

第6章 総合評価

6-1 総合評価(調査団所見)

今回調査は、既に本格稼働後15年以上を経過している関連施設整備事業の地域開発効果等評価調査であったため適切な情報、データ及び意見の収集に困難が予想されたが、おおむね当該調査の目的を達成し、事業の評価を行うことができた。

今回調査による事業評価では、(1)JICAの融資対象となった関連施設整備事業である水力発電所の建設による当該国及び地域経済産業・社会開発面に係る評価、(2)本体事業であるワンサラ鉱山開発面に係る評価の2つの側面から実施したが、いずれの側面においても以下のような有効的な開発効果をもたらしていることを確認した(詳細は第5章のとおり)。特に、ペルー国内の貧困マップで下から2番目となる“貧困(ポブレ)”カテゴリー*に属しているワジャンカ村に対して、15年以上も前から無償で電力供給を行ってきたことは、当該地域社会の産業振興、生活向上に多大な貢献を行った事業として高く評価されるものである。

*ワジャンカ村村長の聞き取り結果であるが、実際は“極貧困”カテゴリーとの見解もある。

以下、今回の評価における主なポジティブポイントを概括する。

(1) 関連施設整備事業(水力発電所の建設)による当該国及び地域経済産業・社会開発面に係る評価

- 1) 雇用創出
- 2) 外貨の獲得(ワンサラ鉱山による直接貢献とその顧客による間接貢献)
- 3) 輸入代替(ディーゼル油の輸入節約による外貨の節約)
- 4) 周辺地域社会の安定・活性化(ワジャンカ村の生活安定及び活性化)
- 5) その他(地場資源の活用、納税、関連産業の振興、環境保全等)

(2) 本体事業(ワンサラ鉱山開発)面に係る評価

水力発電による生産原価の低減とそれに伴う安定経営・成長

6-2 事業に対する提言

今回の評価結果では、JICAの融資対象となった関連施設整備事業及び本体事業いずれにおいても当該国及び地域経済産業・社会開発に大きく貢献したとの結果が得られたが、今後の事業運営に際し、事業主体及び関係企業に対して、以下の3点についてJICAから提言したい。

(1) 地域経済産業・社会開発協力の継続

事業主体であるサンタリイサ鉱業(株)は、これまでワジャンカ村への地域社会貢献として水力発電所からの無償電力の供給をはじめとして、村内の橋梁、子供用運動遊具付きの公園、婦人クラブ集会場など多くの公共インフラ設備の整備に協力してきた実績がある。この点においては、村長をはじめ多くの村民がその貢献に感謝を示していることが今回の調査でも確認できた。

一方、今回の調査において、これまで無償でワジャンカ村に対して数多くの貢献を行ってきたにもかかわらず、ワジャンカ村が自身の自立発展にこれらの恩恵を効果的に利用してこなかった点も確認された。この点については、今後の地域貢献のあり方について、地域との共存・共栄を図る何らかの方策を検討して行くことが必要と思われる。

経済の国際化が進み、海外において本邦企業が事業を実施する機会も増え、地域社会への貢献も必要不可欠なものとなりつつあります。よって、上記の点に留意しつつ、今後も可能な範囲で地域経済産業・社会開発協力を継続して頂き、我が国の国際協力の一翼を担って頂くことを期待するものです。

(2) 環境面への配慮

2002年8月末から9月初めに開催された「持続可能な開発に関するサミット(WSSD)」において、「開発における環境への配慮」が国際的に合意され、もはや開発と環境問題との均衡は、全世界の国・地域に課せられた国際的な責務となっています。

このような世界的な動きから、今回の調査でも、開発側及び受入側にかかわらず諸所の場で環境配慮の意見が聞かれました。この問題は、たとえ開発側に全く環境影響の要因がなくてもあらゆる機会にいわゆるインフォームドコンセントを求められ、また、常に説明責任を問われます。

したがって、今後も環境問題に対する対応に関しては、既に提出済みの「環境影響評価報告」「閉山計画書」をフォローして頂くとともに、関係機関を含めた受入側との継続的な意見交換・情報提供を通し、真摯に対応されることを望みます。

(3) ペルー及び鉱業分野での協力の継続

最近の世界中のあらゆる分野での国際化の流れは、高所得国から低所得国、さらには貧困国の分類にかかわらず急速かつ確実に到来しております。そのなかで、特に自国経済に影響を受けやすいのは、まだその自立発展性を保持していない貧困国です。このような貧困国に対し、先進国が成し得ることは、当該貧困国の貧困撲滅、保健・医療分野の社会インフラ整備及び環境問題などの諸問題において、当該国の自立発展の障害となっている問題の解決に最大限の協

力及び支援を行うことです。そして、これらの協力及び支援の方向性は、現在の国際社会における開発協力及び援助の枠組みにおいても同様の主張がなされており、我々先進国に課せられた国際的な責務ともなっております。また、これらの協力及び支援は、官民の形式にこだわらず、世界中どこでもその実施が奨励されます。

このようななか、サントルイサ鉱業(株)をはじめとする我が国関係企業がこれまでペルー国内で行ってきた多くの貢献は、当該国の輸出額の増加、鉱山開発・経営手法に関する技術力の向上及び我が国に対する国際的な信頼向上など多くの分野で成果がみられ、ペルー及び同国の鉱業分野の発展に大きく寄与してきました。今後も国際的な開発協力、援助の枠組みと一致したこのような国際的な貢献を可能な範囲で継続して頂き、我が国の国際社会での活動に参与頂けることを期待するものです。

收 集 資 料

The Peruvian Power Market

1. Current conditions and issues of electricity sector in the country

The Peruvian Power Market has the "Sistema Eléctrico Interconectado Nacional" (SEIN), as the main electrical grid which is conformed by transmission lines, substations, compensation systems, etc., Through this grid the electrical energy produced by the utilities is transferred to the consumers.

The topography of the electrical grid in the north of Peru is radial, and non radial in the center of the country. In the south of the country the topography is mixed. The voltage levels that prevail are in 138 kV and 220 kV. The main center of load of Peru is the city of Lima.

In the Peruvian Power Market the following organizations take part (To see Annexed N° 1):

- State:
 - The Ministry of Energy and Mines, ordered to lead the power policies to the optimal advantage of the resources without damage of the environment. It has also normative and grant functions.
 - The Supervisor Organism of the Investment in Energy (OSINERG), that has regulating and supervision functions in the power and hidrocarbon sector.
 - INDECOPI, ordered to promote in the peruvian economy a loyal culture of and honest competition and to protect all the forms of intellectual property.
- The Electrical Concessionary Companies, that develop the different electrical activities
- The Committee for the Economic Operation System (COES), ordered of the operation to the minimum costs of the transmission and generation system.
- The Users

Electrical activities

The electrical activities in Peru are developed within the framework of the Decree Law N° 25844, Law of Electrical Concessions, which looks to promote the participation of the private investment according to rules of the free market and to regulate prices based on marginal costs. These activities are split in generation, transmission and distribution of electrical energy (To see Annexed 2). Also, according to the Law of Electrical Concessions, it is only possible to develop the three electrical activities in an isolated zone.

The electrical activities can be developed by natural or legal, national or foreign, public or private persons, by means of concessions or authorizations. The users are split in regulated and free clients. The regulated clients correspond to the Public Service of Electricity, whose demand is 20% of the peak demand of the zone of concession until a top of 1 MW. The free clients are those that are over these values.

In order to develop the generation activity, a grant, concession or authorization of generation, is required. The concession is granted when a hydraulic or geothermal resource is used and the installed capacity is superior to 10 MW. In the case of the authorization, it's necessary when activities of thermal generation as well as when hydraulic or geothermal resources are used and their installed capacity is superior to 500 kW and equal or less to 10 MW. For the transmission activity, concession of transmission is required when the servitude imposition is required to use of government properties or of third.

In order to develop the distribution activity a concession is required when this one takes place for the Public Service of Electricity and his demand is superior to 500 kW. The activities of generation, transmission and distribution that do not require concession, It can be carried out freely fulfilling the practical standards and the dispositions of conservation of the environment and the Cultural Patrimony of

the Nation. In these cases it is required to inform to the Ministry into Energy and Mines the beginning into the operation.

Tariffs

The electrical tariffs for the regulated market are calculated by the concessionary companies and approved by the Attached Management of Tariff Regulation of OSINERG based on marginal costs of short term. These tariffs shouldn't be more than 10% of the average of the prices of the free trade. The service of transmission is of free access and its cost is gotten up in the price of the retirement bars. This cost available considers the value as new of the economically adapted facilities. The distribution tariffs incorporate the added value of distribution, VAD, based on standard costs of investment, operation and maintenance of a company model. In the calculation of the electrical tariffs a rate of update of annual real 12% is considered.

Process of Privatization

The privatization in Peru is related to the foreign investment. In this sense, the competent national organism in relation to the foreign investment in the Peru is PROINVERSION, created by means of Supreme Decree East N° 27-2002-PCM. This organism is in charge to propose and to execute the national policy on foreign investment, to centralize the carried out actions of promotion by the organisms of the public sector, to offer to attention and consultant's office to the investors, as well as to register the flows of direct foreign investment.

It must consider that the national and foreign investors do not need any previous authorization to carry out their investments in Peru. The foreign investment in Peru is based on the principle of National and non Discriminatory Treatment. The Peruvian legislation it grants to the foreign investors the following rights: freedom to acquire actions of investors nations; it frees remittance of utilities and dividends; free re-export of its capital; unrestricted access on the internal credit; freedom to contract to technology and remittance of exemptions; possibility of contracting in the investment outside safe; possibility of subscribing with the State Agreements of Legal Stability for its investments in the country.

The Agreement of Legal Stability is a mechanism by means of which the Peruvian State, represented by the competent national organism in material of investments - PROINVERSION, guarantees to the investors and the companies in which these invest the stability of the effective tributary system at the time of the subscription of the agreement; stability of the regime of free availability of foreign currency and the rights contemplated in articles 7° and 9° of the Legislative Decree N° 662; and, stability of the contemplated rights of not-discrimination in Article 2 of the same legislative decree. The companies that already operate in Peru with contributions of foreign capital in accordance with Article 11 of the Legislative Decree N° 662 will be able to enjoy the stability of the regimes of personnel hiring, under any modality; and, the stability of the exclusively designed special regimes for the exports, such as temporary admission, industrial, commercial and tourist zones frank, and others to being created in the future.

The subscription of an Agreement of Legal Stability can be asked for by any investor, national or foreigner, who commit themselves to fulfill the obligations settled down by law; and the established companies or to settle down in Peru with new contributions of foreign capital in agreement with Article 11 of the Legislative Decree N° 662. The investors who wish to subscribe Agreements of Legal Stability with the State will have to carry out money contributions, canalized through the national financial system, to the capital of a settled down company or to settle down itself with subjection to the Peruvian legislation, or makes investments of risk that formalizes with third, by an amount that is not inferior to US\$ 10000000, 00 (Ten million and 00/100 of Dollars of the United States of America) for the mining sectors and hydrocarbons, and that is not inferior to US\$ 5000000,00 (Five million and 00/100 Dollars of the United States of America) for the other sectors. The national and foreign investors who wish to accede to the stability regime will have to present/display a request before the competent national organism - PROINVERSION, in the formats settled down for it, including:

- a) Document that credits the legal existence of the investor in its country of address, properly legalized before the Ministry of Outer Relations (only for foreign investors)

- b) Document where one credits the faculties of the representative to contract in name of the represented one, or legalized copy. The powers granted in the outside will have to count on the pertinent protocolización.
- c) Copy of the identity card of the representative who will subscribe the Agreement.
- d) Copy of the Testimony of the Scripture de Social Constitution of the company receiving of the investment, properly enrolled before the corresponding Registry.

In the case of companies where the contribution of the investor is destined to the Constitution of the Company, they will have to present/display: Draft of Constitution, properly entered notary's office. The process of subscription of an Agreement of Legal Stability delay around 30 days as of the date of reception in Table of Parts of PROINVERSION. The formats for the request can be obtained in website of PROINVERSION: <http://www.proinversion.com> or in the PROINVERSION offices: Stroll of the Republic 3361 - Floor 9/Files 27 – Peru.

2. Current conditions and issues of electricity sector in Ancash and Huánuco departments

Electrical system in Ancash

The department of Ancash, located in the North zone of Peru, extends on the natural regions of the Coast and the Mountain range. Its relief is very rough due the presence of the Mountain range of the Walk. Its capital is the city of Huaraz. At level of generation of electrical energy, a fishing companies exist that count with an authorization of generation for their self-supplying, such as: Grupo Sipesa S.A., Pesquera Tauro S.A., Austral Mining Group S.A., etc., as well as minning companies like Company Minera Santa Luisa S.A., Miner Malaga Santolalla S.A., etc. Also electrical companies like CAHUA S.A. and EGENOR S.A.A. are located in the department, dedicated exclusively to the generation activity.

In this department it's located the CH Cañón del Pato the Duke company and the future power station CH Centauro I-III.

Also, in the department of Huánuco the electrical distribution is in charge of the concessionary company Electro Norte Medio S.A.

In 2002 the number of final clients in the department was 124749 and the sales of energy to final client were 1192 GW.h..

Electrical system in Huánuco

The department of Huánuco, located in the northeastern zone of Peru, extends on the natural regions of the Mountain range and the Forest. It's capital is the city of Huánuco. In this department doesn't exist a hydroelectric power plant, but exist a thermal power stations operated by the company of distribution Electro Centro S.A.

In this department it's located the future power station CH Marañón. On the other hand, it exist a temporary concession for the elaboration of the studies of the CH Chaglla.

Also, in the department of Huánuco the electrical distribution is in charge of the concessionary company Electro Centro S.A.

In 2002 the number of final clients in the department was 41 732 and the sales of energy to final client were 53,87 GW.h.

3. Development policies

The policies in this sector will continue toward promoting private investment in power generation, transmission and distribution, and encouraging the role of free competition to provide the benefits of a continuous, cheap and quality supply.

The development of a power infrastructure in isolated parts of the country will also be fostered, with the execution of rural electrification projects in areas of scant interest to private investors, in order to allow for more uniform economic development and employment.

The rational use of energy and new and natural sources of energy will be promoted, in order to diversify the Peru's energy base, to preserve the country's energy reserves, and to reduce environmental pollution, above all in parts of the country where it would be very costly to erect transmission lines.

Through this policies, the Energy and Mine Minister has the following objectives:

- Promote private investment, both domestic and foreign, in the power generation, transmission and distribution activities.
- Reform and update the regulatory system of the electricity sub-sector.
- Guarantee the quality and reliability in supply of electricity.
- Expand electrical supply to isolated and rural areas.
- Promote the rational use of energy and use of renewable sources.

4. Evaluation and comments about Compañía Minera Santa Luisa S.A. and JICA-supported facilities (hydroelectric power plant) in the Huanzala Minig

At the moment the Compañía Minera Santa Luisa has two effective right of authorization to develop the activity of electrical generation of energy in the following power stations:

- CT Huanzalá with the Ministerial Resolution N° 266-93-EM/VME of 12.11.1993 (To see Annexed 3) for 5,20 MW of power capacity.
- CH Huallanca Nueva with the Ministerial Resolution N° 247-93-DM/VME of 28.10.1993 (To see Annexed 4) for 4,30 MW of power capacity.

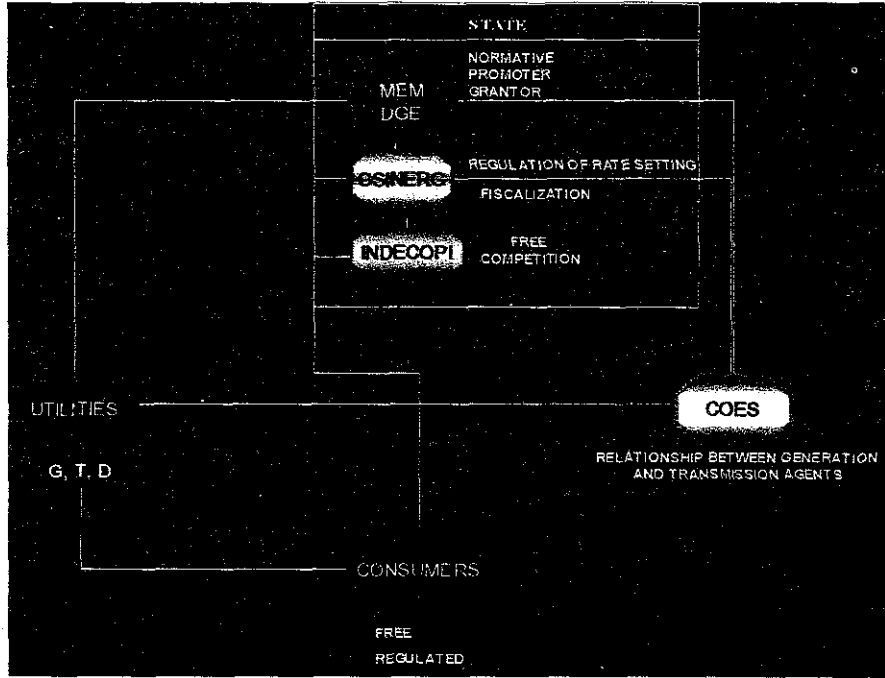
Currently the company comes fulfilling the delivery from statistical information of both power stations to the Minister (To see Annexed 5).

5. Map of Electricity Grid in the country (To see Annexed 6)

6. Directory of Major Power Generation Companies (To see Annexed 7)

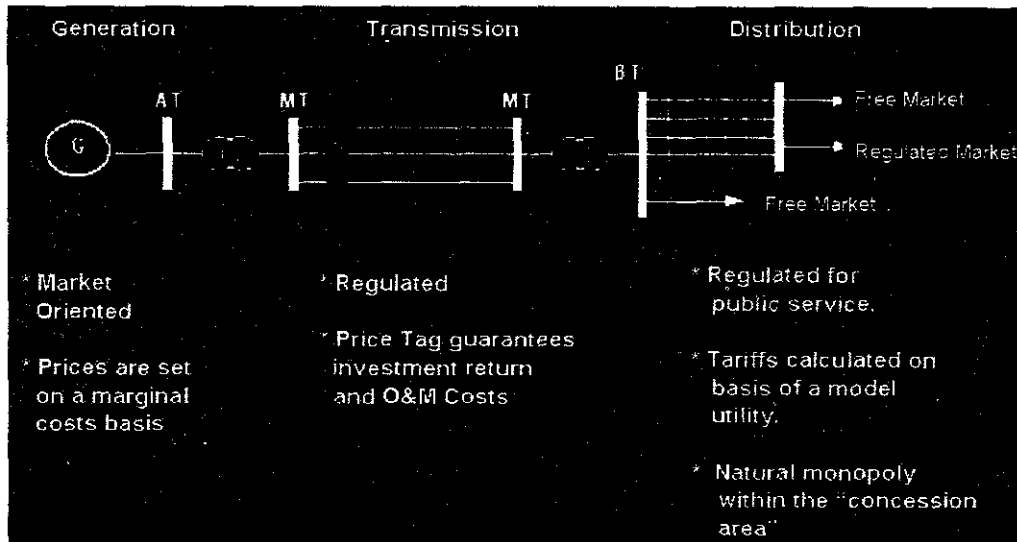
Annexed N° 1

Market Structure



Annexed N° 2

Business Structure



Annexed N° 3

Authorization for the CT Huanzalá

CONCESIONES DE GENERACION						
Datos Generales						
000039		COMPANIA MINERA SANTA LUISA				
C.T. HUANZALA					TERMICA	
DERECHO VIGENTE	33001293 00	001200		No. 51		
AUTORIZACION				07/07/1993		
Resolución y Contrato						
R.M. 266-93-EM-VME						
SN	12/11/1993					
Carta Financ.						
Grupos						
Coordenadas Utm		Demarcación		Representante Legal		
			Máquina		Generador	
Grupo de Tipo	Nombre del Grupo	Grupo	Modelo	Pot. (MW)	Modelo	Pot. (MW)
ELECTROGENO	N-2	MOTOR	DIESEL GL-31X	,67 NO ESPECIFICA	,6	
ELECTROGENO	C-1	MOTOR	DIESEL D-398	,64 NO ESPECIFICA	,6	
ELECTROGENO	C-2	MOTOR	DIESEL D-398	,64 NO ESPECIFICA	,5	
	C-3	MOTOR	NO ESPECIFICA	,64 NO ESPECIFICA	,5	
ELECTROGENO	C-4	MOTOR	NO ESPECIFICA	,64 NO ESPECIFICA	,6	
ELECTROGENO	C-5	MOTOR	DIESEL D-398	,64 NO ESPECIFICA	,6	
Total Pot(MW)				5,79	Total Pot(MW) 5,2	

Annexed N° 4

Authorization for the CH Huallanca Nueva

CONCESIONES DE GENERACION						
Datos Generales						
000039		COMPANIA MINERA SANTA LUISA				
C.H. HUALLANCA NUEVA						
DERECHO VIGENTE	31001193 00	001100		No. 51		
AUTORIZACION				23/09/1993		
Resolución y Contrato						
R.M. 267-93-EM-VME						
SN	28/10/1993					
Carta Financ.						
Grupos						
Coordenadas Utm		Demarcación		Representante Legal		
			Máquina		Generador	
Grupo de Tipo	Nombre del Grupo	Grupo	Modelo	Pot. (MW)	Modelo	Pot. (MW)
HIDROELECTRICO	HUALLANCA NUEVA	TURBINA	PELTON	4,5 TRIFASICO VERT.	4,3	
Total Pot(MW)				4,5	Total Pot(MW) 4,3	

Annexed N° 5

Information of electrical energy for own consumption

INFORMACION DE AUTOPRODUCTORES DE ENERGIA ELECTRICA PARA SU PROPIO USO

Formato de información Mensual

Formato G12

Nombre de Empresa	: Cia. Minera Santa Luisa S.A.
Actividad Económica (CIU)	: Extracción de minerales metalíferos
Total trabajadores de las centrales :	5
Año : 2003	Mes : Marzo

CENTRAL TERMoeLECTRICA							
Nombre de la Central	Tipo	Potencia Instalada (MW)	Potencia Efectiva (MW)	Producción Bruta (MWh)	Consumo de Combustible Tipo (2) Cantidad	Consumo de Lubricantes (galones)	Maxima Demanda (MW)
C.T. Huanzala	EL	5.200	3.485	79.31	D2 7,344	155	2.07
Total General				79.31			

CENTRAL HIDROELECTRICA				
Nombre de la Central	Potencia Instalada (MW)	Potencia Efectiva (MW)	Producción Bruta (MWh)	Maxima Demanda (MW)
C.H. Huallanca Nueva	4.300	4.300	2798.04	4.35
Total General			2798.04	

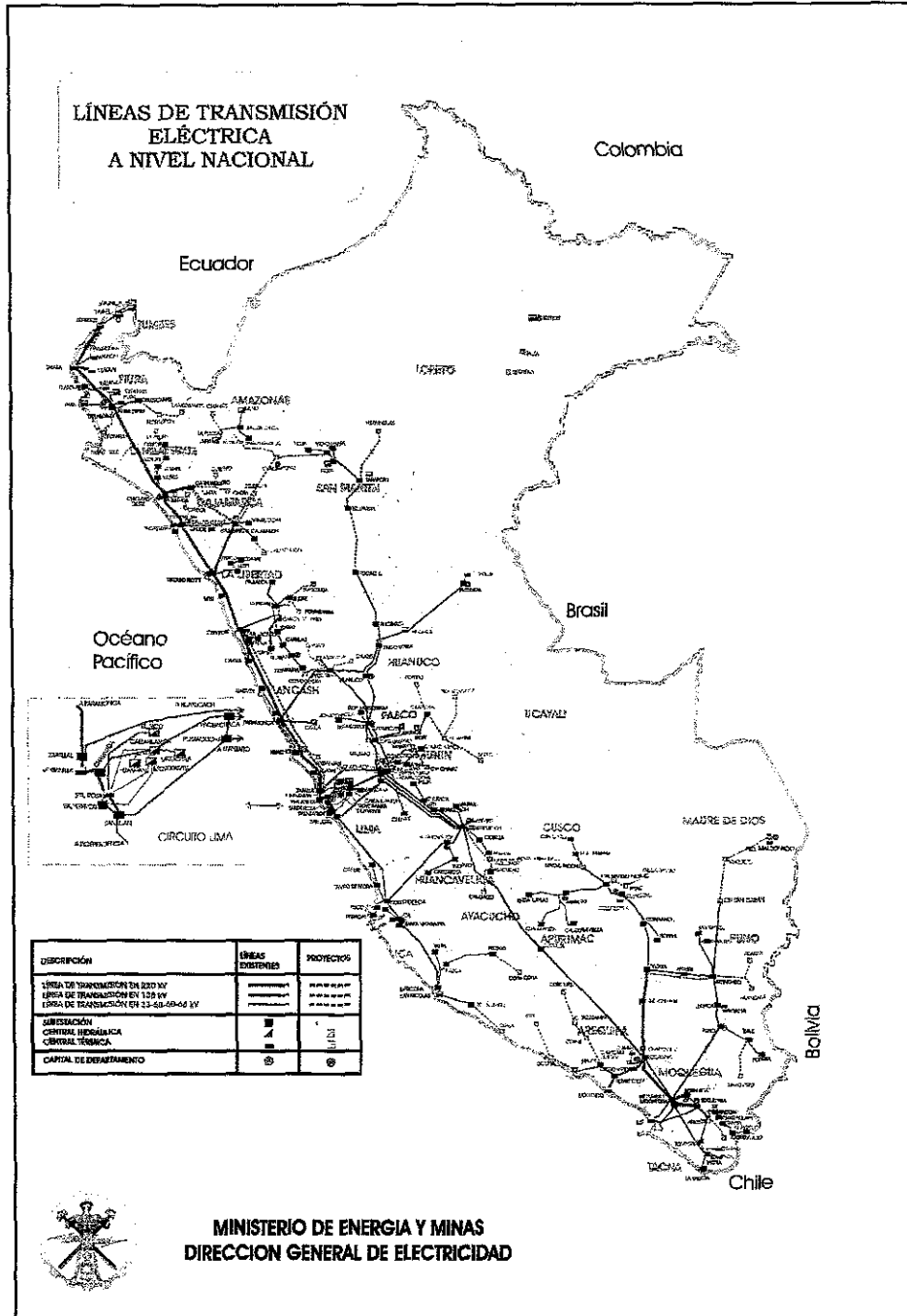
BALANCE DE ENERGIA		(MWh)
Compra de Energía		0
Consumo propio de las centrales		20.92
Pérdidas de transmisión de distribución		54.10
Energía total para su propio uso		2802.32

Nota (1) : EL : Electrógeno
TV : Turbo vapor
TG : Turbo Gas
CC : Ciclo Combinado
OT : Otros

Nota (2) : D1 : Diesel 1 (Galones)
D2 : Diesel 2 (Galones)
RE : Residual : (Galones)
CA : Carbón : (Toneladas)
GN : Gas Naturz (Metros Cúbicos)
BZ : Bagazo : (Toneladas)

Annexed N° 6

Electric Power System



Annexed N° 7
Directory of Mayor Power Generation Companies

CONCESSIONARY COMPANIES OF ELECTRICAL GENERATION

Nº	COMPANY	GENERAL MANAGER	DIRECTION/CONNECTS	TELEPHONE/FAX	OBSERVATION
1	EDEGEL S. A. A. ¹	Ing. José Griso Ginés	Av. Victor A. Belaunde N°147 7° piso Torre 4, Lima-27	215-9230/215-6387 215-6300 (c.t.)	
2	Emp. Generación Eléctrica de Arequipa S. A. ² EGASA	Ing. José Estela Ramírez	Psje. Ripacha N° 101 Chilina, Arequipa	054-212716/054-219317 054-241966 (c.t.)	
3	Empresa Electricidad del Perú S. A. ² ELECTROPERÚ S. A.	Ing. Ivan La Rosa Alzamora	Av. Pedro Miotta N° 421, Lima-29	276-0858/466-3448 432-6439 (c.t.)	
4	Empresa de Generación Termoeléctrica Ventanilla S. A. - ETEVENSA ¹	Ing. Marciano Izquierdo Bello	Av. Néstor Gambeta Km. 14.5, Callao-6 Av. Victor A. Belaunde N° 147 Torre 4 p. 6°, Lima 27	577-6733/577-6736 222-7119/222-6703	
5	Emp. Generación Eléctrica Machupicchu S. A. EGEMSA ²	Ing. Edgar Venero Pacheco	Av. Machupicchu s/n C.T. Dolorespata, Cusco	084-233719/084-222690 084-235058 (c.t.)	
6	Duke Energy International Egenor S.A.A. EGENOR S. A. A. ¹	Sr. Mickey J. Peters	Av. Luciano Castillo Colona s/n zona industrial, Piura Av. Pardo y Aliaga N° 699 4° piso - Lima 27	615-4606 (c.t.) 221-8975/222-1014	c.t. 615-4600 (desde 06/03/02)
7	Emp. de Generación Eléctrica Cahua S. A. ³	Ing. Rodolfo Zamalloa López	V. A. Belaunde N°147 vía principal 110 T.Real, Lima-27	441-9348/222-8860	
8	Emp. Municipal Serv. Eléctricos Utcubamba S.A.C. ³	CPC Víctor Roncal Arteaga	Jr. A. B. Leguía N° 200, Bagua Grande	044-774132/044-774220	
9	Emp. de Generación Eléctrica del Sur S. A. ² (EGESUR S. A.)	Ing. Carlos Falconí Salazar	Av. Ejército s/n - Subestación PARA, Tacna	054-845300(206) 054-845290	
10	Empresa de Generación San Gabán S. A. ² Of. enlace en Lima	Ing. Victor Carlos Estrella	Av. Floral N° 245, Puno Calle Morelli N°139 Of. 402, Lima-41	054-364401/054-365782 224-3578/225-4349	
11	Emp. de Generación Eléctrica Atocongo S. A. ³	Ing. Aldo Solimano Semorile	Av. Atocongo N° 2691, Lima 35	293-3149/217-1496	
12	Shougang Generación Eléctrica S. A. A. ³ SHOUGESA Of. enlace en Lima	Sr. Wang Yong Guang	Zona M-14 N°56 San Juan de Marcona Nazca, Ica Av. República de Chile N° 262 5° piso, Lima-11	034-525678/034-525891 330-4600/330-5136	
13	Energía del Sur S. A. - ENERSUR ³ Of. enlace en Lima	Sr. Klaus Huys	Km. 25 Carretera Costanera Sur, Ilo-Moquegua Av. Javier Prado Oeste N° 960, Lima-27	054-884030/054-884042 222-7979/222-3086	
14	Empresa de Generación Eléctrica Pangoa S. A. EGEPSA PANGO PERÚ ³	Sr. Raúl Camposano Castillón (*)	Los Cafetaleros 600 San Martín de Pangoa, Satipo/Junín	064-543068/064-543017	(*)Director Gte.
15	Emp. de Electricidad de los Andes S. A. ELECTROANDES S.A. ¹	Ing. Ismael Rodríguez Ayala	Carretera Central km 175.5 - La Oroya/Yauli, Junín Av. Canaval y Moreyra N°380 piso 16, Lima-27	064-392977/064-392931 441-2144/422-0348	
16	Empresa Eléctrica de Piura S. A. (EEPSA ¹)	Ing. Marciano Izquierdo Bello	Carretera a Talara - Lobitos Km 3.5 Malacas, Piura Av. Victor A. Belaunde N° 147 Torre 4 p. 6°, Lima-27	074-384131/074-381473 222-7119/222-6703	
17	Sindicato Energético S. A. (SINERSA ³)	Sr. Branislav Zdravkovic	Calle Los Ruiseñores Oeste N° 277 of.102, Lima-27	421-7359/421-4997	
18	TERMOSELVA S.R.L. ³ Of. enlace en Lima	Ing. Dante LaGatta	Carretera Federico Basadre Km. 10, Yarinacocha Av. Camino Real N° 111 Torre "B" piso 9°, Lima-27	611-5000/611-5016	
19	Energía Pacasmayo S. A. ³	Ing. Rodolfo Zamalloa López	V. A. Belaunde N°147 Vía principal 110 T.Real, Lima-27	441-9348/222-8860	
20	Empresa de Generación del Centro S. A. ² EGECEN	Ing. Edwin Manrique Peraita	Campamento Huallamayo - Paucartambo, Pasco Calle Morelli N° 109 2° piso - Lima 41	064-392977/064-392931 224-2436/225/6977	476-9767
21	Soc. Minera Corona S.A. ³ (Div. Energía)	Ing. Carlos Villanueva Ortiz	Av. Pedro de Osma N° 450, Lima-04	467-0590/251-8838	

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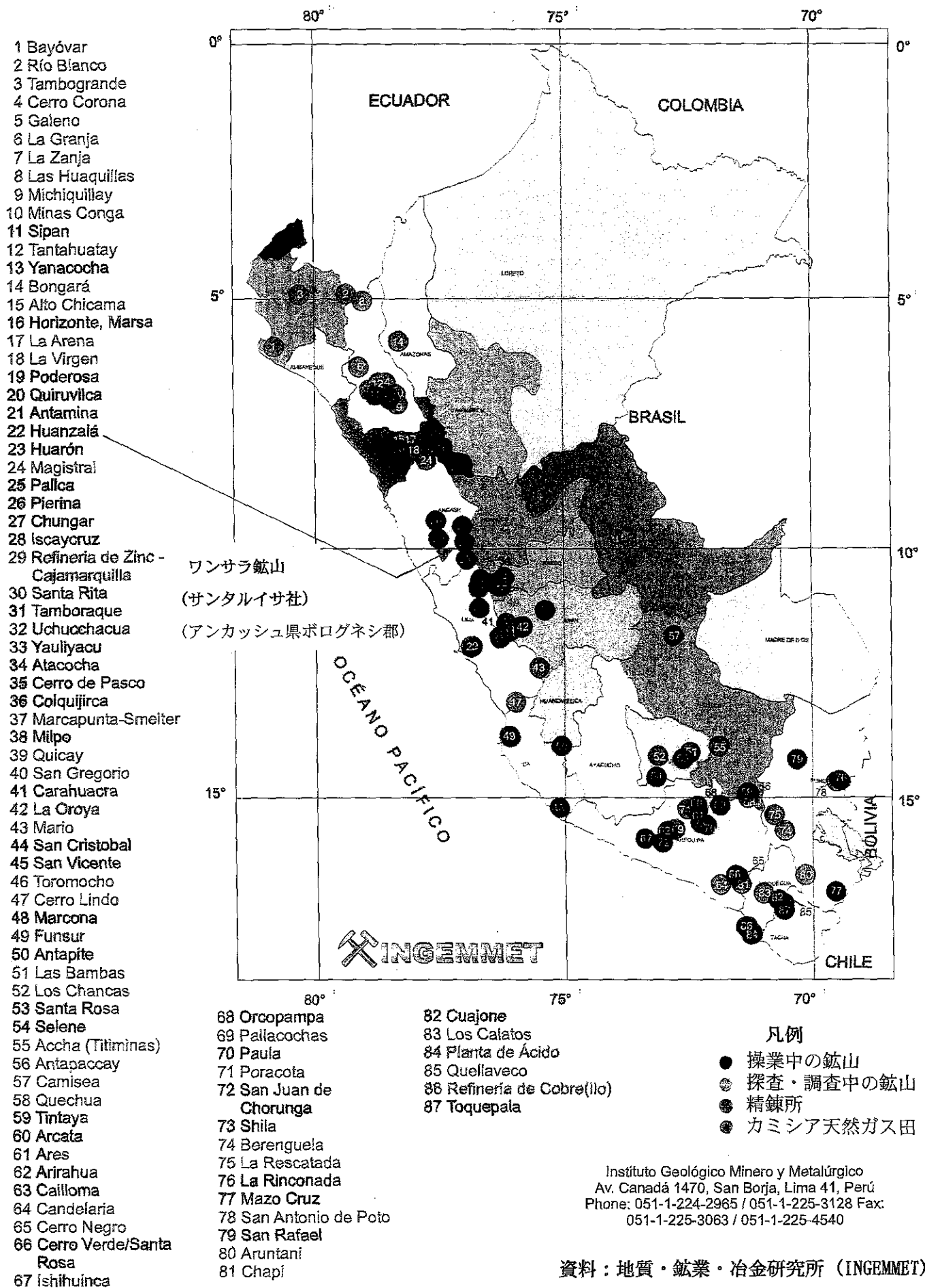
DIRECTORY OF CONCESSIONARY COMPANIES OF ELECTRICAL GENERATION

Pag. 2

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