

添 付 資 料

MINUTES OF MEETING
FOR
PROJECT FORMATION STUDY
ON
PHOTOVOLTAIC RURAL ELECTRIFICATION PROJECT
IN
THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

AGREED UPON BETWEEN
MINISTRY OF INDUSTRY AND HANDICRAFTS
OF THE LAO PEOPLE'S DEMOCRATIC REPUBLIC
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

VIENTIANE, NOVEMBER 21, 1997



Mr. Houmphone Bulyaphol
Director,
Department of Electricity,
Ministry of Industry and Handicrafts



Mr. Hiroshi Hirota
Leader,
Project Formation Study Team,
JICA

The Project Formation Study Team for Master Plan Study on Photovoltaic (hereinafter referred to as "PV") Rural Electrification Project in the Lao People's Democratic Republic dispatched by the Japan International Cooperation Agency (hereinafter referred to as "the JICA Study Team") had a series of discussions on the above-mentioned Study in Vientiane with the officials of the Ministry of Industry and Handicrafts (hereinafter referred to as "MIH") and other relevant officials of the Government of Laos from November 17 to 21, 1997.

Discussions were conducted in a friendly and cordial atmosphere and both side agreed to record the following points as summarized conclusions of the discussions;

1. Objective of the Study

The Objective of the study is to formulate a Master Plan on PV rural electrification through the installation, monitoring and assessment of PV systems in the selected unelectrified area as the pilot project, so that the electrification in those area could be promoted.

2. Counterpart

The counter part of the JICA Study Team is MIH. Upon considering the nature of the Study, The Director of Electricity of MIH is responsible for coordinating and involving concerned organizations in order to implement the Study effectively and efficiently.

3. Steering Committee

Department of Electricity will organize a Steering Committee, which will be composed of the representatives from Electricite du Laos and The Science Technology and Environment Organization (STENO), so that the concerned organizations could be involved during the course of the Study.

4. Study Area

The Study covers the whole country of Lao People's Democratic Republic in terms with institutional study. However, installation and monitoring of Photovoltaic systems will be commenced in the selected area.

5. Scope of the Study

The Study aims to evaluate the potential of PV rural electrification through pilot installation and monitoring of PV systems. The tentative schedule is shown in the annex attached.

Preliminary Investigation Stage

In order to identify the present situation of rural electrification, the following investigation and preparation work will be carried out.

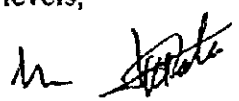
- 1) Collection and review of the relevant data and information including previous study reports.
- 2) Review of the existing development framework in Lao P.D.R..
- 3) Review of rural electrification policy in Lao P.D.R. and role of EDL in rural electrification.
- 4) Identification and survey of unelectrified villages and institutions for the installation of PV systems.
- 5) Selection of the target area for installation.
- 6) Preparation works for the installation and maintenance of PV systems and measurement equipments.

Installation and Monitoring Stage

In order to evaluate the potential of PV systems in terms of both supplier and users.

- 1) Assessment of socio-economic environment of the villages and institutions for PV rural electrification.

Socio-economic conditions of the villages such as source of income, seasonal income levels,



willingness and ability to pay for electricity and disposable incomes, which influence the demand and sustainable management of PV systems

- 2) Evaluation of present user's knowledge and maintenance skill on PV systems and recommend the appropriate training scheme.
- 3) Evaluation of present institutional infrastructure related to the PV electrification and make a recommendations on the ideal system.
- 4) Evaluation of the technical level of management and maintenance staff and recommend an ideal training system.
- 5) Evaluation of the incentive structure including the electricity tariff and tax exemption etc.

Master Plan Formulation Stage

Based on the results of the monitoring and evaluations on the application of PV systems in the selected area, the potential of PV rural electrification will be assessed from an economic, financial and institutional point of view. Appropriate measures and incentive programs for PV rural electrification will be formulated, after the above assessment in the targeted area will be scaled up to the country level.

6. Pilot Installation

1) Site Selection

The site of pilot installation will be determined by the mutual agreement of the both sides.

2) Ownership

JICA has the ownership of installed PV systems and measurement equipments until the Study is completed. After completion of the Study, the ownership will be transferred to MIH.

3) Installation

The cost of equipment and installation will be borne by JICA.

4) Monitoring

MIH assists JICA study team to monitor installed PV systems.

5) Electricity Charge and Collection System

Electricity charges will be collected from the households and institutions where pilot PV systems are installed. MIH will prepare the tariff and collection system in cooperation with JICA before the installation work starts.

6) Maintenance

MIH or relevant organization will be responsible for maintenance of the installed PV systems.

7. Technology Transfer

Workshops for relevant officials will be held in order to improve their present technology to install and maintain PV systems.

8. Seminars

Seminars will be held in order to publicize the benefits of PV installation, and enhance the awareness for rural electrification. During the seminars the opinions of other concerned organization such as other ministries, donor agencies, NGOs and ordinary people will be recognized.

9. Training in Japan

MIH requested relevant technical training be made in Japan.

10. Terms of Reference

The both sides agreed that Terms of Reference on this project should be submitted to Embassy of Japan in the earliest time of this year from the Government of Lao P.D.R. so that the project could be started in 1998.

II. This Minutes of Meeting is subject to approved by higher authority of the Government of the Lao P.D.R..

W. J. ...

Photovoltaic Rural Electrification Project in the Lao P.D.R.
Tentative Project Schedule

Project Month	1997												1998												1999												2000												
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
Year	1997												1998												1999												2000												
Calendar Month	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	
Project Formation Study																																																	
Preliminary Study																																																	
Procurement of Equipments																																																	
Selection of Consultants																																																	
Full Scale Study (I)																																																	
Installation of PV systems																																																	
Full Scale Study (II)																																																	
Full Scale Study (III)																																																	
Workshop																																																	
Seminar																																																	
Counterpart Training																																																	
Reports																																																	

Full Scale Study (I): Institutional Survey
 Full Scale Study (II): Monitoring and Evaluation of PV
 Full Scale Study (III): Formulation of a master plan

lc: Inception Report
 Pr: Progress Report
 It: Interim Report
 Df: Draft Final Report
 F: Final Report

資料2. Electricity Consumption and Planned up to 2000

ELECTRICITY CONSUMPTION AND PLANNED UP TO 2000

No:	Name of provinces	Number of				Electricity supplied in 1996										Will be increased in 1996-2000										Plan up to 2000			
		Districts	Villages	Households	Population	Districts	%	Villages	%	Households	%	Districts	%	Villages	%	Households	%	Districts	%	Villages	%	Households	%	Districts	%	Villages	%	Households	%
1	V.1 municipality	9	486	88,863	531,109	9	100	379	78	78,229	88	0	0	73	15	11,752	15.2	9	100	452	93	89,981	101						
2	Phongsali	7	664	24,833	152,820	3	42.9	17	2.56	697	2.8	4	57.1	20	3.01	1,600	6.44	7	100	37	5.5	2,297	9.2						
3	Loangnamtha	5	484	20,560	114,519	2	40	19	3.93	1,226	6	3	60	42	8.68	4,774	23.2	5	100	61	13	6,000	29						
4	Oudomsay	7	813	29,043	210,820	2	28.6	27	3.32	1,200	4.1	5	71.4	98	12.1	4,827	16.6	7	100	125	15	6,027	21						
5	Sokeo	5	399	19,664	113,493	2	40	9	2.26	925	4.7	3	60	102	25.6	8,500	43.2	5	100	111	28	9,425	48						
6	Huaphan	6	914	36,090	246,414	3	50	90	9.85	7,032	19	3	50	69	7.55	5,740	15.9	6	100	159	17	12,772	35						
7	Loangprabang	11	839	59,513	365,333	1	9.09	49	5.84	4,653	7.8	10	90.9	106	12.6	6,881	11.6	11	100	155	18	11,534	19						
8	Xayabury	9	579	49,337	291,705	4	44.4	69	11.9	6,455	13	5	55.6	73	12.6	5,333	11.2	9	100	142	25	11,988	24						
9	Xiengkhuang	7	506	29,793	199,816	1	14.3	63	12.5	4,157	14	6	85.7	115	22.7	8,300	27.9	7	100	178	35	12,457	42						
10	Vientiane	8	503	49,075	297,891	6	75	147	29.2	12,291	25	2	25	71	14.1	5,744	11.7	8	100	218	43	18,035	37						
11	Borikhamxai	6	485	27,779	160,838	3	50	38	7.84	1,637	5.9	3	50	78	16.1	6,927	24.9	6	100	116	24	8,564	31						
12	Khammouan	9	911	49,837	273,779	7	77.8	114	12.5	8,874	18	2	22.2	130	14.3	8,940	17.9	9	100	244	27	17,814	36						
13	Savannakhet	15	1,576	106,856	671,581	7	46.7	85	5.39	17,389	16	8	53.3	253	18.6	23,764	22.2	15	100	378	24	41,153	39						
14	Saravane	8	742	42,381	256,550	3	37.5	35	4.72	3,727	8.8	5	62.5	116	15.6	9,240	21.8	8	100	151	20	12,967	31						
15	Sekong	4	337	9,520	63,836	1	25	7	2.08	712	7.5	3	75	23	6.82	1,270	13.3	4	100	30	6.9	1,982	21						
16	Champasak	10	896	84,225	501,061	6	60	106	11.8	12,565	15	4	40	381	42.5	49,156	58.4	10	100	487	54	61,721	73						
17	Attapeu	5	190	15,167	87,182	1	20	5	2.63	499	3.3	4	80	15	7.89	1,200	7.91	5	100	20	11	1,699	11						
18	Special region	5	129	8,285	54,112	1	20	1	0.78	91	1.1	4	80	20	15.5	1,400	16.9	5	100	21	16	1,491	18						
	TOTAL	136	11,453	760,843	4,529,856	62	46.6	1,260	11	162,359	22	74	64.4	1,825	16.9	165,548	22	136	100	3,085	27	327,907	44						

Energy Generation and Consumption In The Lao PDR

資料3. Energy Generation and Consumption in the Lao PDR

Table 2.3

Area	Source	1991		1992		1993	
		GWh	%	GWh	%	GWh	%
Generation							
Vientiane	Hydro	683.4	78.4	604.4	76.1	673	77.8
	Diesel	n/a		n/a		n/a	
Other Areas	Import	34.9	4	40.5	5.1	43	5
	Hydro	153	17.6	149	18.8	149	71.2
	Diesel	n/a		n/a		n/a	
Total		871.3	100	793.9	100	865	100
Consumption							
Vientiane	Consumption	180	20.7	202	25.4	211	24.4
	Export	435.4	50	340.3	42.9	412.9	47.7
Other Areas	Consumption	46	5.3	55	6.9	58	6.7
	Export	126.6	14.5	119.4	15	91.4	10.6
	Losses	83.3	9.5	77.2	9.8	91.7	10.6
Total		871.3	100	793.9	100	865	100

Forecast Domestic Generation Requirements In The Lao PDR

Table 2.1

Year	Northern Grid (Nam Ngum 1)		Central Grid (Import)		Southern Grid (Xeset)		Total	
	GWh	MW	GWh	MW	GWh	MW	GWh	MW
1994	230.31	58.00	52.17	14.40	18.50	4.04	300.98	73.44
1995	231.33	59.11	52.94	11.57	18.68	4.08	302.95	74.76
1996	243.00	61.65	53.70	11.73	18.86	4.12	315.56	77.50
1997	258.00	65.45	54.47	11.90	19.05	4.16	331.52	81.51
1998	279.00	70.78	55.23	12.07	19.23	4.20	353.46	87.05
1999	293.00	74.33	56.00	12.24	20.00	4.37	369.00	90.94
2000	316.00	80.17	60.00	13.11	22.00	4.81	398.00	98.09
2001	341.00	86.51	65.00	14.20	24.00	5.24	430.00	105.95
2002	369.00	93.62	70.00	15.30	26.00	5.68	465.00	114.60
2003	389.00	100.97	76.00	16.61	28.00	6.12	502.00	123.70
2004	430.00	109.09	82.00	17.92	30.00	6.56	542.00	133.57
2005	464.00	117.72	88.00	19.23	32.00	6.99	584.00	143.94
2006	502.00	127.36	95.00	20.76	35.00	7.65	632.00	155.77
2007	542.00	137.51	103.00	22.51	38.00	8.30	683.00	168.32
2008	585.00	148.41	111.00	24.26	41.00	8.96	737.00	181.63
2009	632.00	160.34	120.00	26.22	44.00	9.61	796.00	196.17
2010	682.00	173.02	130.00	28.41	48.00	10.94	860.00	211.92

Source: Electricite' du Lao, Vientiane, Lao PDR, Jul 1994

THE ELECTRICITY LAW

Adopted by the National Assembly 12 April 1997
Promulgated by the President of the State 31 May 1997
Effective 29 August 1997
(90 days from promulgation -- 31 May 1997)

Unofficial Translation by:

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Unofficial Translation

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Executive Decree of the President

(National Seal)

Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

No. 34/PDR

EXECUTIVE DECREE
of the
PRESIDENT
of the
LAO PEOPLE'S DEMOCRATIC REPUBLIC

On the promulgation of the Electricity Law

- Pursuant to Section V, Article 53, clause 1 of the Constitution of the Lao People's Democratic Republic;
- Based on the Resolution of the 10th ordinary session of the National Assembly, 111rd Congress on the adoption of the Land Law No. 02-97/NA, dated 12 April 1997;
- Based upon the application of the Standing Committee of the National Assembly, No. 15/SC, dated 7 May 1997.

The President of the
Lao People's Democratic Republic
decrees:

Article 1: The promulgation of the Electricity Law.

Article 2: This Executive Decree is effective from the day it is signed.

Vientiane, 31 May 1997

(seal of the President of the Lao People's Democratic)
(signature)
Nouhak Phoumsavan

(National Seal)

Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

National Assembly

No. 02/97/NA
Date: 12/4/97

THE ELECTRICITY LAW

Chapter I

General Provisions

Article 1: Function of the Electricity Law

The Law on Electricity has the function of determining a regime for the administration, production, transmission and distribution of electricity, including export and import through the use of a highly productive natural resources potential to contribute to the implementation of the national socio-economic development plan and to upgrade the living standards of the people.

Article 2: Electricity

Electricity is a type of energy comprised of electricity, electrical currents, electrical intensity, and electrical energy produced by physical sources of electrical energy: water power, wind power, solar power, petroleum and coal. Electrical power from other sources is not included in this Law.

Article 3: Electricity Ownership

Physical sources of electricity throughout the Lao PDR are the property of the national community and the State administers, preserves, and conservatively uses such on a long term and productive basis.

Article 4: Promotion of Electrical Power Production and Development

The State promotes all sectors of the economy in investing in the production of electricity to meet the demands of the peoples in urban and rural areas, including the development of electricity as an exportable commodity.

Article 5: Protection of the Rights and Interests of Electricity Investors and Users

The State protects the rights and interests of those investing in electricity enterprises and users of electricity according to the laws and regulations of the Lao PDR.

Article 6: Environmental Protection

The undertaking of the electricity business commencing from the survey, agreement upon the size as well as the construction and the expansion of electricity must ensure economic productivity as well as ~~projections of environmental impact~~ the natural environment, the ecological system, limiting social impact and wildlife habitats.

Article 7: Foreign Cooperation

The State has broadened foreign cooperation relative to the production, distribution, export and import and the development of electrical activities according to the law on the Promotion and Management of Foreign Investment in the Lao PDR.

Chapter II Electricity Activities

Article 8: Electricity Activities

Electricity activities are undertakings relative to the survey, data collection, design, construction and installation, production, transmission and distribution, export and import, development and other services relative to electricity.

Article 9: Sizes of Electricity Enterprises

Electricity enterprises in the Lao PDR are divided into four sizes as follows:

1. Electricity with an installed capacity of more than fifty thousand (50,000) kilowatts is proposed by the Government to the National Assembly for approval;
2. Electricity with an installed capacity of more than two thousand (2,000) - fifty thousand (50,000) kilowatts is approved by the Government;
3. Electricity with an installed capacity of more than one hundred (100) - two thousand (2,000) kilowatts is approved by the provincial, prefectural or special zone administrative authorities according to approval from the Ministry of Industry and Handicraft;
4. Electricity with an installed capacity of less than one hundred (100) kilowatts is approved by the district administrative authorities with the approval of the province, the prefecture or the special zone.

Chapter III Electricity Activities Concessions

Article 10: Investment in Electricity Activities

The State promotes investment in electricity activities with emphasis upon hydropower to use water sources which are a natural resources potential.

Investment in electricity activities may be undertaken by many different types of enterprises as follows:

1. The State invests alone
2. The State invests with other domestic or foreign parties;
3. A investor invests in a cooperative investment or privately within the country ← has investors only

Enterprises related to electricity activities may undertake [their activities] in the following forms:

1. Build, operate, and transfer (BOT)
2. Build, operate, own and transfer (BOOT)
3. Build, transfer, and finance (BTF)
4. State operated allowing the State electricity company to be the representative
5. Investment in some other form

Article 11: Concessions for Electricity Enterprises

All persons or organizations who seek to operate an electricity enterprise relative to the production, transmission and distribution, export and import or development of electricity must request a concession from the Government of the Lao PDR and must request approval to establish and register an enterprise as provided for in the Business Law.

Article 12: Procedures for Requesting a Concession

Requests [to establish] electricity enterprise concessions are comprised of studies, evaluation of the project, survey of initial data, application for investment, consideration of the investment application, a signing of a memorandum of association, survey, drafting of a feasibility study, an environmental impact assessment statement, consideration and approval of the concession and other works the procedures of which the Ministry of Industry and Handicrafts shall determine in detail.

The Government of the Lao PDR shall participate in the shareholding when there is a concession for an electricity enterprise.

Article 13: Feasibility Studies

Feasibility studies are comprised of the following contents:

1. Socio-Economic Results
2. Maximum producible electrical power
3. Estimated project value
4. Estimated project term and the life of the dam or estimated term and life of some other electrical system
5. Estimated electricity price
6. Plans and operation phases: construction, installation, and time period for commencing electricity supply

Article 14: Environmental Impact Assessment

Along with the feasibility study, the investor must draft an environmental impact assessment which shall be comprised of the following contents:

1. projection of environmental impacts in each case by proposing a methodology, relief measures or a means to minimize the adverse impacts upon the environment, ecology, society and wildlife habitats;
2. estimate the damage and the movement of peoples who will be affected by the electricity project to conduct their production [activities] somewhere else;
3. means to limit the impact upon the water volume below the hydropower dam, which is a major direct contributor to increased flooding during rainy season, by excavating a drainage ditch to divert the water if necessary or by some other means;
4. calculation of expenses for repairs provided for in clauses 1, 2, and 3 of this Article must be incorporated into the capital of the project.

Article 15. Conditions of those who will receive Concessions

Those who shall receive concessions must meet the following conditions:

1. Have financial and technical ability
2. Have a good and reputable business background;
3. The project must be productive economically and socially;
4. The concession must comply with the National Socio-Economic Development Plan and must not create adverse environmental impacts

When a concession applicant meets all of the conditions, the Government will consider the grant of a concession.

Article 16: Concession Term

Concession terms are not to exceed thirty (30) years, including the construction period, which shall commence from the date of concession approval. After the concession period has expired, the

concessionaire must transfer the entire enterprise back to the Government in a good and operational condition without any compensation whatsoever.

Concession terms may be extended, but shall not exceed 10 (ten) years as agreed to by the Government. Requests to extend concessions must be submitted five (5) years before the expiration of the concession.

Article 17: Rights of the Concessionaire

Concessionaires of electricity enterprises have the following rights:

- 1 Lease land necessary for the operations of the electricity enterprise, but before there is use of other resources on the leased land, there must first be Government approval [to use such].
- 2 To receive benefits from the concession'
- 3 To receive protection under the law
- 4 To receive technical and technological instructions from the Government relative to electricity
- 5 Request an extension to the concession term
- 6 Transfer or succeed to an electricity enterprise according to agreement by the Government

Article 18: Obligations of Concessionaires

Electricity enterprise concessionaires have the following major obligations:

1. Operate enterprises properly and in accordance with the conditions of the concession
2. Deposit a guarantee with the Bank of the Lao PDR
3. Import registered capital as foreign currency into the Lao PDR according to laws and regulations and according to the foreign investment contract
4. Protect the environment
5. Keep accounts as provided in the Enterprise Accounting Law;
6. Timely and completely pay taxes and duties and other obligations according to laws and regulations.
7. Pay damages in case where there has been damage to the environment, lives and property of people if there is a movement of peoples;
8. Train and build up expertise and guarantee social welfare for Lao laborers;
9. Record and report results of the concession according to a time period including detailed expenses of the project;
10. Maintain and repair machinery and electrical equipment to maintain such in good condition according to technical principles relative to electricity;
11. Strictly adhere to the Labor Law and other laws of the Lao PDR;
12. Hand over the project along with the feasibility study and other project documents to the Lao Government without any compensation in the case that the concessionaire does not continue the operations of the electricity enterprise;
13. Before such hand over of the electricity enterprise to the Government, the electricity enterprise operations must first pay all of its debts;

Article 19: Expiration of Concessions

Concessions shall expire in the following cases:

1. End of the concession term;
2. Voluntary cessation of the concession before its term with the approval of the Government;
3. Concession rights are withdrawn due to a serious violation of the laws and regulations;
4. Transfer of the enterprise to someone else with the approval of the Government.

Article 20: Exceptions to Concession Applications

Exceptions to concession applications are as follows:

- 1 Building of a small scale dam with an installed capacity of less than (two thousand) 2,000 kilowatts and with immaterial environmental impact;
- 2 Building and installation of equipment to produce electricity by means of electricity producing equipment by means of a heating system of less than five hundred (500) kilowatts.

Operation of an electricity enterprise as referred to above must conform with the National Masterplan and the requirements of the peoples.

Chapter IV

Installation and Determination of Electricity Equipment Standards

Article 21: Installation of Electricity

Installation of electricity is the building, installation, expansion and repair of an electrical system in order to use such for production, services and peoples daily lives by means of a complete electrical equipment system

Article 22: Approval to Operate an Electricity Enterprise

Individuals and organizations who seek to operate an enterprise related to the installation of electricity must have received approval from the industry and handicraft divisions, must have received approval to register with the commerce division and must have completed tax registration with the finance division.

Article 23: Determination of Standards for Electrical Equipment

In order that electrical tools, electrical equipment, electricity transmission lines and items receiving electricity achieve [a certain standard], ensure safety, be energy saving and is a uniform system throughout the country, the Ministry of Industry and Handicraft shall determine, approve, inspect and conduct work inspections on the quality of all types of electrical equipment produced domestically and imported from abroad.

Chapter V

Electricity Production

Article 24: Electricity Production

Electricity production is the system of producing electricity from the unit generating electricity by water power, wind power, heat energy, geothermal power or other energy.

Article 25: Conditions of Electricity Production

Production of electricity must comply with the following conditions:

- use modern equipment;
- have equipment which limits environmental impact;
- be [of a certain standard] and quality provided for in specific regulations;
- adhere to other necessary conditions in the production of electricity.

Chapter V

Electricity Transmission

Article 26: Electricity Transmission

Electricity transmission is the system of sending and transporting electricity from the electricity production source to the electricity distribution station to urban areas located a long distance away or abroad.

Article 27: Installation and Building of Electricity Transmission Lines

The installation and building of electricity transmission lines must ensure safety and must restrict damage to nature and peoples property.

All citizens have the obligation to contribute to ensuring security, to protect and preserve electricity poles, electricity transmission lines and other equipment in the area where they reside.

Article 28: Transmission of Electricity via a System

The transmission of electricity via a system is the transmission of electricity over an electrical transmission system of another party. The owner of an electricity transmission system who is requested transmission of electricity over their electricity transmission system does not have the right to refuse unless the transmission of electricity over that transmission line cannot be technically guaranteed. Those who use the electricity transmission system of another must pay a service fee.

Article 29: The National Electricity Transmission Grid

The National Electricity Transmission Grid is the high power electricity transmission line system of the Government of the Lao PDR which connects one party to another party throughout the country and which is connected to foreign transmission lines to ensure the administration of production, transmission and distribution of electricity including the protection and preservation of the environment and peoples property.

All electricity production sources must send electricity into the National Electricity Transmission Grid, unless the distribution of electricity within the area where there is an electricity generating plant there is production of small scale electricity or where there is yet no national transmission grid.

Chapter VII

Electricity Distribution

Article 30: Electricity Distribution

Electricity distribution is the distribution of electricity from the transmission system or from the electricity generating equipment to various types of electricity use sites which are referred to as the electricity distribution network by means of a high, medium or low power system.

Article 31: Principles of Electricity Distribution

Electricity distribution must be conducted based upon the following principles:

1. Continuous and regular electricity supply;
2. Broad-based and regular distribution of electricity;
3. Safe distribution of electricity;
4. Distribution of electricity for socio-economic development.

Article 32: Determination of Electricity Prices

The determination of electricity price is subject to socio-economic conditions and the standard of living from time to time. Electricity prices are divided into the following types:

- 1 The export commodity price and the import price;
- 2 The domestic price for industrial and agricultural production;
- 3 The price for rural and remote electricity use;
- 4 The price for electricity used in other services;

The Government shall agree to and shall approve a price for each type from time to time.

Article 33: Rights and Obligations of Electricity Distributors

Electricity distributors have the following rights:

1. Collect electricity fees from distribution and services;
2. Warn electricity users who violate regulations;
3. Suspend electricity distribution to users who seriously violate electricity use regulations;
4. Apply measures relative to electricity distribution to ensure public safety and the environment;
5. Inspect and install electricity for electricity users.

Electricity distributors have the following obligations:

- 1 Broadly and regularly supply electricity to those who request it;
- 2 Notify electricity users in advance of each instance of cut off;
- 3 Instruct regarding regulations and principles regarding the use of electricity;
- 4 Responsibly and timely give service to electricity users;
5. Ensure the safety and social welfare of the electrical workers, safety for society and the environment;
6. Pay taxes and duties and other fees to the State according to regulations and the law;
- 7 Pay damages in the case that the electricity destroys the environment, peoples lives or their property or public property;

Article 34: Rights and Obligations of Electricity Users

Electricity users have the following rights:

1. To use electricity;
2. To receive instructions relative to the use of electricity;
3. To receive safe electricity usage;
4. To receive service in installation and repairs of electricity in their homes;
5. Request inspection of electricity fee calculations that one views is incorrect.

Electricity users have the following obligations:

1. Pay electricity rates and service fees for electricity that one uses;
2. Adhere to regulations and instructions regarding electricity usage;
3. Facilitate the installation, repair, inspection and recording of electricity usage figures;
4. Ensure safety and to protect and preserve the environment relative to electricity usage;
5. Urgently notify electricity officials in case an electricity-related irregularity is discovered.

Chapter VII
Electricity Export and Import

Article 35: Electricity Export

The Government of the Lao PDR promotes the development of electricity as an export commodity [so long as there are] assurances that there will be sufficient electricity for industrial expansion and national socio-economic development.

Article 36: Electricity Import

Electricity can be imported into the Lao PDR provided only that it is necessary for the country's socio-economic development and with agreement of the Government.

Article 37: Transmission of Electricity through the Lao PDR

The transmission of electricity through the Lao PDR is the transmission of electricity from one country across the territory of the Lao PDR to some other country by agreement with the Government of the Lao PDR. The transmission of electricity across the Lao PDR must be conducted via the National Electricity Transmission Grid by payment of a service fee, unless the Lao PDR National Electricity Transmission Grid is unable to supply that need. In such case, the Government shall temporarily approve that a party may transmit power over their own transmission line system but under the administration and inspection of the relevant agency of the Lao PDR.

*electricity
over of line*

The transnational transmission of electricity over the Lao PDR must fulfil the following conditions:

- 1 Limit adverse environmental impacts and limit damage to the people;
- 2 Pay fees to traverse Lao territory and other service fees while also compensating for all damages which arise from the building of such transmission line system;
- 3 Allow the Lao PDR's use of that transmission line system if required.

Chapter IX

Electricity Development in the Localities and in Rural Areas

Article 38: Electricity in the Localities and in Rural Areas

Electricity in the localities and in rural areas is an electrical system which is connected to a common electrical system or is any area's separate electrical system which produces electricity by virtue of small scale hydropower, with petroleum-operated machinery, by solar energy, by wind power or by some other energy

The State promotes the development of electricity in the localities and in rural areas for use in commodities production and for people's daily lives in remote areas.

Article 39: Approval to Establish an Electricity Enterprise in a Locality or in Rural Areas

The provincial, prefectural, or special zone industry and handicraft division will conduct surveys and collect information relative to small scale physical sources of electrical energy with power generating capacity of one hundred (100) to two thousand (2,000) kilowatts to incorporate such into the local electricity building and development plan within the areas of its administrative authority.

The provincial government, the prefecture mayor or the chief of the special zone shall be the party which approves applications to establish electricity in the locality within their area of responsibility according to technical approval from the Ministry of Industry and Handicraft.

The district industry and handicraft bureau shall conduct surveys and collect data relative to physical electricity energy sources within the areas of their administrative control. The district chief shall

approve applications to establish rural electricity according to the technical approval of the provincial, prefectural or special zone industry and handicraft division.

Article 40. Building Electricity in the Localities and in Rural Areas

Building and installing electricity in the localities and in rural areas may be conducted in the following forms:

1. Provinces, the prefecture, the special zone and districts conduct the building and installation themselves;
2. The Ministry of Industry and Handicraft builds and installs and hands it over to the province, the prefecture, the special zone, or the district;
3. Private parties or other parties build and install and thereafter hand it over to the province, the prefecture, the special zone, or the district

The Ministry of Industry and Handicraft and other relevant ministries have the right to make technical recommendations and instructions regarding the building, installing, the protection and preservation of the environment and operating electricity in the locality and in rural areas.

The province, the prefecture, the special zone and districts have the duty to report according to procedures relative to all building and installing of electricity in the locality or in the rural areas to the Ministry of Industry and Handicraft

Article 41: The Fund to Develop Electricity in the Localities and in Rural Areas

The State establishes a fund for assistance and for loans for carrying out works in building, installing and developing electricity in the locality and in rural areas.

The Fund for Developing Electricity in the Localities and in Rural Areas comes from the following funding sources:

1. The State budget;
2. The State and the people;
3. Other enterprises
4. The people.
5. Domestic and foreign assistance.

In addition, the State may have a policy of exempting or minimizing taxes and duties, providing import credits for vehicles and equipment, for construction and for electricity operations in the localities and in rural areas.

Chapter X

Electrical Administration and Inspection Agencies

Article 42: Electrical Administration and Inspection Agencies

Electrical administration and inspection agencies are comprised of the following:

1. The Ministry of Industry and Handicraft;
2. The provincial, prefectural, or special zone industry and handicraft division;
3. The district industry and handicraft bureau;
4. The village administrative authority

Article 43: Rights and Duties of the Ministry of Industry and Handicraft

In the administration and inspection of electricity enterprises, the Ministry of Industry and Handicraft has the following rights and the duties:

- 1 Propagate the strategic plan relative to the development of electricity enterprises;
- 2 Survey and collect information, collect statistics regarding physical electrical energy sources throughout the country;
- 3 Draft a Masterplan regarding development of electricity enterprises including short-term, medium term and long term plans for the development of electricity enterprises and environmental protection;
- 4 Issue regulations regarding production and development of electricity enterprises;
- 5 Protect and preserve physical sources of electricity;
- 6 Research and give technical opinions relative to investment in electricity enterprises;
- 7 Research electricity prices to submit to the Government for agreement upon such and approval;
- 8 Coordinate with other parties and localities involved in the administration and inspection of electricity enterprises;
- 9 Cooperate with foreign parties and find funding sources for developing electricity enterprises;
- 10 Exercise other rights and fulfill other duties relative to the administration of electricity enterprises and regulations and the laws.

Article 44: Rights and Duties of the Provincial, Prefectural, or Special Zone Industry and Handicraft Division

In the administration and inspection of electricity enterprises, the provincial, prefectural or special zone industry and handicraft divisions have the following rights and duties:

- 1 Propagate the Ministry of Industry and Handicraft's Masterplan regarding development of electricity enterprises and the protection and preservation of the environment.
- 2 Survey, collect data, keep statistics and protect and preserve physical sources of electrical energy;
3. Research and give opinions regarding applications to establish small scale electrical production plants from two thousand (2,000) kilowatts down to one hundred (100) kilowatts to submit such to the provincial governor, the mayor of the prefecture or the chief of the special zone for approval;
- 4 Coordinate with other relevant parties regarding administration and inspection of electricity enterprises relative to production, transmission, and distribution of electricity and standards for electrical equipment, produced domestically and imported from abroad;
- 5 Exercise other rights and fulfill other duties relative to the administration of electricity enterprises according to its assigned authority from the Ministry of Industry and Handicraft.

Article 45: Rights and Duties of the District Industry and Handicraft Bureau

In the administration and inspection of electricity enterprises, the district industry and handicraft bureau has the following rights and duties:

1. Implement the plan, project, terms and regulations and instructions of the provincial, prefectural or special zone industry and handicraft division relative to electricity enterprises and the protection and preservation of the environment.
- 2 Research and give opinions regarding applications to establish small scale electrical production plants or electricity generating equipment of one hundred (100) kilowatts or less to submit such to the district governor for approval;
3. Coordinate with other relevant parties regarding administration and inspection of electricity enterprises within the area of its responsibility;
4. Exercise other rights and fulfill other duties relative to the administration of electricity enterprises according to its assigned authority from the industry and handicraft division.

Article 46: Rights and Duties of the Village Administrative Authority

In the monitoring and inspection of electricity enterprises, the village administrative authority has the following rights and duties:

- 1 Monitor and inspect the undertakings of small scale electricity enterprises within the area of its village.
- 2 Propose and report to [to the relevant] organization relative to the undertakings of the electricity enterprise affecting the rights and benefits of the people, fine traditions and laws and regulations;
- 3 Facilitate parties who are undertaking electricity enterprises within the area of its village;
- 4 Coordinate with parties who are conducting electricity enterprises to protect and preserve public order and peace within the area of its village;

Article 47: Inspection

Inspection of electricity enterprises is the inspection of the undertakings of an electricity enterprise in order that the electricity enterprise be productive, be technically assured, protect and preserve the environment, and to ensure that the electricity enterprise's undertakings are proper and in accordance with laws and regulations.

Article 48: Contents of an Inspection

Inspections of electricity enterprises have the following major contents:

1. Performance of phases of electricity enterprises undertakings;
2. Performance according to a time schedule;
3. Performance of the feasibility study;
4. Performance of an issued plan;
5. Performance of technical safety measures;
6. Standards for electrical equipment;
7. Construction, installation, and management of electrical equipment;
8. Application of measures to limit environmental impacts;
9. Payment of damages to the environment and peoples lives and property;
10. Inspect the financial system and social welfare policies;
11. Performance of other regulations relative to undertakings of an electricity enterprise.

Article 49: The Technical Inspection Committee

In order that the building, installation, and undertakings of an electricity enterprise be technically guaranteed, ensures safety, and protects and preserves the environment, the Government may create a technical inspection committee which shall be comprised of the Ministry of Industry and Handicraft and other relevant ministries or agencies. That technical inspection committee shall be automatically terminated after having completed its duties as assigned.

Chapter XI

Measures [to be applied to those] Who Are Productive and Against Violators

Article 50: Policies for those who are Productive

Individuals or organizations achieving excellent results in the undertakings of electricity enterprises and the protection and preservation of the environment shall receive commendations and shall enjoy various policies: [financial] credit or extensions of the concession or other policies.

Article 51: Measures Against Violators

The following major measures shall be applied to those who violate this Law:

1. Educational and training measures;
2. Fines;
3. Criminal measures.

In addition, violators may receive additional punishment: suspension of business undertakings, withdrawal of licenses, nationalization of vehicles, or other equipment used in the offense, or suspension of payment for electricity.

Article 52: Educational and Training Measures

Individuals or organizations who have violated this Law in an immaterial manner: failure to report regarding the undertakings of the electricity enterprise, failure to timely make reports, failure to adhere to technical standards which failure is not dangerous shall be educated and trained.

Article 53: Fines

Individuals or organizations who have violated this Electricity Law shall be fined an equivalent of the amount of actual damages due to any one of the following acts:

1. Undertaking electricity enterprise [business] without approval;
2. Installing electricity without approval;
3. Installing electricity into one's home without a meter;
4. Allow others to draw electricity from one's home without approval;
5. Modifying electricity meters;
6. Failing to adhere to safety standards;
7. Failing to adhere to standards to limit adverse environmental impacts;
8. Failing to pay obligations, taxes, and duties;
9. Failing to pay damages which one causes to the environment, to peoples lives and property;
10. Failing to cooperate with electricity officials in [their] administrative and inspection [duties]

Article 54: Criminal Measures

Any individual violating this Law which act is a criminal violation: cutting of electrical lines, destroying electrical equipment, abuses one's title and position to derive personal benefit from electricity activities, failure to apply safety measures which causes a loss of life, damage to health or causes a person to become handicapped or causes damage to State assets, to cooperatives, or to the public shall be punished according to the Penal Code.

Chapter XII
Final Provisions

Article 55: Implementation

The Government of the Lao Peoples Democratic Republic is the party who shall implement this Law.

Article 56: Effectiveness

This Law is effective ninety (90) days from the date that the President of the Lao Peoples Democratic Republic issues a decree promulgating it.

Persons or organization who have received concessions before the date this Law becomes effective have the right to continue their enterprise operations. In the case that the provisions of this Law

Unofficial Translation

Not Intended for Further Distribution or Sale

Page 13 of 13

conflict with their interests, they have the right to propose to the competent agency for consideration of a resolution within a period of one hundred eighty (180) days from the effective date of this Law.
Terms and provisions which conflict with this Law are hereby repealed.

Subordinate Legislation

Vientiane, date 12/4/1997

[seal and signature]

President of the National Assembly
Samane Vignaket

LAO PEOPLE'S DEMOCRATIC REPUBLIC
Peace Independence Democracy Unity Prosperity

Ministry of Industry and Handicrafts

No.488/MIH
Vientiane, 14 August 1997

(Unofficial Translation)

NOTICE

To : The General Manager of Electricite du Laos
Subject : New Electricity Tariff Adjustment.

In accordance to the Resolution of the Government Meeting on 26 July 1997,
The Ministry of Industry and Handicrafts hereby informs Electricite du Laos the New Tariff to be
applied from the First of October 1997 as follows:

1. Residential Category (Lao or Foreigners) including school and small enterprises with
licence class 7 :

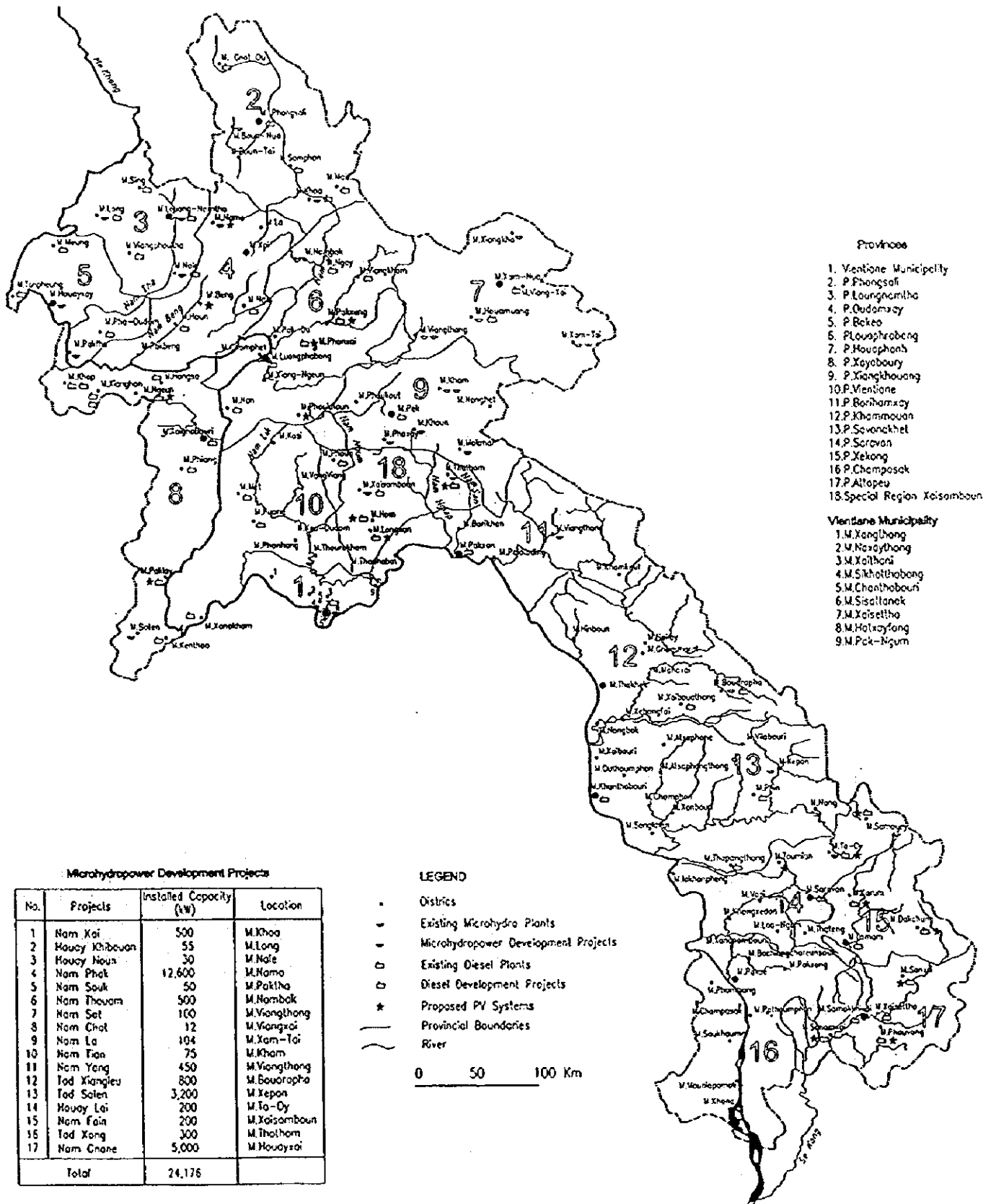
-From 1 to 50 kwh/month	10 kip/kwh
-From 51 to 100 kwh/month	20 kip/kwh
-From 101 to 200 kwh/month	30 kip/kwh
-From 201 to 500 kwh/month	50 kip/kwh
-Over 500 kwh	80 kip/kwh
2. Embassies/International Organization/Including Diplomatic Residences
100 kip/kwh (to be adjusted by + or - 10 kip for monthly exchange rate
fluctuation to always be kept at 9.5 US Cent/kwh)
3. Commercial & Services 80 kip/kwh
4. Commercial Entertainments 100 kip/kwh
5. Government Offices, Industries, Agriculture, Handicrafts 60 kip/kwh
6. Irrigation, Public Companies supplying electricity in rural area 25 kip/kwh
(Bulk at 22 kv)
7. Bulk of 22 kv voltage or over 22 kv for the Categories (1 to 5) should be discounted
by 15% of the above tariffs.
8. Minimum charge:
150 kip/month for Category 1.
1000 kip/month for categories (2 to 7)

The above tariff is not including the sale tax.
The New Tariff adjustment will be effective from October 1997.

Ministry of Industry and Handicrafts
Signed and Sealed by
Soulivong Daravong, the Minister

資料7. Existing Power Plants and Plan up to year 2000-2005

Existing Power Plants and Plan up to year 2000 - 2005



資料8. Proposed Villages to install PV system
Proposed villages to install PV system.

I. Bolikhamxay Province :

1) Ban Nathong :

Populations : . 213
No. of household : 38
Location is known (1: 100 000 map)
Distance about 150 Km

2) Ban Somsanouk :

Populations : 231
Households : 34
Location is Known (1: 100 000 map)
Distance about 150 Km

3) Ban Namay :

Populations : 231
Households : 40
Location is known (1: 100 000 map)
Distance approximately the same as B.Nathong

II. Vientiane province

1) Ban Phonsavang :
(M.Fuang)

Populations : 1,300
Households : 150
Location map (1: 100 000 map)
Distance about 120 Km

2) Ban Houaypoung :
(M.Keo oudom)

Populations : 278
Households : 55
Location is unknown exactly (Island)
Distance about 70 Km

3) Ban Mai :
(M.Keo oudom)

Populations : 573
Households : 89
Location is unknown exactly (Island)
Distance about 70 Km

SPRE Project List of Projects ITEM	Province Sub Project Costs USD	BOLIKHAMXAY								Total Investments th USD	
		Paxan West	D.Borikhan East	Thaen West	Thaen East	Hinboun West	Hinboun East	Total Material	Total Investments		
Transmission, 115 kV Overhead line on steel towers 150 mm ² Bay with circuit breaker Day with disconnector	45,000 /km 110,000 12,000										
Subtransmission, 22 kV Overhead line, 3-phase, ACSR 35 mm ² " " " " 3-phase, ACSR 70 mm ² " " " " 3-phase, ACSR 150 mm ² " " " " 3-phase, ACSR 240 mm ² Overhead line, 2-phase, ACSR 35 mm ² " " " " 2-phase, ACSR 70 mm ²	7,600 /km 8,500 /km 10,300 /km 15,200 /km 6,500 /km 7,100 /km	5	38	24						67	509.2
SWER (Single-Wire Earth Return) Bay with circuit breaker Bay with disconnector Auto-recloser Pole-mounted disconnector Step-up transformer, 3 MVA	30,000 3,000 15,000 2,900 50,000		48	14						83	705.5
Transformer substations 115/22 kV 2x20 MVA, "low cost" substation 22/0.4 kV, 30 kVA, 1-phase pole mounted ss 22/0.4 kV, 100 kVA, 1-phase pole mounted ss 22/0.4 kV, 50 kVA, pole mounted substation 22/0.4 kV, 100 kVA, pole mounted substation 22/0.4 kV, 160 kVA, pole mounted substation SWER 160 kVA, insulation trafo & substation SWER 16 kVA, pole mounted substation	1,016,000 3,600 5,300 6,500 9,100 9,300 12,100 3,500	4	4		2					10	36
Low voltage Overhead line, 3-phase, AC 60 mm ² " " " " 1-phase, AC 60 mm ² " " " " 3-phase, AC 35 mm ² " " " " 1-phase, AC 35 mm ² No of Households (meter and service, etc.)	7,900 /km 6,100 /km 6,600 /km 5,500 /km 70										
Total Investments Investment per household		1280	220	2950	540	1050	6040			6040	422.8
		641	100	1608	497	605	3489			3489	3489
		501	453	545	920	577	578			578	

Ministry of Industry,
Dept. of Electricity,
Vientiane, Lao.PDR.

No. BRKQ01/S.VIT

Att :- Mr. Anousak Phongsavath,
Electrical Engineer.

12 February 1997.

Dear Sir,

Please find herewith our quotation for supply & installation of DP Solar Power systems for installation in provincial Government offices.

1) System Type 1 :- Average Power System, suitable for 4 hour use of lights + limited inverter usage.

Consisting of : 1 x 83w BP283 Solar Panel

1 x DLK4 Lighting kit (4 x 8w, 12v, high efficiency lights & accessory)

1 x Power bloc L130 Solar Battery.

Purchase price CIF Vientiane = 1,870,000 kip per system.

Installation cost = 80,000 kip per system.

Total cost per = 1,950,000 kip system.

2) System Type 2 :- High Power System, suitable for extended period use of lights + 2 hours use of inverter.

Consisting of : 2 x 75w BP275 Solar Panels.

1 x BLK4 Lighting kit.

2 x Solarbloc L120 Solar Batteries.

Purchase price CIF Vientiane = 2,618,000 kip per system.

Installation cost = 80,000 kip per system.

Total cost per = 2,698,000 kip per system.



LAO TECHNICAL SERVICES

PO Box 3974, Vientiane Lao P.D.R. Phone & Fax. 856 21 21 4574

REFRIGERATION - AIRCONDITIONING - ELECTRICAL - COMMUNICATIONS

PH : 21 4574, 21 7548

FAX: 21 4574

MOB: 020 512 060

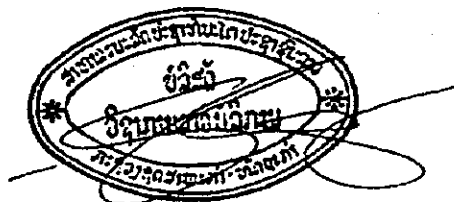
QUOTE No. 433

26/2/97

QUOTATION

To: Mr Anousack

No.	DESCRIPTION	TOTAL
1	1 x 83 w solar panel 1 x lighting kit 1 x 130 AH battery Total Installation Total all	 2200000 180000 <u>2380000</u>
2	2 x 75 w Solar panels 1 x lighting kit 2 x 120AH Batteries Total installation Total all	 2918000 180000 <u>3098000</u>
3	1 x 75w Solar Panel 1 x Lighting kit 1 x 75 AH Solar Battery Total Installation Total all Solar panels are 8P Brand. Transport at extra cost.	 1900000 180000 <u>2080000</u>



資料12. ラオスの日照時間

Sunshine duration of Station Oudomsay

Year=1996

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	-99999	-99999	-99999	-99999	3.7	2.1	2.5	1.4	0.3	9.0	3.9	0.0
2	-99999	-99999	-99999	-99999	3.7	1.7	4.4	1.5	1.7	6.3	9.0	0.1
3	-99999	-99999	-99999	-99999	3.7	3.4	0.6	4.2	4.2	5.7	4.3	3.0
4	-99999	-99999	-99999	-99999	7.4	3.8	0.0	1.9	2.1	3.4	0.8	6.6
5	-99999	-99999	-99999	-99999	10.5	2.4	2.3	6.6	7.4	3.0	2.1	4.0
6	-99999	-99999	-99999	-99999	9.3	2.5	6.0	0.0	8.2	2.2	3.5	0.0
7	-99999	-99999	-99999	-99999	5.3	4.8	3.8	0.7	9.7	0.6	5.8	0.0
8	-99999	-99999	-99999	-99999	7.3	5.3	5.8	2.5	9.2	1.5	5.5	0.6
9	-99999	-99999	-99999	-99999	8.3	3.0	7.3	0.5	7.6	1.0	3.7	0.0
10	-99999	-99999	-99999	-99999	11.0	5.9	2.5	3.8	1.4	3.1	7.6	2.8
11	-99999	-99999	-99999	-99999	8.6	5.1	0.3	0.0	6.7	7.0	6.0	5.3
12	-99999	-99999	-99999	-99999	1.6	5.5	0.9	0.0	5.4	7.8	6.4	4.6
13	-99999	-99999	-99999	-99999	3.0	2.9	3.6	5.0	6.2	6.8	6.5	3.8
14	-99999	-99999	-99999	-99999	4.0	0.0	4.2	6.7	1.5	7.0	5.8	5.5
15	-99999	-99999	-99999	-99999	4.4	1.1	1.7	0.3	1.7	7.2	6.4	5.1
16	-99999	-99999	-99999	-99999	4.2	1.5	1.1	0.0	3.3	7.1	7.1	4.2
17	-99999	-99999	-99999	-99999	2.5	2.0	0.1	0.0	3.7	8.0	4.4	5.6
18	-99999	-99999	-99999	-99999	7.0	2.8	0.0	0.0	2.0	6.6	0.0	3.7
19	-99999	-99999	-99999	-99999	3.3	4.9	0.0	0.0	3.6	2.2	5.6	2.8
20	-99999	-99999	-99999	-99999	2.0	6.2	4.2	0.0	0.4	7.9	0.0	7.6
21	-99999	-99999	-99999	-99999	6.4	3.1	3.5	8.5	1.6	9.1	0.0	5.3
22	-99999	-99999	-99999	-99999	8.9	2.1	3.1	8.6	5.5	8.0	6.3	5.5
23	-99999	-99999	-99999	-99999	8.7	3.2	4.7	0.0	1.4	8.1	6.4	7.1
24	-99999	-99999	-99999	-99999	4.4	2.7	0.0	0.1	0.0	0.0	7.8	5.9
25	-99999	-99999	-99999	-99999	4.6	0.0	0.0	6.2	2.6	0.1	5.7	5.5
26	-99999	-99999	-99999	-99999	0.0	0.0	0.0	2.9	8.6	4.2	5.0	0.0
27	-99999	-99999	-99999	-99999	5.7	1.6	1.0	4.0	5.4	6.4	5.6	5.8
28	-99999	-99999	-99999	-99999	2.9	2.2	6.1	7.7	6.4	6.8	5.6	6.5
29	-99999	-99999	-99999	-99999	1.6	0.0	2.3	2.2	7.7	7.4	5.6	0.8
30	-99999		-99999	-99999	4.9	0.0	1.2	0.9	7.6	7.0	1.2	6.5
31	-99999		-99999		1.7		3.1	0.3		4.2		7.1
Total					160.6	81.8	76.3	76.5	133.1	164.7	143.6	121.3

Sunshine duration of Station Oudomsay

Year=1994

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1				9.2	9.9	6.2	2.5				7.7	0.0
2				9.2	11.4	4.9	4.0				8.0	3.9
3				9.2	9.8	4.3	8.5				7.0	8.8
4				7.6	9.0	4.9	3.2				7.5	6.3
5				6.6	7.4	1.5	8.1				7.0	8.0
6				8.4	0.9	0.0	4.4				7.5	1.5
7				8.5	7.2	1.0	0.9				6.7	-99999
8				8.1	5.1	0.0	0.0				6.1	-99999
9				8.5	3.0	0.0	0.0				5.5	5.5
10				9.1	1.1	0.0	1.9				7.1	5.0
11				8.4	2.2	0.5	1.1				6.8	6.5
12				4.8	1.3	1.5	0.7				7.7	6.3
13				7.2	8.2	2.5	0.1				6.4	4.3
14				2.7	7.3	2.2	0.0				6.0	6.0
15				8.0	8.9	4.8	0.0				7.5	4.8
16				9.0	2.0	2.6	0.0				5.5	4.2
17				8.0	4.5	0.0	0.0				6.5	5.7
18				8.0	0.4	0.0	0.0				3.5	1.9
19				9.7	2.2	0.0	0.0				5.5	5.4
20				8.7	0.0	0.0	0.0				5.5	3.3
21				9.9	0.0	5.0	0.0				6.6	2.9
22				5.5	0.0	2.7	0.0				6.2	4.8
23				7.0	1.7	2.6	0.0				2.5	5.7
24				7.8	4.7	2.7	0.0				5.9	4.6
25				10.5	4.2	1.4	0.0				5.5	3.4
26				10.3	6.3	0.8	0.0				4.5	3.5
27				5.9	2.3	4.0	0.0				0.0	3.5
28				8.0	7.6	0.0	0.0				0.9	4.0
29				10.3	2.5	7.0	0.0				3.9	3.0
30				8.0	2.2	6.2	0.0				6.0	3.5
31					4.5		0.0					5.2

Sunshine duration of Station Attapeu

Year= 1996

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	8.1	10.5	9.5	10.3	4.6	7.9	5.2	8.6	8.4	9.6	5.1	2.2
2	9.8	10.2	10.7	3.2	9.1	8.5	7.7	3.1	8.8	2.5	1.1	2.3
3	9.1	10.5	10.6	4.1	8.3	6.1	8.7	0.1	5.3	7.5	0.0	9.9
4	9.3	9.0	11.0	9.1	7.8	9.0	8.2	0.0	6.5	3.1	2.2	2.4
5	10.5	8.5	11.1	2.3	3.6	13.1	4.5	0.7	7.2	3.4	6.1	8.7
6	9.7	10.6	9.7	6.7	7.3	4.7	6.6	4.9	6.7	10.7	9.8	10.0
7	10.0	10.1	11.0	5.5	1.8	8.2	9.5	7.8	4.2	10.1	8.0	9.1
8	10.1	9.9	10.8	7.2	1.0	6.1	8.7	8.8	7.3	9.7	4.0	5.4
9	10.5	10.2	10.0	5.6	9.4	10.3	6.7	5.9	7.1	7.5	5.8	9.6
10	10.0	9.8	8.5	7.8	7.4	9.6	10.4	7.7	8.7	7.7	8.2	9.0
11	10.0	10.7	3.6	0.4	4.0	9.7	9.1	4.5	0.8	9.2	8.3	10.0
12	9.3	10.4	2.9	8.1	4.3	6.3	5.6	4.3	0.0	4.1	1.2	8.4
13	8.1	9.8	10.5	9.6	5.1	6.4	7.5	0.7	0.0	6.2	9.3	9.4
14	6.3	9.3	9.3	9.8	6.6	8.6	6.7	4.4	0.0	10.6	8.3	9.4
15	9.8	9.6	10.1	3.6	6.4	6.6	8.8	1.0	2.4	10.1	10.0	9.9
16	10.2	9.5	10.7	0.9	9.3	5.3	8.7	7.2	2.1	5.4	2.8	9.3
17	0.0	9.6	10.9	2.4	0.2	6.4	6.0	7.1	0.0	5.6	6.9	9.9
18	10.3	5.0	10.2	4.9	3.3	3.1	5.7	8.4	0.0	6.8	2.1	6.2
19	9.2	9.4	10.3	10.9	1.8	4.6	5.2	7.9	0.0	9.1	2.7	7.8
20	10.4	11.1	7.2	1.0	4.1	7.9	2.6	9.7	0.0	7.8	4.1	3.2
21	10.6	10.4	8.7	3.6	9.6	1.2	0.0	4.5	0.0	5.0	9.0	0.8
22	10.8	10.8	6.6	3.9	9.2	6.6	0.0	0.0	0.2	0.0	7.2	6.5
23	7.0	10.5	9.6	11.2	5.8	2.2	0.0	0.0	0.2	0.1	4.2	9.8
24	7.8	11.1	9.8	6.2	5.4	2.2	0.0	2.6	3.7	2.8	4.6	9.4
25	7.8	9.1	9.6	10.0	5.3	5.0	0.0	6.7	3.0	0.9	10.6	8.0
26	9.8	7.2	8.4	6.8	2.0	11.3	0.0	9.9	6.5	10.1	10.5	9.3
27	10.3	10.1	9.3	9.7	3.6	10.8	5.1	10.1	4.9	5.6	9.9	8.5
28	11.0	10.5	10.0	11.5	8.0	9.2	4.4	6.7	6.0	5.1	9.6	8.9
29	9.8		9.6	9.8	9.8	4.9	6.5	6.9	6.2	6.5	3.3	9.6
30	10.6		9.3	6.3	9.8	9.4	4.2	2.3	6.8	3.5	6.9	9.0
31	2.5		8.9		9.8		8.8	3.7		6.8		2.9
Total	278.7	273.4	288.4	192.4	183.7	211.2	171.1	156.2	113.0	193.1	181.8	234.8

Sunshine duration of Station Saravanne

Year= 1996

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	10.2	8.1	11.0	10.4	6.6	9.6	4.0	4.7	8.3	7.0	5.5	1.8
2	10.2	7.9	11.0	0.2	6.0	6.8	6.5	2.6	7.4	7.5	1.1	6.1
3	7.2	6.6	10.7	1.6	8.6	5.8	10.2	0.8	8.5	6.5	1.2	9.8
4	10.1	5.1	10.5	9.8	5.7	8.4	5.8	0.0	6.4	6.0	3.3	4.6
5	9.8	9.3	10.7	2.8	5.7	7.4	7.3	0.0	8.7	0.4	3.9	8.7
6	9.6	10.6	10.1	7.9	5.9	1.9	7.3	2.5	7.0	8.6	8.4	11.5
7	10.0	10.2	9.6	8.4	5.0	8.2	8.9	1.9	6.6	9.9	8.2	8.1
8	8.1	9.8	9.4	8.9	1.1	7.3	8.8	4.3	8.3	10.1	9.6	7.7
9	14.4	9.5	8.8	9.4	9.1	10.0	6.9	6.8	7.2	7.3	10.3	9.2
10	8.0	5.7	9.7	7.1	2.8	10.2	7.9	7.1	6.6	8.2	8.6	10.1
11	9.7	10.4	4.5	0.0	5.3	6.5	7.8	3.7	3.1	5.7	9.8	10.7
12	9.3	10.3	0.8	6.2	2.9	6.4	4.3	4.4	0.0	2.9	1.3	9.0
13	7.3	10.4	7.1	5.7	5.2	2.9	4.2	2.7	0.0	5.3	9.3	10.1
14	8.6	9.6	10.5	6.5	5.0	3.6	8.7	5.4	0.0	10.3	5.0	10.0
15	9.9	9.6	10.5	6.0	9.4	7.8	10.3	5.0	5.3	10.3	8.7	9.8
16	7.5	6.8	10.1	1.4	9.0	6.9	5.7	8.4	0.0	6.9	0.3	9.3
17	10.2	10.0	10.4	5.2	4.9	3.8	5.5	5.6	0.0	9.2	4.6	8.5
18	10.2	4.7	10.4	7.6	11.3	4.8	3.5	2.6	0.0	7.5	2.1	5.8
19	8.4	6.5	9.2	9.5	6.5	5.4	4.9	2.5	0.2	9.5	6.9	1.8
20	9.9	10.6	8.6	0.0	4.3	6.6	5.2	7.8	0.0	6.8	5.9	9.3
21	9.4	11.3	7.4	4.1	5.3	2.3	0.0	7.5	0.0	8.1	9.8	10.0
22	10.6	11.3	6.8	8.2	9.2	2.6	0.0	0.0	2.3	0.0	5.4	6.6
23	9.5	10.8	6.3	10.5	1.5	2.4	0.0	0.8	2.9	0.0	2.1	9.9
24	10.4	11.0	8.8	10.2	2.9	4.0	0.0	0.1	4.0	0.5	6.6	9.5
25	9.1	10.7	8.9	10.9	6.3	3.8	9.0	5.5	3.5	0.0	9.4	8.8
26	9.6	9.6	6.8	5.7	3.0	3.6	0.0	10.0	3.7	7.3	7.9	9.0
27	10.7	10.5	9.9	9.0	3.7	10.1	2.7	10.2	5.8	5.3	7.0	9.5
28	10.4	10.3	8.4	9.4	8.0	7.4	4.2	4.4	4.3	1.2	9.7	9.3
29	10.0	8.1	6.2	6.4	4.8	5.3	3.3	8.2	4.2	2.9	5.2	10.1
30	10.5		6.5	2.0	7.7	10.3	5.0	2.2	7.2	7.1	6.4	7.1
31	7.0		6.6		6.4		10.0	5.6		2.5		1.7
Total	295.8	265.3	266.2	191.0	179.1	182.1	167.9	133.3	121.5	180.8	183.5	253.4

Sunshine duration of Station Saravanne

Year=1995

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	9.3	-99999	6.7	7.6	4.1	0.5	0.0	8.1	3.9	6.7	0.0	8.8
2	10.5	-99999	9.6	1.6	10.0	0.0	0.6	7.3	4.4	6.9	8.3	9.9
3	-99999	-99999	4.9	8.5	10.2	1.2	2.1	8.1	1.2	6.5	3.1	10.0
4	-99999	-99999	-99999	8.7	6.3	2.0	0.3	0.7	2.2	4.3	5.7	8.5
5	-99999	-99999	9.5	9.2	4.3	5.3	7.0	0.7	2.5	9.0	7.8	7.8
6	-99999	-99999	9.9	7.1	9.8	9.1	4.4	3.2	0.0	0.0	4.7	7.7
7	-99999	-99999	10.2	4.2	10.5	4.9	7.2	2.6	1.3	6.2	3.8	7.3
8	10.1	-99999	7.9	5.7	7.5	3.3	10.0	4.2	3.9	6.8	10.5	8.9
9	9.3	-99999	7.9	9.4	4.1	4.2	5.9	6.0	6.3	0.0	2.7	9.2
10	8.8	-99999	8.6	10.3	0.0	1.1	5.0	6.3	5.3	2.8	2.0	9.3
11	8.3	-99999	9.7	9.8	2.3	3.4	4.1	8.2	0.0	0.0	10.8	7.3
12	5.8	-99999	9.8	7.5	2.2	0.8	3.2	8.7	5.1	1.1	10.8	8.6
13	9.5	9.6	9	7.2	1.9	0.0	3.9	5.9	6.6	9.8	10.9	2.0
14	8.5	8.9	9.8	7.7	2.6	3.5	4.7	5.1	0.9	6.2	10.2	4.3
15	8.9	6.9	8.7	9.6	2.1	9.4	3.2	7.5	6.4	3.1	10.8	9.9
16	8.5	5.6	8.3	7.5	2.9	10.0	2.2	8.4	7.1	8.6	9.5	8.6
17	8.9	7.2	8.9	10.4	9.0	2.8	4.1	10.1	4.9	10.3	9.1	8.6
18	8.6	7.7	9.4	9.6	9.1	7.5	1.0	8.9	4.3	9.9	9.6	9.1
19	9.3	8.8	8	7.8	9.2	5.1	4.1	9.8	8.6	9.9	7.5	10.3
20	9.4	5.8	7.5	7.6	10.4	6.6	11.1	9.4	4.1	10.3	8.4	9.7
21	-99999	9.4	10	10.2	10.5	4.2	10.8	4.1	2.9	11.1	10.3	10.4
22	-99999	8	7.7	10.0	10.1	7.8	9.7	4.1	9.1	10.2	9.0	9.9
23	-99999	7.2	7.4	10.2	5.8	8.9	8.5	5.1	7.4	7.1	4.7	10.5
24	-99999	7.5	7	8.9	9.6	4.0	6.1	3.0	8.7	4.9	5.6	5.5
25	5.5	9.5	4.6	9.9	10.6	5.6	8.0	8.1	7.4	4.3	10.2	9.1
26	-99999	8.7	8.7	7.5	0.0	2.4	8.6	6.0	8.9	0.0	5.3	9.6
27	-99999	9.1	9.8	10.8	8.1	4.8	7.1	3.3	8.9	5.5	1.8	8.6
28	-99999	8.9	8	8.1	5.3	5.7	0.0	0.0	7.0	4.0	0.6	9.7
29	-99999		7.4	9.0	6.8	6.7	0.6	0.0	0.4	4.5	4.4	9.7
30	-99999		7.8	6.9	9.1	0.2	0.0	1.8	8.2	6.9	5.2	9.5
31	-99999		2.7		8.7		2.0	6.8		6.9		8.6

Sunshine duration of Station Saravanne

Year= 1994

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1		10.2	10.6	8.7	6.0	0.0	10.0	3.0	8.0	6.5	4.1	9.3
2		3.6	10.3	4.7	10.0	2.4	6.9	3.2	7.4	8.8	4.0	9.7
3		6.0	10.6	8.0	10.8	4.1	4.3	0.0	7.8	7.1	10.2	10.3
4		9.6	10.3	9.3	10.7	6.7	2.1	1.9	0.0	10.6	10.2	6.1
5		10.8	9.8	9.2	6.4	8.9	0.5	2.0	0.0	9.8	8.6	2.6
6		10.2	9.7	9.3	5.0	3.5	3.9	4.6	0.6	9.5	8.7	2.8
7		10.5	8.4	4.1	7.7	2.5	0.7	8.0	1.3	10.6	9.4	0.9
8		9.7	9.6	4.7	8.0	0.0	4.3	4.6	5.7	8.0	10.0	6.8
9		5.2	8.4	10.7	6.9	2.0	0.0	9.3	3.6	10.3	9.9	4.9
10		5.4	8.4	10.9	6.4	1.3	0.0	8.5	2.8	9.5	10.3	10.0
11		8.0	3.8	10.9	7.1	6.9	0.0	10.3	3.3	4.5	10.4	-99999
12		9.5	1.2	10.5	7.0	8.1	0.0	10.1	1.9	8.2	-99999	6.0
13		8.3	7.4	5.3	9.1	5.1	1.5	8.5	1.1	8.2	-99999	6.2
14		9.0	6.0	10.0	10.1	4.6	0.5	4.0	3.1	7.5	7.4	9.9
15		9.7	9.5	10.0	7.2	0.7	0.0	2.1	3.8	8.6	10.6	10.4
16		9.0	9.9	8.2	4.8	4.4	0.0	5.8	0.5	10.3	10.2	10.4
17		10.5	7.4	7.4	1.3	1.7	1.5	6.1	3.1	9.9	7.8	10.3
18		9.7	1.7	6.4	4.7	0.0	0.3	9.2	0.4	8.5	10.9	8.8
19		10.2	0.8	8.8	8.9	0.0	0.9	3.9	4.1	6.5	10.3	8.3
20		8.2	5.1	5.4	8.8	0.0	0.0	6.4	6.7	0.3	9.8	7.0
21		10.0	8.4	7.2	10.3	0.0	5.9	10.5	7.2	6.5	7.1	7.8
22		10.4	4.8	7.6	7.5	3.5	4.5	3.5	5.7	8.6	6.0	10.2
23		10.5	2.5	8.6	7.2	3.3	8.6	0.4	6.0	5.0	9.5	10.1
24		9.6	0.0	9.2	9.9	0.3	5.1	9.2	8.9	5.3	10.1	9.5
25		7.8	3.7	9.3	8.9	0.2	7.0	3.8	9.3	8.5	10.2	10.3
26		7.2	6.8	8.6	5.9	6.5	1.0	2.0	6.1	6.6	10.2	10.5
27		9.5	8.9	-99999	4.0	2.4	0.5	5.3	8.7	0.8	8.3	10.3
28		4.0	7.3	10.4	4.9	4.0	0.0	0.0	8.9	4.8	10.4	9.9
29			-99999	7.6	5.8	2.8	0.0	0.0	4.1	5.1	10.3	10.4
30			8.7	8.7	5.4	6.5	0.0	0.0	2.2	5.7	7.9	9.8
31			8.3		1.7		0.0	2.0		3.0		10.3

Sunshine duration of Station NalongKhou (PhoneHong)

Year-- 1996

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	7.3	7.3	6.8	8.8	3.5	3.1	5.8	3.3	1.5	8.5	3.3	1.1
2	7.5	8.2	7.4	6.2	6.0	4.9	6.1	3.1	2.3	8.7	5.7	2.1
3	7.3	8.4	6.6	0.0	5.2	2.7	5.9	1.0	6.7	8.3	2.4	7.2
4	7.5	7.8	8.3	0.0	8.7	5.4	1.7	1.6	8.7	3.1	0.3	8.6
5	7.7	4.1	8.8	4.1	4.4	7.0	4.3	1.4	7.8	0.4	0.0	8.3
6	7.5	8.1	6.6	6.6	7.2	7.7	8.5	4.6	8.7	2.6	3.6	1.4
7	8.0	8.1	6.2	8.4	9.0	7.5	7.3	0.7	9.6	2.9	4.3	0.2
8	7.5	5.9	7.5	6.9	7.8	6.9	8.7	6.1	9.0	0.5	6.8	6.3
9	8.0	7.9	8.3	6.5	1.9	9.0	7.5	6.6	2.4	3.4	5.7	7.1
10	8.9	7.1	7.4	6.5	8.5	8.8	4.3	8.1	0.3	6.5	3.0	6.1
11	5.7	8.6	4.3	5.5	7.7	8.1	7.8	2.0	0.4	7.6	5.4	1.6
12	8.5	8.6	5.0	5.0	7.2	9.8	3.7	0.0	1.2	9.1	7.4	7.4
13	8.0	8.4	5.6	6.2	7.8	2.0	7.3	0.0	0.0	9.1	0.1	8.5
14	7.4	7.0	9.6	3.2	8.0	1.9	5.1	0.0	0.0	8.6	7.6	8.6
15	8.8	9.0	8.9	7.6	7.9	3.2	5.2	0.0	0.0	8.3	8.1	8.2
16	8.7	8.8	9.3	3.1	3.2	3.5	0.5	0.9	0.0	7.7	7.0	8.0
17	8.9	6.4	8.6	4.6	2.8	3.2	1.5	0.3	3.4	8.7	3.2	8.1
18	8.4	0.0	8.6	7.7	7.8	4.4	0.3	0.0	2.1	7.8	1.6	8.3
19	8.0	0.0	8.8	6.6	6.9	5.3	0.2	2.0	2.2	8.3	3.7	5.6
20	8.1	0.0	7.2	0.0	7.1	3.3	0.5	0.0	0.5	5.1	6.6	8.3
21	8.0	0.0	5.5	0.0	6.2	2.7	2.7	8.9	0.0	6.2	8.2	8.5
22	8.0	0.7	6.8	0.5	6.3	4.5	2.7	9.0	2.5	6.7	8.3	7.0
23	8.1	2.8	9.4	6.0	2.0	2.7	2.6	0.0	0.0	6.5	9.0	8.0
24	7.3	5.3	8.1	6.6	1.4	1.5	0.0	1.2	0.4	2.4	7.0	8.5
25	7.7	8.8	7.3	6.0	7.0	0.3	1.6	0.8	1.3	0.8	4.3	8.5
26	1.8	8.3	7.2	3.1	4.6	0.2	1.1	1.5	8.6	1.8	8.0	6.5
27	6.1	8.6	7.8	2.7	7.3	1.7	2.2	3.4	6.5	5.0	6.8	6.5
28	5.0	4.7	2.6	0.0	6.8	2.5	2.3	8.3	8.0	8.5	8.5	7.8
29	5.1	8.4	9.0	0.0	4.9	5.9	1.3	8.1	9.1	7.8	8.8	8.3
30	7.7		9.3	5.5	5.1	5.3	0.1	0.5	8.9	6.6	2.7	6.0
31	8.6		9.3		9.1		5.2	3.5		7.0		4.7
Total	231.1	177.3	232.1	133.9	189.3	135.0	114.0	86.9	112.1	184.5	157.4	201.3

Sunshine duration of Station NalongKhou (PhoneHong)

Year= 1995

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	7.3	7.5	4.8	8.3	5.0	4.1	4.5	1.5	2.3	6.4	7.3	8.9
2	4.7	8.0	5.8	6.8	8.6	0.8	0.1	7.3	0.0	8.2	1.7	5.5
3	7.7	6.7	8.0	1.7	7.5	5.1	0.0	4.8	0.2	5.0	2.8	7.4
4	6.1	8.3	1.7	0.9	7.4	2.9	0.0	0.0	6.1	1.7	3.0	8.4
5	4.4	6.3	6.4	8.6	1.5	2.6	0.0	0.0	5.2	1.2	8.3	7.7
6	8.0	7.7	7.8	6.9	4.6	1.5	2.6	0.0	7.2	7.0	8.0	5.9
7	8.1	7.3	8.3	7.0	6.0	3.6	0.4	0.0	5.6	7.4	3.7	8.4
8	8.0	7.6	7.7	8.5	4.7	1.7	0.9	0.0	1.8	6.4	0.0	8.3
9	6.8	7.1	6.9	8.4	3.5	0.0	4.2	3.9	2.2	2.7	6.9	8.3
10	7.8	6.0	6.7	8.1	0.0	1.6	6.6	7.1	6.3	7.1	6.7	8.6
11	7.7	7.8	7.7	5.7	0.8	2.3	5.3	3.2	6.1	8.4	6.1	8.0
12	6.7	5.9	8.4	7.5	3.3	3.1	6.8	0.0	1.2	7.5	6.3	8.9
13	7.6	7.7	6.8	8.2	0.3	1.5	2.7	0.0	6.2	5.8	7.9	8.7
14	6.6	8.2	4.7	8.7	0.9	4.4	3.2	0.0	6.7	8.8	0.0	8.7
15	6.3	8.2	7.5	8.4	4.8	6.9	1.6	1.5	7.5	6.1	0.6	3.6
16	0.9	7.5	7.9	8.5	2.9	4.2	2.7	4.7	7.5	5.2	7.0	3.9
17	2.9	8.4	8.2	7.7	7.2	6.5	1.1	4.1	8.1	3.4	8.8	8.6
18	7.1	8.7	7.5	6.6	2.1	6.2	3.6	1.7	6.5	7.3	8.2	9.3
19	8.0	8.6	5.4	6.5	8.4	3.0	3.9	6.4	4.2	7.3	5.2	8.5
20	7.6	8.2	7.9	6.4	6.8	2.2	1.5	2.2	0.0	8.4	5.2	8.1
21	7.4	8.0	6.5	9.3	8.6	6.6	4.0	4.4	0.2	7.5	8.8	8.8
22	7.8	7.7	7.2	8.4	8.5	5.6	5.2	6.5	0.5	6.2	8.5	8.1
23	6.7	6.8	7.6	8.1	9.7	9.1	5.7	5.9	6.3	7.6	8.0	8.6
24	1.6	4.8	7.3	5.9	9.5	5.8	5.0	5.5	9.5	7.0	8.2	7.9
25	0.3	5.7	8.0	6.6	6.3	6.0	3.9	7.7	7.0	8.7	6.8	8.5
26	4.8	1.5	1.2	9.6	7.3	6.3	0.0	7.5	8.1	8.0	7.9	8.2
27	5.5	6.4	7.4	5.9	3.6	5.7	0.9	3.2	7.4	2.3	4.6	7.9
28	0.3	3.7	3.7	8.1	3.7	2.0	0.6	4.9	7.8	7.4	6.7	8.0
29	1.0		4.8	8.7	7.9	4.0	0.0	1.1	8.9	8.8	8.7	6.2
30	4.6		7.9	7.2	6.8	5.7	3.9	0.0	6.3	6.6	8.0	6.6
31	4.0		9.0		7.2		0.0	0.0		7.8		5.5
Total	174.3	196.3	206.7	217.2	165.4	121.0	80.9	95.1	152.9	199.2	179.9	238.0

Sunshine duration of Station NalongKhou (PhoneHong)

Year=1994

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	8.4	6.8	4.9	9.0	9.8	4.5	1.3	2.3	8.3	7.4	7.9	6.6
2	8.2	6.6	7.1	8.3	7.1	0.2	5.8	4.7	7.6	6.2	8.2	2.9
3	8.7	8.5	8.2	7.3	9.6	1.1	8.5	1.2	8.2	7.1	8.2	1.4
4	8.8	8.4	7.0	7.3	9.6	0.4	7.2	4.8	7.5	5.0	8.5	6.9
5	5.4	7.3	8.5	8.7	7.6	0.0	7.0	4.6	9.0	8.2	8.5	5.1
6	7.0	8.2	8.3	8.9	2.6	0.3	1.6	4.1	4.8	4.9	8.6	5.3
7	8.7	8.1	7.8	8.9	7.5	1.8	3.1	1.4	0.4	9.0	8.1	8.2
8	8.6	7.0	7.8	8.7	2.0	1.7	3.2	1.6	1.1	9.2	8.1	7.0
9	8.6	3.2	7.5	8.7	4.3	0.0	2.1	3.4	3.9	7.0	6.7	8.2
10	8.3	6.0	5.8	8.7	3.4	0.9	2.5	1.6	5.0	3.2	8.2	8.4
11	6.6	8.0	8.7	8.5	2.5	3.9	3.9	3.3	5.4	4.9	6.6	8.3
12	8.6	6.7	0.5	6.2	3.0	2.3	2.4	8.0	5.2	1.9	8.6	8.1
13	7.9	5.0	5.6	7.7	6.7	2.8	0.8	4.1	5.8	4.1	8.0	8.1
14	6.4	5.3	1.8	2.0	7.9	0.9	0.0	0.1	0.0	2.2	8.2	4.3
15	6.9	6.9	5.5	6.8	8.0	2.4	0.0	0.0	5.1	7.3	8.1	5.0
16	7.3	7.1	8.6	4.9	4.3	1.9	0.0	0.0	4.5	5.9	7.4	6.3
17	8.2	6.9	8.4	5.7	5.7	3.8	0.0	0.0	4.3	4.1	1.3	7.2
18	6.3	8.7	4.9	8.5	2.1	0.0	0.0	0.0	3.9	9.0	4.8	5.6
19	4.4	8.5	2.3	6.5	2.9	0.7	2.2	0.0	0.3	8.3	7.4	7.2
20	6.3	7.3	4.7	8.1	0.3	1.3	8.2	5.3	4.0	2.2	8.3	1.9
21	7.6	6.7	6.0	6.7	4.0	3.2	7.2	5.9	6.0	7.7	8.0	6.6
22	4.0	8.2	3.9	8.1	4.6	4.7	6.3	1.6	2.7	9.2	7.4	7.9
23	8.0	8.5	0.0	8.0	8.0	2.7	3.4	1.0	3.4	8.8	6.9	7.9
24	7.4	8.1	0.0	7.3	9.0	4.4	3.4	3.6	3.3	8.6	8.0	8.0
25	7.6	8.3	3.1	7.7	8.3	3.4	1.5	2.0	4.1	8.9	7.4	7.0
26	7.7	7.1	0.0	6.7	1.7	0.2	0.8	3.0	6.1	8.5	5.6	7.6
27	7.7	3.8	0.0	5.1	0.0	0.6	0.0	7.4	4.7	8.6	0.5	6.1
28	7.8	3.0	9.4	6.7	5.8	2.0	0.0	5.4	6.9	8.6	1.4	6.2
29	7.3		7.5	9.1	6.7	5.8	2.2	0.0	4.1	8.1	6.7	4.4
30	6.6		4.7	8.3	2.2	1.8	0.0	0.8	7.3	7.9	6.9	7.5
31	7.5		8.3		0.8		0.0	4.2		8.0		7.5
Total	228.8	194.2	166.8	223.1	158.0	59.7	84.6	85.4	142.9	210.0	208.5	198.7

Sunshine duration of Station ThaKhek

Year= 1996

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	9.9	9.8	10.0	10.6	4.3	9.3	1.1	7.6	2.2	7.2	5.8	7.7
2	10.1	10.1	9.8	9.4	5.5	0.4	3.8	3.5	6.8	9.6	7.4	0.7
3	9.2	9.0	10.0	0.1	9.3	5.7	5.5	2.7	2.6	8.1	0.0	4.7
4	9.8	6.3	10.3	0.6	5.4	10.0	10.3	0.0	8.2	4.9	0.0	6.0
5	10.2	9.6	10.4	3.2	2.5	10.4	10.1	0.0	11.0	4.3	5.6	9.9
6	10.2	9.9	9.8	9.4	9.5	7.5	9.5	0.9	11.6	3.0	6.9	10.3
7	9.8	9.7	9.4	10.4	9.5	9.1	8.1	4.4	11.2	8.0	8.8	10.0
8	9.9	10.3	8.6	10.2	4.2	10.1	9.7	9.4	9.2	0.0	10.5	8.7
9	5.2	8.5	6.6	9.7	7.5	10.1	9.7	6.9	3.4	8.3	10.2	8.8
10	10.3	9.9	9.3	7.2	5.7	10.4	9.7	9.8	8.3	7.4	9.6	9.5
11	10.3	9.5	3.2	8.4	1.1	9.8	4.2	0.7	4.3	5.7	5.6	9.8
12	7.7	10.0	5.5	3.3	0.2	8.4	4.9	0.2	0.0	9.2	7.8	9.5
13	5.9	9.7	9.9	8.7	7.7	3.0	4.5	0.2	0.0	8.6	4.2	7.5
14	5.6	9.4	8.4	8.6	8.8	1.9	10.3	0.0	0.3	9.6	10.1	9.4
15	6.4	9.7	10.4	4.7	8.7	2.6	6.7	1.2	0.6	9.2	4.1	9.2
16	8.9	9.1	10.5	0.0	6.3	2.9	2.5	7.5	0.0	8.0	5.0	9.4
17	10.3	9.7	10.6	7.1	5.7	2.3	4.7	7.9	0.0	8.7	0.7	9.6
18	9.6	4.4	9.8	6.5	9.6	2.0	1.0	6.4	0.9	9.4	0.1	7.8
19	9.2	1.8	10.2	6.7	8.5	4.5	6.7	6.2	1.3	6.2	8.2	8.6
20	9.2	0.0	10.6	1.0	10.5	4.2	4.3	6.2	0.0	4.4	6.8	9.6
21	9.8	6.3	9.9	1.2	11.0	0.9	0.1	7.4	0.0	7.1	9.9	6.5
22	9.9	9.2	8.6	3.6	11.3	0.0	0.0	3.8	0.0	6.9	9.7	8.7
23	10.3	10.4	9.4	9.9	3.6	0.6	0.0	0.0	0.0	0.9	5.4	8.8
24	10.0	10.4	9.8	11.2	6.2	0.8	0.0	0.0	2.7	1.8	5.8	9.1
25	8.8	9.2	6.1	10.9	8.6	0.0	0.8	8.3	2.9	1.7	6.1	9.8
26	9.9	10.1	8.0	11.3	4.0	3.4	0.6	10.5	6.8	8.9	10.2	8.4
27	10.2	9.0	9.8	5.5	5.3	4.7	0.6	12.1	7.2	9.3	10.1	8.8
28	10.6	4.9	1.5	7.2	3.4	9.0	3.2	10.9	6.3	8.4	9.9	9.5
29	10.7	10.0	9.6	10.5	4.2	2.6	0.8	5.2	9.8	9.3	5.9	7.7
30	10.4		8.9	4.0	10.1	2.7	0.0	2.6	10.1	5.3	8.4	9.4
31	10.4		10.5		5.8		8.0	0.2		5.3		0.6
Total	288.7	245.9	275.4	201.1	204.0	149.3	141.4	142.7	127.7	204.7	198.8	254.0

Sunshine duration of Station ThaKhek

Year=1995

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	9.6	9.8	6.8	10.5	10.9	2.2	3.3	4.8	4.2	9.8	4.1	8.7
2	10.1	9.7	9.8	9.3	10.6	4.3	0.1	8.5	0.0	8.0	2.9	4.5
3	9.4	9.2	9.6	7.6	6.0	4.7	0.0	2.0	1.8	6.6	4.9	6.0
4	10.3	10.6	2.5	4.9	9.8	6.0	0.0	0.0	2.7	0.0	5.8	8.7
5	10.2	10.2	8.9	5.6	6.5	2.7	5.9	0.0	7.7	1.9	8.2	9.5
6	10.1	10.4	9.2	8.7	11.0	8.5	7.9	2.1	3.3	4.3	6.7	9.6
7	10.3	10.0	9.2	9.3	10.4	1.3	2.3	0.0	5.4	5.4	2.3	9.1
8	10.2	9.8	7.4	7.1	0.9	0.0	7.0	1.6	5.9	0.6	8.7	9.4
9	10.3	8.8	9.5	8.5	7.5	3.1	12.6	2.7	6.7	0.0	8.1	10.2
10	10.3	10.2	9.3	11.4	0.7	0.4	6.7	11.7	5.7	5.2	4.7	10.2
11	10.1	9.5	6.2	9.9	2.4	1.2	8.4	8.6	0.0	9.4	10.6	10.2
12	9.4	9.5	7.4	4.0	2.2	3.8	2.5	1.3	1.8	7.0	9.2	8.3
13	10.0	9.0	8.1	7.0	3.7	0.3	0.8	0.5	5.2	8.3	10.3	8.8
14	10.4	9.9	9.7	8.1	0.4	0.6	1.4	4.2	5.3	8.3	10.7	9.7
15	10.3	9.7	9.9	9.7	3.8	0.4	1.0	0.8	9.0	6.1	7.9	5.1
16	9.3	8.4	8.9	9.2	4.4	2.7	0.0	6.0	5.1	8.8	9.9	9.9
17	9.7	7.8	10.0	5.1	10.9	6.2	3.4	6.0	5.2	9.9	8.8	10.0
18	9.9	10.0	8.8	9.7	8.4	2.6	1.4	7.6	7.2	9.8	10.1	10.4
19	10.0	9.6	4.5	8.7	9.2	1.3	1.2	3.6	6.5	10.2	7.7	7.9
20	10.0	8.9	9.5	6.3	10.1	5.7	9.0	5.6	6.5	10.2	8.8	9.7
21	10.0	7.9	8.6	8.0	11.6	8.5	3.5	7.3	8.5	9.6	6.0	9.9
22	8.8	9.7	3.8	10.2	8.4	10.0	6.1	6.2	8.8	9.7	10.0	10.0
23	7.9	8.8	4.3	6.5	10.8	9.0	9.6	8.3	9.4	9.1	9.8	9.8
24	6.0	2.7	3.7	6.1	9.1	6.7	9.8	9.4	10.2	7.5	10.7	9.8
25	6.3	5.2	3.6	10.1	10.8	1.3	4.1	9.5	9.8	10.0	10.0	9.7
26	9.7	7.9	8.6	6.4	8.5	4.1	3.2	7.4	9.9	7.1	8.6	9.8
27	8.6	3.7	6.8	9.9	6.5	0.0	7.8	6.0	9.3	0.7	9.0	9.4
28	5.7	8.6	10.2	11.0	8.9	0.3	0.0	0.0	9.5	6.4	5.4	9.6
29	9.9		3.3	10.8	8.5	5.4	0.0	0.0	6.7	8.5	9.4	9.4
30	7.8		10.0	10.5	11.4	4.8	0.0	0.0	3.8	9.7	7.2	8.3
31	7.6		10.6		8.0		0.8	2.3		7.8		9.3
Total	288.2	245.5	238.7	250.1	232.3	108.1	119.8	134.0	181.1	215.9	236.5	280.9

Sunshine duration of Station ThaKhek

Year= 1994

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	8.9	11.0	9.9	5.8	6.4	0.3	10.3	1.8	7.9	6.5	9.5	8.3
2	10.0	6.9	10.0	7.6	11.2	2.2	11.5	4.8	9.0	9.2	6.7	9.8
3	10.1	4.5	9.5	7.6	9.7	0.5	7.7	0.0	10.4	10.9	9.6	9.1
4	9.8	1.4	9.7	7.7	10.7	3.0	0.5	0.8	8.2	10.2	9.7	10.4
5	9.6	9.7	9.0	9.5	8.4	2.1	0.2	3.4	4.9	10.3	7.5	1.5
6	9.9	9.3	4.4	9.9	5.9	2.6	4.7	4.7	0.1	9.8	10.1	4.1
7	10.2	9.5	9.8	10.5	9.6	0.4	3.6	0.8	0.0	10.0	9.5	0.2
8	10.0	6.9	9.4	11.0	8.9	2.3	0.2	2.6	0.0	7.8	9.5	10.7
9	9.8	5.9	8.6	8.7	7.5	0.9	0.9	3.8	5.4	8.6	9.9	10.1
10	8.4	1.5	2.6	10.5	8.5	0.0	2.5	1.7	4.6	5.9	9.4	9.8
11	9.3	7.2	4.3	10.5	5.9	3.7	1.1	8.2	6.7	0.3	10.0	10.2
12	9.5	6.3	6.7	11.0	3.0	2.4	2.5	10.7	3.8	1.9	10.2	10.0
13	9.3	4.1	1.5	1.2	10.4	1.9	2.8	9.2	1.5	8.8	9.8	3.5
14	8.0	9.1	6.7	8.9	8.5	0.6	0.0	4.0	0.0	8.4	9.7	9.0
15	7.5	6.4	8.5	11.0	8.5	0.8	0.0	0.0	5.7	9.1	6.7	8.4
16	8.2	5.8	10.9	11.0	5.5	0.3	0.5	0.0	0.5	8.0	5.8	10.0
17	9.3	5.3	10.3	11.2	4.2	3.0	0.2	4.7	7.0	8.7	5.1	8.9
18	9.8	9.4	4.7	4.5	4.0	0.0	0.0	0.9	0.6	8.4	7.9	8.0
19	9.9	10.8	8.4	5.8	4.2	0.3	0.1	0.6	0.0	8.3	9.9	4.0
20	9.3	9.3	9.5	7.7	7.8	0.0	3.8	8.1	3.1	4.1	9.1	9.8
21	10.2	9.7	5.0	7.6	9.7	3.4	9.1	6.7	3.8	8.8	8.2	10.4
22	8.7	9.7	3.6	4.4	5.2	7.5	6.4	0.0	5.1	9.7	9.6	9.8
23	8.0	9.6	0.0	9.3	10.6	1.4	5.8	5.1	4.3	9.8	8.6	9.9
24	8.9	9.4	0.0	8.2	11.4	2.5	4.9	8.3	8.5	9.7	8.9	10.2
25	9.3	9.9	3.2	6.0	6.6	0.4	1.9	3.7	7.9	9.5	9.5	10.3
26	9.4	7.2	3.4	4.5	7.6	0.0	1.7	4.0	8.3	9.4	9.7	10.2
27	9.7	7.3	1.5	9.9	0.0	1.1	0.1	5.2	8.2	8.4	10.1	9.6
28	9.3	4.3	4.9	9.5	11.0	6.6	0.0	0.3	2.5	8.5	5.8	8.5
29	9.2		9.3	10.5	11.4	3.7	0.0	0.0	9.6	8.1	11.0	9.9
30	9.2		8.3	7.7	3.5	1.1	0.0	0.8	6.2	9.0	9.6	10.1
31	9.3		9.4		0.0		2.8	5.1		5.3		8.4
Total	288.0	207.4	203.0	249.2	225.8	55.0	85.8	110.0	143.8	251.4	266.6	263.1

Sunshine duration of Station Xiengkhuang

Year= 1996

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	9.9	8.1	10.5	9.8	10.4	3.5	1.8	6.3	1.7	10.0	1.2	2.1
2	10.0	6.4	5.5	8.7	2.8	6.4	5.3	4.2	4.3	9.8	6.4	3.3
3	10.0	9.2	7.6	1.6	6.8	9.4	1.8	0.0	6.0	8.3	0.7	6.2
4	10.0	6.8	9.4	5.4	6.6	4.7	0.0	8.2	8.3	6.2	0.8	7.5
5	9.2	6.0	7.9	8.8	6.0	10.3	8.2	0.8	6.8	7.6	0.6	8.0
6	8.5	6.3	7.6	7.7	9.1	7.4	9.0	6.7	9.5	6.2	3.7	0.8
7	9.6	7.9	4.8	9.3	10.0	3.1	11.8	1.2	10.4	1.3	4.0	0.0
8	10.2	7.5	8.0	9.2	5.9	4.7	9.4	3.9	10.6	0.0	4.4	0.0
9	8.8	8.5	7.1	9.2	4.8	7.0	6.9	1.3	4.5	2.2	4.4	0.0
10	8.5	9.6	7.5	6.5	9.8	7.4	5.8	6.3	4.5	4.8	6.8	4.8
11	9.2	10.3	9.3	4.7	8.4	9.6	1.8	0.6	9.3	8.0	5.2	2.1
12	9.8	10.3	8.8	6.3	4.0	7.2	8.0	0.0	2.2	4.3	7.6	5.8
13	8.5	10.3	9.6	8.6	7.3	3.2	3.5	0.3	0.0	10.1	7.1	7.2
14	7.6	9.5	10.8	4.7	8.8	1.7	5.3	0.0	0.0	9.7	9.0	6.6
15	9.8	10.1	10.0	6.7	6.0	3.9	5.4	0.0	0.2	9.8	9.1	7.0
16	10.2	10.3	10.6	4.6	3.5	5.7	0.3	1.0	1.7	9.2	10.1	7.9
17	10.2	9.6	9.1	8.8	4.3	2.7	1.3	0.0	3.7	9.6	4.2	9.7
18	10.0	5.4	8.7	10.0	5.1	7.3	0.7	0.0	2.4	10.3	1.3	3.7
19	8.2	0.0	9.0	5.3	7.5	5.0	0.8	0.3	0.9	9.0	2.3	6.1
20	8.6	0.0	6.8	0.0	9.0	2.3	0.7	1.3	0.5	8.7	7.8	6.5
21	9.0	0.0	7.4	0.0	3.7	0.4	4.4	9.2	1.6	10.1	9.0	7.9
22	10.0	1.7	8.7	1.0	9.0	3.4	2.3	6.3	2.5	9.6	8.8	8.2
23	9.7	2.6	7.9	2.9	7.0	4.0	1.2	0.0	0.0	6.1	8.3	9.9
24	9.0	0.9	7.7	7.8	4.2	0.0	0.0	3.3	0.6	3.5	7.9	7.3
25	9.2	8.6	7.9	4.8	4.0	0.0	0.3	6.6	1.5	2.2	6.8	7.3
26	8.4	10.6	9.5	1.3	2.6	0.6	0.3	3.9	8.8	8.7	9.3	9.1
27	6.4	8.5	5.2	3.9	4.8	2.8	2.5	3.7	4.8	9.6	8.3	7.7
28	7.0	9.1	3.4	0.0	6.7	2.3	2.6	8.6	6.7	10.3	9.3	6.7
29	7.1	7.3	9.8	2.1	5.3	1.8	0.7	6.2	10.3	9.0	8.9	6.5
30	9.5		9.4	9.3	8.4	3.0	1.0	0.0	10.3	7.7	0.9	4.4
31	8.2		9.7		5.8		5.1	6.8		6.8		7.3
Total	280.3	201.4	255.2	169.0	197.6	130.8	108.2	97.0	134.6	228.7	174.2	177.6

Sunshine duration of Station Xiengkhuang

Year= 1995

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	8.8	0.7	9.7	8.5	6.4	6.8	0.2	5.9	1.2	4.7	8.1	8.0
2	6.6	6.5	9.2	8.1	6.2	3.4	0.7	7.1	0.0	6.5	0.0	6.7
3	7.2	7.1	7.6	8.0	5.1	3.1	0.6	4.7	2.2	5.8	2.7	6.8
4	8.8	5.5	0.2	3.7	6.8	4.9	0.0	0.0	3.3	7.4	7.2	9.5
5	9.0	7.8	7.0	3.2	3.7	0.4	0.2	0.2	7.1	5.1	9.9	8.5
6	10.0	7.0	9.5	5.7	4.1	0.7	0.8	0.1	5.8	7.6	7.4	5.9
7	9.9	9.7	9.3	9.0	3.6	3.6	0.9	1.5	6.8	9.8	3.7	7.4
8	8.3	8.8	9.8	10.3	9.4	1.3	0.0	1.0	0.8	3.1	0.0	9.9
9	8.4	8.4	8.9	8.6	5.9	0.0	6.5	2.0	6.4	0.0	4.7	9.9
10	8.1	9.2	8.6	5.3	0.9	0.0	7.2	7.7	11.0	6.0	8.0	9.0
11	10.0	8.3	6.4	5.2	0.0	2.3	8.4	5.0	8.0	6.3	8.2	8.0
12	7.9	5.3	9.3	6.6	4.3	4.2	5.1	0.0	0.0	3.9	7.4	8.1
13	8.5	9.6	9.8	9.8	1.4	4.8	4.9	0.5	5.3	8.4	7.2	7.2
14	4.3	10.6	9.5	10.0	2.5	0.2	0.8	0.0	9.5	7.8	0.0	8.1
15	4.0	10.3	8.7	6.7	3.0	8.3	1.9	1.2	5.4	2.4	2.8	5.6
16	0.7	10.2	8.7	6.3	7.6	6.0	0.0	2.2	7.3	5.2	7.8	9.0
17	1.3	10.4	7.3	7.3	8.7	6.2	3.1	0.1	9.9	4.5	6.1	8.0
18	5.8	10.5	7.4	4.1	5.4	2.7	6.1	2.8	9.9	8.5	6.9	8.3
19	7.8	10.5	7.2	8.0	10.3	1.3	3.9	2.9	9.9	6.1	7.1	6.8
20	9.8	10.1	8.3	6.9	9.4	3.1	2.8	1.8	0.0	8.5	1.7	6.9
21	10.0	9.8	5.1	8.8	11.1	5.2	2.1	1.8	0.0	5.9	6.7	7.3
22	8.4	10.2	6.3	9.2	9.5	5.4	3.4	6.7	0.7	9.3	9.8	7.5
23	9.8	8.5	7.5	9.2	10.6	9.7	8.0	6.9	4.8	7.0	6.4	9.0
24	0.4	8.5	7.3	4.8	10.8	7.5	0.2	4.1	9.7	2.5	6.8	6.9
25	5.5	9.4	0.2	6.5	10.4	7.8	4.8	5.2	9.2	7.3	10.0	9.7
26	9.8	10.0	0.2	6.7	8.8	2.0	3.0	7.8	7.5	8.8	6.9	9.6
27	8.1	10.2	4.7	6.3	2.1	5.2	0.8	7.3	9.4	1.3	1.0	9.3
28	1.5	10.1	5.5	8.3	4.8	1.8	1.8	3.3	8.2	5.5	7.2	9.6
29	2.7		5.2	7.4	6.2	6.1	0.0	0.2	9.5	3.8	7.3	9.5
30	7.6		10.4	4.1	4.6	6.0	0.6	0.0	7.7	10.2	9.1	9.7
31	1.5		8.7		5.7		3.0	0.4		9.6		9.8
Total	210.5	243.2	223.5	212.6	189.3	120.0	81.8	90.4	176.5	188.8	178.1	255.5

Sunshine duration of Station Sayabouly

Year= 1996

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	6.7	8.3	8.0	8.1	7.7	5.2	7.5	3.8	4.3	9.5	0.0	1.6
2	6.5	9.7	5.8	9.1	2.6	4.7	8.1	1.0	3.2	9.0	6.5	0.0
3	5.9	8.9	7.4	0.0	6.4	4.4	5.8	4.0	7.7	7.0	5.1	6.3
4	6.0	6.5	8.4	1.9	5.2	7.0	0.0	5.8	8.4	5.6	0.0	7.2
5	3.0	4.4	7.7	6.8	6.2	8.9	0.9	2.1	7.8	4.4	2.0	4.8
6	6.3	6.6	7.2	9.0	9.2	7.8	7.9	1.9	10.2	6.6	4.9	5.8
7	5.9	6.9	6.1	8.5	5.5	5.8	10.1	6.8	7.7	4.7	6.9	0.3
8	7.0	7.6	9.2	9.0	6.7	8.0	7.4	6.5	11.5	2.3	7.0	0.4
9	6.9	4.5	9.3	8.2	8.3	9.6	3.8	3.1	5.3	0.0	4.9	6.3
10	6.5	9.8	9.0	9.5	10.3	10.2	7.1	7.7	3.1	0.7	6.3	0.0
11	6.6	9.2	9.3	6.9	7.5	9.6	3.1	4.9	7.1	6.2	4.5	0.9
12	6.5	8.5	9.3	4.2	6.5	10.0	8.3	0.0	8.1	9.0	5.8	5.5
13	6.9	8.0	9.6	5.7	10.2	2.6	7.1	2.2	1.0	9.9	5.1	6.5
14	6.7	2.4	9.8	6.0	9.7	0.7	6.5	5.3	0.4	8.5	6.5	7.1
15	7.5	8.6	10.0	4.6	7.8	0.0	5.4	0.1	2.7	7.1	3.5	3.7
16	7.8	9.0	9.9	6.7	6.0	3.9	4.1	0.0	0.0	8.0	7.3	4.6
17	7.6	9.1	9.6	10.3	7.1	3.8	4.7	0.0	5.8	6.8	6.5	7.2
18	7.2	6.7	8.1	8.2	2.9	5.3	0.0	0.0	5.9	7.5	0.0	6.1
19	5.5	0.0	8.6	8.7	7.0	5.7	0.0	0.0	4.2	7.1	3.7	6.7
20	6.5	0.0	6.3	5.0	3.7	2.8	1.9	0.0	2.5	5.7	5.3	8.1
21	7.1	0.0	6.4	0.0	5.3	4.5	5.7	9.0	0.7	7.2	5.3	8.2
22	7.6	0.0	7.7	0.0	7.7	4.4	2.7	9.7	7.0	8.2	6.3	6.8
23	7.3	0.0	8.8	4.2	6.9	6.2	0.0	0.0	0.0	7.9	6.9	6.1
24	7.9	1.5	8.6	8.5	9.9	5.4	0.0	1.6	2.3	4.1	5.8	5.4
25	6.5	6.8	8.9	5.7	5.3	0.5	0.0	1.8	2.0	0.2	6.2	5.8
26	8.1	6.4	8.1	3.0	3.7	0.2	0.3	2.6	7.0	2.5	5.3	4.5
27	5.9	7.9	1.9	2.8	9.6	2.6	0.8	1.7	7.8	9.2	7.2	5.7
28	8.2	8.9	5.0	0.0	7.0	4.6	2.7	5.8	6.9	6.5	4.2	7.0
29	5.7	8.3	8.1	0.7	5.5	4.7	5.4	6.2	8.7	7.6	4.6	6.8
30	7.6		10.0	8.9	5.0	5.6	2.0	0.0	7.9	7.3	6.9	7.5
31	7.8		9.7		6.9		4.8	2.5		3.1		7.5
Total	209.2	174.5	251.8	170.2	209.3	154.7	124.1	96.1	157.2	189.4	150.5	160.4

Sunshine duration of Station Sayabouly

Year= 1995

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	5.7	1.9	7.8	8.1	4.5	5.7	5.8	0.0	1.9	5.5	8.0	5.9
2	5.7	7.1	8.8	5.8	5.9	5.3	1.5	10.1	0.0	8.4	4.8	7.4
3	6.2	8.5	7.5	8.5	6.8	4.9	0.0	6.4	0.0	5.2	4.4	5.1
4	5.2	6.4	2.9	7.4	6.9	3.8	0.0	0.0	2.1	5.2	1.4	6.8
5	5.3	8.4	6.9	8.2	0.0	3.8	0.0	0.0	5.4	7.8	8.8	5.6
6	7.2	8.7	7.7	10.2	5.2	7.1	0.4	0.0	7.4	4.1	7.8	2.8
7	5.6	7.0	8.2	9.2	4.1	1.2	0.0	1.4	8.1	8.0	6.4	4.9
8	5.3	7.3	8.4	10.2	8.3	0.6	0.0	0.0	0.0	8.6	3.3	7.2
9	6.5	7.7	8.0	9.8	5.2	0.5	5.5	0.0	3.9	0.0	6.0	6.8
10	5.4	6.5	8.3	8.7	3.0	0.7	8.4	4.0	7.2	8.3	9.3	5.9
11	7.0	4.0	6.1	9.4	0.9	3.5	6.7	2.7	8.3	7.9	7.4	5.8
12	6.1	5.7	8.4	9.0	5.4	1.2	8.7	0.0	4.5	7.5	5.8	5.6
13	4.7	8.0	8.7	10.2	4.1	4.5	4.9	0.0	6.4	6.9	3.4	5.9
14	4.8	8.1	7.8	8.6	3.8	6.7	1.7	0.0	7.2	7.0	0.0	5.8
15	6.6	8.7	8.2	7.9	5.3	5.8	0.1	2.3	4.9	5.9	0.0	5.7
16	4.7	8.4	8.8	9.6	10.2	5.5	0.0	0.0	7.8	6.1	2.1	8.5
17	3.1	9.2	8.3	9.9	6.4	5.5	2.7	0.0	8.1	6.8	7.7	6.4
18	4.8	9.0	8.4	7.4	3.5	7.7	1.7	4.4	10.1	4.8	4.6	6.3
19	5.0	8.9	7.1	7.9	7.6	5.0	4.7	1.2	0.9	6.8	7.1	5.5
20	7.1	8.7	8.5	7.8	6.7	4.7	0.5	2.2	0.0	6.6	1.6	5.7
21	6.9	8.8	4.6	9.2	8.7	8.0	5.8	2.1	0.0	7.2	7.1	6.6
22	6.4	8.3	4.5	11.1	9.3	6.6	6.2	2.8	0.0	6.3	3.8	4.8
23	8.2	9.0	7.4	9.5	10.6	6.4	6.5	6.0	0.3	6.3	7.0	7.9
24	4.6	8.2	10.1	5.6	9.2	7.4	1.0	4.4	6.0	8.8	8.0	7.0
25	1.5	8.2	0.5	6.6	5.8	6.2	1.7	3.7	8.4	7.9	6.9	7.1
26	6.8	8.0	0.0	8.8	7.9	0.6	4.1	7.0	9.2	9.1	3.5	6.9
27	7.8	8.5	6.4	8.2	5.7	7.2	2.7	6.1	7.5	5.6	5.6	7.7
28	8.4	7.9	6.4	10.7	4.3	0.6	2.7	6.2	6.7	7.1	6.2	0.6
29	2.2		7.9	10.1	8.5	3.4	0.0	2.2	5.7	5.4	5.3	6.6
30	4.2		10.2	7.4	7.8	5.3	1.6	0.0	7.5	9.0	6.0	3.8
31	3.5		9.0		6.1		0.0	0.0		8.5		6.3
Total	172.5	215.1	221.8	261.0	187.7	135.4	85.6	75.2	145.5	208.6	159.3	184.9

Sunshine duration of Station Sayabouly

Year= 1994

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	6.5	6.1	1.3	10.0	6.0	8.2	4.3	3.9	8.9	8.5	6.4	5.6
2	6.5	2.4	4.8	8.9	6.5	4.4	9.0	5.0	6.2	6.3	7.7	2.5
3	7.2	1.6	6.8	6.8	7.5	4.5	9.6	3.3	10.4	6.6	7.4	8.4
4	7.4	4.7	7.5	8.2	8.5	4.6	7.3	1.3	9.5	5.6	6.5	8.5
5	7.0	6.4	8.1	8.7	4.2	3.2	3.5	1.4	8.0	6.4	7.8	8.0
6	6.9	2.6	8.2	9.1	6.4	1.0	6.8	2.6	9.3	5.4	7.5	6.5
7	6.7	7.9	7.2	8.5	5.1	4.0	3.0	0.0	3.9	6.0	7.2	7.0
8	7.5	8.5	6.8	8.3	6.3	3.5	2.1	0.0	5.8	6.1	6.5	5.9
9	7.0	6.1	6.3	9.9	3.0	0.0	0.8	1.4	2.8	8.5	6.5	7.0
10	6.0	6.7	6.3	8.7	5.5	0.0	2.0	3.2	5.3	5.7	6.5	5.6
11	7.1	6.4	8.6	9.0	0.0	5.5	1.8	2.3	4.5	4.4	8.1	5.5
12	6.9	8.3	9.2	6.6	0.0	6.2	1.4	8.2	6.2	2.7	7.0	7.0
13	7.3	8.3	8.8	7.5	3.7	3.2	1.5	7.8	8.7	5.5	8.2	5.8
14	7.6	8.3	3.5	3.0	7.5	2.5	0.0	0.0	0.0	5.7	7.7	5.6
15	6.7	8.3	7.8	7.9	4.5	3.0	0.0	2.3	3.1	6.4	7.7	5.9
16	5.7	7.4	7.9	6.1	3.7	4.8	1.0	0.0	6.4	2.3	8.0	3.3
17	6.1	8.6	8.5	8.4	4.0	0.0	0.0	0.0	2.1	2.9	2.4	7.2
18	7.2	8.2	5.9	8.0	0.0	1.0	0.0	0.0	6.6	8.1	8.0	6.8
19	6.1	8.1	9.7	7.4	3.0	4.6	1.6	0.0	5.5	7.0	8.3	6.1
20	6.3	7.9	9.5	6.9	2.1	3.0	7.0	1.9	4.3	2.3	7.3	4.7
21	5.3	6.2	6.1	6.3	2.1	1.7	5.5	8.0	7.4	9.7	7.8	3.9
22	7.4	6.8	6.8	7.1	3.7	5.5	8.0	0.0	5.8	8.8	4.9	7.7
23	5.5	8.0	0.0	8.9	4.2	4.5	5.6	1.2	0.0	8.6	5.6	7.2
24	7.5	6.7	0.0	8.1	5.4	6.2	2.9	5.5	4.6	8.0	9.1	6.8
25	6.8	7.3	4.4	9.5	8.4	1.6	0.5	4.8	6.5	8.1	7.6	5.7
26	5.1	7.7	0.0	6.8	7.1	1.3	2.8	3.0	5.4	7.1	5.6	6.2
27	6.5	4.7	0.0	2.7	0.0	3.2	0.0	5.5	5.5	7.2	0.0	6.8
28	7.1	3.6	0.0	7.4	2.5	1.6	0.6	6.5	1.2	6.8	5.1	4.2
29	6.8		7.6	6.3	6.3	5.7	0.4	0.0	1.8	6.2	4.5	4.2
30	6.8		6.5	6.2	2.7	4.7	2.9	1.5	8.0	3.3	5.9	5.5
31	6.8		9.7		0.8		0.0	3.7		6.9		5.8
Total	207.3	183.8	183.8	227.2	130.7	103.2	91.9	84.3	163.7	193.1	198.8	186.9

Sunshine duration of Station LuangPrabang

Year= 1996

Month/Day	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	7.8	6.7	10.2	9.7	8.8	4.4	4.9	4.8	3.0	9.5	3.0	1.2
2	7.3	7.0	3.6	6.6	3.1	3.1	6.4	1.0	2.0	9.6	8.1	0.0
3	7.0	8.2	8.2	4.2	2.3	4.6	3.7	3.2	6.8	7.4	1.7	3.7
4	7.2	8.5	9.5	1.4	8.3	3.8	0.0	4.6	7.0	6.3	0.1	5.6
5	5.9	4.4	8.4	6.6	9.7	6.4	4.1	2.4	9.5	4.2	1.3	4.0
6	6.5	6.4	7.2	8.3	8.7	5.9	10.0	1.5	7.3	6.1	3.7	0.0
7	6.2	6.0	4.3	9.0	7.4	5.3	7.4	1.7	9.0	2.0	5.5	0.0
8	7.0	7.4	8.3	8.5	4.9	8.5	9.9	4.6	7.0	4.6	5.2	0.1
9	7.5	5.5	8.7	7.3	8.7	10.0	9.2	0.4	7.2	0.0	4.2	2.2
10	6.2	9.6	8.6	6.6	10.4	8.9	5.0	8.8	4.7	1.9	6.3	1.2
11	5.8	9.0	8.5	5.4	8.2	8.4	2.3	0.0	6.3	9.1	4.6	2.6
12	6.5	8.5	9.0	1.6	7.7	9.8	4.9	0.0	5.7	10.2	4.9	3.1
13	6.4	8.0	9.6	4.8	9.0	2.3	5.6	4.9	1.8	8.3	9.9	1.6
14	6.6	9.2	10.3	4.6	10.2	1.3	6.2	3.9	0.9	7.0	9.0	8.8
15	6.2	8.5	9.0	5.0	9.6	1.8	4.9	0.0	2.9	6.7	5.7	3.7
16	8.0	8.6	9.9	7.5	5.8	3.1	2.4	0.0	2.9	7.3	7.5	5.6
17	7.8	9.0	9.4	9.8	7.0	2.3	0.7	0.0	7.2	8.0	6.6	6.6
18	7.8	8.5	8.1	8.9	4.2	6.1	0.0	0.0	3.7	6.7	0.4	5.8
19	7.0	0.0	6.6	9.2	9.8	3.3	0.0	0.0	2.1	8.4	1.1	4.6
20	6.2	0.0	8.2	1.3	3.1	2.9	3.5	0.2	0.0	8.4	8.6	9.2
21	5.4	0.0	6.7	0.0	7.5	4.5	6.7	6.6	0.7	9.0	0.6	7.2
22	6.3	0.0	6.5	0.2	8.7	5.2	3.0	7.1	8.2	7.5	9.4	6.2
23	6.8	1.5	8.5	3.3	7.8	2.5	3.0	0.0	0.0	8.5	7.1	7.1
24	7.0	0.0	5.3	8.6	4.5	5.1	0.0	1.8	0.0	3.6	9.0	6.6
25	6.6	3.8	8.2	5.1	6.3	0.0	0.0	7.4	2.9	2.4	5.8	4.4
26	5.0	7.8	7.9	1.6	4.5	0.1	0.0	4.1	8.2	6.0	9.8	4.3
27	7.3	9.9	3.1	0.2	7.5	2.6	1.1	1.9	3.7	8.0	5.5	5.3
28	7.5	9.8	4.9	0.5	5.7	2.8	5.4	8.3	7.5	7.4	5.4	6.0
29	7.7	10.0	9.0	4.9	5.9	2.5	1.9	3.1	9.3	7.2	4.3	3.9
30	7.7		9.2	10.4	4.5	2.2	2.3	0.4	3.2	7.2	3.2	7.3
31	8.4		9.7		7.5		5.6	4.5		7.3		6.8
Total	212.6	181.8	244.6	161.1	217.3	129.7	120.1	87.2	140.7	205.8	157.5	134.7

Sunshine duration of Station LuangPrabang

Year= 1995

Month/Day	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	5.2	0.0	8.9	9.0	6.5	5.6	2.4	2.9	0.3	8.8	5.3	6.7
2	6.5	0.3	9.7	8.7	8.7	2.2	2.6	6.7	0.0	8.5	6.0	7.6
3	6.1	7.6	9.9	10.1	7.1	4.7	0.0	5.5	0.5	7.4	2.8	4.3
4	6.6	2.7	0.0	7.6	9.1	6.1	0.3	0.0	3.3	3.9	3.8	6.3
5	5.5	1.0	8.6	8.7	1.8	0.6	0.5	2.7	8.7	6.2	8.1	7.7
6	8.5	7.3	8.3	5.6	6.4	6.1	0.4	0.2	4.8	8.3	8.2	5.2
7	5.6	7.3	9.1	10.0	5.3	1.0	1.0	1.3	7.8	9.8	5.4	7.8
8	4.8	8.9	9.6	10.2	7.9	0.0	0.0	0.5	0.3	5.5	2.4	9.4
9	5.1	7.8	9.2	10.2	8.4	0.1	4.5	2.4	6.6	0.5	4.6	7.0
10	5.5	7.9	7.9	9.9	1.2	1.4	5.8	8.6	8.4	3.0	8.4	5.9
11	6.2	5.6	8.4	7.0	0.0	3.6	7.6	4.8	7.7	8.6	3.6	5.6
12	4.5	4.9	9.2	8.9	7.9	0.0	7.3	0.4	1.3	7.3	7.3	4.9
13	6.7	7.1	8.6	10.0	4.3	7.5	6.0	0.4	3.0	4.9	4.5	4.4
14	1.6	8.5	8.5	8.7	1.4	8.2	3.1	0.0	9.6	7.7	0.0	5.3
15	6.2	8.8	7.8	9.8	3.9	6.4	0.0	3.3	7.5	6.4	5.2	4.6
16	5.4	8.8	7.9	9.2	9.3	8.7	0.0	3.5	7.7	8.7	7.3	8.2
17	6.7	8.7	7.7	9.6	7.0	9.5	1.5	2.4	8.5	8.3	9.2	5.2
18	7.7	9.6	7.7	7.0	7.2	4.5	7.1	2.5	6.6	6.1	4.0	5.1
19	5.8	9.9	6.4	9.5	10.2	3.9	5.6	2.3	0.9	4.8	8.2	5.9
20	6.8	8.7	7.9	6.7	9.4	4.3	4.1	3.8	0.0	6.4	2.6	7.6
21	7.1	8.4	5.8	9.9	8.3	5.4	6.4	2.3	0.0	6.3	7.8	7.9
22	7.5	9.2	3.2	10.8	7.1	5.2	3.9	5.5	0.0	8.6	0.7	2.3
23	7.6	9.1	7.9	9.7	10.6	8.8	7.2	6.4	2.9	3.8	6.5	9.4
24	6.4	9.8	6.9	6.6	10.3	8.9	0.7	2.2	9.1	7.6	6.0	6.2
25	2.4	8.8	2.6	5.1	9.7	10.0	5.5	5.7	9.1	5.8	6.2	8.1
26	7.2	9.8	1.0	9.9	10.0	5.3	2.4	9.4	6.4	9.1	3.2	6.0
27	6.1	9.4	6.0	6.9	5.2	6.0	5.7	7.9	8.9	1.3	2.7	6.3
28	5.3	8.9	2.2	10.7	7.4	0.1	2.2	7.9	5.9	4.5	8.5	7.7
29	0.0		7.8	9.5	10.3	4.1	0.0	4.2	0.7	8.4	7.5	7.2
30	7.5		9.9	9.0	9.5	8.2	2.8	0.0	7.9	6.9	5.5	7.2
31	1.6		9.2		9.0		1.4	0.8		9.7		7.3
Total	175.7	204.8	223.8	264.5	220.4	146.4	98.0	106.5	144.4	203.1	161.5	200.3

Sunshine duration of Station LuangPrabang

Year=1994

Month/Day	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	6.3	3.3	1.6	10.4	7.6	5.0	4.2	6.4	10.4	5.7	8.4	0.7
2	6.2	6.7	8.6	6.5	7.8	5.6	6.9	2.6	9.9	6.8	8.5	1.6
3	7.5	3.8	7.7	8.3	4.9	6.0	9.1	2.2	8.2	7.2	8.5	6.3
4	8.4	5.7	9.9	7.3	10.0	3.0	6.1	5.9	10.1	5.5	6.9	7.4
5	7.8	8.1	7.5	7.2	6.2	0.6	8.3	5.4	7.4	7.0	8.7	8.2
6	7.7	8.4	8.8	9.8	3.6	0.6	8.0	1.6	4.8	6.6	7.7	3.2
7	5.9	6.3	7.4	8.9	6.1	3.1	1.9	0.0	6.3	9.5	9.0	2.9
8	7.9	8.7	7.7	8.6	6.7	0.2	1.4	0.0	5.8	5.4	7.5	2.8
9	7.1	5.5	4.5	9.4	2.6	0.0	0.0	1.3	2.7	4.9	6.3	4.1
10	6.8	8.2	5.5	8.9	5.7	0.2	2.7	0.5	2.1	3.1	6.6	4.5
11	7.9	8.9	8.1	8.4	2.5	4.2	3.8	4.4	5.9	8.4	7.3	3.3
12	5.9	9.7	9.2	6.4	0.4	2.8	1.8	4.2	4.9	2.8	7.5	3.6
13	7.8	7.1	8.2	6.7	8.0	5.3	0.8	5.0	9.3	7.7	8.6	4.6
14	6.6	8.9	4.6	1.9	7.9	0.6	0.0	0.0	0.0	6.6	8.0	4.6
15	7.4	8.6	7.6	9.7	6.7	3.1	0.0	1.0	4.0	6.9	8.2	5.7
16	4.0	8.8	9.3	8.1	5.7	1.8	0.7	1.7	5.8	6.8	8.6	2.7
17	5.4	9.7	8.0	9.2	5.5	0.0	0.0	0.0	5.2	7.2	2.2	8.3
18	6.1	9.9	8.5	7.8	0.0	0.0	0.2	0.0	4.3	6.8	9.7	8.9
19	4.3	9.4	8.2	9.6	4.2	2.0	7.5	0.9	5.5	9.3	9.4	8.2
20	7.0	10.1	9.6	8.9	3.4	0.8	6.1	5.4	5.5	2.3	7.2	3.2
21	4.9	6.8	2.6	8.8	5.9	3.2	6.0	9.3	6.3	10.6	7.7	2.0
22	7.1	7.8	6.8	8.6	2.7	3.4	5.5	1.7	0.5	9.9	7.8	9.1
23	0.0	7.9	0.0	9.8	9.4	2.7	2.6	0.4	1.5	10.5	4.8	5.5
24	5.6	8.2	0.0	5.8	9.6	4.6	1.4	3.8	6.0	9.1	6.5	2.0
25	5.2	7.0	1.9	8.2	8.7	2.3	0.0	5.5	5.7	9.4	6.0	0.0
26	7.5	7.7	0.0	6.4	7.7	0.0	1.2	5.7	6.1	9.7	4.3	4.4
27	7.6	8.4	0.0	5.0	0.0	3.2	0.0	8.1	4.0	7.4	0.0	4.3
28	7.3	6.3	1.0	8.8	4.4	1.3	4.1	6.4	5.3	9.9	1.6	6.0
29	7.3		5.5	8.3	5.5	7.2	3.4	0.0	1.0	5.5	3.4	4.9
30	6.4		5.2	8.4	2.9	4.2	1.5	0.0	9.9	4.8	2.3	1.0
31	7.3		8.7		3.1		0.0	4.7		8.5		4.0
Total	200.2	215.9	182.2	240.1	165.4	77.0	95.2	94.1	164.4	221.8	199.2	138.0

Sunshine duration of Station Pakse

Year=1996

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	8.7	5.6	9.8	10.2	7.0	6.2	3.5	6.0	9.2	6.4	6.0	0.8
2	9.6	5.9	10.4	5.9	5.1	1.6	4.5	7.9	6.0	4.1	7.9	2.8
3	8.5	7.0	10.4	0.3	2.6	4.6	7.5	0.4	8.2	8.1	0.4	8.7
4	9.6	6.9	9.9	9.1	5.0	9.2	5.5	0.0	5.8	6.3	0.0	4.6
5	10.0	8.7	9.6	6.5	0.7	9.2	7.4	0.0	7.7	0.3	0.0	9.5
6	9.6	10.1	9.3	8.5	4.0	7.8	5.0	3.5	5.4	3.4	3.5	3.7
7	10.0	9.7	8.9	7.6	5.7	3.6	6.3	6.8	5.4	9.4	6.8	8.4
8	8.8	10.0	9.1	9.9	2.2	6.5	7.0	10.5	8.3	7.1	10.5	4.6
9	8.8	8.0	9.2	10.2	7.2	7.5	4.5	5.5	6.5	5.1	5.5	9.8
10	6.8	8.5	9.4	8.3	2.9	6.7	7.3	7.0	5.7	7.6	7.0	9.3
11	10.4	10.1	4.2	0.0	3.9	11.0	9.5	4.3	3.5	8.1	4.3	10.5
12	10.1	9.9	5.4	6.2	5.0	7.0	6.3	5.7	0.0	5.7	5.7	8.3
13	7.8	9.6	9.0	9.3	6.1	3.6	6.4	1.4	0.0	8.6	1.4	9.8
14	9.5	8.8	9.7	7.4	3.4	3.5	9.3	3.4	0.0	10.2	3.4	9.8
15	9.8	7.9	9.5	8.4	8.7	3.7	7.3	4.3	3.5	9.7	4.3	9.7
16	9.3	8.4	9.3	7.2	7.8	4.2	4.4	10.0	0.6	7.3	10.0	7.5
17	9.3	8.9	10.3	5.1	2.1	6.7	5.0	5.3	0.0	7.9	5.3	8.8
18	9.6	7.8	9.8	10.4	6.9	3.0	5.5	6.8	0.0	8.5	6.8	6.8
19	9.8	7.9	10.1	10.6	7.6	6.8	7.2	5.7	0.1	8.1	5.7	7.3
20	9.1	10.7	9.3	0.0	3.6	7.2	3.7	10.4	0.0	6.4	10.4	8.5
21	9.7	10.4	6.6	7.9	6.3	1.8	0.0	6.6	0.0	8.2	6.6	4.6
22	10.4	10.6	9.4	2.9	6.7	3.9	0.0	0.0	0.6	0.2	0.0	7.2
23	8.0	10.7	5.7	11.0	4.7	3.8	0.0	2.6	1.7	0.0	2.6	9.8
24	8.7	10.5	9.8	10.7	4.2	3.3	0.0	6.2	3.8	0.5	6.2	8.8
25	9.1	9.1	10.4	11.0	9.6	4.9	1.9	8.1	1.7	0.0	8.1	9.2
26	96.3	8.1	7.7	8.8	3.2	6.3	1.0	10.1	3.1	10.0	10.1	9.5
27	10.3	9.5	8.9	10.2	5.7	7.5	3.1	8.4	4.5	6.4	8.4	7.0
28	10.1	9.7	7.8	8.2	6.1	8.5	5.0	7.1	5.8	6.8	7.1	6.3
29	8.9	9.5	7.2	5.6	5.5	5.4	5.0	8.6	5.0	7.2	8.6	9.2
30	10.6		7.1	4.1	6.4	10.1	3.4	2.8	6.0	7.9	2.8	5.0
31	7.3		9.2		2.0		9.3	3.2		5.5		3.6
Total	374.5	258.5	272.4	221.5	157.9	175.1	151.8	168.6	108.1	191.0	165.4	229.4

Sunshine duration of Station Pakse

Year=1995

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	9.7	10.3	7.0	7.9	3.1	2.1	1.5	9.8	2.6	8.5	0.0	7.2
2	8.6	9.7	9.5	6.9	7.2	5.0	3.8	6.4	2.5	6.7	5.0	10.3
3	9.0	9.2	4.5	7.5	9.1	9.5	0.9	6.7	0.2	5.6	2.5	9.3
4	8.8	9.4	4.7	10.5	5.1	6.2	0.9	0.4	2.3	5.7	3.4	8.7
5	9.4	9.6	10.1	10.7	2.1	5.8	10.3	2.0	2.1	4.0	6.5	7.4
6	9.1	9.0	10.0	8.4	5.9	8.1	7.5	6.2	0.0	0.0	4.9	7.2
7	9.5	9.0	9.1	6.2	9.1	5.3	5.7	4.6	1.3	4.5	7.0	8.6
8	9.2	9.2	8.7	5.4	4.0	4.3	9.2	4.8	5.6	5.7	3.1	9.4
9	9.4	8.6	9.2	9.5	4.1	4.4	6.4	6.1	5.9	9.4	2.5	8.4
10	9.4	8.7	7.7	9.3	0.0	3.1	5.8	7.4	4.9	6.8	7.1	9.3
11	7.7	8.8	9.9	9.5	0.0	4.1	8.0	7.6	0.2	1.2	8.6	7.9
12	3.4	9.8	9.9	5.0	3.0	3.6	7.1	8.5	8.3	3.3	9.2	7.3
13	9.1	7.6	9.4	6.6	2.8	1.8	7.1	3.1	3.6	4.4	10.3	1.5
14	8.0	8.7	9.5	6.3	0.4	3.5	5.1	3.9	4.2	7.9	10.1	3.5
15	8.8	5.4	10.2	5.9	2.1	10.2	4.2	6.3	6.1	1.2	10.7	9.1
16	8.4	6.0	9.5	9.4	1.5	9.6	1.1	7.2	5.8	9.4	7.7	7.1
17	9.2	7.1	9.7	6.9	5.1	4.4	3.0	9.0	7.7	8.0	8.0	7.8
18	9.3	5.6	5.1	5.9	5.8	7.6	3.0	9.9	4.2	9.3	9.5	9.3
19	8.0	8.3	7.0	5.9	10.6	7.2	3.8	8.8	9.0	10.4	7.8	8.2
20	8.0	6.6	9.8	7.4	5.9	9.4	10.1	7.8	5.6	10.4	6.9	8.6
21	9.9	7.6	8.8	9.3	8.5	7.5	10.1	1.7	3.6	10.6	9.0	9.7
22	8.7	4.7	9.2	8.4	9.2	9.4	8.6	8.9	3.4	8.7	10.1	9.6
23	8.4	8.9	8.5	8.2	3.8	4.8	3.3	5.5	4.2	8.9	9.8	9.5
24	8.0	6.4	7.9	3.0	6.2	4.7	7.8	5.4	2.3	6.4	8.7	8.5
25	6.6	8.4	5.9	7.4	7.3	8.2	7.6	5.3	6.6	6.4	9.5	9.3
26	7.2	7.5	7.1	5.1	7.8	6.6	7.5	4.1	7.2	0.1	8.0	8.2
27	9.0	7.2	10.0	7.9	5.3	4.8	9.1	4.4	8.7	6.7	2.1	9.0
28	9.2	4.4	8.6	8.4	9.3	5.7	0.2	0.0	7.2	5.8	3.1	9.6
29	9.1		8.6	9.6	10.3	6.2	1.8	0.0	1.9	5.4	8.5	9.9
30	9.2		7.4	5.2	8.3	2.2	2.1	0.2	6.1	7.6	2.8	8.6
31	9.4		2.6		8.5		4.9	3.7		5.6		7.5

Sunshine duration of Station Pakse

Year=1994

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	9.9	9.2	10.0	8.7	6.2	1.9	8.0	2.1	7.3	7.6	9.3	9.0
2	8.6	3.4	9.5	5.0	11.0	0.6	6.0	4.5	7.0	7.5	8.6	9.6
3	7.3	7.0	9.1	8.8	10.3	6.8	6.7	1.3	7.7	8.9	10.1	9.3
4	8.9	7.3	9.3	9.1	10.7	6.8	2.0	4.3	0.0	7.5	9.4	8.1
5	9.3	9.9	9.6	9.1	7.2	8.1	1.5	5.2	0.0	8.9	6.2	5.1
6	10.2	9.0	9.0	4.3	7.3	2.1	4.4	3.4	2.0	8.4	9.6	1.9
7	9.9	9.8	8.6	8.4	8.5	4.9	4.6	6.8	2.7	10.7	9.7	2.6
8	9.5	9.4	9.4	4.1	3.6	0.8	5.2	4.3	6.2	8.4	9.9	7.4
9	8.6	5.2	8.1	10.6	8.4	2.7	2.6	6.7	7.6	7.7	10.0	4.8
10	9.2	6.9	6.1	10.5	10.2	1.8	0.0	9.1	3.8	10.3	10.1	6.6
11	10.1	8.3	5.5	9.6	8.7	7.3	0.0	11.4	6.0	0.9	9.7	8.9
12	9.2	9.2	7.1	9.9	9.4	7.0	0.1	10.0	2.2	5.9	9.0	4.2
13	9.3	8.4	7.9	5.4	9.3	1.4	4.4	9.4	2.2	6.9	10.5	5.9
14	9.2	9.6	4.4	8.5	8.2	4.9	2.0	7.7	2.5	10.1	9.9	9.4
15	9.1	9.4	8.7	9.5	6.6	2.8	1.0	1.1	2.2	8.2	10.0	10.3
16	6.8	8.8	9.0	10.1	1.1	6.7	1.6	5.9	2.9	8.7	9.7	7.9
17	9.3	8.8	7.1	8.8	3.3	6.1	0.5	3.8	2.9	7.6	7.7	9.6
18	4.5	8.5	5.8	9.1	3.0	0.0	0.5	7.1	0.2	10.3	9.7	8.8
19	8.9	8.2	1.5	9.4	9.6	0.0	2.4	9.0	2.8	10.2	9.2	7.5
20	10.4	7.7	6.8	6.2	7.2	0.0	3.9	7.9	6.0	3.5	9.6	8.3
21	9.2	8.9	6.7	8.6	10.3	0.0	3.7	10.0	5.9	8.3	7.5	9.1
22	9.9	10.0	5.8	6.1	8.8	1.5	8.8	3.6	6.3	10.1	7.7	7.9
23	9.5	9.3	3.1	8.3	4.7	2.5	5.9	1.3	5.2	9.7	8.8	10.0
24	7.9	9.1	0.4	9.9	6.9	0.0	6.8	4.4	8.4	10.2	10.0	8.9
25	9.3	7.9	5.7	8.9	6.5	0.8	7.5	4.9	7.9	9.2	10.2	10.0
26	9.1	9.4	7.9	8.5	6.9	5.8	1.1	0.8	4.5	7.3	9.2	9.5
27	9.6	9.0	8.7	10.3	2.1	5.2	2.3	6.6	3.8	2.6	10.4	10.5
28	9.5	9.0	8.7	9.1	6.6	3.9	0.1	0.0	8.9	7.7	10.3	8.9
29	9.5		8.0	8.8	8.7	4.0	0.0	0.2	8.0	6.1	9.9	10.2
30	8.9		9.5	9.8	3.8	5.9	0.0	0.0	7.5	9.4	8.8	8.8
31	9.7		7.3		0.0		1.7	0.7		9.1		8.3
Total	280.3	236.6	224.3	253.4	215.1	102.3	95.3	153.5	140.6	247.9	280.7	247.3

Sunshine duration of Station Viengsay

Year= 1996

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	7.5	0.0	0.0	11.0	7.9	4.1	2.2	-99999	0.2	2.2	0.1	0.0
2	8.5	0.0	4.3	0.0	3.7	3.5	6.1	3.7	3.2	3.1	0.0	0.2
3	7.3	0.6	3.8	0.0	4.4	5.1	0.0	7.3	7.1	6.8	0.0	5.0
4	9.0	0.0	7.7	0.0	5.7	8.5	0.0	3.8	5.5	2.7	0.0	8.5
5	8.8	0.3	7.2	4.0	6.7	8.5	6.9	3.5	9.5	1.7	0.0	0.3
6	7.4	1.9	2.2	3.9	10.2	5.3	9.2	5.1	9.5	4.4	0.4	0.0
7	7.0	2.0	3.3	0.5	4.4	6.5	9.2	0.3	10.1	0.2	0.2	0.3
8	4.3	0.0	3.5	8.6	0.0	5.2	6.5	2.2	7.8	0.0	1.9	0.0
9	7.3	5.9	2.1	4.8	1.0	9.9	8.7	0.0	3.4	0.0	5.2	0.0
10	4.2	0.4	2.4	8.0	7.2	9.3	0.0	5.3	2.6	0.6	4.8	0.0
11	6.5	7.4	3.9	0.0	0.3	12.1	0.3	0.0	4.2	0.5	2.5	0.0
12	6.9	10.3	0.0	0.0	0.0	9.3	2.8	0.0	2.5	0.7	7.0	0.0
13	7.2	11.8	6.5	-99999	3.7	2.2	0.9	0.0	0.0	7.9	3.6	0.0
14	6.7	10.1	8.3	-99999	10.5	3.6	5.3	0.0	0.0	7.8	5.0	0.0
15	9.0	10.6	7.5	-99999	7.3	0.8	6.0	0.0	0.0	7.6	5.5	3.3
16	9.8	9.2	10.3	3.3	2.4	1.7	2.2	1.0	0.4	7.8	6.1	3.4
17	7.3	7.8	10.1	6.4	0.0	1.9	0.4	0.3	0.7	3.4	0.0	6.9
18	9.2	0.0	6.4	9.1	1.9	4.0	0.0	0.0	0.2	4.4	0.0	0.0
19	1.6	0.0	4.1	4.1	3.7	6.2	1.2	0.0	0.5	2.0	0.0	0.0
20	3.8	0.0	3.7	0.0	6.2	2.1	0.0	5.4	0.5	0.0	0.0	0.0
21	4.2	0.0	3.2	0.0	3.6	0.5	2.2	9.9	1.3	5.6	2.7	1.1
22	6.8	0.0	3.5	0.0	4.5	1.1	7.2	4.2	0.0	0.0	2.4	8.0
23	7.0	0.0	6.3	1.6	5.2	0.6	0.1	0.0	0.0	0.0	2.5	4.7
24	7.8	0.0	2.0	2.4	6.1	0.4	0.0	5.1	0.0	0.0	4.8	7.7
25	2.1	0.0	3.3	0.2	3.7	0.0	2.4	7.8	2.9	1.7	1.7	2.2
26	3.8	0.0	3.2	0.8	1.9	0.0	0.0	3.8	3.8	1.3	4.2	7.9
27	0.0	0.0	0.2	0.8	2.9	4.7	4.0	0.7	0.9	0.1	1.5	7.0
28	0.0	0.0	0.8	0.0	5.0	1.8	6.2	8.0	0.1	8.6	5.8	5.3
29	0.0	0.3	0.3	3.7	2.7	0.4	0.0	3.1	3.4	0.2	0.6	5.7
30	0.0		6.0	7.2	2.1	0.0	0.0	0.0	6.4	5.7	0.0	4.9
31	0.0		11.0		3.4		0.6	0.3		0.0		6.2

Remark: -99999 = Missing data

Sunshine duration of Station Viengsay

Year=1995

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	6.7	0.0	4.9	3.5	2.0	1.2	0.0	3.2	0.7	6.2	2.9	-99999
2	3.5	0.0	8.7	0.0	5.7	3.0	0.3	3.8	0.0	7.2	0.0	-99999
3	0.9	0.0	0.0	0.0	3.6	4.8	0.2	1.8	0.0	6.8	0.0	4.2
4	0.0	0.0	0.0	5.1	4.3	0.8	0.0	0.0	2.9	1.4	3.3	1.4
5	5.9	0.0	2.2	1.4	0.0	0.0	0.0	1.0	10.6	0.0	8.7	0.7
6	6.2	1.3	5.9	0.0	1.9	0.4	1.5	0.0	3.1	0.0	6.0	0.0
7	8.3	2.0	5.5	7.1	0.0	0.8	0.1	0.2	5.9	0.0	0.0	4.3
8	10.0	5.6	8.0	5.3	2.3	0.0	1.3	1.3	0.4	0.0	0.0	10.4
9	5.7	3.3	9.1	4.7	2.3	0.0	8.5	5.0	2.8	0.0	0.0	8.6
10	7.3	1.8	0.8	11.4	0.0	0.0	8.1	3.3	7.6	-99999	0.8	10.6
11	9.5	6.9	5.3	1.3	0.0	0.0	8.6	5.4	2.3	-99999	0.3	6.3
12	0.0	1.2	4.5	-99999	0.0	0.2	6.8	0.5	0.0	0.0	5.6	4.5
13	2.8	5.3	3.2	-99999	5.2	1.2	3.8	0.0	0.0	8.7	1.7	8.3
14	1.4	8.7	3.3	-99999	0.0	2.8	0.0	0.0	2.1	9.0	0.0	9.5
15	0.0	5.8	2.5	-99999	0.9	6.7	0.2	0.4	7.2	2.5	0.9	5.6
16	0.0	4.6	7.4	-99999	4.3	10.2	0.0	0.0	2.8	3.7	7.5	5.0
17	0.0	7.6	2.0	5.5	8.6	3.2	2.4	0.0	0.5	6.5	0.0	3.5
18	6.9	9.3	0.0	6.4	4.2	0.3	5.6	1.0	0.0	7.0	0.0	7.0
19	4.4	10.7	0.0	7.6	8.9	3.5	3.1	1.7	0.2	4.8	0.1	0.0
20	8.0	8.3	3.1	1.9	10.8	2.3	2.8	0.0	0.3	6.3	0.0	0.0
21	5.5	5.3	0.0	10.1	9.9	5.8	5.4	0.4	0.0	3.4	0.0	0.0
22	6.2	5.2	-99999	8.6	2.7	7.5	10.6	3.2	0.0	2.0	1.8	0.0
23	8.0	2.7	3.9	9.0	10.1	10.3	10.0	4.4	5.1	3.1	0.0	0.2
24	0.0	1.7	7.2	3.4	11.8	9.7	3.6	6.1	5.4	0.0	8.8	0.0
25	0.0	0.0	0.0	1.5	11.3	6.3	3.5	2.6	8.3	0.2	8.6	1.0
26	0.0	0.0	0.2	5.7	5.0	1.5	5.1	7.1	7.9	1.7	4.2	0.0
27	0.0	0.0	4.4	-99999	0.9	0.0	6.8	3.1	6.9	0.0	0.0	2.5
28	0.0	0.0	4.0	6.0	2.1	2.0	2.2	0.3	4.9	0.2	3.7	3.2
29	0.0		6.9	6.5	5.2	4.5	0.2	0.0	6.9	4.2	5.9	7.9
30	0.0		11.3	4.6	4.5	6.9	1.0	0.0	6.9	4.3	7.1	9.3
31	0.0		6.6		3.1		0.9	0.9		1.9		9.3

Remark: -99999 = Missing data

Sunshine duration of Station Viengsay

Year= 1994

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	8.4	0.0	0.0	3.2	11.0	2.1	7.1	1.2	2.6	8.5	1.3	3.4
2	6.9	1.0	0.0	5.4	10.7	1.6	10.1	3.7	8.6	5.1	6.6	1.1
3	9.0	0.0	0.0	4.7	10.6	0.7	11.1	1.2	9.4	1.0	5.7	2.3
4	6.8	2.5	0.0	7.1	9.5	0.2	2.0	7.4	11.5	1.1	9.4	0.0
5	5.4	8.8	1.6	8.0	0.0	0.8	2.3	5.2	7.4	3.3	6.3	0.0
6	0.7	10.2	2.3	8.0	0.0	3.4	5.3	6.3	2.6	5.0	7.0	2.2
7	6.8	6.9	7.6	8.9	3.6	0.8	0.0	0.0	-99999	5.3	4.2	1.1
8	6.0	7.9	4.4	2.9	2.3	2.5	0.0	0.3	-99999	5.4	1.6	8.8
9	6.2	1.3	6.2	6.3	4.8	0.0	0.6	0.9	4.6	3.0	4.3	7.5
10	6.5	3.9	1.0	7.9	2.3	0.2	5.2	1.1	3.7	0.1	6.5	8.7
11	6.0	8.5	5.1	7.2	1.9	3.2	7.8	5.5	8.8	2.9	8.0	10.0
12	7.9	8.1	8.1	3.5	3.1	5.6	4.3	3.9	0.0	2.6	8.2	9.9
13	3.9	4.0	6.6	-99999	4.1	1.0	0.4	1.5	0.0	3.7	2.8	6.9
14	0.0	5.6	0.0	-99999	5.4	2.6	0.0	0.3	0.0	4.5	1.3	1.7
15	3.0	5.3	1.6	-99999	3.9	1.0	0.0	0.0	0.0	3.7	0.2	7.7
16	7.0	1.6	4.5	-99999	1.5	0.0	0.0	0.0	0.0	3.3	0.0	4.2
17	8.8	0.1	2.6	2.6	2.3	0.0	0.4	0.1	0.2	0.0	0.0	0.0
18	0.0	8.2	3.1	7.8	0.0	0.0	1.5	1.2	2.5	2.0	0.0	0.0
19	0.0	9.3	0.0	10.4	0.4	0.0	2.7	2.3	1.7	2.5	0.0	0.0
20	0.0	6.4	0.0	9.5	2.5	0.2	1.8	5.3	7.2	0.0	0.9	0.0
21	0.0	4.1	1.3	9.1	4.1	5.2	0.2	0.4	4.5	10.1	1.9	0.0
22	0.0	5.4	0.0	4.6	3.1	3.9	2.5	3.9	0.0	7.8	3.7	0.0
23	0.2	8.7	0.0	6.2	6.2	5.8	1.7	2.5	4.8	7.8	1.3	2.2
24	8.1	-99999	0.0	5.4	8.0	3.4	0.8	1.0	3.8	9.1	0.8	5.8
25	2.4	-99999	0.0	7.5	4.8	0.0	0.0	2.1	3.1	10.3	5.5	9.9
26	4.3	-99999	0.0	9.0	8.4	1.3	1.1	4.2	1.0	10.2	4.8	8.6
27	0.0	0.0	0.0	4.1	0.0	0.5	0.3	6.8	1.7	10.5	0.0	3.1
28	2.0	0.0	0.4	5.5	4.0	1.7	0.2	1.4	0.0	9.4	0.5	3.7
29	0.0		5.6	6.6	3.3	1.4	1.9	0.0	-99999	8.0	5.4	1.4
30	3.6		4.8	6.3	3.0	1.7	0.0	0.0	6.2	1.9	2.1	9.6
31	6.3		4.7		4.0		0.0	0.0		0.9		5.7

Remark: -99999 = Missing data

Sunshine duration of Station Vientiane

Year= 1996

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1							4.3	5.3	4.4	9.8	7.8	2.4
2							5.2	4.9	5.0	10.3	7.6	0.4
3							1.7	2.9	5.6	9.6	3.3	7.0
4							0.0	0.8	7.3	5.8	0.0	9.2
5							8.6	4.4	10.3	0.4	3.3	9.0
6							9.5	3.2	9.1	3.7	0.0	9.1
7							5.3	0.5	10.6	6.0	5.8	1.1
8							10.5	5.7	6.3	2.3	7.9	8.5
9							8.1	3.6	6.0	8.2	7.8	9.2
10							1.7	9.2	3.4	10.7	4.4	9.7
11							5.3	1.8	7.9	10.7	4.0	2.9
12							4.6	0.0	2.5	10.2	5.6	9.7
13							5.2	0.0	0.0	10.7	0.0	9.7
14							6.5	0.0	0.0	10.4	9.0	9.4
15							7.4	0.0	0.2	10.1	5.2	9.6
16							1.3	1.5	1.7	10.0	7.6	8.5
17							1.3	3.5	8.3	10.1	3.1	9.9
18							0.0	3.6	8.9	9.7	1.8	9.4
19							0.7	3.2	2.0	8.0	8.3	5.8
20							3.2	0.0	0.1	10.4	10.5	9.3
21							0.2	7.9	0.1	4.7	9.9	9.9
22							0.9	10.4	6.8	6.5	10.3	9.6
23							0.8	0.0	0.0	7.5	10.3	9.7
24							0.0	0.9	3.3	1.6	8.0	9.7
25							4.1	1.2	1.1	2.5	5.4	9.6
26							2.1	1.7	9.1	8.3	9.9	8.3
27							1.5	8.3	6.8	8.9	9.5	8.8
28							2.1	11.4	9.8	10.5	10.7	6.0
29							0.4	10.6	10.2	10.6	9.5	7.1
30							2.3	4.0	10.1	6.5	2.2	6.4
31							4.6	7.0		3.4		3.8
Total							109.4	117.5	156.9	238.1	188.7	238.7

Sunshine duration of Station Vientiane

Year=1994

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	9.1	8.9	9.7	10.8	10.9	4.2	2.3	5.9	6.9	7.5	7.4	
2	9.1	9.2	8.6	9.4	11.6	3.0	7.3	0.6	6.0	4.9	8.4	
3	10.0	5.4	9.9	10.3	10.9	0.1	7.7	-99999	6.8	7.8	8.8	
4	10.1	5.7	10.0	8.8	11.6	0.0	4.7	1.2	7.2	6.8	7.4	
5	5.6	10.2	8.1	10.4	9.8	0.0	5.1	4.8	7.9	7.3	4.5	
6	9.7	9.4	9.5	9.9	6.6	0.5	6.6	3.5	4.5	8.2	8.6	
7	9.1	9.6	9.1	10.2	6.5	2.4	0.1	1.3	1.1	8.4	7.7	
8	9.2	9.5	8.7	10.5	0.2	1.0	3.2	2.2	2.2	8.0	1.4	
9	9.1	3.8	8.6	10.5	3.5	1.5	2.9	5.1	3.4	8.8	8.3	
10	9.7	7.5	8.5	10.1	5.5	1.8	0.1	5.7	6.9	0.2	7.3	
11	9.4	9.3	2.5	10.2	3.9	3.0	1.1	5.9	-99999	3.80	4.60	
12	9.7	9.9	9.6	10.3	5.7	4.4	1.8	8	-99999	1.60	8.90	
13	9.7	8.0	5.4	8.1	11.3	2.2	2.9	6.4	-99999	0.00	8.70	
14	9.2	5.0	1.5	5.0	9.2	2.5	0.0	3.1	-99999	5.50	5.80	
15	8.8	8.9	8.5	11.2	9.2	2.5	0.5	0	-99999	2.5	-99999	
16	9.3	7.2	10.7	10.9	9.2	0.4	1.2	0	1.8	8.7	-99999	
17	9.7	7.9	10.4	9.9	4.8	0.7	0.1	0	3.7	3.7	-99999	
18	9.9	9.3	4.7	8.8	0.7	0.0	0.1	0	1.4	8.9	-99999	
19	9.8	9.8	6.6	8.8	4.5	2.7	0.8	0	0.1	10.1	-99999	
20	9.4	9.4	9.3	9.0	1.5	3.0	8.2	6.4	1.5	0.0	-99999	
21	9.7	9.0	7.3	8.3	6.1	4.0	8.1	4.4	6.4	9.8	-99999	
22	10.0	9.3	7.7	9.8	10.2	2.6	5.8	3.4	5.7	9.9	-99999	
23	9.4	9.7	0.0	11.1	11.4	0.1	3.8	1.9	1.2	0.7	-99999	
24	8.3	9.5	0.0	9.2	9.1	2.3	5.4	1.1	6.4	0.0	-99999	
25	9.6	9.7	5.4	9.1	7.6	0.5	3.2	3.6	5.7	9.6	-99999	
26	9.3	9.9	0.8	9.3	5.9	0.1	3.6	2	5	7.9	-99999	
27	8.8	7.0	0.0	5.8	0.0	1.8	0.0	8.1	5.6	8.8	-99999	
28	9.2	6.6	0.6	11.0	3.4	5.4	0.0	4.7	4.8	7.2	-99999	
29	8.7		11.4	10.7	8.3	5.9	3.4	0	7.2	7.8	-99999	
30	9.1		6.8	9.7	2.1	2.2	0.0	1.3	2.1	8.5	-99999	
31	9.3		9.1		1.7		0.0	3		8.7		

Sunshine duration of Station Vientiane

Year=1993

Day/Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1	9.7	10.2	6.6	8.2	10.8	6.6	-99999	3.0	7.2	7.3	10.7	9.5
2	9.9	10.3	8.9	9.9	9.0	10.3	-99999	-99999	7.4	10.2	10.6	10.2
3	9.8	10.0	9.9	9.1	10.3	7.5	-99999	2.6	6.4	9.8	10.5	10.1
4	9.9	10.0	9.8	7.7	6.8	7.2	-99999	9.0	8.3	3.6	10.5	9.7
5	9.2	9.8	8.9	7.2	10.1	6.0	-99999	8.2	5.0	9.6	10.5	9.8
6	9.1	10.1	9.0	7.2	9.9	6.7	-99999	7.2	5.4	10.3	10.6	10.2
7	6.4	8.1	7.2	-99999	-99999	7.5	-99999	8.5	6.2	9.8	10.7	8.1
8	6.3	9.9	8.9	-99999	10.5	9.0	-99999	3.9	3.2	10.4	10.5	9.7
9	9.7	9.7	7.6	1.7	9.5	-99999	-99999	7.6	2.2	9.1	10.5	8.8
10	9.1	9.5	7.3	10.3	8.2	4.8	-99999	5.1	2.3	7.0	10.5	0.9
11	9.0	9.4	9.8	6.0	7.9	7.5	-99999	7.8	5.0	7.8	10.2	0.5
12	9.9	9.2	0.8	7.6	9.4	-99999	-99999	8.5	2.4	10.3	10.4	7.5
13	9.1	9.6	1.8	1.0	7.1	7.3	-99999	4.7	5.3	10.6	10.1	9.9
14	9.5	6.0	7.4	6.0	7.5	10.0	-99999	-99999	9.9	8.0	9.2	9.5
15	8.5	9.3	8.6	11.2	9.5	8.8	-99999	0.6	10.6	10.2	10.4	8.0
16	2.1	9.2	9.2	9.3	6.2	5.1	-99999	-99999	6.8	10.3	10.5	10.1
17	2.5	5.9	9.3	11.0	4.8	1.7	-99999	-99999	8.1	7.9	9.3	10.2
18	2.4	9.6	9.0	10.5	6.4	6.6	-99999	0.2	4.1	1.0	10.3	10.0
19	6.2	9.7	5.5	9.5	2.0	9.3	-99999	0.6	3.9	0.9	10.2	-99999
20	8.2	10.0	6.3	9.3	-99999	10.5	-99999	1.9	3.6	3.6	10.2	8.7
21	8.2	10.0	5.2	7.5	6.4	11.4	-99999	-99999	9.3	9.9	9.0	8.2
22	8.7	10.0	5.7	5.1	5.9	9.2	-99999	-99999	10.7	9.8	9.4	9.7
23	9.7	9.5	9.6	11.4	5.3	0.7	-99999	0.9	11.1	8.8	10.2	8.6
24	0.6	5.9	10.0	9.2	2.5	0.7	-99999	2.1	8.3	10.0	9.2	10.0
25	4.6	8.0	9.9	8.5	3.6	1.2	-99999	11.1	5.6	10.4	0.2	9.8
26	5.3	8.8	9.7	9.5	7.5	6.5	-99999	7.8	9.4	10.4	2.6	10.2
27	2.8	10.0	9.7	10.8	9.7	5.6	-99999	10.9	9.8	8.2	10.3	9.8
28	8.4	9.7	9.0	9.3	5.3	0.9	-99999	7.8	9.7	10.7	6.6	10.2
29	9.7		9.2	9.2	3.1	1.5	-99999	1.4	5.5	8.9	7.3	10.0
30	9.6		5.5	7.8	2.0	-99999	-99999	1.5	3.8	9.3	10.1	9.8
31	10.1		8.7		7.5		-99999	6.3		10.7		9.8

入手資料リスト

入手資料		入手日時	入手機関
14	THE ELECTRICITY LAW	1997/11/18	MIH
15	THE WATER AND WATER RESOURCES LAW	1997/11/18	MIH
16	Proposed Villages to install PV system	1997/11/18	MIH
17	ラオス電力政策のフレームワーク	1997/11/18	MIH
18	LIGHTING KIT(installation & operation instructions)	1997/11/18	MIH
19	Lao PDR Southern Provinces Rural Electrification Project: GEF Grant in Support of the Off-Grid Electrification	1997/11/19	EDL
20	Electricity consumption(1996) & plan upto 2000	1997/11/19	MIH
21	電化計画マップ(ラオ語)	1997/11/19	MIH
22	Existing Power Plants In The Lao PDR	1997/11/19	MIH
23	PRINCIPAL GOL AGENCIES INVOLVED IN IPP IMPLEMENTATION	1997/11/19	MIH
24	EXISTING HYDROPOWER PLANTS IN LAO PDR	1997/11/19	MIH
25	EXISTING POWER GRID LAW	1997/11/19	MIH
26	POWER PLAN IN LAO PDR	1997/11/19	MIH
27	Energy Generation and Consumption In The Lao PDR	1997/11/19	MIH
28	Forecast Dmestic Generation Requirements In The Lao PDR	1997/11/19	MIH
29	Rural Electrification Sector Review and Policy Formulation for Lao PDR	1997/11/19	MIH
30	1/100000地図 B.NAKHUMA	1997/11/19	MIH
31	1/100000地図 PAKKAN	1997/11/19	MIH
32	BASIC STATISTIC 95	1997/11/19	MIH
33	BASIC STATISTIC 96	1997/11/19	MIH
34	New Electricity Tariff Adjustment	1997/11/19	MIH
35	MIH設置PVシステムの見積もり	1997/11/25	MIH
36	Re:Lao PDR Solar Battery Charging Pilot Project Subtransmission and Rural Electrification Project Pre-Appraisal Mission - Back to Office Report	1997/11/25	MIH
37		1997/11/19	UNDP
38	UNITED NATIONS DEVELOPMENT PROGRAMME	1997/11/19	UNDP

39	ラオス国の農林小省気象・水文局概要	1997/11/22	気象センタ-
40	Council On Renewable Energy in the Mekon Region	1997/11/19	
41	Sunshine hours in Lao	1997/11/26	気象センタ-
42	Rural Electrification Sector Review and Policy Formulation for LAO PDR	1997/11/22	MIH
43	Pilot Project for the Commercialization of Renewable Energies in Rural Areas of Lao	1997/11/22	MIH
44	People's Democratic Republic	1997/11/27	MIH
45	ボラカルの電化計画	1997/11/27	MIH
	MIHのPV設置場所		

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