

The Sewerage By-Law for the Municipality of Jericho for the Year 2014 (draft)

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The Sewerage By-Law for the Municipality of Jericho for the Year 2014 (draft)

On the basis of its authority and responsibility to provide sewerage services to the public of Jericho, the Municipality Council of Jericho enacts the following sewerage bylaw.

Chapter 1: Explanations

1. Name of the By-Law

This by-law shall be named "The Sewerage By-Law for the Municipality of Jericho for the Year 2014" and shall be effective from the date of its endorsement.

2. Definitions

The following terms, wherever they appear in this by-law, shall have the meaning assigned to them in the following, unless otherwise indicated.

1.	Municipality	The Municipality of Jericho

2. The Municipal Council The Municipal Council of Jericho that

manages the Municipality of Jericho in accordance with the effective laws,

regulations and instructions

3. The Mayor The chairman (head) of the Municipal

Council of the Municipality of Jericho or

his deputy

4. The Authority The Ministry of Local Government of

Palestine

(Municipality) No need of mentioning.

(TA Team) "The Authority" is referred to once in Article 7.1. So we recommend to keep this.

(TA Team) Replaced by "MoLG" based on the discussion

5. City Limits The area located within the limits of the

Municipality of Jericho

6. The Property Area Any land, measured in m², prepared for

housing, commerce, industry or agriculture or any type of services which

may connect to the sewerage system

(Municipality) "May connect" is better than "to be connected".

(TA Team) We recommend to keep this, because connection is enforced to everybody in spite of his will, according to Article 6.

(TA Team) Replaced by "which may connect" based on the discussion

7. The Built-up Area The size, measured in m², of any

building/floor actually constructed on the property area and generating sewage

8. The Owner The person in whose name the property

area is registered

9. The Occupant The person who uses the property area as

the owner or as a tenant or in any other

form

(Municipality) Add "or the water meter is registered by his name". (TA Team) This may be implicated in the expression "in any other form".

10. The Sewage/Wastewater The water being polluted by domestic,

commercial, industrial or institutional use (Stormwater is not sewage/wastewater)

(TA Team) We recommend "being used for". See Article 17.2. (TA Team) "Agricultural" was replaced by "industrial or institutional" based on the discussion.

11. Public Sewers The sewers that the Municipality prepares

for the discharge of wastewater including the sewers network, manholes, pumping stations and their accompanied parts

(Municipality) Add "which owned by the Municipality and permit people to connect who is located nearby after paying the connection fees". (TA Team) To be stated in article 8.1 and article 5.2. The definition must be as simple as possible.

12. The Sewerage System The public sewers including pumping

stations, and wastewater treatment plant with effluent pipe and seasonal reservoir

13. Private Sewers The sewers prepared for the discharge of

wastewater within the property area

(Municipality) Add "to public sewers pipe".

(TA Team) "Connection to public sewers" is stated in article 5.3. The definition must be as simple as possible.

14. Link Sewers The linking sewers that connect the

private sewers to public sewers

(Municipality) "Connecting Pipe" is better than "link sewers". (TA Team) Either will go. The authentic Arabic expression is important.

15. The Capital Costs All depreciation and calculated interest

(TA Team) If capital costs will not be recovered by sewerage fee (refer to Articles 12 and 17.1), this definition must be modified as "Construction costs of link sewers" (refer to Article 21).

16. The Running Costs All costs for salaries and operation and

maintenance (O&M) needed for operating

the sewerage system

17. The Court The magistrate's court of Jericho or any

other specialized court in accordance with

the effective laws and regulations.

3. Validity

The rules of this by-law shall be applied to any kind of property within the city limits including buildings of private and public institutions, and other regions that connect to public sewers.

(Municipality) Instead of "the Refugee Camps", "or other regions that connect to public sewers" (TA Team) Replaced.

Chapter 2: Technical Issues

4. Establishment of Public Sewers

- 1. The Municipality shall establish and maintain the public sewerage network as well as carry out any tasks related to its function.
- 2. Public sewers as well as the connection of sewers and the storm water pipes will be established in the streets and public squares. In case of inability to do so for technical or financial reasons, the Municipality has the right to build all or part of it in private properties as long as it returns the used property to its previous state and to pay the just compensation if any.

5. Establishment of Link and Private Sewers

- 1. The Municipality shall establish link sewers connecting private sewers to the public sewers of the property of any owner or occupant within the city limits whose property lies on the streets or the public squares. Link sewers end at the property's boundaries whenever local conditions allow doing so.
- 2. The Municipality takes the responsibility for connecting the private sewers with the public ones after receiving the fees mentioned in this by-law and designed for this purpose from each and every owner or occupant of any property area.
- 3. The owner or occupant of any property area shall establish the private sewers at his own expenses and after the approval and under the supervision of the municipality, in order to connect to the link sewers.

(Municipality #1) Add "under the supervision of the Municipality".

(Municipality #2) It is preferable to set a certain period of time. (TA Team) The phrase of comment #1 was added. As for comment #2, please refer to Article 22.2.

- 4. Owners of property shall be allowed for any private sewers to cross the neighboring plots near them in case of impossible connection with the link sewers, in accordance with the approved regulatory scheme of the Municipality.
- 5. The owner or occupant of any property area whose private sewer has been connected with the public sewers has to empty any sewage-cesspit that exists within the property area and fill it up with suitable materials.

(Municipality) Insert a condition "ensuring to maintain and remove it in case the public sewer is available".

(TA Team) New article 5.6 was inserted.

- 6. The owner or occupant of any property area to whom the connection fee is incurred, has to ensure to empty and discharge maintain the cesspit in accordance with the provisions of Article 7.2, up until the connection of his private sewers to link sewers.
- 7. It is forbidden for the owner or occupant of any property to connect any stormwater from a property area into the sewer network.

(TA Team) Add the prohibition article on connection.

6. Forced Connection to Public Sewers

- 1. The Municipality shall impose the forced connection for all buildings that located within the serviced areas of public sewers.
- 2. In case of default by the owners of forced connection, the Municipality has the right for establishing and linking private sewers to public sewers and getting additional fees and owed wages from the owners of up to 20% of estimated amounts of such establishing and linking as the expenses of management and supervision, and the estimated amounts by the Municipality will be decisive, and cannot be objected in any judicial or official side.

7. Cesspits

- 1. In case of a public sewer was not existent near the property, or in case of the inability to connect the private sewer with the public sewer, the owner or occupant of the property area shall, at his own expenses and within the property, establish a cesspit after applying to the Municipality for a permission to do so. The plans and the specification must accompany the application and any other information required by the Municipality. The size of the cesspit must be in line with the conditions set forth by the Authority in this matter.
- 2. The owner or occupant, at his own expense, must also empty the cesspit whenever it is full into a special facility within the boundaries of the wastewater sewage treatment plant of Jericho. The Municipality will charge

fees for this purpose according to the tariff that is set in this by-law. It is forbidden to discharge any cesspit into the sewer network or into any natural wadi or stream.

3. The owner or occupant must apply the conditions herein in addition to any other health conditions enforced by other effective health laws and regulations.

8. Property

- 1. The wastewater treatment plant, the pumping stations, the public sewers and the link sewers within public or private land are the property of the Municipality.
- 2. The private sewers and the cesspits within the property areas are the property of the owners of these areas.
- 9. Prohibition of Discharge of Harmful Wastewater and Wastes

No one shall be allowed to discharge or allow discharging any of the following refuse or liquids in the public sewers:

- 1. Gasoline, benzene, solvents or any liquid that may cause flammable conditions or explode within the sewers;
- 2. Solids or viscous matter likely not to flow smoothly or causing problems in the wastewater treatment process, such as:
 - Ashes, asphalt, sand, mud, limesludge, industrial filter cakes,
 - Feathers, blood, animal intestines, bones, animal carcasses, hair,
 - Straw, rubbish, glass, metal parts, paper, plastic bags and other plastic goods;
- 3. Substances likely to create strong odors;
- 4. Stormwater, ground water and drainage; unless by special permission;
- 5. Wastewater containing pH less than 6.0 or greater than 10.0;
- 6. Vegetable and animal oils, fats and greasy material with concentrations greater than 100 mg oil/l (hexane extraction) and milk;
- 7. Mineral oil, oils with mineral base for cutting machines and other distillates containing more than 20 mg oil/l;
- 8. Cyanides such as CN and other compounds likely to produce hydrogen cyanide in acid solutions in a concentration greater than 2.0 mg/l.
- 9. Wastewater with Chemical Oxygen Demand (COD) greater than 2,000 mg/l;
- 10. Wastewater with temperatures greater than 45 C;
- 11. Sulphides (S²-) in concentrations greater than 2.0 mg/l;
- 12. Sulphates (SO₄) in concentrations greater than 600 mg/l;

- 13. Fluorides (F) in concentrations greater than 1.0 mg/l;
- 14. Phenols in concentrations greater than 10.0 mg/l;
- 15. The concentrations of heavy metals may not exceed concentrations indicated below:

Substance	Maximum	Maximum	Maximum
	concentration	concentration mg/l	concentration mg/1
	mg/1 for	for discharges	for discharges less
	discharges	between	than 15 m³/day
	greater than	15-50 m³/day	
	50 m³/day		
Zinc (Zn)	5.00	10.00	15.00
Boron (B)	3.00	4.00	5.00
Chromium IV (CrIv)	0.10	0.15	0.20
Chromium - Total (Cr)	0.50	2.00	5.00
Copper (Cu)	1.00	2.00	4.50
Cadmium (Cd)	0.10	0.50	1.00
Aluminium (Al)	25.00	25.00	25.00
Mercury (Hg)	0.010	0.10	0.50
Manganese(Mg)	1.00	2.50	5.00
Nickel (Ni)	1.00	2.50	4.00
Lead (Pb)	0.25	0.40	0.60

10. Deviations in Required Standards

If the Municipality sees that the liquids discharged into the public sewers contain any of the forbidden materials or exceed the concentrations mentioned in Article 9, the Municipality may decide to:

- 1. Stop such liquids from being discharged into the public sewers.
- 2. Make the offender conduct pre-treatment to separate the harmful substances from the liquids before discharging them into the public sewers or cause an alteration in the value of their concentration by other ways in accordance with the specifications set forth by the Municipality.
- 3. Make the offender pay an additional amount of money to cover the costs that such discharge may cause the Municipality in the treatment process as a result of discharging such substances into the public sewers.
- 4. Make the offender pay for laboratory tests of those discharges that do not meet the requirements mentioned in Article 9.
- 5. Make the offender pay compensation to the farmers who irrigate their lands with the purified wastewater in lieu of the damages that occurred to the quality of soil and crops.
- 6. Stop water supply to the offender.

11. Pre-treatment

If the owner or occupant is forced to conduct a pre-treatment for his wastewater, he must establish the devices designed for such pre-treatment in accordance with the instructions and specifications of the Municipality in due time. He must also guarantee that those devices are in good conditions and receive the right maintenance.

Chapter 3: The Sewerage Fee

12. Principle

The Municipality charges a sewerage fee to recover part of the capital costs for the installation of the sewerage system and to completely cover the running costs.

(TA Team) Capital cost shall not be included at least in the early stage of operation, taken into consideration of the practice of water supply service and other municipalities, and of avoiding too high unit tariff.

13. Object

- 1. The sewerage fee will be imposed on all water consumption that is treated as equivalent to wastewater.
- 2. Water consumption will be measured by the municipality as the only provider of potable water. Each water consumer/wastewater producer has to be equipped with a water meter.
- 3. Exempted from the sewerage fee are those quantities of water produced privately in wells and cisterns.

(Municipality #1) This article needs more explanation.

(Municipality #2) Such quantity of water should be assessed in a particular way and charged, as long as it is discharged to sewer.

(TA Team) This article can be deleted, if the number of citizens using water from private wells and cisterns is negligible. Even if not, this article needs modification from the viewpoint of fairness. Some "assessed charge" scheme has to be designed; e.g. based on the number of occupants in a residence (refer to Article 17.2).

4. Those quantities of water which are not discharged into the sewerage system can only be exempted from the sewerage fee through an application to the Municipality.

(TA Team) Please note that article13.4 and 13.5 are designed for gardening, wet cooling system, swimming pool, agricultural use, etc., of which water is not discharged to sewer.

5. Water used for agricultural and industrial purposes may be exempted from the sewerage fee if the user can prove to the Municipality how much of this water does not enter the sewerage system.

14. Debtor

- 1. Debtor is the owner or occupant in whose name the meter is registered and who has to pay the water fee.
- 2. For building or flats owned by more than one household, every single household is responsible to pay the sewerage fee.
- 3. In cases of uncertain ownership, the occupant is the debtor.

15. Duty to Pay

- 1. The duty to pay the sewerage fee arises as soon as the property is connected to the sewerage system.
- 2. The duty to pay the sewerage fee ends when the connection to the sewerage system is terminated.

16. Maturity of Payment

- 1. The sewerage fee has to be paid every two months after water meter readings have been completed.
- 2. The sewerage fee will be levied together with the water fee in one invoice.
- 3. Non-payment of the sewerage fee will be treated in the same way as non-payment of the water fee.

(Municipality) The treatment of non-payment of sewerage fees cannot be the same with the non-payment of water fees, because discharge of sewage cannot be cut-off.

(TA Team) This article can be deleted if non-payment of sewerage fee can be handled in the same way as claims for unpaid taxes.

4. The Municipality has the right to grant payment in installments or to consider social hardship-only in co-operation with the utility.

(TA Team) Deleted because utility =municipality in Jericho.

17. Calculation Basis for the Sewerage Fee

1. The sewerage fee will be calculated on the basis of all costs needed to construct, operate and maintain the sewerage system; i.e. annual capital and running costs.

(TA Team) Capital cost shall not be included at least in the early stage of operation, taken into consideration of the practice of water supply service

and other municipalities, and of avoiding too high unit tariff (refer to Article 12).

2. The sewerage fee should cover all wastewater flowing into the sewerage system. The quantity of wastewater is defined as the quantity of water used by the owner or occupant, either measured by reading the water meter of the building or of the flat or assessed by the Municipality.

(Municipality) This statement needs modification related to wastewater definition.

(TA Team) We deleted "flowing into the sewerage system" in accordance with the modification of the definition of sewage/wastewater. See Articles 2.10 and 13.3.

3. The Municipality is responsible for maintaining and adjusting the water meters regularly.

(TA Team) In Jericho, utility=municipality.

18. Sewerage Tariff Rates

1. The sewerage tariff rates are set in a progressive scale, depending on the quantities of consumed water. Minimum consumption is equivalent to that of the water consumption.

(Municipality) This item should be re-studied, considering other water usage than domestic one, such as agriculture and desert cooler. (TA Team) We conducted a study to verify the present water tariff structure focusing on its progressiveness, with the result that the linear tariff is more appropriate. Moreover, this article is not needed in so far as the presence of articles 17 and 18.2. So we recommend to delete this whole article.

- 2. The rates are set by the Municipal Council.
- 3. The sewerage tariff can be adapted to the cost developments not more than once every year.

19. The Sewerage Fee Surcharge for Heavy Polluters

- 1. The sewerage fee is based on an average sewage pollution factor, to be compared to the BOD5 (biological oxygen demand within 5 days) of not more than 600mg/l.
- 2. Those who generate sewage composed of more than 600 mg/l BOD5 are charged with a surcharge of 20% for each 100 mg/l above the average.
- 3. The degree of sewage pollution will be fixed by the Municipality after evaluation of laboratory tests. Costs of the tests have to be paid by the polluter.

4. The Municipality is entitled to develop different sewerage fee rates for industrial and commercial discharges if it is proven that they cause additional capital and running costs.

(TA Team) Only 57 (4%) among 1,427 municipalities in Japan adopt this kind of surcharge. It is worth consideration when distinct heavy polluters are present, but necessary labor force should be taken into account to review the application form submitted by industrial users, check the sites and monitor/analyze the wastewater quality at random basis.

20. Revenues from Sales of treated Wastewater

The Municipality intends to sell treated wastewater for irrigation and other purposes. Revenues generated from sales of treated wastewater and exceeding the capital and running costs for the facilities (effluent pipe, seasonal reservoir) are to be used to lower the fee accordingly.

Chapter 4: The Connection Fee

21. Principle

The Municipality imposes a connection fee to recover part of the capital costs.

22. Object

- 1. The connection fee will be imposed on all property and build-up areas which can be used for residential, commercial, industrial or institutional purposes and intended to be connected to the sewerage system.
- 2. Property areas have to be connected within six months after the connection fee has been paid and the construction license approved.

23. Debtor

Debtor is the owner of the building. If more than one person owns any property, then every one of them is responsible for paying his share of the connection fee.

24. Duty to Pay

The duty to pay the connection fee arises as soon as the owner of the property has applied to be connected to the sewerage system.

25. Maturity of Payment

- 1. For already existing buildings which should be connected to the sewerage system, the connection fee has to be paid to the Municipality as soon as the application for connection has been approved by the Municipality.
- 2. For planned buildings, the connection fee is due before the final construction license has been issued.
- 3. Construction of new built-up areas in those parts of Jericho where connection is possible is only permitted, after the owner has applied for a sewerage connection and paid the fee.
- 4. The Municipality has the right to grant payment in installments.

26. Calculation Basis for the Connection Fee

- 1. The connection fee will be calculated according to property or built-up area.
- 2. Property areas are measured in square <u>meter</u> for the total plot, as listed in the application of the connector and confirmed by the Municipality after checking the plot area in the property register.

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(Municipality) "Square meter" instead of "cubic meter" (TA Team) Replaced.
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3. Build-up areas are measured in <u>square meter</u>, comprising the outer measures of the ground floor multiplied by the number of floors.

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(Municipality) "Square meter" instead of "cubic meter" (TA Team) Replaced.
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- 4. The outer measures of all other buildings in the property areas are only counted if wastewater is generated in these buildings.
- 5. Built-up areas which are later added to the building have to be charged correspondingly.

27. Connection Fee Rates

- 1. The connection fee rates are set by the Municipal Council.
- 2. Separate agreements regulate connection fees for the Refugee Camps.
- 3. The connection fee can be adapted to cost development not more than once every year.

28. Particulars

- 1. Each property area will be connected to only one connection in the sewerage network.
- 2. Several buildings can be connected to one connection only if the owners agree to pay connection fees for each building.

3. The Municipality has the right to grant payment in installments or to consider social hardship.

(TA Team) We recommend to insert this statement as in Article 16.4 for sewerage fee.

Chapter 5: The Septic Tank Discharge Fee

29. Principle

The Municipality charges a septic tank discharge fee to recover part of the capital and running costs needed to treat the wastewater in a wastewater treatment plant.

(TA Team) Capital cost shall not be included at least in the first stage of operation, as shown in article 17.1.

30. Object

- 1. The septic tank discharge fee will be imposed on all sludge from septic tanks discharged at the wastewater treatment plant.
- 2. Companies and contractors, running suction trucks for emptying septic tanks, are obliged to discharge the sludge only into a special facility within the area of the wastewater treatment plant.

31. Debtor

- 1. Debtor is the owner of the suction truck or any other equipment used to transport sludge from the septic tank.
- 2. The debtor can be reimbursed by the owner of the septic tank who has contracted him for emptying.

32. Duty to Pay

Duty to pay septic tank discharge fees arises immediately when the suction truck arrives at the wastewater treatment plant.

33. Maturity of payment

Whenever sludge has to be discharged into the wastewater treatment plant, the fee has to be paid prior to discharging in return for a receipt at the treatment plant.

34. Calculation Basis for Septic tank Discharge fee

The septic tank discharge fee is based on suction truck loads of sludge. The average capacity of a suction truck is put at 5 m³. If suction trucks with higher capacity are used, the fee will be transferred to a per-m³-rate.

35. Septic Tank Discharge Fee Rates

- 1. The septic tank discharge rate is set by the Municipal Council.
- The Municipality is allowed to operate its own suction trucks without paying the septic tank discharge fee while invoicing customers the full cost recovering rate.
- 3. The septic tank discharge fee can be adapted to cost development not more than once every year.

36. Particulars for the Septic Tank Discharge Service

- 1. Each company or contractor who is engaged in emptying septic tanks is obliged to apply for a license.
- 2. If a company or a contractor violates his obligations to discharge sludge at the treatment plant, he will loose his license for a minimum of one year. If violation recurs, he will be excluded from septic tank emptying services forever.

Chapter 6: Punishment and Miscellaneous

37. Punishments

1. Any person who violates this by-law or any order or instruction issued in accordance with it shall receive a written notice from the Municipality to retreat from such violation within a reasonable period of time. If he fails to do so, the Municipality shall have the right to carry out the needed actions and make him pay for all the expenses. The Municipality may also take such a person to the court.

2. Any person who:

- fails to act according to the Municipality's decisions based on Article 9 of this by-law,
- fails to implement any tasks necessary in his property based on instructions given by the Municipality's authorized person,
- connects a private sewer with the public sewer without a prior written consent,
- objects or prevents any employee authorized by the Municipality to carry out his duties or practice his powers in accordance with this by-law,
- sabotages in any way the public sewers or the storm water sewers or hinders the work of connecting the private sewers with the public sewers,

- fails to perform the duties he is obliged to perform in accordance with this by-law or any of its articles,

shall pay a fine of no less than Two Hundred and Fifty NIS and no more than Twenty Five Hundred NIS or be sentenced to imprisonment for a period of not exceeding six months or both penalties together and shall pay for any expenses the Municipality paid for.

38. Miscellaneous

- 1. No unauthorized person is allowed to cause a break or uncover or open any part of the sewage premises.
- 2. Any person authorized by the Mayor shall have the right to enter private and public properties in order to inspect the sewer's premises and to ensure their adherence to the conditions and instructions mentioned in this by-law. The person shall not have the right to interfere in any other matter unless such matter is related to the discharge of wastewater and the rules herein.
- 3. The sewerage law will be effective as of the date of ratification from the Ministry of Local Government.
- 4. This by-law cancels all that contradict the provisions of this by-law.

Annex - Fees

(1) Sewerage Fee

Category	Unit Tariff
Fixed Tariff	13.0 NIS/connection/2months
Linear Tariff	1.1 NIS/m ³

(TA Team) Set by tentative calculation for the year 2015

(2) Connection Fee

Category	Fee
For every square meter of the area of land that	$1.5 \text{NIS} / \text{m}^2$
surrounds the building	
For every square meter of building	15 NIS /m ²
Fees of disclosure	50 NIS
For each square meter of building that produce	5 NIS / m ²
used wastewater as services (parking of cars)	

(TA Team) Referred to the present fee of Al-Bireh Municipality, converted from JD to NIS

(3) Cesspit Discharge Fee

Category	Fee
For each loads of vehicles of 5 cubic meter	5 NIS /Tranferred

(TA Team) Referred to the present fee of Al-Bireh Municipality, converted from JD to $\overline{\text{NIS}}$



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4.	The Authority	The Ministry of Local Government
5.	City Limits	The area located within the limits of the Municipality of Jericho
6.	The Property Area	Any land, measured in m², prepared for housing, commerce, industry or agriculture or any type of services which may connect to the sewerage system
7.	The Built-up Area	The size, measured in m², of any building/floor actually constructed on the property area and generating sewage
8.	The Owner	The person in whose name the property area is registered

9.	The Occupant	The person who uses the property area as the owner or as a tenant or in any other form
10.	The Sewage/Wastewater	The water being polluted by domestic, commercial, industrial or institutional use (Stormwater is not sewage/wastewater)
11.	Public Sewers	The sewers that the Municipality prepares for the discharge of wastewater including the sewers network, manholes, pumping stations and their accompanied parts
12.	The Sewerage System	The public sewers including pumping stations, and wastewater treatment plant with effluent pipe and seasonal reservoir
13.	Private Sewers	The sewers prepared for the discharge of wastewater within the property area
14.	Connecting pipes	The connecting pipes that link the private sewers to public sewers
15.	The Capital Costs	All depreciation and calculated interest
16.	The Running Costs	All costs for salaries and operation and maintenance (O&M) needed for operating the sewerage system
17.	The Court	The magistrate's court of Jericho or any other specialized court in accordance with the effective laws and regulations.

3. Validity

The rules of this by-law shall be applied to any kind of property within the city limits including buildings of private and public institutions. and other regions that connect to public sewers

Chapter 2: Technical Issues

4. Establishment of Public Sewers

- 1. The Municipality shall establish and maintain the public sewerage network as well as carry out any tasks related to its function.
- 2. Public sewers as well as the connection of sewers and the storm water pipes will be established in the streets and public squares. In case of inability to do so for technical or financial reasons, the Municipality has the right to build all or part of it in private properties as long as it returns the used property to its previous state and to pay the just compensation if any.

5. Establishment of Link and Private Sewers

- 1. The Municipality shall establish connecting pipes connecting private sewers to the public sewers of the property of any owner or occupant within the city limits whose property lies on the streets or the public squares. Connecting pipes end at the property's boundaries whenever local conditions allow doing so.
- 2. The Municipality takes the responsibility for connecting the private sewers with the public ones after receiving the fees mentioned in this by-law and designed for this purpose from each and every owner or occupant of any property area.
- 3. The owner or occupant of any property area shall establish the private sewers at his own expenses and after the approval and under the supervision of the municipality, in order to connect to the connecting pipes.
- 4. Owners of property shall be allowed for any private sewers to cross the neighboring plots near them in case of impossible connection with the connecting pipes, in accordance with the approved regulatory scheme of the Municipality.
- 5. The owner or occupant of any property area whose private sewer has been connected with the public sewers has to empty any sewage-cesspit that exists within the property area and fill it up with suitable materials.
- 6. The owner or occupant of any property area to whom the connection fee is incurred, has to ensure to empty and discharge the cesspit in accordance with the provisions of Article 7.2, up until the connection of his private sewers to connection pipe.

6. Forced Connection to Public Sewers

- 1. The Municipality shall impose the forced connection for all buildings that located within the serviced areas of public sewers.
- 2. In case of default by the owners of forced connection, the Municipality has the right for establishing and linking private sewers to public sewers and getting additional fees and owed wages from the owners of up to 20% of estimated amounts of such establishing and linking as the expenses of management and supervision, and the estimated amounts by the Municipality will be decisive, and cannot be objected in any judicial or official side.

7. Cesspits

1. In case of a public sewer was not existent near the property, or in case of the inability to connect the private sewer with the public sewer, the owner or occupant of the property area shall, at his own expenses and within the property, establish a cesspit after applying to the Municipality for a permission to do so. The plans and the specification must accompany the application and

- any other information required by the Municipality. The size of the cesspit must be in line with the conditions set forth by the Authority in this matter.
- 2. The owner or occupant, at his own expense, must also empty the cesspit whenever it is full into a special facility within the boundaries of the sewage treatment plant of Jericho. The Municipality will charge fees for this purpose according to the tariff that is set in this by-law. It is forbidden to discharge any cesspit into the sewer network or into any natural wadi or stream.
- 3. The owner or occupant must apply the conditions herein in addition to any other health conditions enforced by other effective health laws and regulations.

8. Property

- 1. The wastewater treatment plant, the pumping stations, the public sewers and the connecting pipes within public or private land are the property of the Municipality.
- 2. The private sewers and the cesspits within the property areas are the property of the owners of these areas.

9. Prohibition of Discharge of Harmful Wastewater and Wastes

No one shall be allowed to discharge or allow discharging any of the following refuse or liquids in the public sewers:

- 1. Gasoline, benzene, solvents or any liquid that may cause flammable conditions or explode within the sewers;
- 2. Solids or viscous matter likely not to flow smoothly or causing problems in the wastewater treatment process, such as:
 - Ashes, asphalt, sand, mud, limesludge, industrial filter cakes,
 - Feathers, blood, animal intestines, bones, animal carcasses, hair,
 - Straw, rubbish, glass, metal parts, paper, plastic bags and other plastic goods;
- 3. Substances likely to create strong odors;
- 4. Stormwater, ground water and drainage; unless by special permission;
- 5. Wastewater containing pH less than 6.0 or greater than 10.0;
- 6. Vegetable and animal oils, fats and greasy material with concentrations greater than 100 mg oil/l (hexane extraction) and milk;
- 7. Mineral oil, oils with mineral base for cutting machines and other distillates containing more than 20 mg oil/l;
- 8. Cyanides such as CN and other compounds likely to produce hydrogen cyanide in acid solutions in a concentration greater than 2.0 mg/l.
- 9. Wastewater with Chemical Oxygen Demand (COD) greater than 2,000 mg/l;

- 10. Wastewater with temperatures greater than 45 C;
- 11. Sulphides (S²-) in concentrations greater than 2.0 mg/l;
- 12. Sulphates (SO₄) in concentrations greater than 600 mg/l;
- 13. Fluorides (F) in concentrations greater than 1.0 mg/l;
- 14. Phenols in concentrations greater than 10.0 mg/l;
- 15. The concentrations of heavy metals may not exceed concentrations indicated below:

Substance	Maximum	Maximum	Maximum
	concentration	concentration mg/1	concentration mg/l
	mg/l for	for discharges	for discharges less
	discharges greater	between	than 15 m³/day
	than 50 m ³ /day	15-50 m ³ /day	-
Zinc (Zn)	5.00	10.00	15.00
Substance	Maximum	Maximum	Maximum
	concentration	concentration mg/1	concentration mg/1
	mg/l for	for discharges	for discharges less
	discharges greater	between	than 15 m³/day
	than 50 m ³ /day	15-50 m³/day	
Boron (B)	3.00	4.00	5.00
Chromium IV (CrIv)	0.10	0.15	0.20
Chromium – Total (Cr)	0.50	2.00	5.00
Copper (Cu)	1.00	2.00	4.50
Cadmium (Cd)	0.10	0.50	1.00
Aluminium (Al)	25.00	25.00	25.00
Mercury (Hg)	0.010	0.10	0.50
Manganese(Mg)	1.00	2.50	5.00
Nickel (Ni)	1.00	2.50	4.00
Lead (Pb)	0.25	0.40	0.60

10. Deviations in Required Standards

If the Municipality sees that the liquids discharged into the public sewers contain any of the forbidden materials or exceed the concentrations mentioned in Article 9, the Municipality may decide to:

- 1. Stop such liquids from being discharged into the public sewers.
- 2. Make the offender conduct pre-treatment to separate the harmful substances from the liquids before discharging them into the public sewers or cause an alteration in the value of their concentration by other ways in accordance with the specifications set forth by the Municipality.
- 3. Make the offender pay an additional amount of money to cover the costs that such discharge may cause the Municipality in the treatment process as a result of discharging such substances into the public sewers.

- 4. Make the offender pay for laboratory tests of those discharges that do not meet the requirements mentioned in Article 9.
- 5. Make the offender pay compensation to the farmers who irrigate their lands with the purified wastewater in lieu of the damages that occurred to the quality of soil and crops.
- 6. Stop water supply to the offender.

11. Pre-treatment

If the owner or occupant is forced to conduct a pre-treatment for his wastewater, he must establish the devices designed for such pre-treatment in accordance with the instructions and specifications of the Municipality in due time. He must also guarantee that those devices are in good conditions and receive the right maintenance.

Chapter 3: The Sewerage Fee

12. Principle

The Municipality may charge a sewerage fee to recover the capital costs for the installation of the sewerage system and to completely cover the running costs.

13. Object

- 1. The sewerage fee will be imposed on all water consumption that is treated as equivalent to wastewater.
- 2. Water consumption will be measured by the municipality as the only provider of potable water. Each water consumer/wastewater producer has to be equipped with a water meter.
- 3. Those quantities of water produced privately in wells and cisterns will be assessed by the Municipality.
- 4. Those quantities of water which are not discharged into the sewerage system can only be exempted from the sewerage fee through an application to the Municipality.
- 5. Water used for agricultural and industrial purposes may be exempted from the sewerage fee if the user can prove to the Municipality how much of this water does not enter the sewerage system.

Debtor

1. Debtor is the owner or occupant in whose name the meter is registered and who has to pay the water fee.

- 2. For building or flats owned by more than one household, every single household is responsible to pay the sewerage fee.
- 3. In cases of uncertain ownership, the occupant is the debtor.

15. Duty to Pay

- 1. The duty to pay the sewerage fee arises as soon as the property is connected to the sewerage system.
- 2. The duty to pay the sewerage fee ends when the connection to the sewerage system is terminated.

Maturity of Payment

- 1. The sewerage fee has to be paid every two months after water meter readings have been completed.
- 2. The sewerage fee will be levied together with the water fee in one invoice.
- 3. Non-payment of the sewerage fee will be treated in the same way as non-payment of the water fee.
- 4. The Municipality has the right to grant payment in installments or to consider social hardship.

17. Calculation Basis for the Sewerage Fee

- 1. The sewerage fee can be calculated on the basis of all costs needed to construct, operate and maintain the sewerage system; i.e. annual capital and running costs.
- 2. The sewerage fee should cover all wastewater. The quantity of wastewater is defined as the quantity of water used by the owner or occupant either measured by reading the water meter of the building or of the flat or assessed by the Municipality.
- 3. The Municipality is responsible for maintaining and adjusting the water meters regularly.

18. Sewerage Tariff Rates

- 1. The sewerage tariff rates are set in a progressive scale, depending on the quantities of consumed water. Minimum consumption is equivalent to that of the water consumption.
- 2. The rates are set by the Municipal Council.
- 3. The sewerage tariff can be adapted to the cost developments not more than once every year.

19. The Sewerage Fee Surcharge for Heavy Polluters

- 1. The sewerage fee is based on an average sewage pollution factor, to be compared to the BOD₅ (biological oxygen demand within 5 days) of not more than 600mg/l.
- 2. Those who generate sewage composed of more than 600 mg/l BOD₅ are charged with a surcharge of 20% for each 100 mg/l above the average.
- 3. The degree of sewage pollution will be fixed by the Municipality after evaluation of laboratory tests. Costs of the tests have to be paid by the polluter.
- 4. The Municipality is entitled to develop different sewerage fee rates for industrial and commercial discharges if it is proven that they cause additional capital and running costs.

20. Revenues from Sales of treated Wastewater

The Municipality intends to sell treated wastewater for irrigation and other purposes. Revenues generated from sales of treated wastewater and exceeding the capital and running costs for the facilities (effluent pipe, seasonal reservoir) are to be used to lower the fee accordingly.

Chapter 4: The Connection Fee

21. Principle

The Municipality imposes a connection fee to recover part of the capital costs.

22. Object

- The connection fee will be imposed on all property and build-up areas which can be used for residential, commercial, industrial or institutional purposes and intended to be connected to the sewerage system.
- 2. Property areas have to be connected within six months after the connection fee has been paid and the construction license approved.

23. Debtor

Debtor is the owner of the building. If more than one person owns any property, then every one of them is responsible for paying his share of the connection fee.

24. Duty to Pay

The duty to pay the connection fee arises as soon as the owner of the property has applied to be connected to the sewerage system.

25. Maturity of Payment

- 1. For already existing buildings which should be connected to the sewerage system, the connection fee has to be paid to the Municipality as soon as the application for connection has been approved by the Municipality.
- 2. For planned buildings, the connection fee is due before the final construction license has been issued.
- 3. Construction of new built-up areas in those parts of Jericho where connection is possible is only permitted, after the owner has applied for a sewerage connection and paid the fee.
- 4. The Municipality has the right to grant payment in installments.

26. Calculation Basis for the Connection Fee

- 1. The connection fee will be calculated according to built-up area.
- 2. Build-up areas are measured in square meter, comprising the outer measures of the ground floor multiplied by the number of floors.
- 3. Built-up areas which are later added to the building have to be charged correspondingly.

27. Connection Fee Rates

- 1. The connection fee rates are set by the Municipal Council.
- 2. Separate agreements regulate connection fees for the Refugee Camps.
- 3. The connection fee can be adapted to cost development not more than once every year.

28. Particulars

- 1. Each property area will be connected to only one connection in the sewerage network.
- 2. Several buildings can be connected to one connection only if the owners agree to pay connection fees for each building.
- 3. The Municipality has the right to grant payment in installments or to consider social hardship.

Chapter 5: The Cesspit Discharge Fee

29. Principle

The Municipality charges a cesspit discharge fee to recover part of the capital and running costs needed to treat the wastewater in a wastewater treatment plant.

30. Object

- 1. The cesspit discharge fee will be imposed on all sludge from Cesspits discharged at the wastewater treatment plant.
- Companies and contractors, running suction trucks for emptying cesspits, are obliged to discharge the sludge only into a special facility within the area of the wastewater treatment plant.

31. Debtor

- 1. Debtor is the owner of the suction truck or any other equipment used to transport sludge from the cesspit.
- 2. The debtor can be reimbursed by the owner of the cesspit who has contracted him for emptying.

32. Duty to Pay

Duty to pay cesspit discharge fees arises immediately when the suction truck arrives at the wastewater treatment plant.

33. Maturity of payment

Whenever sludge has to be discharged into the wastewater treatment plant, the fee has to be paid prior to discharging in return for a receipt at the treatment plant.

34. Calculation Basis for Cesspit Discharge fee

The cesspit discharge fee is based on suction truck loads of sludge. The average capacity of a suction truck is put at 5 m³. If suction trucks with higher capacity are used, the fee will be transferred to a per-m³-rate.

35. Cesspit Discharge Fee Rates

- 1. The Cesspit discharge rate is set by the Municipal Council.
- 2. The Municipality is allowed to operate its own suction trucks without paying the Cesspit discharge fee while invoicing customers the full cost recovering rate.
- 3. The Cesspit discharge fee can be adapted to cost development not more than once every year.

36. Particulars for the cesspit Discharge Service

- 1. Each company or contractor who is engaged in emptying cesspits is obliged to apply for a license.
- 2. If a company or a contractor violates his obligations to discharge sludge at the treatment plant, he will loose his license for a minimum of one year. If violation recurs, he will be excluded from cesspit emptying services forever.

Chapter 6: Punishment and Miscellaneous

37. Punishments

1. Any person who violates this by-law or any order or instruction issued in accordance with it shall receive a written notice from the Municipality to retreat from such violation within a reasonable period of time. If he fails to do so, the Municipality shall have the right to carry out the needed actions and make him pay for all the expenses. The Municipality may also take such a person to the court.

2. Any person who:

- fails to act according to the Municipality's decisions based on Article 9 of this by-law,
- fails to implement any tasks necessary in his property based on instructions given by the Municipality's authorized person,
- connects a private sewer with the public sewer without a prior written consent,
- objects or prevents any employee authorized by the Municipality to carry out his duties or practice his powers in accordance with this by-law,
- sabotages in any way the public sewers or the storm water sewers or hinders the work of connecting the private sewers with the public sewers,
- fails to perform the duties he is obliged to perform in accordance with this by-law or any of its articles,

shall pay a fine of no less than Two Hundred and Fifty NIS and no more than Twenty Five Hundred NIS or be sentenced to imprisonment for a period of not exceeding six months or both penalties together and shall pay for any expenses the Municipality paid for.

38. Miscellaneous

- 1. No unauthorized person is allowed to cause a break or uncover or open any part of the sewage premises.
- 2. Any person authorized by the Mayor shall have the right to enter private and public properties in order to inspect the sewer's premises and to ensure their adherence to the conditions and instructions mentioned in this by-law. The person shall not have the right to interfere in any other matter unless such matter is related to the discharge of wastewater and the rules herein.
- 3. The sewerage law will be effective as of the date of ratification from the Ministry of Local Government.
- 4. This by-law cancels all that contradict the provisions of this by-law.

Annex - Fees

(1) Sewerage Fee

Category		Consumption Quantity	Fee
Residential Fixed Charge		5 NIS/cycle	
	1	$0 - 10 \text{ m}^3$	0.5 NIS/m^3
	2	$11 - 20 \text{ m}^3$	0.5 NIS/m^3
	3	$21 - 30 \text{ m}^3$	0.8 NIS/m^3
	4	$31 - 50 \text{ m}^3$	1.0 NIS/m^3
	5	51 -100 m ³	1.5 NIS/m ³
	6	101 -150 m ³	1.5 NIS/m ³
	7	151 -250 m ³	1.5 NIS/m^3
	8	$>251 \text{ m}^3$	2.0 NIS/m^3
Commercial	Fixed Charge	10 NIS/	2
	1	$0 - 10 \text{ m}^3$	1.0 NIS/m^3
	2	$11 - 20 \text{ m}^3$	1.0 NIS/m^3
	3	$21 - 30 \text{ m}^3$	1.2 NIS/m ³
	4	$31 - 50 \text{ m}^3$	1.4 NIS/m^3
	5	51 -100 m ³	1.6 NIS/m^3
	6	101 -150 m ³	1.8 NIS/m ³
	7	151 -250 m ³	2.0 NIS/m^3
	8	$>251 \text{ m}^3$	2.0 NIS/m^3

(2) Connection Fee

Category	Fee
For every square meter of building	15 NIS / m ²

(3) Cesspit Discharge Fee

Category	Fee
For each loads of vehicles of 5 cubic meter	5 NIS /Transferred



Appendix A 2-8-3

Cabinet decision No. () for the year 2017 for the amendment of the Connecting Houses and Facilities to the Public Sewer System No. (16) for the year 2013.

Based on the basics amendment law provisions of 2003, as amended, in particular Article (70) thereof,

And on the Water Law No. (3) for the Year 2002, particularly Article (42) thereof,

And on the local Authorities Law No. (1) for the year 1997,

And on the Law No. (7) of 1999 of the environment,

After revising the system of connecting houses and facilities to the public sewer network No. (16) for the year 2013, and upon the recommendation of the Minister of Local Government and head of the Water Authority and based on the requirements of the public interest and based on the powers vested in us by law, and based on what was approved by the Cabinet in its meeting held in Ramallah on //, it has been issuing the following amendments: -

Article (1)

To amend article No. (5) of the system to be added to it as follows: -

- 3. After the deadline set by the service provider for the compulsory connection of the owner, all the determined fees of the owner or user are considered as public funds, whether the owner or the user or the service provider was connected to the public sewer network or not.
- 4. The amount due of the owner or the user who fails to pay the bill on time is as follows:
- (a) the service provider sends a written notice to the owner or user, stating the amount owed to the service provider and its details and that this must be paid within fifteen days from the date of notification; (b) in the event of non-payment of the owner or user, the amount due is issued to the Execution Department and bills are considered as the official bonds that shall be collected under Execution Law No. (23) for the Year 2005 and not to be stopped unless the decision is issued from the court that has the lawsuit to stop it.

Article (2)

To amend the article No. (6) paragraph (2) to be as follows:

In case there is no ability to connect directly to public sewer, owners should allow installing pipes in their private lands for the neighboring lands within a setback and is located at a higher level than their land, according to the regulatory diagram approved by the local authority in accordance with the following procedures: -

- a. Inform the land owner by a notice attached with a diagram which shows the track of the pipe to express the reason for objections within a period of 15 days.
- b. Discuss the objections by a committee made for this purpose and consists of:
 - 1. a representative of PWA;
 - 2. a representative of MOLG;
 - 3. a representative of service provider.
- c. The committee studies the objections and within a period of 2 months makes a final decision.
- d. In case of no objection submitted and/or the committee has issued a decision, the commission is entitled to enable the service provider to take an action directly on site without any objection so that the staffs/ employees of the service provider conduct inspection or connect to the public sewer for the necessary extension. Anyone objecting or making a problem to the staffs/ employees is regarded as committing an offense to the staff resistance contrary to the provisions of this system.

The owner of these pipes should commit by a written undertaking to maintain it on their expense and to change the track in case it blocked the freedom of the land owner, and also to remove it in case there is an ability to connect directly to the public sewer.

Article (3)

To amend article (21) to be:

Anyone who makes one of the following actions:

- 1. To damage the property of the water and sewer authority;
- 2. To connect his own sewer with the authority sewer or to cut it without a permission;

30 Dec 2016 3rd Revision Draft

3. To cause any obstacle for the employee of service provider or to stop him for doing his duties or to refuse to let him enter his land to inspect public and private server.

duties or to refuse to let him enter his land to inspect public and private sewer;

4. To use public sewer without a license or illegally use sewer in a way different from

what has been approved in the license;

5. To discharge rainwater to public sewer network;

6. To throw any of prohibited materials that are mentioned in annex No. () of this

system;

7. To discharge sewage outside of the exact location in the wastewater treatment plant or

specified by the service provider within the border of competent authorities;

8. To discharge sewage of private cesspit without written approval from the service

provider;

shall be punished by the imprisonment for a period of not less than 6 months and not

more than one year or a fine of not less than 500 JD and not more than 5000 JD or what is met by equivalent currency, that affects the text does not any more severe penalty

imposed under any other law.

Article (4)

To amend article No (21) from the system to be article No (22) and to amend article No

(22) from the system to be article No (23).

Article (5)

All competent authorities must implement the provisions of this amendment after passing

30 days from the date of publication in an official gazette.

This issued in Ramallah in / / 2017

Prime Minister

Rami Alhamdullah

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MUNICIPALITY OF JERICHO

Strategic Business Plan 2014-2018 For Managing Jericho Sewerage System

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Chapter 1 Introduction

This "Strategic Business Plan for Managing Jericho Sewerage System 2014-2018" is a mid-term program developed for the next 5 years from 2014 to 2018. It aims at providing future management framework, activities to be accomplished and necessary funding resources to be obtained, as well as forming consensus of stakeholders (i.e. the mayor, city council members and municipality staff).

This plan makes clear the following four issues:

- ✓ Construction and household connection plan: branch sewer and connection work;
- ✓ Business plan: activities to be conducted each year;
- ✓ Staffing plan and organization structure;
- ✓ Financial plan: revised CAPEX and its funding resources; revised revenue/expenditure plan.

This plan is the annual rolling plan. The progress will be monitored and evaluated annualy along with the preparation of financial settlements after the end of each fiscal year, and the plan will be revised if necessary prior to the preparation of annual budget of the next year; i.e. the revision will be developed from the period of May/June to September/October.

Chapter 2 Mission, Objective, Means and Activities

The organization mission and the specific actions are categorized into hierarchy, comprised of the mission, objectives, direct means and activities, and are visualized as a tree-like structure of "starategy map" as shown in **Figure 2.2**.

2.1 Mission

A mission statement is an overall goal to be achieved by the Jericho Municipality on sewerage service, and it can work as an effective tool to inspire and influence employees by generating passion and commitment within the organization. The mission statement of Jericho Municipality on sewerage service is decided as below:

"Jericho Municipality Sewerage Section will provide adequate and affordable sewerage service in a sustainable and environmentally sound manner."

2.2 Objectives and Means

The objective and its direct means of Jericho Municipality to achieve the mission statement above are set up as shown in **Figure 2.1**. The objective is "to satisfy customers by high-level of service at reasonable tariff with full cost recovery" and the direct means to be taken for this objective comprise the following three components: "to increase the number of sewerage connections"; "to make many customers pay their bills without delay"; and "to implement efficient and effective operations".



Figure 2.1 Breakdown of Mission into Objective and Means

The specific activities to achieve the three objectives (direct means) above are described in **Table 2.1**. The activities are categorized into the four perspectives of Balanced Score Card (BSC)¹: "Financial", "Customer", "Internal Business Process" and "Learning and Growth", in order to ensure the balanced management framework.

Table 2.1 Activities to be Conducted from Four Perspectives of BSC

Perspectives	Activities
1. Financial	(a) Ensure the commitment from donors to fund the designing and construction of branch sewer and
	household connections
	(b) Implement phased hike of wastewater tariff and connection fee in line with the price increase
2. Customer	(a) Prepare and implement public awareness campaigns for smooth connection and payment of connec-
	tion fee without delay
	(b) Cooperate with the Popular Committee of Aqbat Jaber Camp to accelerate sewer construction and
	connection in the Camp
	(c) Cooperate with PIEFZA and PRICO to accelerate sewer connection in JAIP
	(d) Develop and implement reuse scheme of treated wastewater and sludge at reasonable price
3. Internal Busi-	(a) Accurate and quick transfer and processing of customers' complaints using extended "Work Flow
ness Process	System"
	(b) Accurate and smooth transaction of new connection information using extended "Work Flow Sys-
	tem"
	(c) Accurate and smooth transaction of meter reading information using new "Sewerage Tariff System"
	(d) Strengthen the activities towards non-payment of connection fees and sewerage tariff
	(e) Preventive and periodic maintenance utilizing asset inventory database and record of repair work
4. Learning and	(a) Systematic training is designed and implemented on O&M of facilities for the staff of Sewerage Sec-
Growth	tion

¹ The balanced scorecard (hereinafter "BSC") is a strategic management system to assist the realization of the vision of the organization. It provides a "balanced" performance measurement framework that added non-financial perspectives comprising of "Customer", "Internal Business Process" and "Learning and Growth" to the traditional "Financial".

The balanced scorecard (hereinafter "BSC") is a strategic management system to assist

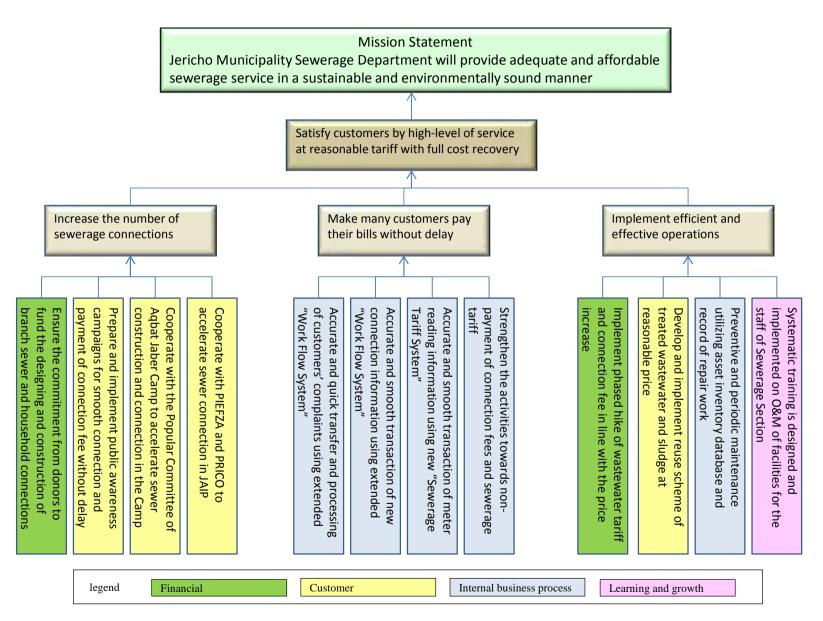


Figure 2.2 Strategy Map of Jericho Municipality for Managing Sewerage System

Chapter 3 Basic Scenario

3.1 Sewerage Fee and Connection Fee

The sewerage by-law of Jericho Municipality including sewerage fee and connection fee was approved by the Municipality Council in March 2014 and will come into effect in April 2014. The sewerage fee and connection fee scheme is as shown in **Table 3.1**. Uniform volumetric tariff was adopted instead of progressive volumetric tariff, considering the unexpected behavior of customers to save water.

Table 3.1 Sewerage Fee and Connection Fee

Category	Unit Fee	Notes
Sewerage Fee	1.0 NIS/m ³	For every cubic meter of water consumption
Connection Fee	13 NIS/m ²	For every square meter of building

3.2 Cost Recovery Principle

The revenue of connection fee shall recover all the construction cost from connection pit until receiving pit, the schematic diagram of which is shown in **Figure 3.1**. The construction cost of trunk/branch sewer up to connection pits shall be borne by the Municipality and shall not be subject to the connection fee. Land or building owners are responsible for private sewer inside the owner's premise excluding receiving pit(s).

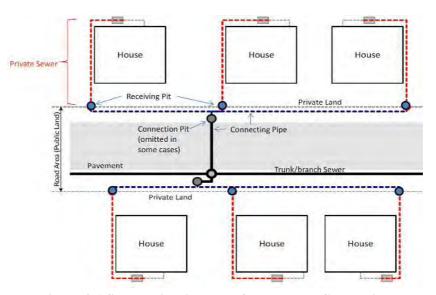


Figure 3.1 Schematic Diagram of Household Connection

The revenue of sewerage fee above shall recover the 100% of the operation and maintenance cost, excluding capital cost (depreciation) that shall be recovered at the next stage after 2018. To enable this, the treated wastewater should be reused (e.g. more than 75% of the efflluent volume and at above 0.3NIS/m³ where 0.36NIS/m³ is the unit price of pumping and distirubuting irrigation water), as well as the electricity generated from the solar panels in the WWTP should be sold to JDECo (e.g. 0.8NIS/kWh which is larger than the aver-

age 0.5NIS/kWh of the unit price for electricity charge). Moreover, it is essential to accelerate the household connection to sewer, including the connection in the Aqbat Jaber Camp.

3.3 KPIs and Targeted Values

The key performance indicators (KPIs) and their targeted values were defined as shown in **Table 3.2**. The KPIs and target values related to customer service e.g. "complaints and requests resolved on time" and related to training e.g. "minimum time dedicated to continuous professional development (CPD)" will be set up at the next stage after 2018 based on the analysis and evaluation of the historical record of operation.

Table 3.2 KPIs and Targeted Values

Index	Annual Targeted Value	Notes
1. Effluent Wastewater Volume (m³/day)	600 m ³ /d for 2014; 2,000m ³ /d for 2015;	
- via tanker trucks & sewer	4,000m ³ /d for 2016; 6,000m ³ /d for 2017;	
	8,000m ³ /d for 2018, each as of the end of	
	the year	
2. Volume of Reused Wastewater (m³/month)	More than 75% of effluent wastewater	
	volume from 2016	
3. Water Quality Test		
- number of sampled, tested & passed the standard		
4. Number of Connection Applications	200/200 for 2014; 1,200/1,400 for 2015;	
- monthly & accumulated	1,200/2,600 for 2016; 1,200/3,800 for	
	2017; 1,200/5,000 for 2018, where annual	
	increase/accumulated increase	
5. Number of Connections Inspected and Approved	Ditto	
- monthly & accumulated		
6. Operating Revenue (NIS)		
7. O&M and Administrative Expenditure (NIS)		For Sewerage Section
		only
8. Unit Treatment Cost (NIS/m³)		Calculated by #7/#1
9. Working Ratio	Below 1.0 for the total from 2014 to 2018	Calculated by #7/#6
10. Number of Staff	14, full-time, regular and trained staff from	
	2016	
11. Number of Bills of Sewerage Fee		
- delivered & collected		
12. Amount of Bills of Sewerage Fee		
- delivered & collected		
13. Number of Service Complaints Related to Sew-		
erage Service		

Chapter 4 Activities to be Strategically Conducted

The annual activities and/or targets to be strategically conducted and/or achieved from 2014 to 2018 are listed in **Table 4.1**, according to the activities categorized by the three direct means.

Table 4.1 Annual Activities and/or Targets from 2014 to 2018

Direct means	Activities	Present status and challenges as of March 2014			Target to be achieved /Specific activitie	es	
		2011	2014	2015	2016	2017	2018
Increase the number of sewerage connections	fund the designing and construction of branch sewer	◆Phase 1 PP has just started, to be completed end Jun 2014 ◆Phase 2 PP will start from Nov 2014 to Apr 2015 ◆Construction using Palestenian budget will start from Nov 2014 to Apr 2015, with design funded by USAID	600m³/d at the end of year; 200 connection applications/year	2,000m ³ /d at the end of year; 1,200 connection applications/year (1,400 connections accumulated)	4,000m ³ /d at the end of year; 1,200 connection applications/year (2,600 connections accumulated)	6,000m ³ /d at the end of year; 1,200 connection applications/year (3,800 connections accumulated)	8,000m ³ /d at the end of year; 1,200 connection applications/year (5,000 connections accumulated)
	Prepare and implement public awareness campaigns for smooth connection and payment of connection fee without delay	◆Public meetings held 3 times, but with no explanation of connection fee and wastewater tariff	Public meetings; PR on various media	Public meetings; PR on various media	Public meetings; PR on various media	Public meetings; PR on various media	Public meetings; PR on various media
	= = = = = = = = = = = = = = = = = = = =	◆ Design: funded by Besancon City in France and Neuchtel City in Switzerland; conducted by PWA and CEP; completion mid-May 2014 ◆ Wastewater volume 1,150m³/d in 2015; Sewer length 35km; Estimated construction cost 4,123.6 tUSD ◆ Construction: fund commitment not yet offered ◆ Early agreement with JM and the Committee needed on administrative, technical and financial issues	Basic agreement by May; Continuous information exchange and dialogue afterwards	Cooperation on PR activities for connection and tariff payment			
	accelerate sewer connection in JAIP	◆ Two factories (Reehana and Palolea) will start operation in March or April; expected wastewater c.a. 63m³/d ◆ Expected wastewater from JAIP in 2014 amounts 638m³/d ◆ UNDP will construct 300m gravitiy sewer and 30m³*3 reservoir tanks by mid or end Apr 2014; pumping station and pressure mains by Dec 2014 ◆ Early agreement with JM and PIEFZA/PRICO needed on administrative, technical and financial issues ◆ 4 factories around JAIP discharge wastewater amouting 12m³/d; gravity sewer connection is possible along the northwestern periphery of JAIP	Agreement by May particularly on wastewater tariff				
Make many customers pay their bills	Accurate and quick transfer and	◆Existing Workflow System has no function to deal with sewerage service; renovation needed ◆Existing Al-Ghassan System has no function to deal with	Implement minimum version-up of Workflow System for sewerage				
without delay	Accurate and smooth transaction of new connection information using extended "Workflow System"	connection fee	Develop sub-system for managing connection fee				
		◆ Mobile billing system in operation, linked to existing billing system and printable hand-held units	Develop built-in system for managing sewerage fee		Develop built-in system for managing reused wastewater fee		
	Strengthen the activities towards non- payment of connection fees and sewerage tariff		Public meetings; PR on various media	Public meetings; PR on various media; Verify collection rate, develop countermeasures if necessary (including installement /reduction /exemption in By-Law)	O .	Public meetings; PR on various media	Public meetings; PR on various media
Implement efficient and effective operations	tariff and connection fee in line with the price increase	◆Accrual accouting is essential for proper cost allocation; Al-Ghassan system must be renovated to deal with accrual accounting	Negotiate sales price with JDECo generated from solar panels; Renovate Al-Ghassan for accrual accounting, cost center, data export, linking to GIS, fixed assets inventory etc.		Verify and if necessary prepare revision draft of wastewater tariff and connection fee		Verify and prepare draft of revised wastewater tariff and connection fee
		◆Farm experiment in WWTP and treated wastewater quality will be tested before lauching supply to outside users	_	wastewater quality test; Information	Develop reuse tariff; Start supplying; Reuse rate more than 75%	Reuse rate more than 75%; Conduct F/S for introducing advanced treatment	Reuse rate more than 75%; Introduce advanced treatment apparatus
	utilizing asset inventory database and record of repair work	◆ No management function for fixed assets in current Al-Ghassan System	Develop preventive maintenance plan for WWTP and sewer network	sewer network into GIS; Renovate Workflow System for daily technical reporting; Develop software for WWTP assets inventory management; Review and revise sewer inspection/cleaning program; Purchase necessary equipment e.g. high pressure cleaning vehicle	Develop support software for sewer network management using GIS	Make full use of support software for sewer network management and WWTP assets inventory management	years, after analyzing and evaluating historical repair data
	Systematic training is designed and implemented on O&M of facilities for the staff of Sewerage Section	◆Training being conducted with JICA TA team	Training on basics and OJT of O&M	OJT of O&M Training for handling sewer maintenance appratus	14, full-time, regular and trained staff; Develop business continuity & emergency management plan	14, full-time, regular and trained staff	14, full-time, regular and trained staff; OJT of O&M for advanced treatment

Chapter 5 Revenue and Expenditure Plan

5.1 Revenue and Expenditure Schedule

The revenue and expenditure schedule from 2014 to 2018 is shown in **Table 5.1** and **Figures 5.1 and 5.2**. The revenue is consisted of wastewater tariff and reuse charge, and the expenditure is consisted of the personnel, electricity, repair and chemicals cost necessary for operation and maintenance. The revenue of reuse charge was calculated assuming that the percentage of reusing treated wastewater is 75% from 2016 and the unit charge is 0.3 NIS/m³.

5.2 Major Assumptions

Balance

Major assumptions used in the calculation are described in **Chapter 8.1**.

e=a+aa-d

2014 2015 2016 2017 2018 Sum Wastewater Tariff a 107,310 688,025 1,259,406 1,810,765 2,386,005 6,251,511 Revenue Reuse charge aa 311,695 448,156 590,561 1,350,412 Personnel 281,913 712,620 904,296 949,512 996,984 3,845,325 -54,513 112,240 365,306 943,131 2.002,275 Electricity 636,111 330,554 1,365,549 O&M Cost Repair 285,336 374,830 374,830 Chemicals 3,993 26,908 51,699 78,084 107,984 268,668 231,393 1,137,104 1,696,131 2,038,537 2,378,653 7,481,817 Sum b Expenditure 0 Interest 0 0 0 0 0 Capital Cost Depreciation 0 0 0 0 0 0 Sum 0 0 0 0 0 O&M and Capital Cost Total 2,038,537 d=b+c231,393 1,137,104 1,696,131 2,378,653 7,481,817

-449,079

-125,030

220,384

597,913

120,105

-124,083

Table 5.1 Annual Balance of Revenue and Expenditure (Unit: NIS)

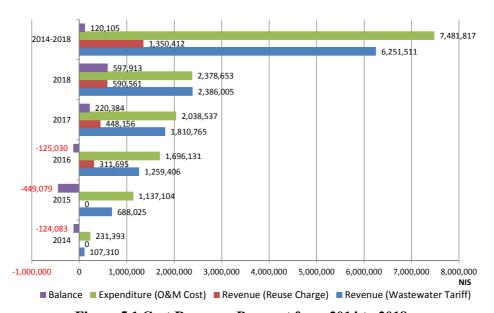


Figure 5.1 Cost Recovery Prospect from 2014 to 2018

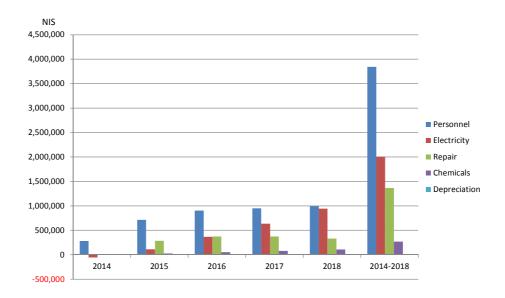


Figure 5.2 Annual Breakdown of O&M Cost

Chapter 6 Capital Investment Plan

6.1 Household Connection

The household connection will be accelerated from 2014 to 2015, using the scheme of the Pilot Project implemented in the JICA TA project ("Tecsom") and the secured budget of the Palestenian National Authority (PNA) as the "counterpart fund" for the Grant Project of JICA. Total 1,550 connections of which 220 are assumed to start construction in 2014 and the other 1,330 are planned to be constructed in 2015. The 16km of branch sewer will be constructed using the PNA's fund above. The total cost will be 8.7 mNIS, of which 3.4mNIS (100mJPY) from JICA and 5.3mNIS (1.5mUSD) from the PNA' fund.

The connection fee and the construction cost for the connection inside the premises of the beneficiaries will be collected in the Pilot Project area, and the former (connection fee) will be reserved for the construction of branch sewer.

6.2 Construction of Branch Sewer

It is estimated in the Basic Design (B/D) Study of the Grant Project of JICA that the total length of branch sewer reaches to around 50km, including the 16km to be constructed by using the PNA' fund. The remaining 34km will be constructed from 2016 onwards by using the Municipality's own budget, in order to ensure the targeted annual new connections of 1,200. The total construction cost is estimated to be 17.68 mNIS (34km*@520NIS/m, where 520NIS/m is an estimation used in the B/D Study) and c.a. 5.9 mNIS/year from 2016 to 2018). The Municipality will search the necessary commitment of donors for funding resources.

Chapter 7 Organization and ICT System Development Plan

7.1 Organogram of Sewerage Section

The sewerage section will start its regular activities after starting operation of the WWTP in June 2014, and will mainly deal with the technical aspect of sewerage service. Fourteen full-time and regular staffs are identified to be necessary as shown in **Figure 7.1**, which is planned to be fulfilled from 2016 onwards.

Other functions related to sewerage service such as bill delivery and collection, customer service, GIS mapping of sewer network, financial accounting or human resources management shall be allocated to the specific departments/sections, and hence the service provision to customers should be implemented in close cooperation with the Sewerage Section and other relevant departments/sections.

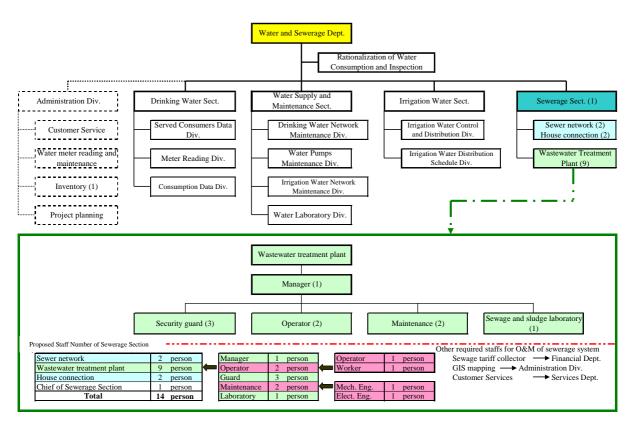


Figure 7.1 Staffing of Sewerage Section

7.2 ICT System Development

7.2.1 Present Status and Challenges

The work flow-chart of current water supply service around existing ICT system is shown in **Figure 7.2**. Related to the drinking water supply service, there are three ICT system working in the Jericho Municipality i.e. the Work-Flow System, Drinking Water Revenue System and Financial System ("Al-Ghassan" or "Oracle" System), of which the Financial System is the main and central, referring to the database of the other two systems.

The existing Financial System is an old one and works on cash base, so it must be renovated to base on the modified accrual accounting system fitting to the works of the Municipality, in order to extract comparable and appropriate financial data for reporting.

Meanwhile the GIS in the Municipality Office was introduced in 2006, the components of which are Arc-Info, Arc-Survey Analyst, Arc-Server Enterprise and Arc-View, each 1 set of version 9.3, as well as AutoDesk Map 3D, Raster Design and one server computer, all funded by JICA. After being upgraded to version 9.3.1 from December 2009 to February 2010, all software licenses have been expired and now 2 sets of Arc-Desktop Basic (version 10.1, cracked version) are being used in the Water Network Maintenance Section and the Engineering Department. The Mayor has given permission to proceed to reactivate GIS in the Municipality Office, recognizing the importance and usefulness of the GIS in order to improve the quality of the services provided to the residents as well as the internal business efficiency and accuracy.

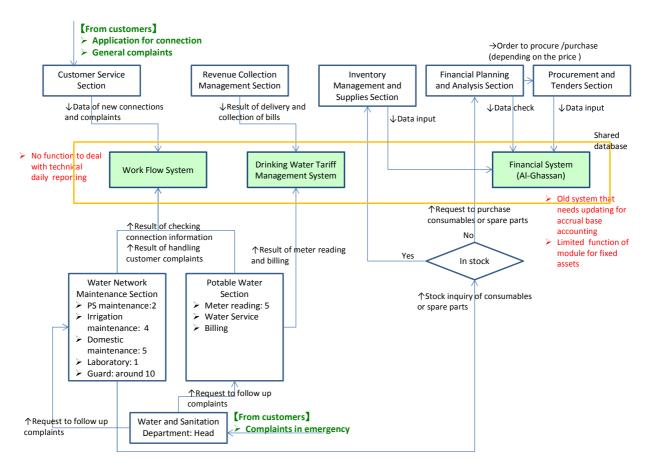


Figure 7.2 Work Flowchart of Water Supply Service around Existing ICT System

7.2.2 ICT System Development Plan related to Sewerage Service

The targeted scheme of ICT system development is shown in **Figure 7.3**. The existing Financial System, Work-Flow System and Drinking Water Revenue System shall be renovated/expanded, in line with the reactivation of GIS including the introduction of necessary hardware and software, the provision of training and the development of supporting software for sewer management. The database shall be linked to each other,

which enables the Sewerage Section the efficient cooperation with relevant departments/sections. Moreover, a system for managing WWTP assets inventory will be developed for recording the as-built data of equipment, daily operation data and maintenance history, which will be utilized to develop the repair plan not only within the period of 2014 to 2018 but also for the next 5 years after 2018.

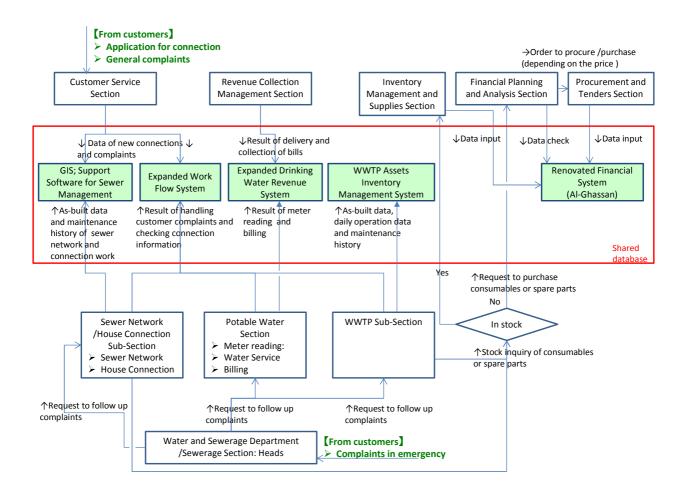


Figure 7.3 Work Flowchart of Sewerage Service based on Future ICT System

Chapter 8 Appendix

8.1 Major Assumptions for Revenue and Expenditure Plan

8.1.1 Connections

(1) Household connections

Potential number of household connections was counted up and grouped into neighborhood, using satellite image and site investigation, along the trunk sewer that was constructed by the Grant Aid Project and 16km of the branch sewer that will be constructed by the PNA's fund. Total 1,550 connections of which 220 are assumed to start construction in 2014 and the other 1,330 are to be constructed in 2015. From 2016 onwards annually 1,200 of new connections will start construction, and 5,150 of all 5,195 water supply connections in 2012 will start to be constructed by 2018 (refer to **Table 8.1**).

Of the connections of which construction start in a given year, 50% are assumed to be completed and discharged to sewer (refer to **Table 8.2**).

(2) Large users

Large users are comprised of 26, from "Arab Development Society" to "Palestinian Academy for Security Sciences"; each location was identified and grouped into neighborhood.

(3) Jericho Agro-Industrial Park (JAIP)

Wastewater from JAIP was estimated by interpolation of 638 m³/d at the end of 2014 and 2,500 m³/d in 2018; the former 638 m³/d is from questionnaire survey for tenants of JAIP conducted by JAIP developer in September 2013; the latter 2,500 m³/d is from the feasibility study of JAIP development. Moreover, two factories (#2: Reehana for Food and Investment Co. and #27: Palolea Company) will start operation in March or May 2014, and the annual wastewater was estimated taking the average of the beginning and end of each year.

Table 8.1 Household Connections

Name of Neighborhood	Total Water		Construction				
-	Connections in 2012	2014	2015	2016	2017	2018	Sum 2014-2018
1 Al Bayader	83	20	42	21			83
2 Shiekh Sabbah	344	30	284	30			344
3 Shiekh Sbeih	276		35	90	73	78	276
4 Om Tawabeen	73	10	63				73
5 Sabiha+Al Doeuk	471	20	121	120	130	80	471
6 Ein Sultan	642	20	157	140	180	145	642
7 Qasir Hisham	383	30	48	120	110	75	383
8 Kitf Al Wad	581	25	105	120	160	171	581
9 Al Dahiah	92		35	20	20	17	92
10 Al Maghtes	194		27	70	47	50	194
11 Falasteen	577		57	120	120	252	549
12 Amman	460		98	120	120	122	460
13 Al Souq	243	4		79	80	80	243
14 Al Ma'moun	144		64	30	30	20	144
15 Al Rasheed	39	15	24				39
16 Al Quds	435		58	120	130	110	418
17 Yaffa	54	26	28			•	54
18 Al Jame	104	20	84			•	104
Sum	5,195	220	1,330	1,200	1,200	1,200	5,150

Table 8.2 Number of Discharged Connections (1/2)

				D	ischarge Rate:	1st year	509
						2nd year	509
Name of Neighborhood	Total Water		Numbe	r of Discharged (Connections to Se	wer	
	Connections in 2012	2014	2015	2016	2017	2018	Sum 2014-2018
1 Al Bayader	83	10	10				
	•		21	21 11	10		
				11	0	0	
						0	
2 Shiekh Sabbah	344	10 15	31 15	32	10	0	
2 Shiekii Sabban	544	13	142	142			2
				15	15		
					0	0	
		15	157	157	15	0	3
3 Shiekh Sbeih	276	0	0	157	15	0	2
			18	17			
				45	45 37	36	
					3/	39	
		0	18	62	82	75	2
4 Om Tawabeen	73	5	5				
			32	31	0		
				<u> </u>	0	0	
						0	
		5	37	31	0	0	
5 Sabiha+Al Doeuk	471	10	10 61	60			1
			01	60	60		1
					65	65	1
						40	
6 Ein Sultan	642	10 10	71 10	120	125	105	4
o em sunan	042	10	79	78			1
	***************************************	***************************************		70	70		1
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				90	90	1
		10	90	148	160	73 163	5
7 Qasir Hisham	383	10 15	89 15	148	100	163	
, van Hondin		15	24	24			
				60	60		1
					55	55 39	1
		15	39	84	115	38 93	3

Table 8.2 Number of Discharged Connections (2/2)

Discharge Rate: 1st year 50%

				001 1 10		2nd year	50%
Name of Neighborhood	Total Water		Number	r of Discharged C	Connections to Se	wer	
	Connections in	2014	2015	2016	2017	2018	Sum
	2012			2010	2017		2014-2018
8 Kitf Al Wad	581	13	12 53	52			2 10
	•••••••••••			60	60		10
	***************************************				80	80	16
	***************************************	13	65	112	140	86 166	8 49
9 Al Dahiah	92	0	03	112	140	100	49
			18	17			3
	***************************************			10	10	10	2
					10	9	<u></u>
		0	18	27	20	19	8
10 Al Maghtes	194	0	0	13			
			14	35	35		7
					24	23	4
			1.4	40	50	25	3 2 2 2 8 8 2 7 7 4 4 2 2 16
11 Falasteen	577	0	14 0	48	59	48	16
11 Tulustoon			29	28			5 12
	***************************************			60	60		12
					60	60 126	12 12
	***************************************	0	29	88	120	186	42
12 Amman	460	0	0				
			49	49 60	60		9 12
				00	60	60	12
				4.0.0	4.4.0	61	6
13 Al Souq	243	2	49	109	120	121	39
15 Al Souq	243	<u></u>	0	0			
				40	39		7 8 4
					40	40 40	8
		2	2	40	79	80	20
14 Al Ma'moun	144	0	0				
			32	32 15	15		6
	***************************************			13	15	15	6 3 3
	***************************************					10	1 13
15 Al Rasheed	39	0 8	32 7	47	30	25	13
13 Al Kasileeu			12	12			1 2
				0	0		
					0	0	
		8	19	12	0	0	3 5 12
16 Al Quds	435	0	0				***************************************
			29	29 60	60		5
				60	60 65	65	13
	***************************************					55	5 36
17 Voffe	E 4	0	29	89	125	120	
17 Yaffa	54	13	13 14	14			55 2 8
				0	0		
					0	0	
		13	27	14	0	0	5
18 Al Jame	104	10	10				2
			42	42			
				0	0	0	
						0	
		10	52	42	0	0	10
Sum	5,195	111	778	1,262	1,200	1,201	4,55

Table 8.3 Number of Water Connections and Supplied Water Volume in 2012

	Mont	h													
Monthly supplied water per connection			Jan	Feb	Mar	Apr	May	Jun	J	ul Aug	Sep	Oct	Nov	Dec	Sum
_	G i	Residential	1,4	126	1,2	261	7,658	35		1,268	1,3	212	1,3	356	
10. 1	Connections	Factories and commercial	2	72	2	69	24	14 1,5	552	261	2	39	2	67	
~ 10 m³		Residential	2,9	004	2,1	121	12114	38 0		1,875	1,4	470	2,2	289	
	Supplied water (m ¹)	Factories and commercial	50	68	70	06	59	92 3,0	582	678	5	25	6	13	
	a :	Residential	5-	45	4	70	2,201	B 5		247	2	61	3	93	
11 ~ 20 m ³	Connections	Factories and commercial	5	2	e	55	5	3 36	7	56	(58	7	73	
11 ~ 20 m	C lid (1)	Residential	8,5	572	7,5	534	35426	281		3,978	4,	248	6,2	285	
	Supplied water (m ¹)	Factories and commercial	8:	37	1,0)63	82	29 5,8	306	891	1,0	064	1,	122	
	Connections	Residential	4	66	4:	23	2,049	52		300	2	35	3	63	
21 ~ 30 m ³	Connections	Factories and commercial	2	8	2	20	3	8 20	1	38	3	39	3	38	
21 ~ 30 m	Supplied water (m ¹)	Residential	11,	837	10,	856	52647	59 0		7,665	5,9	963	9,3	344	
	Supplied water (m)	Factories and commercial	69	93	4	93	95	54 5,0	001	944	9	65	9	52	
	Connections	Residential	82	28	7:	90	4,096	58		569	5	64	7	77	
31 ~ 50 m ³	Connections	Factories and commercial	3	9	4	10	4	9 25	2	45	4	16	3	33	
31 ~ 30 m	C lid(1)	Residential	32,	401	31,	773	164,8	266		22,772	23,047		31,574		
	Supplied water (m ¹)	Factories and commercial	1,4	171	1,6	511	1,9	12 9,8	364	1,746	1,	824	24 1,300		
	C	Residential	9:	39	1,1	101	6,672	124		1,171	1,	106	1,	133	
51 ~ 100 m ³	Connections	Factories and commercial	3	30		34	4	0 20	4	37	1	36	2	27	
31 ~ 100m	Supplied water (ml)	Residential	67,033		80,	099	490,3	07/5		86,686	82.	,433	83,	049	
	Supplied water (m ³)	Factories and commercial	2,1	81	2,5	2,564		2,895 14,8		2,619	2,	763	1,8	322	
	Connections	Residential	2	71	3	98	3,0 4 6	92		671	7	18	2	90	
101 ~ 150 m³	Connections	Factories and commercial	1	3	1	.0	1	5 73		7		17	1	1	
101 ~ 150m	C lid (1)	Residential	32,	696	47,	982	395,8	9403		82,165	88.	,567	54,	334	
	Supplied water (m ¹)	Factories and commercial	1,6	541	1,2	244	1,7	58 8,8	868	878	2,0	058	1,2	289	
	Connections	Residential	1:	51	2:	21	2,189	93		466	5	60	2	90	
151 ~ 250 m ³	Connections	Factories and commercial	1	1	1	2	1	6 79		15		13	1	12	
151 ~ 250m	C lid(1)	Residential	30,	163	41,	323	494,1	883		89,899	104	,603	54,	334	
	Supplied water (m ¹)	Factories and commercial	2,2	295	2,2	297	3,3	76 15	,425	3,047	2,3	286	2,	124	
	a :	Residential	8	66	9	00	8971	58		159	2	61	1	43	
251	Connections	Factories and commercial	1	2	1	.1	9	61		8		12		9	
251 m³ ~	Supplied restor (==)	Residential	56,	655	60,	803	530,6	8249		101,063	141	,664	79,	593	
	Supplied water (m ¹)	Factories and commercial	5,5	594	6,8	808	6,5	73 41	,878	7,013	8,0	024	7,8	366	
	C	Residential	4,7	712	4,7	754	2847)67		4,851	4,	917	4,	745	
C	Connections	Factories and commercial	4:	57	4	61	40	54 2,	789	467	4	70	4	70	
Sum	Communication ()	Residential	242	,261	282	,491	23,091	18,3890		396,103 451,995		,995	320,802		
	Supplied water (m ³)	Factories and commercial	15,	280	16,	786	18,	889 10	5 368	17,816	19.	,509	17,	088	

Table 8.4 Large User Connections

Name of Large User			201	12				201:	3		Neighbor-		Water S	upply Volu	me Projec	tion (m³/d	ay)		V	Vastewater	Discharge	Volume P	rojection (m³/day)	
Name of Large User	Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	Sep-Oct 1	Nov-Dec	Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	hood #	2012	2013	2014	2015	2016	2017	2018	2012	2013	2014	2015	2016	2017	2018
1 Arab Development Society	8,968	7,144	8,892	8,968	5,852	6,992	6,878	5,206	3,762	3,686	12	128	135	142	149	157	165	174	70	74	78	82	86	91	96
2 Ghosheh Factory	432	576	637	408	593	477	449	456	463	660	12	9	9	10	10	11	12	12	5	5	6	6	6	7	7
3 National Security Training Center	4,537	3,743	2,400	3,116	4,380	4,711	2,400	3,742	6,239	6,364	12	63	66	70	73	77	81	86	45	36	39	40	42	45	47
4 Military Intelligence	656	408	600	254	192	527	580	543	500	292	16	7	7	8	8	9	9	10	4	4	4	4	5	5	6
5 Ministry of the Interior	1,271	936	2,879	2,591	6,312	1,814	2,391	2,036	3,121	4,820	16	43	45	48	50	53	56	58	28	25	26	28	29	31	32
6 The Leadership of the National Security Forces	664	1,244	32	2,595	3,290	1,899	648	1,736	4,429	3,058	6	27	28	30	31	33	35	37	25	15	17	17	18	19	20
7 General Administration Police College	55	418	440	407	1,056	1,342	594	1,320	748	187	6	10	11	11	12	12	13	14	6	6	6	7	7	7	8
27+28+29 Palestinian Academy for Security Sciences	2,886	6,782	3,670	1,689	5,249	3,496	882	1,932	1,021	819	6	65	68	72	76	80	84	88	11	37	40	42	44	46	48
8 Jibril Muhammad Aldmanhori/Allimona	334	440	358	195	290	281	246	215	0	352	5	5	5	6	6	6	6	7	2	3	3	3	3	3	4
9 Suleiman Khader Geahchan /Alrawda	109	151	224	234	181	222	265	372	113	234	8	3	3	3	3	4	4	4	2	2	2	2	2	2	2
10 The Tourist Village	458	1,126	931	2,682	3,409	2,208	1,265	2,744	4,200	4,890	6	30	32	33	35	37	39	41	33	18	18	19	20	21	23
11 Tyseer Nimer Mustafa/ Alwaha	88	124	179	122	245	107	115	168	133	145	13	2	2	2	2	2	3	3	1	1	1	1	1	2	2
12 School girls basic minimum	386	409	228	200	731	904	823	589	300	135	2	8	8	9	9	10	10	11	3	4	5	5	6	6	6
13 Jericho, Girls High School	184	182	201	139	346	227	115	319	526	516	2	3	3	3	3	4	4	4	4	2	2	2	2	2	2
14 Girls Jericho Elementary School High	327	563	429	484	544	473	574	644	429	547	2	8	8	9	9	10	10	11	4	4	5	5	6	6	6
15 Jericho Women Charitable	545	601	445	122	301	428	262	364	289	0	1	7	7	8	8	9	9	10	2	4	4	4	5	5	6
16+17 Palestine Telecommunications	248	295	524	564	836	712	536	945	798	671	10	9	9	10	10	11	12	12	7	5	6	6	6	7	7
18 Mehdi Alajlouni -Commercial Investments	1,240	1,400	1,720	1,320	1,880	1,640	1,760	1,680	1,680	1,800	8	25	26	28	29	31	32	34	14	14	15	16	17	18	19
19 Ziad Nusseibeh -Company Compromise	770	1,276	1,144	880	726	1,223	2,376	1,826	1,320	1,254	6	16	17	18	19	20	21	22	12	9	10	10	11	12	12
20 House Grandparents to Care for the Elderly	482	607	540	787	518	342	392	344	776	459	7	9	9	10	10	11	12	12	4	5	6	6	6	7	7
21 Agricultural Jericho Station	174	262	231	226	221	147	210	232	164	119	2	3	3	3	3	4	4	4	1	2	2	2	2	2	2
22 Jericho Government Hospital	1,080	1,600	2,298	4,180	2,611	2,127	1,106	1,185	2,383	1,921	16	38	40	42	44	47	49	52	15	22	23	24	26	27	29
23 Jericho Health Directorate	282	329	269	96	205	357	2,528	336	138	173	15	4	4	4	5	5	5	5	2	2	2	3	3	3	3
24 And border crossings/ the rest	393	362	691	511	862	604	316	981	750	593	11	9	9	10	10	11	12	12	6	5	6	6	6	7	7
25 And border crossings/ the rest	2,205	2,197	2,126	1,632	2,664	2,418	2,249	2,091	2,030	1,946	11	36	38	40	42	44	47	49	17	21	22	23	24	26	27
26 And border crossings/ the rest	587	519	1,169	688	986	550	129	206	196	309	11	12	13	13	14	15	16	16	2	7	7	8	8	9	9
Sum	29,361	33,694	33,257	35,090	44,480	36,228	30,089	32,212	36,508	35,950		579	605	642	670	713	750	788	325	332	355	371	391	416	437
·				32,851		35,352				33.690		5.3% 0	annual inc	rease					55.0% c	of supplied v	vater disch	arged to se	ewer		

		Discha	rge Rate:	1st year 2nd year	50% 50%					
Name of Large User		Con	nection Yea	r		Ε	Discharged W	Vastewater (m ³ /day)	
Name of Large Oser	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
1 Arab Development Society	1					39	82	86	91	96
2 Ghosheh Factory	1					3	6	6	7	7
3 National Security Training Center		1					20	42	45	47
4 Military Intelligence		1					2	5	5	6
5 Ministry of the Interior		1					14	29	31	32
6 The Leadership of the National Security Forces		1					9	18	19	20
7 General Administration Police College		1					4	7	7	8
27+28+29 Palestinian Academy for Security Sciences	1					20	42	44	46	48
8 Jibril Muhammad Aldmanhori/Allimona	1					2	3	3	3	4
9 Suleiman Khader Geahchan / Alrawda	1					1	2	2	2	2
10 The Tourist Village	1					9	19	20	21	23
11 Tyseer Nimer Mustafa/ Alwaha	1					1	1	1	2	2
12 School girls basic minimum		1					3	6	6	6
13 Jericho, Girls High School		1					1	2	2	2
14 Girls Jericho Elementary School High		1					3	6	6	6
15 Jericho Women Charitable	1					2	4	5	5	6
16+17 Palestine Telecommunications	1					3	6	6	7	7
18 Mehdi Alajlouni -Commercial Investments		1					8	17	18	19
19 Ziad Nusseibeh -Company Compromise		1					5	11	12	12
20 House Grandparents to Care for the Elderly	1					3	6	6	7	7
21 Agricultural Jericho Station	1					1	2	2	2	2
22 Jericho Government Hospital		1					12	26	27	29
23 Jericho Health Directorate	1					1	3	3	3	3
24 And border crossings/ the rest	1					3	6	6	7	7
25 And border crossings/ the rest	1					11	23	24	26	27
26 And border crossings/ the rest	1					4	8	8	9	9
Sum	15	11	0	0	0	103	294	391	416	437

Table 8.5 Expected Wastewater Discharge from JAIP in 2014

# Company Name	Expected Wastewater
1 Pinar General Trading Co.	$40 \text{ m}^3/\text{d}$
2 Reehana for food and investment Co.	$35 \text{ m}^3/\text{d}$
3 Weggo Company	$34 \text{ m}^3/\text{d}$
4 Johar Company For Agriculture	$20 \text{ m}^3/\text{d}$
5 Johar Investment & Trading Company	$40 \text{ m}^3/\text{d}$
6 Sinnokrot Company For Textile	$21 \text{ m}^3/\text{d}$
7 Valley Trading Company	$19 \text{ m}^3/\text{d}$
8 Firas and Ala'a Company	$17 \text{ m}^3/\text{d}$
9 Reema Company	$22 \text{ m}^3/\text{d}$
10 Hawamadeh Company for Export	$25 \text{ m}^3/\text{d}$
11 Sabi International Group	$21 \text{ m}^3/\text{d}$
12 Thimar For AgriclutureI Investment Co.	$25 \text{ m}^3/\text{d}$
13 Al Hassan Company For Dates	$33 \text{ m}^3/\text{d}$
14 International Overseas Company	$30 \text{ m}^3/\text{d}$
15 Madaen Food Company	$22 \text{ m}^3/\text{d}$
16 Philadephia Company	$33 \text{ m}^3/\text{d}$
17 The National Carton Industry	$10 \text{ m}^3/\text{d}$
18 Palestine Plastic Industries	$9 \text{ m}^3/\text{d}$
19 OOO Kam Trade	$30 \text{ m}^3/\text{d}$
20 Abo Iyad Company for Investment	$23 \text{ m}^{3}/\text{d}$
21 Asbab Trading and Investment Company	$15 \text{ m}^3/\text{d}$
22 Development & Reconstruction (DARB)	$13 \text{ m}^3/\text{d}$
23 Development & Reconstruction (DARB)	$16 \text{ m}^3/\text{d}$
24 Al'Aradeh Company for Agriculture Equipments	$4 \text{ m}^3/\text{d}$
25 Yaghmour 2010	$32 \text{ m}^3/\text{d}$
26 Venus Trading Company	$21 \text{ m}^{3}/\text{d}$
27 Palolea Company	$28 \text{ m}^3/\text{d}$
Sum	638 m3/d

8.1.2 Unit wastewater consumption

(1) Household connections

The estimation was based on the "unit supplied water per connection" according to 18 neighborhoods; this is from past water supply data (except large users) from 2008 to 2012 (refer to **Table 8.7**). The estimation was made by using primary regression equation prepared for each neighborhood (refer to **Table 8.6** and **Figure 8.1**). Unit wastewater consumption is calculated from unit water consumption multiplied by 55% (refer to **Table 8.8**).

(2) Large users

Water supply volume of each large user was assumed to increase by annual rate of 5.3 %, which is the average of past water supply (except large users) from 2008 to 2012. The unit wastewater consumption was calculated from unit water consumption multiplied by 55% (refer to **Table 8.4**).

Table 8.6 Prospect of Unit Supplied Water per Connection

Neighborhood 1. Al-Bayader 2. Sheikh Sabbah 3. Sheikh Sbeih	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	(Ref) Number of Connections
2. Sheikh Sabbah	694.87	744.45	752.37	719.82	819.44	813.53	835.98	858.46	880.90	903.35	925.80	8
	835.87	855.61	905.58	864.18	913.61	924.19	940.59	957.00	973.41	989.81	1006.22	34
	817.80	879.53	917.73	994.91	1096.28	1142.95	1210.19	1277.42	1344.65	1411.88	1479.12	27
4. Om-Tawabeen	841.77	879.34	829.27	802.40	924.68	882.15	891.05	899.91	908.80	917.70	926.59	7
5. Sabiha+Al Doeuk	660.52	721.86	802.73	807.34	838.30	898.46	942.56	986.66	1030.77	1074.87	1118.97	47
6. Ein-Sultan	739.24	807.50	857.41	867.17	864.54	920.25	951.27	982.30	1013.33	1044.35	1075.38	64
7. Qasir-Hisham	756.37	756.49	769.96	834.76	888.21	903.75	937.95	972.14	1006.34	1040.53	1074.72	38
8. Kitf Al Wad	736.47	767.01	794.32	803.39	937.32	939.13	982.93	1026.75	1070.55	1114.36	1158.17	58
9. Al-Dahiah	1127.40	1212.12	1309.86	1442.05	1411.44	1539.96	1619.77	1699.58	1779.36	1859.17	1938.98	ç
10. Al-Maghtes	999.49	984.41	1034.42	998.70	1251.28	1209.02	1260.81	1312.60	1364.38	1416.17	1467.96	19
11. Falasteen	792.44	853.13	874.44	910.39	1035.72	1056.37	1110.75	1165.13	1219.51	1273.89	1328.27	57
12. Amman	825.71	878.86	979.54	952.85	977.95	1036.52	1074.37	1112.22	1150.07	1187.91	1225.76	46
13. Al-Souq	374.93	342.51	366.91	358.75	371.40	365.65	366.57	367.48	368.41	369.32	370.24	24
14. Al-ma'moun	947.01	1005.94	1063.95	1013.45	1153.01	1162.52	1204.47	1246.42	1288.38	1330.33	1372.28	14
15. Al-Rasheed	454.37	418.48	483.53	484.16	468.14	489.71	499.05	508.33	517.67	527.01	536.28	3
16. Al-Quds	666.36	799.46	763.13	800.72	929.57	950.16	1002.92	1055.69	1108.46	1161.23	1214.00	43
17. Yaffa	986.50	959.31	996.80	928.87	883.51	880.06	856.42	832.78	809.13	785.49	761.85	5
18. Al-Jame	361.67	391.52	399.42	390.73	406.72	416.81	425.74	434.67	443.60	452.53	461.46	10
Average	750.01	797.03	834.96	845.96	919.34	945.74	984.50	1023.26	1062.03	1100.79	1139.55	5,19
Annual Increase Rate		6.3%	4.8%	1.3%	8.7%							
				Average	5.3%							
0 1 177												
Supplied Water	1	2	3	4	5	6	7	8	9	10	11	
Neighborhood	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		Regression Equation (primary)
Al-Bayader	21,051	22,553	22,793	21,807	24,825	24,646	25,326	26,007	26,687	27,367		80.2(X-2007)+20565
2. Sheikh Sabbah	104,952	107,430	113,705	108,507	114,713	116,041	118,101	120,161	122,221	124,281		059.9(X-2007)+103682
3. Sheikh Sbeih	82,385	88,604	92,452	100,227	110,439	115,141	121,914	128,687	135,460	142,233	•	773.1(X-2007)+74502
4. Om-Tawabeen	22,429	23,430	22,096	21,380	24,638	23,505	23,742	23,978	24,215	24,452		36.8(X-2007)+22084
5. Sabiha+Al Doeuk	113,554	124,099	138,002	138,794	144,116	154,458	162,040	169,622	177,204	184,786		581.9(X-2007)+108967
6. Ein-Sultan	173,227	189,221	200,918	203,203	202,587	215,642	222,912	230,183	237,453	244,723		270.2(X-2007)+172021
	105,737	105,753	107,636	116,695	124,168	126,339	131,120	135,900	140,681	145,461		780.4(X-2007)+97657
7. Qasir-Hisham	156,179	162,657	168,448	170,371	198,773				227,027	236,317	245.607 9	290.2(X-2007)+143415
8. Kitf Al Wad		40.500	42.005			199,156	208,446	217,737				
8. Kitf Al Wad 9. Al-Dahiah	37,858	40,703	43,985	48,424	47,396	51,712	54,392	57,072	59,751	62,431	65,111 2	679.7(X-2007)+35634
8. Kitf Al Wad 9. Al-Dahiah 10. Al-Maghtes	70,774	69,706	73,247	48,424 70,718	47,396 88,603	51,712 85,611	54,392 89,278	57,072 92,945	59,751 96,612	62,431 100,279	65,111 2 103,946 3	679.7(X-2007)+35634 667(X-2007)+63609
8. Kitf Al Wad 9. Al-Dahiah 10. Al-Maghtes 11. Falasteen	70,774 166,891	69,706 179,673	73,247 184,162	48,424 70,718 191,732	47,396 88,603 218,127	51,712 85,611 222,476	54,392 89,278 233,929	57,072 92,945 245,382	59,751 96,612 256,835	62,431 100,279 268,288	65,111 2 103,946 3 279,741 1	679.7(X-2007)+35634 667(X-2007)+63609 1453(X-2007)+153758
8. Kitf Al Wad 9. Al-Dahiah 10. Al-Maghtes 11. Falasteen 12. Amman	70,774 166,891 138,637	69,706 179,673 147,561	73,247 184,162 164,464	48,424 70,718 191,732 159,984	47,396 88,603 218,127 164,198	51,712 85,611 222,476 174,032	54,392 89,278 233,929 180,387	57,072 92,945 245,382 186,741	59,751 96,612 256,835 193,096	62,431 100,279 268,288 199,450	65,111 2 103,946 3 279,741 1 205,805 6	679.7(X-2007)+35634 667(X-2007)+63609 1453(X-2007)+153758 354.5(X-2007)+135905
8. Kitf Al Wad 9. Al-Dahiah 10. Al-Maghtes 11. Falasteen 12. Amman 13. Al-Souq	70,774 166,891 138,637 33,254	69,706 179,673 147,561 30,379	73,247 184,162 164,464 32,543	48,424 70,718 191,732 159,984 31,819	47,396 88,603 218,127 164,198 32,941	51,712 85,611 222,476 174,032 32,431	54,392 89,278 233,929 180,387 32,513	57,072 92,945 245,382 186,741 32,594	59,751 96,612 256,835 193,096 32,676	62,431 100,279 268,288 199,450 32,757	65,111 2 103,946 3 279,741 1 205,805 6 32,838 8	679.7(X-2007)+35634 667(X-2007)+63609 1453(X-2007)+153758 354.5(X-2007)+135905 1.4(X-2007)+31943
8. Kitf Al Wad 9. Al-Dahiah 10. Al-Maghtes 11. Falasteen 12. Amman 13. Al-Souq 14. Al-ma'moun	70,774 166,891 138,637 33,254 49,775	69,706 179,673 147,561 30,379 52,872	73,247 184,162 164,464 32,543 55,921	48,424 70,718 191,732 159,984 31,819 53,267	47,396 88,603 218,127 164,198 32,941 60,602	51,712 85,611 222,476 174,032 32,431 61,102	54,392 89,278 233,929 180,387 32,513 63,307	57,072 92,945 245,382 186,741 32,594 65,512	59,751 96,612 256,835 193,096 32,676 67,717	62,431 100,279 268,288 199,450 32,757 69,922	65,111 2 103,946 3 279,741 1 205,805 6 32,838 8 72,127 2	679.7(X-2007)+35634 667(X-2007)+63609 1453(X-2007)+153758 354.5(X-2007)+135905 1.4(X-2007)+31943 204.9(X-2007)+47873
8. Kitf Al Wad 9. Al-Dahiah 10. Al-Maghtes 11. Falasteen 12. Amman 13. Al-Souq 14. Al-ma'moun 15. Al-Rasheed	70,774 166,891 138,637 33,254 49,775 6,468	69,706 179,673 147,561 30,379 52,872 5,957	73,247 184,162 164,464 32,543 55,921 6,883	48,424 70,718 191,732 159,984 31,819 53,267 6,892	47,396 88,603 218,127 164,198 32,941 60,602 6,664	51,712 85,611 222,476 174,032 32,431 61,102 6,971	54,392 89,278 233,929 180,387 32,513 63,307 7,104	57,072 92,945 245,382 186,741 32,594 65,512 7,236	59,751 96,612 256,835 193,096 32,676 67,717 7,369	62,431 100,279 268,288 199,450 32,757 69,922 7,502	65,111 2 103,946 3 279,741 1 205,805 6 32,838 8 72,127 2 7,634 1	679.7(X-2007)+35634 667(X-2007)+63609 1453(X-2007)+153758 354.5(X-2007)+135905 1.4(X-2007)+31943 204.9(X-2007)+47873 32.7(X-2007)+6174.7
8. Kitf Al Wad 9. Al-Dahiah 10. Al-Maghtes 11. Falasteen 12. Amman 13. Al-Souq 14. Al-ma'moun 15. Al-Rasheed 16. Al-Quds	70,774 166,891 138,637 33,254 49,775 6,468 105,801	69,706 179,673 147,561 30,379 52,872 5,957 126,934	73,247 184,162 164,464 32,543 55,921 6,883 121,166	48,424 70,718 191,732 159,984 31,819 53,267 6,892 127,135	47,396 88,603 218,127 164,198 32,941 60,602 6,664 147,592	51,712 85,611 222,476 174,032 32,431 61,102 6,971 150,861	54,392 89,278 233,929 180,387 32,513 63,307 7,104 159,239	57,072 92,945 245,382 186,741 32,594 65,512 7,236 167,617	59,751 96,612 256,835 193,096 32,676 67,717 7,369 175,996	62,431 100,279 268,288 199,450 32,757 69,922 7,502 184,374	65,111 2 103,946 3 279,741 1 205,805 6 32,838 8 72,127 2 7,634 1 192,752 8	679.7(X-2007)+35634 667(X-2007)+63609 1453(X-2007)+153758 354.5(X-2007)+135905 1.4(X-2007)+31943 204.9(X-2007)+47873 32.7(X-2007)+6174.7 378.3(X-2007)+100591
8. Kitf Al Wad 9. Al-Dahiah 10. Al-Maghtes 11. Falasteen 12. Amman 13. Al-Souq 14. Al-ma'moun 15. Al-Rasheed 16. Al-Quds 17. Yaffa	70,774 166,891 138,637 33,254 49,775 6,468 105,801 19,444	69,706 179,673 147,561 30,379 52,872 5,957 126,934 18,908	73,247 184,162 164,464 32,543 55,921 6,883 121,166 19,647	48,424 70,718 191,732 159,984 31,819 53,267 6,892 127,135 18,308	47,396 88,603 218,127 164,198 32,941 60,602 6,664 147,592 17,414	51,712 85,611 222,476 174,032 32,431 61,102 6,971 150,861 17,346	54,392 89,278 233,929 180,387 32,513 63,307 7,104 159,239 16,880	57,072 92,945 245,382 186,741 32,594 65,512 7,236 167,617 16,414	59,751 96,612 256,835 193,096 32,676 67,717 7,369 175,996	62,431 100,279 268,288 199,450 32,757 69,922 7,502 184,374 15,482	65,111 2 103,946 3 279,741 1 205,805 6 32,838 8 72,127 2 7,634 1 192,752 8 15,016	679.7(X-2007)+35634 667(X-2007)+63609 1453(X-2007)+153758 354.5(X-2007)+135905 1.4(X-2007)+31943 204.9(X-2007)+47873 32.7(X-2007)+6174.7 378.3(X-2007)+100591 466(X-2007)+20142
8. Kitf Al Wad 9. Al-Dahiah 10. Al-Maghtes 11. Falasteen 12. Amman 13. Al-Souq 14. Al-ma'moun 15. Al-Rasheed 16. Al-Quds	70,774 166,891 138,637 33,254 49,775 6,468 105,801	69,706 179,673 147,561 30,379 52,872 5,957 126,934	73,247 184,162 164,464 32,543 55,921 6,883 121,166	48,424 70,718 191,732 159,984 31,819 53,267 6,892 127,135	47,396 88,603 218,127 164,198 32,941 60,602 6,664 147,592	51,712 85,611 222,476 174,032 32,431 61,102 6,971 150,861	54,392 89,278 233,929 180,387 32,513 63,307 7,104 159,239	57,072 92,945 245,382 186,741 32,594 65,512 7,236 167,617	59,751 96,612 256,835 193,096 32,676 67,717 7,369 175,996	62,431 100,279 268,288 199,450 32,757 69,922 7,502 184,374	65,111 2 103,946 3 279,741 1 205,805 6 32,838 8 72,127 2 7,634 1 192,752 8 15,016 17,517 3	679.7(X-2007)+35634 667(X-2007)+63609 1453(X-2007)+153758 354.5(X-2007)+135905 1.4(X-2007)+31943 204.9(X-2007)+47873 32.7(X-2007)+6174.7 378.3(X-2007)+100591

Table 8.7 Unit Supplied Water per Connection (1/2)

				2008		
No.	Area Name	Number of Connections	Water Supply Area (ha)	Supplied water Volume (m3/year)	Connection/ha	l/connection/day
1	Al-Bayader	83	12.39	21,051	6.70	694.8
2	Sheikh Sabbah	344	56.24	104,952	6.12	835.8
3	Sheikh Sbeih	276	31.56	82,385	8.75	817.80
4	Om-Tawabeen	73	17.4	22,429	4.20	841.7
5	Sabiha+Al Doeuk	471	311.43	113,554	1.51	660.5
6	Ein-Sultan	642	184.13	173,227	3.49	739.2
7	Qasir-Hisham	383	110.26	105,737	3.47	756.3
8	kitf Al Wad	581	97.31	156,179	5.97	736.4
9	Al-Dahiah	92	16.2	37,858	5.68	1127.4
10	Al-Maghtes	194	93.34	70,774	2.08	999.4
11	Falasteen	577	179.44	166,891	3.22	792.4
12	Amman	460	240.98	138,637	1.91	825.7
13	Al-Souq	243	9.38	33,254	25.91	374.9
14	Al-ma'moun	144	19.23	49,775	7.49	947.0
15	Al-Rasheed	39	13.03	6,468	2.99	454.3
16	Al-Quds	435	40.28	105,801	10.80	666.3
17	Yaffa	54	44.89	19,444	1.20	986.5
18	Al-Jame	104	1.96	13,729	53.06	361.6
	Sum	5195	1479.45	1,422,145		750.0

				2009		
No.	Area Name	Number of Connections	Water Supply Area (ha)	Supplied water Volume (m3/year)	Connection/ha	l/connection/day
1	Al-Bayader	83	12.39	22,553	6.70	744.45
2	Sheikh Sabbah	344	56.24	107,430	6.12	855.61
3	Sheikh Sbeih	276	31.56	88,604	8.75	879.53
4	Om-Tawabeen	73	17.40	23,430	4.20	879.34
5	Sabiha+Al Doeuk	471	311.43	124,099	1.51	721.86
6	Ein-Sultan	642	184.13	189,221	3.49	807.50
7	Qasir-Hisham	383	110.26	105,753	3.47	756.49
8	kitf Al Wad	581	97.31	162,657	5.97	767.01
9	Al-Dahiah	92	16.20	40,703	5.68	1212.12
10	Al-Maghtes	194	93.34	69,706	2.08	984.41
11	Falasteen	577	179.44	179,673	3.22	853.13
12	Amman	460	240.98	147,561	1.91	878.86
13	Al-Souq	243	9.38	30,379	25.91	342.51
14	Al-ma'moun	144	19.23	52,872	7.49	1005.94
15	Al-Rasheed	39	13.03	5,957	2.99	418.48
16	Al-Quds	435	40.28	126,934	10.80	799.46
17	Yaffa	54	44.89	18,908	1.20	959.31
18	Al-Jame	104	1.96	14,862	53.06	391.52
	Sum	5195	1479.45	1,511,302		797.03

				2010		
No.	Area Name	Number of Connections	Water Supply Area (ha)	Supplied water Volume (m3/year)	Connection/ha	l/connection/day
1	Al-Bayader	83	12.39	22,793	6.70	752.37
2	Sheikh Sabbah	344	56.24	113,705	6.12	905.58
3	Sheikh Sbeih	276	31.56	92,452	8.75	917.73
4	Om-Tawabeen	73	17.4	22,096	4.20	829.27
5	Sabiha+Al Doeuk	471	311.43	138,002	1.51	802.73
6	Ein-Sultan	642	184.13	200,918	3.49	857.41
7	Qasir-Hisham	383	110.26	107,636	3.47	769.96
8	kitf Al Wad	581	97.31	168,448	5.97	794.32
9	Al-Dahiah	92	16.2	43,985	5.68	1309.86
10	Al-Maghtes	194	93.34	73,247	2.08	1034.42
11	Falasteen	577	179.44	184,162	3.22	874.44
12	Amman	460	240.98	164,464	1.91	979.54
13	Al-Souq	243	9.38	32,543	25.91	366.91
14	Al-ma'moun	144	19.23	55,921	7.49	1063.95
15	Al-Rasheed	39	13.03	6,883	2.99	483.53
16	Al-Quds	435	40.28	121,166	10.80	763.13
17	Yaffa	54	44.89	19,647	1.20	996.80
18	Al-Jame	104	1.96	15,162	53.06	399.42
	Sum	5195	1479.45	1,583,230		834.96

Table 8.7 Unit Supplied Water per Connection (2/2)

				2011		
No.	Area Name	Number of Connections	Water Supply Area (ha)	Supplied water Volume (m3/year)	Connection/ha	l/connection/day
1	Al-Bayader	83	12.39	21,807	6.70	719.82
2	Sheikh Sabbah	344	56.24	108,507	6.12	864.18
3	Sheikh Sbeih	276	31.56	100,227	8.75	994.91
4	Om-Tawabeen	73	17.4	21,380	4.20	802.40
5	Sabiha+Al Doeuk	471	311.43	138,794	1.51	807.34
6	Ein-Sultan	642	184.13	203,203	3.49	867.17
7	Qasir-Hisham	383	110.26	116,695	3.47	834.76
8	kitf Al Wad	581	97.31	170,371	5.97	803.39
9	Al-Dahiah	92	16.2	48,424	5.68	1442.05
10	Al-Maghtes	194	93.34	70,718	2.08	998.70
11	Falasteen	577	179.44	191,732	3.22	910.39
12	Amman	460	240.98	159,984	1.91	952.85
13	Al-Souq	243	9.38	31,819	25.91	358.75
14	Al-ma'moun	144	19.23	53,267	7.49	1013.45
15	Al-Rasheed	39	13.03	6,892	2.99	484.16
16	Al-Quds	435	40.28	127,135	10.80	800.72
17	Yaffa	54	44.89	18,308	1.20	928.87
18	Al-Jame	104	1.96	14,832	53.06	390.73
	Sum	5195	1479.45	1,604,095		845.96

				2012		
No.	Area Name	Number of Connections	Water Supply Area (ha)	Supplied water Volume (m3/year)	Connection/ha	l/connection/day
1	Al-Bayader	83	12.39	24,825	6.70	819.44
2	Sheikh Sabbah	344	56.24	114,713	6.12	913.61
3	Sheikh Sbeih	276	31.56	110,439	8.75	1096.28
4	Om-Tawabeen	73	17.4	24,638	4.20	924.68
5	Sabiha+Al Doeuk	471	311.43	144,116	1.51	838.30
6	Ein-Sultan	642	184.13	202,587	3.49	864.54
7	Qasir-Hisham	383	110.26	124,168	3.47	888.21
8	kitf Al Wad	581	97.31	198,773	5.97	937.32
9	Al-Dahiah	92	16.2	47,396	5.68	1411.44
10	Al-Maghtes	194	93.34	88,603	2.08	1251.28
11	Falasteen	577	179.44	218,127	3.22	1035.72
12	Amman	460	240.98	164,198	1.91	977.95
13	Al-Souq	243	9.38	32,941	25.91	371.40
14	Al-ma'moun	144	19.23	60,602	7.49	1153.01
15	Al-Rasheed	39	13.03	6,664	2.99	468.14
16	Al-Quds	435	40.28	147,592	10.80	929.57
17	Yaffa	54	44.89	17,414	1.20	883.51
18	Al-Jame	104	1.96	15,439	53.06	406.72
***************************************	Sum	5195	1479.45	1,743,235		919.34

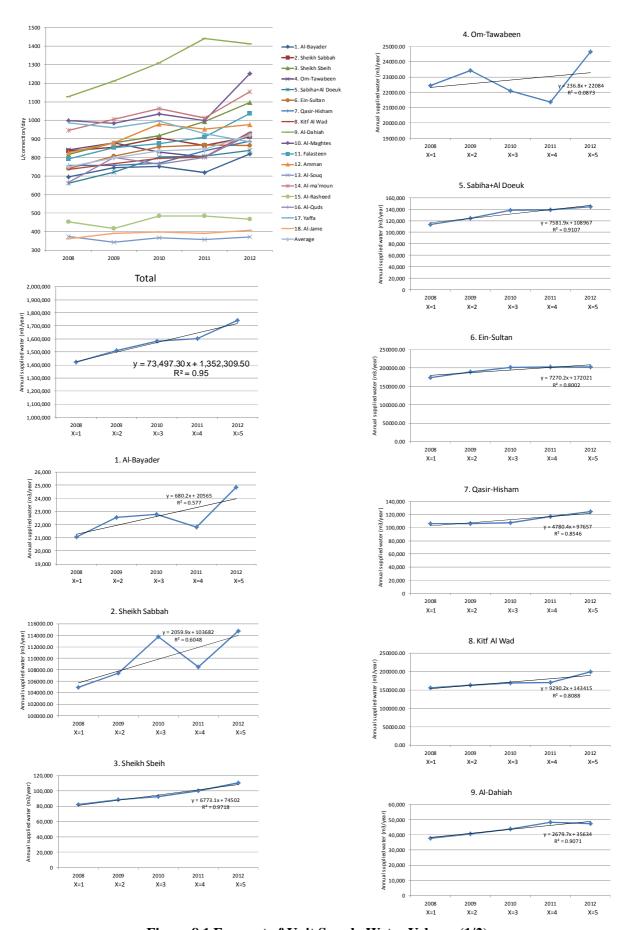
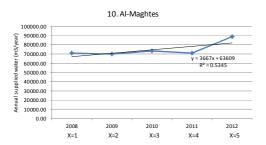
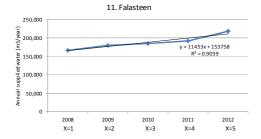
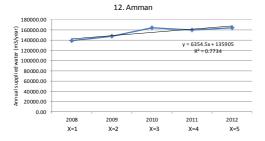
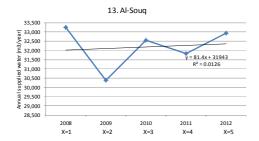


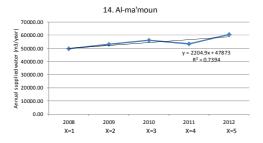
Figure 8.1 Forecast of Unit Supply Water Volume (1/2)

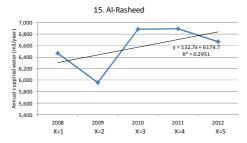








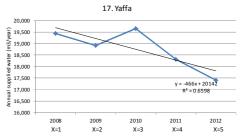




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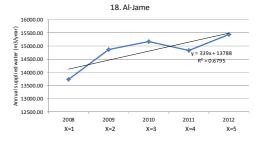


Figure 8.1 Forecast of Unit Supply Water Volume (2/2)

8.1.3 Wastewater volume

Wastewater from household is calculated by multiplying "discharged connections" by "unit wastewater volume" of each neighborhood (refer to **Table 8.8**). Wastewater from large users is summed up using projected wastewater volume of each user; of which 50 % is assumed to be discharged in connected year and 100 % from the next year (refer to **Table 8.6**). Influent to WWTP is calculated by multiplying the sum of discharged wastewater by 1.1, of which 0.1 is the rainwater inflow due to misconnection of private sewer (refer to **Table 8.8**).

Table 8.8 Influent Wastewater to WWTP (1/2)

Name of	Item				arge rate of su Discharged W	* *		55%	Remarks
Neighborhood			2014	2015	2016	2017	2018	Sum 2014-2018	
Al Bayader	Discharged New Connections (accumulated)	a	10	41	73	83	83	-	
	Unit Water Supply Volume	b	836	858	881	903	926	-	
	Unit Wastewater Volume	c=b*r	460	472	484	497	509	-	
	Wastewater from Newly Connected Large Users	d	2	4	5	5	6		16
	Discharged Wastewater from New Connections (m ³ /d)	e=a*c+d	7	23	40	46	48	164	
Shiekh Sabbah	Discharged New Connections (accumulated)	a	15	172	329	344	344	-	
	Unit Water Supply Volume	b	941	957	973	990	1,006	-	
	Unit Wastewater Volume	c=b*r	517	526	535	544	553		
	Wastewater from Newly Connected Large Users	d	1	9	16	16	16		13,14,15,21
	Discharged Wastewater from New Connections (m³/d)	e=a*c+d	9	99	192	203	206	709	
Shiekh Sbeih	Discharged New Connections (accumulated)	a	0	18	80	162	237	-	
	Unit Water Supply Volume	b	1,210	1,277	1,345	1,412	1,479	-	
	Unit Wastewater Volume	c=b*r	666	703	740	777	814	0	
	Wastewater from Newly Connected Large Users	d		10	50	107	102		
0 7 1	Discharged Wastewater from New Connections (m³/d)	e=a*c+d	0	13	59	126	193	391	
Om Tawabeen	Discharged New Connections (accumulated)	a	5	42	73	73	73	_	
	Unit Water Supply Volume Unit Wastewater Volume	b c=b*r	891 490	900 495	909 500	918 505	927 510	-	
	Wastewater from Newly Connected Large Users	d d	490	493	500	505	510	0	
	Discharged Wastewater from New Connections (m³/d)	e=a*c+d	2	21	37	37	37	134	
Sabiha+Al Doeuk	Discharged Wastewater from New Connections (m /d) Discharged New Connections (accumulated)	a a	10	81	201	326	431	134	
Sabilia+Al Doeuk	Unit Water Supply Volume	b	943	987	1.031	1.075	1.119		
	Unit Wastewater Volume	c=b*r	518	543	567	591	615		
	Wastewater from Newly Connected Large Users	d	2	3	3	3	4	15	9
	Discharged Wastewater from New Connections (m ³ /d)	e=a*c+d	7	47	117	196	269	636	
Ein Sultan	Discharged New Connections (accumulated)	a	10	99	247	407	570	050	
Lin Sulun	Unit Water Supply Volume	b	951	982	1.013	1.044	1.075		
	Unit Wastewater Volume	c=b*r	523	540	557	574	591	-	
	Wastewater from Newly Connected Large Users	d	29	79	100	105	111	424	6,7,8,11,19
	Discharged Wastewater from New Connections (m ³ /d)	e=a*c+d	34	132	238	339	448	1.191	
Qasir Hisham	Discharged New Connections (accumulated)	a	15	54	138	253	346		
	Unit Water Supply Volume	b	938	972	1,006	1,041	1,075	_	
	Unit Wastewater Volume	c=b*r	516	535	553	572	591	-	
	Wastewater from Newly Connected Large Users	d	3	6	6	7	7	29	20
	Discharged Wastewater from New Connections (m ³ /d)	e=a*c+d	11	35	82	152	211	491	
Kitf Al Wad	Discharged New Connections (accumulated)	a	13	78	190	330	496	-	
	Unit Water Supply Volume	b	983	1,027	1,071	1,114	1,158	-	
	Unit Wastewater Volume	c=b*r	541	565	589	613	637	-	
	Wastewater from Newly Connected Large Users	d	1	10	19	20	21		10,18
	Discharged Wastewater from New Connections (m ³ /d)	e=a*c+d	8	54	131	222	337	752	
Al Dahiah	Discharged New Connections (accumulated)	a	0	18	45	65	84	-	
	Unit Water Supply Volume	b	1,620	1,700	1,779	1,859	1,939	-	
	Unit Wastewater Volume	c=b*r	891	935	979	1023	1066	-	
	Wastewater from Newly Connected Large Users	d	_					0	
	Discharged Wastewater from New Connections (m³/d)	e=a*c+d	0	17	44	66	90	217	
Al Maghtes	Discharged New Connections (accumulated)	a	0	14	62	121	169		
	Unit Water Supply Volume	b	1,261	1,313	1,364	1,416	1,468	-	
	Unit Wastewater Volume	c=b*r	693	722	750	779	807	-	17
	Wastewater from Newly Connected Large Users	d * 1	3	6	6	7	7		
	Discharged Wastewater from New Connections (m ³ /d)	e=a*c+d	3	16	53	101	143	316	
I Falasteen	Discharged New Connections (accumulated)	a	0	29	117	237	423	-	
	Unit Water Supply Volume	b 	1,111	1,165	1,220	1,274	1,328	-	
	Unit Wastewater Volume Wastewater from Newly Connected Large Users	c=b*r	611	641 37	671 38	701 42	731	170	24,25,26
	wasiewajej itom newly Connected Large Users	u	18	3/	38	42	45	1/8	24,23,20

Table 8.8 Influent Wastewater to WWTP (2/2)

Name of	Item				arge rate of su Discharged W				Remarks
Neighborhood			2014	2015	2016	2017	2018	Sum 2014-2018	
2 Amman	Discharged New Connections (accumulated)	a	0	49	158	278	399	-	
	Unit Water Supply Volume	b	1,074	1,112	1,150	1,188	1,226	-	
	Unit Wastewater Volume	c=b*r	591	612	633	653	674	-	
	Wastewater from Newly Connected Large Users	d	42	108	134	143	150	577	1,2,3
	Discharged Wastewater from New Connections (m ³ /d)	e=a*c+d	42	138	234	325	419	1,158	
3 Al Souq	Discharged New Connections (accumulated)	a	2	4	44	123	203		
	Unit Water Supply Volume	b	367	367	368	369	370	_	
	Unit Wastewater Volume	c=b*r	202	202	203	203	204	_	
	Wastewater from Newly Connected Large Users	d	1	1	1	2	2	7	12
	Discharged Wastewater from New Connections (m ³ /d)	e=a*c+d	1	2	10	27	43	83	
4 Al Ma'moun	Discharged New Connections (accumulated)	a	0	32	79	109	134	_	
7 11 Ivia moun	Unit Water Supply Volume	b	1,204	1,246	1,288	1,330	1,372		
	Unit Wastewater Volume	c=b*r	662	686	709	732	755		
	Wastewater from Newly Connected Large Users	d	002	000	707	132	155	0	
	,		0	22	5.6	90	101		
	Discharged Wastewater from New Connections (m³/d)	e=a*c+d	0	22	56	80	101	259	
5 Al Rasheed	Discharged New Connections (accumulated)	a	8	27	39	39	39		
	Unit Water Supply Volume	b	499	508	518	527	536		
	Unit Wastewater Volume	c=b*r	274	280	285	290	295	-	22
	Wastewater from Newly Connected Large Users	d	1	3	3	3	3		23
	Discharged Wastewater from New Connections (m³/d)	e=a*c+d	3	11	14	14	15	57	
6 Al Quds	Discharged New Connections (accumulated)	a	0	29	118	243	363	-	
	Unit Water Supply Volume	b	1,003	1,056	1,108	1,161	1,214	-	
	Unit Wastewater Volume	c=b*r	552	581	610	639	668	-	
	Wastewater from Newly Connected Large Users	d	0	28	60	63	67	218	4,5,22
	Discharged Wastewater from New Connections (m ³ /d)	e=a*c+d	0	45	132	218	309	704	
7 Yaffa	Discharged New Connections (accumulated)	a	13	40	54	54	54	-	
	Unit Water Supply Volume	b	856	833	809	785	762	-	
	Unit Wastewater Volume	c=b*r	471	458	445	432	419	-	
	Wastewater from Newly Connected Large Users	d						0	
	Discharged Wastewater from New Connections (m ³ /d)	e=a*c+d	6	18	24	23	23	94	
8 Al Jame	Discharged New Connections (accumulated)	a	10	62	104	104	104	_	
	Unit Water Supply Volume	b	426	435	444	453	461		
	Unit Wastewater Volume	c=b*r	234	239	244	249	254	-	
	Wastewater from Newly Connected Large Users	d						0	
	Discharged Wastewater from New Connections (m ³ /d)	e=a*c+d	2	15	25	26	26	94	
vastewater Inflow om Bulk Users occumulated)	Jericho Agro-Industrial Park	f	351	871	1,336	1,802	2,267	6,627	63 m3/d as of June 20 638 m3/d as of end 20 planned wastewater volume 2,500 m3/d as end 2018; linear interpolation in the me time
	Others	g		250	500	750	1,000	2,500	
	Sum	h=f+g	351	1,121	1,836	2,552	3,267	9,127	
	Discharged Connections	i=Σa	111	889	2,151	3,351	4,552	11,054	
	Number of Bills for Discharged Connections		444	5,334	12,906	20,106	27,312		i*4 for 2014; i*6 from 2015 (billed in every 2 months)
	Discharged Wastewater (households, m³/d)	j=Σ(a*c)	50	470	1,214	1,993	2,833	6,560	
	Discharged Wastewater (large users, m³/d)	k=Σd	103	294	391	416	437	1,641	
				***************************************		***************************************			***************************************
	Discharged Wastewater (bulk users, m³/d)	h	351	1,121	1,836	2,552	3,267	9,127	
	Discharged Wastewater (sum, m ³ /d)	l=Σe+h	504	1,885	3,441	4,961	6,537	17,328	
um	Discharged Wastewater (accumulated, m3/year)	m	107,310	688,025	1,259,406	1,810,765	2,386,005	6,251,511	m=l*365*7months /12months for 2014; m=l*365 for 2015, 20 and 2018; m=l*366 for 2016
	Influent Wastewater to WWTP (accumulated, m3/d)	n=l*1.1	554	2,074	3,785	5,457	7,191	19,061	1.1: Rainwater inflow 10% due to misconnection of priv sewer
	Influent Wastewater to WWTP (accumulated, m3/year)	o	117,956	757,010	1,385,310	1,991,805	2,624,715	6,876,796	o=n*365*7months /12months for 2014; o=n*365 for 2015, 20 and 2018; o=n*366 for 2016

8.1.4 Cost calculation

- (1) Operation and Maintenance Cost
- 1) Personnel Cost (refer to **Table 8.9**)
 - ➤ 10 personnel are assumed to be assigned from June 2014, of which 1 manager, 2 engineers and 7 technicians/workers.
 - > 7 working months for 2014, and 12 working months after 2015.
 - ➤ Unit personnel cost is 7,000 NIS/cap/month for manager, 5,500 NIS/cap/month for engineer and 3,700 NIS/cap/month for technicians/workers as of 2012 in Jericho Municipality; annually 5% increase.

2) Electricity Cost

- > Comprised of "fixed charge" and "metered charge"
- ➤ "Fixed charge" is calculated by "maximum demand" multiplied by "unit fixed charge"; maximum demand is 225 kW when all equipment are in full operation; "unit fixed charge" is 6.4087 NIS/kW/month(bill) for low demand users (JDECO as of 2013); annually 5 % increase (refer to **table 8.11**).
- ➤ "Metered charge" is calculated by "total load" multiplied by "unit metered charge"; "total load" is based on 3,655 kWh/day per treated wastewater 6,600 m³/d considering operation hours; total load of a given year =3,655 kWh/day×Influent wastewater volume /6,600 m³/day×1.1; "unit metered charge" is calculated by weighted average of Rate A, B and C and their seasonal settings of JDECO tariff; annually 5 % increase (refer to **Table 8.11**).
- ➤ Solar generation is calculated by "100 kW×8 hours/day×0.7 (efficiency)"; reduction of electricity metered charge is calculated by "solar generation"×"unit metered charge" (refer to **Table 8.11**).
- ➤ 6 working months for 2014, and 12 working months after 2015 (refer to **Table 8.10**).
- 3) Repair Cost (refer to **Tables 8.12 and 8.13**)
 - ➤ Comprised of "spare parts replacement", "shipping" and "supervisor" cost.
 - Estimation was made by the contractor (Hitachi), but the annual upper limit was set as the 1% of construction cost for the mechanical and electronic works.
- 4) Chemicals Cost (refer to **Table 8.14**)
 - > The cost of Hypo-chlorine solutions is calculated, to be dosed to effluent before discharging to Wadi.
 - \triangleright Unit dose rate is 0.18 m³/d per treated wastewater 6,600 m³/d =0.0000273 m³/m³.
 - > Unit cost of chemicals is 1.3 NIS/kg (as of 2013 in Jericho Municipality); annually 5% increase.

(2) Capital cost

Depreciation and other capital costs are not considered during this calculation cycle from 2014 -2018.

Table 8.9 Personnel Cost (Unit: NIS)

Position		201-	4			201	5				201	6			201	.7		
	Rank	Full-time	Share of	Number	Rank	Full-time	Share of	Number		Rank	Full-time	Share of	Number	Rank	Full-time	Share of	Numl	ber
		/Part-time	Working Hours	Assigned F	Real	/Part-time	Working Hours	Assigned F	Real		/Part-time	Working Hours	Assigned Real		/Part-time	Working Hours	Assigned	Real
			al		=a1* b1		a2		=a2* b2			a3	b3 c3=a3* b3			a4	b4	c4=a4* b4
Head, Sewerage sect.	Manager	Full-time	100%	0.5	0.5 Manager	Full-time	100%	0.5	0.5	Manager	Full-time	100%	1	l Manager	Full-time	100%	1	1
Manager of WTTP	Manager	Full-time	100%	0.5	0.5 Manager	Full-time	100%	0.5	0.5	Manager	Full-time	100%	1	Manager	Full-time	100%	1	1
Sewer network	Engineer	Part-time	33%	0.5	0.165 Engineer	Full-time	100%	1	1	Engineer	Full-time	100%	1	1 Engineer	Full-time	100%	1	1
Sewer network	Engineer	Part-time	33%	0.5	0.165 Worker/Technician	Full-time	100%	1	1	Worker/Technician	Full-time	100%	1	Worker/Technician	Full-time	100%	1	1
House connection	Engineer	Part-time	33%	0.5	0.165 Engineer	Full-time	100%	1	1	Engineer	Full-time	100%	1	1 Engineer	Full-time	100%	1	1
riouse connection	Engineer	Part-time	33%	0.5	0.165 Worker/Technician	Full-time	100%	1	1	Worker/Technician	Full-time	100%	1	Worker/Technician	Full-time	100%	1	1
WWTP Operator	Worker/Technician	Full-time	100%	1	1 Worker/Technician	Full-time	100%	1	1	Worker/Technician	Full-time	100%	1	Worker/Technician	Full-time	100%	1	1
WWTP Worker	Worker/Technician	Full-time	100%	1	1 Worker/Technician	Full-time	100%	1	1	Worker/Technician	Full-time	100%	1	Worker/Technician	Full-time	100%	1	1
WWTP Maintenance (M)	Worker/Technician	Full-time	100%	1	1 Worker/Technician	Full-time	100%	1	1	Worker/Technician	Full-time	100%	1	Worker/Technician	Full-time	100%	1	1
WWTP Maintenance (E)	Worker/Technician	Full-time	100%	1	1 Worker/Technician	Full-time	100%	1	1	Worker/Technician	Full-time	100%	1	Worker/Technician	Full-time	100%	1	1
WWTP Laboratory	Worker/Technician	Full-time	100%	1	1 Worker/Technician	Full-time	100%	1	1	Worker/Technician	Full-time	100%	1	Worker/Technician	Full-time	100%	1	1
WWTP Guard	Worker/Technician	Full-time	100%	2	2 Worker/Technician	Full-time	100%	2	2	Worker/Technician	Full-time	100%	3	Worker/Technician	Full-time	100%	3	3
	Manager	-	-	1	1 Manager	-	-	1	1	Manager	-	-	2	2 Manager	-	-	2	2
Total	Engineer	-	-	2	0.66 Engineer	-	-	2	2	Engineer	=	-	2	2 Engineer	-	-	2	2
Total	Worker/Technician	-	-	7	7 Worker/Technician	-	-	9	9	Worker/Technician	-	-	10 10	Worker/Technician	-	-	10	10
	Sum	-	-	10	8.66 Sum	-	-	12	12	Sum	-	-	14 1	4 Sum	-	-	14	14

Position		201	8				N	Aonthly S	Salary (F	ull-time)	1				Annua	l Cost		
	Rank	Full-time /Part-time	Share of Working	Nur		2012	2013	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	Sum
			Hours a5	b5	c5=a5*			dl	d2	d3	d4	d5	e1=c1*d1* 7months	e2=c2*d2* 12months	e3=c3*d3* 12months	e4=c4*d4* 12months	e5=c5*d5* 12months	
Head, Sewerage sect.	Manager	Full-time	100%		1 1	7,000	7,350	7,718	8,104	8,509	8,934	9,381	27,013	48,624	102,108	107,208	112,572	397,525
Manager of WTTP	Manager	Full-time	100%		1 1	7,000	7,350	7,718	8,104	8,509	8,934	9,381	27,013	48,624	102,108	107,208	112,572	397,525
Sewer network	Engineer	Full-time	100%		1 1	5,500	5,775	6,064	6,367	6,685	7,019	7,370	7,004	76,404	80,220	84,228	88,440	336,296
Sewer network	Worker/Technician	Full-time	100%		1 1	5,500	5,775	6,064	4,283	4,497	4,722	4,958	7,004	51,396	53,964	56,664	59,496	228,524
House connection	Engineer	Full-time	100%		1 1	5,500	5,775	6,064	6,367	6,685	7,019	7,370	7,004	76,404	80,220	84,228	88,440	336,296
House connection	Worker/Technician	Full-time	100%		1 1	5,500	5,775	6,064	4,283	4,497	4,722	4,958	7,004	51,396	53,964	56,664	59,496	228,524
WWTP Operator	Worker/Technician	Full-time	100%		1 1	3,700	3,885	4,079	4,283	4,497	4,722	4,958	28,553	51,396	53,964	56,664	59,496	250,073
WWTP Worker	Worker/Technician	Full-time	100%		1 1	3,700	3,885	4,079	4,283	4,497	4,722	4,958	28,553	51,396	53,964	56,664	59,496	250,073
WWTP Maintenance (M)	Worker/Technician	Full-time	100%		1 1	3,700	3,885	4,079	4,283	4,497	4,722	4,958	28,553	51,396	53,964	56,664	59,496	250,073
WWTP Maintenance (E)	Worker/Technician	Full-time	100%		1 1	3,700	3,885	4,079	4,283	4,497	4,722	4,958	28,553	51,396	53,964	56,664	59,496	250,073
WWTP Laboratory	Worker/Technician	Full-time	100%		1 1	3,700	3,885	4,079	4,283	4,497	4,722	4,958	28,553	51,396	53,964	56,664	59,496	250,073
WWTP Guard	Worker/Technician	Full-time	100%	*	3 3	3,700	3,885	4,079	4,283	4,497	4,722	4,958	57,106	102,792	161,892	169,992	178,488	670,270
	Manager	=	=	1	2 2	7,000	7,350	7,718	8,104	8,509	8,934	9,381	54,026	97,248	204,216	214,416	225,144	795,050
Total	Engineer	=	-	1	2 2	5,500	5,775	6,064	6,367	6,685	7,019	7,370	14,008	152,808	160,440	168,456	176,880	672,592
1 Otal	Worker/Technician	-	-	10) 10	3,700	3,885	4,079	4,283	4,497	4,722	4,958	213,879	462,564	539,640	566,640	594,960	2,377,683
	Sum	-	-	14	1 14	-	-	-	-	-	-	-	281,913	712,620	904,296	949,512	996,984	3,845,325

Table 8.10 Electricity Cost (Unit: NIS)

	Items		2014	2015	2016	2017	2018	Sum Remarks
	m ³ /day average	A	554	2,074	3,785	5,457	7,191	-
Influent Wastewater	m³/year	В	117,956	757,010	1,385,310	1,991,805	2,624,715	B=A*365*7months/12months for 2014; - B=A*365 for 2015,2017 and 2018; B=A*366 for 2016
Unit Fixed Charge	NIS/kW/month	С	6.7291	7.0656	7.4189	7.7898	8.1793	6.4087NIS/kW/month for low demand users (as of 2013, annualy 5% increase)
Annual Fixed Charge	NIS	D	47	85	89	93	98	D=C*7months for 2014; D=C*12 months from 2015
Total Load	kWh/day	E	337	1,263	2,306	3,324	4,381	3,655 kWh/day for influent of 6,600 m ³ /day considering operation hours; E=3,655*A/6600*1.1
Unit Metered Charge	NIS/kWh	F	0.569	0.598	0.627	0.659	0.692	Weighted average of rate A to C and seasonal settings; 0.542NIS/kWh as of 2013, annualy 5% increase
Annual Metered Charge	NIS	G	40,827	275,675	529,185	799,538	1,106,553	G=E*F*365/7months/12months for 2014; 2,751,778 G=E*F*365 for 2015,2017 and 2018; G=E*F*366 for 2016
Unit Sales Price	kWh/day	FF	0.800	0.800	0.800	0.800	0.800	-
Solar Generation	NIS	(H)	95,387	163,520	163,968	163,520	163,520	H=100kW*8hrs/day*0.7*FF*365*7months /12months for 2014; 749,915 H=100kW*8hrs/day*0.7*FF*365 for 2015, 2017 and 2018; H=100kW*8hrs/day*0.7*FF*366 for 2016
Electricity Cost	NIS	I=D+G-H	-54,513	112,240	365,306	636,111	943,131	2,002,275

Table 8.11 Electrical Cost Calculation

Metered Charge

·			Wo	rking Day	/S			Friday&	Feast Ev	ening			Saturday&F	east Day	s	
	H	Iour	U	nit Rate	Sub To	otal	Hour	U	nit Rate	Sub To	otal	Hour	Unit Rate		Sub To	otal
Winter	A		16	0.4364	=	7.0		20	0.4364	=	8.7		20	0.4364	=	8.7
	В		2	0.7541	=	1.5		4	0.7541	=	3.0		2	0.7541	=	1.5
	C _		6	1.2859	=	7.7			1.2859	=	0.0		2	1.2859	=	2.6
			T	otal/day	16	.2 Sh		To	otal/day	11	7 Sh		Total/day		12	.8 Sh
Spring & Autumn	A		8	0.3826	=	3.1		10	0.3826	i =	3.8		20	0.3826	=	7.7
	В		2	0.4776	=	1.0		14	0.4776	i =	6.7		4	0.4776	=	1.9
	C _		14	0.5914	=	8.3			0.5914	-	0.0			0.5914	=	0.0
			Te	otal/day	12	.3 Sh		To	otal/day	10	5 Sh		Total/day		9	.6 Sh
ımmer	A		10	0.3955	=	4.0		24	0.3955	=	9.5		24	0.3955	=	9.5
	В		7	0.6026	=	4.2			0.6026	· =	0.0			0.6026	=	0.0
	C _		7	1.4105	=	9.9			1.4105	=	0.0			1.4105	=	0.0
			Т	otal/day	18	.0 Sh		To	otal/day	9	5 Sh		Total/day		9	.5 Sh
			V	Vorkigng					Friday				Saturo &Feast			st Da
				Days									&reast	Days		

	Workigng Days		Friday		Saturday &Feast Days	*	Feast Da	is regarded as holid	lay
Winter	61	988.6	13	152.7		16	204.9	\rightarrow	1346.2
Spring & Autumn	147	1807.5	30	315.4		36	344.2	\rightarrow	2467.1
Summer	40	721.9	9	85.4		13	123.4	→	930.7
									4743.9 NIS/kV
									0.542 NIS/k

Fixed Charge
For low power demand consumer 6.4087 NIS/ month

Category	Equipment Name	Motor Power	Q	'ty	Receiving	Operation	Total Load
		(kW/unit)	duty	standby	Power(kW)	(hr/day)	(kWh/day)
Grit Cha	mber						
	Mechanical Fine Screen	2.2	2	0	4.4	3.0	13.2
	Grit Collector	1.1	2 2 2	0	2.2	2.0	4.4
	Grit Removal Pump	2.2	2	0	4.4	0.50	2.2
	Floor Drain Pump	1.5	1	1	1.5	0.50	0.8
	Grit Separator	0.75	1	0	0.75	0.50	0.4
	Oil Discharge Pump	0.75	1	1	0.75		0.8
	Scum Screen	0.4	1	0	0.4	3.0	1.2
	Mixer	1.5	1	0	1.5	3.0	4.5
	Waste water pump	3.7	1	1	3.7	3.0	11.1
	for Vacuum						
	Conveyor	2.2	1	0	2.2	3.0	6.6
Reactor							
	Reactor Tank Mixer	3.7	8				710.4
	Aeration Blower	55	2	2	110	16.0	1,760.0
	Air Supply Valve	0.2	2	0	0.4	0.2	0.1
Final Cla							
	Clarifier	0.75	2	0	1.5	24.0	36.0
	Return Sludge Pump	15	2 2 2	2	20.1	24.0	482.4
	Waste Sludge Pump	5.5		1	11	6.0	66.0
	Scum Pump	3.7	1	1	3.7		11.1
	Floor Drain Pump	1.5	1	1	1.5	0.5	0.8
Disinfect	tion						
	Hypochlorite Pump	0.2	2	1	0.4	24.0	9.6
Utility Fa	ncility						
	Utility Water Supply Unit	7.4	1	0	7.4	_	53.3
	Defoaming Pump	3.7	1	1	3.7	24.0	88.8
	Auto Strainer	0.1	1	1	0.1	7.2	0.7
Gravity T	Thickner						
	Thickener	0.4	2	0			19.2
	Thickened Sludge Pump	5.5	2	1	11	2.5	27.5
Garden F	Facility						
	Circular Pump	1.5	1	1	1.5	8.0	12.0
Sub-total					225		3,323
Others							
	Lighting and Ventilation						332
Total							3,655

Table 8.12 Repair Cost (Unit: NIS)

Equipment No.	Items	Vendor	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
M01-03-01/02	Fine screen	NISHIHARA Environment Co., Ltd.	0	0	8,658	0	0	9,188	0	0	11,504	0	0	10,348	0	0	10,981
M02-02-01/02	Air Diffuser	Tsukishima Kikai Co., Ltd.	0	0	0	0	0	0	0	0	0	0	135,052	0	0	0	0
M02-08	Hoist Block for Blower	Elephant Chain Block Co., Ltd.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M03-04	Hoist Block for Sludge Pumps	Elephant Chain Block Co., Ltd.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M05-04	Hoist Block for Sludge Pumps	Elephant Chain Block Co., Ltd.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-06-01/02	Grit Removal Pump	FURUKAWA INDUSTRIAL MACHINERY SYSTEMS CO.,LTD.	0	0	0	304	57	58	2,026	60	61	3,136	64	65	2,076	68	1,117
M03-02-01/04	Return Sludge Pump	FURUKAWA INDUSTRIAL MACHINERY SYSTEMS CO.,LTD.	0	0	0	1,539	235	456	13,095	474	484	15,567	503	513	13,875	534	7,416
M03-03-01/03	Waste Sludge Pump	FURUKAWA INDUSTRIAL MACHINERY SYSTEMS CO.,LTD.	0	0	0	456	85	87	3,041	90	92	4,704	96	98	3,113	102	1,678
M05-02-01/03	Thickened sludge pump	FURUKAWA INDUSTRIAL MACHINERY SYSTEMS CO.,LTD.	0	0	0	456	85	87	3,041	90	92	4,704	96	98	3,113	102	1,678
M01-02-01/02	Coarse screen	Hitachi Plant Technologies, Ltd.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-04	Bypass Screen	Hitachi Plant Technologies, Ltd.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-05-01/02	Grit Collector	Hitachi Plant Technologies, Ltd.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-09	Oil Skimmer	Hitachi Plant Technologies, Ltd.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-15	Coarse screen for vacuum	Hitachi Plant Technologies, Ltd.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M03-01-01/02	Clarifier	Hitachi Plant Technologies, Ltd.	0	0	0	0	0	1,664	0	0	0	0	1,837	0	0	0	0
M05-01-01/02	Thickener	Hitachi Plant Technologies, Ltd.	0	0	0	0	0	1,026	0	150	0	0	1,133	0	0	0	172
M05-03	Waste Sludge Measuring Tank	Hitachi Plant Technologies, Ltd.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M04-03	Utility water supply unit	KAWAMOTO PUMP MFG.CO.,LTD.	0	0	157	0	1,025	166	0	1,617	177	1,131	0	175	0	0	1,397
M04-05-01/02	Defoarming Pump	KAWAMOTO PUMP MFG.CO.,LTD.	0	0	0	0	254	0	0	1,132	0	281	0	0	0	0	360
M01-01-01/03	Grit Chamber Inlet Gate	Maezawa Industries, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-16	Bypass Gate	Maezawa Industries, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M02-01-01/02	Inlet Distribution Weir	Maezawa Industries, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M02-04-01/02	Outlet Gate	Maezawa Industries, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M02-05-01	Isolation Gate	Maezawa Industries, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-08	Grit separator	Maezawa Industries, Inc.	0	0	0	0	0	0	0	10.240	0	0	0	0	0	0	0
M02-07-01/02	Air Supply Valve	Maezawa Industries, Inc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-07-01/02	Floor Drain Pump	Tsurumi Manufacturing Co., Ltd.	0	0	0	1.828	0	0	0	1.979	0	0	0	2,142	0	0	0
M01-10-01/02	Oil Discharge Pump	Tsurumi Manufacturing Co., Ltd.	0	0	0	1,775	0	0	0	1.921	0	0	0	2,080	0	0	0
M01-14-01/02		Tsurumi Manufacturing Co., Ltd.	0	0	0	2,284	0	0	0	2,472	0	0	0	2,676	0	0	0
M03-05-01/02	Floor Drain Pump	Tsurumi Manufacturing Co., Ltd.	0	0	0	1,828	0	0	0	1,979	0	0	0	2,142	0	0	0
M03-06-01/02	Scum Pump	Tsurumi Manufacturing Co., Ltd.	0	0	0	2,284	0	0	0	2,472	0	0	0	2,676	0	0	0
M11-01-01/02	Circular Pump	Tsurumi Manufacturing Co., Ltd.	0	0	0	1,828	0	0	0	1,979	0	0	0	2,142	0	0	0
M01-13-01/02	Mixer	Tsurumi Manufacturing Co., Ltd.	0	0	0	2,686	0	0	0	2,908	0	0	0	3,147	0	0	0
M04-04-01/02	Auto strainer	Asahi Machine MFG. Co.,Ltd				,				,				-,			
M01-11	Scum Screen	NIHON INKA CO.,LTD.	0	77	78	80	544	83	85	87	88	1,621	92	94	96	97	663
M01-12	Screenings Conveyor	NIHON INKA CO.,LTD.	0	102	78	107	761	111	85	115	88	2,110	92	125	96	130	928
M02-03-01/08	Reactor Tank Mixer	ShinMaywa Industries, Ltd.	0	5.184	0	9,125	0	7,608	0	88,790	0	6.074	0	10,691	0	8,914	0
M02-06-01/04	Aeration Blower	ShinMaywa Industries, Ltd.	0	456	1,740	474	484	14,379	503	513	48,213	534	545	2,080	567	578	17,184
M04-01	Hypochlorite Tank	TACMINA CORPORATION	0	0	0	0	0	0	0	0	0	2,438	0	0	0	0	0
M04-02-01/03	Hypochlorite Pump	TACMINA CORPORATION	0	117	119	122	124	126	129	132	134	3,849	140	142	145	148	151
	Clarifier (Drive Unit)	HANSHIN	0	0	0	0	1.359	0	0	0	0	7,773	0	0	0	0	1,657
	Thickener (Drive Unit)	SUMITOMO	0	0	0	0	0	0	0	0	0	0	2,477	0	0	0	0
Sub Total (Spare	parts replacement)		0	5,937	10.831	27,175	5,013	35,039	22,005	119,200	60,933	53,923	142,126	41,432	23,080	10,674	45,381
(4)	r	Shipping cost (from Yokohama Port to Jericho)	0	2,216	3,324	4,432	4,432	4,432	4,432	11,079	4,432	4,432	4,432	4,432	4,432	4,432	4,432
Sub Total (Shipp	oing)		0	2,216	3,324	4,432	4,432	4,432	4,432	11,079	4,432	4,432	4,432	4,432	4,432	4,432	4,432
one roun (on FF	8/	SV cost for HITACHI (7days x lpersonnel)	0	0	1,550	1,550	0	1,550	1,550	1,550	1,550	1,550	0	0	1,550	0	1,550
		SV cost for other manufactures (7days x Ipersonnel)	0	0	1,550	1,550	0	1,550	1,550	1,550	1,550	1,550	0	0	1,550	0	1,550
Sub Total (Super	visor)	SV cost for other manufactures (valys x spersonner)	0	0	3,100	3,100	0	3,100	3,100	3,100	3,100	3,100	0	0	3,100	0	3,100
and roun (buper		reparts+Shipping+SV)	0	8,152	17,255	34,707	9,444	42,571	29,537	133,379	68,465	61,455	146,557	45,864	30,612	15,105	52,912
	1 otal (Spa	Total	0	0,132	11,433	34,707	2,444	42,371	27,551	696,016	00,403	01,433	140,557	45,004	50,012	15,105	32,712
C-1-1-1	0.005			207 702	270.007	051 122	175 440	1 226 260	770 170		2 122 660	1 007 220	4.074.402	1.450.127	907 900	272 570	1 500 222
Schekel	0.035	Converter of Yen to Shekel	0	207,783	379,087	951,132	175,448	1,226,369	770,178	4,172,011	2,132,668	1,887,320	4,974,403	1,450,134	807,800	373,579	1,588,325
		Shipping	0	77,553	116,330	155,106	155,106	155,106	155,106	387,765	155,106	155,106	155,106	155,106	155,106	155,106	155,106
		Supervisor	0	0	108,500	108,500	0	108,500	108,500	108,500	108,500	108,500	0	0	108,500	0	108,500
		sum	0	285,336	603,916	1,214,738	330,554	1,489,975	1,033,784	4,668,276	2,396,274	2,150,926	5,129,509	1,605,240	1,071,406	528,685	1,851,931

Table 8.13 Repair Cost (Unit: NIS)

Iter	ns		2014	2015	2016	2017	2018	Sum 2014-2018	Remark
	m³/day avera	age A	554	2,074	3,785	5,457	7,191	-	
Influent Wastewater	m³/year	В	117,956	757,010	1,385,310	1,991,805	2,624,715	- B=	A*365*7months/12months for 2014 :A*365 for 2015,2017 and 2018 :A*366 for 2016
Spare Parts Replacement Cost	NIS	С	0	207,783	379,087	951,132	175,448	1,713,449	
Shipping Cost	NIS	D	0	77,553	116,330	155,106	155,106	504,095	
Supervisor Cost	NIS	E	0	0	108,500	108,500	0	217,000	
Total	NIS	F=C+D+E	0	285,336	603,916	1,214,738	330,554	2,434,544	
Adopted	NIS		0	285,336	374,830	374,830	330,554	1,365,549 Ma	aximum: M&E Construction cost *1%

Table 8.14 Chemicals Cost (Unit: NIS)

Items			2014	2015	2016	2017	2018	Sum	Remark
	m³/day average	e A	554	2,074	3,785	5,457	7,191	-	
Influent Wastewater	m ³ /year	В	117,956	757,010	1,385,310	1,991,805	2,624,715		B=A*365*7months/12months for 2014 B=A*365 for 2015,2017 and 2018 B=A*366 for 2016
Unit Dose of Chemicals (Hypochlorine)	m^3/m^3	С	0.0000273	0.0000273	0.0000273	0.0000273	0.0000273	-	Dose of 0.18m ³ /d per 6,600 m ³ /d
Unit Cost of Chemicals	NIS/m ³	D	1,240	1,302	1,367	1,436	1,507	-	1.3NIS/kg=1,181NIS/m ³ as of 2013 (annually 5% increase)
Chemicals Cost	NIS	E=B*C*D	3,993	26,908	51,699	78,084	107,984	268,668	

8.2 Major Assumptions for Calculating Connection Fee

Connection fee was based on the area of building only, in order to avoid inequality when land-area-based fee were applied; i.e. the variance of land area is so big compared with that of building area as shown in **Figure 8.2** that any connection fee based on the area of land might cause inequality when applied in Jericho.

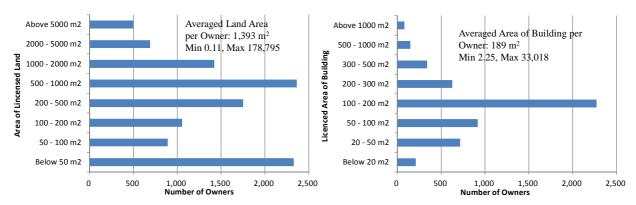


Figure 8.2 Distribution of Land area and Building Area per Single Owner

The construction cost of connection pipe was calculated for all the water supply area in the Municipality, and the JICA grant for the Pilot Project was deducted. The unit price of construction per connection was estimated as shown in **Table 8.15**, and it was multiplied by the number of total water supply connections in 2012 (i.e. 5,264 connections). The construction cost of connection pipe thus calculated was divided by the sum of total building area in the Municipality, as shown in **Table 8.16**. The unit connection fee was determined to be 13.0 NIS for every square meter of building floor, to recover all the construction cost of connection pipes, connection pits and receiving pits for the whole city water supply area.

Table 8.15 Unit Construction Cost from Sewer Manhole to Receiving Pit

Unit Cost Estimation (by Top Design Co.,Ltd, as of July 2013)

	Description	Unit	Price (NIS)	Remark
a	Excavation for H=80cm and W=60cm	m	29	
b	Backfill by sand for H=55cm and W=60cm	m	8	
c	Supply and install base coarse for H=20cm and W=60cm	m	15	
d	Supply and install asphalt for H=5cm	m	42	
e	Supply and install manhole	No.	360	60cm; Cover 160NIS and installation 140NIS
f	Supply and install pipes	m	60	8 inch (ND 200mm)
g	Labor	m	16	
h	Excavator	m	25	
i	Profit and overhead	-	20%	Percentage of Total Cost
j	VAT	-	15%	Ditto

Quantity and Total Price from Sewer Manhole to Receiving Pit

	Description	Qty	Price (NIS)	Total Price (NIS)	Ref
aa	Pipeline	10	154	1,540	a+b+c+d+f
bb	Manhole	1	360	360	e
сс	Labor	10	16	160	g
dd	Excavator	10	25	250	h
ee	Total Cost	ı	-	2,310	
ff	Profit and overhead	ı	20%*ee	462	i
gg	VAT	-	15% *ee	347	j
hh	Total price			3,119	

Table 8.16 Calculation of Connection Fee

Block # (from GIS data)	Building area (m ²) Remarks
33000	12,719.76
33001	18,964.47
33002	16,731.19
33003	4,859.46
33004	40,738.55
33005	33,818.52
33006	16,102.40
33007	28,201.79
33008	55,195.35
33009	36,465.19
33010	16,656.24
33011	67,799.43
33012	22,470.41
33013	29,444.65
33014	17,646.63
33015	0.00
33016	22,071.31
33017	104,715.32
33018	57,545.32
33019	28,224.00
33020	1,936.00
33021	17,562.45
33022	13,755.64
33023	6,704.57
33024	9,240.68
33025	118,336.70
33026	8,874.62
33027	32,160.25
33028	9,583.09
33029	57,750.09
33030	80,774.26
33031	0.00
33032	18,699.09
Sum of total building area in the whole City: A	1,005,747.42 m ²
Water Supply Connections in 2012 :B	5,264
- Residential	4,799 Sum of annual connections /6
- Commercial	465 Ditto
Unit construction cost per connection: C	3,119 NIS/connection
Construction cost for connection: D=B*C	16,418,416 NIS
JICA Fund for Pilot Project Construction: E	3,600,000 NIS (100mJPY, 0.036NIS/JPY)
Construction cost disbursed by Jericho Municipality: F=D-E	12,818,416 NIS
Unit Connection Fee: G=F/A	12.7 NIS/m ² of building

8.3 Job Description

The job description was developed for the chief positions of sewerage management, but not including the personnel belonging to the general administration sections (Human Resources, Public Relations, Quality Management and ICT) and financial sections (Financial Accounting and Revenue Collection), who should closely cooperate with the personnel of Sewerage Section for the integrated and effective service provision.

8.3.1 Head of Sewerage Section

Job Title: Head of Sewerage Section	Job ID:
Who is responsible for: Director of	Administrative Subordination: Water and SewerageDepartment
Water and Sewerage Department	
Version Number: (1/00)	Version Date:
Main Responsibilities	Basic Activities
Executing programs and plans of the sewerage service	 Prepare the plans and the work program to implement the sewerage project. Follow up the sewerage project in the city in terms of (plan, scope, designs, the various, budget). Participate in the preparation of the main plans to implement the sewerage project in the city. Follow up the progress in the project stages and provide all the necessary reports to describe the project progress. Coordinate and contact with the funders of the projects. Coordinate and contact with the companies and contractors who implement the project. Find out and follow up the development ways of the sewerage service in the city to ensure the full coverage of the service. Implement workshops to beneficiaries and prepare the guideline pamphlets for the sewerage service. Prepare and submit the technical papers and present it in the seminars and technical conferences to support developing the service in the city. Prepare an annual public awareness program and conduct the program to use sewers properly. Selection of users and management of reusing treated wastewater.
2. Sewerage service management	 Selection of users and management of reusing treated wastewater. Follow up the process of establishment and maintenance of the sewers in the city. Follow up the house connection process to the public sewer network according to the specified criteria. Evaluate the alternatives of using the treated wastewater in the city with beneficiaries. Find out and follow up the residents' complaints. Implement the various studies relating to the sewerage service (tariff, service level and coverage, the amount of received wastewater and the amount of treated wastewater.
Operating and maintenance the wastewater treatment plant and the sewer network	 Follow up the implementation of periodic maintenance for the sewer network and the wastewatertreatment plant. Follow up the corrective maintenance works for the sewer network and thewastewatertreatment plant. Follow up repairing the faults and malfunctions in the sewer network and wastewater treatment plant. Daily supervision (periodic) of operation of the waste water treatment plant and ensure its safety.
4. Developing the work in the section Powers: Administrative; Financial; Tech	 Prepare and implement the strategic studies for the sewerage service. Evaluate the performance of the section staff and submit it to the director of the department for approval. Identify the required training of the section staff. Prepare periodic reports for the sewerage service. Perform any other works related to sewerage service assigned by the director of the Water and Sewerage department. Follow up developing computerized systems of the sewerage service in the city.

8.3.2 Head of Sewer Network Maintenance

Job Title : Head of Sewer Network and House Connection Division	Job ID:
Who is responsible for: Head of Sewerage Section	Administrative Subordination: Water and Sewerage Department
Version Number: (1/00)	Version Date:
Main Responsibilities	Basic Activities

extension plan in the city. necessary schemes and designs for sanitation pro-
the main plans for the sanitation projects (connce). in the stages of sanitation projects activities and to describe the achievement state. dic inspection and following up of the public cal designs (standards) of the house connections. Sewer connection requests (domestic connectors).
aintenance of the domestic/commercial/industrial in proper method.
ar inspection of the domestic connectors.
ts.
house connections.
from user's premises/buildings to public sewer
se connection.
f sewer networks.
ion work on the computerized system.
eports.
ne range of related works assigned by the director
ε

8.3.3 Head of WWTP

Job Title : Head of Wastewater Treatment Plant	Job ID :	
Who is responsible for: Head of Sewerage Section	Administrative Subordination: Water and Sewerage Department	
Version Number: (1/00)	Version Date:	
Main Responsibilities	Basic Activities	
1. Work plans	 Prepare the annual plan and the estimated budget for the treatment plant work. Prepare the plant work programs and operational equipment. Follow up preparation the technical regulations for wastewater laboratory including determining the maximum acceptable of the daily and periodic tests results. 	
Operate and follow up the treatment plant	 Operate, follow up and direct and continuous supervise for waste water treatment plant work. Monitor the levels of wastewater flow to the plant and taking precautions to prevent the misuse of the work in the plant or exceed the facility capacities and standards. Analyze daily routine reports submitted by the workers in the plant and take necessary technical actions and follow up taking the administrative actions by the head of the section. Conduct regular inspection processes for all the facility assets and make sure the proper implementation according to regulations, manuals and other instructions. 	
Follow up the corrective and preventive maintenance for the waste water treatment plant	 Follow up the preventive technical inspection for all the operation elements in the wastewater treatment plant and follow up providing the necessary maintenance. Follow up conducting the necessary corrective maintenance processes as quickly as possible to avoid any crashes or improper work in the wastewater treatment plant. 	
4. Other Tasks	 Follow up organizing the files of the plant work and maintain all the data of the plant. Guide educational facility tour for visitors in the Wastewater Treatment Plant Follow up data entry of the plant work on the computerized system of the plant operation and maintenance. Prepare periodic and emergency reports about the plant work. Evaluate the staff of the plant. Perform any other tasks within the range of the work assigned by the responsible. 	

8.3.4 Maintenance Staff of WWTP

Job Title : Maintenance employee of	Job ID:			
the Plant	300 ID.			
Who is responsible for: The Responsible of Wastewater Treatment Plant Division	Administrative Subordination: Sanitary Section			
Version Number: (1/01)	Version Date:			
Main Responsibilities	Basic Activities			
Ensure the safety of all the plant parts	 Prepare maintenance and operation budget for the wastewater treatment plant. Conduct periodic inspection (preventive) and control the facilityparts and the systems of the plant in cooperation with the operator and/or worker. Conduct corrective maintenance works for the facilityparts of the plant in cooperation with the operator and/or worker. Ongoing coordination with the plants' operators before and during conducting the maintenance works. Prepare the regular reports describing the technical situation of the plant with its various parts. In case of emergency such as deterioration of treated wastewater quality, malfunction of equipment, power failure and so on, report to the manager and section chief immediately and then follow their instructions. When stopping and resuming whole of the Wastewater Treatment Plant, obtain the approval of the manager and/or the section chief. When depicting malfunction in regular inspection, inform the manager and/or the section chief of it immediately, and then follow their instructions. Inspection, adjustment, maintenance and cleaning of equipment in the Wastewater Treatment Plant Operation and monitoring in the Wastewater Treatment Plant Record the operation data, inspection results on record sheets. Record mechanical and electrical equipment and consumable stores for O&M on ledgers. Submit the regular report to the WWTP Manager 			

8.3.5 Operator of WWTP

Job Title: The Operator of the	Version Number: (1/00)			
Wastewater Treatment Plant				
Who is responsible for: The Re-	Version Date:			
sponsible of the Wastewater Treat-				
ment Plant Division				
Main Responsibilities	Basic Activities			
1. Operate the plant technically	Maintain and operate the units of wastewater treatment process and evaluate it.			
	Follow up the facility operation through the control room.			
	Conduct periodic inspection for all processes in the plant and inform the section			
	chief and manager of the plant operation status.			
	• Prepare the operation and maintenance reports which record the wastewater treat-			
	ment progress.			
	• In case of emergency such as deterioration of treated wastewater quality, malfunc-			
	tion of equipment, power failure and so on, report to the manager and section chief immediately and then follow their instructions.			
	immediately and then follow their instructions.			
	Get approval from the manager and/or the section chief, when stoppping and resum-			
	ing whole of the Wastewater Treatment Plant.			
	• When finding any malfunction in the regular inspection, inform the manager and/or			
	the section chief of it immediately, and then follow their instructions.			
	• Inspect, adjust, maintain and clean equipment in the Wastewater Treatment Plant.			
	Operate and monitor the Wastewater Treatment Plant.			
	Record the operation data, inspection results on record sheets.			
	Guide educational facility tour for visitors in the Wastewater Treatment Plant.			

	2. Other tasks	 Prepare the periodic reports. Perform any other tasks within the scope of the works assigned by the responsible person.
Powers: Administrative; Financial; Technical		

8.3.6 Worker of WWTP

Job Title : The Worker in the	Version Number: (1/00)		
Wastewater Treatment Plant			
Who is responsible for: The Re-	Version Date:		
sponsible of the Wastewater Treat-			
ment Plant Division			
Main Responsibilities	Basic Activities		
1. Cleaning, material transfer and	• Convey dry sludge from the Wastewater Treatment Plant to another site such as		
other tasks	dumping site.		
	• Remove detritus from a grid chamber at the Wastewater Treatment Plant.		
	• Clean rooms in the buildings at the Wastewater Treatment Plant.		
	• Clean the garden and yard in the Wastewater Treatment Plant.		
	Maintain trees in the Wastewater Treatment Plant.		
	• Perform any other tasks within the scope of the works assigned by the responsible		
	person.		
Powers: Administrative; Financial; Technical			

8.3.7 Laboratory

Job Title : The Treated Wastewater Laboratory	Who is responsible for:	
Version Number:	Version Date:	
Main Responsibilities	Basic Activities	
Conduct water quality tests at the laboratory	 Conduct periodic sampling of the wastewater at the inflow point of the wastewater treatment plant-and the wastewater at the final discharge point from the wastewater treatment plant. Conduct required water quality tests according to standard specifications.— Conduct treated wastewater quality test. Report the water quality test results to the Sewerage Section Prepare the periodic reports. Test water quality and sewage sludge, and monitor inflow water quality. Maintain computers, reagents and water quality test equipment in the laboratory. 	
2. Other Tasks	 Evaluate the performance of the staff in the division. Perform any other tasks within the scope of the work assigned by the director and/or section chief. 	
Powers: Administrative; Financial; Technical		

8.3.8 Security Guards

Job Title: The Security Guard of the	Job No.
Wastewater Treatment Plant	
Who is responsible for: The Responsi-	Administrative Subordination: Sewerage Secttion
ble oftheWastewater Treatment Plant	
Division	
Version Number: (1/01)	Version Date:
Main Responsibilities	Basic Activities

Guard the Wastewater Treatment Plant	 Protect the site and prevent a non-staff from entering the wastewater treatment plant Protect the assets of the plant and prevent fromgetting out any material and equipment except the permission of the manager and/or section chief. Inspect the assets of the plant periodically and immediate report it to the manager and/or section chief when any problem occurred. Perform any other task within the scope of the work assigned by the director and/or
	section chief.

8.4 ICT Development Plan

8.4.1 Current Software Systems

There are many applications used in the municipality to control the work, most of them focus on the Financial Department.

(1) Algassana System

As the main system in the municipality, a financial system that has been used since the beginning of 2005, it contains many modules as listed below:

- Accounting module
- Municipal revenues module
- Billing module
- Payroll module
- Inventory module

This system was developed using Oracle 11g database and is old and needs to be upgraded. The maintenance contract is renewed annually, which includes solving the fundamental problems in the system. The company made many substantial modifications to it, but these updates are not installed in Jericho municipality; Algassana Company demands for other fees for installing these updates.

(2) Work Flow Web-Based System

Itlaq Company has developed the system, and it is linked to the municipal revenues from the financial system. The system works efficiently; it offers multiple services to subscribers, including payments in respect of subscriptions, crafts and industries, property, cutting, and other services.

There is a new version the company has developed, municipality is waiting for the right opportunity to get this version.

(3) Mobile Billing System

This system was developed by STDDP Company and is designed to print water bills at the site. The municipality starts to use this from the beginning of March 2014. Being connected to the Algassana system to read the information of subscribers and the debt owed to them, it records the payments of the participants and transfers this data back to the Algassana system.

(4) Personnel and Payroll System

This web-based system was developed by Al-Isra Company, and the municipality will start to use it in the beginning of June 2014. Financial transactions on salaries will be made either by connecting the system to the Algassana system or by inserting these transactions again in the Algassana system.

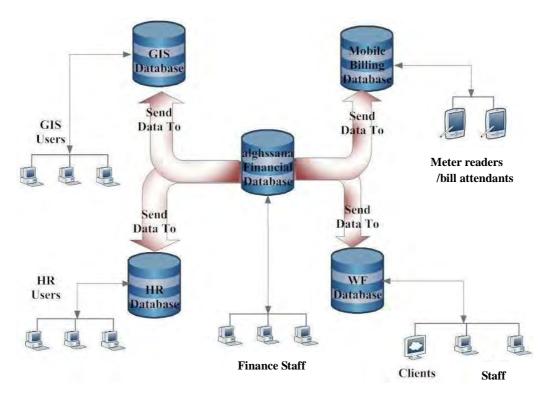


Figure 8.3 Interrelashionship Among Existing Software Applications

8.4.2 Roadmap for ICT Development

In our meeting with the Mayor on March 3, 2014, he said that the municipality will give all the guarantees that they will focus on the process of implementation and development of GIS; he clearly insured the GIS and its benefits for the municipality.

Reactivating GIS must be divided into three steps, bur before starting the process of reactivation, we must insure the guarantees needed, i.e.

- To build the GIS Unit, to be conrolled by the IT Section, and to make sure that the employees of that unit do not resign for two years at minimum and that a training program is developed for the staff on GIS;
- The municipality must guarantee that the licenses for the systems to be renewed every year;
- JICA is kindly requested to assist and monitor the whole process both technically and financially, for the initial stage/cost in particular.

Reactivating process will be divided into the following three phases:

- 1. To upgrade the Algassana financial system
- 2. To reactivate GIS Unit
- 3. To develop a web-based GIS system and to link the web-based GIS to the financial system
- (1) Phase 1: Upgrading Algassana Financial System
- 1) Urgent Need for Upgrading Algassana Financial System

Since 2005, Jericho municipality started to use this financial system in many departments and this is working as the main system in the municipality. A meeting was held with the Financial Manager, Auditing Manager, and IT Manager on February 18, 2014 to discuss the current situation of the software. The software has to be updated for many reasons, i.e.

- It has been strongly requested by the Ministry of Local Government to change the accounting method in the municipality from cash basis to accurual basis, as well as to separate special accounts for public utility services such as water supply and sewerage. But the existing Algassana system is designed for cash basis accounting and for sole general account;
- It does not support currency difference;
- It does not support cost center and projects management;
- It does not support fixed assets inventory;
- The function to export data to Microsoft Excel or Microsoft Word is not efficient;
- The reports give wrong data;
- Arabic interface only;
- No help manual

Jericho municipality tried another software in 2009, a Canadian software named Free Balance donated by the Ministry of Local Government, but there were many problems, mostly that it is complicated and the customized modules for Jericho municipality will not be available.

Algassana Company has the updated version of the software, installed in Hebron municipality. This new version is more stable, and for this reason we had a meeting with the president of Algassana Company and discussed the problems of the software and the new needs of Jericho municipality. The company provided an offer to install the new version and to meet all the needs of the municipality with the price of 25,000 USD and the duration of work for 9 months including training.

There are many reasons to update the financial system as part of reactivating GIS in Jericho municipality, mostly for the following:

- The function to deal with sewerage fees (wastewater tariff and connection fee) must be added;
- Customers and financial data have to be shown in the web-based GIS system, but the cureent version will not provide reliable data.

The Mayor and the relevant personnel in the municipality all insisted on the needs for updating the financial system, and it is one of the greatest and most urgent concerns for the municipality at this period, especially in line with the preparation of starting sewerage service. In order to move Jericho municipality to a new level of professionalism, the current version will not be effective.

2) Phase 1 - Overall Cost

The overall cost to upgrade Algassana financial system is shown in the table below.

Table 8.17 Overall Cost in Phase 1

Item	Cost (USD)
Upgrade Algassana Financial System	27,000

(2) Phase 2: Reactivate GIS Unit

The effective GIS implementation requires necessary staff members possessing a broad range of technical skills, as well as the new training for them, new equipment and the renewal of the expired software. At this phase it is necessary to build the GIS Unit, which is recommended to be controlled by the IT Section.

1) Staffing and Responsibilities

One GIS manager, one system/network administrator for the GIS (employee in the IT Section) and two tech-

nical staff are required. Their responsibilities are as listed below.

(a) GIS Manager/Coordinator

- Provides planning and direction for GIS growth to serve multiple departments
- Serves as chairman of the technical coordinating committee
- Provides overall management for all GIS implementation tasks
- Manages setting of priorities for database and applications development
- Serves as liaison to other departments and outside agencies
- Provides overall management for all contracted work

(b) Technical Staff

Collection of geographical information:

- Capture the location of 'assets' such as sewer manholes and connection/receiving pits, valves of water distribution network, street lights, road barriers and so on, using GPS tools in the field of private companies, government agencies and local authorities
- Desk-based data capture (digitizing) to convert paper maps to GIS datasets, for example, to record the location of telecoms cables, sewer and water pipeline from original maps

Storage, analysis and presentation of GIS:

- Create and maintain the structures necessary for GIS data storage
- Develop the tools for loading/transferring GIS data between different systems
- Determine how individuals will access the GIS (cooperate with the IT Section)
- Produce maps, develop reports, and perform analyses
- Determine how often updates need to occur, how the work processes that generate the updates will mesh with the update process, and how those updates will be accomplished
- Manipulate, analyze and present geographical information by using utilities or programs to convert GIS information from one format to another
- Develop and update internet applications to present GIS data and tools on corporate websites (cooperate with the IT Department)
- Use tools to join different GIS datasets together and create new information or investigate patterns, e.g. using population growth figures and planning information to estimate increasing/decreasing demand for school capacity

(c) System/Network Administrator

- Hardware: procurement, installation, and configuration
- Network infrastructure: installation, configuration, and tuning
- Server system performance tuning/troubleshooting
- Storage subsystem management/configuration/performance
- System and data backup and recovery
- Other related software (upgrades and service packs)

2) Training

The training for GIS has several aspects, in accordance with the roles and responsibilities of various staff that are participating in GIS. It must be noted that the training is useless if not immediately followed by the regular jobs related that need to utilize the GIS software and applications.

(a) System Administrator

- Database management software, if separate from the GIS application
- Hardware, including the workstation, tape drives or other data storage devices
- GIS software

(b) Technical Staff

- GIS software
- Digitizer and plotter
- Related products, such as design software (like AutoCAD)
- Programming languages used by the GIS software: This kind of training will not be necessary for all the members and it may be more effective for this kind of work to be contracted out.

(c) End-Users

Typically, the end-users are the regular existing staff of departments in the municipality. The training for end-users needs to be focused on the non-technical subjects which will help these personnel to carry out basic GIS operations (viewing data, navigating the GIS software), map making, basic analyses and other tasks which are most central to their respective responsibilities in the community. This training needs to focus on GIS software and applications, preparing and printing maps (basic training).

(d) Training Duration and Cost

There are many institutions that provide training course for GIS applications in Palestine. GSE is the most experienced and knowledgeable GIS vendor working in the WBG and is the only learning centre authorized by ESRI to train ArcGIS and GIS after GSE's staff passed successfully authorization exams. This company offers the training course for 3 persons with the price of **9,570USD** (including VAT) for 10 days duration. This cost is almost the same with other similar institutions that give GIS training courses. If there is the possibility to make the training in other country, the Jordan Training Institutions is recommended, because it has more experience in that field but the cost is almost the same. The trained personnel are expected in turn to train other staff in the municipality, mainly the end-users.

3) Hardware & Software

(a) Hardware

The table below shows the hardware needed for the GIS Reactivation.

Table 8.18

Hardware	Qty	Estimated Price /Unit (USD)	Total (USD)
GIS SERVER	1	3,500	3,500
Computers	3	1,400	4,200
UPS	2	400	800
Total (Estimated price including VAT)			8,500

(b) Software

a) GIS Rental Software

Good Shepherd Engineering Company is the only authorized system center for Autodesk in the West Bank & Gaza (WBZ) and is authorized to sell Autodesk products in the Palestinian region. The following list describes the cost for Renewal of GIS products needed in the second phase.

Table 8.19

D)	
,500	16,250
800	4,000
,750	11,875
,250	4,250
	36,325
	5,810 42,125
.,	800 -,750 -,250

b) Oracle 11 g Standard Edition

This system will be installed in the server, either JICA choosed to fund the next phase or not, it is necessary to build geodatabase. The geodatabase is the common data storage and management framework for ArcGIS. It combines "geo" (spatial data) with "database" (data repository) to create a central data repository for spatial data storage and management. It can be leveraged in desktop, server, or mobile environments and allows you to store GIS data in a central location for easy access and management. The estimated cost for the standard edition including installation is 7,000 USD.

4) Phase 2 - Overall Cost

The overall cost to reactivate GIS Unit is shown in the table below.

Table 8.20

Item	Cost (USD)		
Hardware	8,500		
Software	49,125		
Training	9,570		
Total (Estimated)	67,195		

(3) Phase 3: Develop Web-Based GIS system

1) Design and Implementation of Web-Based GIS system

GIS is becoming a vital tool in many applications covering database management, planning, risk assessment, service area mapping, location identification etc.

The rapid development of the internet promotes the popularity of web-based GIS, which itself shows great potential networks. Distributing and sharing maps via web helps decision-makers, investors who want to buy or build new institutions and government where to build new institutions, police etc.

A web-based application was funded by JICA as part of the GIS fund in 2006, for that a meeting was held with the company that developed the system, Good Shepherd Engineering & Computing Co. Ltd. (GSE). According to its president Mr. Michael Younan, the web application that GSE will develop for Jericho municipality will re-write all the application using Flex or Silver-light programming, since .NET is no more supported by the ArcGIS ESRI Server platform. Hence GSE will rewrite and redevelop the existing web-based GIS application.

GSE Company offers the rehabilitation of the web-based GIS application of Jericho municipality that GSE developed in 2009 and reproduce the 4 transactions within the application including a one-year support and maintenance of the application for 28,150 USD (Including VAT), it also offers to integrate and disseminate to the web application all the blocks and parcels from AutoCAD format to Arc-GIS geodatabase for 16,530 USD (including VAT).

The process of transferring data from AutoCAD format to ArcGIS geodatabase will take a long time for the new GIS Unit, but it is the Unit's responsibility and should be a part of the Unit's job. Hence the offer by GSE Company for integrating and disseminating all the blocks and parcels stated above is recommended to be rejected.

It is also recommended to design a new web-based GIS application, rather than to rebuild the old one. The new web-based application must meet the new needs and be flexible to support the multi-layers. The old web-based application is capable of getting data from the financial system, and the new application must also provide this ability. Besides, it is not necessary to build a web-based GIS application to support specifically the sewer network and sewerage service; it is sufficient that the new system provides the ability to add any new layer without writing a new code. In addition, the new application must be an Open Source system, while the old system is not. The cost for this is assumed to be not more than 50,000 USD.

2) Phase 3 - Overall Cost

The overall cost to develop a web-based GIS application is shown in the table below.

Table 8.21

Item	Cost (USD)
Design and implement a new web-based GIS application	50,000

8.4.3 Overall Cost and Schedule

The overall cost from phase 1 to phase 3 as well as the rough time-line is shown in the table below.

Table 8.22

Phase	Item	Cost (USD)	Schedule
1	Update Algassana Financial System	25,000	For 9 months, starting from the latter
		half of 2014 to the first half of 2015	
			(9months duration)
2	Reactivate GIS Unit		In the latter half of 2014, including the
		67,195	nomination of
			- 1 GIS manager;

Phase	Item	Cost (USD)	Schedule
			1 system/network administrator (concurrent with the IT Section);2 technical staff
	- Hardware	8,500	
	- Software	49,125	
	- Training	9,570	For 3 persons and 10 days duration
3	Design and Implement a New Web-Based GIS Application	50,000	In the latter half of 2014
	Total	142,195	



MUNICIPALITY OF JERICHO

Strategic Business Plan 2014-2018 For Managing Jericho Sewerage System

- Revised and Adjusted for 2015-2018 -

November 2015

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Chapter 1 Introduction

This "Strategic Business Plan for Managing Jericho Sewerage System 2014-2018" is a mid-term program developed for the next 5 years from 2014 to 2018. It aims at providing future management framework, activities to be accomplished and necessary funding resources to be obtained, as well as forming consensus of stakeholders (i.e. the mayor, city council members and municipality staff).

This plan makes clear the following four issues:

- ✓ Construction and household connection plan: branch sewer and connection work;
- ✓ Business plan: activities to be conducted each year;
- ✓ Staffing plan and organization structure;
- ✓ Financial plan: revised CAPEX and its funding resources; revised revenue/expenditure plan.

This plan is the annual rolling plan. The progress will be monitored and evaluated annualy along with the preparation of financial settlements after the end of each fiscal year, and the plan will be revised if necessary prior to the preparation of annual budget of the next year; i.e. the revision will be developed from the period of May/June to September/October.

Chapter 2 Mission, Objective, Means and Activities

The organization mission and the specific actions are categorized into hierarchy, comprised of the mission, objectives, direct means and activities, and are visualized as a tree-like structure of "starategy map" as shown in **Figure 2.2**.

2.1 Mission

A mission statement is an overall goal to be achieved by the Jericho Municipality on sewerage service, and it can work as an effective tool to inspire and influence employees by generating passion and commitment within the organization. The mission statement of Jericho Municipality on sewerage service is decided as below:

"Jericho Municipality Sewerage Section provides adequate and affordable sewerage service in a sustainable and environmentally sound manner."

2.2 Objectives and Means

The objective and its direct means of the Municipality to achieve the mission statement above are set up as shown in **Figure 2.1**. The objective is "to satisfy customers by high-level of service at reasonable tariff with full cost recovery" and the direct means to be taken for this objective comprise the following three components: "to increase the number of sewerage connections"; "to make many customers pay their bills without delay"; and "to implement efficient and effective operations".

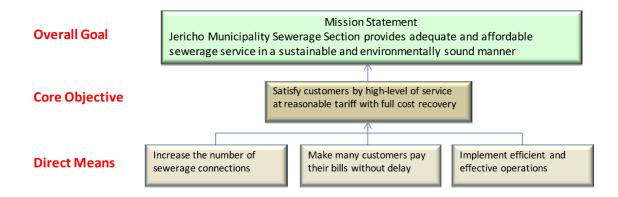


Figure 2.1 Breakdown of Mission into Objective and Means

The specific activities to achieve the three objectives (direct means) above are described in **Table 2.1**. The activities are categorized into the four perspectives of Balanced Score Card (BSC)¹: "Financial", "Customer", "Internal Business Process" and "Learning and Growth", in order to ensure the balanced management framework.

Table 2.1 Activities to be Conducted from Four Perspectives of BSC

Perspectives	Activities
1. Financial	(a) Ensure the commitment from donors to fund the designing and construction of branch sewer and
	household connections
	(b) Implement phased hike of wastewater tariff and connection fee in line with the price increase
2. Customer	(a) Prepare and implement public awareness campaigns for smooth connection and payment of connec-
	tion fee without delay
	(b) Cooperate with the Popular Committee of Aqbat Jaber Camp to accelerate sewer construction and
	connection in the Camp
	(c) Cooperate with PIEFZA and PRICO to accelerate sewer connection in JAIP
	(d) Develop and implement reuse scheme of treated wastewater and sludge at reasonable price
3. Internal Busi-	(a) Accurate and quick transfer and processing of customers' complaints using extended "Work Flow
ness Process	System"
	(b) Accurate and smooth transaction of new connection information using extended "Work Flow Sys-
	tem"
	(c) Accurate and smooth transaction of meter reading information using new "Wastewater Tariff System"
	and "Mobile Billing System"
	(d) Strengthen the activities towards non-payment of connection fees and wastewater tariff
	(e) Preventive and periodic maintenance utilizing asset inventory database and record of repair work
4. Learning and	(a) Systematic training is designed and implemented on O&M of facilities for the staff of Sewerage Sec-
Growth	tion

The balanced scorecard (hereinafter "BSC") is a strategic management system to assist the realization of the vision of the organization. It provides a "balanced" performance measurement framework that added non-financial perspectives comprising of "Customer", "Internal Business Process" and "Learning and Growth" to the traditional "Financial".

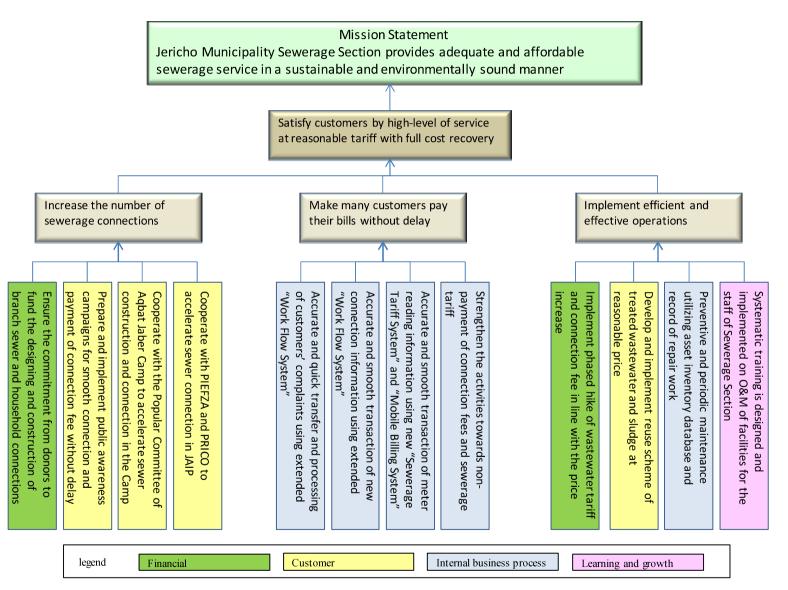


Figure 2.2 Strategy Map of Jericho Municipality for Managing Sewerage System

Chapter 3 Basic Scenario

3.1 Wastewater Tariff and Connection Fee

The sewerage by-law of Jericho Municipality including wastewater tariff and connection fee was approved by the Municipality Council in March 2014 and came into effect in April 2014. The wastewater tariff and connection fee scheme is shown in **Table 3.1**. Uniform volumetric tariff was adopted instead of progressive volumetric tariff, considering the unexpected behavior of customers to save water. In addition the Municipality Council decided on 18th August 2015 after getting the approval by PWA to halve both the regular price of wastewater tariff and connection fee in order to accelerate the household connection and the tariff payment. Since the reluctance to pay connection fee and wastewater tariff is so prevailing among the citizens that the public awareness campaign is all the more important, including the door-to-door visit to potential/existing customers for accelerating the connection and collection of connection fee and wastewater tariff.

Table 3.1 Wastewater Tariff and Connection Fee

Category	Unit Fee		Notes
	Regular Price	Encouraging Price	
Wastewater	1.0 NIS/m ³ 0.5 NIS/m ³		- For every cubic meter of water consumption
Tariff			- Encouraging price applicable till 31 December 2017
Connection	13 NIS/m ²	7 NIS/m ²	-For every square meter of building
Fee			-Encouraing price applicable till 31 December 2016

3.2 Cost Recovery Principle

(1) Cost Recovery for Household Connection

The revenue of connection fee shall recover all the construction cost from connection pit until receiving pit, the schematic diagram of which is shown in **Figure 3.1**. The construction cost of trunk/branch sewer up to connection pits shall be borne by the Municipality and shall not be subject to the connection fee. Land or building owners are responsible for private sewer inside the owner's premise excluding receiving pit(s). The connection fee and internal connection cost for private sewer in the Pilot Project area, which were initially paid by the Japanese grant though technical assistance project, shall start to be recovered from the beneficiaries by the Municipality from December 2015.

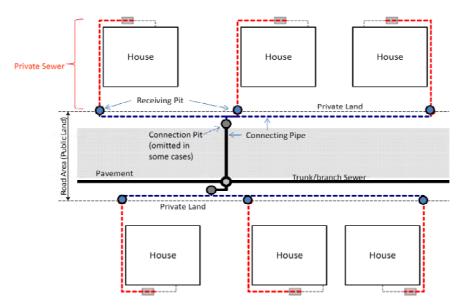


Figure 3.1 Schematic Diagram of Household Connection

(2) Recovery of Operation and Maintenance Cost as Planned in 2014

According to the meeting with PWA on 5th September 2013, the article 3 of the Water Tariff Regulation 2013 which defines the full cost recovery principle of water and wastewater service shall be applied to all the municipalities without any exception, though some phased approach shall be allowed. The 2014 version of this plan was so designed that the revenue of wastewater tariff shall recover the 100% of the operation and maintenance cost, excluding the capital cost (depreciation) that shall be recovered at the next stage after 2018. To enable this, the treated wastewater was assumed to be sold for reusing, as well as the electricity generated from the solar panels in the WWTP shall be sold to JDECo according to the agreement between the Municipality and JDECo. Moreover, it was assumed essential to accelerate the household connection to sewer, including the connection in the Aqbat Jaber Camp.

(3) Recovery of Operation and Maintenance Cost after 2015 Rolling

The assumed increase in the 2014 plan regarding the household connections and the inflow wastewater from JAIP and Aqbat Jaber Camp has been critically low, and the its prospect until 2018 needs drastically downward revision. This 2015 rolling plan reflects this downward modification, as well as the temporary reduction of wastewater tariff from 1.0 NIS/m³ to 0.5 NIS/m³ that was stated in **3.1**, and consequently the full cost recovery requested by the Water Tariff Regulation 2013 can not be achieved during the year from 2014 to 2018.

3.3 KPIs and Targeted Values

The key performance indicators (KPIs) and their targeted values were defined as shown in **Table 3.2**. The KPIs and target values related to customer service e.g. "complaints and requests resolved on time" and related to training e.g. "minimum time dedicated to continuous professional development (CPD)" will be set up at the next stage after 2018 based on the analysis and evaluation of the historical record of operation.

Table 3.2 KPIs and Targeted Values

Index	Annual Targeted Value	Notes
1. Influent Wastewater Volume (m³/day)	390 m ³ /d (in 2015)	
	740 m ³ /d (in 2016)	
	1,200 m ³ /d (in 2017)	
	$1,760 \text{ m}^3/\text{d} \text{ (in 2018)}$	
2. Volume of Reused Wastewater (m³/month)	More than 75% of effluent wastewater	
	volume from 2016	
3. Water Quality Test		
- number of sampled, tested & passed the standard		
4. Number of Connection Applications	340 connections/year from 2016	
- monthly & accumulated		
5. Number of Connections Inspected and Approved	340 connections/year from 2016	
- monthly & accumulated		
6. Operating Revenue (NIS)	-	
7. O&M and Administrative Expenditure (NIS)	-	For Sewerage Section
		only
8. Unit Treatment Cost (NIS/m³)	7.0 NIS/m ³ (in 2018)	Calculated by #7/#1
9. Working Ratio	More than 0.37 (in 2018)	Calculated by #7/#6
10. Number of Staff	14 full-time staff including duplica-	
	tionn from 2016	
11. Number of Bills of Wastewater Tariff	-	No reporting function in
- delivered & collected		existing Al-Ghassan Sys-
		tem
12. Amount of Bills of Wastewater Tariff	40% (collected/delivered) from 2016	
- delivered & collected		
13. Number of Service Complaints Related to Sewe-		
rage Service		

Chapter 4 Activities to be Strategically Conducted

The annual activities and/or targets to be strategically conducted and/or achieved from 2014 to 2018 are listed in **Table 4.1**, according to the activities categorized by the three direct means.

Table 4.1 Annual Activities from 2014 to 2018

Direct means	Activities	Present status and challenges as of November 2015			Specific Activities		
			2014	2015	2016	2017	2018
Increase the number of sewerage	Ensure the commitment from donors to fund the designing and construction of branch sewer	◆12.5km of branch sewer constructed by USAID	Preparation and construction supervision of PP1, PP2 and USAID project	Preparation and construction supervision of PP2 and USAID project	Searching for and securing the commitment of potential donors		
connections	Prepare and implement public awareness campaigns for smooth connection and payment of connection fee without delay	◆89 and 359 connections were connected by PP-1 and PP-2 respectively ◆ Public meeting held in Jun 2015 explaining household connection and connection fee	Public meetings; PR on various media	Public meetings; PR on various media; Door-to-door visit to accelerate connections	Public meetings; PR on various media; Door-to-door visit to accelerate connections	Door-to-door visit to accelerate connections	Public meetings; PR on various media; Door-to-door visit to accelerate connections
	Cooperate with the Popular Committee of Adbat Jaber Camp to accelerate sewer construction and connection in the Camp	◆ Tender document ready for construction and fund commitment offered by Gol via UNDP for FY 2016 but not decided ◆ Dialogue on-going between JM, PCSAJC and PCSESC to agree on administrative, technical and financial issues	Basic agreement by May; Continuous Preliminary information exchange and dialogue	Intermittent dialogue to agree on administrative, technical and financial issues; Cooperation on PR activities for connection and tariff payment	Intermittent dialogue to agree on administrative, technical and financial # issues; Agreement on connection fee and wastewater tariff among JM, PCSAJC and UNRWA	Cooperation on PR activities for connection and tariff payment	Cooperation on PR activities for connection and tariff payment
	Cooperate with PIEFZA and PRICO to accelerate sewer connection in JAIP	◆One factory (Palolea) ready to start operation, waiting for the permit by MoH ♦ UNDP to construct pumping station and pressure mains, with schedule not fixed yet ♦ Early agreement with JM and PIEFZA/PRICO needed on administrative, technical and financial issues ♦ factories around JAIP discharge wastewater amouting 12m³/d; gravity sewer connection is possible along the north-western	Agreement by May particularly on wastewater tariff; Preliminary information exchange and dialogue	Intermittent dialogue to agree on administrative, technical and financial issues	Intermittent dialogue to agree on administrative, technical and financial issues; Agreement on administrative, technical and financial issues		
Make many customers pay their bills	Accurate and quick transfer and processing of cusotmers' complaints using extended "Workflow System"	periphery of JAIP ◆ Existing Workflow System was modified for sewerage service	Implement minimum version-up of Workflow System for sewerage				
without delay	Accurate and smooth transaction of new connection information using extended "Workflow System"	-		Develop sub-system of Workflow System for managing sewerage connection			
	Accurate and smooth transaction of meter reading information using new "Sewerage Tariff System"	◆Water tariff and wastewater tariff in one bill from March/April 2015 ◆Mobile billing system in operation, linked to existing billing system and printable hand-held units		Develop built-in system for managing sewerage fee	Develop built-in system for managing reused wastewater fee		
	Strengthen the activities towards non- payment of connection fees and sewerage tariff	◆ Preparation of collecting connection fee and construction cost for internal connection work within PP area ★ Temporary discount of connection fee and sewerage tariff being applied from Sep 2015 to Dec 2016 and Dec 2017 respectively ★ Installment of paying connection fee (13NIS/m²) up to 12 months (Aug 2014) ★ Installment of paying connection fee (7NIS/m²) up to 6 months for 70% of total fee, after paying 30% in cash (Nov 2015)		Public meetings; PR on various media; Verify collection rate, develop countermeasures if necessary (including installement /reduction /exemption)	Public meetings; PR on various media; Door-to-door visit to enhance payment of connection fee and internal construction cost (PP area) and wastewater tariff	Public meetings; PR on various media; Door-to-door visit to enhance payment of connection fee and internal construction cost (PP area) and wastewater tariff	Public meetings; PR on various media; Door-lo-door visit to enhance payment of connection fee and internal construction cost (PP area) and wastewater tariff
Implement efficient and effective operations	Implement phased hike of wastewater tariff and connection fee in line with the price increase	◆ Creating separate account and adopting accrual accouting are essential for proper cost allocation; Al-Ghassan system should be renovated for that purpose ◆ Agreement concluded between JM and JDECo for reducing electricity tariff in proportion to the generated electricity by solar panels	Negotiate sales price with JDECo generated from solar panels; Renovate Al-Ghassan for accrual accounting, cost center, data export, linking to GIS, fixed assets inventory etc.		Verify and if necessary prepare revision draft of wastewater tariff and connection fee. Apply original connection fee from discounted 7 NIS/m² to 13 NIS/m²	Apply original sewerage tariff from discounted 0.5 NIS/m³ to 1.0 NIS/m³	Verify and prepare draft of revised wastewater tariff and connection
	Develop and implement reuse scheme of treated wastewater and sludge at reasonable price	◆Farm experiment in WWTP and water quality test on-going before lauching supply to outside users	Farm experiment after June; Treated wastewater quality test; Information disclosure on treated wastewater and sewage sludge	Farm experiment; Treated wastewater quality test; Information disclosure on treated wastewater and sewage sludge		Reuse rate more than 75%; Conduct F/S for introducing advanced treatment	Reuse rate more than 75%; Introduce advanced treatment apparatus
	Preventive and periodic maintenance utilizing asset inventory database and record of repair work	◆No management function for fixed assets in current Al-Ghassan System ♦ No function for dealing with technical reportings in current Workflow System; renovation needed ♦ Hands-on training needed for data entry of sewer network in GIS	Develop program for GIS reactivation and system renovation by end Mar: Purchase hardware &coffware for GIS; GIS staff training as end-users; Develop preventive maintenance plan for WWTP and sewer network	Basic training on the operation of GIS funded by TeCSOM, Fill in data from as-built drawings of sewer network inti GIS; Renovate Workflow System for daily technical reporting. Develop software for WWTP assets inventory, management, Review and revise sewer inspection/cleaning program, Purchase necessary equipment e.g. high pressure eleaning vehicle	WWTP and sewer network; Develop support software for sewer network management using GIS	Make full use of support software for sower network management and WWTP assets inventory management	Develop repair plan for another 5 years, after analyzing and evaluating historical repair data
	Systematic training is designed and implemented on O&M of facilities for the staff of Sewerage Section	◆ Training being conducted with TeCSOM team	Training on basics and OJT of O&M	OJT of O&M Training for handling sewer maintenance apparatus	14, full-time, regular and trained staff; Develop business continuity & emergency management plan	14, full-time, regular and trained staff	14, full-time, regular and trained staff; OJT of O&M for advanced treatment

Chapter 5 Revenue and Expenditure Plan

5.1 Revenue and Expenditure Schedule

The revenue and expenditure schedule from 2014 to 2018 is shown in **Table 5.1** and **Figures 5.1** and **5.2**. The revenue is consisted of wastewater tariff and reuse charge, and the expenditure is consisted of the personnel, electricity, repair and chemicals cost necessary for operation and maintenance. The collection rate of wastewater tariff is set as 15% in 2015 and 40% after 2016 based on the current collection status of both wastewater tariff and water tariff. The revenue of reuse charge was calculated assuming that the percentage of reusing treated wastewater is 75% from 2016 and the unit charge is 0.5 NIS/m³.

5.2 Major Assumptions

Major assumptions used in the calculation are described in Chapter 8.1.

Table 5.1 Annual Balance of Revenue and Expenditure (Unit: NIS)

Items			2014	2015	2016	2017	2018	Sum	Remarks	
Discharged Wastewater (m3/year) A			14,600	128,845	245,952	398,580	583,270	1,371,247		
Influent Was	tewater to WV	VTP (m3/year)	B=A*1.1	16,121	141,620	270,474	438,365	641,670	1,508,250	_
Reuse Rate o	f Treated Was	tewater	С	0%	0%	75%	75%	75%	-	
Wastewater Tariff (NIS/m3) D		D	1.0	0.8	0.5	0.5	1.0	-	In 2015 1.0 NIS/m3 until Aug.; 0.5 NIS/m3 after Sep.	
Reused Wast	ewater Tariff ((NIS/m3)	E	-	-	0.5	0.5	0.5	-	
Collection Ra	ate of Wastewa	ater Tariff	F	0%	15%	40%	40%	40%	-	
	Wastewater	Γariff	G=A*D*F	0	15,461	49,190	79,716	233,308	377,675	
Revenue	Reused Wate	er Tariff	H=B*C*E	0	0	101,428	164,387	240,626	506,441	_
	Sum		I=G+H	0	15,461	150,618	244,103	473,934	884,116	
		Personnel	J	178,959	481,728	561,324	589,437	618,909	2,430,357	_
		Electricity	K	49,559	44,787	66,024	120,793	152,704	433,867	
	O&M Cost	Repair	L	0	156,178	156,178	780,892	468,535	1,561,783	
		Chemicals	M	546	5,034	10,094	17,185	26,399	59,258	
Expenditure		Sum	N=J+K+L+M	229,064	687,727	793,620	1,508,307	1,266,547	4,485,265	
		Interest	0	0	0	0	0	0	0	Capital cost not
	Capital Cost	Depreciation	P	0	0	0	0	0	0	subject to be recovered until
		Sum	Q=O+P	0	0	0	0	0	0	2018
	O&M and Ca	apital Cost Tota	ıl R=N+Q	229,064	687,727	793,620	1,508,307	1,266,547	4,485,265	
Balance			S=R-I	-229,064	-672,266	-643,002	-1,264,204	-792,613	-3,601,149	

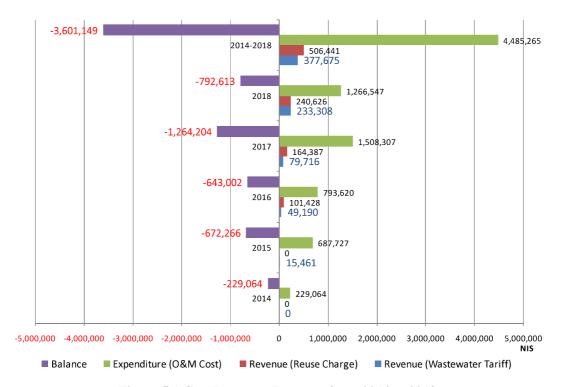


Figure 5.1 Cost Recovery Prospect from 2014 to 2018

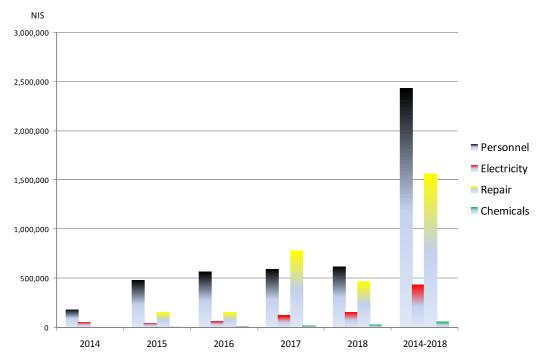


Figure 5.2 Annual Breakdown of O&M Cost

Chapter 6 Capital Investment Plan

6.1 Connection to Public Sewer

The connection to public sewer will be accelerated from 2014 to 2015, using the scheme of the Pilot Project implemented in the JICA Technical Assistance Project. This Pilot Project has the total budget of 3.8mNIS (100mJPY) and through this 89 and 359 connections were connected in 2014 and in 2015 respectively. The Municipality has started to construct from 2015 by its own budget the connecting pipe from connection pit to receiving pit, through which 43 connections were connected by 16th November 2015 and 17 and 20 connections are supposed to be connected until December 2015 and for every month from 2016 respectively. In addition, The Municipality is planning to start collecting the connection fee and the cost of internal connection work within households in the Pilot Project area, and annually 100 new connections shall be added from 2016 by using this fund.

Table 6.1 Connection to Public Sewer

Category	2014	2015	2016-2018 (per year /total in 3 years)	
New Connections	89	359		448
through Pilot Project	69	339	-	440
New Connections		69 (by 7 th Nov.)	240/720	805
by Jericho Municipality	=	16 (by End Dec.)	240/720	803
Fund from PP1 and PP2	-	-	100/300	300
Sum	89	444	1,020	1,553

6.2 Construction of Branch Sewer

It is estimated in the Detailed Design (D/D) Study of the Grant Project of JICA that the total length of branch sewer reaches around 50km, including 16 km to be constructed by the commitment of the Palestine Authority (PA). The latter was supported by USAID, which amounts to 4.5 mUSD and was completed in October 2015, to cover the construction of 12.5 km of branch sewer and 2.1km of connecting pipe from manhole to connection pit. The PA's own commitment, which amounts to 1.0 mUSD, has been postponed due to its financial crisis and its implementation is unforeseen to date as of November 2015. The remaining branch sewer including the connecting pipe from manhole to connection pit should be constructed from 2016 onwards by the Municipality side, and the necessary commitment of donors for funding should be sought for.

Chapter 7 Organization and ICT System Development Plan

7.1 Organogram of Sewerage Section

The sewerage section started its regular activities after starting operation of the WWTP in June 2014, and mainly deals with the technical aspect of sewerage service. The organogram of Water and Sewerage Department is shown in **Figure 7.1**. Fourteen full-time and regular staffs have been identified to be necessary in the technical assistance project of JICA, while the current staffing as of November 2015 is shown in **Table 7.1**. The number of current staff is 16, of which 10 are full-time including duplication and 6 are concurrent with other jobs. It is assumed that concurrent staff shall be replaced by full-time staff in a phased manner and the number of full-time staff shall be 14 including duplication, while the number of concurrent staff shall be reduced to 2 from 2016 onwards.

Other functions related to sewerage service such as bill delivery and collection, customer service, public relations, GIS mapping of sewer network, financial accounting or human resources management shall be allocated to the specific departments/sections, and hence the service provision to customers should be implemented in close cooperation with the Sewerage Section and other relevant departments/sections.

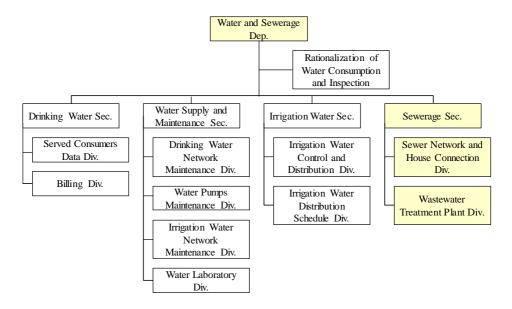


Figure 7.1 Organogram of Water and Sewerage Department

Table 7.1 Staffing Plan of Sewerage Section (as of November 2015)

Dep./Sec./Div.	Designation	Number	Name	Work Type	Notes
Water and Sewerage Dep.	Manager	1	Mr. Mohammed Fetyani	Concurrent	
Sewerage Sec.	Manager	1	Mr. Ibrahim Abu Seiba	Full-time	
	Manager		Mr. Ibrahim Abu Seiba	Full-time	Duplication
Sewer Network and	Technician	,	Mr. Majdi Mohammad Al-Ghouj	Full-time	
House Connection Div.	Technician	4	Mr. Thaer Dodeen	Concurrent	
	Technician		Mr. Mohammed Mehsen Jalayta	Concurrent	

Dep./Sec./Div.	Designation	Number	Name	Work Type	Notes
	Manager	1	Mr. Ibrahim Abu Seiba	Full-time	Duplication
	Operator	1	Mr. Omran Khalaf	Full-time	
	Inspection/	2	Mr. Mohammed Awajneh	Concurrent	Mechanical
	O&M	2	Mr. Maher Swaidy	Concurrent	Electrical
Wastewater Treatment			Mr. Adan Ashoor	Full-time	
Plant Div.	Worker/	,	Mr. Ibrahim Jalayta	Full-time	
	Guard	4	Mr. Ramadan Jalaytah	Full-time	
			Mr. Mosa Barahmeh	Full-time	
	Water Qual-	2	Mr. Ata Shwawi	Concurrent	
	ity Analysis	2	Ms. Hanan Yaghi	Full-time	Under training
T-4-1		16	Full-time including duplication: 10);	
Total		16	Concurrent: 6		

7.2 ICT System Development

7.2.1 Present Status and Challenges

The work flow-chart of current water supply service around existing ICT system is shown in **Figure 7.2**. Related to the drinking water supply service, there are three ICT system working in the Municipality i.e. the Work-Flow System, Drinking Water Revenue System and Financial System ("Al-Ghassan" or "Oracle" System), of which the Financial System is the main and central, referring to the database of the other two systems. The existing Financial System is an old one and works on cash base, so it must be renovated to be based on the modified accrual accounting system fitting to the works of the Municipality, in order to extract comparable and appropriate financial data for reporting.

Meanwhile the GIS in the Municipality Office was introduced in 2006, the components of which are Arc-Info, Arc-Survey Analyst, Arc-Server Enterprise and Arc-View, each 1 set of version 9.3, as well as AutoDesk Map 3D, Raster Design and one server computer, all funded by JICA. After being upgraded to version 9.3.1 from December 2009 to February 2010, all software licenses have been expired and now 2 sets of Arc-Desktop Basic (version 10.1) are being used in the Water Network Maintenance Section and the Engineering Department. The Mayor has given permission in March 2014 to proceed to reactivate GIS in the Municipality Office, recognizing the importance and usefulness of the GIS in order to improve the quality of the services provided to the residents as well as the internal business efficiency and accuracy.

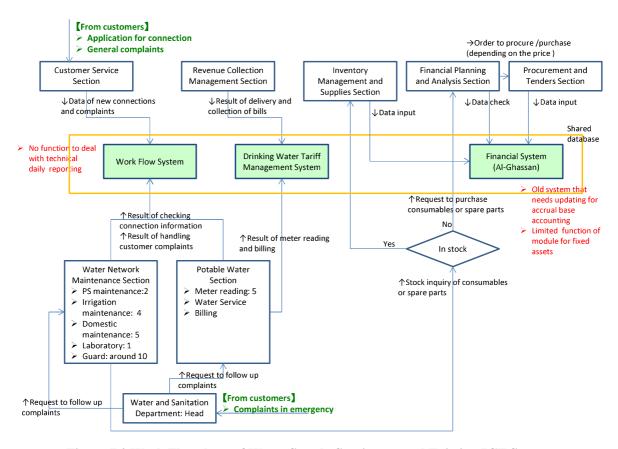


Figure 7.2 Work Flowchart of Water Supply Service around Existing ICT System

7.2.2 ICT System Development Plan related to Sewerage Service

The targeted scheme of ICT system development is shown in **Figure 7.3**. The existing Financial System, Work-Flow System and Drinking Water Revenue System shall be renovated/expanded, in line with the reactivation of GIS including the introduction of necessary hardware and software, the provision of training and the development of supporting software for sewer management. The database shall be linked to each other, which enables the Sewerage Section the efficient cooperation with relevant departments/sections. Moreover, a system for managing WWTP assets inventory will be developed for recording the as-built data of equipment, daily operation data and maintenance history, which will be utilized to develop the repair plan not only within the period of 2014 to 2018 but also for the next 5 years after 2018.

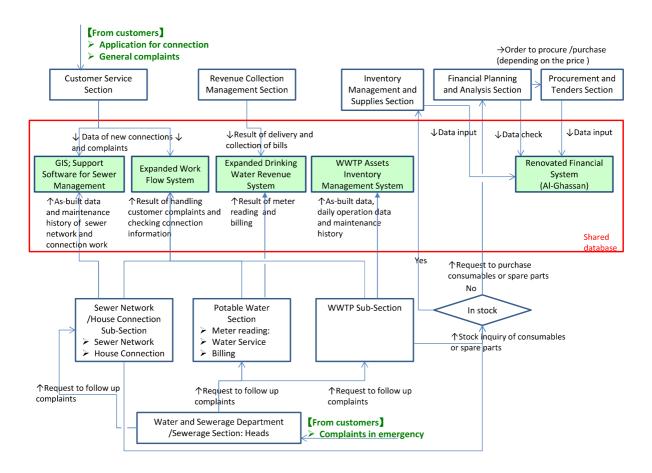


Figure 7.3 Work Flowchart of Sewerage Service based on Future ICT System

Chapter 8 Appendix

8.1 Major Assumptions for Revenue and Expenditure Plan

8.1.1 Connections

(1) Household Connections

Through the Pilot Project that was mentioned in **6.1**, 89 and 359 connections were connected by November 2015. The Municipality has started to construct from 2015 by its own budget the connecting pipe from connection pit to receiving pit, through which 43 connections were connected by 7th November 2015 and 17 connections are supposed to be connected by the end of December 2015. After 2016, annually 340 connections are supposed to be connected (refer to **Table 8.1**). Among the connections of which construction starts in a given year, 50% of them are assumed to be completed and discharged to sewer (refer to **Table 8.2**).

Table 8.1 Household Connections

Total Water		Nun	nber of Conn	ections to Se	wer	
Connections in 2012	2014	2015	2016	2017	2018	Sum 2014-2018
5,195	89	419	340	340	340	1,528

Table 8.2 Number of Discharged Connections

			Di	scnarge Kate:	1st year	50%
					2nd year	50%
		Number o	f Discharged	Connections	to Sewer	
	2014	2015	2016	2017	2018	Sum
	2014	2013	2010	2017	2010	2014-2018
2014	45	44				89
2015		210	209			419
2016			170	170		340
2017				170	170	340
2018					170	170
Sum	45	254	379	340	340	1,358

(2) Large Users

Large users are comprised of 26, from #1 (Arab Development Society) to #27-#29 (Palestinian Academy for Security Sciences); each location was identified and the expected year of connection was set up according to either the plan of the Pilot Project or the accessibility to the sewer network (refer to **Table 8.3**). Some users such as #1 (Arab Development Society) have no sewer network nearby, so the Municipality should extend branch sewer before requesting these users to connect.

(3) Jericho Agro-Industrial Park (JAIP)

Since the starting operation of tenants in JAIP has been much behind the schedule, the wastewater volume from JAIP was estimated by interpolation of 7 m³/d as of the end of 2015 and 227 m³/d as of the end of 2018; the former 7 m³/d is from one factory (#27: Palolea Company) which will start operation in the end of 2015; the latter 227 m³/d is from questionnaire survey for tenants of JAIP updated by the JAIP developer in November 2015 (refer to **Table 8.4**). The annual wastewater was estimated taking the average of the beginning and end of each year.

Table 8.3 Large User Connections

Name of Large User			201	2				201	3		Neighbor-		Water S	Supply Volu	me Projec	tion (m³/da	av)		V	Vastewater	Discharge	Volume P	rojection (i	n³/dav)	
Name of Large Oser	Jan-Feb	Mar-Apr :	May-Jun	Jul-Aug	Sep-Oct 1	Nov-Dec	Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	hood#	2012	2013	2014	2015	2016	2017	2018	2012	2013	2014	2015	2016	2017	2018
1 Arab Development Society	8,968	7,144	8,892	8,968	5,852	6,992	6,878	5,206	3,762	3,686	12	128	135	142	149	157	165	174	70	74	78	82	86	91	96
2 Ghosheh Factory	432	576	637	408	593	477	449	456	463	660	12	9	9	10	10	11	12	12	5	5	6	6	6	7	7
3 National Security Training Center	4,537	3,743	2,400	3,116	4,380	4,711	2,400	3,742	6,239	6,364	12	63	66	70	73	77	81	86	45	36	39	40	42	45	47
4 Military Intelligence	656	408	600	254	192	527	580	543	500	292	16	7	7	8	8	9	9	10	4	4	4	4	5	5	6
5 Ministry of the Interior	1,271	936	2,879	2,591	6,312	1,814	2,391	2,036	3,121	4,820	16	43	45	48	50	53	56	58	28	25	26	28	29	31	32
6 The Leadership of the National Security Forces	664	1,244	32	2,595	3,290	1,899	648	1,736	4,429	3,058	6	27	28	30	31	33	35	37	25	15	17	17	18	19	20
7 General Administration Police College	55	418	440	407	1,056	1,342	594	1,320	748	187	6	10	11	11	12	12	13	14	6	6	6	7	7	7	8
27+28+29 Palestinian Academy for Security Sciences	2,886	6,782	3,670	1,689	5,249	3,496	882	1,932	1,021	819	6	65	68	72	76	80	84	88	11	37	40	42	44	46	48
8 Jibril Muhammad Aldmanhori/Allimona	334	440	358	195	290	281	246	215	0	352	5	5	5	6	6	6	6	7	2	3	3	3	3	3	4
9 Suleiman Khader Geahchan /Alrawda	109	151	224	234	181	222	265	372	113	234	8	3	3	3	3	4	4	4	2	2	2	2	2	2	2
10 The Tourist Village	458	1,126	931	2,682	3,409	2,208	1,265	2,744	4,200	4,890	6	30	32	33	35	37	39	41	33	18	18	19	20	21	23
11 Tyseer Nimer Mustafa/ Alwaha	88	124	179	122	245	107	115	168	133	145	13	2	2	2	2	2	3	3	1	1	1	1	1	2	2
12 School girls basic minimum	386	409	228	200	731	904	823	589	300	135	2	8	8	9	9	10	10	11	3	4	5	5	6	6	6
13 Jericho, Girls High School	184	182	201	139	346	227	115	319	526	516	2	3	3	3	3	4	4	4	4	2	2	2	2	2	2
14 Girls Jericho Elementary School High	327	563	429	484	544	473	574	644	429	547	2	8	8	9	9	10	10	11	4	4	5	5	6	6	6
15 Jericho Women Charitable	545	601	445	122	301	428	262	364	289	0	1	7	7	8	8	9	9	10	2	4	4	4	5	5	6
16+17 Palestine Telecommunications	248	295	524	564	836	712	536	945	798	671	10	9	9	10	10	- 11	12	12	7	5	6	6	6	7	7
18 Mehdi Alajlouni -Commercial Investments	1,240	1,400	1,720	1,320	1,880	1,640	1,760	1,680	1,680	1,800	8	25	26	28	29	31	32	34	14	14	15	16	17	18	19
19 Ziad Nusseibeh - Company Compromise	770	1,276	1,144	880	726	1,223	2,376	1,826	1,320	1,254	6	16	17	18	19	20	21	22	12	9	10	10	11	12	12
20 House Grandparents to Care for the Elderly	482	607	540	787	518	342	392	344	776	459	7	9	9	10	10	11	12	12	4	5	6	6	6	7	7
21 Agricultural Jericho Station	174	262	231	226	221	147	210	232	164	119	2	3	3	3	3	4	4	4	1	2	2	2	2	2	2
22 Jericho Government Hospital	1,080	1,600	2,298	4,180	2,611	2,127	1,106	1,185	2,383	1,921	16	38	40	42	44	47	49	52	15	22	23	24	26	27	29
23 Jericho Health Directorate	282	329	269	96	205	357	2,528	336	138	173	15	4	4	4	5	5	5	5	2	2	2	3	3	3	3
24 And border crossings/ the rest	393	362	691	511	862	604	316	981	750	593	11	9	9	10	10	11	12	12	6	5	6	6	6	7	7
25 And border crossings/ the rest	2,205	2,197	2,126	1,632	2,664	2,418	2,249	2,091	2,030	1,946	11	36	38	40	42	44	47	49	17	21	22	23	24	26	27
26 And border crossings/ the rest	587	519	1,169	688	986	550	129	206	196	309	11	12	13	13	14	15	16	16	2	7	7	8	8	9	9
Sum	29,361	33,694	33,257	35,090	44,480	36,228	30,089	32,212	36,508	35,950	-	579	605	642	670	713	750	788	325	332	355	371	391	416	437
<u> </u>				32,851		35,352				33,690		5.3% of	annual inc	rease					55.0%	of supplied v	vater disch	arged to se	wer		

		Dischar	ge Rate:	1st year	50%					
				2nd year	50%					
Name of Large User		Connec	ction Year	l)		I	Discharged V	Vastewater i	m ³ /day)	
Name of Large Oser	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
1 Arab Development Society					1					48
2 Ghosheh Factory					1					4
3 National Security Training Center					1					24
4 Military Intelligence	1					2	4	5	5	6
5 Ministry of the Interior	1					13	28	29	31	32
6 The Leadership of the National Security Forces			1					9	19	20
7 General Administartion Police College			1					4	7	8
27+28+29 Palestinian Academy for Security Sciences	1					20	42	44	46	48
8 Jibril Muhammad Aldmanhori/Allimona		1					2	3	3	- 4
9 Suleiman Khader Geahchan /Alrawda					1					1
10 The Tourist Village	1					9	19	20	21	23
11 Tyseer Nimer Mustafa/ Alwaha		1					1	1	2	2
12 School girls basic minimum		1					3	6	6	6
13 Jericho, Girls High School		1					1	2	2	2
14 Girls Jericho Elementary School High		1					3	6	6	6
15 Jericho Women Charitable	1					2	4	5	5	6
16+17 Palestine Telecommunications	1					3	6	6	7	7
18 Mehdi Alajlouni -Commercial Investments	1					8	16	17	18	19
19 Ziad Nusseibeh - Company Compromise					1					6
20 House Grandparents to Care for the Elderly	1					3	6	6	7	7
21 Agricultural Jericho Station		1					1	2	2	2
22 Jericho Government Hospital	1					12	24	26	27	29
23 Jericho Health Directorate		1					2	3	3	3
24 And border crossings/ the rest		1					3	6	7	7
25 And border crossings/ the rest		1					12	24	26	27
26 And border crossings/ the rest		1	,	,		,	4	8	9	9
Sum	9	10	2	0	5	72	181	232	259	356

⁽Note)
*1) Red indicates connected by PP phase1 and blue indicates connected by PP phase2.

Table 8.4 Expected Wastewater Discharge from JAIP at the End of 2018

No.	Company Name	Discharged	Estimated	Notes
		Wastewater	Wastewater	
		Estimated in 2014	Updated in 2015	
1 Pinar G	eneral Trading Co.	40 m3/d	30 m3/d	
2 Reehan	a for food and investment Co.	35 m3/d	m3/d	Estimation unavailable
3 Weggo	Company	34 m3/d	m3/d	Cancelled
4 Johar C	Company For Agriculture	20 m3/d	30 m3/d	
5 Johar II	nvestment &Trading Company	40 m3/d	m3/d	Cancelled
6 Sinnok	rot Company For Textile	21 m3/d	m3/d	Cancelled
7 Valley	Trading Company	19 m3/d	m3/d	Cancelled
8 Firas ar	nd Ala'a Company	17 m3/d	m3/d	Cancelled
9 Reema	Company	22 m3/d	m3/d	Cancelled
10 Hawam	adeh Company for Export	25 m3/d	100 m3/d	
	ternational Group	21 m3/d	m3/d	Cancelled
12 Thimar	For AgriclutureI Investment Co.	25 m3/d	m3/d	Cancelled
13 Al Hass	san Company For Dates	33 m3/d	m3/d	Cancelled
	tional Overseas Company	30 m3/d	m3/d	Cancelled
15 Madaei	1 Food Company	22 m3/d	m3/d	Cancelled
	phia Company	33 m3/d	m3/d	Estimation unavailable
17 The Na	tional Carton Industry	10 m3/d	m3/d	Cancelled
18 Palestir	ne Plastic Industries	9 m3/d	m3/d	Cancelled
19 000 K		30 m3/d	m3/d	Cancelled
	ad Company for Investment	23 m3/d	m3/d	Cancelled
21 Asbab	Tradind and Investment Company	15 m3/d	m3/d	Cancelled
	pment & Reconstruction (DARB)	13 m3/d	m3/d	Cancelled
	pment & Reconstruction (DARB)	16 m3/d	m3/d	Cancelled
	leh Company for Agriculture Equipments	4 m3/d	m3/d	Cancelled
25 Yaghm		32 m3/d	m3/d	Cancelled
26 Venus	Trading Company	21 m3/d	m3/d	Cancelled
27 Palolea	1 7	28 m3/d	7 m3/d	Start opeartion in 2015
28 Siba Co		m3/d	10 m3/d	
29 Nationa	al Company for Animals &Agro Products	m3/d	m3/d	Cancelled
30 S. Rohi		m3/d	m3/d	Cancelled
	r Trading Company	m3/d	m3/d	Cancelled
	re Company for Packaging and Advising	m3/d	m3/d	Cancelled
33 Magic S		m3/d	m3/d	Estimation unavailable
	Logistics Service Company	m3/d	m3/d	Estimation unavailable
	m Dates Co.	m3/d	m3/d	Estimation unavailable
36 Al Bara		m3/d	m3/d	Cancelled
37 Trico C		m3/d	m3/d	Cancelled
38 PaperPa		m3/d	2 m3/d	
	for Industry and Trade Company	m3/d	m3/d	Estimation unavailable
40 New Ea	ast Supplies Co.	m3/d	12 m3/d	
41 Amazo		m3/d	36 m3/d	
42 Holylaı		m3/d	m3/d	Estimation unavailable
	Sum	638 m3/d	227 m3/d	<u> </u>

8.1.2 Unit Wastewater Consumption

(1) Household Connections

The estimation was based on the "unit supplied water per connection" according to 18 neighborhoods, which is from the past water supply data (except large users) from 2008 to 2012. The estimation was made by using primary regression equation for all the neighborhoods (refer to **Table 8.5**). The unit wastewater consumption is calculated from unit water consumption multiplied by 55% (refer to **Table 8.6**), of which rate was measured by the Municipality as the share of the usage other than domestic purposes i.e. gardening, wet cooling system and swimming pool.

(2) Large Users

Water supply volume of each large user was assumed to increase by annual rate of 5.3 %, which is the average of past water supply (except large users) from 2008 to 2012. The unit wastewater consumption is calculated from unit water consumption multiplied by 55% (refer to **Table 8.5**), of which rate was measured by the Municipality in 2009 as stated in (1) above.

Table 8.5 Prospect of Unit Supplied Water per Connection

. Al-Bayader	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	(Ref) Number of Connections
. In Dayager	694.87	744.45	752.37	719.82	819.44	813.53	835.98	858.46	880.90	903.35	925.80	8
Sheikh Sabbah	835.87	855.61	905.58	864.18	913.61	924.19	940.59	957.00	973.41	989.81	1006.22	34
Sheikh Sbeih	817.80	879.53	917.73	994.91	1096.28	1142.95	1210.19	1277.42	1344.65	1411.88	1479.12	27
Om-Tawabeen	841.77	879.34	829.27	802.40	924.68	882.15	891.05	899.91	908.80	917.70	926,59	7
Sabiha+Al Doeuk	660.52	721.86	802.73	807.34	838.30	898.46	942.56	986.66	1030.77	1074.87	1118.97	47
. Ein-Sultan	739.24	807.50	857.41	867.17	864.54	920.25	951.27	982.30	1013.33	1044.35	1075.38	64
. Qasir-Hisham	756.37	756.49	769.96	834.76	888.21	903.75	937.95	972.14	1006.34	1040.53	1074.72	38
. Kitf Al Wad	736.47	767.01	794.32	803.39	937.32	939.13	982.93	1026.75	1070.55	1114.36	1158.17	58
. Al-Dahiah	1127.40	1212.12	1309.86	1442.05	1411.44	1539.96	1619.77	1699.58	1779.36	1859.17	1938.98	g
0. Al-Maghtes	999.49	984.41	1034.42	998.70	1251.28	1209.02	1260.81	1312.60	1364.38	1416.17	1467.96	19
Falasteen	792.44	853.13	874.44	910.39	1035.72	1056.37	1110.75	1165.13	1219.51	1273.89	1328.27	57
2. Amman	825.71	878.86	979.54	952.85	977.95	1036.52	1074.37	1112.22	1150.07	1187.91	1225.76	46
3. Al-Souq	374.93	342.51	366.91	358.75	371.40	365.65	366.57	367.48	368.41	369.32	370.24	24
4. Al-ma'moun	947.01	1005.94	1063.95	1013.45	1153.01	1162.52	1204.47	1246.42	1288.38	1330.33	1372.28	14
5. Al-Rasheed	454.37	418.48	483.53	484.16	468.14	489.71	499.05	508.33	517.67	527.01	536.28	3
6. Al-Quds	666.36	799.46	763.13	800.72	929.57	950.16	1002.92	1055.69	1108.46	1161.23	1214.00	43
7. Yaffa	986.50	959.31	996.80	928.87	883.51	880.06	856.42	832.78	809.13	785.49	761.85	5
8. Al-Jame	361.67	391.52	399.42	390.73	406.72	416.81	425.74	434.67	443.60	452.53	461.46	10
verage	750.01	797.03	834.96	845.96	919.34	945.74	984.50	1023.26	1062.03	1100.79	1139.55	5,19
nnual Increase Rate		6.3%	4.8%	1.3%	8.7%							
Supplied Water Seighborhood	2008	2009	2010	2011	5 2012	2013	2014	2015	2016	10 2017	2018 F	Regression Equation (primary)
. Al-Bayader	21,051 104,952	22,553 107,430	22,793 113,705	21,807 108,507	24,825 114,713	24,646 116,041	25,326 118,101	26,007 120,161	26,687 122,221	27,367 124,281		80.2(X-2007)+20565
. Sheikh Sabbah . Sheikh Sbeih	82,385	88,604	92,452	108,307	114,713	115,141		128,687	135,460	142,233		2059.9(X-2007)+103682
							121,914				•	773.1(X-2007)+74502
. Om-Tawabeen . Sabiha+Al Doeuk	22,429 113,554	23,430 124.099	22,096 138.002	21,380	24,638	23,505	23,742	23,978	24,215	24,452	24,089 2	36.8(X-2007)+22084
. Sabina+Ai Doeuk		124,099			144 116	154 450	162.040	160 622	177.204		102 269 7	E01 0(V 2007) 100067
Ein Cultan	172 227	190 221		138,794	144,116	154,458	162,040	169,622	177,204	184,786		7581.9(X-2007)+108967
. Ein-Sultan	173,227	189,221	200,918	203,203	202,587	215,642	222,912	230,183	237,453	244,723	251,993 7	7270.2(X-2007)+172021
. Qasir-Hisham	105,737	105,753	200,918 107,636	203,203 116,695	202,587 124,168	215,642 126,339	222,912 131,120	230,183 135,900	237,453 140,681	244,723 145,461	251,993 7 150,241 4	7270.2(X-2007)+172021 1780.4(X-2007)+97657
. Qasir-Hisham . Kitf Al Wad	105,737 156,179	105,753 162,657	200,918 107,636 168,448	203,203 116,695 170,371	202,587 124,168 198,773	215,642 126,339 199,156	222,912 131,120 208,446	230,183 135,900 217,737	237,453 140,681 227,027	244,723 145,461 236,317	251,993 7 150,241 4 245,607 9	7270.2(X-2007)+172021 1780.4(X-2007)+97657 1780.2(X-2007)+143415
. Qasir-Hisham . Kitf Al Wad . Al-Dahiah	105,737 156,179 37,858	105,753 162,657 40,703	200,918 107,636 168,448 43,985	203,203 116,695 170,371 48,424	202,587 124,168 198,773 47,396	215,642 126,339 199,156 51,712	222,912 131,120 208,446 54,392	230,183 135,900 217,737 57,072	237,453 140,681 227,027 59,751	244,723 145,461 236,317 62,431	251,993 7 150,241 4 245,607 9 65,111 2	(270.2(X-2007)+172021 1780.4(X-2007)+97657 1290.2(X-2007)+143415 1679.7(X-2007)+35634
. Qasir-Hisham . Kitf Al Wad . Al-Dahiah 0. Al-Maghtes	105,737 156,179 37,858 70,774	105,753 162,657 40,703 69,706	200,918 107,636 168,448 43,985 73,247	203,203 116,695 170,371 48,424 70,718	202,587 124,168 198,773 47,396 88,603	215,642 126,339 199,156 51,712 85,611	222,912 131,120 208,446 54,392 89,278	230,183 135,900 217,737 57,072 92,945	237,453 140,681 227,027 59,751 96,612	244,723 145,461 236,317 62,431 100,279	251,993 7 150,241 4 245,607 9 65,111 2 103,946 3	270.2(X-2007)+172021 1780.4(X-2007)+97657 1290.2(X-2007)+143415 1667.7(X-2007)+35634 1667(X-2007)+63609
Qasir-Hisham Kitf Al Wad Al-Dahiah Al-Maghtes I. Falasteen	105,737 156,179 37,858 70,774 166,891	105,753 162,657 40,703 69,706 179,673	200,918 107,636 168,448 43,985 73,247 184,162	203,203 116,695 170,371 48,424 70,718 191,732	202,587 124,168 198,773 47,396 88,603 218,127	215,642 126,339 199,156 51,712 85,611 222,476	222,912 131,120 208,446 54,392 89,278 233,929	230,183 135,900 217,737 57,072 92,945 245,382	237,453 140,681 227,027 59,751 96,612 256,835	244,723 145,461 236,317 62,431 100,279 268,288	251,993 7 150,241 4 245,607 9 65,111 2 103,946 3 279,741 1	270.2(X-2007)+172021 1780.4(X-2007)+97657 1290.2(X-2007)+143415 1667(X-2007)+35634 1667(X-2007)+63609 1453(X-2007)+153758
Qasir-Hisham Kitf Al Wad Al-Dahiah J. Al-Maghtes I. Falasteen 2. Amman	105,737 156,179 37,858 70,774 166,891 138,637	105,753 162,657 40,703 69,706 179,673 147,561	200,918 107,636 168,448 43,985 73,247 184,162 164,464	203,203 116,695 170,371 48,424 70,718 191,732 159,984	202,587 124,168 198,773 47,396 88,603 218,127 164,198	215,642 126,339 199,156 51,712 85,611 222,476 174,032	222,912 131,120 208,446 54,392 89,278 233,929 180,387	230,183 135,900 217,737 57,072 92,945 245,382 186,741	237,453 140,681 227,027 59,751 96,612 256,835 193,096	244,723 145,461 236,317 62,431 100,279 268,288 199,450	251,993 7 150,241 4 245,607 9 65,111 2 103,946 3 279,741 1 205,805 6	270.2(X-2007)+172021 1780.4(X-2007)+97657 1290.2(X-2007)+143415 1679.7(X-2007)+35634 1667(X-2007)+63609 1453(X-2007)+153758 1354.5(X-2007)+135905
Qasir-Hisham Kiff Al Wad Al-Dahiah 0. Al-Maghtes 1. Falasteen 2. Amman 3. Al-Souq	105,737 156,179 37,858 70,774 166,891 138,637 33,254	105,753 162,657 40,703 69,706 179,673 147,561 30,379	200,918 107,636 168,448 43,985 73,247 184,162 164,464 32,543	203,203 116,695 170,371 48,424 70,718 191,732 159,984 31,819	202,587 124,168 198,773 47,396 88,603 218,127 164,198 32,941	215,642 126,339 199,156 51,712 85,611 222,476 174,032 32,431	222,912 131,120 208,446 54,392 89,278 233,929 180,387 32,513	230,183 135,900 217,737 57,072 92,945 245,382 186,741 32,594	237,453 140,681 227,027 59,751 96,612 256,835 193,096 32,676	244,723 145,461 236,317 62,431 100,279 268,288 199,450 32,757	251,993 7 150,241 4 245,607 9 65,111 2 103,946 3 279,741 1 205,805 6 32,838 8	270.2(X-2007)+172021 1780.4(X-2007)+97657 1290.2(X-2007)+143415 1679.7(X-2007)+35634 1667(X-2007)+63609 1453(X-2007)+153758 1354.5(X-2007)+135905 14.4(X-2007)+31943
Qasir-Hisham Kitf Al Wad Al-Dahiah 0. Al-Maghtes 1. Falasteen 2. Amman 3. Al-Souq 4. Al-ma'moun	105,737 156,179 37,858 70,774 166,891 138,637 33,254 49,775	105,753 162,657 40,703 69,706 179,673 147,561 30,379 52,872	200,918 107,636 168,448 43,985 73,247 184,162 164,464 32,543 55,921	203,203 116,695 170,371 48,424 70,718 191,732 159,984 31,819 53,267	202,587 124,168 198,773 47,396 88,603 218,127 164,198 32,941 60,602	215,642 126,339 199,156 51,712 85,611 222,476 174,032 32,431 61,102	222,912 131,120 208,446 54,392 89,278 233,929 180,387 32,513 63,307	230,183 135,900 217,737 57,072 92,945 245,382 186,741 32,594 65,512	237,453 140,681 227,027 59,751 96,612 256,835 193,096 32,676 67,717	244,723 145,461 236,317 62,431 100,279 268,288 199,450 32,757 69,922	251,993 7 150,241 4 245,607 9 65,111 2 103,946 3 279,741 1 205,805 6 32,838 8 72,127 2	270.2(X-2007)+172021 1780.4(X-2007)+97657 1290.2(X-2007)+143415 1679.7(X-2007)+35634 1667(X-2007)+53639 1453(X-2007)+153758 1354.5(X-2007)+135905 14.14(X-2007)+31943 1204.9(X-2007)+47873
Qasir-Hisham Kitf Al Wad Al-Dahiah 0. Al-Maghtes 1. Falasteen 2. Amman 3. Al-Souq 4. Al-ma'moun 5. Al-Rasheed	105,737 156,179 37,858 70,774 166,891 138,637 33,254 49,775 6,468	105,753 162,657 40,703 69,706 179,673 147,561 30,379 52,872 5,957	200,918 107,636 168,448 43,985 73,247 184,162 164,464 32,543 55,921 6,883	203,203 116,695 170,371 48,424 70,718 191,732 159,984 31,819 53,267 6,892	202,587 124,168 198,773 47,396 88,603 218,127 164,198 32,941 60,602 6,664	215,642 126,339 199,156 51,712 85,611 222,476 174,032 32,431 61,102 6,971	222,912 131,120 208,446 54,392 89,278 233,929 180,387 32,513 63,307 7,104	230,183 135,900 217,737 57,072 92,945 245,382 186,741 32,594 65,512 7,236	237,453 140,681 227,027 59,751 96,612 256,835 193,096 32,676 67,717 7,369	244,723 145,461 236,317 62,431 100,279 268,288 199,450 32,757 69,922 7,502	251,993 7 150,241 4 245,607 9 65,111 2 103,946 3 279,741 1 205,805 6 32,838 8 72,127 2 7,634 1	270.2(X-2007)+172021 1780.4(X-2007)+97657 1290.2(X-2007)+143415 1697.7(X-2007)+35634 1697.7(X-2007)+35639 1453(X-2007)+135758 1354.5(X-2007)+135905 11.4(X-2007)+31943 1204.9(X-2007)+47873 32.7(X-2007)+6174.7
Qasir-Hisham Kitf Al Wad Al-Dahiah 0. Al-Maghtes 1. Falasteen 2. Amman 3. Al-Souq 4. Al-ma'moun 5. Al-Rasheed 6. Al-Quds	105,737 156,179 37,858 70,774 166,891 138,637 33,254 49,775 6,468 105,801	105,753 162,657 40,703 69,706 179,673 147,561 30,379 52,872 5,957 126,934	200,918 107,636 168,448 43,985 73,247 184,162 164,464 32,543 55,921 6,883 121,166	203,203 116,695 170,371 48,424 70,718 191,732 159,984 31,819 53,267 6,892 127,135	202,587 124,168 198,773 47,396 88,603 218,127 164,198 32,941 60,602 6,664 147,592	215,642 126,339 199,156 51,712 85,611 222,476 174,032 32,431 61,102 6,971 150,861	222,912 131,120 208,446 54,392 89,278 233,929 180,387 32,513 63,307 7,104 159,239	230,183 135,900 217,737 57,072 92,945 245,382 186,741 32,594 65,512 7,236 167,617	237,453 140,681 227,027 59,751 96,612 256,835 193,096 32,676 67,717 7,369 175,996	244,723 145,461 236,317 62,431 100,279 268,288 199,450 32,757 69,922 7,502 184,374	251,993 7 150,241 4 245,607 9 65,111 2 103,946 3 279,741 1 205,805 6 32,838 8 72,127 2 7,634 1 192,752 8	270.2(X-2007)+172021 1780.4(X-2007)+97657 12290.2(X-2007)+143415 1667(X-2007)+35634 1667(X-2007)+35639 1453(X-2007)+135905 13.4(X-2007)+31943 1204.9(X-2007)+47873 32.7(X-2007)+6174.7 1378.3(X-2007)+100591
Qasir-Hisham Kitf Al Wad Al-Dahiah 0. Al-Maghtes 1. Falasteen 2. Amman 3. Al-Souq 4. Al-ma'moun 5. Al-Rasheed	105,737 156,179 37,858 70,774 166,891 138,637 33,254 49,775 6,468	105,753 162,657 40,703 69,706 179,673 147,561 30,379 52,872 5,957	200,918 107,636 168,448 43,985 73,247 184,162 164,464 32,543 55,921 6,883	203,203 116,695 170,371 48,424 70,718 191,732 159,984 31,819 53,267 6,892	202,587 124,168 198,773 47,396 88,603 218,127 164,198 32,941 60,602 6,664	215,642 126,339 199,156 51,712 85,611 222,476 174,032 32,431 61,102 6,971	222,912 131,120 208,446 54,392 89,278 233,929 180,387 32,513 63,307 7,104	230,183 135,900 217,737 57,072 92,945 245,382 186,741 32,594 65,512 7,236	237,453 140,681 227,027 59,751 96,612 256,835 193,096 32,676 67,717 7,369	244,723 145,461 236,317 62,431 100,279 268,288 199,450 32,757 69,922 7,502	251,993 7 150,241 4 245,607 9 65,111 2 103,946 3 279,741 1 205,805 6 32,838 8 72,127 2 7,634 1 192,752 8 15,016 -	270.2(X-2007)+172021 1780.4(X-2007)+97657 1290.2(X-2007)+143415 1697.7(X-2007)+35634 1697.7(X-2007)+35639 1453(X-2007)+135758 1354.5(X-2007)+135905 11.4(X-2007)+31943 1204.9(X-2007)+47873 32.7(X-2007)+6174.7

8.1.3 Wastewater Volume

The wastewater from household is calculated by multiplying "discharged connections" by the average "unit wastewater volume" of all neighborhoods (refer to **Table 8.6**). The wastewater from large users is summed up using projected wastewater volume of each user; of which 50 % is assumed to be discharged in connected year and 100 % from the next year (refer to **Table 8.5**). The influent to WWTP is calculated by multiplying the sum of discharged wastewater by 1.1, of which 0.1 is the expected rainwater inflow due to misconnection of private sewer (refer to **Table 8.6**).

Table 8.6 Influent Wastewater to WWTP

			Di	scharge rat	e of suppli	ed water to	sewer: r=	55%	
Category	Item			I	Discharged	Wastewate	r		Remarks
			2014	2015	2016	2017	2018	Sum 2014-2018	
	Discharged New Connections (accumulated)	a	45	299	678	1,018	1,358	-	
Wastewater	Unit Water Supply Volume (l/connection/day)	b	985	1,023	1,062	1,101	1,140	-	
Inflow from New Connections	Unit Wastewater Volume (1/connection/day)	c=b*r	541	563	584	605	627	-	
(accumulated)	Wastewater from Newly Connected Large Users (m³/d)	d	72	181	232	259	356	1,100	
	Discharged Wastewater from New Connections (m³/d)	e=a*c+d	96	349	628	875	1,207	3,155	
Wastewater Inflow from	Jericho Agro-Industrial Park	f	0	4	44	117	191	356	7 m3/d as of end 2015; 227 m3/d as of end 2018; linear interpolation in the mean time
Bulk Users (accumulated)	Others	g	0	0	0	100	200	300	Aqbat Jaber Camp
(accumulated)	Sum	h=f+g	0	4	44	217	391	656	
	Discharged Connections	i=a	45	299	678	1,018	1,358	3,398	
	Number of Bills for Discharged Connections		135	1,794	4,068	6,108	8,148	20,253	i*3 for 2014; i*6 from 2015 (billed in every 2 months)
	Discharged Wastewater (households, m³/d)	j=a*c	24	168	396	616	851	2,055	
	Discharged Wastewater (large users, m³/d)	k=d	72	181	232	259	356	1,100	
	Discharged Wastewater (bulk users, m³/d)	h	0	4	44	217	391	656	
	Discharged Wastewater (sum, m³/d)	l=e+h	96	353	672	1,092	1,598	3,811	
Sum	Discharged Wastewater (accumulated, m3/year)	m	14,600	128,845	245,952	398,580	583,270	1,371,247	m=l*365*5months /12months for 2014; m=l*365 for 2015, 2017 and 2018; m=l*366 for 2016
	Influent Wastewater to WWTP (accumulated, m3/d)	n=l*1.1	106	388	739	1,201	1,758	4,192	1.1: Rainwater inflow 10% due to misconnection of private sewer
	Influent Wastewater to WWTP (accumulated, m3/year)	0	16,121	141,620	270,474	438,365	641,670	1,508,250	o=n*365*5months /12months for 2014; o=n*365 for 2015, 2017 and 2018; o=n*366 for 2016

8.1.4 Cost Calculation

- (1) Operation and Maintenance Cost
- 1) Personnel Cost (refer to **Table 8.7**)
 - ➤ 14 full time staff including duplication and 2 concurrent staff from 2016.
 - > 5 working months for 2014, and 12 working months after 2015.
 - ➤ Unit personnel cost is: 5,900 NIS/cap/month for manager; 3,800 NIS/cap/month for engineer; 4,400 NIS/cap/month for technicians/workers (3 shifts); and 2,200 NIS/cap/month for technicians/workers (day shift) based on the actual payment as of 2015 in the Municipality.
 - > The salaries stated above are assumed to be increased at the annual rate of 5 %.
- 2) Electricity Cost (refer to **Table 8.8**)
 - ➤ The electricity cost is comprised of "fixed charge" and "metered charge".
 - ➤ "Fixed charge" is calculated using the uit fixed charge 6.4087 NIS/month (bill) for low demand users (JDECO as of 2015); annually 0 % increase.
 - ➤ "Metered charge" is calculated by "total load" multiplied by "unit metered charge"; "total load" is calculated considering the operating equipment and operation hours; "unit metered charge" is calculated by the weighted average of rate A, B and C and their seasonal settings of JDECO tariff; annually 0 % increase (refer to **Table 8.9**).
 - > Surplus energy to be sold to JDECo is calculated by assuming the electricity generated and consumed; the sales are calculated by the weighted average of rate A, B and C and their seasonal settings of sales price agreed between the Municipality and JDECO; annually 0 % increase (refer to **Tables 8.10 and 8.11**).
- 3) Repair Cost (refer to **Tables 8.12 and 8.13**)
 - > The repair cost is comprised of "spare parts replacement", "shipping" and "supervisor" cost.
 - ➤ Estimation was initially made by the contractor (Hitachi), but was adjusted in 2015 in terms of the unit cost, the shipping cost from manufactured place and the cost of supervisor to be dispatched from the manufacturing country.
 - ➤ The adjusted estimation above for the year 2017 was allocated to the preceding 2 years (2015 and 2016), the particular year 2017 and following year (2018) according to the share of 10%, 10%, 50% and 30%, considering the preventive maintenance activity e.g. changing oil and its effect.
- 4) Chemicals Cost (refer to Table 8.14)
 - > The cost of Hypo-chlorine solutions is calculated, to be dosed to effluent before discharging to Wadi.
 - \triangleright Unit dose rate is 0.18 m³/d per treated wastewater 6,600 m³/d =0.0000273 m³/m³.
 - ➤ Unit cost of chemicals is 1.3 NIS/kg (as of 2013 in the Municipality); annually 5% increase.

(2) Capital Cost

Depreciation and other capital costs are not considered during this calculation cycle from 2014 -2018.

Table 8.7 Personnel Cost (Unit: NIS)

Position	Rank		2014			2015			2016		1	2017			2018		N	Ionthly Sala	ry (Full-time	2)			Annu	ıal Cost		
		Full-time /Part-time	Share of Working	Number	Full-time	Share of	Number	Full-time	Share of	Number	Full-time /Part-time		Number	Full-time	Share of	Number	2014	2015 20	16 2017	2018	2014	2015	2016	2017	2018	Sum
		/Part-time		Assigned Real	/Part-time		Assigned Real	/Part-time	Working . Hours	Assigned Real	/Fart-time		Assigned Real	/Part-time	Working . Hours	Assigned Real	1									
			al	b1 c1=a *b1	1	a2	b2 c2=a2 *b2		a3	b3 c3=a3 *b3	3	a4	b4 c4=a-	4	a5	b5 c5=a5 *b5	dl	d2 d	3 d4	d5				e4=c4* d4*12		
										- 03			04											months		
Manager, Water Supply and Sewerage Dep.	Manager	Concurrent	50%	1 0.	5 Concurrent	50%	1 0.5	Concurrent	50%	1 0.5	Concurrent	50%	1 0.	5 Concurrent	50%	1 0.5	5,619	5,900 6,	95 6,505	6,830	14,048	35,400	37,170	39,030	40,980	166,628
Manager, Sewerage Section	Manager	Full-time	100%	1	l Duplication	n 33%	1 0.33	Duplication	33%	1 0.33	B Duplication	a 33%	1 0.3	3 Duplication	n 33%	1 0.33	5,619	5,900 6,	95 6,505	6,830	28,095	23,576	24,778	26,017	27,317	129,783
	Manager	-			Duplication	1 33%	1 0.33	Duplication	33%	1 0.33	Duplication	33%	1 0.3	3 Duplication	33%	1 0.33	5,619	5,900 6,	95 6,505	6,830	0	23,576	24,778	26,017	27,317	101,688
	Engineer	Concurrent	33%	1 0.3	3 -			-			-			-			3,619	3,800 3,9	90 4,190	4,400	6,031	0	0	0	0	6,031
Sewer Network and House	Engineer	Concurrent	33%	1 0.3	3 -			-			-			-			3,619	3,800 3,5	90 4,190	4,400	6,031	0	0	0	0	6,031
Connection Div.	Worker/Technician	-			Full-time	100%	1 1	Full-time	100%	1	Full-time	100%	1	l Full-time	100%	1 1	2,095	2,200 2,3	310 2,426	2,547	0	26,400	27,720	29,112	30,564	113,796
	Worker/Technician	-			Concurrent	50%	1 0.5	Full-time	100%	1 :	Full-time	100%	1	l Full-time	100%	1 1	2,095	2,200 2,3	310 2,426	2,547	0	13,200	27,720	29,112	30,564	100,596
	Worker/Technician	-			Concurrent	50%	1 0.5	Full-time	100%	1 :	Full-time	100%	1	l Full-time	100%	1 1	2,095	2,200 2,3	310 2,426	2,547	0	13,200	27,720	29,112	30,564	100,596
WWTP Manage	r Manager	Full-time	100%	1	1 Duplication	1 33%	1 0.33	Duplication	33%	1 0.33	Buplication	33%	1 0.3	3 Duplication	1 33%	1 0.33	5,619	5,900 6,	95 6,505	6,830	28,095	23,576	24,778	26,017	27,317	129,783
WWTP Operato	r Engineer	Full-time	100%	1	l Full-time	100%	1 1	Full-time	100%	1 :	Full-time	100%	1	l Full-time	100%	1 1	3,619	3,800 3,5	90 4,190	4,400	18,095	45,600	47,880	50,280	52,800	214,655
	Worker/Technician	Full-time	100%	1	l Full-time	100%	1 1	Full-time	100%	1 :	Full-time	100%	1	l Full-time	100%	1 1	4,190	4,400 4,6	520 4,851	5,094	20,950	52,800	55,440	58,212	61,128	248,530
WWTP Worker/Guard	Worker/Technician	Full-time	100%	1	1 Full-time	100%	1 1	Full-time	100%	1	Full-time	100%	1	1 Full-time	100%	1 1	4,190	4,400 4,6	520 4,851	5,094	20,950	52,800	55,440	58,212	61,128	248,530
(Shift)	Worker/Technician	Full-time	100%	1	1 Full-time	100%	1 1	Full-time	100%	1	Full-time	100%	1	l Full-time	100%	1 1	4,190	4,400 4,6	520 4,851	5,094	20,950	52,800	55,440	58,212	61,128	248,530
	Worker/Technician	-			Full-time	100%	1 1	Full-time	100%	1	Full-time	100%	1	l Full-time	100%	1 1	4,190	4,400 4,6	520 4,851	5,094	0	52,800	55,440	58,212	61,128	227,580
WWTP Maintenance (M)	Worker/Technician	Concurrent	50%	1 0.	5 Concurrent	50%	1 0.5	Full-time	100%	1	Full-time	100%	1	l Full-time	100%	1 1	2,095	2,200 2,3	310 2,426	2,547	5,238	13,200	27,720	29,112	30,564	105,834
WWTP Maintenance (E	Worker/Technician	Concurrent	50%	1 0.	5 Concurrent	50%	1 0.5	Full-time	100%	1	Full-time	100%	1	l Full-time	100%	1 1	2,095	2,200 2,3	310 2,426	2,547	5,238	13,200	27,720	29,112	30,564	105,834
WWTP	Worker/Technician	Concurrent	50%	1 0.	5 Concurrent	50%	1 0.5	Concurrent	50%	1 0.5	Concurrent	50%	1 0.	5 Concurrent	50%	1 0.5	2,095	2,200 2,3	310 2,426	2,547	5,238	13,200	13,860	14,556	15,282	62,136
Laboratory	Worker/Technician	-			Full-time	100%	1 1	Full-time	100%	1	Full-time	100%	1	1 Full-time	100%	1 1	_		310 2,426					29,112		113,796
	Manager	-	-	3 2.	5 -	-	4 1.5	-	-		5 -	-	4 1.	5 -	-	4 1.5	_		95 6,505	-				117,082	_	527,884
	Engineer	-	•	3 1.6	7 -	-		-	-	-	-	-	1	1 -	-	1 1	<u> </u>		90 4,190					50,280		226,717
	Worker/Technician	-	-	3 1.	5 -	-		-	-		7 -	-	7	7 -	-	7 7	L-		310 2,426					189,228		702,587
Total	Worker/Technician (shift)		-	3	3	-	4 4		-	4 4		-	4	4	-	4 4	4,190		520 4,851	5,094				232,848		973,170
	Sum	-	•	12 8.6	7 -	-	16 11.0	-	-	16 13.0) -	-	16 13.	0 -	-	16 13.0	_	-		-	178,959 4					
	Full-Time+Duplication	-	-	6	6 -	-	10 8.0	-	-	14 12.0) -	-	14 12.	0 -		14 12.0	_	-		-	137,135 3					
	Concurrent	-	-	6 2.	7 -	-	6 3	-	-	2	l -	-	2	1 -	-	2 1	_	-		-	41,824 1	.01,400	51,030	53,586	56,262	228,764

Table 8.8 Electricity Cost (Unit: NIS)

It	ems		2014	2015	2016	2017	2018	Sum	Remarks
Unit Fixed Charge	NIS/kW/month	. C	6.4087	6.4087	6.4087	6.4087	6.4087	-	6.4087NIS/kW/month for low demand users (as of 2015, no annual increase)
Annual Fixed Charge	NIS	D	32	77	77	77	77	340	D=C*5months for 2014; D=C*12 months from 2015
Annual Metered Charge	NIS	Е	49,527	44,710	65,947	120,716	152,627	433,527	Actual cost for 2014; Calculated cost considering the sales of surplus solar from 2015
Electricity Cost	NIS	F=D+E	49,559	44,787	66,024	120,793	152,704	433,867	1

Table 8.9 Summary of Electrical Metered Charge Calculation

Metered Charge (Unit: NIS)

	2014	2015	2016	2017	2018	Sum
Winter	-	20,810	27,537	43,255	53,184	144,786
Spring&Autumn	-	24,189	34,861	63,445	78,841	201,337
Summer	-	- 290	3,549	14,016	20,601	37,877
Year Total	29,330	44,710	65,947	120,716	152,627	384,000

Tariff (Unit: NIS)

Time zone	Winter	Spring& Autumn	Summer	Notes
A	0.4364	0.3826	0.3955	Winter: DecFeb.
В	0.7541	0.4776	0.6026	Spring&Autumn: MarJun. and SepNov.
С	1.2859	0.5914	1.4105	Summer: JulAug.

Table 8.10 Electrical Metered Charge Calculation (Annual Total)

Subtotal for 2015				Subtotal for 2016				Subtotal for 2017				Subtotal for 2018			
Winter				Winter				Winter				Winter			
	Days R	ate(NIS/d)	Sum(NIS)		Days Ra	ate(NIS/d)	Sum(NIS)		Days Ra	ate(NIS/d)	Sum(NIS)		Days	Rate(NIS/d)	Sum(NIS)
Working Days	59	229.3	13,529.0	Working Days	60	297.3	17,838.0	Working Days	59	468.0	27,612.0	Working Days	59	573.3	33,824.7
Friday&Feast Evening	14	129.4	1,812.0	Friday&Feast Evening	14	175.0	2,450.0	Friday&Feast Evening	14	290.7	4,069.8	Friday&Feast Evening	14	362.8	5,079.2
Saturday&Feast Days	17	152.9	2,599.0	Saturday&Feast Days	17	203.0	3,451.0	Saturday&Feast Days	17	329.8	5,606.6	Saturday&Feast Days	17	408.5	6,944.5
Sub Total	90	-	17,940.0	Sub Total	91	-	23,739.0	Sub Total	90	-	37,288.4	Sub Total	90	-	45,848.4
Include VAT (16%)	-	-	20,810.0	Include VAT (16%)	-	-	27,537.2	Include VAT (16%)	-	-	43,254.5	Include VAT (16%)	-	-	53,184.1
Days Subtotal		90		Days Subtotal		91		Days Subtotal		90		Days Subtotal		90	
Spring&Autumn				Spring&Autumn				Spring&Autumn				Spring&Autumn			
		ate(NIS/d)	Sum(NIS)			ate(NIS/d)	Sum(NIS)		Days Ra	ate(NIS/d)	Sum(NIS)			Rate(NIS/d)	
Working Days	133	93.4	12,422.2	Working Days	133	140.1	18,633.3	Working Days	130	265.6	34,528.0	Working Days	130	333.2	43,316.0
Friday&Feast Evening	34	96.3	3,274.2	Friday&Feast Evening	34	135.9	4,620.6	Friday&Feast Evening	34	242.2	8,234.8	Friday&Feast Evening	34	299.3	10,176.2
Saturday&Feast Days	46	112.1	5,156.6	Saturday&Feast Days	46	147.8	6,798.8	Saturday&Feast Days	49	243.5	11,931.5	Saturday&Feast Days	49	295.4	14,474.6
Sub Total	213	-	20,853.0	Sub Total	213	-	30,052.7	Sub Total	213	-	54,694.3	Sub Total	213	-	67,966.8
Include VAT (16%)	-	-	24,189.5	Include VAT (16%)	-	-	34,861.1	Include VAT (16%)	-	-	63,445.4	Include VAT (16%)	-		78,841.5
Days Subtotal		213		Days Subtotal		213		Days Subtotal		213	_	Days Subtotal		213	
Summer				Summer				Summer				Summer			
		ate(NIS/d)				ate(NIS/d)				ate(NIS/d)				Rate(NIS/d)	
Working Days	41	-74.2	-3,042.2	Working Days	41	-1.9	- 77.9	Working Days	44	176.8	7,779.2	Working Days	44	283.8	
Friday&Feast Evening	9	113.0	1,017.0	Friday&Feast Evening	9	149.4	1,344.6	Friday&Feast Evening	9	239.1	2,151.9	Friday&Feast Evening	9	292.9	2,636.1
Saturday&Feast Days	12	113.0	1,356.0	Saturday&Feast Days	12	149.4	1,792.8	Saturday&Feast Days	9	239.1	2,151.9	Saturday&Feast Days	9	292.9	2,636.1
Sub Total	62	-	-669.2	Sub Total	62	-	3,059.5	Sub Total	62	-	12,083.0	Sub Total	62	-	,
Include VAT (16%)	-	-	-289.5	Include VAT (16%)	-	-	3,549.0	Include VAT (16%)	-	-	14,016.3	Include VAT (16%)	-		20,600.9
Days Subtotal		62		Days Subtotal		62		Days Subtotal		62		Days Subtotal		62	
Days Total	365	365		Days Total	366	366		Days Total	365	365		Days Total	365	365	
Total Metered	Charge (N	IS/year):	44,710	Total Metered	Charge (NI	IS/year):	65,947	Total Metered	Charge (NI	[S/year):	120,716	Total Metered	Charge (N	√IS/year):	152,627

Table 8.11 (1/4) Electricity Metered Charge Calculation (For the Year 2015)

vv inter,	, January 2015		D.	ata Data						AM									PM	1				
				put Outpu	t 0	1	2	3	4	5 6	7	8	9 10	11	12	3 14	15	16	17	18	19	20	21	22 2
Load	Consumption	kWh	A	<mark>560</mark>	23.3	23.3	23.3	23.3 2	3.3 23	3.3 23.3	23.3 2	23.3 23	.3 23.3	23.3	23.3 23	.3 23.3	23.3	23.3	23.3	23.3	23.3	23.3 2	3.3 23	3.3 23.3
Solar	Maximum Output	kW	В	45																				
	Output Rate for Solar	- %	C		0	0	0	0	0	0 5	20	40 <i>6</i>	50 80	95	100 10	0 80	70	50	30	5	0	0	0	0
	Solar Generation	kWh	D=B*C 33	30.8	0.0	0.0	0.0	0.0	0.0	0.0 2.3	9.0	18.0 27	.0 36.0	42.8	45.0 45	.0 36.0	31.5	22.5	13.5	2.3	0.0	0.0	0.0	0.0
JDECO	Consumption	kWh	E=A-D (NLT	Γ0)	23.3	23.3	23.3	23.3 2	3.3 23	3.3 21.1	14.3	5.3	0 0	0	0	0 0	0	0.8	9.8	21.1	23.3	23.3 2	3.3 2.	3.3 23.
Surplus	Power	kWh	F=D-A (NLT	Γ0)	0	0	0	0	0	0 0	0	0 3	.7 12.7	19.5	21.7 21	.7 12.7	8.2	0	0	0	0	0	0	0
Time Z	one for Working Days		G		A	A	Α	A	A	A B	В	A	A A	A	Α	A A	A	C	C	C	C	C	C	C A
Tariff fo	or consumption	NIS/kWh	ı H		0.436	0.436	0.436	0.436 0.	436 0.4	136 0.754	0.754 0	0.436 0.43	36 0.436	0.436	0.436 0.4	36 0.436	0.436	1.286	1.286	1.286	1.286 1	.286 1.3	286 1.2	286 0.43
Tariff fo	or surplus	NIS/kWh	1=H-0.12		0.316	0.316	0.316	0.316 0.	316 0.3	316 0.634	0.634 0	.316 0.3	16 0.316	0.316	0.316 0.3	16 0.316	0.316	1.166	1.166	1.166	1.166 1	.166 1.	166 1.	166 0.31
Cost for	consumption	NIS	J=E*H Sub	Total 261.	1 10.2	10.2	10.2	10.2 1	0.2 10	0.2 15.9	10.8	2.3	0 0	0	0	0 0	0	1	12.6	27.1	30	30	30	30 10.
Cost for	surplus	NIS	K=F*I Sub	Total 31.	8 0	0	0	0	0	0 0	0	0 1	.2 4	6.2	6.9 6	.9 4	2.6	0	0	0	0	0	0	0
Bill for	Working Days	NIS/day	L=J-K T	otal 229.	3																			
Time Zon	ne for Friday &Feast Evening		M		A	A	A	A	A	A A	A	A	A A	A	A	A A	A	В	В	В	В	A	A	A A
Tariff fo	or consumption	NIS/kWh	ı N		0.436	0.436	0.436	0.436 0.	436 0.4	36 0.436	0.436 0	0.436 0.43	36 0.436	0.436	0.436 0.4	36 0.436	0.436	0.754	0.754	0.754	0.754	0.436 0.4	436 0.4	436 0.43
Tariff fo	or surplus	NIS/kWh	0=N-0.12		0.316	0.316	0.316	0.316 0.	316 0.3	316 0.316	0.316 0	.316 0.3	16 0.316	0.316	0.316 0.3	16 0.316	0.316	0.634	0.634	0.634	0.634	0.316 0.3	316 0.3	316 0.31
Cost for	consumption	NIS	P=E*N Sub	Total 161.	2 10.2	10.2	10.2	10.2 1	0.2 10	0.2 9.2	6.2	2.3	0 0	0	0	0 0	0	0.6	7.4	15.9	17.6	10.2 10	0.2 10	0.2 10.:
Cost for	surplus	NIS	Q=F*O Sub	Total 31.	8 0	0	0	0	0	0 0	0	0 1	.2 4	6.2	6.9 6	.9 4	2.6	0	0	0	0	0	0	0
Bill for	Friday&Feast Evening	NIS/day	R=P-Q T	otal 129.	4																			
Time Zor	ne for Saturday&Feast Days	<u>s</u>	S		A	A	A	A	A	A A	A	A	A A	A	A	A A	A	A	C	C	В	В	A	A A
Tariff fo	or consumption	NIS/kWh	ı T		0.436	0.436	0.436	0.436 0.	436 0.4	36 0.436	0.436	.436 0.43	36 0.436	0.436	0.436 0.4	36 0.436	0.436	0.436	1.286	1.286	0.754	0.754 0.4	436 0.4	436 0.43
	or surplus		n U=T-0.12		0.316	0.316	0.316	0.316 0.	316 0.3	316 0.316	0.316	.316 0.3	16 0.316	0.316	0.316 0.3	16 0.316	0.316	0.316	1.166	1.166	0.634	0.634 0.3	316 0.3	316 0.31
	consumption	NIS		Total 184.	7 10.2	10.2	10.2	10.2 1	0.2 10	0.2 9.2	6.2	2.3	0 0	0	0	0 0	0	0.3	12.6	27.1	17.6	17.6 10	0.2 10	0.2 10.
Cost for		NIS	W=F*U Sub	Total 31.		_	0	0	0	0 0	0	0 1	.2 4	6.2	6.9 6	.9 4	2.6	0	0	0	0	0	0	0
	Friday&Feast Evening	NIS/dav	X=V-W T	otal 152.																				
														_										
Springe	&Autumn 2015																							
			D:	ata Data						AM									PM	1				
			Inj	put Outpu	t ()	1	2	3	4	5 6	7	8	9 10	-11	12	3 14	15	16	17	18	19	20	21	22 2
Load	Consumption	kWh	A	<mark>690</mark>	28.8	28.8	28.8	28.8 2	8.8 28	3.8 28.8	28.8 2	28.8 28	.8 28.8	28.8	28.8 28	.8 28.8	28.8	28.8	28.8	28.8	28.8	28.8 2	8.8 28	8.8 28.8
Solar	Maximum Output	kW	В	65																				
	Output Rate for Solar	- %	С		0	0	0	0	0	0 5	20	40 6	50 80	95	100 10	0 80	70	50	30	5	0	0	0	0 (
	Solar Generation	kWh	D=B*C 47	7.8	0.0	0.0	0.0	0.0	0.0	0.0 3.3	13.0 2	26.0 39	.0 52.0	61.8	65.0 65	.0 52.0	45.5	32.5	19.5	3.3	0.0	0.0	0.0	0.0 0.0
JDECO	Consumption	kWh	E=A-D (NLT	Γ0)	28.8	28.8	28.8	28.8 2	8.8 28	3.8 25.6	15.8	2.8	0 0	0	0	0 0	0	0	9.3	25.6	28.8	28.8 2	8.8 2	8.8 28.
Surplus	Power	kWh	F=D-A (NLT	Γ0)	0	0	0	0	0	0 0	0	0 10	.2 23.2	33	36.2 36	.2 23.2	16.7	3.7	0	0	0	0	0	0
Time Z	one for Working Days		G		A	А	Α	Α	A	A C	С	С	с с	С		C C	С	С	С	С	С	В	В	A A
Tariff fo	or consumption	NIS/kWh				0.383	0.383 (0.383 0.	383 0.3	883 0.591	0.591 0	591 0.59	91 0.591	0.591	0.591 0.5	0.591	0.591	0.591	0.591	0.591	0.591 (0.478 0.4	478 0.3	383 0.383
	or surplus	NIS/kWh	1=H-0.12		0.263	0.263	0.263 (0.263 0.	263 0.2	263 0.471	0.471 0	.471 0.4	71 0.471	0.471	0.471 0.4	71 0.471	0.471	0.471	0.471	0.471	0.471 (0.358 0.3	358 0.3	263 0.263
	consumption	NIS	J=E*H Sub	Total 179.		11	11	11	11	11 15.1	9.3	1.7	0 0	0	0	0 0	0	0		15.1	_	13.8 1	3.8	11 11
Cost for		NIS		Total 85.		0	0	0	0	0 0	0	0 4	.8 10.9	15.5	17.1 17	.1 10.9	7.9	1.7	0	0	0	0	0	0 (
	Working Days	NIS/day		otal 93.		_				-										_				
	ne for Friday &Feast Evening		M		А	А	Α	Α	Α	A B	В	В	в в	В	В	в в	В	В	В	В	В	Α	Α	A A
	or consumption	NIS/kWh	ı N		0.383	0.383	0.383 (0.383 0.	383 0.3	883 0.478	0.478 0	0.478 0.4	78 0.478	0.478	0.478 0.4	78 0.478	0.478	0.478	0.478	0.478	0.478	0.383 0.3	383 0.3	383 0.38
	or surplus		0=N-0.12		0.263	0.263	0.263 (0.263 0.	263 0.2	263 0.358	0.358 0	.358 0.3	58 0.358	0.358	0.358 0.3	58 0.358	0.358	0.358	0.358	0.358	0.358 0	0.263 0.3	263 0.3	263 0.26
	consumption	NIS	P=E*N Sub	Total 161.4	4 11	11	11	11	11	11 12.2	7.5	1.3	0 0	0	0	0 0	0	0	4.4	12.2	13.8	11	11	11 1
Cost for		NIS	Q=F*O Sub			0	0	0	0	0 0	0	0 3	.6 8.3	11.8	12.9 12	9 8.3	6	1.3	0	0	0	0	0	0 (
	Friday&Feast Evening	NIS/day	R=P-Q T	otal 96.	3																			
	ne for Saturday&Feast Days		S		А	A	Α	Α	A	A A	A	Α	A A	A	A	A A	A	A	В	В	В	В	Α	A A
	or consumption	NIS/kWh	ı T		0.383	0.383	0.383 (0.383 0.	383 0.3	883 0.383	0.383 0	0.383 0.3	83 0.383	0.383	0.383 0.3	33 0.383	0.383	0.383	0.478	0.478	0.478	0.478 0.3	383 0.3	383 0.38
Tariff fo	or surplus	NIS/kWh	u=T-0.12		0.263	0.263	0.263 (0.263 0.	263 0.2	263 0.263	0.263 0	0.263 0.20	63 0.263	0.263	0.263 0.2	53 0.263	0.263	0.263	0.358	0.358	0.358	0.358 0.3	263 0.2	263 0.26
	consumption	NIS	V=E*T Sub	Total 160.	1 11	11	11	11	11	11 9.8	6	1.1	0 0	0	0	0 0	0	0	4.4	12.2	13.8	13.8	11	11 1
Cost for		NIS	W=F*U Sub	Total 4	3 0	0	0	0	0	0 0	0	0 2	.7 6.1	8.7	9.5 9	.5 6.1	4.4	1	0	0	0	0	0	0 (
	Friday&Feast Evening			otal 112.		_																		
		, , , , , ,																						
Summe	er 2015																							
			D:	ata Data						AM									PM	ſ				
			Inj	put Outpu	t 0	1	2	3	4	5 6	7	8	9 10	11	12	3 14	15	16	17	18	19	20	21	22 2
Load	Consumption	kWh	A	<mark>770</mark>	32.1	32.1	32.1	32.1 3	2.1 32	2.1 32.1	32.1 3	32.1 32	.1 32.1	32.1	32.1 32	.1 32.1	32.1	32.1	32.1	32.1	32.1	32.1 3	2.1 32	2.1 32.
Solar	Maximum Output	kW	В	75																				
	Output Rate for Solar	- %	C		0	0	0	0	0	0 5	20	40 <i>e</i>	50 80	95	100 10	0 80	70	50	30	5	0	0	0	0
	Solar Generation	kWh	D=B*C 55	1.3	0.0	0.0	0.0	0.0	0.0	0.0 3.8	15.0	30.0 45	.0 60.0	71.3	75.0 75	.0 60.0	52.5	37.5	22.5	3.8	0.0	0.0	0.0	0.0 0.0
JDECO	Consumption	kWh	E=A-D (NLT	Γ0)	32.1	32.1	32.1	32.1 3	2.1 32	2.1 28.4	17.1	2.1	0 0	0	0	0 0	0	0	9.6	28.4	32.1	32.1 3	2.1 3	2.1 32.
Surplus	Power	kWh	F=D-A (NLT	Γ0)	0	0	0	0	0	0 0	0	0 12	.9 27.9	39.2	42.9 42	.9 27.9	20.4	5.4	0	0	0	0	0	0
Time Z	one for Working Days		G		A	A	A	A	A	A A	В	В	в с	С	C	C C	C	C	В	В	В	В	A	Α /
	or consumption	NIS/kWh	ı H		0.396	0.396	0.396 (0.396 0.	396 0.3	96 0.396	0.603 0	0.603 0.60	03 1.411	1.411	1.411 1.4	11 1.411	1.411	1.411	0.603	0.603	0.603 0	0.603 0.3	396 0.3	396 0.39
Tariff fo	or surplus	NIS/kWh	n I=H-0.12		0.276	0.276	0.276	0.276 0.	276 0.2	276 0.276	0.483 0	0.483 0.48	83 1.291	1.291	1.291 1.2	91 1.291	1.291	1.291	0.483	0.483	0.483 (0.483 0.3	276 0.2	276 0.27
Cost for	consumption	NIS	J=E*H Sub	Total 198.	6 12.7	12.7	12.7	12.7 1	2.7 12	2.7 11.2	10.3	1.3	0 0	0	0	0 0	0	0	5.8	17.1	19.3	19.3 13	2.7 12	2.7 12.
	surplus	NIS		Total 272.5			0	0	0	0 0		0 6		_	55.4 55			7	0	0	0	0	0	0
Cost for		NIS/day		otal -74.			-			. 0									-	-	-			
	Working Days	NIS/dav			A	Α	A	Α	A	A A	A	A	A A	A	A	A A		-						
Bill for	Working Days ne for Friday &Feast Evening		M					_								A A	. A	A	A	Α	A	A	A	A A
Bill for Time Zon						0.396	0.396	0.396 0.	396 0.3	96 0.396	0.396 0	.396 0.39	96 0.396	0.396	0.396 0.3			0.396						
Bill for Time Zon Tariff fo	ne for Friday & Feast Evening or consumption	NIS/kWh			0.396					896 0.396 276 0.276				_		96 0.396	0.396		0.396	0.396	0.396	0.396 0.3	396 0.:	396 0.39
Bill for Time Zon Tariff fo Tariff fo	ne for Friday&Feast Evening or consumption or surplus	NIS/kWl:	1 N 1 O=N-0.12	Total 173	0.396	0.276	0.276).276 0.	276 0.2	276 0.276	0.276	0.276 0.2	76 0.276	_	0.396 0.3	96 0.396 76 0.276	0.396	0.396 0.276	0.396	0.396 0.276	0.396 0	0.396 0.3	396 0.3 276 0.3	396 0.39 276 0.27
Bill for Time Zon Tariff fo Tariff fo Cost for	ne for Friday & Feast Evening or consumption or surplus r consumption	NIS/kWh NIS/kWh	n N n O=N-0.12 P=E*N Sub	Total 173.:	0.396 0.276 5 12.7	0.276 12.7	0.276 (0.276 0. 12.7 1	276 0.2 2.7 12	276 0.276 2.7 11.2	0.276 0 6.8	0.276 0.2	76 0.276 0 0	0.276	0.396 0.3	0.396 0.276 0 0.276	0.396 0.276 0	0.396 0.276 0	0.396 0.276 3.8	0.396 0.276 11.2	0.396 0 0.276 0 12.7	0.396 0.3 0.276 0.3 12.7 13	396 0.3 276 0.3 2.7 13	396 0.39 276 0.27 2.7 12.
Bill for Time Zon Tariff fo Tariff fo Cost for Cost for	ne for Friday & Feast Evening for consumption for surplus fr consumption fr surplus	NIS/kWh NIS/kWh NIS NIS	n N n O=N-0.12 P=E*N Sub Q=F*O Sub	Total 60.	0.396 0.276 5 12.7 5 0	0.276 12.7	0.276).276 0.	276 0.2	276 0.276	0.276 0 6.8	0.276 0.2	76 0.276 0 0	0.276	0.396 0.3	0.396 0.276 0 0.276	0.396 0.276 0	0.396 0.276 0	0.396	0.396 0.276	0.396 0	0.396 0.3	396 0.3 276 0.3	396 0.39 276 0.27 2.7 12.
Bill for Time Zon Tariff for Cost for Cost for Bill for	ne for Friday & Feast Evening for consumption for surplus fr consumption fr surplus Friday & Feast Evening	NIS/kWh NIS/kWh NIS NIS NIS	1 N 1 O=N-0.12 P=E*N Sub Q=F*O Sub R=P-Q T		0.396 0.276 5 12.7 5 0	0.276 12.7 0	0.276 (12.7 0	0.276 0.	276 0.2 2.7 12 0	276 0.276 2.7 11.2 0 0	0.276 0 6.8 0	0.276 0.2° 0.8 0 3	0.276 0 0 .6 7.7	0.276 0 10.8	0.396 0.3 0.276 0.2 0 111.8 11	96 0.396 76 0.276 0 0 8 7.7	0.396 0.276 0 5.6	0.396 0.276 0 1.5	0.396 0.276 3.8 0	0.396 0.276 11.2 0	0.396 (0.276 (0.276 (0.277) 0	0.396 0.: 0.276 0.: 12.7 1: 0	396 0.3 276 0.3 2.7 13 0	396 0.39 276 0.27 2.7 12.
Bill for Time Zon Tariff for Cost for Cost for Bill for	ne for Fridav & Feast Evening or consumption or surplus or consumption or surplus Friday & Feast Evening ne for Saturday & Feast Days	NIS/kWh NIS/kWh NIS NIS NIS	1 N 1 O=N-0.12 P=E*N Sub Q=F*O Sub R=P-Q T	Total 60.	0.396 0.276 5 12.7 5 0 0	0.276 12.7 0	0.276 (12.7 0	0.276 0. 12.7 1 0	276 0.2 2.7 12 0	276 0.276 2.7 11.2 0 0 A A	0.276 0 6.8 0	0.276 0.2 0.8 0 3	76 0.276 0 0 .6 7.7 A A	0.276 (0 10.8	0.396 0.3 0.276 0.2 0 111.8 11	96 0.396 76 0.276 0 0 8 7.7	0.396 0.276 0 5.6	0.396 0.276 0 1.5	0.396 0.276 3.8 0	0.396 0.276 11.2 0	0.396 (0.276 (12.7 1 0	0.396 0.: 0.276 0.: 12.7 1: 0	396 0.3 276 0.3 2.7 13 0	396 0.39 276 0.27 2.7 12. 0
Tariff for Tariff for Tariff for Cost for Cost for Bill for Tariff for	ne for Friday &Feast Evening or consumption or surplus or consumption or surplus Friday &Feast Evening ne for Saturday &Feast Days or consumption	NIS/kWh NIS/kWh NIS NIS NIS NIS/day	1 N 1 O=N-0.12 P=E*N Sub Q=F*O Sub R=P-Q T S 1 T	Total 60.	0.396 0.276 5 12.7 5 0 0 A 0.396	0.276 12.7 0 A 0.396	0.276 (12.7 0 A 0.396 (0.276 0. 12.7 1 0 A 0.396 0.	276 0.2 2.7 12 0 A 396 0.3	276 0.276 2.7 11.2 0 0 A A 896 0.396	0.276 0 6.8 0 A 0.396 0	0.276 0.2 0.8 0 3 A 0.396 0.39	76 0.276 0 0 .6 7.7 A A	0.276 (0 10.8 A 0.396 (0.396 0.3 0.276 0.2 0 11.8 11 A 0.396 0.3	96 0.396 76 0.276 0 0 .8 7.7 A A	0.396 0.276 0 5.6 A	0.396 0.276 0 1.5 A 0.396	0.396 0.276 3.8 0 A 0.396	0.396 0.276 11.2 0 A 0.396	0.396 0 0.276 0 12.7 1 0 A 0.396 0	0.396 0.3 0.276 0.3 12.7 13 0 A	396 0.2 276 0.2 2.7 12 0 A	396 0.39 276 0.27 2.7 12. 0 0 A A 396 0.39
Tariff for Cost for Bill for Tariff for Cost for Bill for Tariff f	ne for Friday &Feast Evening or consumption or surplus consumption r surplus Friday &Feast Evening ne for Saturday &Feast Days or consumption or surplus	NIS/kWI: NIS/kWI: NIS NIS NIS NIS NIS/kWI: NIS/kWI:	1 N 1 O=N-0.12 P=E*N Sub Q=F*O Sub R=P-Q T S 1 T 1 U=T-0.12	Total 60.: otal 113.	0.396 0.276 5 12.7 5 0 A 0.396 0.276	0.276 12.7 0 A 0.396 0.276	0.276 (12.7 0 A 0.396 (0.276 (0.276 0. 12.7 1 0 A 0.396 0. 0.276 0.	276 0.2 2.7 12 0 A 396 0.3 276 0.2	276 0.276 2.7 11.2 0 0 A A 896 0.396 276 0.276	0.276 0 6.8 0 A 0.396 0 0.276 0	0.276 0.276 0.2 0.8 0 3 A 0.396 0.39	76 0.276 0 0 .6 7.7 A A 96 0.396 76 0.276	0.276 (0 10.8 A 0.396 (0.396 0.3 0.276 0.2 0 111.8 11 A 0.396 0.3 0.276 0.2	0 0.396 0 0.276 0 0 8 7.7 A A A	0.396 0.276 0 5.6 A 0.396	0.396 0.276 0 1.5 A 0.396 0.276	0.396 0.276 3.8 0 A 0.396	0.396 0.276 11.2 0 A 0.396 0.276	0.396 C 0.276 C 12.7 I 0 A 0.396 C 0.276 C	0.396 0.3 0.276 0.3 12.7 1: 0 A 0.396 0.3 0.276 0.2	396 0.2 276 0.2 2.7 12 0 A 396 0.2 276 0.2	396 0.39 276 0.27 2.7 12. 0 0 A A 396 0.39 276 0.27
Tariff for Cost for Cost for Tariff for Cost for Tariff for Tariff for Tariff for Cost for Tariff for Cost for Tariff for Cost for Cost for Cost for Tariff for Cost for Cost for Tariff for Cost for Cost for Cost for Tariff for Cost for Co	ne for Fridar &Feast Evening or consumption or surplus consumption surplus results Friday &Feast Evening ne for Saturdar &Feast Evening or consumption or surplus consumption	NIS/kWh NIS/kWh NIS NIS NIS/day S NIS/kWh NIS/kWh	1 N 1 O=N-0.12 P=E*N Sub Q=F*O Sub R=P-Q T S 1 T 1 U=T-0.12 V=E*T Sub	Total 60.: total 113.t	0.396 0.276 5 12.7 5 0 0 A 0.396 0.276 5 12.7	0.276 12.7 0 A 0.396 0.276 12.7	0.276 (12.7 0 A 0.396 (12.7 12.7 12.7 12.7 12.7 12.7 12.7 12.7	0.276 0. 12.7 1 0 A 0.396 0. 0.276 0.	276 0.2 2.7 12 0 A 396 0.3 276 0.2 2.7 12	276 0.276 2.7 11.2 0 0 A A 896 0.396 276 0.276	0.276 0 6.8 0 A 0.396 0 0.276 0	0.276 0.2 0.8 0 3 A 0.396 0.39 0.276 0.2 0.8	76 0.276 0 0 .6 7.7 A A 96 0.396 76 0.276 0 0	0.276 (0 10.8 A 0.396 (0.276 (0.396 0.3 0.276 0.2 0 111.8 11 A 0.396 0.3 0.276 0.2	96 0.396 0 0 0 0 8 7.7 A A A 0 0.396 0 0.276 0 0.276	0.396 0.276 0 5.6 A 0.396 0.276	0.396 0.276 0 1.5 A 0.396 0.276	0.396 0.276 3.8 0 A 0.396 0.276	0.396 0.276 11.2 0 A 0.396 0.276 11.2	0.396 (0.276 (0.	0.396 0.3 0.276 0.3 12.7 1: 0 A 0.396 0.3 0.276 0.3	396 0.3 276 0.3 2.7 12 0 A 396 0.3 2.7 12	396 0.39 276 0.27 2.7 12. 0 0 A A 396 0.39 276 0.27 2.7 12.
Bill for Time Zon Tariff fo Cost for Cost for Bill for Tariff fo Cost for	ne for Fridar &Feast Evening or consumption or surplus consumption surplus results Friday &Feast Evening ne for Saturdar &Feast Evening or consumption or surplus consumption	NIS/kWh NIS/kWh NIS NIS NIS/day S NIS/kWh NIS/kWh NIS/kWh	PE N Sub Sub PE N Sub	Total 60.: total 113.t	0.396 0.276 5 12.77 5 0 0 A 0.396 0.276 5 12.77 5 0.396	0.276 12.7 0 A 0.396 0.276 12.7	0.276 (12.7 0 A 0.396 (0.276 (0.276 0. 12.7 1 0 A 0.396 0. 0.276 0.	276 0.2 2.7 12 0 A 396 0.3 276 0.2	276 0.276 2.7 11.2 0 0 A A 896 0.396 276 0.276	0.276 0 6.8 0 A 0.396 0 0.276 0	0.276 0.2 0.8 0 3 A 0.396 0.39 0.276 0.2 0.8	76 0.276 0 0 .6 7.7 A A 96 0.396 76 0.276 0 0	0.276 (0 10.8 A 0.396 (0.276 (0.396 0.3 0.276 0.2 0 111.8 11 A 0.396 0.3 0.276 0.2	96 0.396 0 0 0 0 8 7.7 A A A 0 0.396 0 0.276 0 0.276	0.396 0.276 0 5.6 A 0.396 0.276	0.396 0.276 0 1.5 A 0.396 0.276	0.396 0.276 3.8 0 A 0.396	0.396 0.276 11.2 0 A 0.396 0.276	0.396 C 0.276 C 12.7 I 0 A 0.396 C 0.276 C	0.396 0.3 0.276 0.3 12.7 1: 0 A 0.396 0.3 0.276 0.2	396 0.2 276 0.2 2.7 12 0 A 396 0.2 276 0.2	396 0.396 276 0.276 2.7 12.7 0 0 A A 396 0.396

Table 8.11 (2/4) Electrical Cost Calculation (For the Year 2016)

	y 2016			ъ.	ъ.					43.									F33 -	,			
					Data Output	0	1 2	3	4	AM 5 6	7	8	9 10	11	10	12 1	1.5	16	PM		10 (00 21	22
		1337			_	-		_				-				13 14		16	17	18		20 21	
	umption	kWh	A	660	_	27.5 27	.5 27.5	27.5	27.5 27	7.5 27.5	27.5 2	7.5 27.	.5 27.5	27.5	27.5 27	7.5 27.5	27.5	27.5	27.5	27.5	27.5 27	.5 27.5	27.5 2
	mum Output	kW	В	45	_	0	0 0	0	0	0 5	20	10 (0 00	05	100 1	00 00	70	50	20	-	0	0 0	
	ut Rate for Solor		C Page	220.0	_	0	0 0		0	0 5		_	0 80	_		00 80		50	30	5	0	0 0	
	Generation	kWh		330.8	_		0.0			0.0 2.3		8.0 27.		_	45.0 45		_		13.5	2.3	_	.0 0.0	
JDECO Consump	ption	kWh	E=A-D (N		_	27.5 27		_		7.5 25.3	_	9.5 0.		0	0	0 (_	5			27.5 27		
Surplus Power	Wanting Days	kWh	F=D-A (N	L1 ()	_	0	0 0	_	0	0 0		_	0 8.5	_	17.5 17		_	0	0	0	0	0 0	
Time Zone for V		NIIC 4 NVI	G		-	A 0.436 0.4	A A 86 0.436		A 0.436 0.4	A B		A 436 0.43	A A 36 0.436	A 0.436 (A 0.436 0.4	A A		C 1.286	C 1.286	C 1.286 1	C .286 1.2	C C	
Tariff for consun	-	NIS/kWh				0.436 0.4		_			_	316 0.31		_	0.316 0.3		_						
Tariff for surplus			I=H-0.12	Sub Total										0.316 (0.316 0.3	0.310					.166 1.1	_	
Cost for consump	ption	NIS		Sub Total	319.8		2 12	12										6.4			35.4 35		
Cost for surplus	a Dana	NIS		_	22.5	0	0 0	0	0	0 0	0	0	0 2.7	4.8	5.5 5	5.5 2.7	1.3	0	0	0	0	0 0	0
Bill for Working Time Zone for Frida		NIS/day	L=J-K M	Total	297.3			_			-						_	n	n	n	n		
		> TO 4 TO 1			_		A A	A	A	A A			A A	A		A A		В	В	В		A A	
Tariff for consun Tariff for surplus		NIS/kWh					6 0.436		0.436 0.4			436 0.43			0.436 0.4								0.436 0
			O=N-0.12			0.316 0.3		_		316 0.316	_	316 0.31		_	0.316 0.3		_				_		0.316 0
Cost for consump	ption	NIS		Sub Total	197.5		2 12	_		12 11		4.1 0.		0	0	0 (_		10.6		_	12 12	
Cost for surplus		NIS		Sub Total		0	0 0	0	0	0 0	0	0	0 2.7	4.8	5.5 5	5.5 2.7	1.3	0	0	0	0	0 0	0
Bill for Friday&		NIS/day	R=P-Q	Total	175.0													-	_	-		ъ .	
Time Zone for Satu			S		_		A A	A	A	A A			A A	A		A A		A	C	C		B A	
Tariff for consun	-	NIS/kWh					6 0.436			436 0.436		436 0.43				136 0.43						54 0.436	
Tariff for surplus			U=T-0.12			0.316 0.3				316 0.316		316 0.31			0.316 0.3						0.634 0.6		
Cost for consump	puon	NIS		Sub Total	225.5		2 12	12	12	12 11		4.1 0.		0	0	0 (2.2			20.7 20	_	
Cost for surplus	E	NIS		Sub Total	22.5	0	0 0	0	0	0 0	0	0	0 2.7	4.8	5.5 5	5.5 2.7	1.3	0	0	0	0	0 0	0
Bill for Friday&	xFeast Evening	NIS/day	X=V-W	Total	203.0			_									_						
Cuulu-0 /	201¢																						
Spring&Autumi	11 2016			Data	Data					AM									PM	ſ			
					Output	0	1 2	3	4	5 6	7	8	9 10	11	12	13 14	15	16	17	18	19 2	20 21	22
Load Consu	umption	kWh	A	790	put	32.9 32				2.9 32.9		2.9 32.			32.9 32			32.9			32.9 32		
	mum Output	kW	В	65	_	32.9 32	.9 32.9	32.9	32.9 3.	2.9 32.9	32.9 3	2.9 32.	.9 32.9	32.9	32.9 32	2.9 32.3	32.9	32.9	32.9	32.9	32.9 32	.9 32.9	32.9 3
			С	00	_	0	0 0	0	0	0 5	20	10 (0 00	05	100 1	00 00	70	50	20	-	0	0 0	
		%		177.0	_	0		0	0			40 6		_		00 80	_	50	30	5	0 0		
	Generation	kWh		477.8	_		0.0	_		0.0 3.3		6.0 39.			65.0 65		_		19.5	3.3	_	.0 0.0	
JDECO Consump	ption	kWh	E=A-D (N		_	32.9 32				2.9 29.7	_		0 0	0	0	0 (_				32.9 32		
Surplus Power		kWh	F=D-A (N	LT 0)	_	0	0 0		0	0 0		0 6.		_	32.1 32		_	0	0	0	0	0 0	
Time Zone for V			G				A A	A	A	A C	_		C C	С	С	C C		С	С	С		B B	
Tariff for consum		NIS/kWh			_	0.383 0.3				383 0.591	0.07.1	591 0.59			0.591 0.5		_						0.383 0
Tariff for surplus			I=H-0.12		_	0.263 0.2		_		263 0.471	_	471 0.47		_	0.471 0.4	71 0.47	_				0.471 0.3		
Cost for consump	ption	NIS	J=E*H S	Sub Total	210.7	12.6 12	6 12.6	12.6	12.6 12	2.6 17.5	11.8	4.1	0 0	0	0	0 (_	0.2	7.9	17.5	19.5 15	.7 15.7	12.6 1
Cost for surplus		NIS	K=F*I S	Sub Total	70.6	0	0 0	0	0	0 0	0	0 2.	9 9	13.6	15.1 15	5.1	5.9	0	0	0	0	0 0	0
Bill for Working		NIS/day	L=J-K	Total	140.1																		
Time Zone for Frida	ay &Feast Evening		M				A A	A	A	A B			B B	В	В	B E		В	В	В	_	A A	
Tariff for consum	•	NIS/kWh				0.383 0.3				383 0.478		478 0.47			0.478 0.4						0.478 0.3	-	0.383 0
Tariff for surplus	s	NIS/kWh	O=N-0.12			0.263 0.2	53 0.263	0.263	0.263 0.2	263 0.358		358 0.35	58 0.358	0.358	0.358 0.3	358 0.35	0.358	0.358	0.358	0.358 (0.358 0.2	63 0.263	0.263 0
Cost for consump	ption	NIS		Sub Total		12.6 12	6 12.6	12.6	12.6 12	2.6 14.2	9.5		0 0	0	0	0 (0.2	6.4	14.2	15.7 12		12.6 1
Cost for surplus		NIS	Q=F*O s	Sub Total	53.6	0	0 0	0	0	0 0	0	0 2.	.2 6.8	10.3	11.5 11	1.5 6.8	4.5	0	0	0	0	0 0	0
Bill for Friday&	kFeast Evening		•					_			_	_											
		NIS/day	R=P-Q	Total	135.9																В	D A	
Time Zone for Satu		NIS/day	•	Total	135.9	A	A A	A	A	A A	. A	A	A A	A	A	A A	A	A	В	В		B A	. A
	urday&Feast Days	NIS/day NIS/kWh	R=P-Q S	Total		A 0.383 0.3		_		A A		A 2		_	A 0.383 0.3						0.478 0.4		0.383 0
Time Zone for Satu	urday&Feast Days	NIS/kWh	R=P-Q S	Total			33 0.383	0.383	0.383 0.3		0.383 0		33 0.383	0.383		883 0.38	0.383	0.383	0.478	0.478 (78 0.383	
Tariff for consum Tariff for surplus Cost for consump	nption	NIS/kWh NIS/kWh NIS	R=P-Q S T U=T-0.12 V=E*T S	Total Sub Total	187.1	0.383 0.3 0.263 0.2 12.6 12	33 0.383 53 0.263 .6 12.6	0.383	0.383 0.3	383 0.383	0.383 0 0.263 0 7.6	383 0.38 263 0.26 2.6	33 0.383 53 0.263 0 0	0.383 (0.263 (0	0.383 0.3	0 (3 0.383 3 0.263 0 0	0.383 0.263 0.2	0.478 0.358 6.4	0.478 (0.358 (14.2	0.478 0.4 0.358 0.3 15.7 15	78 0.383 58 0.263 .7 12.6	3 0.383 0 3 0.263 0 5 12.6 1
Tariff for surplus	nption	NIS/kWh	R=P-Q S T U=T-0.12 V=E*T s			0.383 0.3 0.263 0.2	33 0.383 53 0.263	0.383	0.383 0.3	383 0.383 263 0.263	0.383 0 0.263 0 7.6	383 0.38 263 0.26	33 0.383 53 0.263 0 0	0.383 (0.383 0.3	883 0.383 263 0.263	3 0.383 3 0.263 0 0	0.383 0.263	0.478	0.478 (0.478 0.4	78 0.383 58 0.263	3 0.383 0 3 0.263 0 5 12.6 1
Tariff for consum Tariff for surplus Cost for consump	urday&Feast Days mption s ption	NIS/kWh NIS/kWh NIS	R=P-Q S T U=T-0.12 V=E*T S	Sub Total	187.1	0.383 0.3 0.263 0.2 12.6 12	33 0.383 53 0.263 .6 12.6	0.383 (0.263 (12.6	0.383 0.3 0.263 0.3 12.6 13	383 0.383 263 0.263 2.6 11.3	0.383 0 0.263 0 7.6	383 0.38 263 0.26 2.6	33 0.383 53 0.263 0 0	0.383 (0.263 (0	0.383 0.3	0 (3 0.383 3 0.263 0 0	0.383 0.263 0.2	0.478 0.358 6.4	0.478 (0.358 (14.2	0.478 0.4 0.358 0.3 15.7 15	78 0.383 58 0.263 .7 12.6	3 0.383 0 3 0.263 0 5 12.6 1
Time Zone for Satur Tariff for consum Tariff for surplus Cost for consump Cost for surplus Bill for Friday&	urday&Feast Days mption s ption	NIS/kWh NIS/kWh NIS	R=P-Q S T U=T-0.12 V=E*T S W=F*U S	Sub Total	187.1 39.3	0.383 0.3 0.263 0.2 12.6 12	33 0.383 53 0.263 .6 12.6	0.383 (0.263 (12.6	0.383 0.3 0.263 0.3 12.6 13	383 0.383 263 0.263 2.6 11.3	0.383 0 0.263 0 7.6	383 0.38 263 0.26 2.6	33 0.383 53 0.263 0 0	0.383 (0.263 (0	0.383 0.3	0 (3 0.383 3 0.263 0 0	0.383 0.263 0.2	0.478 0.358 6.4	0.478 (0.358 (14.2	0.478 0.4 0.358 0.3 15.7 15	78 0.383 58 0.263 .7 12.6	3 0.383 0 3 0.263 0 5 12.6 1
Time Zone for Satu Tariff for consum Tariff for surplus Cost for consump Cost for surplus	urday&Feast Days mption s ption	NIS/kWh NIS/kWh NIS	R=P-Q S T U=T-0.12 V=E*T S W=F*U S X=V-W	Sub Total Sub Total Total	187.1 39.3 147.8	0.383 0.3 0.263 0.2 12.6 12	33 0.383 53 0.263 .6 12.6	0.383 (0.263 (12.6	0.383 0.3 0.263 0.3 12.6 13	383 0.383 263 0.263 2.6 11.3 0 0	0.383 0 0.263 0 7.6	383 0.38 263 0.26 2.6	33 0.383 53 0.263 0 0	0.383 (0.263 (0	0.383 0.3	0 (3 0.383 3 0.263 0 0	0.383 0.263 0.2	0.478 (0.358 (6.4 0	0.478 (0.358 (14.2)	0.478 0.4 0.358 0.3 15.7 15	78 0.383 58 0.263 .7 12.6	3 0.383 0 3 0.263 0 5 12.6 1
Time Zone for Satur Tariff for consum Tariff for surplus Cost for consump Cost for surplus Bill for Friday&	urday&Feast Days mption s ption	NIS/kWh NIS/kWh NIS	R=P-Q S T U=T-0.12 V=E*T S W=F*U S X=V-W	Sub Total Sub Total Total Data	187.1 39.3 147.8	0.383 0.3 0.263 0.2 12.6 12 0	33 0.383 53 0.263 6 12.6 0 0	0.383 (0.263 (12.6 0	0.383 0.3 0.263 0.3 12.6 12 0	383 0.383 263 0.263 2.6 11.3 0 0	0.383 0 0.263 0 7.6	383 0.38 263 0.26 2.6 0 1.	83 0.383 53 0.263 0 0 6 5	0.383 (0.263 (0	0.383 0.3 0.263 0.2 0 8.4 8	383 0.383 263 0.263 0 (3.4 5	3 0.383 3 0.263 0 0 5 3.3	0.383 0.263 0.2 0	0.478 (0.358 (6.4 0	0.478 (0.358 (14.2 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.478 0.4 0.358 0.3 15.7 15 0	78 0.383 58 0.263 .7 12.6 0 0	3 0.383 0 3 0.263 0 5 12.6 1
Time Zone for Satur Tariff for consum Tariff for surplus Cost for consump Cost for surplus Bill for Friday& Summer 2016	urday&Feast Days mption s ption &Feast Evening	NIS/kWh NIS/kWh NIS NIS NIS/day	R=P-Q S T U=T-0.12 V=E*T S W=F*U S X=V-W	Sub Total Sub Total Total Data Input	187.1 39.3 147.8	0.383 0.3 0.263 0.2 12.6 12 0	33 0.383 33 0.263 36 12.6 0 0	0.383 0.263 12.6 0	0.383 0.3 0.263 0.3 12.6 12 0	383 0.383 263 0.263 2.6 11.3 0 0	0.383 0 0.263 0 7.6 0	383 0.38 263 0.26 2.6 0 1.	83 0.383 53 0.263 0 0 .6 5	0.383 (0.263 (0 7.6	0.383 0.3 0.263 0.2 0 8.4 8	883 0.38: 263 0.26: 0 (3.4 5	3 0.383 3 0.263 0 0 5 3.3	0.383 0.263 0.2 0	0.478 (0.358 (6.4 0 PM	0.478 (0.358 (14.2 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.478	78 0.383 558 0.263 .7 12.6 0 0	3 0.383 0 3 0.263 0 5 12.6 1 0 0
Time Zone for Satur Tariff for consum Tariff for surplus Cost for consum Cost for surplus Bill for Friday& Summer 2016 Load Consum	urdav&Feast Davs mption s ption &Feast Evening umption	NIS/kWh NIS/kWh NIS NIS NIS/day	R=P-Q S T U=T-0.12 V=E*T S W=F*U S X=V-W	Sub Total Sub Total Total Data Input	187.1 39.3 147.8	0.383 0.3 0.263 0.2 12.6 12 0	33 0.383 33 0.263 36 12.6 0 0	0.383 0.263 12.6 0	0.383 0.3 0.263 0.3 12.6 12 0	383 0.383 263 0.263 2.6 11.3 0 0	0.383 0 0.263 0 7.6	383 0.38 263 0.26 2.6 0 1.	83 0.383 53 0.263 0 0 .6 5	0.383 (0.263 (0	0.383 0.3 0.263 0.2 0 8.4 8	883 0.38: 263 0.26: 0 (3.4 5	3 0.383 3 0.263 0 0 5 3.3	0.383 0.263 0.2 0	0.478 (0.358 (6.4 0 PM	0.478 (0.358 (14.2 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.478	78 0.383 558 0.263 .7 12.6 0 0	3 0.383 0 3 0.263 0 5 12.6 1
Time Zone for Satu Tariff for consun Tariff for surplus Cost for consum Cost for surplus Bill for Friday& Summer 2016 Load Consu Solar Maxim	urdav&Feast Davs nption s pption &Feast Evening umption mum Output	NIS/kWh NIS/kWh NIS NIS NIS/day	R=P-Q S T U=T-0.12 V=E*T 8 W=F*U 8 X=V-W	Sub Total Sub Total Total Data Input	187.1 39.3 147.8	0.383 0.3 0.263 0.2 12.6 12 0	33 0.383 53 0.263 56 12.6 0 0 1 2 3 3 36.3	0.383 0.263 12.6 0 3 36.3	0.383 0.3 0.263 0.263 0.261 12.6 12 0	383 0.383 0.263 0.263 0.263 0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0 0.263 0 7.6 0 0 3 3 3 3 3 3 3 3	383 0.38 263 0.26 2.6 0 1. 8 6.3 36.	83 0.383 83 0.263 0 0 .6 5 9 10 3 36.3	0.383 (0.263 (0 7.6	0.383 0.3 0.263 0.2 0 8.4 8	883 0.38: 263 0.26: 0 (0 3.4 5 13 14 13 14	3 0.383 3 0.263 0 0 5 3.3 1 15 3 36.3	0.383 0.263 0.2 0	0.478 (0.358 (6.4 0 0 PM 17 36.3	0.478 (0.358 (14.2 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.478	78 0.383 78 0.383 70 0.263 70 0.00 70 0.00	8 0.383 0 8 0.263 0 6 12.6 1 0 0
Time Zone for Satu Tariff for consun Tariff for consun Cost for consum Cost for surplus Bill for Friday& Summer 2016 Load Consu Solar Maxin Outpu	urdav&Feast Davs inption s ption &Feast Evening umption mum Output ut Rate for Solar	NIS/kWh NIS/kWh NIS NIS NIS/day	R=P-Q S T U=T-0.12 V=E*T S W=F*U S X=V-W	Sub Total Sub Total Total Data Input 870 75	187.1 39.3 147.8	0.383 0.3 0.263 0.2 12.6 12 0 0 36.3 36	33 0.383 53 0.263 56 12.6 0 0 0 0	0.383 0.263 12.6 0 3 36.3	0.383 0.3 0.263 0.263 0.2 12.6 12 0 4 36.3 36	383 0.383 0.263 0.263 0.263 0.263 0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0 0.263 0 7.6 0	383 0.38 263 0.26 2.6 0 1. 8 6.3 36. 40 6	33 0.383 53 0.263 0 0 .6 5 9 10 3 36.3	0.383 (0 0.263 (0 7.6 11 36.3 (1	0.383 0.3 0.263 0.2 0 8.4 8 12 336.3 36	883 0.383 263 0.263 0 (0 3.4 5 13 14 5.3 36.3	3 0.383 3 0.263 0 0 5 3.3 1 15 3 36.3	0.383 0.263 0.2 0 16 36.3	0.478 (0.358 (0.358 (0.478 (0.358 (0.478 (0.358 (0.478 (0.	0.478 (0.358 (14.2 : 0 14.2 : 0 14.2 : 18 : 36.3 :	0.478	78 0.383 78 0.263 78 0.263 70 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 0.383 0 8 0.263 0 6 12.6 1 0 0
Time Zone for Satu Tariff for consum Cost for consum Cost for surplus Bill for Friday& Summer 2016 Load Consum Solar Maxim Outpu Solar	urday&Feast Days mption s ption &Feast Evening umption mum Output ut Rate for Solar Generation	NIS/kWh NIS/kWh NIS NIS NIS NIS KWh kWh kW	R=P-Q S T U=T-0.12 V=E*T S W=F*U S X=V-W	Sub Total Sub Total Total Data Input 870 75	187.1 39.3 147.8 Data _ Output	0.383 0.3 0.263 0.2 12.6 12 0 0 36.3 36 0 0	33 0.383 33 0.263 36 12.6 30 0 1 2 3 36.3 0 0 0 0.0	0.383 0.263 12.6 0 0 0 0 0 0 0 0 0	0.383 0.3 0.263 0.3 12.6 12 0 4 4 36.3 36 0 0.0 (383 0.383 0.263 0.263 0.263 0.263 0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0 0.263 0 7.6 0 0	8 6.3 36.3 40 8 40 6 60.0 45.	33 0.383 33 0.263 0 0 6 5 9 10 3 36.3 60 80 0 60.0	0.383 (0 0.263 (0 7.6 7.6 11 36.3 (1 95 71.3 (1	0.383 0.3 0.263 0.2 0 8.4 8 12 36.3 36 100 10 75.0 75	883 0.383 0 0 0 3.4 5 13 14 15.5.3 36.3 00 80	3 0.383 3 0.263 0 0 5 3.3 1 15 3 36.3 0 70 0 52.5	0.383 0.263 0.2 0 16 36.3 50 37.5	0.478 (0.358 (0.358 (0.478 (0.358 (0.478 (0.358 (0.478 (0.	0.478 (0.358 (14.2 10 14.2 10 14.2 11 18 18 136.3 13 13 18 18 18 18 18 18 18 18 18 18 18 18 18	1.478 0.478 0.3 1.358 0.3 15.7 15 0 19 2 19 2 0 0.0 0	78 0.383 78 0.383 78 0.263 70 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 0.383 0 8 0.263 0 6 12.6 1 0 0
Time Zone for Satu Tariff for consum Cost for consum Cost for surplus Bill for Friday & Summer 2016 Load Consu Solar Maxin Outpu Solar JDECO Consum JDECO Consum	urday&Feast Days mption s ption &Feast Evening umption mum Output ut Rate for Solar Generation	NIS/kWh NIS/kWh NIS NIS NIS NIS kWh kWh kW	R=P-Q S T U=T-0.12 V=E*T s W=F*U s X=V-W A B C D=B*C : E=A-D (N	Data Input 870 75 551.3	187.1 39.3 147.8 Data _ Output	0.383 0.3 0.263 0.2 12.6 12 0 0 36.3 36 0 0 0 0.0 0 36.3 36	33 0.383 53 0.263 6 12.6 0 0 1 2 3 36.3 0 0 0 0.0 3 36.3	3 3 36.3 0.00 36.3	0.383 0.3 0.263 0.3 12.6 12 0 4 36.3 36 0 0.0 (36.3 36	AM 5 66.3 36.3 32.6 6.3 32.6 588 0.383 688 0.383 688 0.263 688 0.263 688 0.263 688 0.263 688 0.263 688 0.263 688 0.263	0.383 0 0.263 0 7.6 0 0 36.3 3 7 36.3 3 20 15.0 3 15.0 3	8 6.3 36. 40 6.3 45.	33 0.383 53 0.263 0 0 66 5 9 10 3 36.3 60 80 0 60.0 0 0	0.383 (0.263 (0.	0.383 0.3 0.263 0.2 0 8.4 8 12 36.3 36 100 10 75.0 75	883 0.383 0 0 0 3.4 5 13 14 15.3 36.3 00 80 0 0	3 0.383 3 0.263 0 0 6 3.3 1 15 3 36.3 0 70 0 52.5	0.383 0.263 0.2 0 16 36.3 50 37.5	0.478 (0.358 (0.	0.478 (0.358 (14.2 10 14.2 10 14.2 11 18 18 36.3 13 18 32.6 13 18 18 18 18 18 18 18 18 18 18 18 18 18	1478 0.4 1.478 0.3 1.5.7 15 0 19 2 19 2 0 0.0 0 36.3 36	78 0.383 58 0.263 58 0.263 60 0 60 0	8 0.383 0 8 0.263 0 6 12.6 1 0 0
Time Zone for Satu Tariff for consum Tariff for consum Cost for consum Cost for surplus Bill for Friday & Summer 2016 Load Consus Solar Maxir Outpu Solar JDECO Consum Surplus Power	urdav&Feast Davs mption s ption &Feast Evening umption mum Output ut Rate for Solar Generation uption	NIS/kWh NIS/kWh NIS NIS NIS NIS KWh kWh kW	R=P-Q S T U=T-0.12 V=E*T S W=F*U S X=V-W	Data Input 870 75 551.3	187.1 39.3 147.8 Data _ Output	0.383 0.3 0.263 0.2 12.6 12 0 0 36.3 36 0 0 0 0.0 0 36.3 36 0	33 0.383 33 0.263 36 12.6 30 0 0 1 2 3 36.3 0 0 0 0.0 3 36.3	3 3 36.3 0.0 0 0 0 0 0 0 0 0 0	0.383 0.3 0.263 0.3 12.6 12 0 4 36.3 36 0 0.0 (36.3 36 0 0	AM 5 66.3 36.3 32.6 0 0 0	0.383 0 0.263 0 7.6 0 0 3.36.3 3 20 1.5.0 3 21.3	8 6.3 36. 40 6 0 8. 0 8.	9 10 3 36.3 9 10 9 10 3 36.3 60 80 0 60.0 0 0	0.383 (0.263 (0.	0.383 0.3 0.263 0.2 0 8.4 8 12 36.3 36.3 36 100 10 75.0 75 0	883 0.388 0 0 0 33.4 5 13 14 5.3 36.3 00 80 0	3 0.383 3 0.263 0 0 5 3.3 1 15 3 36.3 0 70 0 52.5 0 0	0.383 0.263 0.2 0 16 36.3 50 37.5 0	0.478 (0.358 (0.	0.478 (0.358 (0.	19 2 19 3 19 2 19 2 19 3 19 3 19 3 19 3 19 3 19 3 19 3 19 3	78 0.383 58 0.263 57 12.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22 3 36.3 3 0 0 0 0 0 0 0 0 1 36.3 3
Time Zone for Satur Tariff for consum Tariff for surplus Cost for consum Cost for surplus Bill for Friday& Summer 2016 Load Consus Solar Maxir Outpu Solar JDECO Consum Surplus Power Time Zone for V	urday&Feast Days mption s ption &Feast Evening umption mum Output ut Rate for Solar Generation uption Working Days	NIS/kWh NIS/kWh NIS NIS NIS/day	R=P-Q S T U=T-0.12 V=E*T S W=F*U S X=V-W A B C D=B*C D=B*C G G (N	Data Input 870 75 551.3	187.1 39.3 147.8 Data Output	0.383 0.3 0.263 0.2 12.6 12 0 0 36.3 36 0 0.0 0 36.3 36 0 A	33 0.383 33 0.263 36 12.6 0 0 0 1 2 3 36.3 0 0 0 0.0 3 36.3 0 0 A A	3 36.3 0.00 36.3 0 A	0.383 0.3 0.263 0.2 12.6 12 0 4 36.3 36 0 0.0 0 36.3 36 0 A	AM 5 66.3 36.3 0 50.0 3.88 0 4.88 0 5.88 0 5.88 0 5.88 0 5.88 0 5.88 0 6.88 0 6.88 0 6.88 0 6.88	0.383 0 0.263 0 7.6 0 3 36.3 3 20 15.0 3 21.3 0	8 6.3 36. 40 6 6.3 0.8 8 B	9 10 3 36.3 9 10 6 5 9 10 3 36.3 6 80 0 60.0 0 0 7 23.7 B C	0.383 (0.263 (0.	0.383 0.3 0.263 0.2 0 8.4 8 12 12 100 10 10 10 10 10 10 10 10 10 10 10 10	13 14 13 36.3 36.3 00 80 00 80 00 80 00 80 00 80 00 0	3 0.383 3 0.263 0 0 6 3.3 1 15 3 36.3 0 70 0 52.5 0 0 7 16.2	0.383 0.263 0.2 0 0 16 36.3 50 37.5 0 1.2	0.478 0.358 6.4 0 0 17 17 18 18 18 18 18 18	0.478 (0.358 (14.2 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 19 19 19 19 19 19 19 19 19 19 19 19 1	78 0.383 58 0.263 57 12.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22 3 36.3 3 6 12.6 1 6 12.6 1 7 0 0 8 36.3 3 9 0 9 0.0 1 36.3 3
Load Consum Solar Maxim JDECO Consumg Solar Surplus Power Time Zone for V	urday&Feast Days mption s ption &Feast Evening umption mum Output ut Rate for Solar Generation ption Working Days mption	NIS/kWh NIS/kWh NIS NIS NIS/day	R=P-Q S T T U=T-0.12 V=E*T s W=F*U s X=V-W	Data Input 870 75 551.3	187.1 39.3 147.8 Data Output	0.383 0.3 0.263 0.2 12.6 12 0 0 36.3 36 0 0 0.0 0 36.3 36 0 A 0.396 0.3	33 0.383 33 0.263 36 12.6 0 0 0 1 2.6 0 0 0 0 0.0 0 0.0 0 3 36.3 0 0 0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0	3 3 36.3 0 0 0 36.3 0 0 0 0 0	0.383 0.3 0.263 0.2 112.6 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AM 5 66.3 36.3 0 5 0.0 3.88 0 .883 0 .263 0 0 0 AM 5 66.3 36.3 0 5 0 0 0 A A A 396 0.396	0.383 0 0.263 0 7.6 0 0 3 36.3 3 2 20 1 15.0 3 2 21.3 0 B	8 6.3 36.40 6.3 0.6603 0.600 0	9 10 3 36.3 9 10 6 5 9 10 3 36.3 6 80 0 60.0 0 0 7 23.7 B C	0.383 (0.263 (0.	12 36.3 36 3.263 0.263 0.2 0 8.4 8 12 36.3 36 100 10 75.0 75 0 38.7 38 C	13 1-4 5.3 36.3 00 80 5.0 60.0 0 (3.7 23.7 C (411 1.41	3 0.383 3 0.263 0 0 5 3.3 4 15 3 36.3 0 70 0 52.5 0 0 16.2 C C	0.383 0.263 0.2 0 0 16 36.3 50 37.5 0 1.2 C	0.478 (0.358 (0.	0.0.478 (19 36.3 36 0 .	78 0.383 58 0.263 57 12.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22 3 36.3 3 6 12.6 1 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Time Zone for Satu Tariff for consum Cost for consum Cost for surplus Bill for Friday & Summer 2016 Load Consum Solar JDECO Consum Surplus Power Time Zone for V Tariff for consum Tariff for surplus	urdav&Feast Davs mption s s s ption &Feast Evening umption mum Output ut Rate for Solar Generation ption Generation ption Working Davs mption s	NIS/kWh NIS/kWh NIS NIS NIS/day	R=P-Q S T U=T-0.12 V=E*T S W=F*U S X=V-W A A B C D=B*C : E=A-D (N F=D-A (N G H H	Data Input 870 75 S551.3 ILT 0)	187.1 39.3 147.8 Data Output	0.383 0.3 0.263 0.2 12.6 12 0 0 36.3 36 0 0 0.0 0 36.3 36 0 A 0.396 0.3 0.276 0.2	33 0.383 33 0.263 36 12.6 0 0 0 1 2.6 0 0 0 0 0.0 0 3 36.3 0 0 0.0 0 3 36.3 0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0	3 36.3 0.00 36.3 0 0.0 36.3	0.383 0.3 0.263 0.2 112.6 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AM 5 66.3 36.3 0 0 0 AM 5 66.3 36.3 0 0 0 A A 396 0.396 276 0.276	0.383 0 0.263 0 7.6 0 0 3.36.3 3 20 15.0 3 21.3 0 B 0.603 0 0.483 0	8 6.3 36.40 6.3 0.48 6.3 0.48 6.3 0.48	9 10 3 36.3 9 10 3 36.3 9 0 9 10 3 36.3 60 80 0 60.0 0 0 7 23.7 B C	0.383 (0.263 (0.	12 36.3 36 3.263 0.2 0 8.4 8 12 36.3 36 100 10 75.0 75 0 38.7 38 C	13 14 5.3 36.3 00 80 5.0 60.0 0 (3.7 23.7 C (3.1 1.41	3 0.383 3 0.263 0 0 5 3.3 1 15 3 36.3 0 70 0 52.5 0 0 52.5 0 0 16.2 C C 1.411	0.383 0.263 0.2 0 16 36.3 50 37.5 0 1.2 C 1.411 1.291	0.478 6.4 0.358 6.4 0 0 0 0 0 0 0 0 0	0 0.483 (0.0483 (0.	19 36.3 36 0 .	78 0.383 58 0.263 58 0.263 7 12.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22 3 36.3 3 3 0.263 0 5 12.6 1 0 0 0 22 1 36.3 3 0 0 0 0 0.0 1 36.3 3 0 0 0 1 A 5 0.396 0 5 0.276 0
Time Zone for Satur Tariff for consum; Cost for consum; Cost for surplus Bill for Friday & Summer 2016 Load Consus Solar Maxir Outpu Solar JDECO Consum; Surplus Power Time Zone for V Tariff for consum; Cost for surplus	urdav&Feast Davs mption s ption &Feast Evening umption mum Output ut Rate for Solar Generation uption Working Davs mption s ption s	NIS/kWh NIS/kWh NIS/NIS NIS NIS/day kWh kW % kWh kWh kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh	R=P-Q S T U=T-0.12 V=E*T s W=F*U s X=V-W A B C D=B*C : E=A-D (N G H H I=H-0.12 J=E*H s	Data Input 870 75 ILT 0)	187.1 39.3 147.8 Data Output	0.383 0.3 0.263 0.2 12.6 12 0 0 36.3 36 0 0 0.0 0 36.3 36 0 A 0.396 0.3 0.276 0.2 14.4 14	33 0.383 33 0.263 36 12.6 0 0 0 1 2 3 36.3 0 0 0 0 0.0 3 36.3 0 0 0 A A A 6 0.396 6 0.276 4 14.4	3 36.3 0.263 0 0 0 36.3 0 0.0 36.3 0 0.396 0.276	0.263 0.263 0.263 0.263 0.263 0.263 0.263 0.263 0.263 0.263 0.263 0.276	AM 5 6.3 36.3 32.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0 0.263 0 0.263 0 0 0.263 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 8 6.3 36.3 40 60.0 45.6 3 0 8.8 B 603 0.66 483 0.48 3.8	9 10 3 36.3 9 10 3 36.3 9 10 0 80 0 60.0 0 60.0 0 0 0 7 23.7 B C 0 3 1.411 3 1.291 0 0	0.383 (0.263 (0 0.263 (0 0.263 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12 36.3 36.3 36 36.3 36 36.3 36 100 10 75.0 75 0 38.7 38 C	13 14 5.3 36.2 00 80 00	3 0.383 3 0.263 0 0 5 3.3 4 15 3 36.3 0 70 0 52.5 0 0 7 16.2 C C	0.383 0.263 0.2 0 0 16 36.3 50 37.5 0 1.2 C 1.411 1.291	0.478 (6.4 0.358) PM 17 36.3 30 22.5 13.8 0 B B 0.0603 (8.3 0.483) 8.3	0 0.478 (1 14.2 1 14.2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	19 : 36.3 36 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	78 0.383 78 0.383 78 0.263 78	3 0.383 0 3 0.263 0 5 12.6 1 0 0 22 1 36.3 3 0 0.0 1 36.3 3 0 0.0 1 36.3 3 0 0.0 1 36.3 3
Time Zone for Satur Tariff for consum Cost for consum Cost for surplus Bill for Friday & Summer 2016 Load Consus Solar Maxir Outpu Solar JDECO Consum Surplus Power Time Zone for V Tariff for surplus Cost for consum Cost for surplus	urday&Feast Days mption s ption &Feast Evening umption mum Output ut Rate for Solar Generation uption Working Days mption s ption	NIS/kWh NIS/kWh NIS NIS NIS/day kWh kW kWh kWh kWh kWh kWh	R=P-Q S T T U=T-0.12 V=E*T 8 W=F*U 8 X=V-W A A B C D=B*C : E=A-D (N G H I=H-0.12 J=E*H 8 K=F*I 8	Data Input 870 75 Still T Otal LLT 0)	187.1 39.3 147.8 Data Output	0.383 0.3 0.263 0.2 12.6 12 0 0 36.3 36 0 0 0.0 0 36.3 36 0 A 0.396 0.3 0.276 0.2	33 0.383 33 0.263 36 12.6 0 0 0 1 2.6 0 0 0 0 0.0 0 3 36.3 0 0 0.0 0 3 36.3 0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0	3 36.3 0.263 0 0 0 36.3 0 0.0 36.3 0 0.396 0.276	0.383 0.3 0.263 0.2 112.6 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AM 5 66.3 36.3 0 0 0 AM 5 66.3 36.3 0 0 0 A A 396 0.396 276 0.276	0.383 0 0.263 0 0.263 0 0 0.263 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 6.3 36.40 6.3 0.48 6.3 0.48 6.3 0.48	9 10 3 36.3 9 10 3 36.3 9 10 0 80 0 60.0 0 60.0 0 0 0 7 23.7 B C 0 3 1.411 3 1.291 0 0	0.383 (0.263 (0 0.263 (0 0.263 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12 36.3 36 3.263 0.2 0 8.4 8 12 36.3 36 100 10 75.0 75 0 38.7 38 C	13 14 5.3 36.2 00 80 00	3 0.383 3 0.263 0 0 5 3.3 1 15 3 36.3 0 70 0 52.5 0 0 52.5 0 0 16.2 C C 1.411	0.383 0.263 0.2 0 16 36.3 50 37.5 0 1.2 C 1.411 1.291	0.478 6.4 0.358 6.4 0 0 0 0 0 0 0 0 0	0 0.483 (0.0483 (0.	19 36.3 36 0 .	78 0.383 58 0.263 58 0.263 7 12.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 0.383 0 3 0.263 0 5 12.6 1 0 0 22 1 36.3 3 0 0.0 1 36.3 3 0 0.0 1 36.3 3 0 0.0 1 36.3 3
Time Zone for Satu Tariff for consum Cost for consum Cost for surplus Bill for Friday & Summer 2016 Load Consum Solar Maxim Outpu Solar JDECO Consum Surplus Power Time Zone for V Tariff for consum Tariff for surplus Cost for consum Cost for surplus Bill for Working Bill for Working	urdav&Feast Davs mption s s ption &Feast Evening umption mum Output ut Rate for Solar Generation ption ption Working Davs mption s ption g Days	NIS/kWh NIS/kWh NIS/NIS NIS NIS/day kWh kW % kWh kWh kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh	R=P-Q S T T U=T-0.12 V=E*T s W=F*U s X=V-W A B C D=B*C : E=A-D (N G H I=H-0.12 J=E*H s K=F*I s L=J-K	Data Input 870 75 ILT 0)	187.1 39.3 147.8 Data Output	0 0.0.36.3 36.3 36.3 36.3 36.3 36.3 36.3	33 0.383 34 0.263 35 0.263 35 0.263 36 0.263 36.3 36.3 36.3 36.3 36.3 36.3 36.3	3 3 36.3 0.00 36.3 0 0.0 36.3 0 0.0 14.4 0	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	AM 5 6 6.3 32.6 0	0.383 0 0.263 0 0 7.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 8 6.3 36.3 36.4 40 6 0 0.0 45.6 0 8.8 10 603 0.6(483 0.48480 0.48480 0.48480 0.48480 0.48480	9 10 3 363 9 10 3 363 3 363 9 80 0 80 0 60 0 0 0 0 0 2 3 1.411 3 1.291 0 0 0 2 30.6	0.383 (0.263 (0 0.263 (0 0 7.6)	0.383 0.333 0.333 0.333 0.333 0.333 0.333 0.333 0.333 0.333 0.333 0.3336.3 360 100 10 100 10 100 100 100 100 100 100	0.3883 0.	3 0.383 3 0.263 3 0.263 0 0 5 3.3 4 15 5 36.3 0 70 0 52.5 0 0 1 1.411 1 1.291 1 1.291	0.383 0.263 0.2 0 0 16 36.3 50 37.5 0 1.2 C 1.411 1.291 0 1.5	PMM 17 36.3 30 22.5 13.8 0 B B 0.0483 0 0.483 0 0	1 18 36.3 1 5 3.8 32.6 1 0 0 8 8 0 0.483 (0 0 0.483 (0 0 0 0.483 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0.0 0 0 0 0 B B B B B B B B B B B B B	78 0.383 58 0.263 58 0.263 58 0.263 58 0.263 58 0.263 58 0.263 58 0.263 58 0.263 58 0.263 58 0.263 58 0.263 58 0.263 58 0.263 58 0.276 59 14.44 50 0	22 3 36.3 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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Time Zone for Satur Tariff for consum Cost for consum Cost for surplus Bill for Friday & Summer 2016 Load Consum Solar Outpu Solar JDECO Consum Surplus Power Time Zone for V Tariff for consum Cost for surplus Cost for consum Cost for consum Cost for surplus Bill for Working Time Zone for Frida Tariff for consum	urdav&Feast Davs mption s s ption &Feast Evening umption mum Output ut Rate for Solar Generation uption Working Davs mption s ption g Days lav &Feast Evening mption	NIS/kWh NIS/kWh NIS/NIS NIS NIS NIS NIS NIS NIS/day kWh kW % kWh kWh NIS/kWh NIS/kWh NIS/kWh NIS/day	R=P-Q S T U=T-0.12 V=E*T s W=F*U s X=V-W A B C D=B*C : E=A-D (N G H H I=H-0.12 J=E*H s K=F*I s L=J-K M	Data Input (870 75 11 11 11 11 11 11 11 11 11 11 11 11 11	187.1 39.3 147.8 DataOutput	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 0.383 33 0.383 33 0.263 33 0.263 33 0.263 33 0.263 33 0.263 33 36.3 30 0 0 0 0 0.0 0 0 0 0 0 0 0 0 0 0 0	3 3 36.3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 4 36.3 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	383 0.383383 0.383383 0.383383 0.383383 0.383383 0.26263 0.2626 11.3.3 0.2626.5 0.2666	0.383 0 0.263 0 0.263 0 0.263 0 0.263 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0.265 0 0.255 0	8 8 40 663 36. 40 0 45. B 1 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	9 10 6 5 9 10 9 23,3 36,3 9 80,0 9 10 9 10 9 10 9 10 9 20,0 9 10 9 10 9 10 9 10 9 10 9 10 9 10 9 1	0.383 (0.263 (0 0.263 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0.333 0.363 0.263	383 0.388	3 0.383 3 0.263 0 0 0 5 3.3 1 15 5 3.36.3 1 70 0 52.5 0 0 16.2 1 1.411 1 1.291 1 0 0 20.9	0.383 0.263 0.2 0 0 16 36.3 50 37.5 0 1.2 C 1.411 1.291 0 1.5	0.478 (0.358) 6.4 (0.358) 6.4 (0.358) 7 (14.2 0 14.2 0 15.3 14.2 0 16.3 15.3 15.3 15.3 15.3 15.3 15.3 15.3 15	19 19 19 19 19 19 19 19 19 19 19 19 19 1	78 0.383 80 2635 80 2635 80 2635 80 2635 80 2635 80 2635 80 2635 80 2635 80 2635 80 2635 80 2635 80 2635 80 2635 80 2655 80	\$ 0.383 0 6 0.263 0 6 0.263 0 7 12.6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Time Zone for Satur Tariff for consum Cost for consum Cost for surplus Bill for Friday& Summer 2016 Load Consus Solar Maxir Outpu Solar JDECO Consum Surplus Power Time Zone for VI Tariff for consum Cost for surplus Cost for consum Cost for surplus Bill for Working Time Zone for Fid Time Zone for Fid Time Zone for Fud Tariff for consum	urdav&Feast Davs mption s ption &Feast Evening umption mum Output ut Rate for Solar Generation uption Working Davs mption s ption g Days g Days av&Feast Evening mytion s	NIS/kWh NIS/kWh NIS/day kWh kW % kWh kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh	R=P-Q S T T U=T-0.12 V=E*T 8 W=F*U 8 X=V-W A B C D=B*C : E=A-D (N F=D-A (N G H I=H-0.12 J=E*H 8 K=F*I 8 L=J-K M	Sub Total Data Input 870 75 SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS	187.1 39.3 147.8 Data Output	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 0.383 33 0.383 33 0.263 33 0.263 33 0.263 33 0.263 33 0.263 33 36.3 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 36.3 0.26 0 0 0 0.0 0.0 0.36.3 0 0.276 14.4 0 0.396 0.276 0.276	4 4 4 336.3 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	383 0.383383 0.383383 0.383383 0.383383 0.263263 0.26266 11.3.2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0 0.263 0 0.263 0 0.263 0 0.263 0 0 0.263 0 0 0.263 0 0 0 0.263 0 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263	8 8 40 66.3 36.4 40 66.3 0.4 40 66.3 0.4 40	9 10 6 5 9 10 9 10 0 80 0 60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 (0.263 (0 0.263 (0 0.263 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12 12 12 36.3 36.3 36.3 36.3 36.3 36.3 36.3 36.	383 0.388	3 0.383 3 0.263 0 0 0 5 3.33 1 15 1 36.3 1 70 0 52.5 1 0 0 1 16.2 1 C C C C C C C C C C C C C C C C C C C	0.383 0.263 0.2 0 0 16 36.3 50 37.5 0 1.2 C 1.411 1.291 0 1.5 A 0.396 0.2276	0.478 (0.358) 6.4 (0.358) 6.4 (0.358) 7 (I 18 36.3 1 5 3.8 32.6 1 0 0 483 (0 4	0.0478 0.4338 0.3358 0.3358 0.3358 0.3358 0.336.3 360 0.00 0.00 0.00 0.046.3 0.6463 0.6483 0.4883 0.4883 0.	78 0.383 8 0.263 8 0.263 8 0.263 8 0.263 8 0.263 9 0.00	6 0.263 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Time Zone for Satur Tariff for consum Cost for consump Cost for surplus Bill for Friday & Summer 2016 Load Consum Solar JDECO Consum Surplus Power Time Zone for V Tariff for consum Tariff for surplus Cost for consum Tariff for consum Cost for consump Cost for consump Cost for consump	urdav&Feast Davs mption s s s ption &Feast Evening umption mum Output ut Rate for Solar Generation ption gumption s ption g Days av&Feast Evening ption g Days av&Feast Evening ption s s ption g Days av&Feast Evening ption s s	NIS/kWh NIS/kWh NIS	R=P-Q S S T U=T-0.12 V=E*T 8 W=F*U 8 X=V-W A B B C D=B*C : E=A-D (N F=D-A (N G H I=H-0.12 J=E*H 8 K=F*I 8 L=J-K M N N O=N-0.12 P=E*N 8	Data Input 870 75 Sub Total LT O) LLT O) Total Total Total Sub Total Total	187.1 39.3 147.8 Data Output	0 0,36,3 36,3 36,3 36,3 36,3 36,3 36,3 36,	33 0.383 33 0.383 33 0.263 33 0.263 34 0.263 34 0.263 34 0.263 34 0.263 34 0.276 44 14.44 0 0 0.276 44 14.44 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0	0383 0263 12.6 0 0 0 0 0 0 0 0 0	4 4 336.3 36.3 36.3 36.3 36.3 36.3 36.3 36.	AM AM 5 6 6.3 36.3 36.3 36.3 36.3 36.3 36.3 36	0.383 0 0.263 0 7.6 0 7.6 0 0 0.263 0 0 0.263 0 0 0 0.263 0 0 0 0.263 0 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.276 0 0.276 0 0.276 0 0.276 0 8.4	8 8 6.3 36.3 36.4 40 6 6.3 36.3 6.3 6.3 6.3 6.3 6.3 6.3 6.3	9 10 0 5 6 5 6 6 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6	0.383 (0.263 (0 0.263 (0 0.263 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0.3 0.263 0.2 0 8.4 8 8.4 8 112 12 1336.3 36.3 36.3 36.3 36.3 36.3 36.3 36.	383 0.3883 0.3883 0.3883 0.266 0.266 0.276	3 0.383 3 0.263 0 0 0 1 3.33 1 15 1 36.3 1 70 0 1 52.5 1 1 1.291 1 1.2	0.383 0.263 0.2 0 0 16 36.3 50 37.5 0 1.2 C 1.411 1.291 0 1.5 A 0.396 0.276 0	PM 17 36.3 30 22.5 13.8 0 8.3 0 483 6.3 0 483 6.3 0 483 6.3 0 6.0 0 6.0 0 6.0 0 6.0 0 6.5 5.5	I 18 36.3 : 5 3.8 32.6 : 0 0 B B B B D 0.603 (0 483 (0 0 483 (0 0 0 483 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 2 19 2	78 0.3833 80 2633 70 12.6.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$ 0.383 0 0 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0.00 0 0.00
Time Zone for Satu Tariff for consum; Cost for consum; Cost for surplus Bill for Friday & Summer 2016 Load Consum Solar JDECO Consum; Surplus Power Time Zone for V Tariff for consum Tariff for surplus Cost for consum; Tariff for surplus Tariff for surplus Cost for consum; Tariff for surplus Cost for consum; Cost for consum; Cost for consum; Cost for consum; Cost for surplus Cost for consum; Cost for surplus Cost for consum; Cost for surplus	urdav&Feast Davs mption s s s ption wmption mum Output ut Rate for Solar Generation pution working Davs mption s ption g Days lav&Feast Evening mption s ption g Days lav&Feast Evening mption s ption	NIS/kWh NIS/kWh NIS NIS NIS NIS NIS NIS NIS NIS NIS/day kWh kWh kWh NIS/kWh NIS/NIS NIS	R=P-Q S S T T U=T-0.12 V=E*T S W=F*U S X=V-W A B C C D=B*C : E=A-D (N F=D-A (N G H I=H-0.12 J=E*H S K=F*I S L=J-K M N O=N-0.12 P=E*N S Q=F*O S	Data Input (870 75 ILT 0) ILT 0 Total Total Sub Total Sub Total Sub Total Sub Total Sub Total Sub Total	187.1 39.3 147.8 DataOutput 230.8 232.7 -1.9	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 0.383 33 0.383 33 0.263 33 0.263 33 0.263 33 0.263 33 0.263 33 36.3 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0383 0263 12.6 0 0 0 0 0 0 0 0 0	4 4 4 336.3 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	383 0.383383 0.383383 0.383383 0.383383 0.263263 0.26266 11.3.2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0 0.263 0 7.6 0 7.6 0 0 0.263 0 0 0.263 0 0 0 0.263 0 0 0 0.263 0 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.276 0 0.276 0 0.276 0 0.276 0 8.4	8 8 40 66.3 36.4 40 66.3 0.4 40 66.3 0.4 40	9 10 0 5 6 5 6 6 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6	0.383 (0.263 (0 0.263 (0 0.263 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12 12 12 36.3 36.3 36.3 36.3 36.3 36.3 36.3 36.	383 0.3883 0.3883 0.3883 0.266 0.266 0.276	3 0.383 3 0.263 0 0 0 1 3.33 1 15 1 36.3 1 70 0 1 52.5 1 1 1.291 1 1.2	0.383 0.263 0.2 0 0 16 36.3 50 37.5 0 1.2 C 1.411 1.291 0 1.5 A 0.396 0.2276	0.478 (0.358) 6.4 (0.358) 6.4 (0.358) 7 (I 18 36.3 1 5 3.8 32.6 1 0 0 483 (0 4	0.0478 0.4338 0.3358 0.3358 0.3358 0.3358 0.336.3 360 0.00 0.00 0.00 0.046.3 0.6463 0.6483 0.4883 0.4883 0.	78 0.383 8 0.263 8 0.263 8 0.263 8 0.263 8 0.263 9 0.00	\$ 0.383 0 0 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0.00 0 0.00
Time Zone for Satu Tariff for consum Cost for consump Cost for surplus Bill for Friday & Summer 2016 Load Consum Solar JDECO Consum Surplus Power Time Zone for V Tariff for consum Tariff for surplus Cost for consum Tariff for surplus Cost for surplus Tariff for consum Cost for consump Cost for consump	urdav&Feast Davs mption s s s ption wmption mum Output ut Rate for Solar Generation pution working Davs mption s ption g Days lav&Feast Evening mption s ption g Days lav&Feast Evening mption s ption	NIS/kWh NIS/kWh NIS NIS NIS NIS NIS NIS NIS NIS NIS/day kWh kWh kWh NIS/kWh NIS/NIS NIS	R=P-Q S S T U=T-0.12 V=E*T 8 W=F*U 8 X=V-W A B B C D=B*C : E=A-D (N F=D-A (N G H I=H-0.12 J=E*H 8 K=F*I 8 L=J-K M N N O=N-0.12 P=E*N 8	Data Input 870 75 Sub Total LT O) LLT O) Total Total Total Sub Total Total	187.1 39.3 147.8 Data Output	0 0,36,3 36,3 36,3 36,3 36,3 36,3 36,3 36,	33 0.383 33 0.383 33 0.263 33 0.263 34 0.263 34 0.263 34 0.263 34 0.263 34 0.276 44 14.44 0 0 0.276 44 14.44 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0	0383 0263 12.6 0 0 0 0 0 0 0 0 0	4 4 336.3 36.3 36.3 36.3 36.3 36.3 36.3 36.	AM AM 5 6 6.3 36.3 36.3 36.3 36.3 36.3 36.3 36	0.383 0 0.263 0 7.6 0 7.6 0 0 0.263 0 0 0.263 0 0 0 0.263 0 0 0 0.263 0 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.276 0 0.276 0 0.276 0 0.276 0 8.4	8 8 6.3 36.3 36.4 40 6 6.3 36.3 6.3 6.3 6.3 6.3 6.3 6.3 6.3	9 10 0 5 6 5 6 6 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6	0.383 (0.263 (0 0.263 (0 0.263 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0.3 0.263 0.2 0 8.4 8 8.4 8 112 12 1336.3 36.3 36.3 36.3 36.3 36.3 36.3 36.	383 0.3883 0.3883 0.3883 0.266 0.266 0.276	3 0.383 3 0.263 0 0 0 1 3.33 1 15 1 36.3 1 70 0 1 52.5 1 1 1.291 1 1.2	0.383 0.263 0.2 0 0 16 36.3 50 37.5 0 1.2 C 1.411 1.291 0 1.5 A 0.396 0.276 0	PM 17 36.3 30 22.5 13.8 0 8.3 0 483 6.3 0 483 6.3 0 483 6.3 0 6.0 0 6.0 0 6.0 0 6.0 0 6.5 5.5	I 18 36.3 : 5 3.8 32.6 : 0 0 B B B B D 0.603 (0 483 (0 0 483 (0 0 0 483 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 2 19 2	78 0.3833 80 2633 70 12.6.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$ 0.383 0 0 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0.00 0 0.00
Time Zone for Satu Tariff for consum; Cost for consum; Cost for surplus Bill for Friday & Summer 2016 Load Consum Solar JDECO Consum; Surplus Power Time Zone for V Tariff for consum; Tariff for surplus Cost for consum; Tariff for surplus Tariff for surplus Cost for consum; Cost for surplus Cost for consum; Cost for surplus Cost for consum; Cost for surplus	urdav&Feast Davs mption s s ption &Feast Evening umption mum Output ut Rate for Solar Generation uption Working Days mption s ption g Days law &Feast Evening mption s ption s ption g Days	NIS/kWh NIS/kWh NIS NIS NIS NIS NIS NIS NIS NIS NIS/day kWh kWh kWh NIS/kWh NIS/NIS NIS	R=P-Q S S T T U=T-0.12 V=E*T S W=F*U S X=V-W A B C C D=B*C : E=A-D (N F=D-A (N G H I=H-0.12 J=E*H S K=F*I S L=J-K M N O=N-0.12 P=E*N S Q=F*O S	Data Input (870 75 ILT 0) ILT 0 Total Total Sub Total Sub Total Sub Total Sub Total Sub Total Sub Total	187.1 39.3 147.8 DataOutput 230.8 232.7 -1.9	0 0 36.3 36.3 36.3 36.4 36.4 14.4 14.4 14.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	33 0.383 33 0.383 33 0.263 33 0.263 34 0.263 34 0.263 34 0.263 34 0.263 34 0.276 44 14.44 0 0 0.276 44 14.44 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0 0.276 44 14.44 0	0383 0263 12.6 0 0 0 0 0 0 0 0 0	4 4 336.3 36.3 36.3 36.3 36.3 36.3 36.3 36.	AM AM 5 6 6.3 36.3 36.3 36.3 36.3 36.3 36.3 36	0.383 0 0.263 0 0.263 0 0.263 0 0 0.263 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 8 6.3 36.3 40 6.3 36.3 88 0.4 88 0.	9 10 0 5 6 5 6 6 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6	0.383 (0.263 (0 0.263 (0 0.263 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	12 12 36.3 36.3 36.3 36.3 36.3 36.3 36.3 36.	383 0.3883 0.3883 0.3883 0.266 0.266 0.276	3 0.383 3 0.263 3 0.263 3 0 0 i 3.3 3 3.3 3 36.3 9 70 0 j 52.5 9 0 0 i 4.5 1 1.291 9 0 0 i 20.9 1 A A 5 0.396 5 0.396 6 0.296	0.383 0.263 0.2 0 0 16 36.3 50 37.5 0 1.2 C 1.411 1.291 0 1.5 A 0.396 0.276 0	PM 17 36.3 30 22.5 13.8 0 8.3 0 483 6.3 0 483 6.3 0 483 6.3 0 6.0 0 6.0 0 6.0 0 6.0 0 6.5 5.5	I 18 36.3 : 5 3.8 32.6 : 0 0 B B B B D 0.603 (0 483 (0 0 483 (0 0 0 483 (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 1 15.7 15 0 15.6 3 36 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	78 0.3833 80 2633 70 12.6.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0 0.26
Time Zone for Satu Tariff for consum Cost for consum Cost for Satu Bill for Friday & Summer 2016 Load Consum Solar Masin Outpu Solar JDECO Consum Surplus Power Time Zone for V Tariff for consum Cost for surplus Bill for Working Tariff for consum Tariff for consum Tariff for consum Cost for consum Tariff for consum Cost for consum Cost for consum Cost for surplus Bill for Working Cost for surplus Tariff for consum Cost for surplus Cost for surplus Tariff for surplus Cost for surplus	urdav&Feast Davs mption s s ption &Feast Evening umption mum Output ut Rate for Solar Generation ption generation ption s ption g Days aw&Feast Evening my Days my D	NIS/kWh NIS/kWh NIS NIS NIS NIS NIS NIS NIS NIS NIS/day kWh kWh kWh NIS/kWh NIS/NIS NIS	R=P-Q S T U=T-0.12 V=E*T S W=F*U S X=V-W A B C D=B*C : E=A-D (N F=D-A (N G H I=H-0.12 J=E*H S L=J-K M N O=N-0.12 P=E*N S Q=F*O S R=P-Q S	Data Input (870 75 ILT 0) ILT 0 Total Total Sub Total Sub Total Sub Total Sub Total Sub Total Sub Total	187.1 39.3 147.8 Data Output 230.8 232.7 -1.9 200.6 51.2 149.4	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 2 3 3 6 12.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 36.3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 4 36.3 3(0.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	AM	0.383 0 0.263 0 7.66 0 7.66 0 9 1 15.0 3 1 12.8 0 0.483 0 0.483 0 0.26	8 8 6.3 36.4 0 1. 8 8 6.3 36.4 0 6.6 3 9 8 8 6.3 36.4 0 6.6 3 9 8 8 8 6.3 36.4 0 6.6 3 9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	9 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 (0.263 (0 0.263 (0 0.264 (0.383 0.383 0.303 0.263 0.203 0.263 0.203	13 14 15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	3 0.383 3 0.263 3 0.263 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0.263 0.2 0 0 16 36.3 50 37.5 0 1.2 C 1.411 1.291 0 1.5 A 0.396 0.276 0	PM 17 36.3 30 22.5 13.8 0 B B 0.603 0.483 0 A A 0.396 0.276 5.5 0 A	14.2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	19 19 19 19 19 19 19 19 19 19 19 19 19 1	78 0.383 88 0.2636 88 0.2626 70 12.66 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0 0.26
Time Zone for Satu Tariff for consum Cost for consum Cost for surplus Bill for Friday & Summer 2016 Load Consu Solar Maxin Outpu Solar JDECO Consum Surplus Power Time Zone for Y Tariff for consum Tariff for surplus Bill for Friday & Time Zone for Satu Tariff for consum Tariff for consum Tariff for surplus Cost for surplus Bill for Friday & Time Tariff for surplus Cost for surplus Tariff for consum Tariff for surplus Tariff for surplus Cost for surplus Tariff for surplus	urdav&Feast Davs mption s s s s s s s s s s s s s s s s s s s	NIS/kWh NIS/kWh NIS NIS NIS NIS NIS NIS NIS NIS NIS/day kWh kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/NIS NIS NIS NIS NIS NIS NIS NIS NIS NIS	R=P-Q S T U=T-0.12 V=E*T S W=F*U S X=V-W A B C D=B*C : E=A-D (N F=D-A (N G H I=H-0.12 J=E*H S L=J-K M N O=N-0.12 P=E*N S Q=F*O S R=P-Q S	Data Input (Stab Total Stab Total Stab Total Stab Total Input (Stab Total Stab Total Stab Total Stab Total Input (Stab Total Stab Total Input (Stab Total Stab Total Input (Stab To	187.1 39.3 147.8 Data Output 230.8 232.7 -1.9	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 2 3 3 6 12.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0383 i 12.6	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	AM	0.383 0 0.263 0 0.263 0 0.263 0 0.263 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.263 0 0 0.265 0 0 0.265 0 0 0.265	8 8 6.3 36.4 0 1. 8 8 6.3 36.4 0 6.6 3 9 8 8 6.3 36.4 0 6.6 3 9 8 8 8 6.3 36.4 0 6.6 3 9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	9 10 9 10 3 363 0 80 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 (0.263	0.383 0.383 0.303 0.263 0.203 0.263 0.203	133 0.388 0.3866 0.2666	3 0.383 3 0.263 3 0.263 3 0.33 1 15 3 36.3 1 70 1 52.5 1 0.0 1 1.291 1 0.0 2 0.0 3 0.0 4 0.0 4 0.0 4 0.0 6 0.0	0.383 0.263 0.2 0 0 16 36.3 50 1.2 C 1.411 1.291 0.396 0.276 0 0.3	PM 17 36.3 30 222.5 13.8 0 B B 0.603 0.483 0 C 2.5 5.5 0 C A A 0.396 6 A	14.2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	19 19 19 19 19 19 19 19 19 19 19 19 19 1	78 0.383 88 0.263 88 0.263 70 12.60 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22 23 36.3 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Time Zone for Satur Tariff for consum Cost for surplus Bill for Friday & Summer 2016 Load Consum Solar JDECO Consum Surplus Power Time Zone for Y Tariff for consum Tariff for surplus Tariff for consum Tariff for surplus Tariff for consum Tariff for surplus Cost for surplus Tariff for consum Tariff for surplus Cost for surplus Dill for Working Tariff for consum Tariff for surplus Tariff for surplus Tariff for surplus Tariff for consum Cost for surplus Tariff for consum Cost for surplus Tariff for consum	urdav&Feast Davs mption s s ption Refeast Evening umption mum Output ut Rate for Solar Generation upption Working Davs mption s ption g Days lav&Feast Evening mption s ption s Evening s ption s Refeast Evening mption s Feast Evening mption s	NIS/kWh NIS/kWh NIS NIS NIS NIS NIS NIS NIS NIS NIS/day kWh kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/NIS NIS NIS NIS NIS NIS NIS NIS NIS NIS	R=P-Q S S T T U=T-0.12 V=E*T S W=F*U S X=V-W A B C D=B*C : E=A-D (N F=D-A (N G H I=H-0.12 J=E*H S K=F*I S L=J-K M N O=N-0.12 P=E*N S R=P-Q S S T U=T-0.12	Data Input (Stab Total Stab Total Stab Total Stab Total Input (Stab Total Stab Total Stab Total Stab Total Input (Stab Total Stab Total Input (Stab Total Stab Total Input (Stab To	187.1 39.3 147.8 Data Output 230.8 232.7 -1.9 200.6 51.2	0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	1 2 3 3 6 12.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 36.3 0 0.00 36.3 0 0.00 4 A 0.396 1 14.4 0 0 A A 0.396 1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	4 4 36.3 36 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	AM AM AM 5 6 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7 6 7	0.383 0 0.263 0 0.263 0 0.263 0 0.263 0 0 0.263 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 8 6.3 36. 40 6 6.3 36. 40 6 6.3 48 0.4 49 6.3 38 0.4 49 6.3 38 0.3 4. 49 6.3 38 0.3 4. 49 6.3 48 0.3 48 0.3 48 0.3 48 0.3 4. 49 0.3 48 0.3 4	9 10 9 10 3 363 0 80 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 (0.263	12	133 0.388 0.3866 0.2666	3 0.383 3 0.263 3 0.263 3 0.263 3 0.263 3 0.263 3 0.263 3 0.263 4 15 4 15 5 2.363 5 2.276 6 2.276 6 3.363 6 3.363 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0.263 0.2 0 0 16 36.3 50 1.2 C 1.411 1.291 0.396 0.276 0 0.3	0.478 0.478	1 18 36.3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	19 19 19 19 19 19 19 19 19 19 19 19 19 1	78 0.38388 0.38388 0.263888 0.263888 0.263888 0.263888 0.263888 0.2638	0.383 0 0.26
Time Zone for Satur Tariff for consum Tariff for consum Cost for consum Cost for surplus Bill for Friday & Summer 2016 Load Consum Outpu Solar JDECO Consum Surplus Power Time Zone for V Tariff for consum Tariff for surplus Bill for Workin; Tariff for surplus Cost for consum Tariff for surplus Cost for consum Tariff for surplus Bill for Workin; Tariff for consum Cost for consum Cost for consum Cost for consum Cost for consum Tariff for surplus Bill for Workin; Tariff for consum Cost for consum Cost for consum Cost for consum Tariff for consum Cost for	urdav&Feast Davs mption s s ption Refeast Evening umption mum Output ut Rate for Solar Generation upption Working Davs mption s ption g Days lav&Feast Evening mption s ption s Evening s ption s Refeast Evening mption s Feast Evening mption s	NIS/kWh NIS/kWh NIS NIS NIS NIS NIS NIS NIS NIS NIS/day kWh kWh kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/day NIS/kWh	R=P-Q S S T T U=T-0.12 V=E*T S W=F*U S X=V-W A B C D=B*C : E=A-D (N F=D-A (N G H I=H-0.12 J=E*H S K=F*I S L=J-K M N O=N-0.12 P=E*N S R=P-Q S S T U=T-0.12	Data Input (187.1 39.3 147.8 Data Output 230.8 232.7 -1.9 200.6 51.2	0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	33 0.383 33 0.263 36 12.6 0	3 3 36.3 0 0.00 36.3 0 0.00 4 A 0.396 1 14.4 0 0 A A 0.396 1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	4 4 36.3 36 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AM AM 5 6 6.3 36.3 36.3 36.3 36.3 36.3 36.3 36	0.383 0 0.263 0 0.263 0 0.263 0 0 0.263 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 8 6.3 36. 40 6 6.3 36. 40 6 6.3 48 0.4 49 6.3 38 0.4 49 6.3 38 0.3 4. 49 6.3 38 0.3 4. 49 6.3 48 0.3 48 0.3 48 0.3 48 0.3 4. 49 0.3 48 0.3 4	9 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 (0.263 (0 0.263 (0 0.263 (0 0.264 (12 12 12 13 14 14 14 15 15 16 16 16 16 16 16 16 16 16 16 16 16 16	13 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	3 0.383 8 0.263 9 0.263 9 0 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	0.383 0.263 0.2 0 0 16 36.3 50 37.5 0 1.2 C 1.411 1.291 0 1.5 A 0.396 0.276 0 0.3	0.478 0.478	1 18 36.3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	19 : 19 : 19 : 19 : 19 : 19 : 19 : 19 :	78 0.38388 0.38388 0.263888 0.263888 0.263888 0.263888 0.263888 0.2638	22 23 36.3 20 0 26.0 26.0 26.0 26.0 26.0 26.0 26.0 26.

Table 8.11 (3/4) Electrical Cost Calculation (For the Year 2017)

March Marc	Winter,	January 2017																								
Manuse M													_													
Solve						_	1		_	_			_													22 2
Continue		•				37.9	37.9	37.9	31.9	37.9	37.9 37.9	3 31.9	37.9	37.9	37.9	31.9 31	.9 37.9	37.9	37.9	37.9	37.9	37.9	31.9	37.9	37.9	37.9 37.
Martine Countries Mart	Solor				<u>'</u>	0	0	0	0	0	0 1	= 20	40	60	90	05 10	00 100	90	70	50	20	-	0	0	0	0
Marchis Power Marchis Powe									_										_				_			0.0 0.
Semina Province Semina Semina Province Semina Semina Province Semina Semina Province Semina Semina Province Semina Provi	IDECO								_				_				_		_				_			37.9 37.
The Print									_							_			_				_	_		0
Tell fill fill fill fill fill fill fill f			жп						_								_		_				_			C .
Tell for componence of the contemponence of the con			NIS/kWh																_				_			1.286 0.43
Control Cont		•						0.316	_										_				_			1.166 0.31
Mathematical part Math	Cost for	consumption	NIS	J=E*H Sub Total	473.9	16.5	16.5	16.5	16.5	16.5	16.5 26.9	21.8	8.7	4.8	0.8	0	0 (0.8	2.8	19.8	31.4	45.8	48.7	48.7	48.7	48.7 16.
Martin M	Cost for	surplus	NIS	K=F*I Sub Total	5.9	0	0	0	0	0	0 (0 (0	0	0	1.5 2	.2 2.2	. 0	0	0	0	0	0	0	0	0
Martin	Bill for	Working Days	NIS/day	L=J-K Total	468.0																					
Table Tabl	Time Zon	e for Friday &Feast Evening		M		A	A	A	A	A	A A	. A	A	A	A	A	A A	A	A	В	В	В	В	A	Α	A A
Control processing Control process Control	Tariff fo	r consumption	NIS/kWh	ı N		0.436	0.436	0.436	0.436	0.436	0.436 0.43	6 0.436	0.436	0.436	0.436	0.436 0.4	36 0.436	0.436	0.436	0.754	0.754	0.754	0.754	0.436	0.436	0.436 0.43
Control Cont	Tariff fo	r surplus	NIS/kWh	1 O=N-0.12		0.316	0.316	0.316	0.316	0.316	0.316 0.31	6 0.316	0.316	0.316	0.316	0.316 0.3	16 0.316	0.316	0.316	0.634	0.634	0.634	0.634	0.316	0.316	0.316 0.31
Mile From Part Section Service No.	Cost for	consumption	NIS	P=E*N Sub Total	296.6	16.5	16.5	16.5	16.5	16.5	16.5 15.0	5 12.6	8.7	4.8	0.8	0	0 (0.8	2.8	11.6	18.4	26.9	28.6	16.5	16.5	16.5 16.
Part	Cost for	surplus	NIS	Q=F*O Sub Total	5.9	0	0	0	0	0	0 (0 0	0	0	0	1.5 2	.2 2.2	0	0	0	0	0	0	0	0	0
Tale file resource process of the pr	Bill for	Friday&Feast Evening	NIS/day	R=P-Q Total	290.7																					
Tall file resumps	Time Zon	e for Saturday&Feast Days	<u>s</u>	S		A	A	Α	A	A	A A	A A	A	Α	A	A	A A	A	A	A	C	C	_		A	Α .
Control Cont	Tariff fo	r consumption	NIS/kWh	ı T		0.436	0.436	0.436	0.436	0.436	0.436 0.43	6 0.436	0.436	0.436	0.436	0.436 0.4	36 0.436	0.436	0.436	0.436	1.286	1.286	0.754	0.754	0.436	0.436 0.43
Mary							0.316	0.316	_							_	_		_				_			0.316 0.3
Springs Spri									_							-			_				_			16.5 16.
Series S		-					0	0	0	0	0 (0	0	0	0	1.5 2	.2 2.2	0	0	0	0	0	0	0	0	0
Page	Bill for	Friday&Feast Evening	NIS/day	X=V-W Total	329.8																					
Part	C	A 2017																								
Part	Spring&	Autumn 2017		Data	Data						AM										PM	1				
Land Consequence Web A 1996 48 835 435						0	1	2	3	4		5 7	Я	Q	10	11 1	12 13	3 14	15	16			19	20	2.1	22 2
Miximum Quage Ny B S S S S S S S S S	Load	Consumption	kWh		v .	_	43.8		_																	43.8 43.
Compone Name for Soliton Soliton Compone Name for Soliton						15.0	13.0	13.0	15.0	15.0	15.0 15.1	, 15.0	13.0	15.0	15.0	15.0 15	.0 15.0	, 15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0 15.
Select Scientifies 1984 1944						0	0	0	0	0	0 :	5 20	40	60	80	95 10	00 100	80	70	50	30	5	0	0	0	0
							0.0		_	0.0			_			_			_			3.3	_		0.0	0.0 0.
Time for exposing points Point P	JDECO	Consumption	kWh	E=A-D (NLT 0)		43.8	43.8	43.8	43.8	43.8	43.8 40.0	5 30.8	17.8	4.8	0	0	0 (0	0	11.3	24.3	40.6	43.8	43.8	43.8	43.8 43.
Tariff for consumption Nisk Wh He 1	Surplus	Power	kWh	F=D-A (NLT 0)		0	0	0	0	0	0 (0 (0	0	8.2	18 21	.2 21.2	8.2	1.7	0	0	0	0	0	0	0
Tariff for surplus	Time Zo	one for Working Days		G		А	Α	Α	Α	Α	Α (. C	С	С	С	С	C C	. C	С	С	С	С	С	В	В	A
Cont or community Nice See S	Tariff fo	r consumption	NIS/kWh	n H		0.383	0.383	0.383 (0.383 (0.383	0.383 0.59	0.591	0.591	0.591	0.591	0.591 0.5	91 0.59	0.591	0.591	0.591	0.591	0.591	0.591	0.478	0.478	0.383 0.38
Cont in cumple NIS Cont Series	Tariff fo	r surplus	NIS/kWh	1=H-0.12		0.263	0.263	0.263 (0.263 (0.263	0.263 0.47	0.471	0.471	0.471	0.471	0.471 0.4	71 0.47	0.471	0.471	0.471	0.471	0.471	0.471	0.358	0.358	0.263 0.26
Mile	Cost for	consumption	NIS	J=E*H Sub Total	302.7	16.8	16.8	16.8	16.8	16.8	16.8 24	1 18.2	10.5	2.8	0	0	0 (0	0	6.7	14.4	24	25.9	20.9	20.9	16.8 16.
This process	Cost for	surplus	NIS	K=F*I Sub Total	37.1	0	0	0	0	0	0 (0 (0	0	3.9	8.5	0 10	3.9	0.8	0	0	0	0	0	0	0
Tariff for commuption	Bill for	Working Days	NIS/day		265.6																					
Time from symbo Nisk Section							_		_										_				_			A A
Cost for consumption NIS									_							_	_						_			0.383 0.38
This part						0.00							0.000						01000				010.00			0.263 0.26
Part									_					_	_				_				_			16.8 16.
This propersion This properties This prope		_		_			0	0	0	0	0 () ()	0	0	2.9	6.4 /	.6 /.6	2.9	0.6	0	0	0	0	0	0	0
Tariff for consumption Tariff for consumption NIS-4Wh I = 1			NIS/day		242.2		Α.		Α.	Α.			Α.	Α.	Α.		Λ Λ	Α.		Α.	D	D	D	D	Α.	_
This implies This			NIIC A.MA						_										_							A 0.383 0.38
Cost for surplise NIS V=F*** Series 24-2 16-8									_														_			0.263 0.26
State Stat					26/12				_														0.000			16.8 16.
Property		•														-			_				_			0
Summer 2017							-			0		, ,			2.2	1.7	.0 5.0	, 2.2	0.1	0		-	-		-	
Part			,																							
Load Consumption kWh A 1120	Summer	2017																								
Consist Cons											AM										PM	1				
Solar Maximum Output Max B Org						_																				22 2
Duput Rate for Solar %	Load	•				46.7	46.7	46.7	46.7	46.7	46.7 46.	7 46.7	46.7	46.7	46.7	46.7 46	.7 46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7 46.
Solar Generation Why D=B*C \$51.3 0.0	Solar				i				_										_		_		_			
Deel Consumption Wh E=A D NLT 0 Surplus Power Wh E=A D NLT 0 Surplus Power Wh E=D NLT 0 Surplus Power Wh E=D NLT 0 Surplus Power Wh E=D NLT 0 Surplus Power Surplu									_				_						_				_	_		0
Figure Surplus Surpl	mr								_														_			0.0 0.
Tariff for consumption NIS/Wh H																_			_					_		46.7 46.
Tariff for consumption NISAWh H : 0.396 0.396 0.396 0.396 0.396 0.396 0.396 0.396 0.396 0.603 0			kWh			_			_	_																0
Tariff for surplus			NIIC 4 33 "																_							A A
Cost for consumption NIS J=E*H sub*Total 14.6 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		•							_										_							
Cost for surplus NIS K=F** Sub-Total 146.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					323.4				_							_			_	_						18.5 18.
Time Zone for Firtlay AFFeat Nersing NIS/day									_				_						_				_	_		0
		_				_		-	-			-		-						-	-		-			
Tariff for consumption NIS/kWh N = N-0.12	_						A	A	Α	Α	A A	A A	A	A	A	A	A A	. A	Α	Α	A	A	Α	A	Α	Α .
Tariff for surplus NIS/kWh O=N-0.12	_								_				_			_			_				_	_		
		•				0.276	0.276	0.276	0.276	0.276	0.276 0.27	6 0.276	0.276	0.276	0.276	0.276 0.2	76 0.276	0.276	0.276	0.276	0.276	0.276	0.276	0.276	0.276	0.276 0.27
Cost for surplus NIS Q=F*O Sub Total 31.4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	_	•			270.5	18.5	18.5	18.5	18.5	18.5							_		0	3.6	9.6	17	18.5	18.5	18.5	18.5 18.
Bill for Friday & Feast Evening NIS/day R=P-Q Total 239.1 Time Zone for Saturday & Feast Day State Day Stat	_		NIS			0	0	0	0	0	0 (0		0	3.7	6.8 7	.8 7.8	3.7	1.6		0		_			0
Tariff for consumption NIS/Wh T		•	NIS/day	R=P-Q Total	239.1																					
Tariff for surplus NIS/kWh U=T-0.12	Time Zon	e for Saturday&Feast Days	5	S		A	A	Α	Α	Α	A A	A	Α	Α	Α	A	A A	A	A	Α	Α	Α	A	Α	Α	Α .
Cost for consumption NIS V=E*T Sub Total 270.5 18.5 18.5 18.5 18.5 18.5 18.5 18.5 18	Tariff fo	r consumption				0.396	0.396	0.396	0.396	0.396	0.396 0.39	6 0.396	0.396	0.396	0.396	0.396 0.3	96 0.396	0.396	0.396	0.396	0.396	0.396	0.396	0.396	0.396	0.396 0.39
Cost for surplus NIS W=F**U_Sub_Total 31.4 0 0 0 0 0 0 0 0 0 0 3.7 6.8 7.8 7.8 3.7 1.6 0 0 0 0 0 0 0	Tariff fo	r surplus	NIS/kWh	1 U=T-0.12		0.276	0.276	0.276	0.276	0.276	0.276 0.27	6 0.276	0.276	0.276	0.276	0.276 0.2	76 0.276	0.276	0.276	0.276	0.276	0.276	0.276	0.276	0.276	0.276 0.27
			NIS	V=E*T Sub Total	270.5	18.5	18.5	18.5	18.5	18.5	18.5 1	7 12.5	6.6	0.7	0	0	0 (0	0	3.6	9.6	17	18.5	18.5	18.5	18.5 18.
Bill for Friday & Feast Evening NIS/day X=V-W Total 239 I	Cost for	surplus	NIS			0	0	0	0	0	0 (0	0	0	3.7	6.8 7	.8 7.8	3.7	1.6	0	0	0	0	0	0	0
201 101 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Bill for	Friday&Feast Evening	NIS/day	X=V-W Total	239.1																					

Table 8.11 (4/4) Electrical Cost Calculation (For the Year 2018)

winter,	January 2018																									
	, January 2018			Data	Data						AM										PM	ſ				
					Output	0	1	2	3	4	5	6 7	8	9	10	11 1	2 13	14	15	16	17	18	19	20	21	22 2
Load	Consumption	kWh	A	1060		44.2	44.2	44.2	44.2	44.2	44.2 44	2 44.2	44.2	44.2	44.2 44	.2 44	.2 44.2	44.2	44.2	44.2	44.2	44.2	44.2	14.2 4	1.2 4	4.2 44.
Solor	Maximum Output	kW	В	45																						
	Output Rate for Solor		С			0	0	0	0	0	0	5 20	40	60		95 10	_		70	50	30	5	0	0	0	0
IDECO	Solor Generation	kWh	D=B*C	330.8		0.0	0.0	0.0	0.0	0.0	0.0 2		18.0		36.0 42	_	_		31.5		13.5	2.3	0.0			0.0 0.
	Consumption	kWh	E=A-D (44.2	44.2	44.2	44.2			2 35.2	26.2	17.2		_	0 0		12.7		30.7	42	_			4.2 44.
Surplus Time 7	one for Working Days	kWh	G	NLI 0)		0 A	0 A	0 A	0 A	0 A	0 A	0 0 B B	0 A	0 A	0 A	0 0 A	.8 0.8 A A	. A	0 A	0 C	0 C	0 C	0 C	0 C	0 C	0 C
	or consumption	NIS/kWh									0.436 0.7				0.436 0.4	_			0.436		_				_	286 0.43
-	or surplus	NIS/kWh		2		0.316	0.316	0.316			0.316 0.6				0.316 0.3				0.316			1.166				166 0.31
	consumption	NIS	J=E*H	Sub Total	573.9	19.3	19.3	19.3	19.3		19.3 31		11.4	7.5		.6	0 0		5.5			53.9	_	_		6.8 19.
Cost for	surplus	NIS	K=F*I	Sub Total	0.6	0	0	0	0	0	0	0 0	0	0	0	0 0	.3 0.3	0	0	0	0	0	0	0	0	0
Bill for	Working Days	NIS/day	L=J-K	Total	573.3																					
Time Zon	ne for Friday&Feast Evening		M			Α	Α	Α	Α	Α	Α	A A	Α	Α	Α	Α .	A A	. A	Α	В	В	В	В	Α	Α	Α .
Tariff fo	or consumption	NIS/kWh	N			0.436	0.436	0.436	0.436	0.436	0.436 0.4	6 0.436	0.436	0.436	0.436 0.4	36 0.43	36 0.436	0.436	0.436	0.754).754	0.754	0.754 0	.436 0.	136 0.	436 0.43
Tariff fo	or surplus	NIS/kWh	O=N-0.1	2		0.316	0.316	0.316	0.316	0.316	0.316 0.3	6 0.316	0.316	0.316	0.316 0.3	16 0.3	16 0.316	0.316	0.316	0.634	0.634	0.634	0.634 0	.316 0.	316 0.	316 0.31
	consumption	NIS	P=E*N	Sub Total	363.4	19.3	19.3	19.3	19.3		19.3 18		11.4	7.5		_	0 0		5.5			31.6	_			9.3 19.
Cost for		NIS	Q=F*O	Sub Total	0.6	0	0	0	0	0	0	0 0	0	0	0	0 0	.3 0.3	0	0	0	0	0	0	0	0	0
	Friday&Feast Evening		R=P-Q	Total	362.8			_						_							-		D	D		
	ne for Saturday&Feast Days		S			0.436	0.436	0.436	A 0.436	0.436	A 0.436 0.4	A A 6 0.436	A 0.436	A 0.436 (A 0.436 0.4	_	A A		A 0.436	A 0.436	C 1.286	C 1.286	0.754 0	.754 O.	A 136 0.	A 436 0.43
-	or consumption or surplus	NIS/kWh		2			0.436	0.436			0.436 0.4				0.316 0.3	_			_							316 0.31
	consumption	NIS/KWII	V=E*T	Sub Total	409.1	19.3	19.3	19.3	19.3		19.3 18		11.4	7.5		.6	0 0		5.5							9.3 19.
Cost for		NIS	W=F*U	Sub Total	0.6	0	0	0	0	0	0	0 0	0	0	0	0 0			0.0	0	0	0	0	0	0	0
	Friday&Feast Evening		X=V-W	Total	408.5				-		-			-	-						-	_	-			-
Spring8	&Autumn 2018																									
				Data	Data						AM										PN					
					Output	0	1	2	3	4	5	6 7	8	9			2 13		15	16	17	18	19	20	21	22 2
Load	Consumption	kWh	A	1190		49.6	49.6	49.6	49.6	49.6	49.6 49	6 49.6	49.6	49.6	49.6 49	.6 49	.6 49.6	49.6	49.6	49.6	49.6	49.6	49.6	9.6 4	9.6 4	9.6 49.
Solar	Maximum Output	kW	B C	65		0	0	0	0	0	0	5 20	40	<i>c</i> 0	00 4	25 16	0 100		70	50	20	-	0	0	0	0
	Output Rate for Solar Solar Generation	kWh	D=B*C	477.8		0.0	0.0	0.0	0.0	0.0	0.0 3	5 20 3 13.0	26.0	60 39.0	80 <u>9</u> 52.0 61	.8 65			70 45.5	50 32.5	30 19.5	3.3	_	0.0	0.0	0.0 0.
IDECO	Consumption	kWh	E=A-D (49.6	49.6	49.6	49.6		49.6 46		23.6	10.6	0		0 03.0		4.1	_		46.4				9.6 49.
Surplus		kWh	F=D-A (47.0	0	0	0	0	0	0 0	0	0	2.4 12			-	0	0	0	0.4	0	0	0	0
	one for Working Days		G			A	A	A	A	A	A	СС	C	C	С	_	C C		C	C	C	C	C	В	В	A A
Tariff fo	or consumption	NIS/kWh					0.383	0.383	0.383		0.383 0.5	0.591	0.591	0.591	0.591 0.5	91 0.59	0.591	0.591	0.591	0.591).591	0.591	0.591 0	.478 0.	178 0.	383 0.38
Tariff fo	or surplus	NIS/kWh	I=H-0.12	2		0.263	0.263	0.263	0.263	0.263	0.263 0.4	1 0.471	0.471	0.471	0.471 0.4	71 0.4	71 0.471	0.471	0.471	0.471).471	0.471	0.471 0	.358 0.	358 0.	263 0.26
	consumption	NIS	J=E*H	Sub Total	355.7	19	19	19	19	19	19 27	4 21.6	14	6.3	0	0	0 0	0	2.4	10.1	17.8	27.4	29.3 2	3.7 2	3.7	19 1
Cost for	surplus	NIS	K=F*I	Sub Total	22.5	0	0	0	0	0	0	0 0	0	0	1.1 5	.7 7	.3 7.3	1.1	0	0	0	0	0	0	0	0
	Working Days	NIS/day	L=J-K	Total	333.2														_							
	ne for Friday &Feast Evening		M			A	A	A	A	A		В В	В	В	В		В В		В	В	В	В	В	A	A	Α .
	or consumption	NIS/kWh				0.383			_		0.383 0.4				0.478 0.4		78 0.478		_				_			383 0.38
	or surplus	NIS/kWh	O=N-0.1 P=E*N	Sub Total	316.4	0.263	0.263	0.263	0.263	0.263	0.263 0.3 19 22				0.358 0.3	_	58 0.358		0.358	0.358	0.358		_			263 0.26
Cost for	consumption		P=E~N	Sub Total	310.4				19								0 0			0.0	14.4					10 1
			0-E*0	Sub Total	17.1	0	0	0	0				11.3	5.1	-		0 0		2			22.1	23.7	19	19	19 1
	•	NIS	Q=F*O	Sub Total	17.1	0	0	0	0	0	0	1 17.5 0 0	0	5.1	-	.3 5			0	8.2	14.4	22.1	0	0	19 0	19 1 0
_	Friday&Feast Evening	NIS NIS/day	R=P-Q	Sub Total Total			0 A	0 A		0	0	0 0	0	0	0.9 4	.3 5	.5 5.5	0.9	0	0	0	0	0	0		0
Time Zon	•	NIS NIS/day	R=P-Q S			0 A 0.383	A	A	A	0 A	0	0 0 A A	0 A	0 A	0.9 4	.3 5		0.9	0 A	0 A	0 B	0 B	0 B	0 B	0 A	0
Tariff fo	Friday&Feast Evening ne for Saturday&Feast Days	NIS NIS/day	R=P-Q S T	Total		A	A	A	A	0 A 0.383	0 A	0 0 A A 3 0.383	0 A 0.383	0 A 0.383 (0.9 4 A	A	5 5.5 A A 83 0.383	0.9 A	0 A	0 A 0.383	0 B	0 B	0 B 0.478 0	0 B	0 A 383 0.	0 A
Tariff for Tariff for	Friday&Feast Evening ne for Saturday&Feast Days or consumption	NIS NIS/day NIS/kWh	R=P-Q S T U=T-0.1	Total		A 0.383	A 0.383	A 0.383	A 0.383	0 A 0.383	0 A 0.383 0.3	0 0 A A 3 0.383 3 0.263	0 A 0.383	0 A 0.383 (O.9 4 A 0.383 0.3	A 83 0.38 63 0.20	5 5.5 A A 83 0.383	0.9 A 0.383	0 A 0.383	0 A 0.383 (0.263 (0 B 0.478	0 B 0.478	B 0.478 0	0 B	0 A 883 0.	O A 383 0.38
Tariff for Tariff for	Friday&Feast Evening ne for Saturday&Feast Days or consumption or surplus consumption	NIS/day NIS/kWh NIS/kWh	R=P-Q S T U=T-0.1	Total	299.3	A 0.383 0.263	A 0.383 0.263	A 0.383 0.263	A 0.383 0.263	0 A 0.383 0.263	0 A 0.383 0.3 0.263 0.2 19 17	0 0 A A 3 0.383 3 0.263	0 A 0.383 0.263	0 A 0.383 0 0.263 0	0.9 4 A 0.383 0.3 0.263 0.2	A 83 0.38 63 0.26 0	A A 83 0.383 53 0.263	. A 8 0.383 8 0.263	0 A 0.383 0.263	0 A 0.383 (0.263 (0 B 0.478	0 B 0.478 0.358	B 0.478 0	0 B .478 0. .358 0.	A 883 0. 263 0.	O A A A 383 0.388 263 0.26
Tariff for Cost for Cost for	Friday&Feast Evening ne for Saturday&Feast Days or consumption or surplus consumption	NIS/day NIS/kWh NIS/kWh NIS NIS	R=P-Q S T U=T-0.1 V=E*T	Total 2 Sub Total Sub Total	299.3 307.8	A 0.383 0.263	A 0.383 0.263	A 0.383 0.263	A 0.383 0.263	0 A 0.383 0.263	0 A 0.383 0.3 0.263 0.2 19 17	0 0 A A 3 0.383 63 0.263 7 14	0 A 0.383 0.263 9	0 A 0.383 (0 0.263 (0 4.1	0.9 4 A 0.383 0.3 0.263 0.2	A 83 0.38 63 0.26 0	A A A 83 0.383 0.263 0 0	. A 8 0.383 8 0.263	0 A 0.383 0.263 1.6	0 A 0.383 (0.263 (6.5	0 B 0.478 0.358 14.4	0 B 0.478 0.358 22.1	0 B 0.478 0 0.358 0 23.7 2	0 B .478 0. .358 0.	0 A 383 0. 263 0.	A A 383 0.38 263 0.26 19 1
Tariff for Cost for Bill for	Friday&Feast Evening the for Saturday&Feast Days or consumption or surplus consumption consumption surplus Friday&Feast Evening	NIS/day NIS/kWh NIS/kWh NIS NIS	R=P-Q S T U=T-0.1 V=E*T W=F*U	Total 2 Sub Total Sub Total	299.3 307.8 12.4	A 0.383 0.263	A 0.383 0.263	A 0.383 0.263	A 0.383 0.263	0 A 0.383 0.263	0 A 0.383 0.3 0.263 0.2 19 17	0 0 A A 3 0.383 63 0.263 7 14	0 A 0.383 0.263 9	0 A 0.383 (0 0.263 (0 4.1	0.9 4 A 0.383 0.3 0.263 0.2	A 83 0.38 63 0.26 0	A A A 83 0.383 0.263 0 0	. A 8 0.383 8 0.263	0 A 0.383 0.263 1.6	0 A 0.383 (0.263 (6.5	0 B 0.478 0.358 14.4	0 B 0.478 0.358 22.1	0 B 0.478 0 0.358 0 23.7 2	0 B .478 0. .358 0.	0 A 383 0. 263 0.	A A 383 0.38 263 0.26 19 1
Tariff for Cost for Cost for	Friday&Feast Evening the for Saturday&Feast Days or consumption or surplus consumption consumption surplus Friday&Feast Evening	NIS/day NIS/kWh NIS/kWh NIS NIS	R=P-Q S T U=T-0.1 V=E*T W=F*U	Total 2 Sub Total Sub Total Total	307.8 12.4 295.4	A 0.383 0.263	A 0.383 0.263	A 0.383 0.263	A 0.383 0.263	0 A 0.383 0.263	0 A 0.383 0.3 0.263 0.2 19 17	0 0 A A 3 0.383 63 0.263 7 14	0 A 0.383 0.263 9	0 A 0.383 (0 0.263 (0 4.1	0.9 4 A 0.383 0.3 0.263 0.2	A 83 0.38 63 0.26 0	A A A 83 0.383 0.263 0 0	. A 8 0.383 8 0.263	0 A 0.383 0.263 1.6	0 A 0.383 (0.263 (6.5	0 B 0.478 0.358 14.4 0	0 B 0.478 0.358 22.1	0 B 0.478 0 0.358 0 23.7 2	0 B .478 0. .358 0.	0 A 383 0. 263 0.	A A 383 0.38 263 0.26 19 1
Tariff for Cost for Bill for	Friday&Feast Evening the for Saturday&Feast Days or consumption or surplus consumption consumption surplus Friday&Feast Evening	NIS/day NIS/kWh NIS/kWh NIS NIS	R=P-Q S T U=T-0.1 V=E*T W=F*U	2 Sub Total Sub Total Total Data	307.8 12.4 295.4 Data	A 0.383 0.263 19	A 0.383 0.263 19 0	A 0.383 0.263 19	A 0.383 0.263 19 0	0 A 0.383 0.263 19 0	0 A 0.383 0.3 0.263 0.2 19 17 0 AM	0 0 A A 3 0.383 3 0.263 7 14 0 0	0 A 0.383 0.263 9 0	0 A 0.383 (0.263 (0.4.1 0	A 0.383 0.383 0.263 0.2 0 0 0.6 3	A	A A A A A A A A A A A A A A A A A A A	0.9 A 0.383 0.263 0 0	0 A 0.383 0.263 1.6	0 A 0.383 (0.263 (6.5	0 B 0.478 0.358 14.4 0	0 B 0.478 0.358 22.1 0	0 B 0.478 0 0.358 0 23.7 2	0 B .478 0. .358 0. 23.7	0 A 883 0. 263 0. 19	0 A 383 0.38 263 0.26 19 1
Tariff for Cost for Cost for Bill for Summer	Friday&Feast Evening ne for Saturdav&Feast Davs or consumption or surplus consumption surplus Friday&Feast Evening rr 2018	NIS NIS/day NIS/kWh NIS/kWh NIS NIS NIS/day	R=P-Q S T U=T-0.1 V=E*T W=F*U	2 Sub Total Sub Total Total Data Input	307.8 12.4 295.4	A 0.383 0.263 19 0	A 0.383 0.263 19 0	A 0.383 0.263 19 0	A 0.383 0.263 19 0	0 A 0.383 0.263 19 0	0 A 0.383 0.3 0.263 0.2 19 17 0 AM 5	0 0 A A 3 0.383 3 0.263 7 14 0 0	0 A 0.383 0.263 9 0	0 A 0.383 (0 0.263 (0 4.1 0 0 9	0.9 4 A 0.383 0.3 0.263 0.2 0 0.6 3	A 83 0.34 63 0.26 0 2	A A A A A A A A A A A A A A A A A A A	0.9 A 0.383 0.263 0.06	0 A 0.383 0.263 1.6 0	0 A 0.383 (0.263 (6.5 0	0 B 0.478 0.358 14.4 0	0 B 0.478 0.358 22.1 0	0 B 0.478 0 0.358 0 23.7 2 0	0 B .478 0. .358 0. 23.7 0	0 A 383 0. 263 0. 19 0	0 A A A A A A A A A A A A A A A A A A A
Tariff for Cost for Cost for Bill for Summer	Friday&Feast Evening se for Saturday&Feast Davs or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption	NIS NIS/day NIS/kWh NIS/kWh NIS NIS NIS NIS/day	R=P-Q S T U=T-0.1 V=E*T W=F*U X=V-W	2 Sub Total Sub Total Total Total Data Input 1270	307.8 12.4 295.4 Data	A 0.383 0.263 19	A 0.383 0.263 19 0	A 0.383 0.263 19 0	A 0.383 0.263 19 0	0 A 0.383 0.263 19 0	0 A 0.383 0.3 0.263 0.2 19 17 0 AM	0 0 A A 3 0.383 3 0.263 7 14 0 0	0 A 0.383 0.263 9 0	0 A 0.383 (0 0.263 (0 4.1 0 0 9	A 0.383 0.383 0.263 0.2 0 0 0.6 3	A 83 0.34 63 0.26 0 2	A A A A A A A A A A A A A A A A A A A	0.9 A 0.383 0.263 0.06	0 A 0.383 0.263 1.6 0	0 A 0.383 (0.263 (6.5	0 B 0.478 0.358 14.4 0	0 B 0.478 0.358 22.1 0	0 B 0.478 0 0.358 0 23.7 2 0	0 B .478 0. .358 0. 23.7 0	0 A 383 0. 263 0. 19 0	0 A 383 0.38 263 0.26 19 1
Tariff for Cost for Cost for Bill for Summer	Friday&Feast Evening ne for Saturday&Feast Days or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output	NIS NIS/day NIS/kWh NIS/kWh NIS NIS NIS NIS/day	R=P-Q S T U=T-0.1 V=E*T W=F*U X=V-W	2 Sub Total Sub Total Total Data Input	307.8 12.4 295.4 Data	A 0.383 0.263 19 0	A 0.383 0.263 19 0	A 0.383 0.263 19 0	A 0.383 0.263 19 0	0 A 0.383 0.263 19 0	0 A 0.383 0.3 0.263 0.2 19 17 0 AM 5 52.9 52	0 0 A A 3 0.383 3 0.263 7 14 0 0	0 A 0.383 0.263 9 0	0 A 0.383 (0 0.263 (0 4.1 0 0 9	0.9 4 A 0.383 0.383 0.3 0.263 0.2 0 0.6 3	A 83 0.34 63 0.26 0 2	2 13 9 52.9	0.9 A 0.383 0.263 0 0 0 0 1 0.6	0 A 0.383 0.263 1.6 0	0 A 0.383 (0.263 (6.5 0	0 B 0.478 0.358 14.4 0	0 B 0.478 0.358 22.1 0	0 B 0.478 0 0.358 0 23.7 2 0	0 B .478 0. .358 0. 23.7 0	0 A 383 0. 263 0. 19 0	0 A A A A A A A A A A A A A A A A A A A
Tariff for Cost for Cost for Bill for Summer	Friday&Feast Evening se for Saturday&Feast Davs or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption	NIS NIS/day NIS/kWh NIS/kWh NIS NIS NIS NIS/day	R=P-Q S T U=T-0.1 V=E*T W=F*U X=V-W	2 Sub Total Sub Total Total Total Data Input 1270 75	307.8 12.4 295.4 Data	A 0.383 0.263 19 0 52.9	A 0.383 0.263 19 0	A 0.383 0.263 19 0	A 0.383 0.263 19 0	0 A 0.383 0.263 19 0 4 52.9	A 0.383 0.3 0.263 0.2 19 17 0 AM 5 52.9 52	0 0 A A A 3 0.383 3 0.263 7 14 0 0	0 A 0.383 0.263 9 0 8 52.9	0 A 0.383 (0 0.263 (0 4.1 0	0.9 4 A 0.383 0.383 0.3 0.263 0.2 0 0.6 3	A 83 0.3663 0.266 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 13 2 13 00 100	0.9 A 3 0.383 0.263 0 0 0.6 1 0.6	0 A 0.383 0.263 1.6 0	0 A 0.383 (0.263 (6.5 0) 16 52.9 50	0 B 0.478 0.358 14.4 0	0 B 0.478 0.358 22.1 0	0 B 0.478 0 0.358 0 23.7 2 0 19 52.9 5	0 B .478 0. .358 0. .33.7 0	0 A 883 0. 263 0. 119 0 0 0 0	0 A 3883 0.38 263 0.26 19 1 0 22 2 2.9 52.
Tariff for Cost for Cost for Bill for Summer	Friday&Feast Evening ac for Saturday&Feast Days or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS NIS kWh kWh	R=P-Q S T U=T-0.1 V=E*T W=F*U X=V-W	Total Sub Total Sub Total Total Data Input 1270 75	307.8 12.4 295.4 Data	A 0.383 0.263 19 0 52.9	A 0.383 0.263 19 0 1 52.9	A 0.383 0.263 19 0	A 0.383 0.263 19 0 3 52.9	0 A 0.383 0.263 19 0 4 52.9 0 0.0	A 0.383 0.3 0.263 0.2 19 17 0 AM 5 52.9 52	0 0 A A B 3 0.383 B 0.263 C 14 C 0 0 C 7 C 9 52.9 C 20 B 15.0	0 A 0.383 0.263 9 0 8 52.9	0 A 0.383 (0 0.263 (0 4.1 0	0.9 4 A A 0.383 0.383 0.3 0.263 0.2 0 0.6 3	A	2 13 2 13 00 100	0.9 A 0.383 0.263 0.60 0.6 14 0.6 80 0.00	0 A 0.383 0.263 1.6 0 15 52.9	0 A 0.383 (0.263 (6.5 0 0 16 52.9 50 37.5	0 B 0.478 0.358 14.4 0 PN 17 552.9	0 B 0.478 0.358 22.1 0 1 1 1 8 52.9	0 B 0.478 0 0.358 0 23.7 2 0 0 19 52.9 5	0 B .478 0. .358 0. 23.7 0 20 52.9 5	0 A 883 0. 119 0 0 221 22.9 5	0 A 383 0.38 263 0.26 19 1 0 22 2 22 2 0
Tariff for Cost for Cost for Bill for Summer	Friday&Feast Evening ac for Saturday&Feast Davs or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS NIS NIS kWh kWh	R=P-Q S T U=T-0.1 V=E*T W=F*U X=V-W A B C D=B*C	2 Sub Total Sub Total Total Data Input 1270 75 551.3 NLT 0)	307.8 12.4 295.4 Data	A 0.383 0.263 19 0 52.9	A 0.383 0.263 19 0 1 52.9	A 0.383 0.263 19 0 2 52.9	A 0.383 0.263 19 0 3 52.9	0 A 0.383 0.263 19 0 4 52.9 0 0.0	A 0.383 0.383 0.263 0.263 0.2 19 17 0 AM 5 52.9 52 0 0.0 3 52.9 49	0 0 A A B 0383 B 0.263 7 14 0 0 6 7 9 52.9 5 20 8 15.0	0 A 0.383 0.263 9 0 0 8 52.9	0 A 0.383 (0.263 (4.1 0) 9 52.9 : 60 45.0 (0.9 4 A A D.383 0.3 0.263 0.2 0 0.6 3	A 883 0.343 0.20 0 0 2	A A A A A A A A A A A A A A A A A A A	. A 3 0.383 3 0.263 0 0 0.6 1 14 5 52.9 8 80 0 60.0	0 A 0.383 0.263 1.6 0	0 A 0.383 (0.263 (6.5 0 0 16 52.9 50 37.5	0 B 0.478 0.358 14.4 0 PN 17 552.9	0 B 0.478 0.358 22.1 0 1 1 1 8 52.9	0 B 0.478 0 0.358 0 23.7 2 0 0 19 52.9 5	0 B .478 0. .358 0. 23.7 0 20 52.9 5	0 A 883 0. 119 0 0 221 22.9 5	A
Tariff for Cost for Cost for Bill for Summer	Friday&Feast Evening ac for Saturday&Feast Davs or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption	NIS NIS/kWh NIS/kWh NIS/kWh NIS/NIS NIS NIS NIS/day	R=P-Q S T U=T-0.1 V=E*T W=F*U X=V-W A B C D=B*C E=A-D (G	2 Sub Total Sub Total Total Data Input 1270 75 551.3 NLT 0)	307.8 12.4 295.4 Data	0.383 0.263 19 0 52.9 0 0.05 52.9	A 0.383 0.263 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A 0.383 0.263 19 0 52.9 0 0.00 52.9	A 0.383 0.263 19 0 52.9 0 0.00 52.9	0 A 0.383 19 0 6 52.9 0 0 0 0 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A 0.383 0.3 0.263 0.2 19 17 0	A A A 3 0.383 3 0.263 7 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 A 0.383 0.263 9 0 0 8 8 52.9 40 30.0 22.9 0 B	9 52.9 60 4.5 60 60 7.9 0	A 0.383 0.3 0.263 0.2 0 0.6 3 10 552.9 52 80 9 60.0 71 0 7.1 18	A	2 13 2 13 2 13 3 0.383 3 0.383 3 0.263 5 0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	. A	0 A 0.383 0.263 1.6 0 52.9 70 52.5 0.4 0	0 A A 0.263 (6.5 0 6.5 0 16 52.9 50 37.5 15.4 0	0 B .0.478 0.358 14.4 0 PM 17 552.9 30 222.5 30.4 0 B	0 B 0.478 0.358 22.1 0 1 1 18 52.9 5 3.8 49.2 0 B	B B 0.478 0 0.358 0 0 0.358 0 0 0.00 0 0.00 0.00 0.00 B	B A478 0. 3.358 0. 3.3.7 0 20 20 0.0.0 0. B	0 A A S83 0. 263 0. 119 0 221 22.9 5 0 0 0 A	A A A A A A A A A A A A A A A A A A A
Time Zon Tariff for Cost for Bill for Load Solar JDECO Surplus Time Zon	Friday&Feast Evening ac for Saturday&Feast Days or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Power	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS NIS NIS Wh kWh kWh kWh kWh NIS/kWh NIS/kWh	R=P-Q S T U=T-0.1 V=E*T W=F*U X=V-W A B C D=B*C G H	2 Sub Total Sub Total Total Data Input 1270 75 551.3 NLT 0) NLT 0)	307.8 12.4 295.4 Data	0.383 0.263 19 0 52.9 0 0.0 52.9 0 0.0 0.396	A 0.383 0.263 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A 0.383 0.263 19 0 0 0.00 0.00 0.00 0.396	A 0.383 0.263 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 A 0.383 0.263 19 0 52.9 0 0.0 52.9 0 A	A 0.383 0.3 0.263 0.2 19 17 0 AM 5 52.9 52 0 0.0 3 552.9 49 0 A 0.396 0.3	0 0 0	8 52.9 0 0 0.603	9 552.9 :	A A	A	2 133 0.263 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	. A 5 0.383 5 0.263 5 0.06	0 A 0.383 0.263 1.6 0 52.9 70 52.5 0.4 0	0 A 0.383 (0.263 (6.5 0 0) 6.5 52.9 50 37.5 15.4 0 C C	PN 17 52.9 30 B B B B B B B B B B B B B B B B B B	0 B 0.478 0.358 22.1 0 1 1 1 8 52.9 5 3.8 49.2 0 B	B 0.478 0 0.358 0 0.358 0 0 0.358 0 0 0.0552.9 5 0 0 0.0 B B 0.603 0 0	B .478 0358 0337 0	0 A 883 0. 263 0. 119 0 0 221 22.9 5 0 0 0 A	A
Time Zon Tariff for Cost for Cost for Bill for Summer Load Solar JDECO Surplus Time Zon Tariff for Tariff for	Friday&Feast Evening ac for Saturdan&Feast Davs or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Power own for Working Days or consumption or surplus	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/day kWh kWh % kWh kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh	R=P-Q S T U=T-0.1 V=E*T W=F*U X=V-W A B C D=B*C E=A-D (G H I=H-0.12	2 Sub Total Sub Total Total Data Input 1270 75 S51.3 NLT 0) NLT 0)	299.3 307.8 12.4 295.4 Data Output	0.383 0.263 19 0 52.9 0 0.0 52.9 0 0.0 0.396 0.276	A 0.383 0.263 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A 0.383 0.263 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A 0.383 0.263 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AM 5 52.9 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0	8 52.9 0 0.6383 0.263 9 0 0 52.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9 552.9 : 60 4.1 0 8 0.603 1 9 0.603 1	A A A A A A A A A A A A A A A A A A A	A 883 0.343663 0.26 0 0 2	2 13 2 13 2 13 3 0.263 3 0.263 3 0.263 3 0.263 3 0.263 3 0.263 0	. A 3 0.383 3 0.263 0 0 0 . 0.66	0 A 0.383 0.263 1.6 0 52.9 70 52.5 0.4 0 C 1.411	0 A 0.383 (0.263 (6.5 0 0 0.263 (6.5 52.9 50 37.5 15.4 0 C C 1.291 (6.1291 (6.	PN 17 52.9 30.483 0.483	0 B 0.478 0.358 22.1 0 1 1 1 8 52.9 5 3.8 49.2 0 B 0.603	B 0.478 0 0.358 0 0.358 0 0 0.358 0 0 0.0552.9 5 0 0 0.00 552.9 5 0 0 B 0.603 0 0.483 0 0.483 0	B .478 0358 03.7 0 .20	0 A 883 0.263 0.119 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A
Time Zon Tariff for Cost for Bill for Summer Load Solar JDECO Surplus Time Ze Tariff fo Tariff fo Cost for	Friday&Feast Evening ac for Saturday&Feast Days or consumption surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Power one for Working Days or consumption or surplus consumption or surplus	NIS NIS/day NIS/kWh NIS/kWh NIS NIS NIS/day kWh kWh kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh	R=P-Q S T U=T-0.1 V=E*T W=F*U X=V-W A A B C D=B*C E=A-D (F=D-A (G H I=H-0.12 J=E*H	Total 2 Sub Total	299.3 307.8 12.4 295.4 Data Output	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 52.9 0.383 19 0 0 0 0 52.9 0 0.0 0.396 0.276 20.9	2 52.9 0.383 0.263 19 0 52.9 0 0.0 52.9 0 0.396 0.276 20.9	3 52.9 0.00 3 52.9 0 0.0 52.9 0 0.0 6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AM AM AM AM 5 5 5 5 2 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 A A A 3 0.883 3 0.263 7 144 0 0 0 6 7 9 52.9 5 20 8 15.0 2 37.9 0 A B 16 0.603 4 0.603 4 0.603 4 0.603 6 0.483 4 22.8	A 0.383 0.263 9 0 0 8 52.9 40 30.0 22.9 0 B 0.603 0.483 13.8	9 52.9 : 60 0 8 B 0.603 1 4.8	A A A A A A A A A A A A A A A A A A A	A 883 0.343663 0.26 0 0 2	2 133 0.2623 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	. A 3 0.383	0 A 0.383 0.263 1.6 0 52.9 70 52.5 0.4 0 C 1.411 1.291 0.6	0 A A 0.383 (0.263 (6.5 0) 6.5 0 0 16 52.9 50 37.5 15.4 (C C 1.411 (1.291 (21.7) 1.291 (21.7) 6 1.291 (21.7)	B 0.478 0.478 14.4 0 17 52.9 30 22.5 30.4 0 B 0.603 0.483 18.3	0 B 0.478 0.358 22.1 0 1 1 18 52.9 5 3.8 49.2 0 B 0.603 0.483 29.6	B 0.478 0 0.478 0 0.358 0 0 0.552.9 5 0 0 0 0.0603 0 0.483 0 31.9 3	B .478 0478 0358 0358 0	0 A 883 0. 19 0 21 21 0 0 0 A A A B 996 0. 199	A
Time Zon Tariff for Cost for Bill for Summer Load Solar JDECO Surplus Tariff for Tariff for Cost for	Friday&Feast Evening see for Saturdav&Feast Davs or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Power ome for Working Davs or consumption or surplus consumption surplus	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS NIS NIS NIS NIS/day kWh kW kWh kWh kWh kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/	R=P-Q S T U=T-0.1 V=E*T W=F*U X=V-W A B C D=B*C E=A-D (F=D-A (G H H=H-0.12 J=E*H K=F*I	Total	299.3 307.8 12.4 295.4 Data Output	0.383 0.263 19 0 52.9 0 0.0 52.9 0 0.0 0.396 0.276	A 0.383 0.263 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A 0.383 0.263 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A 0.383 0.263 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AM 5 52.9 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0	8 52.9 0 0.6383 0.263 9 0 0 52.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9 552.9 : 60 4.1 0 8 0.603 1 9 0.603 1	A A A A A A A A A A A A A A A A A A A	A 883 0.343663 0.26 0 0 2	2 133 0.2623 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	. A 3 0.383	0 A 0.383 0.263 1.6 0 52.9 70 52.5 0.4 0 C 1.411	0 A 0.383 (0.263 (6.5 0 0 0.263 (6.5 52.9 50 37.5 15.4 0 C C 1.291 (6.1291 (6.	PN 17 52.9 30.483 0.483	0 B 0.478 0.358 22.1 0 1 1 1 8 52.9 5 3.8 49.2 0 B 0.603	B 0.478 0 0.358 0 0.358 0 0 0.358 0 0 0.0552.9 5 0 0 0.00 552.9 5 0 0 B 0.603 0 0.483 0 0.483 0	B .478 0358 03.7 0 .20	0 A 883 0.263 0.119 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A
Time Zon Tariff for Cost for Bill for Summer Load Solar JDECO Surplus Time Zon Tariff for Cost for Bill for Cost for Bill for Bill for Bill for	Friday&Feast Evening see for Saturday&Feast Days or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Power own for Working Days or consumption or surplus consumption or surplus consumption surplus Consumption or surplus Consumption	NIS NIS/day NIS/kWh NIS/kWh NIS NIS NIS/day kWh kWh kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh	R=P-Q S T U=T-0.1 V=E*T W=F*U X=V-W A A B C D=B*C E=A-D (F=D-A (G H I=H-0.12 J=E*H L=J-K	Total 2 Sub Total	299.3 307.8 12.4 295.4 Data Output	0.383 0.263 19 0 52.9 0 0.0 0.0 52.9 0 0.276 20.9 0	1 52.9 0.393 0.263 19 0 52.9 0 0.0 0 52.9 0 0.396 0.276 20.9	2 52.9 0.396 0.00 52.9 0 0.396 0.276 20.9	3 52.9 0.00 3.00 0.00 0.00 52.9 0.00 0.276 20.9	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AM 5 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 A A A A A A A A A A A A A A A A A	8 52.9 0 0.383 0.263 9 0 0 30.0 22.9 0 0 0.603 0.483 13.8	9 552.9 : 60 4.1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A A A A A A B A B A B A B A B B B B B B	A	2 13 2 13 2 13 2 13 2 13 2 13 2 13 2 13	. A i 0.383 i 0.263 i 0.6 i 144 i 52.9 i 80 i 0.6 i 144 i 1291 i 1291 i 1291 i 9.2	0 0.383 0.263 1.6 0 52.9 70 52.5 0.4 0 C 1.411 1.291 0.6	0 0.383 (0.263 (6.5 0 0 1 1 6 5 2 9 1 5 0 0 C C 1.411 (1.291 (0.21.7 0 0 1 1 2 1 .7 0 0 1 1 .291 (0.21.7 0 0 1 1 .291 (0.21.7 0 1 1 .291 (0.21.7 0 1 1 .291 (0.21.7 0 .291 (0.21.7 0 1 .291 (0.21.7 0 1 .291 (0.21.7 0 1 .291 (0.21.7 0 .291 (0.21.7 0 1 .291 (0.21.7 0 .	PN 17 52.9 30 4 0 B 0.603 0.483 0.0483 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 B 0.478 0.358 222.1 0 1 18 52.9 5 3.8 49.2 0 B 0.603 0.483 29.6	B	B	0 A S83 0.0 119 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A
Time Zon Tariff for Cost for Bill for Load Solar JDECO Surplus Time Zon Tariff for Cost for Bill for Cost for Bill for Time Zon Time Zon Time Zon	Friday&Feast Evening ac for Saturdan&Feast Davs or consumption or surplus consumption surplus Friday&Feast Evening Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Power one for Working Days or consumption or surplus consumption	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS NIS NIS/day kWh kWh kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh	R=P-Q S S T T U=T-0.1. V=E*T W=F*U X=V-W A A A B C D=B*C E=A-D D F=D-G H I=H-0.12 J=E*H K=F*I M	Total	299.3 307.8 12.4 295.4 Data Output	0.383 0.263 19 0 52.9 0 0 0 52.9 0 0 0.396 0.276 20.9 0	1 52.9 0.383 0.263 19 0 52.9 0 0.0 0 52.9 0 0.396 0.276 20.9 0	0.383 0.263 19 0 52.9 0 0.0 52.9 0 0.0 0.396 0.276 20.9 0	3 52.9 0.00 3 52.9 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	A 0.383 0.263 19 0 4 52.9 0 0.0 52.9 0 0.0 0.276 0 0.276 0	AM 5 0 0 AM A 0.383 0.336 0.206 0.206 0.2000 AM 5 0 0 0 0 0 0 A 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 A A A A A 3 0.383 3 0.263 5 7 144 0 0 0 5 5 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 52.9 0 0383 0263 9 0 0 8 52.9 40 30.0 22.9 0 8 0.603 0.603 0.603 0.603 0.603	9 52.9 : 52.9 : 60 4.1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A A A A 3.383 0.3.263 0.2.263 0.2 0.0.66 3 10 10 80 80 91 80 91 80 71 11 11 11 11 11 11 11 11 11 11 11 11	A	2 13 3 0.262 0 0 0 0 0 1000 0 1000 0 1000 0 1 1 22.11 1 1.291 1 1.291	. A 3 0.383 8 0.263 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15 52.9 70 6 70 70 70 70 70 70 70 70 70 70 70 70 70	0 A 0.383 (0.263 (6.5 0 16 52.9 50 37.5 15.4 : 0 C 1.1411 (1.1411 (PN 17 52.9 30 4 0 B 0.603 0.483 18.3 0 A	B 0.478 0.358 22.1 0 1 18 52.9 5 3.8 49.2 0 B 0.603 0.483 229.6 0 A	B 0.448 0 0.358 0 23.7 2 2 0 0 0.0 0.0 52.9 5 0 0 B B 0.603 0 0.483 0 0 31.9 2 0 0 A	B	0 A 883 0. 0. 119 0 0 119 0 0 1 1 1 1 1 1 1 1 1 1 1 1	A A A A A A A A A A A A A A A A A A A
Tariff for Cost for Cost for Summer Load Solar JDECO Surplus Time Zo for Tariff for Cost for Time Zo for Tariff for Cost for Tariff for Cost for Tariff fo	Friday&Feast Evening ac for Saturday&Feast Days or consumption surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Power one for Working Days or consumption surplus consumption consumption consumption surplus consumption consumption consumption	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS NIS NIS NIS/day kWh kWh kWh NIS/kWh	R=P-Q S S T U=T-0.10 V=E*T W=F*U X=V-W A A B C D=B*C G G H H=H-0.12 J=E*H K=F*I L=J-K M N	Total 2 Sub Total Sub Total Total Data Input 1270 75 551.3 NLT 0) NLT 0) NLT 01 Total	299.3 307.8 12.4 295.4 Data Output	0.383 0.263 19 0 52.9 0 0.00 52.9 0 0.396 0.276 20.9 0	A 0.383 0.263 19 0 52.9 0 0.0 52.9 0 A 0.396 A 0.396	A 0.383 0.263 19 0 52.9 0 0.0 52.9 0 0.396 0 0.276 20.9 0	A 0383 0263 19 0 52.9 0 0.0 52.9 0 A 0396 20.9 0	A 0.383 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AM 5 5 52.9 52.9 4 0 0 A A A A A A A A A A A A A A A A A	0 0 A A A A A A 3 3 3.883 3 0.263 7 14 0 0 6 7 9 52.9 5 20 37.9 0 0 0 0 6 6 6.603 4 22.8 6 6 6.603 4 20.8 6 6 0.483 6 0.603 6 0.483	8 8 52.9 40 30.0 22.9 0 8 8 52.9 40 30.0 22.9 0 8 0.603 0.483 13.8 0	9 52.9 : 60 4.1 0 9 52.9 : 8 60 45.0 (7.9 0 8 B 0.603 1 4.8 0	0.9 4 A A A 0.263 0.2 0 0.6 3 10 10 0.552.9 52 80 7 1 18 0 0 1.11 18 0 0 9.2 23 A A	A A A B B B B B B B B B B B B B B B B B	5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5	. A 3 0.383 0.263 0 0 0 0.66	0 0 0 383 0.263 1.6 0 52.9 70 52.5 0.4 0 C 1.291 0.6 0	A 0.383 (0.263 (6.5 0) 16 52.9 15.4 1 0 0 C C C C C C C C C C C C C C C C C	PN 17 52.9 30 483 0.483 0 A 0.396	B 0.478 0.358 22.1 0 1 18 52.9 5 3.8 49.2 0 B B 0.603 0.483 29.6 0 0 A 0.396	0 B B 0.478 0 23.7 2 0 23.7 2 0 0 19 52.9 5 0 0.0 0 0.0 8 B 0.603 0 0.483 0 0.483 0 0.483 0 0.483 0 0.483 0	B .478 0358 0358 0357 0	A 883 0. 263 0. 119 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A A A A A A A A A A A A A A A A A A A
Time Zon Tarriff for Cost for Cost for Bill for Load JDECO Surplus Time Zo Tarriff for Cost for Bill for Load JOECO Surplus Time Zo Tarriff for	Friday&Feast Evening ne for Saturdav&Feast Davs or consumption or surplus consumption surplus consumption surplus Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Power Consumption or surplus or consumption or surplus working Days ne for Fidav&Feast Evening or consumption surplus consumption or surplus consumption or surplus or consumption surplus or consumption or surplus or consumption	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS NIS NIS NIS/day kWh kWh kWh kWh kWh NIS/kWh	R=P-Q S T T U=T-0.1 V=E*T W=F*U W=F*U X=V-W A A B C D=B*C E=A-D Q G H I=H-0.1;2 F=D-A(M M N O O=N-0.1	Total 2 Sub Total Total Data Input 1270 75 551.3 NLT 0) NLT 0) 2 Sub Total Total	299.3 307.8 12.4 295.4 Data Output	0.383 0.263 19 0 52.9 0 0.0 52.9 0 0.396 0.276 0 0.396	A 0.383 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A 0.383 0.263 19 0 52.9 0 0.0 52.9 0 A 0.396 0.276	A 0.383 0.263 19 0 3 52.9 0 0.0 0.52.9 0 20.9 0 0.276	A 0.383 0.263 19 0 0 19 0 0 19 0 0 0 0 0 0 0 0 0	AM AM AM AM AM AM AM AM 5 0.0263 0.2 19 17 0 AM AM 5 0.00 3 5 0.00 3 6.00 3 0.00 6.00 3 A A A A A A A A A A A A A	0 0 A A A 3 3.3833 3 0.2633 7 14 0 0 0 6 7 9 52.9 5 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 52.9 0 8 8 52.9 40 30.0 22.9 0 B 0.603 0.483 13.8 0	9 52.9 : 60 45.0 (7.9 0 8 0.603 1 4.8 0 9 0.383 (9 0.483 1 9 0 9 52.9 :	0.9 4 A A A 10 0.9 80 10 10 10 10 10 10 10 10 10	A	5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5	. A A 5 0.396 6 0.276	15 52.9 70 C 1.411 1.291 0.6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	16 52.9 50 37.5 15.4 1 0 C C 1.411 (1.291 (21.7) 0 A A 0.396 (0.276 (0.276) (0.276 (0.276) (0.276) (0.276 (0.276) (0.276 (0.276) (0.276 (0.276) (0.276 (0.276) (0.276 (0.276) (0.276 (0.276) (0.276 (0.276) (0.276 (0.276) (0.276 (0.276) (0.276 (0.276) (0.276 (0.276) (0.276 (0.276) (0.276 (0.276) (0.276 (0.276) (0.276) (0.276 (0.276) (0.276) (0.276 (0.276) (0.276) (0.276 (0.276) (0.276) (0.276) (0.276 (0.276) (B 0.478 0.358 14.4 0 PN 17 52.9 30 4 0.603 0.483 0 A 0.0396 0.276	0 B 0.478 0.358 22.1 0 1 1 18 52.9 5 3.8 49.2 0 B 0.603 0.483 29.6 0 0	0 B B 0.478 0 0.338 0 0.338 0 0.338 0 0 0.358 0 0 0.00 19 52.9 5 0 0 0.00 52.9 5 0 0 0.483 0 31.9 5 0 0 A A 0.396 0 0.276 0	B .478 0. 0.358 0. 3.37 0	A 883 0. 263 0. 119 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 A 383 0.385 0.385 0.326 0.226 0.229 52.0 0 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0
Time Zon Tariff fo Tariff fo Tariff fo Cost for Cost for Bill for Summed Load JDECO Surplus JDECO Tariff fo Cost for Tariff fo Tariff fo Tariff fo Tariff fo Tariff fo Cost for	Friday&Feast Evening ac for Saturday&Feast Davs or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Power or consumption or surplus or consumption or surplus consumption or surplus Working Days ac for Friday&Feast Evening or consumption or surplus Working Days ac for Friday&Feast Evening or consumption or surplus To surplus To surplus To surpl	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS NIS NIS NIS/day kWh kWh kWh kWh kWh NIS/kWh	R=P-Q S S T U=T-0.10 V=E*T W=F*U X=V-W A A B C D=B*C E=A-D (6 G H I=H-0.12 J=E*H L=J-K M N N O=N-0.0 P=E*N	Total	299.3 307.8 12.4 295.4 Data Output 382.9 99.1 283.8	0.383 0.263 19 0 0 52.9 0 0.0 0.276 20.9 0 0.396 0.276 20.9 0	A 0.383 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A 0.383 0.263 19 0 52.9 0 0.0 52.9 0 0.396 0 0.276 20.9 0	A 0383 0263 19 0 52.9 0 0.0 52.9 0 A 0396 20.9 0	0 A A 0.383 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AM 5 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0 0 0 A A A A A A A A A B A A A A A A A A A A	8 8 52.9 40 30.0 22.9 40 30.0 22.9 0 0 0 A 0.396 0 0 0 0 0 0 0 0 0 0 0 0 0	9 52.9 : 60 4.1 : 0 : 9 52.9 : 60 45.0 : 7.9 : 0 : 0 : 4.8 : 0 : 4.8 : 0 : 4.8 : 0 : 4.1 : 0 : 4.1 : 0	0.9 4 A A A A 3.383 0.3383 0.3383 0.3383 0.3383 0.3383 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.33896 0.33806 0.3380	A A S 3 0.3(3) A A S 3 0.3(3) A S 3 0.2(2) A S 5 0 C A 5 0 C C C C C C C C C C C C C C C C C C C	2 133 0.383 0.383 0.2632 0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	. A 383 3 0.263 3 0.264 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	15 52.9 70 C 1.411 1.291 0.6 0 0 0.276 0.276 0.2	A 0.383 (0.263 (6.5) 0.263 (6.5) 0 0 0.264 (1.291 (0.21.7) 0 0 0.276 (6.1) 0 0.276 (6.1)	0 B 0.478 0.358 14.4 0 PW 17 52.9 30 222.5 30.4 0 B 0.603 0.483 18.3 0 A 0.396 0.276	0 B 0.478 0.358 22.1 0 1 1 18 52.9 5 3.8 49.2 0 B 0.603 0.483 29.6 0 0 4 0.396 0.276	0 B B C C C C C C C C C C C C C C C C C	B .478 0. 0.358 0. 3.37 0	A 8883 0. 263 0. 119 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A
Time Zon Tariff for Cost for Cost for Summer Load Solar JDECO Surplus Time Zon Tariff for Cost for Time Zon Tariff for Cost for Tariff for Cost f	Friday&Feast Evening ac for Saturday&Feast Davs or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Power or consumption or surplus or consumption or surplus consumption or surplus Working Days ac for Friday&Feast Evening or consumption or surplus Working Days ac for Friday&Feast Evening or consumption or surplus To surplus To surplus To surpl	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS/ NIS NIS NIS/day kWh kWh kWh NIS/kWh	R=P-Q S T T U=T-0.1 V=E*T W=F*U W=F*U X=V-W A A B C D=B*C E=A-D Q G H I=H-0.1;2 F=D-A(M M N O O=N-0.1	Total 2 Sub Total Total Data Input 1270 75 551.3 NLT 0) NLT 0) 2 Sub Total Total	299.3 307.8 12.4 295.4 Data Output 382.9 99.1 283.8	0.383 0.263 19 0 52.9 0 0.0 52.9 0 0.396 0.276 0 0.396	A 0.383 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A 0.383 0.263 19 0 52.9 0 0.0 0.0 0.276 20.9 0 4 0.396 0.276 20.9 0	A 0.383 0.263 19 0 3 52.9 0 0.0 0.0 52.9 0 0.276 20.9 0	A 0.383 0.263 19 0 0 19 0 0 19 0 0 0 0 0 0 0 0 0	AM 5 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0	0 0 0 A A A A A 3 0.383 3 0.263 3 0.263 3 0.263 6 7 7 144 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 52.9 0 8 8 52.9 40 30.0 22.9 0 B 0.603 0.483 13.8 0	9 52.9 : 60 45.0 (7.9 0 8 0.083 1 9 0 60 45.0 (7.9 0 8 0.603 1 4.8 0 0 A 0.396 (0.276 (0.9 4 A A A A 3.383 0.3383 0.3383 0.3383 0.3383 0.3383 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.3381 0.33896 0.33806 0.3380	A	2 133 0.383 0.383 0.2632 0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	. A 383 3 0.263 3 0.264 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	15 52.9 70 C 1.411 1.291 0.6 0.396 0.276	16 52.9 50 37.5 15.4 1 0 C C 1.411 (1.291 (21.7 0) A A 0.396 (0.27	B 0.478 0.358 14.4 0 PN 17 52.9 30 4 0.603 0.483 0 A 0.0396 0.276	0 B 0.478 0.358 22.1 0 1 1 18 52.9 5 3.8 49.2 0 B 0.603 0.483 29.6 0 0	0 B B 0.478 0 0.338 0 0.338 0 0.338 0 0 0.358 0 0 0.00 19 52.9 5 0 0 0.00 52.9 5 0 0 0.483 0 31.9 5 0 0 A A 0.396 0 0.276 0	0 B B	A 883 0. 263 0. 119 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 A 383 0.385 0.385 0.326 0.226 0.229 52.0 0 0.00 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0
Time Zon Tariff for Cost for Cost for Bill for Load Solar IDECO Surplus Time Zo Cost for Surplus Time Zo Tariff for Cost for Tariff for Tariff for Cost for Tariff for Cost for Tariff for	Friday&Feast Evening ne for Saturday&Feast Davs or consumption surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Power one for Working Days or consumption or surplus consumption surplus consumption or or surplus consumption or or surplus consumption or osupption or osumption or osupption or osupption consumption or osupption consumption or osupption or osupption consumption or osupption	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS NIS NIS NIS/day kWh kWh kWh kWh NIS/kWh	R=P-Q S S T U=T-0.10 V=E*T W=F*U X=V-W A A B C D=B*C E=A-D 0 G H I=H-0.12 J=E*H N N O=N-0.10 Q=E*O	Total	299.3 307.8 12.4 295.4 Data Output 382.9 99.1 283.8	0.383 0.263 19 0 0 52.9 0 0.0 0.276 20.9 0 0.396 0.276 20.9	A 0.383 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A 0.383 0.263 19 0 52.9 0 0.00 52.9 0 0.276 20.9 0 0.396 0.276 20.9	A 0.383 0.263 19 0 3 52.9 0 0.0 0.0 52.9 0 0.276 20.9 0	0 A A 0.383 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AM 5 5 52.9 52.9 0 0 A AM 5 5 0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 A A A A A A A A A B A A A A A A A A A A	8 8 52.9 40 30.0 22.9 40 30.0 22.9 0 0 0 A 0.396 0 0 0 0 0 0 0 0 0 0 0 0 0	9 52.9 : 60 4.1 : 0 : 9 52.9 : 60 45.0 : 7.9 : 0 : 0 : 4.8 : 0 : 4.8 : 0 : 4.8 : 0 : 4.1 : 0 : 4.1 : 0	A A A A A A A A A A A A A A A A A A A	.3 5 A A S S S S S S S S S S S S S S S S S	2 133 0.383 0.383 0.2632 0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	. A	15 52.9 70 C 1.411 1.291 0.6 0 0 0.276 0.276 0.2	A 0.383 (0.263 (6.5) 0.263 (6.5) 0 0 0.264 (1.291 (0.21.7) 0 0 0.276 (6.1) 0 0.276 (6.1)	0 B 0.478 0.358 14.4 0 PW 17 52.9 30 222.5 30.4 0 B 0.603 0.483 18.3 0 A 0.396 0.276	0 B 0.478 0.358 22.1 0 1 1 18 52.9 5 3.8 49.2 0 B 0.603 0.483 29.6 0 0 4 0.396 0.276	0 B B C C C C C C C C C C C C C C C C C	0 B B	A 8883 0. 263 0. 119 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A
Time Zon Tariff for Cost for Cost for Cost for Summer Load Solar JDECO Surplus JDECO	Friday&Feast Evening see for Saturdav&Feast Davs or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Power One for Working Days or consumption surplus Working Days for Fridav&Feast Evening or consumption or surplus consumption surplus for Fridav&Feast Evening or consumption or surplus consumption or surplus for Fridav&Feast Evening or consumption or surplus consumption surplus Friday&Feast Evening	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS NIS NIS NIS/day kWh kWh kWh kWh NIS/kWh	R=P-Q S S T U=T-0.1 V=E*T W=P*U X=V-W A A B C D=B*C E=A-D (F=D-A (G H I=H-0.1; I=E*H N O O=N-0.1 P=E*N N O Q=F*O S	Total	299.3 307.8 12.4 295.4 Data Output 382.9 99.1 283.8	0.383 0.263 19 0 0 52.9 0 0.00 52.9 0 0.396 0.276 20.9 0 0.396 0.276 20.9 0 A	A 0.383 0.263 19 0 1 52.9 0 0.00 A 0.396 0.276 0 0.276 20.9 0 0.276 A A 0.396 0.276 A A A A A A A A A A A A A A A A A A A	2 52.9 0.383 0.263 19 0 0 0.0 52.9 0 0.276 20.9 0 0.276 20.9 0.276 20.9 0.276	A 0.383 0.263 19 0 0 3 52.9 0 0.0 52.9 0 0 4 0.396 0.276 20.9 0 0.276 20.9	0 A A 0.383 19 0 0 52.9 0 0 0 0 0 0 0 0 0 0 0 0 0	AM 5 0 0 AM 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 A A A A A 3 0.383 3 0.263 7 144 0 0 0 6 7 9 52.9 5 20 37.9 9 52.9 6 6 0.603 6 0.483 4 22.8 A A B 6 0.396 6 0.276 6 0.276 6 1.300 6 0.483 A A A A A A A A A A A A A A A A A A A	8 52.9 0 38.3 9 0 0 8 52.9 0 40 30.0 22.9 0 8 0.603 0.483 13.8 0 0.276 9.1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A A A A A A A A A A A A A A A A A A A	.3 5 A .3 6 A .3 0.34 A .3 0.34 A .3 0.34 A .4 2.2 C .4 2.2 A .4 3.2 A .4 3.2 A .4 4 3.2 A .4 4 3.2 A .4 4 3.2 A .4 4 3.2 A .4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5	5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5	. A 383 3 0.26	0.383 0.263 1.6 0 52.9 70 52.5 0.4 1.291 0.6 0.396 0.276 0.276	16 52.9 50 37.5 15.4 0 C C 1.411 (1.291 (2.1.7) 0 A A A 0.396 (6.1.0) 0.276 (6.1.0) 0.276 (6.1.0) 0	0 B 0.478 0.358 14.4 0 17 52.9 30 22.5 30.4 0 B B B B B B B B B B B B B B B B B B B	0 B 0.478 8 0.358 22.1 0 1 1 1 8 52.9 0 0 8 8 49.2 0 0 8 8 0.39 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 B 0.478 0 0.338 0 23.7 2 0 19 552.9 5 0 0.00 B 0.00 B 0.00 31.9 2 0 A A 0.276 0 0 A	B	0 A A 883 0.0 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 A
Tariff for Cost for Cost for Surplus Solar Interest of Cost for Surplus Cost for Cos	Friday&Feast Evening ne for Saturdav&Feast Davs or consumption or surplus consumption surplus Friday&Feast Evening Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Output Rate for Solar Solar Generation Consumption one for Working Davs or consumption or surplus consumption surplus Working Days for Cridav&Feast Evening or consumption or surplus surplus consumption surplus	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS NIS NIS NIS/day kWh kWh kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/kWh NIS/NIS NIS/day	R=P-Q S S T U=T-0.10 V=E*T W=F*U X=V-W A A B C D=B*C E=A-D (G H I=H-0.12 J=E*H K=F*I M N N O=N-0.10 Q=F*O R=P-Q T	2	299.3 307.8 12.4 295.4 Data Output 382.9 99.1 283.8	0.383 19 0.263 19 0 52.9 0 0.0 52.9 0 0.276 20.9 0 276 20.9 0 0.276 20.9	A 0.383 0.263 19 0 0 152.9 0 0.00 52.9 0 0.276 20.9 0 A 0.396 0.276 20.9 0 A 0.396 0.276 20.9 0 A 0.396	2 52.9 0.383 0.263 19 0 0 0.0 52.9 0 0.276 20.9 0 0.276 20.9 0.276 20.9 0.276	A 0.383 0.263 19 0 0 3 52.9 0 0.0 52.9 0 A 0.396 0.276 20.9 0 A 0.396 0.276 20.9 0 A 0.396 0.276 0.276 0.276 0.276 0.276 0.276 0.276 0.276 0.276 0.276	0 A A 0.383 d 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AM 5 0 0 AM 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 A A A A A 3 0.383 3 0.263 3 7 144 0 0 0 6 7 9 52.9 5 20 8 15.0 2 37.9 0 0 0 6 0.60 6 0.483 4 22.8 0 0 0 A A A 6 0.396 6 0.396 6 0.396	8 52.9 0 383 0.263 9 0 30.0 22.9 0 8 0.603 0.483 13.8 0 0.276 9.1 0 0.396	9 9 52.9 : 60 445.0 (7.9 0 8 8 0.603 1 9.0483 1 9.0503 1 9.0503 1 9.0503 1 9.0503 1 9.0503 1 9.0503 1 9.0503 1 9.0503 1 9.0503 1	0.9 4 A A A A 0.263 0.263 0.2 0 0.6 3 10 10 80 7.1 18 60.0 71 1 0 0 1.291 1.2 1.291 1.2 0 0 0 0 0 1 0 0 0 0 0 0 0	3 5 A	5 5.5. A A A A A A A A A A A A A A A A A A A	0.9 A	0 A 0.383 0.263 1.6 0 15 52.9 70 52.5 0.4 0 0 0 0 0 0 0 0 0 0 0 0 0	16 52.9 50 37.5 15.4 0 C C 1.291 0 0 0.276 6 1 0 0 0.276 6 1 0 0 0.276 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0 0.396 6 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 B 0.478 0.358 14.4 0 17 52.9 30 22.5 30.4 0 B 0.603 18.3 0 A 0.396 0.276 12 0	0 B B 0.478 0.358 0.358 22.1 0 I 18 52.9 5 3.8 49.2 0 B 0.603 0.483 29.6 0 A 0.396 0.276 19.4 0 A 0.396	0 B B 0.478 0 0 0.358 0 0 0.358 0 0 0 0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 B	A 883 0.0 19 0 0 19 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 A
Time Zon Tariff for Cost for Cost for Summed Load Solar JDECO Surplus Time Zo Tariff for Tariff for Tariff for Cost for Tariff for Tariff for Cost for Tariff for	Friday&Feast Evening ac for Saturday&Feast Davs or consumption or surplus consumption surplus Friday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption One for Working Days or consumption or surplus consumption or surplus consumption or surplus consumption or surplus working Days active Friday&Feast Evening or consumption surplus consumption surplus Friday&Feast Evening consumption surplus consumption surplus consumption	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS NIS NIS NIS/day kWh kWh kWh kWh kWh NIS/kWh	R=P-Q S S T U=T-0.10 V=E*T W=F*U X=V-W A A B C D=B*C E=A-D 0 H I=H-0.12 J=E*H N N O=N-0.1 P=E*N Q=F*O S T U=T-0.1 U=T-0.1	Total	382.9 99.1 382.9 99.1 283.8 314.2 21.3 292.9	0.383 19 0.263 19 0 52.9 0 0.0 52.9 0 0.276 20.9 0 276 20.9 0 0.276 20.9	A 0.383 0.263 19 0 0 1 52.9 0 0.0 52.9 0 A 0.396 0.276 20.9 0 A 0.396 0.276 20.9 0 A 0.396 0.276 20.9 0 A 0.396	0.383 0.263 19 0 0 2 52.9 0 0.0 52.9 0 0.276 20.9 0 0.276 20.9 0 0.276 20.9	3 52.9 0 0 383 19 0 0 52.9 0 0 0 0 0 0 276 20.9 0 0 276 20.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A AM 5 0 0 AM 5 0 0 0 0 AM 5 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 A A A 3 0.383 3 0.263 7 14 0 0 0 6 7 9 52.9 5 20 8 15.0 0 0 0 0 0 4 A B 6 0.483 4 22.8 A 0 0 0 0 0 A A A 15 0 0 0 0 0 A A A 15 0 0 0 0 0 0 0 A A A 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 52.9 0 383 0.263 9 0 30.0 22.9 0 8 0.603 0.483 13.8 0 0.276 9.1 0 0.396	9 9 52.9 : 60 445.0 (7.9 0 8 8 0.603 1 9.0483 1 9.0503 1 9.0503 1 9.0503 1 9.0503 1 9.0503 1 9.0503 1 9.0503 1 9.0503 1 9.0503 1	0.9 4 A A A A A A A A A A B A B A B A B A B	.3 5 A 3 0.34 A 4 0.24 A 5 0.24 A 6 0.25 A 7 0 0 A 7 0 0.27 A 7 0 0.27 A 8 0.37 A 8 0.34 A 9 0.34 A 9 0.34 A 9 0.37	5 5.5 5 5.5	0.9 A 3 0.383 0.263 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 A 0.383 0.263 1.6 0 15 52.9 70 52.5 0.4 0 0 0 0 0 0 0 0 0 0 0 0 0	16 52.9 50 37.5 15.4 0 C C 1.291 0 0 0.276 6 1 0 0 0.276 6 1 0 0 0.276 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0.396 6 1 0 0 0 0.396 6 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 B B 0.478 0.478 14.4 0 PN 17 52.9 30 22.5 30.483 18.3 0 A 0.396 12 0 A 0.396 0.276	0 B B 0.478 0.358 0.358 22.1 0 11 18 52.9 5 3.8 49.2 0 B 0.603 0.483 29.6 0 0.276 19.4 0 0.396 0.276 0 0.396 0.276	0 B B 0.478 0 0 0.358 0 0 0.358 0 0 0 0.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0	B	0 A A 8883 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	A
Taniff for Cost for Cost for Cost for Cost for Taniff for Cost for	Friday&Feast Evening ne for Saturdav&Feast Davs or consumption or surplus consumption surplus consumption Triday&Feast Evening r 2018 Consumption Maximum Output Output Rate for Solar Solar Generation Consumption Power Consumption or surplus or consumption or surplus working Days ne for Working Days or consumption surplus working Days to Friday&Feast Evening or consumption or surplus consumption or surplus consumption or surplus consumption or surplus r consumption	NIS NIS/day NIS/kWh NIS/kWh NIS/kWh NIS NIS NIS/day kWh kWh kWh kWh NIS/kWh	R=P-Q S S T U=T-0.10 V=E*T W=F*U X=V-W A A B C D=B*C E=A-D 0 H I=H-0.12 J=E*H N N O=N-0.1 P=E*N Q=F*O S T U=T-0.1 U=T-0.1	2 Sub Total Data Input 1270 75 551.3 NLT 0) NLT 0) 2 Sub Total Control 1270 75 Sub Total Total 2 Sub Total Sub Total Sub Total Sub Total Sub Total Sub Total Sub Total	382.9 99.1 382.9 99.1 283.8 314.2 21.3 292.9	0.383 0.263 19 0 52.9 0 0.00 52.9 0 A 0.396 0.276 20.9 0 A 0.396 0.276 0.276 0.276	0.383 0.263 19 0 1 52.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.383 0.263 19 0 0 52.9 0 0.0 0.0 52.9 0 0.276 20.9 0 0.276 20.9 0	3 52.9 0 0 383 19 0 0 52.9 0 0 0 0 0 0 276 20.9 0 0 276 20.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AM 5 52.9 52.9 49 0 A A A A 5 52.9 52 0 0 0 A A A A A A A A A A A A A A A A	0 0 0 A A A 3 0.383 3 0.263 7 14 0 0 0 6 7 9 52.9 5 20 8 15.0 0 0 0 0 0 4 A B 6 0.483 4 22.8 A 0 0 0 0 0 A A A 15 0 0 0 0 0 A A A 15 0 0 0 0 0 0 0 A A A 15 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 52.9 0 30.0 30.0 30.0 22.9 0 8 0.603 0.483 13.8 0 0.396 9.1 0.276	0 0.383 (0.263 (4.1 0 0) 9 52.9 : 60 0 45.0 (4.8 0) 0.483 1 4.8 0 0 .276 (3.1 0) 0.396 (0.276	0.9 4 A A A A A A A A A A A A A	.3 5 A 3 0.34 A 4 0.24 A 5 0.24 A 6 0.25 A 7 0 0 A 7 0 0.27 A 7 0 0.27 A 8 0.37 A 8 0.34 A 9 0.34 A 9 0.34 A 9 0.37	5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5	0.9 A i 0.383 i 0.263 i 0.263 i 0.266 i 0.266 i 0.276 i 0.396 i 0.276	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 A A 0.383 (6.5 0 0.263 (6.5 52.9 50 37.5 15.4 11.291 0 0.396 (6.1 0 0.276 (6.1 0	0 B B 0.478 0.478 14.4 0 PN 17 52.9 30 22.5 30.483 18.3 0 A 0.396 12 0 A 0.396 0.276	0 B B 0.478 0.358 0.358 22.1 0 11 18 52.9 5 3.8 49.2 0 B 0.603 0.483 29.6 0 0.276 19.4 0 0.396 0.276 0 0.396 0.276	0 B B 0.478 0 0 0.358 0 0 0.276 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	B	0 A A 8883 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	0 A , , , , , , , , , , , , , , , , , ,

Table 8.12 Repair Cost (Based on the Estimation by the Manufacturer; Unit: tJPY)

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Equipment No		Vendor	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
M01-03-01/02		NISHIHARA Environment Co., Ltd.				6,927			7,351			9,204			8,278		
M02-02-01/02		Tsukishima Kikai Co., Ltd.											108,042				
M02-08	Hoist block for blower	Elephant Chain Block Co., Ltd.															
M03-04	Hoist block for sludge pumps	Elephant Chain Block Co., Ltd.						_									
M05-04	Hoist block for sludge pumps	Elephant Chain Block Co., Ltd.				212			1 212	_		2.000			1.764		
	Grit removal pump	FURUKAWA Industrial Machinery Systems Co.,Ltd.				243			1,713			2,606	<u> </u>		1,764		
	Return sludge pump	FURUKAWA Industrial Machinery Systems Co.,Ltd.				1,231		553		10,855		12,841	\vdash	813		11,527	
	Waste sludge pump	FURUKAWA Industrial Machinery Systems Co.,Ltd.				365			2,570			3,909			2,646		
M05-02-01/03		FURUKAWA Industrial Machinery Systems Co.,Ltd.				365			2,570			3,909			2,646		
M01-02-01/02		Hitachi Plant Technologies, Ltd.															
M01-04	Bypass screen	Hitachi Plant Technologies, Ltd.															
M01-05-01/02	Grit collector	Hitachi Plant Technologies, Ltd.										_					
M01-09	Oil skimmer	Hitachi Plant Technologies, Ltd.				_						_					
M01-15	Coarse screen for vacuum	Hitachi Plant Technologies, Ltd.				_		1 221				_	1 460 1				
M03-01-01/02		Hitachi Plant Technologies, Ltd.				_		1,331				_	1,469				
M05-01-01/02		Hitachi Plant Technologies, Ltd.						821		120			906				138
M05-03	Waste sludge measuring tank	Hitachi Plant Technologies, Ltd.			-												
M04-03	Utility water supply unit	KAWAMOTO Pump MFG.Co.,Ltd.				126			953			2,340			140		
	Defoarming pump	KAWAMOTO Pump MFG.Co.,Ltd.							203			1,130					
	Grit chamber inlet gate	Maezawa Industries, Inc.															
M01-16	Bypass gate	Maezawa Industries, Inc.															
M02-01-01/02		Maezawa Industries, Inc.															
M02-04-01/02		Maezawa Industries, Inc.															
M02-05-01	Isolation gate	Maezawa Industries, Inc.															
M01-08	Grit separator	Maezawa Industries, Inc.								8,192							
	Air supply valve	Maezawa Industries, Inc.															
	Floor drain pump	Tsurumi Manufacturing Co., Ltd.				1,463				1,583				1,714			
	Oil discharge pump	Tsurumi Manufacturing Co., Ltd.				1,420				1,537				1,664			
	Wastewater pump for vacuum	Tsurumi Manufacturing Co., Ltd.				1,827				1,978				2,141			
	Floor drain pump	Tsurumi Manufacturing Co., Ltd.				1,463				1,583				1,714			
M03-06-01/02		Tsurumi Manufacturing Co., Ltd.				1,827				1,978				2,141			
	Circular pump	Tsurumi Manufacturing Co., Ltd.				1,463				1,583				1,714			
M01-13-01/02	Mixer	Tsurumi Manufacturing Co., Ltd.				2,149				2,326				2,518			
M04-04-01/02	Auto strainer	Asahi Machine MFG. Co.,Ltd															
M01-11	Scum Screen	NIHON INKA CO.,LTD.				188					709					1,599	
M01-12	Screenings conveyor	NIHON INKA CO.,LTD.				230					928					2,042	
M02-03-01/08	Reactor tank mixer	ShinMaywa Industries, Ltd.				11,447		6,086		71,032		4,859		8,553		7,131	
M02-06-01/04	Aeration blower	ShinMaywa Industries, Ltd.				2,136			12,293			39,408			2,553		
M04-01	Hypochlorite tank	TACMINA Corporation										1,951					
M04-02-01/03	Hypochlorite pump	TACMINA Corporation				286		200		209		3,186		226		234	
	Clarifier (drive unit)	HANSHIN										7,306					1,325
	Thickener (drive unit)	SUMITOMO											1,981				
	Generator spareparts					110			110			110			110		
	Instrumentation spareparts					2,842								2,842			
	UPS battery					439					439					439	
Sub Total (Spa	reparts replacement)					38,547		8,991	27,764	102,976	2,077	92,760	112,399	26,037	18,137	22,973	1,463
		Shipping cost (from Yokohama Port to Jericho)															
Sub Total (Shi	oping) ⇒ Included in spareparts																
	,	SV cost for HITACHI (7days x 1personnel)						1,550					1,550				
		SV cost for other manufactures (7days x 1personnel)						1,550					1,550				
Sub Total (Sup	ervisor)							3,100					3,100				
	Total (Spa	reparts+Shipping+SV)				38,547		12,091	27,764	102,976	2,077	92,760	115,499	26,037	18,137	22,973	1,463
		Total								460,322							
	0.03	35 Converter of JPY to NIS				1,349,128		314,681	971,733	3,604,157	72,688	3,246,584	3,933,951	911,310	634,784	804,054	51,214
Total Cost in		Shipping				,,		,	,		,	,	,,			,	
NIS		Supervisor						108,500					108,500				
		Sum				1,349,128			971.733	3,604,157	72,688	3,246,584	4,042,451	911.310	634.784	804.054	51,214
Total Cost in	1.0	05 Annual inflation rate				1,561,784							6,407,991				
NIS with		Shipping															
Inflation		Supervisor						138,477					176,735				
		Sum				1,561,784		540,098	1,302,215	5,071,411	107,393	5,036,518	6,584,726	1,558,649	1,139,980	1,516,164	101,400

Table 8.13 Repair Cost (Unit: NIS)

Item	ns		2014	2015	2016	2017	2018	Sum 2014-2018	Remark
	m³/day aver	age A	106	388	739	1,201	1,758	-	
Influent Wastewater	m³/year	В	16,121	141,620	270,474	438,365	641,670	-]	B=A*365*5months/12months for 2014 B=A*365 for 2015,2017 and 2018 B=A*366 for 2016
Spare Parts Replacement Cost	NIS	C	0	0	0	1,561,784	0	1,561,784	
Shipping Cost	NIS	D	0	0	0	0	0	0	
Supervisor Cost	NIS	Е	0	0	0	0	0	0	
Total	NIS	F=C+D+E	0	0	0	1,561,784	0	1,561,784	
Adopted	NIS		0	156,178	156,178	780,892	468,535	1,561,783	The original estimation of 2017 was allocated to the year 2015, 2016, 2017 and 2018 according to the ratio of 10%, 10%, 50% and 30% respectively.

Table 8.14 Chemicals Cost (Unit: NIS)

Items			2014	2015	2016	2017	2018	Sum 2014-2018	Remark
	m³/day ave	rage A	106	388	739	1,201	1,758	-	
Influent Wastewater	m³/year	В	16,121	141,620	270,474	438,365	641,670	- B	=A*365*5months/12months for 2014 =A*365 for 2015,2017 and 2018 =A*366 for 2016
Unit Dose of Chemicals (Hypochlorin	e) m^3/m^3	С	0.0000273	0.0000273	0.0000273	0.0000273	0.0000273	- D	Oose of 0.18m ³ /d per 6,600 m ³ /d
Unit Cost of Chemicals	NIS/m³	D	1,240	1,302	1,367	1,436	1,507		.3NIS/kg=1,181NIS/m ³ as of 2013 annually 5% increase)
Chemicals Cost	NIS	E=B*C*D	546	5,034	10,094	17,185	26,399	59,258	

8.2 Major Assumptions for Calculating Connection Fee

(1) Initial Setting

Connection fee was based on the area of building only, in order to avoid inequality when land-area-based fee was applied; i.e. the variance of land area is so big compared with that of building area as shown in **Figure 8.2** that any connection fee based on the area of land might cause inequality when applied in Jericho.

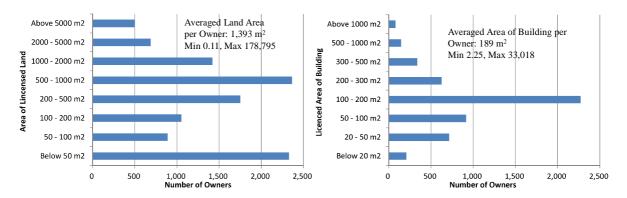


Figure 8.2 Distribution of Land Area and Building Area per Single Owner

The construction cost of connection pipe was calculated for all the water supply area in the Municipality, and the JICA grant for the Pilot Project was deducted. The unit price of construction per connection was estimated as shown in **Table 8.15**, and it was multiplied by the number of total water supply connections in 2012 (i.e. 5,264 connections). The construction cost of connection pipe thus calculated was divided by the sum of total building area in the Municipality, as shown in **Table 8.16**. The unit connection fee was calculated to be 12.7 NIS for every square meter of building floor, to recover all the construction cost of connection pipes, connection pits and receiving pits for the whole city water supply area.

Table 8.15 Unit Construction Cost from Sewer Manhole to Receiving Pit

Unit Cost Estimation (by Top Design Co., Ltd, as of July 2013) Price (NIS) Unit Ref Remark Description Excavation for H=80cm and W=60cm 29 QS #1 m b Backfill by sand for H=55cm and W=60cm m 8 QS #2 Supply and install base coarse for H=20cm and W=60cr 15 QS #3 m 42 Supply and install asphalt for H=5cm m OS #6 60cm; Cover 160NIS and installation 140NIS Supply and install manhole No 360 QS #4 8 inch (ND 200mm) Supply and install pipes m 60 QS #7 Labor 16 QS #9 m Excavator m 25 QS #10 QS #11 Profit and overhead 20% Percentage of Total Cost VAT QS #12 15% Ditto

Quantity and Total Price from S	ewer Manhole to Receiving P	it			
Desc	cription	Qty	Price (NIS)	Total Price (NIS)	Ref
aa Pipeline		10	154	1,540 a+	-b+c+d+f
bb Manhole		1	360	360 e	
cc Labor		10	16	160 g	
dd Excavator		10	25	250 h	
ee Total Cost		-	-	2,310	
ff Profit and overhead		-	20%*ee	462 i	
gg VAT		-	15%*ee	347 ј	
hh Total price		, and the second		3,119	

Table 8.16 Calculation of Connection Fee

Block # (from GIS data)	Building area (m ²) Remarks
33000	12,719.76
33001	18,964.47
33002	16,731.19
33003	4,859.46
33004	40,738.55
33005	33,818.52
33006	16,102.40
33007	28,201.79
33008	55,195.35
33009	36,465.19
33010	16,656.24
33011	67,799.43
33012	22,470.41
33013	29,444.65
33014	17,646.63
33015	0.00
33016	22,071.31
33017	104,715.32
33018	57,545.32
33019	28,224.00
33020	1,936.00
33021	17,562.45
33022	13,755.64
33023	6,704.57
33024	9,240.68
33025	118,336.70
33026	8,874.62
33027	32,160.25
33028	9,583.09
33029	57,750.09
33030	80,774.26
33031	0.00
33032	18,699.09
Sum of total building area in the whole City: A	1,005,747.42 m ²
Water Supply Connections in 2012 :B	5,264
- Residential	4,799 Sum of annual connections /6
- Commercial	465 Ditto
Unit construction cost per connection: C	3,119 NIS/connection
Construction cost for connection: D=B*C	16,418,416 NIS
JICA Fund for Pilot Project Construction: E	3,600,000 NIS (100mJPY, 0.036NIS/JPY)
Construction cost disbursed by Jericho Municipality: F=D-E	12,818,416 NIS
Unit Connection Fee: G=F/A	12.7 NIS/m ² of building

(2) Actual Cost of Connection

The actual construction cost from sewer manhole to receiving pit until June 2015 is calculated as shown in **Table 8.17** i.e. 3,469 NIS/Connection, which exceeds the original estimation of 3,119 NIS/Connection shown in **Table 8.15**. The unit cost per unit length of connection pipe is calculated as 202.5 NIS/m as shown in **Table 8.17**.

Table 8.17 Unit Construction Cost from Sewer Manhole to Receiving Pit (Actual)

No.	Connection Area	Actual Length	Actual Cost	Actual Cost Adjusted	Unit Cost per Connection	Unit Cost per Connection
		A (m)	B (NIS)	C (NIS)	D=B/A(NIS/m)	E=C/A(NIS/m)
1 F	lami Erikat	3.2	581.0	431.0	181.6	134.7
2 N	Jazmi Abdo	3	816.0	666.0	272.0	222.0
3 F	adwa Asraf	6	1,234.0	1,009.0	205.7	168.2
4 A	tef Damen	40	8,650.0	8,050.0	216.3	201.3
5 T	'elecommunications	78	16,742.0	16,742.0	214.6	214.6
6 S	ameer Awajneh	3.1	587.7	437.7	189.6	141.2
7 Z	Luher Manasrah	13	4,381.8	3,781.8	337.1	290.9
8 T	heib Idrees	18.5	2,169.5	2,019.5	117.3	109.2
9 N	Iahmoud Azezah	6	1,081.0	781.0	180.2	130.2
10 A	shraf Abdallah	6	1,437.0	1,137.0	239.5	189.5
11 Y	asmeen Ayyad	30	5,460.0	4,935.0	182.0	164.5
12 K	Thaled Balo	5.2	1,126.8	901.8	216.7	173.4
14 A	anton Barakat	7	1,323.0	1,323.0	189.0	189.0
18 N	Iohammed Jouhary	8	1,402.0	1,402.0	175.3	175.3
19 S	aad Awajneh	30	8,645.0	8,420.0	288.2	280.7
- S	um	257	55,636.8	52,036.8	-	-
- A	verage	17.1	3,709	3,469	216.5	202.5

(Note) Actual Cost was adjusted in column "C" by reducing the working hours of the bagger up to the estimation.

8.3 Comparison of Financial Prospect

The comparison of financial prospects as of November 2015 and as of March 2014 is shown in **Table 8.18**.

Table 8.18 Comparison of Financial Prospect as of November 2015 and as of March 2014

(Black: Prospect as of November 2015; Red: Prospect as of March 2014)

Household Connection Projection

		Nu	imber of Connec	tions to Sewer		
	2014	2015	2016	2017	2018	2014-2018
	89/220	419/1330	340/1200	340/1200	340/1200	1528/5150
PP1	89/94					89/94
PP2		359/481				359/481
Connection by JM		60/261	240/1100	240/1100	240/1100	780/3561
PNA (1mUSD)	0/126	0/588				0/714
Fund from PP1 and PP2			100/100	100/100	100/100	300/300

Inflow Wastewater Projection (m³/d)

		2014	2015	2016	2017	2018
Discharged Wastewater (Household)	A	24/50	168/470	396/1214	616/1993	851/2833 30%
Discharged Wastewater (Large User)	В	72/103	181/294	232/391	259/416	356/437 81%
Discharged Wastewater (JAIP)	С	0/351	4/871	44/1336	117/1802	191/2267 8%
Discharged Wastewater (Aqbat Jaber Camp)	D	0/0	0/250	0/500	100/750	200/1000 20%
Discharged Wastewater (Sum)	E=A+B+C+D	96/504	353/1885	672/3441	1092/4961	1598/6537 18%
Non Revenue Water	F=E*10%	10/50	35/189	67/344	109/496	160/654
Influent Wastewater to WWTP	G=E+F	106/554	388/2074	739/3785	1201/5457	1758/7191

E	Bill Collecti	ion Rate of	Wastewate	er Tariff	
	2014	2015	2016	2017	2018
_	0%/100%	15%/100%	40%/100%	40%/100%	40%/100%

Wastewater Tariff and	Reused Wa	istewater I	ariff (NIS/m	-)	
	2014	2015	2016	2017	2018
Wastewater Tariff	1.0/1.0 0	.5 (Sep-) /1.0	0.5/1.0	0.5/1.0	1.0/1.0
Reused Wastewater Tariff	-	-	0.5/0.3	0.5/0.3	0.5/0.3

Revenue and Expenditure Plan (Revised in November 2015)

	It	ems		2014	2015	2016	2017	2018	Sum	Remarks
	Wastewater T	ariff	G=A*D*F	0	15,461	49,190	79,716	233,308	377,675	
Revenue	Reused Water	Tariff	H=B*C*E	0	0	101,428	164,387	240,626	506,441	
	Sum		I=G+H	0	15,461	150,618	244,103	473,934	884,116	
		Personnel	J	178,959	481,728	561,324	589,437	618,909	2,430,357	
		Electricity	K	49,559	44,787	66,024	120,793	152,704	433,867	
	O&M Cost	Repair	L	0	156,178	156,178	780,892	468,535	1,561,783	
		Chemicals	M	546	5,034	10,094	17,185	26,399	59,258	
Expenditure		Sum	N=J+K+L+M	229,064	687,727	793,620	1,508,307	1,266,547	4,485,265	
		Interest	0	0	0	0	0	0	0	
	Capital Cost	Depreciation	P	0	0	0	0	0	0	Capital cost not subject to be recovered until 2018
		Sum	Q=O+P	0	0	0	0	0	0	
	O&M and Cap	oital Cost Total	R=N+Q	229,064	687,727	793,620	1,508,307	1,266,547	4,485,265	
Balance			S=R-I	-229,064	-672,266	-643,002	-1,264,204	-792,613	-3,601,149	

Revenue and Expenditure Plan (as of March 2014)

	It	ems		2014	2015	2016	Remarks	2018	Sum
	Wastewater Ta	ariff	G=A*D*F	107,310	688,025	1,259,406	1,810,765	2,386,005	6,251,511
Revenue	Reused Water	Tariff	H=B*C*E	0	0	311,695	448,156	590,561	1,350,412
	Sum		I=G+H	107,310	688,025	1,571,101	2,258,921	2,976,566	7,601,923
		Personnel	J	281,913	712,620	904,296	949,512	996,984	3,845,325
		Electricity	K	-54,513	112,240	365,306	636,111	943,131	2,002,275
	O&M Cost	Repair	L	0	285,336	374,830	374,830	330,554	1,365,549
		Chemicals	M	3,993	26,908	51,699	78,084	107,984	268,668
Expenditure		Sum	N=J+K+L+M	231,393	1,137,104	1,696,131	2,038,537	2,378,653	7,481,817
		Interest	0	0	0	0	0	0	0
	Capital Cost	Depreciation	P	0	0	0	0	0	Capital cost not subject to be recovered until 2018
		Sum	Q=O+P	0	0	0	0	0	0
	O&M and Cap	oital Cost Total	R=N+Q	231,393	1,137,104	1,696,131	2,038,537	2,378,653	7,481,817
Balance			S=R-I	-124,083	-449,079	-125,030	220,384	597,913	120,105

8.4 Job Description

The job description was developed for the chief positions of sewerage management, but not including the personnel belonging to the general administration sections (Human Resources, Public Relations, Quality Management and ICT) and financial sections (Financial Accounting and Revenue Collection), who should closely cooperate with the personnel of Sewerage Section for the integrated and effective service provision.

8.4.1 Head of Sewerage Section

Powers: Administrative; Financial; Technical

Job Title : Head of Sewerage Section	Job ID:
Who is responsible for: Director of Water and Sewerage Department	Administrative Subordination: Water and SewerageDepartment
Version Number: (1/00)	Version Date:
Main Responsibilities	Basic Activities
Executing programs and plans of the sewerage service	 Prepare the plans and the work program to implement the sewerage project. Follow up the sewerage project in the city in terms of (plan, scope, designs, the various, budget). Participate in the preparation of the main plans to implement the sewerage project in the city. Follow up the progress in the project stages and provide all the necessary reports to describe the project progress. Coordinate and contact with the funders of the projects. Coordinate and contact with the companies and contractors who implement the project. Find out and follow up the development ways of the sewerage service in the city to ensure the full coverage of the service. Implement workshops to beneficiaries and prepare the guideline pamphlets for the sewerage service. Prepare and submit the technical papers and present it in the seminars and technical conferences to support developing the service in the city. Prepare an annual public awareness program and conduct the program to use sewers properly.
2. Sewerage service management	 Selection of users and management of reusing treated wastewater. Follow up the process of establishment and maintenance of the sewers in the city. Follow up the house connection process to the public sewer network according to the specified criteria. Evaluate the alternatives of using the treated wastewater in the city with beneficiaries. Find out and follow up the residents' complaints. Implement the various studies relating to the sewerage service (tariff, service level and coverage, the amount of received wastewater and the amount of treated wastewater.
Operating and maintenance the wastewater treatment plant and the sewer network	 Follow up the implementation of periodic maintenance for the sewer network and the wastewater treatment plant. Follow up the corrective maintenance works for the sewer network and thewastewatertreatment plant. Follow up repairing the faults and malfunctions in the sewer network and wastewater treatment plant. Daily supervision (periodic) of operation of the wastewater treatment plant and ensure its safety.
4. Developing the work in the section	 Prepare and implement the strategic studies for the sewerage service. Evaluate the performance of the section staff and submit it to the director of the department for approval. Identify the required training of the section staff. Prepare periodic reports for the sewerage service. Perform any other works related to sewerage service assigned by the director of the Water and Sewerage department. Follow up developing computerized systems of the sewerage service in the city.

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8.4.2 Head of Sewer Network Maintenance

Job Title: Head of Sewer Network and House Connection Division	Job ID:
Who is responsible for: Head of Sewerage Section	Administrative Subordination: Water and Sewerage Department
Version Number: (1/00)	Version Date:
Main Responsibilities	Basic Activities
Sewer networks and houseconnection (public and domestic)	 Prepare work programs of sewer extension plan in the city. Participate in the preparation of necessary schemes and designs for sanitation projects. Follow up the implementation of the main plans for the sanitation projects (connection, manholes and maintenance). Follow up the achievement level in the stages of sanitation projects activities and provide all the necessary reports to describe the achievement state. Implement the processes of periodic inspection and following up of the public sewer networks and manholes. Prepare and follow up the technical designs (standards) of the house connections. Follow up the implementation of sewer connection requests (domestic connectors). Follow up the connection pipe maintenance of the domestic/commercial/industrial to make sure of the achievement in proper method. Implement the processes of regular inspection of the domestic connectors. Treatment of customer complaints. Monitor and prevent from illegal house connections. Manage house connection work from user's premises/buildings to public sewer when a user applies to a new house connection. Follow up the cleaning process of sewer networks.
2. Other Tasks	 Follow up data entry of the division work on the computerized system. Prepare periodic and necessary reports. Evaluate the staff of the division. Perform any other tasks within the range of related works assigned by the director and/or section chief.

Powers: Administrative; Financial; Technical

8.4.3 Head of WWTP

Job Title : Head of Wastewater Treatment Plant	Job ID:
Who is responsible for: Head of Sewerage Section	Administrative Subordination: Water and Sewerage Department
Version Number: (1/00)	Version Date:
Main Responsibilities	Basic Activities
1. Work plans	 Prepare the annual plan and the estimated budget for the treatment plant work. Prepare the plant work programs and operational equipment. Follow up preparation the technical regulations for wastewater laboratory including determining the maximum acceptable of the daily and periodic tests results.
Operate and follow up the treatment plant	 Operate, follow up and direct and continuous supervise for wastewater treatment plant work. Monitor the levels of wastewater flow to the plant and taking precautions to prevent the misuse of the work in the plant or exceed the facility capacities and standards. Analyze daily routine reports submitted by the workers in the plant and take necessary technical actions and follow up taking the administrative actions by the head of the section. Conduct regular inspection processes for all the facility assets and make sure the proper implementation according to regulations, manuals and other instructions.
Follow up the corrective and preventive maintenance for the wastewater treatment plant	 Follow up the preventive technical inspection for all the operation elements in the wastewater treatment plant and follow up providing the necessary maintenance. Follow up conducting the necessary corrective maintenance processes as quickly as possible to avoid any crashes or improper work in the wastewater treatment

	plant.
4. Other Tasks	 Follow up organizing the files of the plant work and maintain all the data of the plant. Guide educational facility tour for visitors in the wastewater treatment plant Follow up data entry of the plant work on the computerized system of the plant operation and maintenance. Prepare periodic and emergency reports about the plant work. Evaluate the staff of the plant. Perform any other tasks within the range of the work assigned by the responsible.

Powers: Administrative; Financial; Technical

8.4.4 Maintenance Staff of WWTP

Job Title : Maintenance employee of the Plant	Job ID:
Who is responsible for: The Responsible of Wastewater Treatment Plant Division	Administrative Subordination: Sanitary Section
Version Number: (1/01)	Version Date:
Main Responsibilities	Basic Activities
Ensure the safety of all the plant parts	 Prepare maintenance and operation budget for the wastewater treatment plant. Conduct periodic inspection (preventive) and control the facilityparts and the systems of the plant in cooperation with the operator and/or worker. Conduct corrective maintenance works for the facilityparts of the plant in cooperation with the operator and/or worker. Ongoing coordination with the plants' operators before and during conducting the maintenance works. Prepare the regular reports describing the technical situation of the plant with its various parts. In case of emergency such as deterioration of treated wastewater quality, malfunction of equipment, power failure and so on, report to the manager and section chief immediately and then follow their instructions. When stopping and resuming whole of the wastewater treatment plant, obtain the approval of the manager and/or the section chief. When depicting malfunction in regular inspection, inform the manager and/or the section chief of it immediately, and then follow their instructions. Inspection, adjustment, maintenance and cleaning of equipment in the wastewater treatment plant. Operation and monitoring in the wastewater treatment plant. Record the operation data, inspection results on record sheets. Record mechanical and electrical equipment and consumable stores for O&M on ledgers. Submit the regular report to the WWTP Manager

8.4.5 Operator of WWTP

Job Title : The Operator of the	Version Number: (1/00)
Wastewater Treatment Plant	
Who is responsible for: The	Version Date:
Responsible of the Wastewater	
Treatment Plant Division	
Main Responsibilities	Basic Activities
1. Operate the plant technically	Maintain and operate the units of wastewater treatment process and evaluate it.
	Follow up the facility operation through the control room.
	• Conduct periodic inspection for all processes in the plant and inform the section
	chief and manager of the plant operation status.
	Prepare the operation and maintenance reports which record the wastewater treat-
	ment progress.
	• In case of emergency such as deterioration of treated wastewater quality, malfunc-

	tion of equipment, power failure and so on, report to the manager and section chief immediately and then follow their instructions.
	 Get approval from the manager and/or the section chief, when stoppping and resum ing whole of the wastewater treatment plant.
	 When finding any malfunction in the regular inspection, inform the manager and/or the section chief of it immediately, and then follow their instructions.
	• Inspect, adjust, maintain and clean equipment in the wastewater treatment plant.
	Operate and monitor the wastewater treatment plant.
	• Record the operation data, inspection results on record sheets.
	• Guide educational facility tour for visitors in the wastewater treatment plant.
2. Other tasks	Prepare the periodic reports.
	• Perform any other tasks within the scope of the works assigned by the responsible
	person.

Powers: Administrative; Financial; Technical

8.4.6 Worker/Guard of WWTP

Job Title: The Worker/Guard in the	Job ID:
Wastewater Treatment Plant	
Who is responsible for: The	Administrative Subordination: Sewerage Section
Responsible of the Wastewater	-
Treatment Plant Division	
Version Number: (1/00)	Version Date:
Main Responsibilities	Basic Activities
Cleaning, material transfer and other tasks	• Convey dry sludge from the wastewater treatment plant to another site such as dumping site.
	Remove detritus from a grid chamber at the wastewater treatment plant.
	Clean rooms in the buildings at the wastewater treatment plant.
	Clean the garden and yard in the wastewater treatment plant.
	Maintain trees in the wastewater treatment plant.
	Perform any other tasks within the scope of the works assigned by the responsible person.
2. Guard the Wastewater Treatment Plant	 Protect the site and prevent a non-staff from entering the wastewater treatment plant. Protect the assets of the plant and prevent from getting out any material and equipment except the permission of the manager and/or section chief. Inspect the assets of the plant periodically and immediately report it to the manager and/or section chief when any problem occurred. Perform any other task within the scope of the work assigned by the director and/or section chief.

Powers: Administrative; Financial; Technical

8.4.7 Laboratory

Job Title: The Treated Wastewater	Job ID:
Laboratory	
Who is responsible for:	Administrative Subordination:
Version Number:	Version Date:
Main Responsibilities	Basic Activities
Conduct water quality tests at the laboratory	 Conduct periodic sampling of the wastewater at the inflow point of the wastewater treatment plant and the wastewater at the final discharge point from the wastewater treatment plant. Conduct required water quality tests according to standard specifications. Conduct treated wastewater quality test. Report the water quality test results to the Sewerage Section Prepare the periodic reports. Test water quality and sewage sludge, and monitor inflow water quality. Maintain computers, reagents and water quality test equipment in the laboratory.

2. Other Tasks	 Evaluate the performance of the staff in the division. Perform any other tasks within the scope of the work assigned by the director and/or section chief.
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Powers: Administrative; Financial; Technical

A 2-9-3: Second Revised Sewerage Management Plan

MUNICIPALITY OF JERICHO

Strategic Business Plan 2014-2020 For Managing Jericho Sewerage System

- Revised and Extended for 2016-2020 -

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Chapter 1 Introduction

This "Strategic Business Plan for Managing Jericho Sewerage System 2014-2020" is a mid-term program developed from 2014 to 2020. It aims at providing the management framework, activities to be accomplished and necessary funding resources to be obtained, as well as forming consensus of stakeholders (i.e. the mayor, city council members and municipality staff).

This plan makes clear the following four issues:

- ✓ Construction and household connection plan: branch sewer and connection work;
- ✓ Business plan: activities to be conducted each year;
- ✓ Staffing plan and organization structure;
- ✓ Financial plan: construction plan and revised revenue/expenditure plan.

This plan is the annual rolling plan. The progress will be monitored and evaluated annualy along with the preparation of financial settlements after the end of each fiscal year, and the plan will be revised if necessary prior to the preparation of annual budget of the next year; i.e. the revision will be developed from the period of May/June to September/October.

Chapter 2 Mission, Objective, Means and Activities

The organization mission and the specific actions are categorized into hierarchy, comprised of the mission, objectives, direct means and activities, and are visualized as a tree-like structure of "starategy map" as shown in **Figure 2.2**.

2.1 Mission

A mission statement is an overall goal to be achieved by the Jericho Municipality on sewerage service, and it can work as an effective tool to inspire and influence employees by generating passion and commitment within the organization. The mission statement of Jericho Municipality on sewerage service is decided as below:

"Jericho Municipality Sewerage Section provides adequate and affordable sewerage service in a sustainable and environmentally sound manner."

2.2 Objectives and Means

The objective and its direct means of the Municipality to achieve the mission statement above are set up as shown in **Figure 2.1**. The objective is "to satisfy customers by high-level of service at reasonable tariff with full cost recovery" and the direct means to be taken for this objective comprise the following three components: "to increase the number of sewerage connections"; "to make many customers pay their bills without delay"; and "to implement efficient and effective operations".



Figure 2.1 Breakdown of Mission into Objective and Means

The specific activities to achieve the three objectives (direct means) above are described in **Table 2.1**. The activities are categorized into the four perspectives of Balanced Score Card (BSC)¹: "Financial", "Customer", "Internal Business Process" and "Learning and Growth", in order to ensure the balanced management framework.

Table 2.1 Activities to be Conducted from Four Perspectives of BSC

Perspectives	Activities
1. Financial	(a) Ensure the commitment from donors to fund the designing and construction of branch sewer and
	household connections
	(b) Implement phased hike of wastewater tariff and connection fee in line with the price increase
2. Customer	(a) Prepare and implement public awareness campaigns for smooth connection and payment of connec-
	tion fee without delay
	(b) Cooperate with the Popular Committee of Aqbat Jaber Camp to accelerate sewer construction and
	connection in the Camp
	(c) Cooperate with PIEFZA and PRICO to accelerate sewer connection in JAIP
	(d) Develop and implement reuse scheme of treated wastewater and sludge at reasonable price
3. Internal Busi-	(a) Accurate and quick transfer and processing of customers' complaints using extended "Work Flow
ness Process	System"
	(b) Accurate and smooth transaction of new connection information using extended "Work Flow Sys-
	tem"
	(c) Accurate and smooth transaction of meter reading information using new "Wastewater Tariff Sys-
	tem" and "Mobile Billing System"
	(d) Strengthen the activities towards non-payment of connection fees and wastewater tariff
	(e) Preventive and periodic maintenance utilizing asset inventory database and record of repair work
4. Learning and	(a) Systematic training is designed and implemented on O&M of facilities for the staff of Sewerage
Growth	Section

¹ The balanced scorecard (hereinafter "BSC") is a strategic management system to assist the realization of the vision of the organization. It provides a "balanced" performance measurement framework that added non-financial perspectives comprising of "Customer", "Internal Business Process" and "Learning and Growth" to the traditional "Financial".

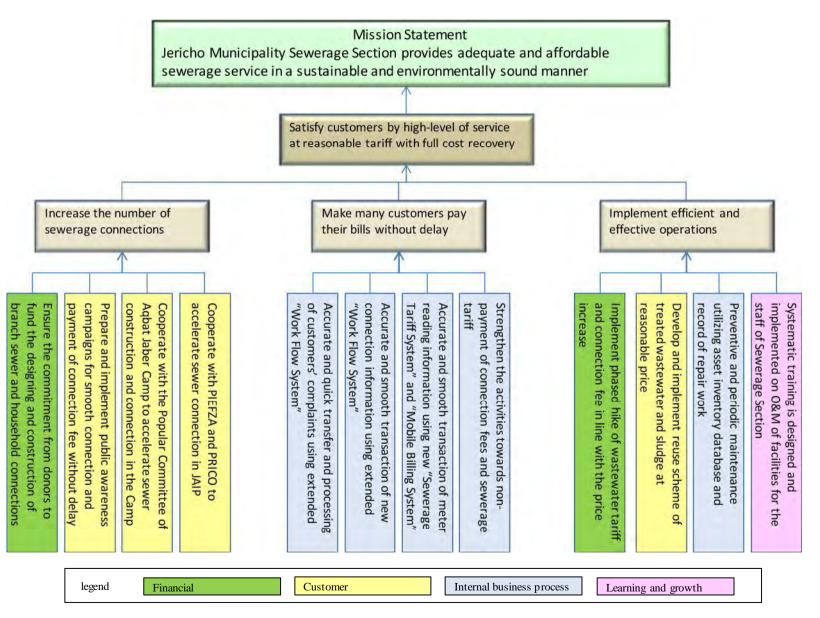


Figure 2.2 Strategy Map of Jericho Municipality for Managing Sewerage System

Chapter 3 Basic Scenario

3.1 Wastewater Tariff and Connection Fee

The Jericho Municipality had prepared its original draft of sewerage by-law based on the prototype provided by PWA, before the "System of Connecting Houses and Buildings to the Public Sewerage" was approved by the Council of Ministers and enacted in December 2013 to be enforced to every municipality. Thus the Municipality discarded the former and adopted the latter, attached with the wastewater tariff and connection fee which was approved by the Municipality Council in March 2014 before getting the approval of MoLG and PWA and coming into effect in April 2014.

The scheme of wastewater tariff, connection fee and other related fees is shown in **Table 3.1**. Regarding the wastewater tariff, uniform volumetric tariff was adopted instead of progressive volumetric tariff, considering the unexpected behavior of customers to save water. In addition the Municipality Council decided on 18th August 2015 after getting the approval by PWA to halve both the regular price of wastewater tariff and connection fee in order to accelerate the household connection and the tariff payment. Since the reluctance to pay connection fee and wastewater tariff is so prevailing among the citizens that the public awareness campaign is all the more important, including the door-to-door visit to potential/existing customers for accelerating the connection and collection of connection fee and wastewater tariff.

Table 3.1 Wastewater Tariff, Connection Fee and Other Fees

Category	Unit Fee		Notes
	Regular Price	Encouraging Price	
Wastewater Tariff	1.0 NIS/m ³	0.5 NIS/m ³	- For every cubic meter of water consumption
			- Encouraging price applicable till 31 December 2017
Connection Fee	13 NIS/m ²	7 NIS/m ²	-For every square meter of building
			-Encouraing price applicable till 31 December 2016
Tanker Sludge Tariff	5 NIS/transferral	-	-Effective before the sewerage by-law but applied at
			the WWTP from July 2016
			-Equivalent to 0.5 NIS/m³ for 10 m³ tanker truck
Reused Wastewater	0.5 NIS/m^3	-	-Applied to the licenced users by the MoA
Tariff			-Reused wastewater to be used for irrigation purpose

3.2 Cost Recovery Principle

(1) Cost Recovery for Household Connection

The revenue of connection fee shall recover all the construction cost from connection pit until receiving pit, the schematic diagram of which is shown in **Figure 3.1**. The construction cost of trunk/branch sewer up to connection pits shall be borne by the Municipality and shall not be subject to the connection fee. Land or building owners are responsible for private sewer inside the owner's premises excluding receiving pit(s). The connection fee and internal connection cost for private sewer in the Pilot Project area, which were initially paid by the Japanese grant though technical assistance project, shall start to be recovered from the beneficiaries by the Municipality from October 2016.

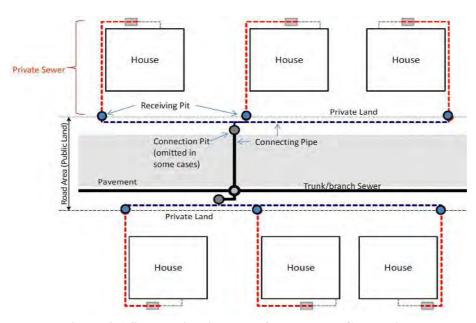


Figure 3.1 Schematic Diagram of Household Connection

(2) Recovery of Operation and Maintenance Cost as Planned in 2014

According to the meeting with PWA on 5th September 2013, the article 3 of the Water Tariff Regulation 2013 which defines the full cost recovery principle of water and wastewater service shall be applied to all the municipalities without any exception, though some phased approach shall be allowed. The 2014 version of this plan was so designed that the revenue of wastewater tariff shall recover the 100% of the operation and maintenance cost, excluding the capital cost (depreciation) that shall be recovered at the next stage after 2018. To enable this, the treated wastewater was assumed to be sold for reusing, as well as the electricity generated from the solar panels in the WWTP shall be sold to JDECo according to the agreement between the Municipality and JDECo. Moreover, it was assumed essential to accelerate the household connection to sewer, including the connection in the Aqbat Jaber Camp.

(3) Recovery of Operation and Maintenance Cost after 2015 Rolling

The assumed increase in the 2014 plan regarding the household connections and the inflow wastewater from JAIP and Aqbat Jaber Camp was critically small or even null for the latter two, and its prospect until 2018 needed drastically downward revision. This rolling plan reflects this downward modification, as well as the temporary reduction of wastewater tariff from 1.0 NIS/m³ to 0.5 NIS/m³ that was stated in 3.1, and consequently the full cost recovery requested by the Water Tariff Regulation 2013 cannot be achieved during the years from 2014 to 2020.

3.3 KPIs and Targeted Values

The key performance indicators (KPIs) and their targeted values were defined as shown in **Table 3.2**. Since the increase of sewer connection and revenue income, as well as the proper staffing for the sewerage service are the most urgent and important things so far, the selected KPIs are focused on these issues and the targeted values constitute the major factors for calculating the financial prospect as described in **Chapter 5**.

Table 3.2 KPIs and Targeted Values

Index	Annual Targeted Value for 2016	Notes
1. Influent Wastewater Volume (m³/day)	630 m ³ /d (annual average)	
2. Volume of Reused and Charged Wastewater	More than 50% of inflow wastewater	
(m ³ /month)	volume	
3. Number of New Connections	300 new connections	
4. Number of Staff	Nominally 17 (actually 13.5)	
5. Collection Ratio of Bills of Wastewater Tariff	30% (collected/billed)	
6. Reuse Rate of Treated Wastewater	75 % of influent to WWTP	_

Chapter 4 Activities to be Strategically Conducted

The annual activities and/or targets to be strategically conducted and/or achieved from 2014 to 2020 are listed in **Table 4.1**, according to the activities categorized by the three direct means.

Table 4.1 Annual Activities from 2014 to 2020

Direct means	Activities	Present status and challenges as of July 2016	Specific Activities						
			2014	2015	2016	2017	2018	2019	2020
Increase the number of sewerage connections	Ensure the commitment from donors to fund the designing and construction of branch sewer and household connections	 ◆ 12.5km of branch sewer constructed by USAID ◆ 24km of branch sewer planned to be constructed by USAID from around May 2016, but disbursement delayed ◆ Disbursement of reserved 1mUSD from PA requested by JM ◆ 1 mUSD of collateral fund from GoJ is expected for household connections in exchange of the 1 mUSD from PA as above 	Preparation and construction supervision of PP1, PP2 and USAID project	Preparation and construction supervision of PP2 and USAID project	Municipality's budget; Search for and securing the commitment of potential donors, including PA	commitment of potential donors, including PA	·	ŕ	Search for and securing the s commitment of potential donors
	Prepare and implement public awareness campaigns for smooth connection and payment of connection fee without delay	◆ 89 and 359 connections were connected by PP-1 and PP-2 respectively ◆ Door-to-door visit campaign started from Nov 2015 to accelerate connections	Public meetings; PR on various media	Public meetings; PR on various media; Door-to-door visit to accelerate connections	Public meetings; PR on various media; Door-to-door visit to accelerate connections	s Public meetings; PR on various media; Door-to-door visit to accelerate connections	Public meetings; PR on various media; Door-to-door visit to accelerate connections	Public meetings; PR on various media; Door-to-door visit to accelerate connections	Public meetings; PR on various media; Door-to-door visit to accelerate connections
	Cooperate with the Popular Committee of Aqbat Jaber Camp to accelerate sewer construction and connection in the Camp	◆ Tender document ready for construction and fund commitment of 2 mUSD offered by GoJ via UNRWA for JFY 2016 ◆ Dialogue on-going between JM, PCSAJC and PCSESC to agree on administrative, technical and financial issues	Preliminary information exchange and dialogue	Intermittent dialogue to agree on administrative, technical and financial issues	Intermittent dialogue to agree 1 on administrative, technical an- financial issues; Agreement on connection fee and wastewater tariff among JM, PCSAJC and UNRWA	1	г		
	Cooperate with PIEFZA and PRICO to accelerate sewer connection in JAIP	◆ One factory (Palolea) started operation	Preliminary information exchange and dialogue	Intermittent dialogue to agree on administrative, technical and financial issues	Sign agreement on I administrative, technical and financial issues				
Make many customers pay their bills without delay	Accurate and quick transfer and processing of cusotmers' complaints using extended "Workflow System" Accurate and smooth transaction of new	◆Existing Workflow System was modified for sewerage service	Implement minimum version-up of Workflow System for sewerage	Develop sub-system of					
ueiay	connection information using extended "Workflow System"			Workflow System for managing sewerage connection	5				
	Accurate and smooth transaction of meter reading information using new "Sewerage Tariff System"	◆ Water tariff and wastewater tariff in one bill from March 2015 ◆ Mobile billing system in operation, linked to existing billing system and portable hand-held units ◆ Billing System shall be modified in line with the renovation of Financia System	ı	Develop built-in system for managing sewerage fee	Renovate Financial System and Billing System to improve the outputs (all municipality-wise)				
	Strengthen the activities towards non- payment of connection fees and sewerage tariff	◆ Preparation on-going of collecting connection fee and construction cost for internal connection work within PP area ◆ Temporary discount of connection fee and sewerage tariff being applied from Sep 2015 to Dec 2016 and Dec 2017 respectively ◆ Installment of paying connection fee (13NIS/m²) up to 12 months (Aug 2014) ◆ Installment of paying connection fee (7NIS/m²) up to 6 months for 70% of total fee, after paying 30% in cash (Nov 2015) ◆ 1 staff was increased in Collection Section, but 1 staff is on sick leave	media	Public meetings; PR on various media; Verify collection rate, develop countermeasures if necessary (including installement /reduction /exemption)	unit price, prepare the bills and call customers to promote payment of connection fee and	call customers to promote payment of connection fee and printernal construction cost (in Pl and extended PP area) and	call customers to promote payment of connection fee and	call customers to promote payment of connection fee and	call customers to promote
Implement efficient and effective operations	Implement phased hike of wastewater tariff and connection fee in line with the price increase	◆ Creating separate account and adopting accrual accouting are essential for proper cost allocation; Al-Ghassan system should be renovated for that purpose; System integration of all JM computer applications is under investigation by Global Communities ◆ Agreement concluded between JM and JDECo for reducing electricity tariff in proportion to the generated electricity by solar panels ◆ JM and JDECo signed an agreement on Mega Solar Project to rent the vacant space of WWTP for installing solar panels	Negotiate sales price with JDECo generated from solar panels			Apply original connection fee from discounted 7 NIS/m ² to 13 NIS/m ²			
	Develop and implement reuse scheme of treated wastewater and sludge at reasonable price	◆ Farm experiment in WWTP and water quality test on-going before lauching supply to outside users ◆ Application for license to use treated wastewater approved by MoA from 3 farm owners	Farm experiment after June; Treated wastewater quality test Information disclosure on treated wastewater and sewage sludge	Farm experiment; Treated ; wastewater quality test; Information disclosure on treated wastewater and sewage sludge	Develop reuse tariff; Start supplying to licensed users; Reuse rate more than 75%	Reuse rate more than 75%; Conduct F/S for introducing advanced treatment	Reuse rate more than 75%	Reuse rate more than 75%	Reuse rate more than 75%
	Preventive and periodic maintenance utilizing asset inventory database and record of repair work	 No management function for fixed assets in current Al-Ghassan System No function for dealing with technical reportings in current Workflow System; renovation needed → Hands-on training needed for data entry of sewer network in GIS → Reactivation or substitution of expired GIS needed 		Introductory training on the operation of GIS funded by TeCSOM	Reactivate GIS software; Provide the staff with basic training on the operation and administration of GIS; Fill in data of sewer network into GIS Develop preventive maintenance program for WWTP and sewer network	Provide the staff with advanced training on the operation and administration of GIS; Update data of sewer network in GIS; Update preventive maintenance program for WWTP and sewer network	program for WWTP and sewer network		e Update preventive maintenance program for WWTP and sewer network
	Systematic training is designed and implemented on O&M of facilities for the staff of Sewerage Section	◆Training being conducted with TeCSOM team ◆Hands-on training needed for the inspection, overhaul, minor repair of all equipment in WWTP, to facilitate preventive maintenance		OJT of O&M Training for sewer cleaning using the introduced high pressure flushing vehicle	17 (actually 13.5) full-time, regular and trained staff; Develop business continuity & emergency management plan	and trained staff; Update	r 20 (actually 17) full-time, regula and trained staff	r 20 (actually 17) full-time, regula and trained staff	r 20 (actually 17) full-time, regular and trained staff

Chapter 5 Revenue and Expenditure Plan

5.1 Revenue and Expenditure Schedule

The revenue and expenditure schedule from 2014 to 2020 is shown in **Table 5.1** and **Figures 5.1 and 5.2**. The revenue is consisted of wastewater tariff and reuse charge, and the expenditure is consisted of the personnel, electricity, repair and chemicals cost necessary for operation and maintenance. The collection rate of wastewater tariff is set as 20% in 2015 and 10% annual increase after 2016 based on the current collection status of both wastewater tariff and water tariff. The revenue of reused wastewater tariff was calculated assuming that the percentage of treated wastewater to be reused and charged is 50% in 2016 and 75% from 2017 to 2020 and the unit charge is 0.5 NIS/m³.

5.2 Major Assumptions

Major assumptions used in the calculation are described in Chapter 8.1.

Table 5.1 Annual Balance of Revenue and Expenditure

	I	tems		2014	2015	2016	2017	2018	2019	2020	Sum	Remarks
Tanker Sludg	Tanker Sludge (m3/d) A		A	57	41	143	143	143	143	143	813	
Tanker Sludg	ge (m3/year)		B=A*152 (for 2014), 365 or 366	8,664	14,965	52,338	52,195	52,195	52,195	52,338	284,890	
Discharged V	Wastewater (m3	/year)	С	12,927	77,015	210,450	440,920	685,835	818,695	954,894	3,200,736	
Influent Was	tewater to WW	TP (m3/year)	D=C*1.1	14,296	84,680	231,678	485,085	754,455	900,455	1,050,420	3,521,069	
Reused Was	tewater (m3/yea	nr)	E	0	0	115,839	363,814	565,841	675,341	787,815	2,508,650	
Wastewater Tariff (NIS/m3)		F	1.0	0.8	0.5	0.5	1.0	1.0	1.0	: :	In 2015 1.0 NIS/m3 until Aug.; 0.5 NIS/m3 after Sep.	
Reused Wastewater Tariff (NIS/m3)		G	-	-	0.5	0.5	0.5	0.5	0.5	-		
Collection Rate of Wastewater Tariff		Н	0%	20%	30%	40%	50%	60%	70%	-		
Waste	Wastewater '	Vastewater Tariff		0	12,322	31,568	88,184	342,918	491,217	668,426	1,634,635	
Revenue	Reused Wate	Reused Water Tariff		0	0	57,920	181,907	282,921	337,671	393,908	1,254,327	
(NIS)	Tanker Sludg	Tanker Sludge Tariff		0	0	26,169	52,195	52,195	52,195	52,338	235,092	
	Sum		L=I+J+K	0	12,322	115,657	322,286	678,034	881,083	1,114,672	3,124,054	
		Personnel	M	163,889	409,140	568,254	664,410	743,220	758,070	773,226	4,080,209	
		Electricity	N	49,527	45,164	70,606	109,236	196,129	223,083	249,125	942,870	
	O&M Cost	Repair	0	0	0	85,819	858,190	85,819	171,638	514,914	1,716,380	
_		Chemicals	P	484	3,010	8,646	19,017	31,039	38,914	47,660	148,770	
Expenditure (NIS)		Sum	Q=M+N+O+P	213,900	457,314	733,325	1,650,853	1,056,207	1,191,705	1,584,925	6,888,229	
(1 (15)		Interest	R	0	0	0	0	0	0	0	0	
	Capital Cost	Depreciation	S	0	0	0	0	0	0	0	0	
		Sum	T=R+S	0	0	0	0	0	0	0	0	
	O&M and Ca	apital Cost Total	U=Q+T	213,900	457,314	733,325	1,650,853	1,056,207	1,191,705	1,584,925	6,888,229	
Balance (NIS	S)		V=U-L	-213,900	-444,992	-617,668	-1,328,567	-378,173	-310,622	-470,253	-3,764,175	

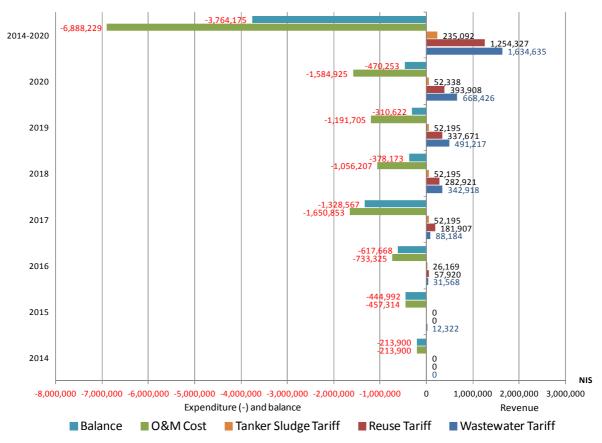


Figure 5.1 Cost Recovery Prospect from 2014 to 2020

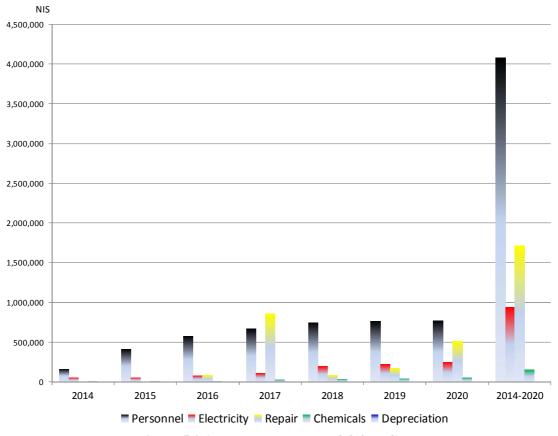


Figure 5.2 Annual Breakdown of O&M Cost

Chapter 6 Capital Investment Plan

6.1 Connection to Public Sewer

The connection to public sewer was accelerated from 2014 to 2015, using the scheme of the Pilot Project implemented in the JICA technical assistance Project. This Pilot Project had the total budget of 3.8 mNIS (100mJPY) and through this 89 and 359 connections were connected in 2014 and in 2015 respectively. The Municipality started to construct from 2015 by its own budget the connecting pipe from connection pit to receiving pit, through which 49 connections were connected by the end of 2015. And monthy 7 and 10 connections are supposed to be connected in 2016 and after 2017 respectively. In addition, the Municipality implements the extended Pilot Project for household connection in 2016 by its own budget of 870 tNIS (230 tUSD), with the scope of 212 new connections. Besides, the Municipality shall start collecting the connection fee and the cost of internal connection work within the households in the Pilot Project area, and by using this fund, new connections shall be added annually by 50 in 2017 and 100 from 2018 to 2020.

Meanwhile the Government of Japan is to disburse 1mUSD for expanding household connections, as a collateral fund in exchange of the same amount to be disbursed by the Palestine Authority (PA) as mentioned in **6.2**, and 1,110 new connections were expected in 2017 by using this fund.

Category 2014 2015 2016 2017 2018-2020 Sum Note **New Connections** 89 359 448 through Pilot Project 296 120 360 **New Connections** 49 (7*12)(120/year) 825 (10*12)by Jericho Municipality +212) 300 Fund from PP1 and PP2 50 350 (100/year) 1mUSD, Fund from GoJ 1,110 1,110 900USD /connection 660 Sum 89 408 296 1,280 2,733 (220/year)

Table 6.1 Connection to Public Sewer

6.2 Construction of Branch Sewer

It was estimated in the Detailed Design (D/D) study of the JICA grant project that the total length of branch sewer reaches around 50 km, including 16 km to be constructed by the commitment of the PA. But it was proved that the total length of branch sewer is far beyond 50 km, which remains to be studied.

The 4.5 mUSD project funded by USAID was completed in October 2015, to cover the construction of 12.5 km of branch sewer and 2.1 km of connecting pipe from manhole to connection pit. The 2nd phase of this project finished the detailed design, of which scope shall be another 28 km of branch sewer with expected budget of 6.3 mUSD.

Meanwhile the PA's own commitment, which amounts to 1.0 mUSD, has been postponed due to its financial crisis but the Municipality as well as JICA has pushed its quickest disbursement. The remaining branch sewer including the connecting pipe from manhole to connection pit should be constructed from 2016 onwards by the Municipality side, and the necessary commitment of donors for funding should be sought for.

Chapter 7 Organization and ICT System Development Plan

7.1 Organogram of Sewerage Section

The sewerage section started its regular activities after starting operation of the WWTP in June 2014, and mainly deals with the technical aspect of sewerage service. The organogram of Water and Sewerage Department is shown in **Figure 7.1**. Fourteen full-time and regular staffs have been identified to be necessary through the technical assistance project of JICA, while the current staffing as of July 2016 is shown in **Table 7.1**. The number of currently filled post is nominally 16 (actually 12.5), of which 13 (actually 11.0) are full-time including duplication and 3 (actually 1.5) are concurrent with the job of other sections. It is assumed that (a) 1 full-time technician shall be added from 2016 in the WWTP Laboratory; (b) 2 full-time workers shall be added from 2017 in the Sewer Network and House Connection Division; (c) 1 mechanical technician of the WWTP who is concurrent as of July 2016 shall be turned into full-time from 2017; and (d) the manager of the Sewer Network and House Connection Division who is duplicated with the managers of the Sewerage Section and the WWTP Division as of July 2016 shall be full-time from 2018.

Other functions related to sewerage service such as bill delivery and collection, customer service, public relations, GIS mapping of sewer network, financial accounting or human resources management shall be allocated to the specific departments/sections, and hence the service provision to customers should be implemented in close cooperation with the Sewerage Section and other relevant departments/sections.

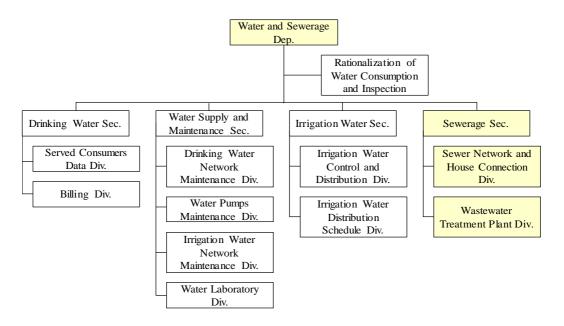


Figure 7.1 Organogram of Water and Sewerage Department

Table 7.1 Staffing of Sewerage Section (as of July 2016)

Dep./Sec./Div.	Designation	Number (Nominal /(Actual))	Name	Work Type	Notes
Water and Sewerage Dep.	Manager	1/(0.5)	Mr. Mohammed Fetyani	Concurrent	
Sewerage Sec.	Manager	1/(0.33)	Mr. Ibrahim Abu Seiba	Full-time	Duplication
C. N. ()	Manager	1/(0.33)	Mr. Ibrahim Abu Seiba	Full-time	Duplication
Sewer Network and	Engineer		Mr. Majdi Mohammad Al-Ghouj	Full-time	
House Connection Div.	Technician	3	Mr. Essa Sharar	Full-time	
DIV.	Technician		Mr. Ahmad Saleh Alfahad	Full-time	
	Manager	1/(0.33)	Mr. Ibrahim Abu Seiba	Full-time	Duplication
	Operator	1	Mr. Omran Khalaf	Full-time	
	Inspection/	1/(0.5)	Mr. Mohammed Awajneh	Concurrent	Mechanical
	O&M	1	Mr. Maher Swaidy	Full-time	Electrical
Wastewater Treatment			Mr. Adnan Ashour	Full-time	
Plant Div.	Worker/		Mr. Ibrahim Jalayta	Full-time	
Traint Div.	Guard	5	Mr. Ramadan Jalayta	Full-time	
	Guard		Mr. Mousa Barahma	Full-time	
			Mr. Ismail Barahma	Full-time	
	Water Qual-	1/(0.5)	Mr. Ata Shwawi	Concurrent	
	ity Analysis				
Total		16/ (12.5)	Full-time including duplication: 13/		
10(a)		10/ (12.3)	Concurrent: 3/ (1.5)		

7.2 ICT System Development

7.2.1 Present Status and Challenges

Related to the sewerage service, there are three computer application software working in the Municipality i.e. the Work-Flow System, Revenue (Billing) System and Financial System ("Al-Ghassan" or "Oracle" System), of which the Financial System is the main and central, referring to the database of the other two systems. The existing Financial System is an old one and works on cash base, so it shall be renovated to be based on the modified accrual accounting system fitting to the works of the Municipality, to enable the Municipality to extract comparable and appropriate financial data for reporting. The expected date of completing the renovation is expected to be the end of 2016.

Meanwhile the GIS in the Municipality Office was introduced in 2006, the components of which are Arc-Info, Arc-Survey Analyst, Arc-Server Enterprise and Arc-View, each 1 set of version 9.3, as well as AutoDesk Map 3D, Raster Design and one server computer, all funded by JICA. After being upgraded to version 9.3.1 from December 2009 to February 2010, all software licenses have been expired and now 2 sets of Arc-Desktop Basic (version 10.1) are being used in the Water Network Maintenance Section and the Engineering Department. The Mayor has given permission in March 2014 to proceed to reactivate GIS in the Municipality office, recognizing the importance and usefulness of the GIS in order to improve the quality of the services for the residents as well as the internal business efficiency and accuracy. Preliminary training for the staff of Sew-

erage Section on the operation of GIS i.e. entering data into GIS was provided in 2015 through the technical assistance project of JICA, and more opportunities are needed for the basic and advanced training on the operation and administration of GIS.

7.2.2 ICT System Development Plan related to Sewerage Service

The existing Financial System, Work-Flow System and Revenue (Billing) System shall be renovated/expanded, in line with the reactivation of GIS including the introduction of necessary hardware and software, the training for the staff and the development of supporting software for sewer management. The database shall be linked to each other, which enables the Sewerage Section to cooperate efficiently with relevant departments/sections. Moreover, a system and a module of GIS for managing the WWTP assets and sewer inventory will be developed for recording the as-built data of equipment, daily operation and maintenance history, which can be utilized to update the preventive maintenance program of which first version shall be developed in 2016.

Chapter 8 Appendix

8.1 Major Assumptions for Revenue and Expenditure Plan

8.1.1 Connections

(1) Household Connections

The annual increase of household connections is summarized in **Table 8.1**, for which the detail is decribed in **6.1**. Among the connections of which construction starts in a given year, 50% of them are assumed to be completed and discharged to sewer, for the purpose of properly calculating the annual average of influent wastewater to the WWTP (refer to **Table 8.2**).

Table 8.1 Household Connections

Total Water	Number of Connections to Sewer							
Connections in 2012	2014	2015	2016	2017	2018	2019	2020	Sum 2014-2020
5,195	89	408	296	1,280	220	220	220	2,733

Table 8.2 Number of Discharged Connections

						Discharge Rate:	1st year	50%
							2nd year	50%
	Number of Discharged Connections to Sewer							
	2014	2015	2016	2017	2018	2019	2020	Sum 2014-2020
2014	45	44						89
2015		204	204					408
2016			148	148				296
2017				640	640			1280
2018					110	110		220
2019						110	110	220
2020						110	110	
Sum	45	248	352	788	750	220	220	2,623

(2) Jericho Agro-Industrial Park (JAIP)

Since the starting operation of tenants in JAIP has been much behind the schedule, the wastewater volume from JAIP was estimated by linear interpolation of 0 m³/d as of the beginning of 2016 and 602 m³/d as of the end of 2020; the former 0 m³/d is based on the fact that the agreement on sewerage issue among the Municipality, PIEFZA and JAIPCo was under negotiation then; the latter 602 m³/d is from the list by PADECO, the JICA advisory consultant for PIEFZA, updated in November 2015 (refer to **Table 8.3**). The pumping station and pressure mains to deliver wastewater from JAIP to the manhole of Jericho trunk sewer start operation in July 2016. The annual wastewater was estimated taking the average of the beginning and end of each year.

(3) Agbat Jaber Camp

UNRWA is planning to construct the sewer network in Aqbat Jaber Camp from 2016 using the fund from the Government of Japan. The volume of discharged wastewater was estimated assuming that (a) the Package 1, which was defined in the feasibility study and detailed design prepared by CEP and is to serve 40 % of the

camp's population, shall start in 2016 and end in 2017; (b) only the Package 1 shall be completed in 2020; (c) the wastewater discharged after the completion of this Package 1 is estimated to be 515m³/d in 2020 (1,320 m³/d as the total wastewater from the camp in 2020 multiplied by 3,451/8,850 i.e the population ratio in the Package 1 area); (d) the annual increase of wastewater from 2017 to 2019 is calculated by linear interpolation and taking the average of the beginning and end of each year.

(4) Jericho Gate

Jericho Gate is a residential and tourism project by a private developer on the southern periphery of the Municipality. The development area is around 30,000 m² and the maximum volume of wastewater is expected to be 1,000 m³/d. Though the construction of its basic infrastructure has been launched, a new sewer trunk to connect to the existing manhole of Jericho trunk sewer #19 should also be constructed, and the expected period of wastewater discharge is still to be known. Thus the wastewater from this area is not counted-in for the period until 2020.

Table 8.3 Expected Wastewater Discharge from JAIP at the End of 2020 $\,$

No.	Company Name	Estimation in 2014	Estimation Updated in Nov.2015	Notes
1 Pinar G	eneral Trading Co.	40 m3/d	m3/d	Cancelled
2 Reehan	a for food and investment Co.	35 m3/d	0 m3/d	
3 Weggo	Company	34 m3/d	m3/d	Cancelled
4 Johar C	ompany For Agriculture	20 m3/d	24 m3/d	
5 Johar Ir	nvestment &Trading Company	40 m3/d	m3/d	Cancelled
	ot Company For Textile	21 m3/d	m3/d	Cancelled
	Frading Company	19 m3/d	m3/d	Cancelled
***************************************	nd Ala'a Company	17 m3/d	m3/d	Cancelled
	Company	22 m3/d	m3/d	Cancelled
	nadeh Company for Export	25 m3/d	80 m3/d	
	ernational Group	21 m3/d	m3/d	Cancelled
	For AgriclutureI Investment Co.	25 m3/d	m3/d	Cancelled Cancelled
	san Company For Dates	33 m3/d 30 m3/d	m3/d m3/d	Cancelled
	tional Overseas Company	22 m3/d	m3/d m3/d	Cancelled
	n Food Company	33 m3/d	•	
	phia Company tional Carton Industry	33 m3/d 10 m3/d	m3/d m3/d	Estimation unavailable Cancelled
	tional Carton Industry ne Plastic Industries	9 m3/d	m3/d m3/d	Cancelled
19 OOO K		30 m3/d	m3/d	Cancelled
	ad Company for Investment	23 m3/d	m3/d	Cancelled
	Tradind and Investment Company	25 H3/d 15 m3/d	m3/d	Cancelled
	oment & Reconstruction (DARB)	13 m3/d	m3/d	Cancelled
	oment & Reconstruction (DARB)	15 m3/d	m3/d	Cancelled
	leh Company for Agriculture Equipments	4 m3/d	m3/d	Cancelled
25 Yaghm		32 m3/d	m3/d	Cancelled
	Frading Company	21 m3/d	m3/d	Cancelled
27 Palolea		28 m3/d	6 m3/d	Started operation in Dec 2015
28 Siba Co		m3/d	40 m3/d	Started operation in Dec 2013
	l Company for Animals & Agro Products	m3/d	m3/d	Cancelled
30 S. Rohi		m3/d	m3/d	Cancelled
	r Trading Company	m3/d	m3/d	Cancelled
	re Company for Packaging and Advising	m3/d	m3/d	Cancelled
33 Magic S		m3/d	m3/d	Estimation unavailable
	Logistics Service Company	m3/d	1 m3/d	
	m Dates Co.	m3/d	8 m3/d	
36 Al Bara	ika Factory	m3/d	m3/d	Cancelled
37 Trico C	O.	m3/d	m3/d	Cancelled
38 Paper F	Pal	m3/d	2 m3/d	
39 F.M.H	for Industry and Trade Company	m3/d	8 m3/d	Assumed starting operation in 2016
40 New Ea	ast Supplies Co.	m3/d	m3/d	Out of the list provided by PADECo
41 Amazoi	n Co.	m3/d	29 m3/d	
42 Holylan	d Herb	m3/d	8 m3/d	
43 Jerusale	em Pal	- m3/d	16 m3/d	Assumed starting operation in 2016
44 Choice,	"Daarb"	- m3/d	40 m3/d	
45 Jaffa N	ew Solar Power Limited	- m3/d	4 m3/d	Assumed starting operation in 2016
46 Al-Mas	ara Co.	- m3/d	18 m3/d	
47 Dead S	ea Secret	- m3/d	80 m3/d	Assumed starting operation in 2016
48 Afaq Pa	alm Dates	- m3/d	6 m3/d	
49 Quality	Foods Co.	- m3/d	48 m3/d	Assumed starting operation in 2016
50 Nesco		- m3/d	40 m3/d	Assumed starting operation in 2016
51 Ecopal		- m3/d	2 m3/d	
52 Moora	Co.	- m3/d	1 m3/d	
53 Al-Bay		- m3/d	4 m3/d	
54 Artistic		- m3/d	4 m3/d	
55 Orchida	Foods Supplies Company	- m3/d	2 m3/d	
56 Al Mah	room Co.	- m3/d	3 m3/d	
57 Viesto		- m3/d	120 m3/d	
58 Bow Ed	quipment Co.	- m3/d	8 m3/d	
	Sum	638 m3/d	602 m3/d	

8.1.2 Unit Wastewater Consumption

The estimation of unit wastewater consumption was based on the "unit supplied water per connection", which was calculated using the past water supply data from 2012 to 2015. The estimation was made by using the annual average increase/decrease ratio which was calculated as -0.6% (refer to **Table 8.4** and **Table 8.5**). The unit wastewater consumption is calculated from the unit water consumption multiplied by 55%, of which rate was measured by the Municipality as the share of the usage other than domestic purposes i.e. gardening, wet cooling system and swimming pool. Large users were not separately calculated, since their share among the total of supplied water is as small as around 5%.

Table 8.4 Unit Water Supply per Connection (unit: m³/day/connection)

Neighborhood	2012	2013	2014	2015
Religious Places	1,095.87	1,483.84	1,427.42	1,233.31
Al. Bayader	903.87	772.41	728.93	769.92
Gardens	2,821.36	2,911.93	2,101.21	2,142.36
City Center	489.94	494.05	458.80	434.86
Sheikh Sabbah	920.24	918.37	893.71	848.38
Sheikh Sbeih	1,053.24	1,045.48	1,070.73	1,098.96
Dahiya	1,745.21	1,604.44	1,400.69	1,218.03
Om Al. Twabeen	935.53	864.26	765.44	848.47
Security Depts.	8,456.28	8,421.47	9,486.99	7,440.17
Government Depts.	2,418.51	2,176.85	2,515.48	2,102.06
Al. Rasheed St.	520.22	511.71	532.01	529.98
Al .Quds. St.	987.65	1,090.70	1,058.62	1,065.96
Al. Ma'moun St.	1,191.22	1,201.93	1,109.78	1,039.43
Al. Maghtas St.	1,197.46	1,280.80	1,238.56	1,082.72
Amman St.	1,052.64	1,094.49	1,009.69	1,078.90
Falasteen St.	961.30	1,014.23	934.18	951.28
Yafa St.	997.50	1,128.64	1,296.21	1,238.24
Sabiha	847.34	873.06	908.82	969.06
Ein Assultan	989.94	1,131.02	1,404.56	1,049.33
Hisham Palace	926.80	1,001.21	967.63	901.87
Kitf Al. Wad	879.10	885.77	884.46	919.80
Institutions and Associations	3,366.12	2,079.23	2,224.04	1,336.07
Ein Asslutan Camp	78,480.87	22,459.02	12,330.60	9,393.44
Municipal Facilities	6,142.21	6,663.54	8,793.26	7,833.85
Mosque	498.52	480.46	482.07	407.97
Aqbat Jaber Camp	-	-	-	-
Al Dyouk	-	-	-	361.47
Average	1,074.35	1,096.24	1,113.47	1,053.01

Table 8.5 Prospect of Unit Supplied Water per Connection

		2012	2013	2014	2015	2016	2017	2018	2019	2020
Unit Water Supply Volume (l/connection/day)		1074.35	1096.24	1113.47	1053.01	1046.62	1040.27	1033.95	1027.68	1021.44
Increment	Yearly	-	2.0%	1.6%	-5.4%	-0.6%	-0.6%	-0.6%	-0.6%	-0.6%
	Average	-		-0.6%						

8.1.3 Tanker Sludge

The sludge from septic tanks is collected and transported to the WWTP by tanker trucks, of which monthly average volume is shown in **Table 8.6**. The volume has increased significantly from December 2015, when the pavement of entrance road of the WWTP was finished to facilitate the approach of tanker trucks and the disposal of tanker sludge to wadi was prohibited by the Municipality. The estimated volume from 2017 to 2020 was put as the same value as that of 2016 i.e. 144 m³/d.

Table 8.6 Tanker Sludge Collected and Transported to the WWTP (unit: m³/day average)

Month	Days	2014	2015	2016
Jan	31	-	57.1	122.0
Feb	28 or 29	-	61.7	170.8
Mar	31	-	29.5	153.2
Apr	30	-	10.6	146.0
May	31	-	21.7	125.3
Jun	30	-	34.0	-
Jul	31	-	21.5	-
Aug	31	31.3	10.9	-
Sep	30	30.8	22.1	_
Oct	31	85.4	24.1	_
Nov	30	78.9	59.9	_
Dec	31	60.2	135.2	_
Average	-	57.0	44.0	177.0

8.1.4 Wastewater Volume

The wastewater except from bulk users and sludge tankers is calculated by multiplying "discharged connections" by the average "unit wastewater volume" of all neighborhoods. The influent to WWTP is calculated by multiplying the sum of discharged wastewater by 1.1, of which 0.1 is the expected rainwater inflow due to misconnection of private sewer (refer to **Table 8.7**).

Table 8.7 Influent Wastewater to WWTP

						Discharge	e rate of sup	plied water	to sewer: r=	55%	
Category	Item					Discharged	Wastewate	r			Remarks
			2014	2015	2016	2017	2018	2019	2020	Sum 2014-2020	
	Discharged Connections	a	45	293	645	1,433	2,183	2,403	2,623	-	
Wastewater Inflow from	Unit Water Supply Volume (l/connection/day)	b	1,113	1,053	1,047	1,040	1,034	1,028	1,021	-	
New Connections	Unit Wastewater Volume (l/connection/day)	c=b*r	612	579	576	572	569	565	562	-	
	Discharged Wastewater from New Connections (m³/d)	d=a*c	28	170	372	820	1,242	1,358	1,474	5,464	
Wastewater	Jericho Agro-Industrial Park (m³/d)	e	0	0	60	180	300	420	541	1,501	Starts discharging from 2016; 602 m3/d as of end 2020; linear interpolation meanwhile
Inflow from Bulk Users	Others (m ³ /d)	f	0	0	0	65	194	322	451	1,032	Aqbat Jaber Camp (Package1)
	Sum (m ³ /d)	g=e+f	0	0	60	245	494	742	992	2,533	
Tanker Sludge	e (m³/d)	h	57	41	143	143	143	143	143	813	Actual daily average from Aug 2014 to May 2016: same as 2016 after 2017
	Discharged Connections	i=a	45	293	645	1,433	2,183	2,403	2,623	9,625	
	Number of Bills for Discharged Connections	j	135	1,758	3,870	8,598	13,098	14,418	15,738	57,615	i*3 for 2014; i*6 from 2015 (billed in every 2 months)
	Discharged Wastewater (except bulk users, m ³ /d)	k=a*c	28	170	372	820	1,242	1,358	1,474	5,464	
	Discharged Wastewater (bulk users, m³/d)	L=g	0	0	60	245	494	742	992	2,533	JAIP and Aqbat Jaber Camp
	Discharged Wastewater (Tanker Sludge, m³/d)	m=h	57	41	143	143	143	143	143	813	
	Discharged Wastewater (sum, m³/d)	n=k+L+m	85	211	575	1,208	1,879	2,243	2,609	8,810	
Sum	Discharged Wastewater (m3/year)	0	12,927	77,015	210,450	440,920	685,835	818,695	954,894	3,200,736	o=n*365*5months /12months for 2014; o=n*365 for 2015 and 2017- 2019; o=n*366 for 2016 and 2020
	Influent Wastewater to WWTP (m3/d)	p=n*1.1	94	232	633	1,329	2,067	2,467	2,870	9,692	1.1: Rainwater inflow 10% due to misconnection of private sewer
	Influent Wastewater to WWTP (m3/year)	q	14,296	84,680	231,678	485,085	754,455	900,455	1,050,420	3,521,069	q=p*365*5months /12months for 2014; q=p*365 for 2015 and 2017- 2019; q=p*366 for 2016 and 2020
	Reused and Charged Rate of Treated Wastewater	s	0%	0%	50%	75%	75%	75%	75%	-	
	Reused Wastewater Volume (m3/year)	t	0	0	115,839	363,814	565,841	675,341	787,815	2,508,650	

8.1.5 Cost Calculation

- (1) Operation and Maintenance Cost
- 1) Personnel Cost (refer to **Table 8.8**)
 - ➤ 5 working months for 2014, and 12 working months after 2015.
 - ➤ Unit personnel cost (NIS/cap/month) as per 2015 is: 6,900 for director; 5,000 for manager; 3,800 for engineer; 4,400 for technician; and 2,200 for worker, based on the actual payment in the Municipality.
 - ➤ The salaries above are assumed to be increased annually by 5 % for 2016 and 2 % for the others.
- 2) Electricity Cost (refer to **Table 8.9**)
 - > The electricity cost is comprised of "fixed charge" and "metered charge".
 - ➤ "Fixed charge" is calculated based on the paid amount in 2015 (2,253 NIS) and the annual increase ratio of total power consumption during summer season; annually 0 % increase (refer to **Table 8.11**).
 - ➤ "Metered charge" is calculated as "operation days" multiplied by "daily bill"; "daily bill" is calculated by "total load" and the weighted average of time-zone rate (A, B and C) with its seasonal setting of JDECO tariff; annually 0 % increase is expected (refer to **Tables 8.10**, **8.12** and **8.13**).
 - ➤ "Total load" is calculated considering the operating equipment and operation hours (refer to **Table 8.11**).
 - ➤ Surplus energy to be sold to JDECo is calculated by assuming the electricity generated and consumed; the sales are calculated by the weighted average of time-zone (A, B and C) and its seasonal setting of sales price agreed between the Municipality and JDECO with annual 0 % increase (refer to **Table 8.13**).
 - > The effect of the Mega Solar Project is not counted-in, because the share of the generated electricity that can be used in the WWTP and the date of starting operation are not clear so far.
- 3) Repair Cost (refer to **Tables 8.14 and 8.15**)
 - ➤ The repair cost is comprised of "spare parts replacement", "shipping" and "supervisor" cost.
 - Estimation was initially made by the contractor (Hitachi), but was adjusted in terms of the unit cost, the shipping cost from manufactured place and its frequency and the cost of supervisor to be dispatched from the manufacturing country.
 - ➤ The adjusted estimation above for the year 2017 was allocated to the years from 2016 to 2020 according to the share of 5%, 50%, 5%, 10% and 30% respectively, considering the preventive maintenance activity and its effect e.g. changing oil.
 - ➤ The estimation for 2019 and 2020 was neglected, considering the same reason above (preventive maintenance).
- 4) Chemicals Cost (refer to **Table 8.16**)
 - > The cost of Hypo-chlorine solutions is calculated, to be dosed to effluent before discharging to Wadi.
 - \triangleright Unit dose rate is 0.18 m³/d per treated wastewater 6,600 m³/d =0.0000273 m³/m³.
 - ➤ Unit cost of chemicals is 1.3 NIS/kg (as of 2013 in the Municipality); annually 5% increase.

(2) Capital Cost

Depreciation and other capital costs are not considered during this calculation cycle from 2014 -2020.

Table 8.8 Personnel Cost (Unit: NIS)

Positi	ion	Type			Actual A	Assigned	Numbe	r			N	Monthly	Salary (Full-time	:)		1	Annual Cos	t					
			2014 a1	2015 a2	2016 a3	2017 a4	2018 a5	2019 a6	2020 a7	2014 b1	2015 b2	2016 b3	2017 b4	2018 b5	2019 b6	2020 b7	2014 c1=a1* b1*5	2015 c2=a2* b2*12	2016 c3=a3* b3*12	2017 c4=a4* b4*12	2018 c5=a5* b5*12	2019 c6=a6* b6*12	2020 c7=a7* b7*12	Sum
Water Supply & Sewerage Dep.	Director	Conc.	0.5	0.5	0.5	0.5	0.5	0.5	0.5	6,765	6,900	7,245	7,390	7,538	7,689	7,843	16,913	41,400	43,470	44,340	45,228	46,134	47,058	284,543
	M	Full	1							4,902	5,000	5,250	5,355	5,462	5,571	5,682	24,510							24,510
Sewerage Sec.	Manager	Dupl.		0.33	-	-	0.5	0.5	0.5	4,902	5,000	- /	5,355	5,462	5,571	5,682		19,980	20,998	21,418	32,772	33,426	34,092	162,686
	Manager	Dupl.		0.33	0.33	0.33				4,902	5,000	·····	5,355	5,462	5,571	5,682		19,980	20,998	21,418				62,396
	Engineer 1	Full	0.33				1	1	1	4,902 3,725	5,000 3,800	- /	5,355 4,070	5,462 4,151	5,571 4,234	5,682 4,319	6,208				65,544	66,852	68,184	200,580 6,208
	Engineer 1 Engineer 2	Conc.	0.33	<u> </u>						3,725	3,800		4,070	4,151	4,234	4,319	6,208							6,208
	Engineer 3	Full	0.33	1	1	1	1	1	1	3,725	ļ	·····	4,070	4,151	4,234	4,319	0,206	45,600	47,880	48.840	49.812	50,808	51.828	294,768
Sewer Network &		Conc.		0.5				1		2,157	2,200	- /	/	2,403	, -	2,500		13,200	47,000	40,040	47,012	50,000	31,020	13,200
House Connection	Worker 1	Full			1	1	1	1	1	2,157	2,200					2,500			27,720	28,272	28,836	29,412	30,000	144,240
Div.	Worker 2	Conc.		0.5						2,157	2,200	2,310	2,356	2,403	2,451	2,500		13,200						13,200
	WOIKEI 2	Full			1	1	1	1	1	2,157	2,200	2,310	2,356	2,403	2,451	2,500			27,720	28,272	28,836	29,412	30,000	144,240
	Worker 3	Conc.								2,157	2,200		·	2,403		2,500								
	***************************************	Full				1	1	1	1	2,157	2,200	-	ana	2,403		2,500				28,272	28,836	29,412	30,000	116,520
	Worker 4	Conc.				1	1	1	1	2,157	2,200	·		2,403	2,451	2,500				20.272	28.836	20.412	20,000	116 520
		Full Full	1			1	1	1	1	2,157 4,902	5,000		2,356 5,355	2,403 5,462	2,451 5,571	2,500 5,682	24,510			28,272	28,830	29,412	30,000	116,520 24,510
WWTP Sec.	Manager	Dupl.	1	0.33	0.33	0.33	0.5	0.5	0.5	4,902	5,000					5,682	24,310	19,980	20,998	21,418	32,772	33,426	34,092	162,686
WWTP Operation	Engineer	Full	1	0.55	0.33	0.33	1	_		3,725	_	_	4,070	4,151	4,234	4,319	18,625	45,600	47,880	48,840	49,812	50,808	51,828	313,393
	Worker 1	Full	1	1	1	1	1	-		2,157	2,200			2,403		2,500	10,785	26,400	27,720	28,272	28,836	29,412	30,000	181,425
WWTP Worker/	Worker 2	Full	1	1	1	1	1	1	1	2,157	2,200			2,403	2,451	2,500	10,785	26,400	27,720	28,272	28,836	29,412	30,000	181,425
Guard (Shift)	Worker 3	Full	1	1	1	1	1	1	1	2,157	2,200	2,310	2,356	2,403	2,451	2,500	10,785	26,400	27,720	28,272	28,836	29,412	30,000	181,425
Guard (Sillit)	Worker 4	Full		1	1	1	1	1		2,157	2,200		2,356	2,403		2,500		26,400	27,720	28,272	28,836	29,412	30,000	170,640
	Worker 5	Full			1		1	1	1	2,157	2,200	<i>/</i>	_	2,403		2,500			27,720	28,272	28,836	29,412	30,000	144,240
WWTP	Technician	Conc.	0.5	0.5	0.5					4,314	4,400	ļ	4,712		4,902	5,000	10,785	26,400	27,720	56544	57.670	50.004	60,000	64,905
Maintenance (M) WWTP		Full	0.5	0.5		1	1	1	1	4,314 4,314	4,400 4,400		4,712 4,712	4,806 4,806	4,902 4,902	5,000 5,000	10,785	26,400		56,544	57,672	58,824	60,000	233,040 37,185
Maintenance (E)	Technician	Conc. Full	0.3	0.3	1	1	1	1	1	4,314	4,400	 	4,712		4,902	5,000	10,783	20,400	55,440	56,544	57,672	58,824	60,000	288,480
WWTP	Technician	Conc.	0.5	0.5	0.5	0.5	0.5		0.5	5,196	-	_		5,790		1 ' - 	12,990	31,800	33,390	34,056	34,740	35,436	36,144	218,556
Laboratory	Technician	Full			1	1	1	4	1	4,314	konorrano in comerciano	((marriero incomercia)	(<i></i>	germen viranen var			55,440	56,544	57,672		60,000	288,480
	Director	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5															
	Manager	-	2.0	1.0	1.0	1.0	2.0	2.0	2.0	6,765	6,900	7,245	7,390	7,538	7,689	7,843	67,650	82,717	86,931	88,671	180,912	184,536	188,232	879,649
	Engineer	-	1.67	2.0	2.0	2.0	2.0	2.0	2.0	3,725	3,800	3,990	4,070	4,151	4,234	4,319	31,040	91,200	95,760	97,680	99,624	101,616	103,656	620,576
	Technician	-	1.5	1.5	3.0	3.5	3.5	-	3.5	4,314	4,400	4,620	4,712	4,806	4,902	5,000	32,355	79,200	166,320	197,904	201,852	205,884	210,000	1,093,515
Total	Worker	-	3.0	5.0	7.0	9.0	9.0	9.0	9.0	2,157	2,200	2,310	2,356	2,403	2,451	2,500	32,355	132,000	194,040	254,448	259,524	264,708	270,000	1,407,075
	Sum	-	8.67	10.0	13.5	16.0	17.0	17.0	17.0	-	-	-	-	-	-	-	163,889	409,140	568,254	664,410	743,220	758,070	773,226	4,080,209
	Full-Time+ Duplication	-	6.0	7.0	12.0	15.0	16.0	16.0	16.0	-	-	-	-	-	-	-	100,000	269,940	491,394	586,014	663,252	676,500	690,024	3,577,110
	Concurrent	-	2.67	3.0	1.5	1.0	1.0	1.0	1.0	-	-	-	-	-	-	-	63,889	139,200	76,860	78,396	79,968	81,570	83,202	503,099

8.67 10.0 13.5 16.0 17.0 17.0 17.0 0.02 0.02 0.05 0.02 0.02 0.02 0.02

Table 8.9 Electricity Cost (Unit: NIS)

I	tems		2014	2015	2016	2017	2018	2019	2020	Sum	Remarks
Annual Fixed Charge	NIS	A		2,253	2,636	3,222	4,461	4,821	5,204	72,124	
Annual Metered Charge	NIS	В	49,527	42,911	67,970	106,014	191,668	218,262	243,921	870,746 cons	nal cost for 2014; Calculated cost idering the sales of surplus solar a 2015
Electricity Cost	NIS	C=A+B	49,527	45,164	70,606	109,236	196,129	223,083	249,125	942,870	

Table 8.10 Summary of Electrical Metered Charge Calculation

Metered Charge (Unit: NIS)

\mathcal{E} \	/						
	2015	2016	2017	2018	2019	2020	Sum
Winter	17,477	24,908	35,633	60,167	67,608	75,457	281,249
Spring&Autumn	24,167	37,084	56,954	100,878	114,826	127,711	461,619
Summer	1,267	5,979	13,427	30,623	35,828	40,753	127,876
Year Total	42,911	67,970	106,014	191,668	218,262	243,921	870,746

Tariff (Unit: NIS)

Tariii (Uliii: N	M2)			
Time zone	Winter	Spring& Autumn	Summer	Notes
A	0.4010	0.3602	0.3767	Winter: DecFeb.
В	0.6263	0.4400	0.5408	Spring&Autumn: MarJun. and SepNov.
С	1.0283	0.5303	1.1894	Summer: JulAug.

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	WASTEWATER TREATMENT PLANT Operation Schedule Consideration			m3/day Ratio			232			633 2.73			1,329 5.73			2,067 8.91			2,467 10.64			2,870 12.38
						2015			2016		(Return	2017 Sludge & Cla		(Blo	2018 wer & Reacto			2019			2020	
Facility	Equipment	Rated Capacity (kW)	Cons- tant (-)	Actual Power (kW)	Operation Time (hour)	Rated Capacity (kW)	Consump- tion (kWh)	Operation Time (hour)	Rated Capacity (kW)	Consump- tion (kWh)												
Tanker Receiving	Mixer for Vacuum Wastewater Pump for Vacuum-1/2	1.5 3.7	0.8	1.2 3.0	0.38	1.5	0.5	2.40 0.70	1.5 3.7	2.9 2.1	2.40 0.70	1.5 3.7	2.9									
Tank	Wastewater Pump for Vacuum -2/2	3.7	0.8	3.0	0.00	3.7	1.1	0.40	3.7	1.2	0.70		1.2	0.70	3.7	1.2	0.70	3.7	1.2	0.70	3.7	1.2
Grid	Fine Screen -1/2	2.2 2.2	0.8		0.00		0.0	2.05	2.2	3.7 3.7	4.30	2.2	7.7 7.7	6.68	2.2	12.0	7.98 7.98	2.2	14.4	9.29	2.2	16.7
Chamber	Fine Screen -2/2		0.8	1.8	1.50	2.2	2.7	2.05	2.2 2.2 1.1	3.7	4.30	2.2 2.2 1.1	7.7	6.68	2.2 2.2 1.1	12.0	7.98	2.2 2.2 1.1	14.4	9.29	2.2	16.7
	Grid Collector -1/2 Grid Collector -2/2	1.1	0.8		0.00 23.93		0.0 21.5	24.00 24.00	1.1	21.6 21.6	24.00 24.00	1.1	21.6	24.00 24.00	1.1	21.6	24.00 24.00	1.1	21.6	24.00 24.00	1.1	21.6 21.6
	Grid Removal Pump -1/2		0.8		0.00	1.1	0.0	1.37	1.1 2.2		24.00	2.2	21.6	4.46	2.2	21.6 8.0	5.32	2.2	21.6 9.6	6.19	1.1 2.2	11.1
	Grid Removal Pump -2/2	2.2	0.8		0.50	2.2	0.9	1.37	2.2	2.5 2.5	2.87	2.2	5.2 5.2	4.46	2.2	8.0		2.2 2.2	9.6	6.19	2.2	11.1
	Floor Drain Pump -1/2	1.5	0.8	1.2	0.00		0.0	0.00		0.0	0.00		0.0	0.00		0.0	0.00		0.0	0.00		0.0
	Floor Drain Pump -2/2	1.5	0.8	1.2	0.00		0.0	0.00		0.0	0.00		0.0	0.00		0.0			0.0	0.00		0.0
	Grid Separator	0.75 0.75	0.8		0.50 1.02	0.8	0.3 0.6	3.00 1.02	0.8	1.8 0.6	6.30 1.02	0.8	3.8 0.6	9.80 1.02	0.8 0.8	5.9 0.6	11.70 1.02	0.8	7.0 0.6	13.62 1.02	0.8	8.2 0.6
	Oil Discharge Pump -1/2 Oil Discharge Pump -2/2	0.75	0.8		0.75	0.8	0.5	0.75	0.8	0.5	0.75	0.8	0.6	0.75	0.8	0.5	0.75	0.8	0.5	0.75	0.8	0.5
	Scum Screen	0.73	0.8		1.83	0.4	0.6			0.6	1.94		0.6	1.94	0.4	0.6	1.94	0.4	0.6	1.94	0.4	0.6
	Screening Conveyor	2.2	0.8	1.8	1.68	2.2	3.0	1.94 4.50	0.4 2.2	8.1	6.88	2.2	12.4	10.69	2.2	19.2	12.77	2.2	23.0	14.86	2.2	26.7
Reactor	Reactor Tank Mixer -1/8	3.7	0.8		24.00	3.7	72.0	24.00		72.0	24.00	3.7 3.7 3.7 3.7	72.0	24.00	3.7 3.7	72.0	24.00	3.7 3.7	72.0	24.00	3.7	72.0 72.0
	Reactor Tank Mixer -2/8 Reactor Tank Mixer -3/8	3.7	0.8		24.00 0.33	3.7	72.0	24.00	3.7	72.0	24.00	3.7	72.0	24.00 2.97	3.7	72.0 8.9		3.7	72.0 10.6	24.00	3.7	72.0 12.4
	Reactor Tank Mixer -3/8 Reactor Tank Mixer -4/8	3.7 3.7	0.8		0.33	3.7 3.7	1.0 1.0	0.91	3.7	2.7 2.7	1.91 1.91	3.7	5.7 5.7	2.97	3.7	8.9		3.7 3.7	10.6	4.13 4.13	3.7 3.7	12.4
	Reactor Tank Mixer -5/8	3.7	0.8		0.33	3.7	1.0	0.32		1.0	0.32	3.7	1.0	24.00	3.7	72.0		3.7	72.0	24.00	3.7	72.0
	Reactor Tank Mixer -6/8	3.7	0.8		0.32	3.7	1.0	0.32		1.0	0.32	3.7	1.0	24.00	3.7	72.0	24.00	3.7	72.0	24.00	3.7	72.0
	Reactor Tank Mixer -7/8	3.7	0.8		0.33	3.7	1.0	0.33	3.7	1.0	0.33	3.7	1.0	2.97	3.7	8.9	3.55	3.7	10.6	4.13	3.7	12.4
	Reactor Tank Mixer -8/8 Aeration Blower -1/4	3.7	0.8		0.33	3.7	1.0	0.33	3.7	1.0	0.33	3.7	1.0	2.97	3.7	8.9	3.55	3.7	10.6	4.13	3.7	12.4
	Aeration Blower -1/4 Aeration Blower -2/4	55.0 55.0	0.8		0.35 0.37	55.0 55.0	15.4 16.1	0.96 1.00	55.0 55.0	42.0 44.0	2.01 2.10	55.0 55.0	88.2 92.4	3.12 3.27	55.0 55.0	137.2 143.7	3.72 3.90	55.0 55.0	163.9 171.7	4.33 4.54	55.0 55.0	190.7 199.7
	Aeration Blower -3/4	55.0	0.6		0.00	33.0	0.0	0.00		0.0	0.00	33.0	0.0	0.78	55.0	25.7	0.93	55.0	30.7	1.08	55.0	35.7
	Aeration Blower -4/4	55.0	0.6		0.27	55.0	8.8	0.27	55.0	8.8	0.27	55.0	8.8	0.82	55.0	27.0	0.98	55.0	32.2	1.13	55.0	37.4
Clarifier	Clarifier -1/2	0.75	0.8		24.00	0.8	14.4	24.00		14.4	24.00		14.4	24.00	0.8	14.4	24.00	0.8	14.4	24.00	0.8	14.4
	Clarifier -2/2	0.75	0.8		0.52	0.8	0.3	0.52	0.8	0.3	24.00	0.8	14.4	24.00	0.8	14.4	24.00	0.8	14.4	24.00	0.8	14.4
	Return Sludge Pump -1/4 Return Sludge Pump -2/4	15.0 15.0	0.5 0.5		3.00 0.00	15.0	22.5 0.0	0.00	15.0	29.3 0.0	0.00	15.0	30.8 0.0	6.38 0.00	15.0	47.8 0.0	7.61 0.00	15.0	57.1 0.0	8.86 0.00	15.0	66.4 0.0
	Return Sludge Pump -3/4	15.0	0.5		0.00	·	0.0	0.00		0.0	4.10	15.0	30.8	6.38	15.0	47.8	7.61	15.0	57.1	8.86	15.0	66.4
	Return Sludge Pump -4/4	15.0	0.5	7.5 7.5	0.00		0.0	0.00		0.0	0.00		0.0	0.00		0.0	0.00	330.0	0.0	0.00		0.0
	Waste Sludge Pump -1/3	5.5	0.8		0.00		0.0	0.44	5.5	2.0	0.67	5.5	2.9	0.89	5.5	3.9		5.5	4.9	1.33	5.5	5.9
	Waste Sludge Pump -2/3	5.5	0.8		0.00		0.0	0.00		0.0	0.00		0.0	0.00		0.0			0.0	0.00		0.0
	Waste Sludge Pump -3/3 Floor Drain Pump -1/2	5.5 1.5	0.8		0.02	5.5	0.1	0.02	5.5	0.1	0.02	5.5	0.1	0.02	5.5	0.1	0.02	5.5	0.1	0.02	5.5	0.1
	Floor Drain Pump -2/2	1.5	0.8		0.00		0.0	0.00	+	0.0	0.00		0.0	0.00		0.0			0.0	0.00		0.0
	Scum Pump -1/2	3.7	0.8	3.0	0.07	3.7	0.2	0.18	3.7	0.5	0.38	3.7	1.1	0.59	3.7	1.8	0.71	3.7	2.1	0.83	3.7	2.5
	Scum Pump -2/2	3.7	0.8	3.0	0.00		0.0	0.00		0.0	0.00		0.0	0.00		0.0			0.0	0.00		0.0
Disinfec-	Hypochlorite Pump -1/3	0.2	0.8		0.00		0.0	1.00	0.2	0.2	1.00	0.2	0.2	2.00	0.2	0.4		0.2	0.4	3.00	0.2	0.6
tion	Hypochlorite Pump -2/3 Hypochlorite Pump -3/3	0.2	0.8		0.00		0.0	0.00		0.0	0.00		0.0	0.00		0.0			0.0	0.00		0.0
	Utility Water Supply Unit	7.4	0.8		11.15	7.4	41.3	11.15	7.4	41.3	11.15	7.4	41.3	11.15	7.4	41.3	11.15	7.4	41.3	11.15	7.4	41.3
	Auto Strainer -1/2	0.1	0.8	0.1	0.00		0.0	0.00		0.0	0.00		0.0	0.00		0.0	0.00		0.0	0.00		0.0
	Auto Strainer -2/2	0.1	0.8		0.00		0.0	0.00		0.0	0.00		0.0	0.00		0.0			0.0	0.00		0.0
	Defoaming Pump -1/2	3.7	0.8	3.0	0.25 0.25	3.7	0.8	0.68 0.68	3.7	2.0	1.43 1.43	3.7 3.7	4.3 4.3	2.23 2.23	3.7	6.7	2.66	3.7	8.0	3.10	3.7	9.3 9.3
Thickener	Defoaming Pump -2/2 Thickener -1/2	0.4	0.8	0.3	0.25	5.7	0.8	0.68	0.4	0.1	0.67	0.4	0.2	0.89	0.4	6.7 0.3	2.66 1.11	0.4	8.0 0.3	3.10 1.33	0.4	0.4
- Increne	Thickener -2/2	0.4	0.8		0.00		0.0	0.00		0.0	0.00	0.4	0.2	0.00		0.0			0.0	0.00	······································	0.4
	Thickened Sludge Pump -1/3	5.5	0.8	4.4	0.00	1	0.0	0.44	5.5	2.0	0.67	5.5	2.9 0.0	0.89	5.5	3.9	1.11	5.5	4.9	1.33	5.5	5.9
	Thickened Sludge Pump -2/3	5.5	0.8	4.4	0.00		0.0	0.00	1	0.0	0.00	1	0.0	0.00	1	0.0			0.0	0.00		0.0
Cordo:	Thickened Sludge Pump -3/3	5.5	0.8		0.00 4.00	1.7	0.0	0.00		0.0	0.00		0.0	0.00 4.00		0.0		1.5	0.0	0.00	1.5	0.0
Garden	Circular Pump -1/2 Circular Pump -2/2	1.5	0.8		4.00	1.5 1.5	4.8	4.00		4.8 4.8	4.00		4.8 4.8	4.00	1.5	4.8 4.8		1.5	4.8 4.8	4.00 4.00	1.5 1.5	4.8
Others	Base Load by Building Service(Winter)	7.0	1.0	7.0	24	7.0	168.0	24		168.0	24		168.0	24		168.0		7.0	168.0	24	7.0	168.0
	Base Load by Building Service(Spr&Aut)	12.0	1.0	12.0	24	12.0	288.0	24	12.0	288.0	24	12.0	288.0	24	12.0	288.0	24	12.0	288.0	24	12.0	288.0
	Base Load by Building Service(Summer)	15.0	1.0	15.0	24	15.0	360.0	24	15.0	360.0	24	15.0	360.0	24	15.0	360.0		15.0	360.0	24	15.0	360.0
				Wh (Winter)			480.0	4		593.4	4		767.2 887.2	4		1140.5	4	J.	1248.6	4		1357.2
				h (Spr&Aut) Vh (Summer)			600.0 672.0	1		713.4 785.4	-		959.2	ł		1260.5 1332.5	1		1368.6 1440.6	ł		1477.2 1549.2
	Allowance(1						1.155	1		1.155	_		1.155	1		1.155	_	L	1.155	1	'	1.155
				Wh (Winter)			560	1		690	1		890	1		1320	ì		1450	1	ı	1570
				h (Spr&Aut)			700			830			1030	1		1460	1		1590	1		1710
				Vh (Summer)			780			910			1110			1540			1670			1790
																		-				

Table 8.12 Electrical Metered Charge Calculation (Annual Total)

		2015			2016		Г	2017		20	20 2018			2019				
Winter		2013			2010			2017		20	20 2010			201)				
winter	D	D-4-(MIC/4)	C(NTC)	D	D-4-(NIC/J)	C(ATIC)	D	D-4-(NIC/4)	C(NTC)	D	D-4- (NIIC/4)	C(ATIC)	D	D-4-(NTC/J)	C(ATIC)	D	D-4-(NIC/4)	C(ATIC)
	Days	Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)		Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)
Working Days	59	189.7	11,192.0	60	264.5	15,870.0	59		22,420.0	59	636.7	37,565.3	59		42,155.5	60		47,220.0
Friday&Feast Evening	14	115.4	1,616.0	14	168.7	2,361.8	14	252	3,528.0	14	437.9	6,130.6	14	494.3	6,920.2	14	547	7,658.0
Saturday&Feast Days	17	132.9	2,259.0	17	190.6	3,240.2	17	280.6	4,770.2	17	480.7	8,171.9	17	541.6	9,207.2	17	598.3	10,171.1
Sub Total	90	-	15,067.0	91	-	21,472.0	90	_	30,718.2	90	-	51,867.8	90	-	58,282.9	91	-	65,049.1
Include VAT (16%)	-	-	17,477.0	-	-	24,907.5	-	-	35,633.1	-	-	60,166.6	-	-	67,608.2	-	-	75,457.0
Spring&Autumn																		
	Days	Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)
Working Days	133	94.4	12,555.2	133	150.5	20,016.5	130	237	30,810.0	130	428	55,640.0	130	488.5	63,505.0	130	544.3	70,759.0
Friday&Feast Evening	34	96	3,264.0	34	144.4	4,909.6	34	219.1	7,449.4	34	384.6	13,076.4	34	437.3	14,868.2	34	486.1	16,527.4
Saturday&Feast Days	46	109	5,014.0	46	153.1	7,042.6	49	221.2	10,838.8	49	372.4	18,247.6	49	420.7	20,614.3	49	465.5	22,809.5
Sub Total	213	-	20,833.2	213	-	31,968.7	213	-	49,098.2	213	-	86,964.0	213	-	98,987.5	213	-	110,095.9
Include VAT (16%)	-	-	24,166.5	-	-	37,083.7	-	-	56,953.9	-	-	100,878.2	-	-	114,825.5	-	-	127,711.2
Summer																		
	Days	Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)	Days	Rate(NIS/d)	Sum(NIS)
Working Days	41	-35.4	-1,451.4	41	45.7	1,873.7	44	171.3	7,537.2	44	446	19,624.0	44	529	23,276.0	44	607.4	26,725.6
Friday&Feast Evening	9	111.6	1,004.4	9	156.2	1,405.8	9	224.3	2,018.7	9	376.4	3,387.6	9	422.8	3,805.2	9	467	4,203.0
Saturday&Feast Days	12	111.6	1,339.2	12	156.2	1,874.4	9	224.3	2,018.7	9	376.4	3,387.6	9	422.8	3,805.2	9	467	4,203.0
Sub Total	62	-	892.2	62	-	5,153.9	62	-	11,574.6	62	-	26,399.2	62	-	30,886.4	62	-	35,131.6
Include VAT (16%)	-	-	1,267.2	-	-	5,978.5	-	-	13,426.5	-	-	30,623.1	-	-	35,828.2	-	-	40,752.7
Days Total	365			366			365			365			365			366		
Total Charge (with VAT)			42,911			67,970			106,014			191,668			218,262			243,921

Table 8.13 (1/6) Electricity Metered Charge Calculation (For the Year 2015)

Winter,	January 2015																											
				Data	Data Output						AN		-			40		12	- 12				PN		40	20		22 24
Load	Consumption	kWh	A	Input 560	Output	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	23.3	12 23.3	13 23.3	14 23.3	15 23.3	16 23.3	23.3	18 23.3	19 23.3	20	21	22 23.3 23.3
Solar	Maximum Output	kW	В	45																								
	Output Rate for Solar	%	С			0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0 (
	Solar Generation	kWh	D=B*C	330.8		0.0	0.0	0.0	0.0	0.0	0.0	2.3	9.0	18.0	27.0	36.0	42.8	45.0	45.0	36.0	31.5	22.5	13.5	2.3	0.0	0.0	0.0	0.0 0.0
	Consumption	kWh	E=A-D (1			23.3	23.3	23.3	23.3	23.3		21.05	14.3	5.3	0	12.7	0	0	0	12.7	0	0.8		21.05	23.3	23.3	23.3	23.3 23.3
Surplus P	one for Working Days	kWh	F=D-A (!	NLI 0)		0 A	0 A	0 A	0 A	0 A	0 A	0 B	0 B	0 A	3.7 A	12.7 A	19.45 A	21.7 A	21.7 A	12.7 A	8.2 A	0 C	0 C	0 C	0 C	0 C	0 C	0 (
	consumption	NIS/kWh	~~~~~			0.401	0.401	0.401	0.401	0.401	0.401	0.626	0.626	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	1.028	1.028	1.028	1.028	1.028	~~~~	1.028 0.40
Tariff for		NIS/kWh				0.281	0.281	0.281	0.281	0.281	0.281	0.506	0.506	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.908	0.908	0.908	0.908	0.908	0.908	0.908 0.28
Cost for o	consumption	NIS	J=E*H	Sub Total	217.9	9.3	9.3	9.3	9.3	9.3	9.3	13.2	9	2.1	0	0	0	0	0	0	0	0.8	10.1	21.6	24	24	24	24 9.3
Cost for s	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	NIS	K=F*I	Sub Total	28.2	0	0	0	0	0	0	0	0	0	1	3.6	5.5	6.1	6.1	3.6	2.3	0	0	0	0	0	0	0 (
	Working Days	NIS/day	L=J-K	Total	189.7																							
	e for Friday&Feast Evening	NICANA	M			A 0.401	A 0.401	A 0.401	A 0.401	A 0.401	A 0.401	A 0.401	A 0.401	A 0.401	A 0.401	A 0.401	A 0.401	A 0.401	A 0.401	A 0.401	A 0.401	0.626	B 0.626	0.626	B 0.626	A 0.401	A 0.401	A A 0.401 0.40
Tariff for	consumption	NIS/kWh NIS/kWh				0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401		0.626	0.626	0.626	0.506	0.401		0.281 0.28
	consumption	NIS	P=E*N	Sub Total	143.6	9.3	9.3	9.3	9.3	9.3	9.3	8.4	5.7	2.1	0.201	0.201	0.201	0.201	0.201	0.201	0.201	0.5	6.1	13.2	14.6	9.3	9.3	9.3 9.3
Cost for s		NIS	Q=F*O	Sub Total	28.2	0	0	0	0	0	0	0.1	0	0	1	3.6	5.5	6.1	6.1	3.6	2.3	0.0	0.1	0	0	0	0	0 (
Bill for F	Friday&Feast Evening	NIS/day	R=P-Q	Total	115.4																							
Time Zone	e for Saturday&Feast Days		S			A	Α	Α	Α	Α	Α	Α	A	Α	A	Α	Α	Α	Α	Α	Α	Α	C	C	В	В	Α	A A
Tariff for	consumption	NIS/kWh	T			0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	1.028	1.028	0.626	0.626	0.401	0.401 0.40
Tariff for		NIS/kWh				0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281		0.281	0.908	0.908	0.506	0.506	0.281	0.281 0.28
	consumption	NIS	V=E*T	Sub Total Sub Total	161.1	9.3	9.3	9.3	9.3	9.3	9.3	8.4	5.7	2.1	0	0	0	0	0	0	0	0.3	10.1	21.6	14.6	14.6	9.3	9.3 9.3
Cost for s		NIS/dov	W=F*U X=V-W		28.2	0	0	0	0	0	0	0	0	0	1	3.6	5.5	6.1	6.1	3.6	2.3	0	0	0	0	0	0	0 (
om for f	Friday&Feast Evening	NIS/day	Λ= V - W	Total	132.9																							
Spring&	Autumn 2015																											
				Data	Data						AN	Л											PN	1				
				Input	Output	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22 23
Load	Consumption	kWh	A	700		29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2	29.2 29.2
Solar	Maximum Output	kW	В	65																								
	Output Rate for Solar Solar Generation	%	C D=B*C	477.0		0.0	0	0	0.0	0	0	5	20	40	60 39.0	52.0	95	100	100 65.0	80 52.0	70	50 32.5	30 19.5	5	0	0	0	0.0 0.0
IDECO	Consumption	kWh kWh	E=A-D (1	477.8		29.2	29.2	29.2	29.2	29.2	0.0 29.2	3.3 25.95	13.0	3.2	39.0	52.0	61.8	65.0	05.0	52.0	45.5	32.3		3.3 25.95	0.0 29.2	0.0 29.2	0.0 29.2	29.2 29.3
Surplus P		kWh	F=D-A (1			0	0	0	29.2	0	0	20.90	0	0	9.8	22.8	_	35.8	35.8	22.8	16.3	3.3	0	0	0	0	0	0 (
	ne for Working Days		G			A	A	A	A	A	A	C	C	C	C	С	С	С	С	C	C	С	C	C	C	В	В	A A
Tariff for	consumption	NIS/kWh	Н			0.36	0.36	0.36	0.36	0.36	0.36	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.44	0.44	0.36 0.36
Tariff for	surplus	NIS/kWh	I=H-0.12			0.24	0.24	0.24	0.24	0.24	0.24	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.32	0.32	0.24 0.24
	consumption	NIS	J=E*H	Sub Total	168.1	10.5	10.5	10.5	10.5	10.5	10.5	13.8	8.6	1.7	0	0	0	0	0	0	0	0	5.1	13.8	15.5	12.8	12.8	10.5 10.5
Cost for s		NIS	K=F*I	Sub Total	73.7	0	0	0	0	0	0	0	0	0	4	9.4	13.4	14.7	14.7	9.4	6.7	1.4	0	0	0	0	0	0 (
	Working Days	NIS/day	L=J-K	Total	94.4				-					-			-		-					-	-			
	e for Friday&Feast Evening consumption	NIS/kWh	M N			A 0.36	0.36	0.36	0.36	0.36	0.36	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.36	A 0.36	A A
Tariff for		NIS/kWh		2.		0.24	0.24	0.24	0.24	0.24	0.24	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.24	0.24	0.24 0.24
	consumption	NIS	P=E*N	Sub Total	153.4	10.5	10.5	10.5	10.5	10.5	10.5	11.4	7.1	1.4	0	0	0	0	0	0	0	0	4.3	11.4	12.8	10.5	10.5	10.5 10.5
Cost for s		NIS	Q=F*O	Sub Total	57.4	0	0	0	0	0	0	0	0	0	3.1	7.3	10.4	11.5	11.5	7.3	5.2	1.1	0	0	0	0	0	0 (
Bill for F	Friday&Feast Evening	NIS/day	R=P-Q	Total	96.0																							
	e for Saturday&Feast Days		S			A	Α	Α	A	A	Α	Α	A	A	A	A	Α	Α	Α	A	Α	Α	В	В	В	В	Α	A A
	consumption	NIS/kWh				0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.44	0.44	0.44	0.44	0.36	0.36 0.36
Tariff for	consumption	NIS/kWh	U=T-0.12 V=E*T	Sub Total	152.1	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.32	0.32	0.32	0.32	0.24	0.24 0.24
Cost for s		NIS NIS	V=E*1 W=F*U	Sub Total	152.1 43.1	10.5	10.5	10.5	10.5	10.5	10.5	9.3	5.8	1.2	2.4	5.5	7.8	8.6	8.6	5.5	3.9	0.8	4.3	11.4	12.8	12.8	10.5	0 0
	Friday&Feast Evening	NIS/day	X=V-W	Total	109.0	0	- 0	- 0	0	0	0	- 0	- 0	0	2.4	3.3	7.0	8.0	8.0	3.3	3.9	0.8	- 0	- 0	- 0	0	- 0	0 (
Summer	2015																											
					Data						AN	Л											PN					
					Output	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22 23
Load	Consumption	kWh	A	780		32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5 32.5
Solar	Maximum Output Output Rate for Solar	kW	B C	75		0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0 (
	Solar Generation	kWh	D=B*C	551.3		0.0	0.0	0.0	0.0	0.0	0.0	3.8	15.0	30.0	45.0	60.0	71.3	75.0	75.0	60.0	52.5	37.5	22.5	3.8	0.0	0.0	0.0	0.0 0.0
JDECO (Consumption	kWh	E=A-D (1			32.5	32.5	32.5	32.5	32.5		28.75	17.5	2.5	0	0	0	0	0	0	0	0		28.75	32.5	32.5	32.5	32.5 32.5
Surplus P	-	kWh	F=D-A (1			0	0	0	0	0	0	0	0	0	12.5	27.5	38.75	42.5	42.5	27.5	20	5	0	0	0	0	0	0 (
Time Zo	ne for Working Days		G			Α	Α	A	Α	A	Α	Α	В	В	В	С	С	С	С	С	С	С	В	В	В	В	Α	A A
	consumption	NIS/kWh	Н			0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.541	0.541	0.541	1.189	1.189	1.189	1.189	1.189	1.189	1.189	0.541	0.541	0.541	0.541		0.377 0.37
Tariff for		NIS/kWh	I=H-0.12	0.1 m ·	4	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.421	0.421	0.421	1.069	1.069	1.069	1.069	1.069	1.069	1.069	0.421		0.421			0.257 0.25
Cost for s	consumption	NIS	J=E*H	Sub Total	187.6 223	12.2	12.2	12.2	12.2	12.2	12.2	10.8	9.5	1.4	5 2	20.4	41.4	15.4	45.4	20.4	21.4	5.2	5.4	15.5	17.6	17.6	12.2	12.2 12.2
	Working Days	NIS/day	K=F*I L=J-K	Total	-35.4	0	0	0	0	0	0	0	0	0	5.3	29.4	41.4	45.4	45.4	29.4	21.4	5.3	0	0	0	0	0	0 (
-	e for Friday&Feast Evening	1115/Uay	M	iotal	-33.4	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	Α	A	A	A	A	A	A A
	consumption	NIS/kWh				0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377		0.377 0.37
Tariff for	-	NIS/kWh	O=N-0.12	2		0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257 0.257
Cost for o	consumption	NIS	P=E*N	Sub Total	167.1	12.2	12.2	12.2	12.2	12.2	12.2	10.8	6.6	0.9	0	0	0	0	0	0	0	0	3.8	10.8	12.2	12.2	12.2	12.2 12.2
Cost for s		NIS	Q=F*O	Sub Total	55.5	0	0	0	0	0	0	0	0	0	3.2	7.1	9.9	10.9	10.9	7.1	5.1	1.3	0	0	0	0	0	0 (
	Friday&Feast Evening	NIS/day	R=P-Q	Total	111.6																_				_			
	e for Saturday&Feast Days	NHC 2 W.	S			A 0.277	A	A	A	A	A	A	A 0.277	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A A
Tariff for Tariff for	consumption	NIS/kWh		,		0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	_	0.377	0.377		0.377			0.377 0.37
_	consumption	NIS/kWh NIS	U=1-0.12 V=E*T	Sub Total	167.1	12.2	12.2	12.2	12.2	12.2	12.2	10.8	6.6	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	3.8	10.8	12.2	12.2	12.2	12.2 12.2
Cost for s		NIS	W=F*U	Sub Total	55.5	0	0	0	0	0	0	0	0.0	0.9	3.2	7.1	9.9	10.9	10.9	7.1	5.1	1.3	3.0	0.8	0	0	0	0 (
	Friday&Feast Evening	NIS/day	X=V-W	Total	111.6	Ü	-				-							,	/				-	-	-		-	, ,

Table 8.13 (2/6) Electricity Metered Charge Calculation (For the Year 2016)

Winter,	January 2016												5					`							_				
				Data Input	Data Output	0		2	3	4	Al 5	M 6	7	8	9	10	11	12.	13	14	15	16	PN 17	Л 18	19	20	21	22	23
Load	Consumption	kWh	A	690	Output	28.8	28.8		28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	16 28.8	28.8	28.8	28.8	28.8	28.8		28.8
Solar	Maximum Output	kW	В	45																									
	Output Rate for Solar	%	C D D*C	220.0		0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0	0
JDECO O	Solar Generation Consumption	kWh kWh	D=B*C E=A-D (330.8 (NLT 0)		28.8	28.8	28.8	28.8	28.8	28.8	2.3	9.0	18.0	27.0	36.0	42.8	45.0	45.0	36.0	31.5	22.5 6.3	13.5	2.3	0.0 28.8	0.0 28.8	0.0 28.8	0.0 28.8	0.0 28.8
Surplus P	-	kWh	F=D-A (NLT 0)		0	0	0	0	0	0	0	0	0	0	7.2	13.95	16.2	16.2	7.2	2.7	0	0	0	0	0	0	0	0
	ne for Working Days		G			A	A	A	A	A	A	В	В	A	A	A	A	A	A	A	A	C	С	C	C	C	C	С	A
Tariff for Tariff for	consumption	NIS/kWh NIS/kWh				0.401	0.401	0.401	0.401	0.401	0.401	0.626	0.626	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.908	0.908	0.908	0.908	0.908	0.908		0.401
	consumption	NIS NIS	J=E*H	Sub Total	282.4	11.5	11.5	11.5	11.5	11.5	11.5	16.6	12.4	4.3	0.7	0	0	0	0	0	0	6.5	15.7	27.3	29.6	29.6	29.6		11.5
Cost for s	surplus	NIS	K=F*I	Sub Total	17.9	0	0	0	0	0	0	0	0	0	0	2	3.9	4.6	4.6	2	0.8	0	0	0	0	0	0	0	0
_	Working Days	NIS/day	L=J-K	Total	264.5																								
***************************************	e for Friday&Feast Evening Consumption	NIS/kWh	M N			0.401	0.401	A 0.401	A 0.401	0.401	A 0.401	A 0.401	A 0.401	0.401	A 0.401	B 0.626	0.626	0.626	B 0.626	0.401	A 0.401	A 0.401 (A 0.401						
Tariff for	1	NIS/kWh		12		0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.506	0.506	0.506	0.506	0.281	0.281		0.281
Cost for c	consumption	NIS	P=E*N	Sub Total	186.6	11.5	11.5	11.5	11.5	11.5	11.5	10.6	7.9	4.3	0.7	0	0	0	0	0	0	3.9	9.6	16.6	18	11.5	11.5	11.5	11.5
Cost for s		NIS	Q=F*O	Sub Total	17.9	0	0	0	0	0	0	0	0	0	0	2	3.9	4.6	4.6	2	0.8	0	0	0	0	0	0	0	0
	Friday&Feast Evening	NIS/day	R=P-Q S	Total	168.7	A	A	A	A	A	A	A	A	A	A		A	Α	A	A	A	Α	С	С	В	В	A	A	A
/20000000000000000000000000000000000000	e for Saturday&Feast Days consumption	NIS/kWh				0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	A 0.401	0.401	0.401	0.401	0.401	0.401	0.401	1.028	1.028	0.626	0.626			0.401
Tariff for		***************************************		2		0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.908	0.908	0.506	0.506	0.281	0.281 (0.281
	consumption	NIS	V=E*T	Sub Total	208.5	11.5	11.5	11.5	11.5	11.5	11.5	10.6	7.9	4.3	0.7	0	0	0	0	0	0	2.5	15.7	27.3	18	18	11.5		11.5
Cost for s		NIS	W=F*U	Sub Total	17.9	0	0	0	0	0	0	0	0	0	0	2	3.9	4.6	4.6	2	0.8	0	0	0	0	0	0	0	0
DIII for F	Friday&Feast Evening	NIS/day	X=V-W	Total	190.6																								
Spring&	Autumn 2016																												
				Data Input	Data Output	0	1	2	3	4	A!	M 6	7	8	Q	10	11	12	13	14	15	16	PN 17	18	19	20	21	22	23
Load	Consumption	kWh	A	830		34.6	34.6		34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6		34.6
Solar	Maximum Output	kW	В	65																									
	Output Rate for Solar	%	C			0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0	0
IDECO	Solar Generation Consumption	kWh kWh	D=B*C E=A-D (477.8		0.0 34.6	0.0 34.6	0.0 34.6	0.0 34.6	0.0 34.6	0.0	3.3	13.0	26.0 8.6	39.0	52.0	61.8	65.0	65.0	52.0	45.5	32.5 2.1	19.5	3.3	0.0 34.6	0.0 34.6	0.0 34.6	0.0 34.6	0.0 34.6
Surplus P		kWh	F=D-A (0	34.0	34.0	0	34.0	0	0	0	0.0	4.4	-	27.15	30.4	30.4	17.4	10.9	0	0	0	0	0	0	0	34.0
Time Zo	ne for Working Days		G	,		A	A	A	A	A	A	С	С	C	С	С	С	С	С	С	С	C	C	C	С	В	В	A	A
	consumption	NIS/kWh	Н			0.36	0.36	0.36	0.36	0.36	0.36	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.44	0.44		0.36
Tariff for	consumption	NIS/kWh NIS	I=H-0.12 J=E*H	Sub Total	207.1	0.24	12.5	0.24	0.24	0.24	0.24	0.41	0.41	0.41 4.6	0.41	0.41	0.41	0.41	0.41	0.41	0.41	1.1	0.41	0.41	0.41	0.32	0.32		0.24
Cost for s		NIS	K=F*I	Sub Total	56.6	0	0	0	0	0	0	0.0	0	0	1.8	7.1	11.1	12.5	12.5	7.1	4.5	0	0	0.0	0	0	0	0	0
	Working Days	NIS/day	L=J-K	Total	150.5																								
	e for Friday&Feast Evening		M			A	Α	A	A	A	Α	В	В	В	В	В	В	В	В	В	В	В	В	В	В	Α	A	A	Α
Tariff for Tariff for	consumption	NIS/kWh	N O=N-0.1	12		0.36	0.36	0.36	0.36	0.36	0.36	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.36	0.36		0.36
	consumption	NIS/kWh NIS	P=E*N	Sub Total	188.6	12.5	12.5	12.5	12.5	12.5	12.5	13.8	9.5	3.8	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	6.6	13.8	15.2	12.5	12.5		12.5
Cost for s		NIS	Q=F*O	Sub Total	44.2	0	0	0	0	0	0	0	0	0	1.4	5.6	8.7	9.7	9.7	5.6	3.5	0	0	0	0	0	0	0	0
	Friday&Feast Evening	NIS/day	R=P-Q	Total	144.4																								
	e for Saturday&Feast Days consumption	NICANA	S T			0.36	A 0.36	0.36	A 0.36	0.36	A 0.36	A 0.36	A 0.36	A 0.36	A 0.36	A 0.36	A 0.36	A 0.36	A 0.36	A 0.36	A 0.36	A 0.36	0.44	0.44	0.44	0.44	A 0.36	A 0.36	0.36
Tariff for		NIS/kWh	U=T-0.1	2		0.36	0.36	0.36	0.36	0.24	0.36	0.24	0.24	0.36	0.36	0.24	0.36	0.36	0.36	0.36	0.36	0.36	0.32	0.32	0.32	0.44	0.24		0.36
	consumption	NIS	V=E*T	Sub Total	186.3	12.5	12.5	12.5	12.5	12.5	12.5	11.3	7.8	3.1	0	0	0	0	0	0	0	0.8	6.6	13.8	15.2	15.2	12.5	12.5	12.5
Cost for s		NIS	W=F*U	Sub Total	33.2	0	0	0	0	0	0	0	0	0	1.1	4.2	6.5	7.3	7.3	4.2	2.6	0	0	0	0	0	0	0	0
Bill for F	Friday&Feast Evening	NIS/day	X=V-W	Total	153.1																								_
Summer	2016																												
				Data	Data						A!	M											PN	Л					
		117-			Output	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Load Solar	Consumption Maximum Output	kWh kW	A B	910 75		37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9	37.9
Souli	Output Rate for Solar	%	С	13		0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0	0
	Solar Generation	kWh	D=B*C	551.3		0.0	0.0	0.0	0.0	0.0	0.0	3.8	15.0	30.0	45.0	60.0	71.3	75.0	75.0	60.0	52.5	37.5	22.5	3.8	0.0	0.0	0.0	0.0	0.0
	Consumption	kWh	E=A-D			37.9	37.9		37.9	37.9		34.15	22.9	7.9	0	0	0	0	0	0	0	0.4		34.15	37.9	37.9	37.9		37.9
Surplus P	ower one for Working Days	kWh	F=D-A (NLT 0)		0 A	0 A	0 A	0 A	0 A	0 A	0 A	0 B	0 B	7.1 B	22.1 C	33.35 C	37.1 C	37.1 C	22.1 C	14.6 C	0 C	0 B	0 B	0 B	0 B	0 A	0 A	0 A
_	consumption	NIS/kWh				0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.541	0.541	0.541	1.189	1.189	1.189	1.189	1.189	1.189	1.189		0.541	0.541				A. 0.377
Tariff for		NIS/kWh				0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.421	0.421	0.421	1.069	1.069	1.069	1.069	1.069	1.069	1.069	0.421	0.421	0.421	0.421	0.257	0.257 (0.257
	consumption	NIS	J=E*H	Sub Total	226.6		14.3	14.3	14.3	14.3	14.3	12.9	12.4	4.3	0	0	0	0	0	0	0	0.5	8.3	18.5	20.5	20.5	14.3		14.3
Cost for s	Surplus Working Days	NIS/day	K=F*I L=J-K	Sub Total Total	180.9 45.7	0	0	0	0	0	0	0	0	0	3	23.6	35.7	39.7	39.7	23.6	15.6	0	0	0	0	0	0	0	0
	e for Friday&Feast Evening	NIS/day	M	Total	43.7	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
_	consumption	NIS/kWh	N			0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377		0.377	0.377	0.377	0.377		0.377
Tariff for	-	NIS/kWh	O=N-0.1			0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257		0.257	0.257	0.257	0.257	0.257	0.257	_	0.257		0.257	0.257	0.257			0.257
Cost for s	consumption	NIS NIS	P=E*N	Sub Total Sub Total	200.7	14.3	14.3		14.3	14.3	14.3	12.9	8.6	3	1.8	5.7	0	0 5	0 9 5	5.7	3.7	0.2	5.8	12.9	14.3	14.3	14.3		14.3
	surplus Friday&Feast Evening	NIS/day	Q=F*O R=P-Q	Total	156.2	0	0	0	0	0	0	0	0	0	1.8	5.7	8.6	9.5	9.5	5.7	3.7	0	0	0	0	0	0	0	0
	e for Saturday&Feast Days		S			A	Α	A	A	A	A	Α	A	A	Α	A	Α	A	Α	Α	Α	Α	A	A	Α	A	A	A	A
	consumption	NIS/kWh				0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377		0.377		0.377	0.377	0.377			0.377
Tariff for	-	NIS/kWh	U=T-0.1		200 -	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257			0.257
Cost for s	consumption	NIS NIS	V=E*T W=F*U	Sub Total Sub Total	200.7	14.3	14.3	14.3	14.3	14.3	14.3	12.9	8.6	0	1.8	5.7	8.6	9.5	9.5	5.7	3.7	0.2	5.8	12.9	14.3	14.3	14.3	14.3	14.3
	Friday&Feast Evening	NIS/day	X=V-W	Total	156.2		U	U	U	U	U	U	U	U	1.0	3.7	8.0	9.3	9.3	J. I	٥.1	U	U	U	U	U	U	U	
	,			. oral	150.2																								—

Table 8.13 (3/6) Electrical Cost Calculation (For the Year 2017)

Winter.	January 2017																											
				Data	Data						Al	М											PN	1				
Load	Consumption	kWh	A	Input 890	Output	37.1	37.1	37.1	37.1	37.1	5 37.1	6 37.1	7 37.1	37.1	9 37.1	10 37.1	11 37.1	12 37.1	13 37.1	14 37.1	15 37.1	16 37.1	17 37.1	18 37.1	19 37.1	20 37.1	21 37.1	22 2: 37.1 37.
Solar	Maximum Output	kW	В	45		37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1 37.
	Output Rate for Solar	%	С			0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0 (
IDEGO	Solar Generation	kWh	D=B*C E=A-D (330.8		0.0	0.0	0.0	0.0	0.0	0.0	2.3	9.0	18.0	27.0	36.0	42.8	45.0	45.0	36.0	31.5	22.5	13.5	2.3	0.0	0.0	0.0	0.0 0.0
Surplus I	Consumption Power	kWh kWh	F=D-A (37.1	37.1	37.1	37.1	37.1	37.1	34.85	28.1	19.1	10.1	1.1	5.65	7.9	7.9	1.1	5.6	14.6	23.6	34.85	37.1	37.1	37.1	37.1 37.
	one for Working Days		G			A	A	A	A	A	A	В	В	A	A	A	A	A	A	A	A	C	C	C	C	C	C	C A
	r consumption	NIS/kWh				0.401	0.401	0.401	0.401	0.401	0.401	0.626	0.626	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	1.028	1.028	1.028	1.028	1.028	1.028	1.028 0.40
Tariff fo		NIS/kWh		Sub Total	20.5	0.281	0.281	0.281	0.281	0.281	0.281	0.506	0.506	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.908	0.908	0.908	0.908	0.908	0.908	0.908 0.28
Cost for	consumption	NIS NIS	J=E*H K=F*I	Sub Total	386	14.9	14.9	14.9	14.9	14.9	14.9	21.8	17.6	7.7	4.1	0.4	1.6	2.2	2.2	0.4	2.2	15	24.3	35.8	38.1	38.1	38.1	38.1 14.9
	Working Days	NIS/day	L=J-K	Total	380.0												1.0											
***************************************	e for Friday&Feast Evening		M			A	A	A	A	A	A	A	A	A	A	A	Α	A	A	A	A	В	В	В	В	A	A	A A
	r consumption	NIS/kWh				0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.626	0.626	0.626	0.626	0.401		0.401 0.40
Tariff fo	r surplus consumption	NIS/kWh NIS	O=N-0.1 P=E*N	2 Sub Total	258	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	7.7	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.506 9.1	0.506	0.506	0.506	0.281	0.281	0.281 0.28 14.9 14.1
Cost for		NIS	Q=F*O	Sub Total	238 6	0	14.9	14.9	14.9	14.9	0	0	0	0	0	0.4	1.6	2.2	2.2	0.4	0	9.1	0	0	0	0	0	0 (
-	Friday&Feast Evening	NIS/day	R=P-Q	Total	252.0																							
v2000200020002000	ne for Saturday&Feast Days		S			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	С	C	В	В	A	A A
Tariff fo	r consumption	NIS/kWh NIS/kWh	T U=T-0.12			0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.908	0.908	0.626	0.626		0.401 0.40
	consumption	NIS/KWII	V=E*T	Sub Total	286.6	14.9	14.9	14.9	14.9	14.9	14.9	14	11.3	7.7	4.1	0.231	0.281	0.281	0.281	0.4	2.2	5.9	24.3	35.8	23.2	23.2	14.9	14.9 14.9
Cost for		NIS	W=F*U	Sub Total	6	0	0	0	0	0	0	0	0	0	0	0.1	1.6	2.2	2.2	0	0	0	0	0	0	0	0	0 (
Bill for	Friday&Feast Evening	NIS/day	X=V-W	Total	280.6																							
Spring &	Autumn 2017																											
Springe	CAutumii 2017			Data	Data						Al	M											PN	1				
				Input	Output	0	1	2	3	4	5	6		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22 2
Load Solar	Consumption Maximum Output	kWh kW	A B	1030		42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9 42.9
Soar	Output Rate for Solar	%	С	0.0		0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0 (
	Solar Generation	kWh	D=B*C	477.8		0.0	0.0	0.0	0.0	0.0	0.0	3.3	13.0	26.0	39.0	52.0	61.8	65.0	65.0	52.0	45.5	32.5	19.5	3.3	0.0	0.0	0.0	0.0 0.0
JDECO	Consumption	kWh	E=A-D (42.9	42.9	42.9	42.9	42.9	42.9	39.65	29.9	16.9	3.9	0	0	0	0	0	0	10.4	23.4	39.65	42.9	42.9	42.9	42.9 42.9
Surplus I		kWh	F=D-A (NLT 0)		0	0	0	0	0	0	0	0	0	0		_	22.1	22.1	9.1	2.6	0	0	0	0	0	0	0 (
	r consumption	NIS/kWh	G H			0.36	0.36	0.36	0.36	0.36	0.36	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.44	0.44	A A
Tariff fo		NIS/kWh	I=H-0.12	!		0.24	0.24	0.24	0.24	0.24	0.24	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.32	0.32	0.24 0.2
Cost for	consumption	NIS	J=E*H	Sub Total	271.4	15.5	15.5	15.5	15.5	15.5	15.5	21	15.9	9	2.1	0	0	0	0	0	0	5.5	12.4	21	22.7	18.9	18.9	15.5 15.:
Cost for		NIS	K=F*I	Sub Total	34.4	0	0	0	0	0	0	0	0	0	0	3.7	7.7	9.1	9.1	3.7	1.1	0	0	0	0	0	0	0 (
	Working Days te for Friday&Feast Evening	NIS/day	L=J-K M	Total	237.0				_				D	D	D	D.	В	D	n	- D	D	D		D	D			
	r consumption	NIS/kWh				0.36	0.36	0.36	0.36	0.36	0.36	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.36	0.36	A A
Tariff fo	1	NIS/kWh	O=N-0.1	2		0.24	0.24	0.24	0.24	0.24	0.24	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.24	0.24	0.24 0.2
	consumption	NIS	P=E*N	Sub Total	245.9	15.5	15.5	15.5	15.5	15.5	15.5	17.4	13.2	7.4	1.7	0	0	0	0	0	0	4.6	10.3	17.4	18.9	15.5	15.5	15.5 15.:
Cost for	•	NIS	Q=F*O	Sub Total	26.8	0	0	0	0	0	0	0	0	0	0	2.9	6	7.1	7.1	2.9	0.8	0	0	0	0	0	0	0 (
	Friday&Feast Evening te for Saturday&Feast Days	NIS/day	R=P-Q S	Total	219.1	A	A	A	A	A	A	A	A	A	A	A	A	Α	A	A	A	A	В	В	В	В	A	A A
	r consumption	NIS/kWh	T			0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.44	0.44	0.44	0.44	0.36	0.36 0.3
Tariff fo	r surplus	NIS/kWh	U=T-0.12	2		0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.32	0.32	0.32	0.32	0.24	0.24 0.2
	consumption	NIS	V=E*T	Sub Total	241.3	15.5	15.5	15.5	15.5	15.5	15.5	14.3	10.8	6.1	1.4	0	0	0	0	0	0	3.7	10.3	17.4	18.9	18.9	15.5	15.5 15.:
Cost for	-	NIS	W=F*U	Sub Total	20.1	0	0	0	0	0	0	0	0	0	0	2.2	4.5	5.3	5.3	2.2	0.6	0	0	0	0	0	0	0 (
DIII IOF	Friday&Feast Evening	NIS/day	X=V-W	Total	221.2																							
Summe	r 2017																											
				Data	Data						Al	M											PN	1				
					Output	0	1	2	3	4	5	6		8	9			12	13	14	15	16	17	18	19	20	21	22 2
Load Solar	Consumption Maximum Output	kWh kW	A B	1110 75		46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3	46.3 46.3
Dom	Output Rate for Solar	%	С	10		0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0 (
	Solar Generation	kWh	D=B*C	551.3		0.0	0.0	0.0	0.0	0.0	0.0	3.8	15.0	30.0	45.0	60.0	71.3	75.0	75.0	60.0	52.5	37.5	22.5	3.8	0.0	0.0	0.0	0.0 0.0
	Consumption	kWh	E=A-D (46.3	46.3	46.3	46.3	46.3		42.55	31.3	16.3	1.3	0	0	0	0	0	0	8.8	23.8		46.3	46.3	46.3	46.3 46.3
Surplus I	Power one for Working Days	kWh	F=D-A (NLT 0)		0	0	0	0	0	0	0	0 B	0 P	0 B	13.7 C	24.95 C	28.7 C	28.7 C	13.7 C	6.2 C	0 C	0 D	0 D	0 D	0 D	0	0 (
-	r consumption	NIS/kWh				0.377	A 0.377	0.377	0.377	A 0.377	0.377	0.377	0.541	0.541	0.541	1.189	1.189	1.189	1.189	1.189	1.189	1.189	0.541	0.541	0.541	0.541	A 0.377	A A
Tariff fo		NIS/kWh		!		0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.421	0.421	0.421	1.069	1.069	1.069	1.069	1.069	1.069	1.069	0.421	0.421	0.421	0.421	0.257	0.257 0.25
	consumption	NIS	J=E*H	Sub Total	295.4	17.4	17.4	17.4	17.4	17.4	17.4	16	_	8.8	0.7	0	0	0	0	0	0	10.5	12.9	23	25		17.4	17.4 17.4
Cost for		NIS	K=F*I	Sub Total	124.1	0	0	0	0	0	0	0	0	0	0	14.7	26.7	30.7	30.7	14.7	6.6	0	0	0	0	0	0	0 (
	Working Days ne for Friday&Feast Evening	NIS/day	L=J-K M	Total	171.3	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A A
	r consumption	NIS/kWh				0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377 0.37
Tariff fo		NIS/kWh		2		0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257 0.25
	consumption	NIS	P=E*N	Sub Total	254.1	17.4	17.4	17.4	17.4	17.4	17.4	16	_	6.1	0.5	0	0	0	0	0	0	3.3	9	16	17.4	17.4	17.4	17.4 17.4
Cost for		NIS	Q=F*O	Sub Total	29.8	0	0	0	0	0	0	0	0	0	0	3.5	6.4	7.4	7.4	3.5	1.6	0	0	0	0	0	0	0 (
	Friday&Feast Evening te for Saturday&Feast Days	NIS/day	R=P-Q S	Total	224.3	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A A
	r consumption	NIS/kWh				0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377		0.377			0.377 0.37
Tariff fo	-	NIS/kWh		2		0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257 0.25
	consumption	NIS	V=E*T	Sub Total	254.1	17.4	17.4	17.4	17.4	17.4	17.4	16	_	6.1	0.5	0	0	0	0	0	0	3.3	9	16	17.4	17.4	17.4	17.4 17.4
Cost for		NIS	W=F*U	Sub Total	29.8	0	0	0	0	0	0	0	0	0	0	3.5	6.4	7.4	7.4	3.5	1.6	0	0	0	0	0	0	0 (
Bill for	Friday&Feast Evening	NIS/day	X=V-W	Total	224.3																							

Table 8.13 (4/6) Electrical Cost Calculation (For the Year 2018)

miter,	January 2018			Data	Data						A!	M											PN	И					_
				Input	Output	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	2
Load	Consumption	kWh	A	1320		55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	5
Solar	Maximum Output	kW	В	45													0.5	400	400		===								
	Output Rate for Solar Solar Generation	% kWh	C D=B*C	330.8		0.0	0.0	0.0	0.0	0.0	0.0	2.3	9.0	18.0	27.0	36.0	95 42.8	100 45.0	45.0	36.0	70 31.5	22.5	13.5	2.3	0.0	0.0	0.0	0.0	0.
JDECO (Consumption	kWh	E=A-D (55	55	55	55	55		52.75	46	37	28		12.25	10	10	19	23.5	32.5		52.75	55	55	55	55	5
Surplus P		kWh	F=D-A			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	_
Time Zo	one for Working Days		G			A	A	Α	A	A	A	В	В	Α	A	A	Α	Α	A	Α	A	С	С	С	С	С	С	С	1
Tariff for	r consumption	NIS/kWh	Н			0.401	0.401	0.401	0.401	0.401	0.401	0.626	0.626	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	1.028	1.028	1.028	1.028	1.028	1.028	1.028	0.40
Tariff for		NIS/kWh				0.281	0.281	0.281	0.281	0.281	0.281	0.506	0.506	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.908	0.908	0.908		0.908	0.908		0.28
	consumption	NIS	J=E*H	Sub Total Sub Total	636.7	22.1	22.1	22.1	22.1	22.1	22.1	33	28.8	14.8	11.2	7.6	4.9	4	4	7.6	9.4	33.4	42.7	54.2	56.6	56.6	56.6	56.6	22.
Cost for	Surplus Working Days	NIS NIS/day	K=F*I L=J-K	Total	636.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	e for Friday&Feast Evening	NIS/day	M	Total	030.7	A	A	A	A	A	А	A	A	A	A	A	A	A	A	A	A	В	В	В	В	Α	A	A	_
***************************************	r consumption	NIS/kWh				0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.626	0.626	0.626		0.401	0.401		0.40
Tariff for	r surplus	NIS/kWh	O=N-0.1	2		0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.506	0.506	0.506	0.506	0.281	0.281	0.281	0.28
Cost for	consumption	NIS	P=E*N	Sub Total	437.9	22.1	22.1	22.1	22.1	22.1	22.1	21.2	18.4	14.8	11.2	7.6	4.9	4	4	7.6	9.4	20.4	26	33	34.4	22.1	22.1	22.1	22.
Cost for		NIS	Q=F*O	Sub Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Friday&Feast Evening	NIS/day	R=P-Q	Total	437.9																								
/**************************************	e for Saturday&Feast Days		S			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	C	C	В	В	A	A	
	r consumption	NIS/kWh	T			0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.908	0.908		0.626	0.401	0.401	0.40
Tariff for	consumption	NIS/kWh NIS	U=T-0.12 V=E*T	Sub Total	480.7	22.1	22.1	22.1	22.1	22.1	22.1	21.2	18.4	14.8	11.2	7.6	4.9	4	4	7.6	9.4	13	42.7	54.2	34.4	34.4	22.1	22.1	22.
Cost for		NIS	V=E*I W=F*U	Sub Total	460.7	0	22.1	- 22.1		22.1	22.1	21.2	10.4	0	0	0	4.9	0	0	0	9.4	0	42.7	34.2	0	0	0	0	
	Friday&Feast Evening	NIS/day	X=V-W	Total	******																								
																													_
Spring&	Autumn 2018																												
				Data	Data						A!												PN						
				Input	Output	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	2
Load Solar	Consumption Maximum Output	kWh kW	A B	1460 65		60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.8	60.
Solar	Output Rate for Solar	%	С С	65		0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0	
	Solar Generation	kWh	D=B*C	477.8		0.0	0.0	0.0	0.0	0.0	0.0	3.3	13.0	26.0	39.0	52.0	61.8	65.0	65.0	52.0	45.5	32.5	19.5	3.3	0.0	0.0	0.0	0.0	0.
JDECO (Consumption	kWh	E=A-D (60.8	60.8	60.8	60.8	60.8		57.55	47.8	34.8	21.8	8.8	0	0	0	8.8	15.3	28.3		57.55	60.8	60.8	60.8	60.8	60.
Surplus P	Power	kWh	F=D-A	NLT 0)		0	0	0	0	0	0	0	0	0	0	0	0.95	4.2	4.2	0	0	0	0	0	0	0	0	0	
Time Zo	one for Working Days		G			A	Α	Α	A	A	Α	С	C	C	C	C	С	C	C	C	C	C	C	C	C	В	В	Α	I
Tariff for	r consumption	NIS/kWh	Н			0.36	0.36	0.36	0.36	0.36	0.36	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.44	0.44	0.36	0.3
Tariff for		NIS/kWh	I=H-0.12			0.24	0.24	0.24	0.24	0.24	0.24	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.32	0.32	0.24	0.2
	consumption	NIS	J=E*H	Sub Total	431.8	21.9	21.9	21.9	21.9	21.9	21.9	30.5	_	18.5	11.6	4.7	0	0	0	4.7	8.1	15	21.9	30.5	32.2	26.8	26.8	21.9	21.9
Cost for S	surplus Working Days	NIS/day	K=F*I L=J-K	Sub Total Total	3.8 428.0	0	0	0	0	0	0	0	0	0	0	0	0.4	1.7	1.7	0	0	0	0	0	0	0	0	0	
	working Days e for Friday&Feast Evening	ivio/day	L=J-K M	ıotal	428.0	A	A	A	A	A	A	В	В	В	В	В	В	В	В	В	В	В	В	В	В	A	A	A	1
	r consumption	NIS/kWh	N			0.36	0.36	0.36	0.36	0.36	0.36	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.36	0.36	0.36	0.3
Tariff for		NIS/kWh	O=N-0.1	2		0.24	0.24	0.24	0.24	0.24	0.24	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.24	0.24	0.24	0.2
Cost for	consumption	NIS	P=E*N	Sub Total	387.5	21.9	21.9	21.9	21.9	21.9	21.9	25.3	21	15.3	9.6	3.9	0	0	0	3.9	6.7	12.5	18.2	25.3	26.8	21.9	21.9	21.9	21.
Cost for :	*	NIS	Q=F*O	Sub Total	2.9	0	0	0	0	0	0	0	0	0	0	0	0.3	1.3	1.3	0	0	0	0	0	0	0	0	0	
	Friday&Feast Evening	NIS/day	R=P-Q	Total	384.6																								
	e for Saturday&Feast Days		S			Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	A	Α	В	В	В	В	Α	Α	1
	r consumption	NIS/kWh	T U=T-0.12	2		0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.44	0.44	0.44	0.44	0.36	0.36	0.3
Tariff for	consumption	NIS/kWh NIS	U=1-0.12 V=E*T	Sub Total	374.6	21.9	21.9	21.9	21.9	21.9	21.9	20.7	17.2	12.5	7.9	3.2	0.24	0.24	0.24	3.2	5.5	10.2	18.2	25.3	26.8	26.8	21.9	21.9	21.
Cost for		NIS	V=E*I W=F*U	Sub Total	2.2	21.9	21.9	21.9	21.9	21.9	21.9	20.7	0	12.3	0	0	0.2	1	1	0.2	0.0	0.2	10.2	23.3	20.8	20.8	21.9	21.9	21.
	Friday&Feast Evening	NIS/day	X=V-W	Total		0	U	U	U	0	U	U	U	U	U	U	0.2	- 1	- 1	U	U	U	U	U		U	0	U	_
					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,																				_				_
Summer	r 2018																												
				Data	Data						A!	M											PN	Л					
					Output	0	1	2	3		5	6		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	2
Load	Consumption	kWh	A	1540		64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.2	64.
Solar	Maximum Output	kW	B C	75								_	20	40		00	05	100	100	00	70	50	20	-					
	Output Rate for Solar Solar Generation	% kWh	C D=B*C	551.3		0.0	0.0	0.0	0.0	0.0	0.0	3.8	20 15.0	40 30.0	60 45.0	60.0	95 71.3	100 75.0	100 75.0	60.0	70 52.5	50 37.5	30 22.5	3.8	0.0	0.0	0.0	0.0	0.0
JDECO (Consumption	kWh	E=A-D (64.2	64.2	64.2	64.2	64.2		60.45	_	34.2	19.2	4.2	0	75.0	75.0	4.2	11.7	26.7		60.45	64.2	64.2	64.2	64.2	64.
Surplus P		kWh	F=D-A (04.2	04.2	04.2	04.2		04.2	00.43	_	0	0	0	7.05	10.8	10.8	0	0	0	0	00.45	04.2	04.2	04.2	04.2	04.
	one for Working Days		G			A	A	A	A	A	A	A	В	В	В	C	С	С	С	C	C	C	В	В	В	В	A	A	Ā
Tariff for	r consumption	NIS/kWh	Н			0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.541	0.541	0.541	1.189	1.189	1.189	1.189	1.189	1.189	1.189	0.541	0.541	0.541	0.541	0.377	0.377	0.37
Tariff for		NIS/kWh	I=H-0.12			0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.421	0.421	0.421	1.069	1.069	1.069	1.069	1.069	1.069	1.069	0.421	0.421		0.421	0.257	0.257	0.25
	consumption	NIS	J=E*H	Sub Total	476.5	24.2	24.2	24.2	24.2	24.2		22.8	26.6	18.5	10.4	5	0	0	0	5	13.9	31.8	22.6	32.7	34.7	34.7	24.2	24.2	24.
Cost for	-	NIS	K=F*I	Sub Total	30.5	0	0	0	0	0	0	0	0	0	0	0	7.5	11.5	11.5	0	0	0	0	0	0	0	0	0	
	Working Days	NIS/day	L=J-K	Total	446.0								-																
	e for Friday&Feast Evening r consumption	MICASS?	M			0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377	0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377	0.37
Tariff for	-	NIS/kWh NIS/kWh	N O=N-0.1	2		0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257		0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257		0.257	0.257		0.25
	consumption	NIS/KWII	P=E*N	Sub Total	383.8	24.2	24.2	24.2	24.2			22.8		12.9	7.2	1.6	0.237	0.257	0.257	1.6	4.4		15.7	22.8	_	24.2	24.2	24.2	24.
Cost for		NIS	Q=F*O	Sub Total	7.4	0	0	0	0		0	0	_	0	0	0	1.8	2.8	2.8	0	0	0	0	0	0	0	0	0	24.
	Friday&Feast Evening	NIS/day	R=P-Q	Total									-		-		-				-			-			-		_
	e for Saturday&Feast Days		S			Α	A	A	Α	A	Α	A	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	A	Α	
Tariff for	r consumption	NIS/kWh	T			0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	_	0.377	0.377	0.377	0.37
Tariff for	-	NIS/kWh	U=T-0.12			0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257		0.257	0.257		0.25
	consumption	NIS	V=E*T	Sub Total	383.8	24.2	24.2	24.2	24.2	24.2	24.2	22.8	18.5	12.9	7.2	1.6	0	0	0	1.6	4.4	10.1	15.7	22.8	24.2	24.2	24.2	24.2	24.
Cost for :	•	NIS	W=F*U	Sub Total	7.4	0	0	0	0	0	0	0	0	0	0	0	1.8	2.8	2.8	0	0	0	0	0	0	0	0	0	(
Bill for I	Friday&Feast Evening	NIS/day	X=V-W	Total	376.4																								

Table 8.13 (5/6) Electrical Cost Calculation (For the Year 2019)

Winter	January 2019																											
vinici,	January 2017			Data	Data						A!	М											PM	[
				Input	Output	0	1	2	3	4	5	6	_	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22 23
Load Solar	Consumption Maximum Output	kWh kW	A B	1450 45		60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4 60.4
Soldi	Output Rate for Solar	%	C			0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0 (
	Solar Generation	kWh	D=B*C	330.8		0.0	0.0	0.0	0.0	0.0	0.0	2.3	9.0	18.0	27.0	36.0	42.8	45.0	45.0	36.0	31.5	22.5	13.5	2.3	0.0	0.0	0.0	0.0 0.0
	Consumption	kWh	E=A-D (60.4	60.4	60.4	60.4	60.4		58.15	51.4	42.4	33.4		17.65	15.4	15.4	24.4	28.9	37.9		58.15	60.4	60.4	60.4	60.4 60.4
Surplus I	one for Working Days	kWh	F=D-A (NLI 0)		0 A	0 A	0 A	0 A	0 A	0 A	0 B	0 B	0 A	0 A	0 C	0 C	0 C	0 C	0 C	0 C	0 (
	r consumption	NIS/kWh	~~~~~			0.401	0.401	0.401	0.401	0.401	0.401	0.626	0.626	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	1.028	~~~~~	1.028	1.028	1.028	1.028	1.028 0.40
Tariff for	r surplus	NIS/kWh	I=H-0.12			0.281	0.281	0.281	0.281	0.281	0.281	0.506	0.506	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.908	0.908	0.908	0.908	0.908	0.908	0.908 0.28
	consumption	NIS	J=E*H	Sub Total	714.5	24.2	24.2	24.2	24.2	24.2	24.2	36.4	32.2	17	13.4	9.8	7.1	6.2	6.2	9.8	11.6	39	48.2	59.8	62.1	62.1	62.1	62.1 24.1
Cost for	surplus Working Days	NIS	K=F*I	Sub Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (
	ne for Friday&Feast Evening	NIS/day	L=J-K M	Total	714.5	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	Α	В	В	В	В	A	A	A A
***************************************	r consumption	NIS/kWh				0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.626	~~~~~	0.626		0.401		0.401 0.40
Tariff for	r surplus	NIS/kWh	O=N-0.1			0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.506	0.506	0.506	0.506	0.281	0.281	0.281 0.28
~~~~~	consumption	NIS	P=E*N	Sub Total	494.3	24.2	24.2	24.2	24.2	24.2	24.2	23.3	20.6	17	13.4	9.8	7.1	6.2	6.2	9.8	11.6	23.7	29.4	36.4	37.8	24.2	24.2	24.2 24.:
Cost for	surplus Friday&Feast Evening	NIS/day	Q=F*O R=P-Q	Sub Total Total	494.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (
	ne for Saturday&Feast Days	1415/day	S S	Total	474.3	A	A	A	A	A	A	A	A	A	A	A	A	Α	A	A	Α	A	С	С	В	В	A	A A
~~~~~~~~	r consumption	NIS/kWh	***************************************			0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	1.028	1.028	************	0.626	***************************************	0.401 0.40
Tariff for	r surplus	NIS/kWh	U=T-0.12			0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.908	0.908	0.506	0.506	0.281	0.281 0.28
	consumption	NIS	V=E*T	Sub Total	541.6	24.2	24.2	24.2	24.2	24.2	24.2	23.3	20.6	17	13.4	9.8	7.1	6.2	6.2	9.8	11.6	15.2		59.8	37.8	37.8	24.2	24.2 24.
Cost for	surplus Friday&Feast Evening	NIS/day	W=F*U X=V-W	Sub Total Total	541.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 (
DIII 101	Friday&Feast Evening	1415/day	A-V-W	Total	341.0																							
Spring&	Autumn 2019																											
				Data Input	Data Output	0	- 1	2	3	4	Al 5		7	8	9	10	11	12	13	14	15	16	PM 17	18	19	20	21	22 2
Load	Consumption	kWh	A	1590	Output	66.3	66.3	66.3	66.3	66.3	66.3	66.3	66.3	66.3	66.3	66.3	66.3	66.3	66.3	14 66.3	66.3	66.3	66.3	66.3	66.3	66.3	66.3	66.3 66.3
Solar	Maximum Output	kW	В	65																								
	Output Rate for Solar	%	С			0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0 (
IDEGO	Solar Generation	kWh	D=B*C	477.8		0.0	0.0	0.0	0.0	0.0	0.0	3.3	13.0	26.0	39.0	52.0	61.8	65.0	65.0	52.0	45.5	32.5	19.5	3.3	0.0	0.0	0.0	0.0 0.0
Surplus I	Consumption Power	kWh kWh	E=A-D (66.3	66.3	66.3	66.3	66.3	66.3	63.05	53.3	40.3	27.3	14.3	4.55	1.3	1.3	14.3	20.8	33.8	46.8 6	63.05 0	66.3	66.3	66.3	0 (
	one for Working Days	KWII	G	. (121 0)		A	A	A	A	A	A	C	C	C	C	C	C	C	C	C	C	C	С	C	С	В	В	A A
Tariff for	r consumption	NIS/kWh	Н			0.36	0.36	0.36	0.36	0.36	0.36	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.44	0.44	0.36 0.36
Tariff for		NIS/kWh	I=H-0.12			0.24	0.24	0.24	0.24	0.24	0.24	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.32	0.32	0.24 0.24
	consumption	NIS	J=E*H K=F*I	Sub Total Sub Total	488.5 0	23.9	23.9	23.9	23.9	23.9	23.9	33.4	28.3	21.4	14.5	7.6	2.4	0.7	0.7	7.6	11	17.9	24.8	33.4	35.2	29.2	29.2	23.9 23.9
Cost for	Working Days	NIS/day	K=F™I L=J-K	Total	488.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	U	0	0	0	0	0	0 (
	e for Friday&Feast Evening	1115/0019	M	10	100.5	Α	A	A	А	A	A	В	В	В	В	В	В	В	В	В	В	В	В	В	В	Α	A	A A
Tariff for	r consumption	NIS/kWh	N			0.36	0.36	0.36	0.36	0.36	0.36	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.36	0.36	0.36 0.36
Tariff for		NIS/kWh	O=N-0.1			0.24	0.24	0.24	0.24	0.24	0.24	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.24	0.24	0.24 0.24
Cost for	consumption	NIS NIS	P=E*N O=F*O	Sub Total Sub Total	437.3	23.9	23.9	23.9	23.9	23.9	23.9	27.7	23.5	17.7	12	6.3	0	0.6	0.6	6.3	9.2	14.9	20.6	27.7	29.2	23.9	23.9	0 0
	Friday&Feast Evening	NIS/day	R=P-Q	Total	437.3	0	0	0	0	0	- 0	0	0	0	0	0	0	0	0	0	0	0	0	0	- 0	0	0	0 (
	ne for Saturday&Feast Days		S			Α	Α	Α	Α	A	Α	Α	Α	Α	A	A	Α	Α	Α	А	А	А	В	В	В	В	Α	A A
	r consumption	NIS/kWh	T			0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.44	0.44	0.44	0.44	0.36	0.36 0.36
Tariff for		NIS/kWh	U=T-0.12		120.5	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.32	0.32	0.32	0.32	0.24	0.24 0.24
Cost for	consumption	NIS NIS	V=E*T W=F*U	Sub Total	420.7	23.9	23.9	23.9	23.9	23.9	23.9	22.7	19.2	14.5	9.8	5.2	1.6	0.5	0.5	5.2	7.5	12.2	20.6	27.7	29.2	29.2	23.9	0 0
	Friday&Feast Evening	NIS/day	X=V-W	Total	420.7	0	0	0	0	0	- 0	0	0	0	0	0	0	0	0	0	0	0	U	0	0	0	0	0 (
Summer	r 2019											_																
				Data Input	Data Output	0	1	2	3	4	Al 5	vi 6	7	8	9	10	11	12	13	14	15	16	PM 17	18	19	20	21	22 23
Load	Consumption	kWh	A	1670		69.6	69.6	69.6	69.6	69.6		69.6	_	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6 69.6
Solar	Maximum Output	kW	В	75																								
	Output Rate for Solar	%	C			0	0	0	0	0		5	_	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0 (
IDECO	Solar Generation	kWh	D=B*C	551.3		0.0	0.0	0.0	_	0.0	0.0	3.8	_	30.0	45.0	60.0	71.3	75.0	75.0	60.0	52.5	37.5 32.1	22.5	3.8	0.0	0.0	0.0	0.0 0.0
Surplus I	Consumption Power	kWh kWh	E=A-D (69.6	69.6	69.6	_	69.6	09.6	65.85	54.6	39.6	24.6	9.6	1.65	5.4	5.4	9.6	17.1	52.1	47.1 6	0 0	69.6	69.6	69.6	69.6 69.6
<u> </u>	one for Working Days		G			A	A	A	A	A	A	A	В	В	В	С	С	С	С	С	С	С	В	В	В	В	A	A A
	r consumption	NIS/kWh	Н			0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.541	0.541	0.541	1.189	1.189	1.189	1.189	1.189	1.189	1.189				0.541		0.377 0.377
Tariff for		NIS/kWh				0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.421	0.421	0.421	1.069	1.069	1.069	1.069	1.069	1.069	1.069			_	0.421		0.257 0.257
Cost for	consumption	NIS NIS	J=E*H K=F*I	Sub Total	542.4 13.4	26.2	26.2	26.2	26.2	26.2	26.2	24.8	29.5	21.4	13.3	11.4	1.8	5.8	5.8	11.4	20.3	38.2	25.5	35.6	37.6	37.6	26.2	0 (
	Working Days	NIS/day	L=J-K	Total		U	U	U	U	U	U	U	U	U	U	U	1.0	5.0	٥.٥	U	U	U	U	U	U	U	U	0 (
	ne for Friday&Feast Evening		М			A	A	A	A	A	A	Α	A	Α	A	A	Α	Α	A	Α	Α	A	A	Α	A	A	Α	A A
	r consumption	NIS/kWh				0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377		0.377		0.377	0.377	0.377 0.37
Tariff for		NIS/kWh				0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257		0.257	_	0.257		0.257 0.25
Cost for Cost for	consumption	NIS NIS	P=E*N O=F*O	Sub Total Sub Total	426 3.2	26.2	26.2	26.2	26.2	26.2		24.8		14.9	9.3	3.6	0.4	1.4	1.4	3.6	6.4	12.1	17.7	24.8	26.2	26.2	26.2	0 0
	Surplus Friday&Feast Evening	NIS/day	Q=F*O R=P-Q	Total		U	U	U	U	0	U	U	U	U	U	U	0.4	1.4	1.4	U	U	U	U	U	U	U	U	U (
	ne for Saturday&Feast Days		S			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	Α	A	A	A	A	A	A	A A
	r consumption	NIS/kWh				0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377 0.37
Tariff for		NIS/kWh				0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257			_	0.257		0.257 0.25
Cost for Cost for	consumption	NIS NIS	V=E*T W=F*U	Sub Total	426 3.2	26.2	26.2	26.2	26.2	26.2	26.2	24.8	20.6	14.9	9.3	3.6	0.4	1.4	1.4	3.6	6.4	12.1	17.7	24.8	26.2	26.2	26.2	26.2 26.2
	surplus Friday&Feast Evening	NIS/day	W=F**U X=V-W	Total	422.8	0	0	U	0	0	0	0	U	0	U	0	0.4	1.4	1.4	0	U	0	0	0	0	0	U	0 (
~ in 101.	year cast is veining	1110/day	23- Y - YV	rotal	+44.6								_															

Table 8.13 (6/6) Electrical Cost Calculation (For the Year 2020)

Winter,	January 2020																											
				Data	Data						AM												PM					
Load	Consumption	kWh	A	Input 1570	Output	65.4	65.4	65.4	65.4	65.4	65.4	65.4	7 65.4	65.4	9 65.4	65.4	65.4	12 65.4	65.4	65.4	15 65.4	16 65.4	65.4	18 65.4	19 65.4	20 65.4 6	21 5.4	22 23 65.4 65.4
Solar	Maximum Output	kW	В	45		0.5.4	0.54	00.4	03.4	00.4	00.4	00.4	05.4	03.4	00.4	05.4	0.54	05.4	05.4	05.4	05.4	05.4	0.0.4	W.4	05.4	05.4 0	J.4	05.4 05.4
	Output Rate for Solar	%	C			0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0 0
	Solar Generation	kWh	D=B*C	330.8		0.0	0.0	0.0	0.0	0.0	0.0	2.3	9.0	18.0	27.0	36.0	42.8	45.0	45.0	36.0	31.5	22.5	13.5	2.3	0.0	0.0	0.0	0.0 0.0
JDECO (Consumption	kWh	E=A-D (1	NLT 0)		65.4	65.4	65.4	65.4	65.4	65.4	53.15	56.4	47.4	38.4	29.4	22.65	20.4	20.4	29.4	33.9	42.9	51.9 6	3.15	65.4	65.4 6	5.4	65.4 65.4
Surplus F	Power	kWh	F=D-A (?	NLT 0)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
	one for Working Days		G			A	A	A	A	A	A	В	В	A	A	A	A	A	A	A	Α	C	С	С	C	С	С	C A
*************	r consumption	NIS/kWh	**************			0.401	0.401	0.401	0.401	0.401			0.626	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	1.028		1.028				1.028 0.401
Tariff for		NIS/kWh				0.281	0.281	0.281	0.281	0.281			0.506	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.908		0.908				0.908 0.281
	consumption	NIS	J=E*H	Sub Total Sub Total	787	26.2	26.2	26.2	26.2	26.2	······	39.6	35.3	19	15.4	11.8	9.1	8.2	8.2	11.8	13.6	44.1		64.9				67.3 26.2
Cost for		NIS	K=F*I		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
	Working Days e for Friday&Feast Evening	NIS/day	L=J-K M	Total	787.0	Δ.	A	A	A	A	Α.	Α.	A	Λ	A	A	Α.	Δ.	Α.	A	A	В	В	В	В	Α.	A	A A
	r consumption	NIS/kWh	*************			0.401	0.401	0.401	0.401	0.401	0.401	A 0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.626	***********	0.626	****	A 0.401 0.	****	A A 0.401 0.401
Tariff for		NIS/kWh	O=N-0.12	2		0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.506	0.506	0.506	0.506	0.281 0.	281	0.281 0.281
	consumption	NIS	P=E*N	Sub Total	547	26.2	26.2	26.2	26.2	26.2	26.2	25.3	22.6	19	15.4	11.8	9.1	8.2	8.2	11.8	13.6	26.9	32.5	39.6	41	26.2 2	6.2	26.2 26.2
Cost for		NIS	Q=F*O	Sub Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
	Friday&Feast Evening	NIS/day	R=P-Q	Total	547.0					•••••												************		********	••••••	***************************************	*******	
Time Zon	e for Saturday&Feast Days		S			A	A	Α	Α	A	Α	Α	Α	Α	Α	A	Α	Α	Α	Α	Α	А	С	С	В	В	Α	A A
Tariff for	r consumption	NIS/kWh	T			0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401	1.028	1.028	0.626	0.626 0.	401	0.401 0.401
Tariff for	r surplus	NIS/kWh	U=T-0.12	2		0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.281	0.908	0.908	0.506	0.506 0.	281	0.281 0.281
Cost for	consumption	NIS	V=E*T	Sub Total	598.3	26.2	26.2	26.2	26.2	26.2	26.2	25.3	22.6	19	15.4	11.8	9.1	8.2	8.2	11.8	13.6	17.2	53.4	64.9	41	41 2	6.2	26.2 26.2
Cost for	surplus	NIS	W=F*U	Sub Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
Bill for l	Friday&Feast Evening	NIS/day	X=V-W	Total	598.3																							
C 9.	Autumn 2020																											
3pr mg cc	Autumii 2020			Data	Data						AN	1											PM					
				Input	Output	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22 23
Load	Consumption	kWh	A	1710		71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3	71.3 7	1.3	71.3 71.3
Solar	Maximum Output	kW	В	65																								
	Output Rate for Solar	%	С			0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0 0
	Solar Generation	kWh	D=B*C	477.8		0.0	0.0	0.0	0.0	0.0	0.0	3.3	13.0	26.0	39.0	52.0	61.8	65.0	65.0	52.0	45.5	32.5	19.5	3.3	0.0	0.0	0.0	0.0 0.0
JDECO	Consumption	kWh	E=A-D (1			71.3	71.3	71.3	71.3	71.3	71.3 €	58.05	58.3	45.3	32.3	19.3	9.55	6.3	6.3	19.3	25.8	38.8	51.8 6	8.05	71.3	71.3 7	1.3	71.3 71.3
Surplus F		kWh	F=D-A (1	NLT 0)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
	one for Working Days		G			A	A	A	A	A	A	С	С	С	С	С	С	C	С	С	С	C	C	С	С	В	В	A A
	r consumption	NIS/kWh	Н			0.36	0.36	0.36	0.36	0.36	0.36	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53		0.44	0.36 0.36
Tariff for	•	NIS/kWh				0.24	0.24	0.24	0.24	0.24	0.24	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41	0.41		0.32	0.24 0.24
	consumption	NIS	J=E*H	Sub Total	544.3	25.7	25.7	25.7	25.7	25.7	25.7	36.1	30.9	24	17.1	10.2	5.1	3.3	3.3	10.2	13.7	20.6		36.1	_			25.7 25.7
Cost for	•	NIS	K=F*I	Sub Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
	Working Days	NIS/day	L=J-K M	Total	544.3		A		A	A	A	В	В	В	В	В	В	В	В	В	В	В	В	В	В	Α.	A	A A
	e for Friday&Feast Evening r consumption	NIS/kWh	N			0.36	0.36	0.36	0.36	0.36	0.36	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	A 0.36	0.36	A A 0.36 0.36
Tariff for		NIS/kWh	O=N-0.12	2		0.24	0.24	0.24	0.24	0.24	0.24	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32		0.24	0.24 0.24
	consumption	NIS	P=E*N	Sub Total	486.1	25.7	25.7	25.7	25.7	25.7	25.7	29.9	25.7	19.9	14.2	8.5	4.2	2.8	2.8	8.5	11.4	17.1	22.8	29.9	31.4	25.7 2	5.7	25.7 25.7
Cost for		NIS	Q=F*O	Sub Total	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0.5	0	0	0	0	0	0	0	0 0
	Friday&Feast Evening	NIS/day	R=P-Q	Total	486.1				_				_				_											
	e for Saturday&Feast Days		S			A	A	A	A	A	A	A	Α	Α	A	A	A	Α	Α	Α	А	A	В	В	В	В	A	A A
Tariff for	r consumption	NIS/kWh	T			0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.44	0.44	0.44	0.44	0.36	0.36 0.36
Tariff for	r surplus	NIS/kWh	U=T-0.12	2		0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.32	0.32	0.32	0.32).24	0.24 0.24
Cost for	consumption	NIS	V=E*T	Sub Total	465.5	25.7	25.7	25.7	25.7	25.7	25.7	24.5	21	16.3	11.6	7	3.4	2.3	2.3	7	9.3	14	22.8	29.9	31.4	31.4 2	5.7	25.7 25.7
Cost for	surplus	NIS	W=F*U	Sub Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0
Bill for l	Friday&Feast Evening	NIS/day	X=V-W	Total	465.5																							
C	2020																											
Summer	r 2020			Data	Data						AN	1											PM					
					Output	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22 23
Load	Consumption	kWh	A	1790		74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6	74.6 7	4.6	74.6 74.6
Solar	Maximum Output	kW	В	75																								
	Output Rate for Solar	%	C			0	0	0	0	0	0	5	20	40	60	80	95	100	100	80	70	50	30	5	0	0	0	0 0
	Solar Generation	kWh	D=B*C	551.3		0.0	0.0	0.0	0.0	0.0	0.0	3.8	15.0	30.0	45.0	60.0	71.3	75.0	75.0	60.0	52.5	37.5	22.5	3.8	0.0		0.0	0.0 0.0
	Consumption	kWh	E=A-D (1			74.6	74.6	74.6	74.6	74.6	74.6		59.6	44.6	29.6	14.6	3.35	0	0	14.6	22.1	37.1	52.1 7		_			74.6 74.6
Surplus F		kWh	F=D-A (1	NLT 0)		0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4	0	0	0	0	0	0	0	0	0 0
	one for Working Days		G			A	A	A	A	A	A	A	В	В	В	С	С	C	С	С	C	C	В	В	В	В	Α	A A
	r consumption	NIS/kWh				0.377	0.377	0.377	0.377	0.377			0.541	0.541	0.541	1.189	1.189	1.189	1.189	1.189	1.189	1.189			_			0.377 0.377
Tariff for	•		I=H-0.12	Sub Total		0.257	0.257	0.257	0.257	0.257			0.421	_	0.421	1.069	1.069	1.069	1.069	1.069	1.069	1.069			_	0.421 0.		0.257 0.257
	consumption	NIS	J=E*H		608.2	28.1	28.1	28.1	28.1	28.1	28.1	26.7	32.2	24.1	16	17.4	4	0	0	17.4	26.3	44.1		38.3	40.3			28.1 28.1
Cost for	•	NIS	K=F*I	Sub Total	0.8	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.4	0	0	0	0	0	0	0	0	0 0
	Working Days e for Friday&Feast Evening	NIS/day	L=J-K M	Total	607.4					Α.		Α.		Α.				Α.	Α.	Α.		Α.				Α.	Α.	
	r consumption	NIS/kWh				0.377	0.377	A 0.377	A 0.377	A 0.377	A 0.377	A 0.377 0.	A 377	A A 0.377 0.377														
Tariff for		NIS/kWh		2		0.257	0.257	0.257	0.257	0.257			0.257		0.257	0.257	_			0.257	0.257	0.257			_			0.257 0.257
	consumption	NIS/KWII	P=E*N	Sub Total	467.2	28.1			28.1	28.1			22.5			5.5	1.3	0.257	0.257	5.5	8.3	14			_			28.1 28.1
Cost for	-	NIS	O=F*O	Sub Total	0.2	20.1	28.1	28.1	20.1	20.1	28.1	26.7	0	16.8	11.2	0.0	0		0.1	0.0	0.3	0	0	26.7	0	0	0.1	
	Friday&Feast Evening	NIS/day	R=P-Q	Total		U	U	U	U	U	U	U	U	U	U	U	U	0.1	0.1	U	U	U	U	U	U	U	U	0 0
	e for Saturday&Feast Days	1115/Uay	S S	ıotdi	-07.0	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	Α	A A
	r consumption	NIS/kWh				0.377	0.377	0.377	0.377	0.377			0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377	0.377						0.377 0.377
Tariff for		NIS/kWh		2		0.257	0.257	0.257	0.257	0.257			0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257	0.257			_			0.257 0.257
	consumption	NIS	V=E*T	Sub Total	467.2	28.1	28.1	28.1	28.1	28.1		26.7	22.5	16.8	11.2	5.5	1.3	0	0	5.5	8.3	14		26.7				28.1 28.1
Cost for	-	NIS	W=F*U	Sub Total	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0.0	0	0	0	0	0	0	0 0
	Friday&Feast Evening	NIS/day	X=V-W	Total	467.0																		-					
									_	_							_											

Table 8.14 Repair Cost by Equipment Based on Adjusted Cost Estimation (Unit: NIS)

Equipment No.		Vendor	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
M01-03-01/02	Fine Screen	Nishihara Environment	0	0	0	151,523	0	0	160,798	0	0	201,328	0	0	181,084	0	0
M02-02-01/02	Air Diffuser	Tsukishima Kikai	0	0	0	0	0	0		0	0	0	2,363,417	0	0	0	0
M02-08	Hoist Block for Blower	Elephant Chain Block	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M03-04	Hoist Block for Sludge Pumps	Elephant Chain Block	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M05-04	Hoist Block for Sludge Pumps	Elephant Chain Block	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-06-01/02	Grid Removal Pump	Furukawa Industrial Machinery Systems	0	0	0	5,317	0	0	37,468	0	0		0	0	38,588	0	0
M03-02-01/04	Return Sludge Pump	Furukawa Industrial Machinery Systems	0	0	0	26,933	0	12,095	0	237,458	0	280,893	0	17,780	0	252,158	0
M03-03-01/03	Waste Sludge Pump	Furukawa Industrial Machinery Systems	0	0	0	7,975	0	0	56,228	0	0	85,511	0	0	57,873	0	0
M05-02-01/03	Thickened Sludge Pump	Furukawa Industrial Machinery Systems	0	0	0	7,975	0	0	56,228	0	0	85,511	0	0	57,873	0	0
M01-02-01/02	Coarse Screen	Hitachi Plant Technologies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-04	Bypass Screen	Hitachi Plant Technologies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-05-01/02	Grid Collector	Hitachi Plant Technologies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-09	Oil Skimmer	Hitachi Plant Technologies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-15	Coarse screen for vacuum	Hitachi Plant Technologies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M03-01-01/02	Clarifier	Hitachi Plant Technologies	0	0	0	0	0	46,580	0	0	0	0	51,428	0	0	0	0
M05-01-01/02	Thickener	Hitachi Plant Technologies	0	0	0	0	0	28,724	0	4,200	0	0	31,714	0	0	0	4,824
M05-03	Waste Sludge Measuring Tank	Hitachi Plant Technologies	0	0	0	0	0	0	0	0	0	0	0	0_	0	0	0
M04-03	Utility Water Supply Unit	Kawamoto Pump Mfg.	0	0	0	4,396	0	0	33,352	0	0	81,895	0	0	4,896	0	0
M04-05-01/02	Defoarming Pump	Kawamoto Pump Mfg.	0	0	0	0	0	0	7,116	0	0	39,559	0	0	0	0	0
M01-01-01/03	Grid Chamber Inlet Gate	Maezawa Industries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-16	Bypass Gate	Maezawa Industries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M02-01-01/02	Inlet Distribution Weir	Maezawa Industries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M02-04-01/02	Outlet Gate	Maezawa Industries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M02-05-01	Isolation Gate	Maezawa Industries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-08	Grid separator	Maezawa Industries	0	0	0	0	0	0	0	286,732	0	0	0	0	0	0	0
M02-07-01/02	Air Supply Valve	Maezawa Industries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-07-01/02	Floor Drain Pump	Tsurumi Manufacturing	0	0	0	31,993	0	0	0	34,630	0	0	0	37,485	0	0	0
M01-10-01/02	Oil Discharge Pump	Tsurumi Manufacturing	0	0	0	31,060	0	0	0	33,620	0	0	0	36,392	0	0	0
M01-14-01/02	Wastewater Pump for Vacuum	Tsurumi Manufacturing	0	0	0	39,968	0	0	0	43,262	0	0	0	46,828	0	0	0
M03-05-01/02	Floor Drain Pump	Tsurumi Manufacturing	0	0	0	31,993	0	0	0	34,630	0	0	0	37,485	0	0	0
M03-06-01/02	Scum Pump	Tsurumi Manufacturing	0	0	0	39,968	0	0	0	43,262	0	0	0	46,828	0	0	0
M11-01-01/02	Circular Pump	Tsurumi Manufacturing	0	0	0	31,993	0	0	0	34,630	0	0	0	37,485	0	0	0
M01-13-01/02	Mixer	Tsurumi Manufacturing	0	0	0	75,215	0	0	0	50,885	0	0	0	55,079	0	0	0
M04-04-01/02	Auto strainer	Asahi Machine Mfg.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M01-11	Scum Screen	Nihon Inka	0	0	0	6,585	0	0	0	0	24,821	0	0	0	0	55,976	0
M01-12	Screenings Conveyor	Nihon Inka	0	0	0	8,048	0	0	0	0	32,494	0	0	0	0	71,457	0
M02-03-01/08	Reactor Tank Mixer	ShinMaywa Industries	0	0	0	250,411	0	0		1,686,962	0	0	0	293,396	0	0	0
M02-06-01/04	Aeration Blower	ShinMaywa Industries	0	0	0	46,731	0	0		0	0	862,059	0	0	55,848	0	0
M04-01	Hypochlorite Tank	Tacmina Corporation	0	0	0	40,731	0	0	208,903	0	0	68,276	0	0	0	0	0
M04-02-01/03	Hypochlorite Pump	Tachina Corporation	0	0	0	10,024	0	7,000	0	7,308	0	111,524	0	7,896	0	8,204	0
W104-02-01/03	Clarifier (Drive Unit)	Hanshin	0	0	0	10,024	0	7,000	0	7,508	0	255,700	0	7,890	0	0,204	46,389
					0	0		0			0	233,700	69.342	0	0	0	
	Thickener (Drive Unit)	Sumitomo	0	0			0		0	0							0
	Generator Spareparts		0	0	0	3,864	0	0	3,864	0	0	3,864	0	0	3,864	0	0
	Instrumentation Spareparts		0	0	0	62,178	0	0	0	0	0	0	0	62,178	0	0	0
0.1.001.00	UPS Battery	(15,372	q	0	0		15,372	0	0	0	0	15,372	O O	
Sub Total (Spare	eparts replacement)	CIT (C. VIII P. C. VIII)	0	0	0	889,522	0	94,399	623,959	2,497,579	72,687	2,133,121		678,832	400,026	403,167	51,213
0.1.00 . 1.00		Shipping cost (from Yokohama Port to Jericho)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sub Total (Ship)	ping) ⇒ Included in Spareparts repl		0	0	0	0	0	0	0	0	0		0	0	0	0	0
		SV cost for HITACHI (7days x 1personnel)	0	0	0	54,250	0	0		0	0	0	54,250	0	0	0	0
		SV cost for other manufactures (7days x lpersonnel)	0	0	0	54,250	0	0	0	0	0	0	54,250	0	0	0	0
Sub Total (Supe			0	0	0	108,500	0	0	0	0	0	0	108,500	0	0	0	0
	Total (Spare	parts+Shipping+SV)	0	0	0	998,022	0	94,399		2,497,579	72,687	2,133,121	2,624,401	678,832	400,026	403,167	51,213
		Total							1	10,577,406							
		Discount Factor of Submitted Cost	T														

Discount Factor of Submitted Cost Estimate

Fine Screen 0.5 Submersible pump 0.5 Blower 0.5 Air Diffuser

Non-submersible pump 0.5 Reactor Miyer 0.5 Instruments Spare 0.5 Others

Table 8.15 Repair Cost (Unit: NIS)

	Items		2014	2015	2016	2017	2018	2019	2020	Sum 2014-2020	Remark
	m³/day average	A	94	232	633	1,329	2,067	2,467	2,870	-	
Influent Wastewater	m ³ /year	В	14,296	84,680	231,678	485,085	754,455	900,455	1,050,420	-	B=A*365*5months/12months for 2014 B=A*365 for 2015,2017 and 2018 B=A*366 for 2016
Spare Parts Replacement	NIS	C	0	0	0	889,522	0	94,399	623,959	1,607,880	
Shipping	NIS	D	0	0	0	0	0	0	0	0	
Supervision	NIS	Е	0	0	0	108,500	0	0	0	108,500	
Total	NIS	F=C+D+E	0	0	0	998,022	0	94,399	623,959	1,716,380	
Adopted	NIS		0	0	85,819	858,190	85,819	171,638	514,914	1,716,380	Only the repair cost for 2017 is counted, which is allocated to the year 2016-2020 according to the ratio of 5%, 50%, 5%, 10% and 30% respectively.
				0%	5%	50%	5%	10%	30%		

Table 8.16 Chemicals Cost (Unit: NIS)

	Items		2014	2015	2016	2017	2018	2019	2020	Sum 2014-2020	Remark
	m³/day avera	age A	94	232	633	1,329	2,067	2,467	2,870	-	
Influent Wastewater	m ³ /year	В	14,296	84,680	231,678	485,085	754,455	900,455	1,050,420	- B	=A*365*5months/12months for 2014 =A*365 for 2015 and 2017-2019 =A*366 for 2016 and 2020
Unit Dose of Chemicals (Hypochlorine)	m^3/m^3	С	0.0000273	0.0000273	0.0000273	0.0000273	0.0000273	0.0000273	0.0000273	- D	ose of 0.18m ³ /d per 6,600 m ³ /d
Unit Cost of Chemicals	NIS/m ³	D	1,240	1,302	1,367	1,436	1,507	1,583	1,662	-	3NIS/kg=1,181NIS/m ³ as of 2013 nnually 5% increase)
Chemicals Cost	NIS	E=B*C*D	484	3,010	8,646	19,017	31,039	38,914	47,660	148,770	

8.2 Major Assumptions for Calculating Connection Fee

(1) Initial Setting

Connection fee was based on the area of building only, in order to avoid inequality when land-area-based fee was applied; i.e. the variance of land area is so big compared with that of building area as shown in **Figure 8.2** that any connection fee based on the area of land might cause inequality when applied in Jericho.

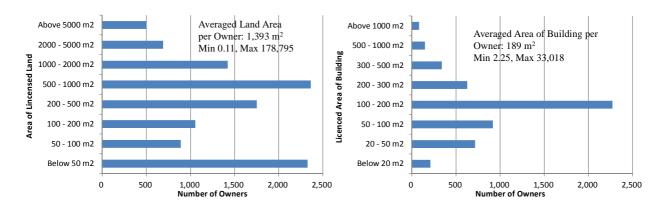


Figure 8.2 Distribution of Land Area and Building Area per Single Owner

The construction cost of connection pipe was calculated for all the water supply area in the Municipality, and the JICA grant for the Pilot Project was deducted. The unit price of construction per connection was estimated as shown in **Table 8.17**, and it was multiplied by the number of total water supply connections in 2012 (i.e. 5,264 connections). The construction cost of connection pipe thus calculated was divided by the sum of total building area in the Municipality, as shown in **Table 8.18**. The unit connection fee was calculated to be 12.7 NIS for every square meter of building floor, to recover all the construction cost of connection pipes, connection pits and receiving pits for the whole city water supply area.

Table 8.17 Unit Construction Cost from Sewer Manhole to Receiving Pit

Unit Cost Estimation (by Top Design Co., Ltd, as of July 2013) Description Unit Price (NIS) Ref Remark a Excavation for H=80cm and W=60cm QS #1 29 m QS #2 b Backfill by sand for H=55cm and W=60cm m 8 c Supply and install base coarse for H=20cm and W=60cm 15 QS #3 m d Supply and install asphalt for H=5cm m 42 QS #6 60cm; Cover 160NIS and installation 140NIS Supply and install manhole No 360 QS #4 60 QS #7 8 inch (ND 200mm) Supply and install pipes m Labor 16 QS #9 m QS #10 h Excavator m 25 QS #11 Profit and overhead Percentage of Total Cost 20%

Quantity	y and Total Price from Sewer Manhole to Receiving P	it			
	Description	Qty	Price (NIS)	Total Price (NIS)	Ref
aa Pij	peline	10	154	1,540 a+l	o+c+d+f
bb Ma	anhole	1	360	360 e	
cc La	bor	10	16	160 g	
dd Ex	ccavator	10	25	250 h	
ee To	otal Cost	-	-	2,310	
ff Pro	ofit and overhead	-	20%*ee	462 i	
gg VA	AT	-	15%*ee	347 j	
	otal price	Ť		3,119	
	·		· ·	· ·	· · · · · · · · · · · · · · · · · · ·

Table 8.18 Calculation of Connection Fee

Block # (from GIS data)	Building area (m ²	Remarks
33000	12,719.76	
33001	18,964.47	
33002	16,731.19	
33003	4,859.46	
33004	40,738.55	
33005	33,818.52	
33006	16,102.40	
33007	28,201.79	
33008	55,195.35	
33009	36,465.19	
33010	16,656.24	
33011	67,799.43	
33012	22,470.41	
33013	29,444.65	
33014	17,646.63	
33015	0.00	
33016	22,071.31	
33017	104,715.32	
33018	57,545.32	
33019	28,224.00	
33020	1,936.00	
33021	17,562.45	
33022	13,755.64	
33023	6,704.57	
33024	9,240.68	
33025	118,336.70	
33026	8,874.62	
33027	32,160.25	
33028	9,583.09	
33029	57,750.09	
33030	80,774.26	
33031	0.00	
33032	18,699.09	
Sum of total building area in the whole City: A	1,005,747.42 m ²	
Water Supply Connections in 2012 :B	5,264	
- Residential	4,799 Sum of	annual connections /6
- Commercial	465 Ditto	
Unit construction cost per connection: C	3,119 NIS/co	nnection
Construction cost for connection: D=B*C	16,418,416 NIS	
JICA Fund for Pilot Project Construction: E	3,600,000 NIS (10	00mJPY, 0.036NIS/JPY)
Construction cost disbursed by Jericho Municipality: F=D-E	12,818,416 NIS	
Unit Connection Fee: G=F/A	12.7 NIS/m	² of building

(2) Actual Cost of Connection

The actual construction cost from sewer manhole to receiving pit until July 2016 is calculated as shown in **Table 8.19** i.e. 2,801 NIS/Connection, which is smaller than the original estimation of 3,119 NIS/Connection by 10% as shown in **Table 8.18**. The unit cost per unit length of connection pipe is calculated as 196.3 NIS/m as shown in **Table 8.19**.

Table 8.19 Unit Construction Cost from Sewer Manhole to Receiving Pit (Actual)

No. Connection Area	Actual	Actual	Actual Cost	Unit Cost per	Unit Cost per
Tto. Connection / freu	Length	Cost	Adjusted	Connection	Connection
	•	B (NIS)	C (NIS)	D=B/A(NIS/m)	E=C/A(NIS/m)
1 Rami Erikat	A (m)		ì		
	3	581	431	193.7	143.7
2 Mehdi Nazmi Abdo	3	816	666	272.0	
3 Fadwa Ashraf	6	1,234	1,009	205.7	168.2
4 Atef Damen Alawawdah	40	8,650	8,050	216.3	201.3
5 Telecommunications	78	16,742	16,742	214.6	214.6
6 Sameer Awajneh	3	588	438	196.0	146.0
7 Zuher Manasrah	13	4,382	3,782	337.1	290.9
8 Jabrah Elias, Theib Idrees	19	2,170	2,020	114.2	106.3
9 Mahmoud Azezah	6	1,081	781	180.2	130.2
10 Ashraf Abdallah	6	1,437	1,137	239.5	189.5
11 Yasmeen Ayyad	30	5,460	4,935	182.0	164.5
12 Khaled Balo	5	1,127	902	225.4	180.4
14 Anton Barakat	7	1,323	1,323	189.0	189.0
18 Mohammed Alhohary	8	1,402	1,402	175.3	175.3
19 Saad Awajneh	30	8,645	8,420	288.2	280.7
a2 Nesmah Areiha	21	4,737	4,737	225.6	225.6
a3 Mahmoud Daabes	15	4,000	4,000	266.7	266.7
a4 Aldel Kareem Yaseen	40	6,378	6,378	159.5	159.5
a5 Lounge	23.5	3,445	3,445	146.6	146.6
a7 Coptic Monastry	7	2,103	2,103	300.4	300.4
a9 Khaled Abdel Kareem Jalaytah	7	1,116	1,116	159.4	159.4
a10 Jacob Tahhan	29	3,454	3,454	119.1	119.1
a11 Mosaab Qurei	24	6,812	6,812	283.8	283.8
a12 Zein Alabdeen Moghrabi	1	172	172	172.0	172.0
a13 Ibrahim Rasem Oudah	6	825	825	137.5	137.5
a15 Alyarmouk Building	10	5,000	5,000	500.0	500.0
a16 Khaleel Qoraishy	3	366	366	122.0	122.0
a17 Ramadan Fetyani	6	1,857	1,857	309.5	309.5
a18 Raed Masaada	35	7,065	7,065	201.9	201.9
a20 Mohammed Barahmeh	2	269	269	134.5	134.5
a21 Suad Jalaytah	4	1,538	1,538	384.5	384.5
a22 Yaghi Builiding	10	1,812	1,812	181.2	181.2
a24 Abdel Kareem Qoraishy	2	361	361	180.5	180.5
a26 Somayah Alsahhar	3	366	366	122.0	122.0
a27 Mousa Jadallah	10	2,895	2,895	289.5	289.5
a28 Akram Balbisi	3	366	366	122.0	122.0
a29 Saleh Ibtahim Jalaytah	2	269	269	134.5	134.5
a31 General Intelligence Bldg.	25	5,409	5,409	216.4	216.4
a32 Wael Jaabari	3	1,591	1,591	530.3	530.3
a35 Tanya Nasser Shukri	24	3,778	3,778	157.4	157.4
a36 Ghassan Maraqa, Mahmoud Ayyad	80	10,744	10,744	134.3	134.3
a37 Mohammed Mesbah Shehada	6	3,228	3,228	538.0	
a38 Aleman Mosque	3	516	516	172.0	
a39 Essa Daabed	3	441	441	147.0	***************************************
a40 Mohammed Khateeb	6	2,874	2,874	479.0	
a41 Kamel Sonoqrot	26	3,122	3,122	120.1	120.1
a42 Intelligence Prison	3	441	441	147.0	
a46 Jamal Aldeen Alsahouri	15	2,082	2,082	138.8	***************************************
a47 Barakat Jaber	2	589	589	294.5	
a48 Lameed Alalami	8	200	200	25.0	
a49 Mohammed Atallah Jaber	3	585	585	195.0	
- Sum	727.5	146,444	142,844	1,5.0	1,5.0
				201.2	1063
- Average	14.3	2,871	2,801	201.3	196.3

(Note) Actual Cost was adjusted for #1- #19 in column "C" by reducing the working hours of the bagger up to the original estimation.

8.3 Job Description

The job description was developed for the chief positions of sewerage management, but not including the personnel belonging to the general administration sections (Human Resources, Public Relations, Quality Management and ICT) and financial sections (Financial Accounting and Revenue Collection), who should closely cooperate with the personnel of Sewerage Section for the integrated and effective service provision.

8.3.1 Head of Sewerage Section

Powers: Administrative; Financial; Technical

Job Title: Head of Sewerage Section	Job ID:
Who is responsible for: Director of	Administrative Subordination: Water and SewerageDepartment
Water and Sewerage Department	
Version Number: (1/00)	Version Date:
Main Responsibilities	Basic Activities
Executing programs and plans of the sewerage service	 Prepare the plans and the work program to implement the sewerage project. Follow up the sewerage project in the city in terms of (plan, scope, designs, the various, budget). Participate in the preparation of the main plans to implement the sewerage project in the city. Follow up the progress in the project stages and provide all the necessary reports to describe the project progress. Coordinate and contact with the funders of the projects. Coordinate and contact with the companies and contractors who implement the project. Find out and follow up the development ways of the sewerage service in the city to ensure the full coverage of the service. Implement workshops to beneficiaries and prepare the guideline pamphlets for the sewerage service. Prepare and submit the technical papers and present it in the seminars and technical conferences to support developing the service in the city. Prepare an annual public awareness program and conduct the program to use sewers properly. Selection of years and prepare to fraveing treated westerwater.
2. Sewerage service management	 Selection of users and management of reusing treated wastewater. Follow up the process of establishment and maintenance of the sewers in the city. Follow up the house connection process to the public sewer network according to the specified criteria. Evaluate the alternatives of using the treated wastewater in the city with beneficiaries. Find out and follow up the residents' complaints. Implement the various studies relating to the sewerage service (tariff, service level and coverage, the amount of received wastewater and the amount of treated wastewater.
3. Operating and maintenance the wastewater treatment plant and the sewer network	 Follow up the implementation of periodic maintenance for the sewer network and the wastewater treatment plant. Follow up the corrective maintenance works for the sewer network and thewastewatertreatment plant. Follow up repairing the faults and malfunctions in the sewer network and wastewater treatment plant. Daily supervision (periodic) of operation of the wastewater treatment plant and ensure its safety.
4. Developing the work in the section	 Prepare and implement the strategic studies for the sewerage service. Evaluate the performance of the section staff and submit it to the director of the department for approval. Identify the required training of the section staff. Prepare periodic reports for the sewerage service. Perform any other works related to sewerage service assigned by the director of the Water and Sewerage department. Follow up developing computerized systems of the sewerage service in the city.

8.3.2 Head of Sewer Network Maintenance

Job Title: Head of Sewer Network and House Connection Division	Job ID:
Who is responsible for: Head of Sew-	Administrative Subordination: Water and Sewerage Department
erage Section	W ' D
Version Number: (1/00)	Version Date:
Main Responsibilities	Basic Activities
Sewer networks and houseconnection (public and domestic)	 Prepare work programs of sewer extension plan in the city. Participate in the preparation of necessary schemes and designs for sanitation projects. Follow up the implementation of the main plans for the sanitation projects (connection, manholes and maintenance). Follow up the achievement level in the stages of sanitation projects activities and provide all the necessary reports to describe the achievement state. Implement the processes of periodic inspection and following up of the public sewer networks and manholes. Prepare and follow up the technical designs (standards) of the house connections. Follow up the implementation of sewer connection requests (domestic connectors). Follow up the connection pipe maintenance of the domestic/commercial/industrial to make sure of the achievement in proper method. Implement the processes of regular inspection of the domestic connectors. Treatment of customer complaints. Monitor and prevent from illegal house connections. Manage house connection work from user's premises/buildings to public sewer when a user applies to a new house connection. Follow up the cleaning process of sewer networks.
2. Other Tasks	 Follow up data entry of the division work on the computerized system. Prepare periodic and necessary reports. Evaluate the staff of the division. Perform any other tasks within the range of related works assigned by the director and/or section chief.

Powers: Administrative; Financial; Technical

8.3.3 Head of WWTP

Job Title : Head of Wastewater Treatment Plant	Job ID:
Who is responsible for: Head of Sewerage Section	Administrative Subordination: Water and Sewerage Department
Version Number: (1/00)	Version Date:
Main Responsibilities	Basic Activities
1. Work plans	 Prepare the annual plan and the estimated budget for the treatment plant work. Prepare the plant work programs and operational equipment. Follow up preparation the technical regulations for wastewater laboratory including determining the maximum acceptable of the daily and periodic tests results.
Operate and follow up the treatment plant	 Operate, follow up and direct and continuous supervise for wastewater treatment plant work. Monitor the levels of wastewater flow to the plant and taking precautions to prevent the misuse of the work in the plant or exceed the facility capacities and standards. Analyze daily routine reports submitted by the workers in the plant and take necessary technical actions and follow up taking the administrative actions by the head of the section. Conduct regular inspection processes for all the facility assets and make sure the proper implementation according to regulations, manuals and other instructions.
3. Follow up the corrective and preventive maintenance for the wastewater treatment plant	 Follow up the preventive technical inspection for all the operation elements in the wastewater treatment plant and follow up providing the necessary maintenance. Follow up conducting the necessary corrective maintenance processes as quickly as possible to avoid any crashes or improper work in the wastewater treatment plant.

4. Other Tasks	 Follow up organizing the files of the plant work and maintain all the data of the plant. Guide educational facility tour for visitors in the wastewater treatment plant Follow up data entry of the plant work on the computerized system of the plant operation and maintenance. Prepare periodic and emergency reports about the plant work.
	Evaluate the staff of the plant.
	Perform any other tasks within the range of the work assigned by the responsible.

Powers: Administrative; Financial; Technical

8.3.4 Maintenance Staff of WWTP

Job Title: Maintenance employee of Job ID:		
r		
the Plant		
Who is responsible for: The Respon- Administrati	Administrative Subordination: Sanitary Section	
sible of Wastewater Treatment Plant	·	
Division		
Version Number: (1/01) Version Date	v	
Main Responsibilities	Basic Activities	
Prepare n Conduct tems of th Conduct tion with Ongoing maintena Prepare th various p In case of tion of eq immediat When sto approval When deg section cl Inspection treatment Operation Record th Record m ledgers.	maintenance and operation budget for the wastewater treatment plant. periodic inspection (preventive) and control the facilityparts and the system plant in cooperation with the operator and/or worker. corrective maintenance works for the facilityparts of the plant in cooperathe operator and/or worker. coordination with the plants' operators before and during conducting the nace works. The regular reports describing the technical situation of the plant with its arts. The emergency such as deterioration of treated wastewater quality, malfunctupingment, power failure and so on, report to the manager and section chief ely and then follow their instructions. The piping and resuming whole of the wastewater treatment plant, obtain the of the manager and/or the section chief. The picting malfunction in regular inspection, inform the manager and/or the nief of it immediately, and then follow their instructions. The picting malfunction in regular inspection, inform the manager and/or the nief of it immediately, and then follow their instructions. The picting malfunction in regular inspection, inform the manager and/or the nief of it immediately, and then follow their instructions. The picting malfunction in regular inspection, inform the manager and/or the nief of it immediately, and then follow their instructions.	

8.3.5 Operator of WWTP

Job Title: The Operator of the	Version Number: (1/00)
Wastewater Treatment Plant	
Who is responsible for: The Re-	Version Date:
sponsible of the Wastewater Treat-	
ment Plant Division	
Main Responsibilities	Basic Activities
1. Operate the plant technically	Maintain and operate the units of wastewater treatment process and evaluate it.
	Follow up the facility operation through the control room.
	• Conduct periodic inspection for all processes in the plant and inform the section
	chief and manager of the plant operation status.
	Prepare the operation and maintenance reports which record the wastewater treatment progress.
	• In case of emergency such as deterioration of treated wastewater quality, malfunction of equipment, power failure and so on, report to the manager and section chief immediately and then follow their instructions.
	Get approval from the manager and/or the section chief, when stoppping and resum-

	 ing whole of the wastewater treatment plant. When finding any malfunction in the regular inspection, inform the manager and/or the section chief of it immediately, and then follow their instructions. Inspect, adjust, maintain and clean equipment in the wastewater treatment plant.
	 Operate and monitor the wastewater treatment plant.
	 Record the operation data, inspection results on record sheets.
	• Guide educational facility tour for visitors in the wastewater treatment plant.
2. Other tasks	Prepare the periodic reports.
	 Perform any other tasks within the scope of the works assigned by the responsible
	person.

Powers: Administrative; Financial; Technical

8.3.6 Worker/Guard of WWTP

Job Title : The Worker/Guard in the	Job ID:
Wastewater Treatment Plant	
Who is responsible for: The Re-	Administrative Subordination: Sewerage Section
sponsible of the Wastewater Treat-	
ment Plant Division	
Version Number: (1/00)	Version Date:
Main Responsibilities	Basic Activities
 Cleaning, material transfer and 	• Convey dry sludge from the wastewater treatment plant to another site such as
other tasks	dumping site.
	Remove detritus from a grid chamber at the wastewater treatment plant.
	Clean rooms in the buildings at the wastewater treatment plant.
	Clean the garden and yard in the wastewater treatment plant.
	Maintain trees in the wastewater treatment plant.
	Perform any other tasks within the scope of the works assigned by the responsible
	person.
Guard the Wastewater Treatment	• Protect the site and prevent a non-staff from entering the wastewater treatment plant.
Plant	• Protect the assets of the plant and prevent from getting out any material and equip-
	ment except the permission of the manager and/or section chief.
	• Inspect the assets of the plant periodically and immediately report it to the manager
	and/or section chief when any problem occurred.
	• Perform any other task within the scope of the work assigned by the director and/or section chief.

Powers: Administrative; Financial; Technical

8.3.7 Laboratory

Job Title : The Treated Wastewater	Job ID:
Laboratory	
Who is responsible for:	Administrative Subordination:
Version Number:	Version Date:
Main Responsibilities	Basic Activities
Conduct water quality tests at the laboratory	 Conduct periodic sampling of the wastewater at the inflow point of the wastewater treatment plant and the wastewater at the final discharge point from the wastewater treatment plant. Conduct required water quality tests according to standard specifications. Conduct treated wastewater quality test. Report the water quality test results to the Sewerage Section Prepare the periodic reports. Test water quality and sewage sludge, and monitor inflow water quality. Maintain computers, reagents and water quality test equipment in the laboratory.
2. Other Tasks	 Evaluate the performance of the staff in the division. Perform any other tasks within the scope of the work assigned by the director and/or section chief.

Powers: Administrative; Financial; Technical