



Vision: To be an internationally leading organization conducting energy and energy related businesses in a socially and environmentally responsible manner to support Thailand's sustainable development and enhance the nation's competitiveness in the global market.

Corporate Culture

Over decades, EGAT has established its corporate culture: **Loyalty, Striving for Excellence, and Embracing Good Ethics**, which serves as the guiding principles for all EGAT employees in carrying out their duties and responsibilities so as to contribute optimum benefits to Thai society. These shared values which have long been embraced by EGAT people illustrate EGAT's strict observance of good corporate governance.

Loyalty EGAT people all share EGAT's ownership and are committed to their duties of good faith, loyalty, skill and diligence, to drive organizational growth and protect the interest of EGAT and the nation.

Striving for Excellence EGAT strives for greater efficiency and excelling in its business with accountability and transparency. Its board directors and senior management must be leaders with vision and strong principles to plan and direct the organization in the best interest of the nation. EGAT people are always encouraged to be initiative and resourceful and to continually develop themselves for improved competence and performance. The culture of work excellence has earned EGAT an established reputation for its quality electricity service.

Embracing Good Ethics EGAT always values and supports employees of integrity and righteousness with ethical conduct. EGAT is determined to prevent abuse of power and misconduct in the organization. It is also committed to equitable treatment to all employees and all stakeholders.

HIGHLIGHTS 2001

	Fiscal Year 2001	Fiscal Year 2000	Increase/(Decrease) Percentage
Operations			
Installed Capacity (megawatts)			
Thailand's system installed capacity	22,034.80	22,269.00	(1.05)
- EGAT's power plants	15,000.40	17,039.60	(11.97)
- Private power plants	7,034.40	5,229.40	34.52
System Peak Generation (megawatts)	16,126.40	14,918.30	8.10
Energy Generated and Purchased (million kilowatt-hours)	103,165.20	96,780.72	6.60
Transmission System			
Line length (circuit-kilometres)	27,039.50	26,349.53	2.62
Substations	194	193	0.52
Transformer capacity (kilovolt-amperes)	57,985,820	55,903,320	3.73
Sales of Electricity (million kWh)	97,412.08	90,725.42	7.37
Number of Employees	28,543	29,175	(2.17)
Financial Operations (in million baht)			
Total Assets	409,331	434,108	(5.71)
Capital Expenditure	12,939	13,051	(0.86)
Total Liabilities	275,231	311,788	(11.73)
Long-term debts	183,722	216,410	(15.10)
Current liabilities and other liabilities	91,509	95,378	(4.06)
Total Revenues	195,299	164,356	18.83
Revenue from energy sales - net	185,072	160,992	14.96
Other revenues	10,227	3,364	204.01
Total Expenses	179,075	143,544	24.75
Operating expenses	168,383	131,914	27.65
Other expenses	10,692	11,630	(8.07)
Operating Profits	16,688	29,077	(42.61)
Net Income	16,223	20,812	(22.05)
Remittance to the Ministry of Finance	16,620	7,975	108.40

No. EGAT E4900/10830



Electricity Generating Authority of Thailand
Bang Kruai, Nonthaburi 11130

March 15, 2002

Subject: Submission of EGAT Annual Report 2001

Excellency,

The Electricity Generating Authority of Thailand (EGAT) is pleased to submit for your consideration EGAT Annual Report 2001 which documents its overall performance in fiscal year 2001 ending on September 30, 2001.

Through fiscal year 2001, EGAT had achieved its entrusted mission in capably running the country's electric power system to provide an efficient and reliable power supply for the economic and social needs at an economical cost while taking account of prudent environmental protection and urging more public participation in its impact mitigation processes as well as supporting an efficient use of energy.

Despite the slow recovery of the national economic growth, the country's electricity demand in fiscal year 2001 had continuously increased at a high rate close to the national load forecast. Peak generation requirement further grew 8.10 per cent from a year earlier to 16,126.40 megawatts (MW) whereas gross energy generation increased 6.60 per cent to 103,165.20 million kilowatt-hours (kWh). On the supply side, the country's system installed capacity was slightly reduced from the previous year to 22,034.80 MW, consisting of 15,000.40 MW or 68.08 per cent from EGAT's power plants and 7,034.40 MW or 31.92 per cent from private power sources.

Electric energy generation from EGAT's own power facilities declined further by 6,406.55 million kWh or 9.40 per cent whereas power purchase from private power plants rose by 44.70 per cent. In its own generation system, EGAT continued, in an effort to achieve the most economical production cost, to further reduce the energy generation from the high cost fuel oil and diesel oil while depending more on the indigenous natural gas, lignite and hydropower. As a result, the shares from fuel oil-based and diesel oil-based generation were only 3.01 per cent (3,110.61 million kWh) and 0.15 per cent (155.23 million kWh) of the country's electricity, 72.84 per cent and 0.30 per cent less than the earlier year respectively. On the contrary, lignite and hydropower shares accounted for 16.78 per cent (17,306.58 million kWh) and 6.12 per cent (6,310.55 million kWh) of the country's energy generation, representing the increase of 12.01 per cent and 19.16 per cent respectively. Natural gas-fired generation which remained the largest source of EGAT's own generation accounted for 33.80 per cent (34,871.18 million kWh) of the country's electricity. The share from natural gas slightly declined from the previous year by 2.61 per cent. The remaining 40.14 per cent (41,409.31 million kWh) of the country's electricity was purchased from domestic and foreign private power facilities. The purchased portion showed an increase of 44.70 per cent over the preceding year as a new private power plant of 1,470 MW as well as five new small power producers (SPPs) totalling 335 MW started their production and sold the energy to EGAT's grid system.

Electric energy sales grew remarkably by 7.37 per cent to a total of 97,412.08 million kWh. Virtually all of the sold volume was to the Provincial Electricity Authority and the Metropolitan Electricity Authority accounting for 61.90 per cent and 36.27 per cent respectively. The remaining 1.83 per cent was the energy sales to a small number of direct customers, Electricite du Laos and Tenaga Nasional Berhad of Malaysia and other minor customers.

In 2001, three power development projects totalling 922 MW in capacity have been under implementation. This included a 300 MW thermal power project, a 122 MW gas turbine power project and a 500 MW hydropower project.

In financial terms, at the end of fiscal year 2001, EGAT's total assets amounted to 409,331 million baht, a decrease of 24,777 million baht or 5.71 per cent from the previous year. The decrease was mainly attributable to the sale of its Ratchaburi thermal power units 1 - 2 to Ratchaburi Electricity Generating Company Limited. Total revenue from energy sales and other income aggregated 195,299 million baht. On the other hand, overall expense totalled 179,075 million baht. Of this total, 84,437 million baht or 47.15 per cent was expended on electricity purchase from private power plants, showing an increase of 37,452 million baht or 79.71 per cent from the prior year. Fuel cost dropped by 1,817 million baht or 3.24 per cent to 54,224 million baht. Administrative expenses were further curtailed by 993 million baht or 17.96 per cent from the preceding year. In sum, net income for the year totalled 16,223 million baht. During fiscal year 2001, EGAT remitted a total of 16,620 million baht to the Ministry of Finance, comprising the appropriation of 8,530 million baht for the year 2000 and additional appropriation of 8,090 million baht for the earlier years.

Following the government's policy of power industry reform and divestiture of state enterprise assets in the stock market to revitalize the domestic economy and create national income, during 2001, EGAT has conducted a review on models of electric supply industry reform, their consequences as well as an appropriate organizational restructuring plan for EGAT. A report on the study finding will be submitted to the government in early fiscal year 2002.

In the meantime, continuous moves have been made to ready EGAT and its people for the future competitive electricity market. With its vision set towards being an internationally leading organization conducting energy and related businesses, EGAT has presently been in its process to restructure the organization and develop its management in order to further improve its operational efficiency and business practices to be consistent with international standards. Its organization will soon be restructured into five self-contained business units. Such best practice management systems as the quality management systems and good corporate governance have been adopted organizationwide to ensure its efficient and environmentally friendly operations, and thus enhancing the corporate sustainable competitiveness in the liberalized market.

In all, the year 2001 presented another successful year for EGAT's overall performance, which had been made possible by the continued support from the government, the concerned public and private agencies and the general public, to whom EGAT owes its sincere thanks.

Accept, Excellency, the assurances of our highest consideration.



(Somchai Richupan)

Chairman, Board of Directors

Public Relations Division

Tel. 0 2436 4800, 0 2436 4809

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MESSAGE from GOVERNOR

Electricity demand which had sharply declined after the economic crisis in 1997 has seemingly recovered its normal growth. Although the country's gross domestic product (GDP) recorded just a below two per cent growth in fiscal year 2001 and the slow recovery tended to continue over the next years, demand for electricity recorded an eight per cent increase over the same period. The unparalleled electricity demand growth implies that the economy is just one among several major factors which influence the power consumption. Those other principal factors range from population expansion, population income, living standard, energy conservation efforts, electricity tariffs, consumers' behavioural changes to the weather. The year 2001 saw a stable growth of electricity consumption in all major sectors including residential, industrial and service sectors. On comparison, the actual incremental demand has been, more or less, close to the projected load forecast. However, all above-mentioned factors will be further observed closely for any change that may have an effect on the power demand.

From a global perspective, electricity industries have experienced economic impacts and such difficulties in implementing their industry reforms as investment, supply security and prices. The emerging problematic phenomena have led to pauses and concerns over the future of the industry reform worldwide. Common hindrances to the reform efforts are caused by the unique form of electricity that cannot be stored, its comparatively high fixed costs, long lead time as well as the monopolistic nature of such areas of the industry as transmission and distribution. The power supply industries have also been faced with challenges concerning fuel utilization, environmental problems in both international and local arena, and opposition from related communities. On the demand side, there exist constraints arising from the uncertainty of amount and period of electricity usage, making it difficult to precisely forecast future demand. Yet the industry cannot afford to risk the supply shortfalls, as it would subsequently cause extensive damages to the economic and social health.

Given the constraints, the planning and operations of electric power supply have, in the past, been carried out by public utilities which have given equal importance to both their business objectives with electricity viewed as a product or service as well as their social objectives. The state-run operations are to secure energy supply and an equal access to electricity service of the same standard and price for all. These utilities have successfully run their operations to meet both economic and social needs, providing the solid foundations for the nation's development for decades.

During the last decade, the direction of the electricity industry development worldwide and in Thailand alike, had all led to the reform of the industry from the previously state-run to the newly private-run structures. New frameworks with more competition have been introduced so as to address the shortcomings of the state-run



operations in various areas, including operating efficiency, investments, technological development and prices. In Thailand, independent power producers (IPPs) and small power producers (SPPs) have presently had an increasing role in the generation business. However, the public sector still accounts for the planning of power development and supply in which social objectives are also incorporated. The Thai electricity supply industry has presently been in its process of industry reform towards a competitive electricity market.

An electricity industry has different environments and problems in each country. Any change or reform should therefore conform to conditions and constraints of each individual country. Many countries have currently been reviewing their industry reform to best benefit their people. The industry reform which will most benefit the nation should harmoniously integrate social goals into an efficient competitive framework. This must be done with very careful steps. In late fiscal year 2001, EGAT

started to review, once again, a study on industry reform to propose to the government and related agencies the most appropriate model of the electricity market reform. In our new revision, EGAT has been learning from experiences of structural reforms and privatization both at home and abroad. In the meantime, we have been taking continual steps in further preparing our human resources, equipment and technology for our future roles in the industry while also supporting the government's policy of competitive power industry in the near future.

A handwritten signature in black ink, reading "Vitaya K." with a period at the end. The signature is written in a cursive, flowing style.

(Vitaya Kotcharug)
Governor

CORPORATE GOVERNANCE

According to the government's policy, EGAT has been one among the state enterprises to come under a national holding company and to be listed on the stock market in the near future. To become a good public company, sound investment and management are of vital importance. In addition to its efficiency, an organization needs to have an effective corporate governance system in order to secure its stakeholders' trust and confidence in its efficient, transparent and accountable business operations that create long term value for them.

Through decades of its operation, EGAT has accumulated a good reputation for its efficient, reliable and reasonably priced electricity service which meets international standards. Its excellent service coupled with a sound corporate governance system in place will strengthen EGAT's competitiveness in the future energy market.

Good Cause for Corporate Governance

The observance and practice of corporate governance with a sound monitoring system will eventually benefit all stakeholders as it helps strengthen their trust and confidence in the transparency of the corporate business operations and its standardized business management and practices which are consistent with international practices. With a proper governance system put in place, the leader and senior management must discharge their responsibilities and exercise their power within a framework of effective accountability. A good corporate governance structure also provides an effective tool for monitoring all activities and operations of the organization and preventing management fraud. This will help ensure the transparent management and operations and enhance the corporate competitiveness in the global liberalized market.

Principles of EGAT Corporate Governance

EGAT's corporate governance system is based on key principles in common with international standards, including:

1. Accountability
2. Responsibility
3. Equitable treatment
4. Transparency in business operations and information disclosure
5. Leader's vision in sustaining long term growth and shareholders values
6. Good ethics

Roles of EGAT Board of Directors

With EGAT Board of Directors at the helm, their roles and responsibilities determine EGAT's good governance and thus are clearly defined so as to ensure that they exercise their duties and responsibilities within a framework of effective accountability.

- EGAT Board includes adequate numbers of independent directors from a wide variety of professionals to represent all stakeholder groups.
- The Board of Directors are responsible for establishing committees including an Audit Committee that reports directly to EGAT Board of Directors.
- A Nomination Committee is also appointed to select qualified nominees for executive positions including Deputy Governors and Assistant Governors.
- A Remuneration Committee is appointed to consider the remuneration for the board directors, various committees and EGAT management.
- Guiding principles of corporate governance are incorporated into EGAT's rules and apply to all employees.

EGAT Corporate Governance Practices

- A framework of corporate governance practice was formulated to clearly define duties and responsibilities of the Board of Directors, board structure and code of conduct for board directors, information disclosure to shareholders, other stakeholders and the general public, as well as their social responsibilities and ethical conduct.
- The organization's vision has been developed, focussing on enhancing shareholders' long term value. EGAT's future directions and goals have been set, with continual evaluations. Corporate strategies must be promptly adjusted when operational performance fails to meet the set goals.
- Rules and criteria concerning the appointment, responsibilities and accountabilities of shareholders including board directors and senior management, etc. have been distinctively defined.

The criteria also cover participatory process of director nominee selection and listing of independent directors made by an independent nomination committee.

- Financial and management reports as well as internal auditing provide effective tools for corporate governance. The auditing contributes to the credibility of EGAT's financial reports and its risk management.
- Disclosure of sufficient, reliable and timely information and financial reports, except for those information which involve strategic trade secrets, reflects transparency of EGAT's operations and helps boost the corporate image.

Code of Conduct

To ensure that EGAT Board of Directors, senior management and employees perform their respective duties in strict compliance with EGAT's guiding principles of corporate governance, EGAT issued its ethical code and code of conduct for all EGAT people. Code of conduct for the board directors and the management focusses on transparent, accountable and ethical management for an optimum benefit for the organization and the country.

Code of conduct for employees emphasizes their duties of good faith, loyalty, skill and diligence; compliance with corporate rules; striving for work excellence in the interest of EGAT; and restraining oneself from fraudulent actions.

Value of Good Corporate Governance

EGAT is determined to further develop its organization within a framework of best practice corporate governance to pave the way for its future operation in the liberalized market where efficiency, transparency and good ethics of business operation are increasingly required. EGAT's corporate governance observance and practice will, in the long run, be beneficial to all stakeholders, and will contribute true benefits to the economic and social prosperity of the country.

Report of the Audit Committee
Electricity Generating Authority of Thailand
Fiscal Year 2001

The Audit Committee was established by the Board of Directors on 22 June 2001. Three Directors were assigned to serve as members of the Committee as follows:

- | | |
|---------------------------|---------------------------------|
| 1. Mr. Tawee Butsunton | Chairman of the Audit Committee |
| 2. Mr. Somchai Wongsawat | Member of the Audit Committee |
| 3. Mr. Norkun Sitthiphong | Member of the Audit Committee |

The Audit Committee has duties, responsibilities, and legal jurisdiction according to the Rules of the Audit Committee approved by the Board of Directors.

The Committee has held monthly meeting to review the reliability and credibility of financial statements, effectiveness and performance efficiency of the Electricity Generating Authority of Thailand (EGAT), and to prevent the occurrence of any conflict of interest. In addition, the Committee ensured that the practices of EGAT comply with appropriate laws, regulations, Cabinet resolutions, and policies of the Board of Directors. Quarterly reports have been submitted to the Board of Directors.

The Committee has reviewed the internal audit plan, procedures, internal auditor's report, and the internal control assessment report, which were prepared by the Internal Audit Division. The Committee has discussed issues, problems, and constraints with the Director of the Internal Audit Division, management teams responsible for preparing monthly financial report to the Ministry of Finance and financial statements, auditor in charge in the Office of the Auditor General. The Committee has also reviewed the energy purchasing management plan from IPP and SPP, energy sales to customer, cost management, effective environmental management system and advanced pollution control technologies, operational expense control and conflict of interest with executives and managers of operational unit concerning good governance.

The Committee has received good cooperation and support from administrative personnel. The recommendations from the Committee were efficiently acted upon. The Committee is of the opinion that EGAT's operations in the year 2001 were managed satisfactorily and were based upon the principles of good governance.



(Tawee Butsunton)

Chairman of the Audit Committee

31 January 2002

BOARD of DIRECTORS

(October 1, 2000 - May 14, 2001)

Chairman

Sivavong Changkasiri

Directors

Sommaï Phasee

Panit Nitithanprapas

Petipong Pungbun Na Ayudhya

Chaiwat Wongwattanasan

Twatchai Yongkittikul

Tawee Butsunton

Boonsong Paukatong

Apai Chandanachulaka (appointed on October 17, 2000)

Plodprasop Suraswadi (appointed on October 17, 2000)

Vitaya Kotcharug (ex-officio)

(May 15 - September 30, 2001)

Chairman

Somchai Richupan

Directors

Panit Nitithanprapas

Sommaï Phasee

Palakorn Suwanrat (resigned on July 31, 2001)

Apai Chandanachulaka (appointed on July 31, 2001)

Somchai Wongsawat

Sunthad Somchevita

Pala Sookawesh

Tawee Butsunton

Norkun Sitthiphong

Lae Dilokvidhyarat

Vitaya Kotcharug (ex-officio)



Somchai Richupan

Chairman

Age 63

Education

- B.A. (Economics), Thammasat University
- M.A. (Economics), University of Florida, USA
- Ph.D. (Economics), University of Florida, USA

Present position

- President, Siam Development Institute
- Chairman of the Board of Directors, Export-Import Bank of Thailand



Panit Nitithanprapas

Director

Age 58

Education

- B.A. (Arts), Chulalongkorn University
- B.A. (Laws), Sukhothai Thammathirat Open University
- M.A. (Public Administration), National Institute of Development and Administration
- Certificate, National Defence College, Class 37

Present position

- Permanent Secretary of the Prime Minister's Office



Sommai Phasee

Director

Age 57

Education

- B.A. (Economics) Hons., Thammasat University
- M.A. (Economics), Thammasat University
- M.A. (Economics - Planning and Development), Vanderbilt University, Tennessee, USA

Present position

- Deputy Permanent Secretary of the Ministry of Finance



Apai Chandanachulaka Director

Age 58

Education

- B.A. (Political Science), Thammasat University
- M.A. (Political Science), Thammasat University
- Certificate, National Defence College, Class 33

Present position

- Director-General of the Department of Local Administration, Ministry of Interior



Somchai Wongsawat Director

Age 54

Education

- LL.B., Thammasat University
- Thai Barrister-at-Law, Thailand
- Certificate, National Defence College, Class 38

Present position

- Permanent Secretary of the Ministry of Justice



Sunthad Somchevita Director

Age 57

Education

- B. Arch., Chulalongkorn University
- Master of Architecture, Pratt Institute, Brooklyn, New York, USA

Present position

- Permanent Secretary of the Ministry of Science, Technology and Environment



Pala Sookawesh Director

Age 61

Education

- B. Eng. (Electrical) 2nd Class Hons., Chulalongkorn University
- M.S. in Industrial Engineering (Operation Research), Oregon State University, USA
- Certificate, National Defence College, Course for the Joint State - Private Sectors
- Certificate in Advance Management Program, Harvard Business School, Harvard University, USA

Present position

- Chairman of the Board of Directors, the Aromatics (Thailand) Public Co., Ltd.



Tawe Butsumtorn

Director

Age 62

Education

- B. Eng. (Mechanical) 1st Class Hons., Chulalongkorn University
- Honorary Doctorate's Degree in Engineering, King Mongkut's Institute of Technology Ladkrabang
- Honorary Doctorate's Degree in Engineering, Chulalongkorn University

Present position

- President of the Federation of Thai Industries



Norkun Sitthiphong

Director

Age 48

Education

- B.Eng. (Mechanical), Chulalongkorn University
- Ph.D. (Mechanical Engineering), Oregon State University, USA

Present position

- Vice President for Academic Affairs, Chiang Mai University



Lae Dilokvidhyarat

Director

Age 54

Education

- B.A. (Political Science), Chulalongkorn University
- M.A. (Development Studies), Institute of Social Studies, the Hague, the Netherlands

Present position

- Associate Professor of Economics, Chulalongkorn University
- Director of Labour and Management Development Centre, Chulalongkorn University



Vitaya Kotcharug

Director (ex-officio)

Age 59

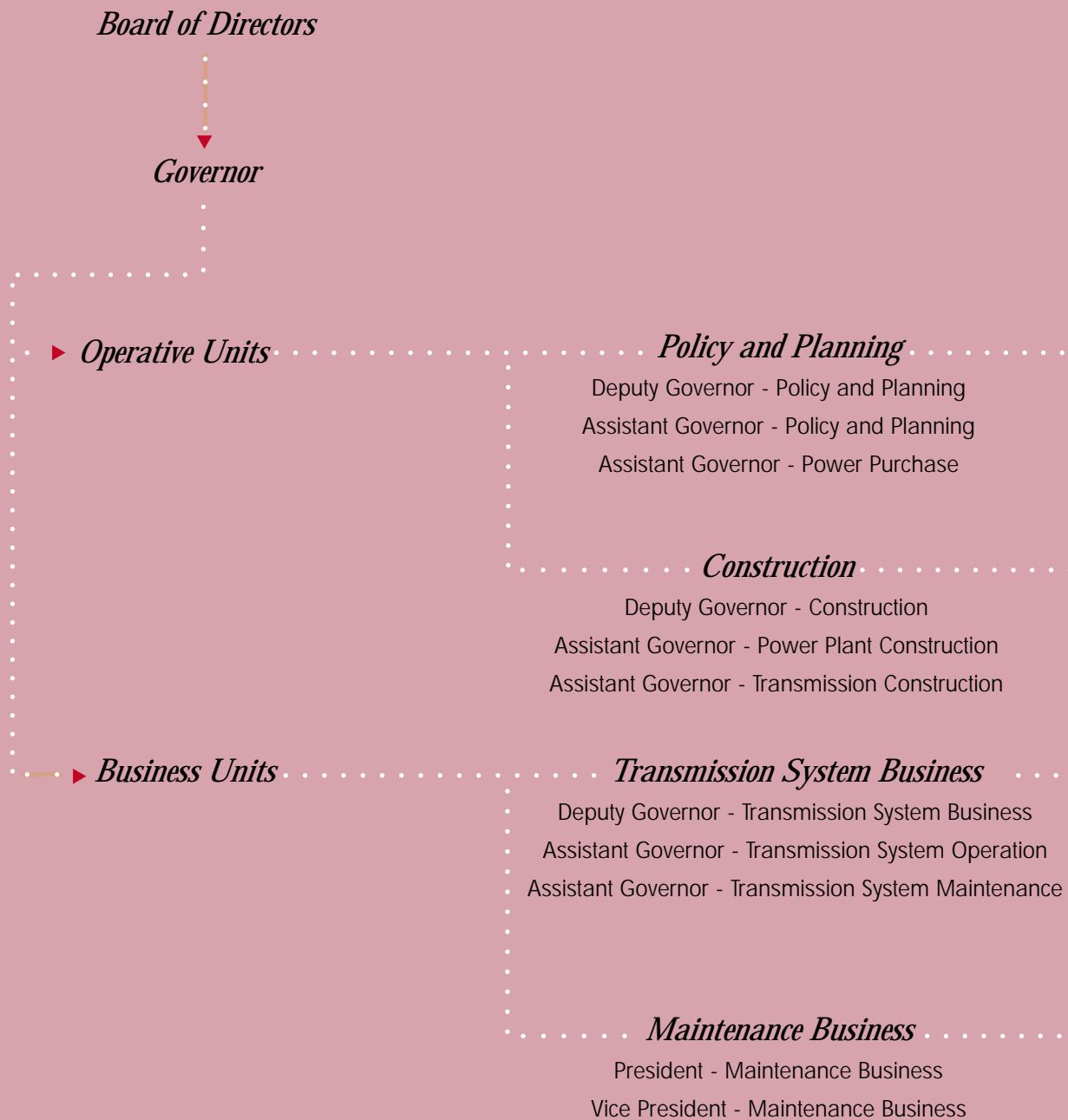
Education

- B. Eng. (Electrical), Chulalongkorn University
- Certificate, Psychological Operation Staff Course, Class 72, Applied Psychology Institute
- Certificate, Naval War College, Class 28

Present position

- EGAT Governor

ORGANIZATION CHART



Account and Finance

Deputy Governor - Account and Finance
 Assistant Governor - Account and Finance
 Assistant Governor - Business Ventures

Administration

Deputy Governor - Administration
 Assistant Governor - Personnel
 Assistant Governor - Services
 Assistant Governor - Special Affairs

Hydro Plant

Deputy Governor - Hydro Plant
 Assistant Governor - Hydro Power Development
 Assistant Governor - Hydro Power Operation

Generation Business 1

President - Generation Business 1
 Vice President - Generation Business 1 -
 Bang Pakong Power Plant
 Vice President - Generation Business 1 -
 Power Plant

Generation Business 2

President - Generation Business 2
 Vice President - Generation Business 2 -
 Mae Moh Power Plant
 Vice President - Generation Business 2 -
 South Bangkok Power Plant

Engineering Business

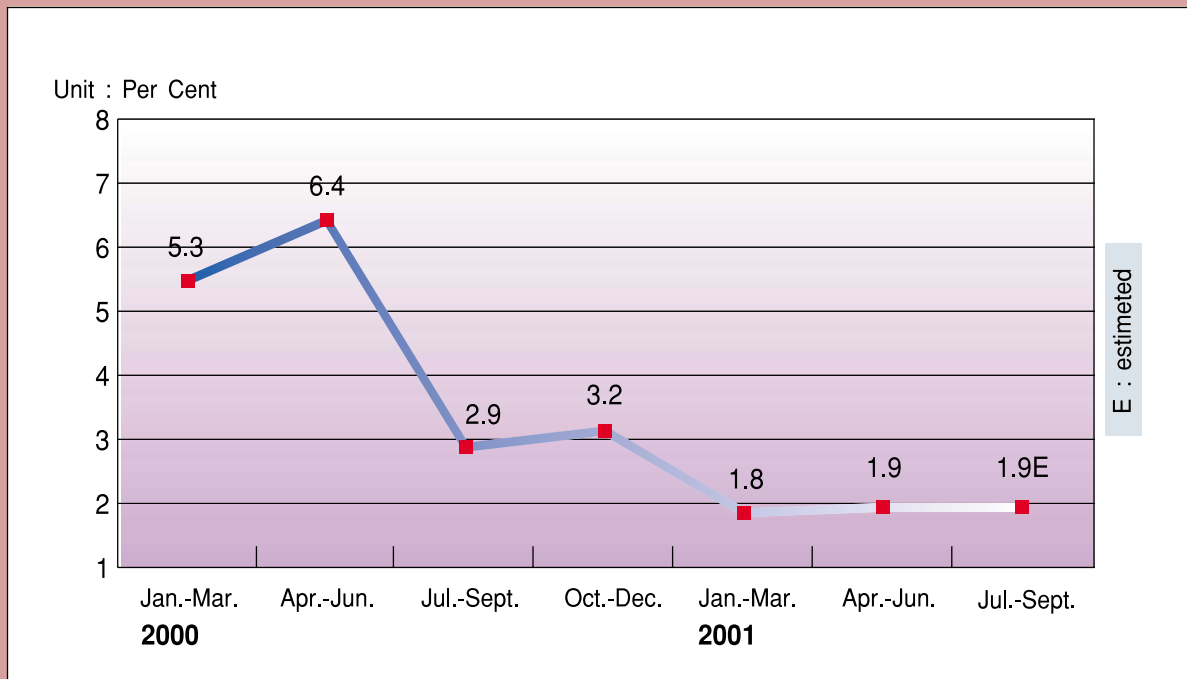
President - Engineering Business
 Vice President - Engineering Business
 Vice President - Project Engineering Business

Fuel Business

President - Fuel Business
 Vice President - Fuel Business - Production
 Vice President - Fuel Business - Planning and
 Development

ECONOMIC and ELECTRICITY OVERVIEW

Gross Domestic Product (GDP) Growth Rate at Constant 1988 Price

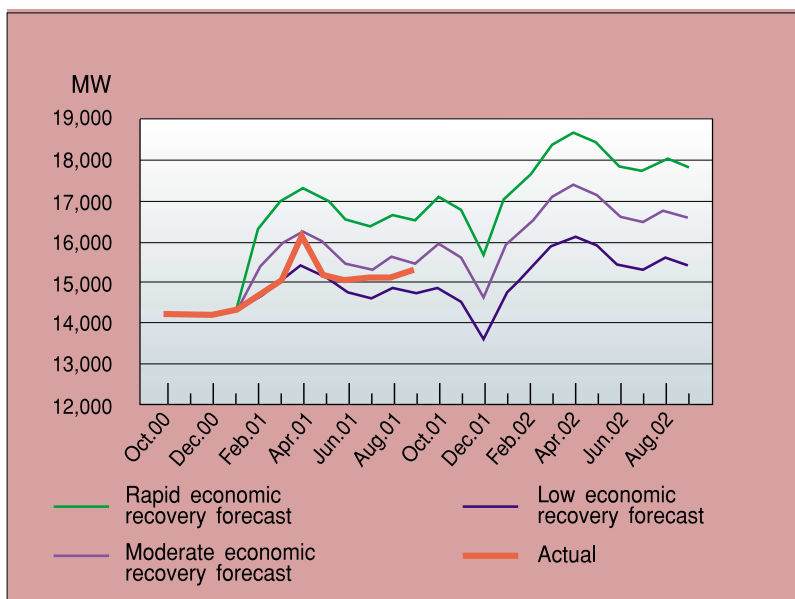


The weakening of the global economies has had a strong effect on the Thai economy which saw slower growth, compared with a year earlier. A series of measures including the Bank of Thailand's low-interest rate policy and the government's economic stimuli have been implemented to accelerate the economic recovery. Despite the stimulus measures, private consumption and investment growth continued to decline with excess production capacity. However, inflation remained at a low level. Liquidity problems in the financial system had also been relaxed. The Thai baht weakened slightly in line with regional currencies, but still remained sufficient stability conducive to Thai export's competitiveness.

Export growth, which has led the country's economic recovery over recent years, declined in 2001. Major exports of electronics, computer parts and electrical appliances were affected by the weakening of the US and Japanese economies and intense competition in the global market. Despite the fall of manufacturing exports, agricultural exports were on the rise, such as rice, frozen broiler, etc. due to the strong demand from EU countries.

Regarding the economic outlook for 2002, with the US being Thailand's major export market, the prospect of the Thai economic recovery will significantly hinge upon the US economic conditions. Provided a stronger US economy, Thailand's and regional economies are likely to recover faster. Besides, the Thai government has continuously eased its monetary and fiscal policies to provide a solid ground for the economic recovery and help improve the country's competitiveness in the global market.

System Gross Peak Generation (Fiscal Year 2001)



Notwithstanding the slow growth of the economy, electricity demand continued to pick up, albeit at a slightly slower pace than the previous year. The fast recovery of electricity growth was mainly attributable to the government's stimulus measures of domestic consumption. System peak generation requirement in fiscal year 2001 topped 16,126.40 MW, occurring on April 23, 2001, at 2.00 p.m. and at the country's average temperature of 38.70 degrees Celsius. The new peak demand recorded growth of 8.10 per cent compared to the prior year. Gross energy generation requirement rose by 6.60 per cent to 103,165.20 million kWh.

Electricity consumption by agricultural sector as well as government and non-profit organization sectors continued to grow constantly. Electricity demand by the industrial sector, which accounted for the biggest portion of electricity consumption, increased at a much lower rate due largely to the drop in export during the year. According to a new load forecast revised by Thailand Load Forecast Subcommittee, electricity demand will continue to grow at a slightly slower pace. Power demand is projected to grow by 7 per cent in 2002. Average electricity growth is projected for 6.86 per cent per year through the next five years (2002 - 2006) in the moderate economic recovery case.

Monthly Peak Generation Requirement

Month	Peak Generation (MW)		Increase	
	FY 2001	FY 2000	MW	Percentage
October	14,139.30	13,678.00	461.30	3.37
November	14,133.90	13,390.40	743.50	5.55
December	14,124.60	12,510.80	1,613.80	12.90
January	14,211.80	13,620.70	591.10	4.34
February	14,600.80	14,105.20	495.60	3.51
March	15,012.90	14,667.20	345.70	2.36
April	16,126.40	14,918.30	1,208.10	8.10
May	15,187.80	14,676.70	511.10	3.48
June	14,992.30	14,255.10	737.20	5.17
July	15,045.10	14,139.90	905.20	6.40
August	15,096.70	14,375.50	721.20	5.02
September	15,247.30	14,252.00	995.30	6.98
Yearly Peak Generation	16,126.40	14,918.30	1,208.10	8.10



Energy Generation Requirement

Month	Energy Generation (million kWh)		Increase	
	FY 2001	FY 2000	Million kWh	Percentage
October	8,507.75	7,943.91	563.84	7.10
November	7,819.70	7,684.30	135.40	1.76
December	7,983.92	6,927.03	1,056.89	15.26
January	8,125.57	7,718.47	407.10	5.27
February	7,927.08	7,393.21	533.87	7.22
March	8,927.36	8,605.92	321.44	3.74
April	8,981.72	8,009.34	972.38	12.14
May	9,090.05	8,749.93	340.12	3.89
June	8,897.53	8,421.16	476.37	5.66
July	9,013.36	8,463.95	549.41	6.49
August	9,057.57	8,538.79	518.78	6.08
September	8,833.59	8,324.71	508.88	6.11
Total	103,165.20	96,780.72	6,384.48	6.60



OPERATIONS

Generation System

Energy Generation and Purchase Thailand's gross energy generation throughout fiscal year 2001 amounted to 103,165.20 million kWh, marking an increase of 6.60 per cent over the previous year. Of this total, 61,755.89 million kWh or 59.86 per cent was produced by EGAT's own generation facilities and the remaining 41,409.31 million kWh or 40.14 per cent was the energy purchased from private power plants.

Energy generation mix in fiscal year 2001 comprised 33.80 per cent (34,871.18 million kWh) from natural gas, 16.78 per cent (17,306.58 million kWh) from lignite, 6.12 per cent (6,310.55 million kWh) from hydropower, 3.01 per cent (3,110.61 million kWh) from fuel oil, 0.15 per cent (155.23 million kWh) from diesel oil and a trivial output of 1.74 million kWh from non-hydro renewable energy. EGAT's generation from lignite, and hydropower was 12.01 per cent and 19.16 per cent more than the previous year, whereas its natural gas-based and fuel oil-based generation decreased by 2.61 per cent and 72.84 per cent respectively.

Electricity purchased from private power facilities accounted for 40.14 per cent (41,409.31 million kWh) of the country's electricity, including 37.33 per cent (38,515.41 million kWh) from domestic private power sources and 2.81 per cent (2,893.90 million kWh) from neighbouring countries.





Compared with the previous year, EGAT's own generation was further reduced by 9.40 per cent whereas its energy purchase from private power companies grew by 44.70 per cent due to additional purchase from new IPP and SPP projects of which the purchase agreements were due during the year.

Installed Capacity In fiscal year 2001, the country's installed generating capacity slightly decreased by 1.05 per cent to 22,034.80 MW, consisting of 15,000.40 MW or 68.08 per cent from EGAT's power plants and 7,034.40 MW or 31.92 per cent from private power plants. EGAT's own capacity decreased by 11.97 per cent whereas private power capacity rose by 34.52 per cent.

At the start of fiscal year 2001, EGAT sold and transferred Ratchaburi thermal power plant of 1,470 MW to Ratchaburi Electricity Generating Company Limited. A number of power facilities totalling 819.5 MW were also retired or taken out of service, including the old 237.5 MW North Bangkok power plant, the 122 MW Nong Chok gas turbine power plant and the 460 MW Ratchaburi combined cycle power plant. On the other hand, EGAT's new capacity additions included a 244 MW Surat Thani gas turbine power plant and additional capacity of 6.3 MW derived from the uprate of Bhumibol hydropower unit 6 from 70 MW to 76.3 MW after its renovation programme. At the end of fis-

cal year 2001, EGAT's own power capacity decreased to 15,000.40 MW compared with 17,039.60 MW in the previous year.

The increase of private power capacity was contributed by the 1,470 MW capacity from Ratchaburi power plant which was privatized and additional capacities of 335 MW from five new small power producers (SPPs).

At the fiscal year end, the country's system installed capacity mainly consisted of 28.39 per cent thermal, 23.03 per cent combined cycle, 13.10 per cent hydro, and 3.53 per cent gas turbine - from EGAT's power plants. The remaining 31.92 per cent of the country's entire capacity was power purchased from private power facilities including 22.36 per cent from domestic IPPs, 8.02 per cent from SPPs and 1.54% from neighbouring countries.

Ongoing Projects A total of 922 MW of EGAT's power projects have been implemented in 2001. These projects which progressed at different stages included:

1. Lan Krabue gas turbine unit 11 of 122 MW in northern Kamphaeng Phet province. The project will be completed by June 2002.

2. Krabi thermal unit 1 of 300 MW in southern Krabi province due for service in December 2002.

3. Lam TaKhong pumped storage units 1 - 2 of 250 MW each, in Nakhon Ratchasima province. Both units are scheduled for operation in October and November 2001.

Fuel Consumption In 2001, about 90 per cent of EGAT's own generation depended on fossil fuels including natural gas, lignite, fuel oil and diesel oil. Its fuel-based generation totalled 55,443.60 million kWh, 11.80 per cent less than the previous year due to a higher energy portion from hydropower and EGAT's commitment to buy more electricity from private power plants according to the due purchase agreements.

Natural gas remained the key source of EGAT's electricity generation. Consumption of natural gas through fiscal year 2001 increased 5.39 per cent to 345,315 million cubic feet or an average of 946 million cubic feet per day. Lignite consumption rose 9.09 per cent to 15.24 million tonnes, representing an average use of 41,753 tonnes per day. Higher consumption of lignite was contributed by EGAT's efficient gas emissions control measures including the operation of flue gas desulphurization system and the use of



purchased high quality coal. These measures enabled Mae Moh lignite-fired power plant to run at higher capacity with gas emissions much lower than regulatory limits.

In the meantime, in effort to achieve the lowest possible production cost, EGAT continued to minimize its oil-based generation due to the rising oil prices. Consumption of fuel oil dropped to only 782 million litres in 2001, a further decrease of 71.34 per cent compared with a year earlier. Utilization of diesel oil decreased by 1.69 per cent to 46 million litres.

Mine Operation EGAT owns and operates Mae Moh lignite mine which supplies lignite to a 2,625 MW mine-mouthed Mae Moh power plant. Operations at Mae Moh mine in fiscal year 2001 included 15 million tonnes of lignite production and 67.55 million cubic metres of overburden removal. In addition, Mae Moh mine also purchased 207,541 tonnes of low sulphur content lignite from private mines to use in combination with lignite fuel from EGAT's own Mae Moh mine for air pollution control.

In running its mining operation, EGAT has regularly monitored any significant change or impact on the surrounding community and the environment. Moreover, an ISO 14001 environmental management system (EMS) has been implemented at Mae Moh Mine to further improve and ensure its efficient and accountable environmental management which meets both national and international environmental management standards. Mae Moh Mine was certified to ISO 14001 international standard in April 2001.

Over recent years, EGAT has continuously explored for new potential sources of high quality coal to secure fuel supply for Mae Moh power plant in the long run. Explorations at Wiang Haeng basin in northern Chiang Mai province revealed large deposits of high quality coal with over 14.23 million tonnes of economically proven reserves. Lignite at this basin has an average heating value of 3,100 kilocalories/kilogram and 1.30 per cent of sulphur content.

Wiang Haeng coal basin explorations and an environmental impact assessment (EIA) have been conducted in parallel with a community development programme. To start with, field studies and researches have been conducted to assess all impacts on the quality of life of the local community that may be caused by mining activities. Participatory approaches are used to involve the local community in the planning and design of the project. An EIA report has currently been prepared. In addition, on September 25, 2001, the government, by the Cabinet resolution, approved to reserve Saba Yoi basin in Songkhla province, another potential lignite basin in the south of Thailand, for EGAT's mine development for electricity generation in the future.

Reservoir Operation The year 2001 marked another successful year for EGAT's reservoir operation which satisfied both irrigation and peak generation requirements. Owing to plentiful stock of water in EGAT's major reservoirs at the start of the fiscal year, hydropower generation through 2001 increased by 19.16 per cent to 6,310.55 million kWh, and thus more water supply to serve various purposes downstream, i.e. irrigation, waterworks, salinity control and water treatment.



In 2001, the rains started in May with heavy and continual rainfalls in most parts of the country. This coupled with heavy downpours caused by heavy storms caused floods in certain areas of the country, such as Phetchabun province where there were no dams to help absorb the rainwater. Inflow into EGAT's major dams rapidly filled up many reservoirs, particularly in northern and northeastern provinces. The water stock in Bhumibol and Sirikit dams, the country's major dams in the north, for instance, increased to 80 per cent and 95 per cent of their storage capacity respectively. At the fiscal year end, total inflow into all EGAT's reservoirs aggregated 35,632 million cubic metres, the amount close to the prior year.



With ample supply, a total 42,437 million cubic metres of water supply was released from EGAT's dams countrywide to sufficiently serve various needs downstream, 20.34 per cent much more than the previous year. Of the total release, 35,287 million cubic metres or 83.15 per cent was passed through generators to produce electricity before being discharged for downstream usage.

At the end of fiscal year 2001, water supplies in all EGAT's reservoirs increased 3.09 per cent to 54,963 million cubic metres, representing 88 per cent of the total storage capacity. This promised a good outlook for next year's reservoir operation.

Operational Efficiency EGAT's quality power service has been maintained through fiscal year 2001. However, the overall operational efficiency of EGAT's power plants began to decline slightly, compared with the previous year. The decline was attributable to the cumulative effects of the country's economic crisis which started in 1997. The sluggish economy caused the country's electricity demand and consumption to decrease, for the first time in Thailand's electricity history, in 1998 and 1999. Although electricity growth began to pick up in 2000, still there existed a high reserve margin. Several power purchase contracts with awarded independent power producers (IPPs) and small power producers (SPPs), which had been signed years before the economic crisis, became effective during the years when electricity demand fell.

Power Plant Performance Indices

	Fiscal Year		Increase/ (Decrease) Percentage
	2001	2000	
Thermal, Gas Turbine, and Combined Cycle Power Plants			
Gross capacity factor	55.92	58.79	(2.87)
Output factor	79.41	77.40	2.01
Equivalent availability factor	87.55	84.52	3.03
Planned outage factor	6.75	8.50	(1.75)
Unplanned outage factor	5.69	4.75	0.94
Forced outage factor	1.38	1.52	(0.14)
Net efficiency	35.91	36.20	(0.29)
Hydropower Plants			
Gross capacity factor	24.35	20.01	4.34
Output factor	77.45	75.28	2.17
Availability factor	95.54	93.09	2.45
Planned outage factor	2.30	4.66	(2.36)
Unplanned outage factor	2.16	2.24	(0.08)
Forced outage factor	0.15	0.01	0.14

EGAT were to purchase more electric energy from those private power plants. This caused EGAT to put some of its ageing power plants on a cold standby and operate with large reserve capacity. Moreover, based on EGAT's policy of fuel diversification, fuel oil-fired generation which yielded higher efficiency was tremendously reduced to lessen dependence on the high priced fuel oil and to use indigenous natural gas and renewable energy instead. These factors, despite EGAT's countermeasures, culminated in a slight decline in its overall power plant performance in 2001.

Notwithstanding, as the country's single largest power producer, EGAT has been committed to maintaining the highest availability and reliability of its fleet of power plants to ensure the adequate and uninterrupted power supply for the whole country. With decades of its experience and expertise, EGAT is confident to maintain the high, standardized performance of its power facilities to meet the country's requirement for years to come.



Transmission System

EGAT owns and operates the national transmission grid which consists of long distance high voltage transmission lines and substations of voltages ranging from 500, 230, 132, 115 to 69 kV. Thailand's power system has been recognized as one of the most reliable in the region, with its bulk power transmission being interconnected mainly at 500 kV, 230 kV and 115 kV throughout the country.

In 2001, transmission system development mainly involved the construction of eight transmission line projects totalling 5,540 circuit-kilometres and five substations, with some of the projects being placed into operation during the year. A number of ageing transmission lines were also taken out of service.

At the end of fiscal year 2001, EGAT's transmission network had a total line length of 27,039.50 circuit-kilometres, 194 substations with a total transformer capacity of 57,985,820 kVA, marking the increase of 2.62 per cent, 0.52 per cent and 3.73 per cent over the previous year respectively.

Transmission System Maintenance

Following the adoption of condition-based maintenance system, EGAT's transmission maintenance system has been further improved by introducing an online condition monitoring system which enables the continuous monitoring and diagnosing of actual conditions and performance of substations and transmission components. Preventive maintenance activities have been implemented for such high cost components as transformers including the installation of neutral grounding reactors to prevent or minimize damages to transformers caused by overvoltage in the power system during single line-to-ground faults. Aged equipment has been retrofitted or replaced for 16 substations to strengthen stability and reliability of the power supply system. In addition, in effort to be self-reliant, EGAT has developed its own computerized control substation system including equipment for remote terminal units, which significantly helped save its maintenance cost.

Apart from the maintenance of its own transmission facilities, EGAT has also provided maintenance services for private companies. These services ranging from high voltage equipment maintenance, installation, testing to power system study and analysis produced an additional income of 30.50 million baht in 2001.



Communication System Development

Telecommunication system has been planned and developed along with the construction of power plant and transmission system to ensure efficiency and reliability of the power supply service. In 2001, EGAT's telecommunication system development involved the installation of 1,266 km composite optical fibre overhead ground wire (OPGW) for transmission lines. To date, EGAT's OPGW lines stretched over 3,228 kilometres across the country.

Moreover, 36 substations have presently been equipped with the state-of-the-art synchronous digital hierarchy (SDH) equipment to ensure the highest transmission capacity immune from electromagnetic interference, which has significantly improved quality and reliability of EGAT's telecommunication backbone network. Teleprotection, telecontrol and data communication between power plants, substations and control centres are transmitted on these media, ensuring the better power supply service and quality for end users.





System Reliability A good power supply system with high reliability should be able to provide uninterrupted power supplies at stable frequency and voltage to satisfy customers' demand in all circumstances. Over the past several years, EGAT has closely cooperated with two distributing utilities, namely the Metropolitan Electricity Authority (MEA) and the Provincial Electricity Authority (PEA), in a System Reliability Improvement Project so as to study and implement measures in preventing and minimizing power failures and interruptions in the supply as well as delivery systems. The committee represented by all the three power utilities has also planned criteria for further improving system reliability.

With its mission of generation and transmission, EGAT has fully recognized the vital needs for maintaining an efficient and reliable power system. Its power and transmission expansion projects have been carefully planned and implemented to strengthen the power supply system and meet the country's demand at an acceptable level of reliability which also meets international standards.

According to the cabinet's resolution, those state enterprises ranked as Good State Enterprises, which included EGAT, are required to be evaluated against their performance agreements made with the state Performance Agreement Committee (PAC). In the aspect of service quality, reliability of supply has been one among key performance indicators used in appraising EGAT's performance.

In fiscal year 2001, these reliability indices showed the record improvement of EGAT's power system reliability compared with recent years. System average interruption frequency index (SAIFI) was further reduced from 0.92 to 0.74 time/delivery point whereas system average interruption duration index (SAIDI) decreased from 51.14 in the prior year to 37.65 minutes/delivery point. Unsupplied energy (System-Minute) was also curbed from 16.04 to 11.31 MW-minute/MW in 2001.



Energy Sales and Tariff

Energy Sales In 2001, non-coincident maximum power demand aggregated 18,057.40 MW, comprising the demand of 6,228.58 MW from MEA, 11,214.45 MW from PEA, 317.29 MW from direct customers, 57.79 MW from Laos, 146.56 MW from standby power supply, and 92.73 MW from other minor customers.

EGAT's sales volume through fiscal year 2001 increased further by 7.37 per cent from the previous year to 97,412.08 million kWh. Nearly all of the electricity sales were to two distributing authorities, namely PEA and MEA which accounted for 61.90 per cent (60,303.38 million kWh) and 36.27 per cent

(35,327.39 million kWh) of EGAT's total sales volume. Direct customers accounted for 1.37 per cent (1,333.11 million kWh) of EGAT's energy sales. The remaining sales volume of 448.20 million kWh was sold to Laos and Malaysia as well as other minor customers.

Compared with a year earlier, the sales volumes to PEA and MEA were 7.51 per cent and 7.41 per cent higher respectively. Energy sales to direct customers, Laos and Malaysia also increased by 8.74 per cent, 13.50 per cent, and 644.44 per cent respectively. Sale to standby power supply and other minor customers dropped by 54.66 per cent and 20.36 per cent respectively.



Revenue from Energy Sales In fiscal year 2001, EGAT's energy sales revenues, including Automatic Adjustment Charge (F) but excluding value added tax (VAT), amounted to 189,389.39 million baht, higher than last year by 32,427.61 million baht or 20.66 per cent. Of the total sales revenues, 63.26 per cent (119,802.87 million baht) was from sales to PEA, 35.04 per cent (66,367.82 million baht) from MEA and 1.34 per cent (2,541.40 million baht) from direct customers. The remaining 677.30 million baht was revenues from energy sales to Laos, Malaysia, standby power supply and other minor customers.

Bulk Supply Tariff A new electricity tariff structure was endorsed by the Cabinet on October 3, 2000 and became effective since the start of fiscal year 2001 on October 1, 2000. Under the new tariff structure, bulk supply tariff rates which EGAT charges to its customers, namely MEA and PEA, and its direct customers are detailed as follows:



Wholesale Rate for MEA and PEA

Monthly Electricity Rate

Unit : Baht/kWh (excluding VAT)

Voltage Level	Generation Charge		Transmission Charge		Total	
	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-peak
230 kV	1.8758	1.1514	0.2810	-	2.1568	1.1514
Exit of 230 :115 (or 69) kV	1.8803	1.1539	0.5042	-	2.3845	1.1539
End of 115 (or 69) kV line*	1.9405	1.1753	0.8717	-	2.8122	1.1753
11 - 33 kV	1.9450	1.1765	1.0439	-	2.9889	1.1765

Notes:

* Including 115:115 kV and 69:69 kV substations

Peak 09.00 - 22.00 hrs Monday - Friday

Off-Peak 22.00 - 09.00 hrs Monday - Friday and the whole day on Saturday, Sunday and public holidays (excluding compensatory holidays)



Connection Charge

Voltage level of 69 kV and over	50,000	Baht / MVA / year
Voltage level of 11 - 33 kV	100,000	Baht / MVA / year

Power Factor Charge

Effective since January 2002, a power factor charge at the rate of 4.67 baht/kVAr/month will be imposed if the power factor of the bulk supply between EGAT and MEA/PEA is lower than 0.875.

Notes

1. Should there be any change in expenses beyond control by the utilities such as fluctuations of fuel costs, foreign exchange rates and inflation rates or Consumer Price Index (CPI), adjustments will be made to either increase or decrease the electricity charge in the electricity bills.
2. A value added tax (VAT) rate of 7% should be added.

Retail Rates for Direct Customers

Retail rates apply to EGAT's direct customers with a power demand of 1,000 kW and over, or with energy consumption over 250,000 kWh/month.

Monthly Electricity Rate (Time-of-Day : TOD Rate)

Voltage Level (kV)		Demand Charge (Baht/kW)			Energy Charge (Baht/kWh)
		08:00 - 18:30 hrs	18:30 - 21:30 hrs	21:30 - 08:00 hrs (Excess Demand from 18:30 - 21:30 hrs)	
> 69	-	29.91	224.30	1.6660	
11 - 33	-	58.88	285.05	1.7034	
< 11	-	68.22	332.71	1.7314	

Monthly Electricity Rates (Time-of-Use : TOU Rate)

Voltage Level (kV)	Demand Charge (Baht/kW)	Energy Charge (Baht/kWh)		Service Charge (Baht/kWh)
	Peak	Peak	Off-Peak	
> 69	74.14	2.6136	1.1726	228.17
11 - 33	132.93	2.6950	1.1914	228.17
< 11	210.00	2.8408	1.2246	228.17

<i>Peak</i>	<i>09.00 - 22.00 hrs</i>	<i>Monday - Friday</i>
<i>Off-Peak</i>	<i>22.00 - 09.00 hrs</i>	<i>Monday - Friday and the whole day on Saturday, Sunday and public holidays (excluding compensatory holidays)</i>

Notes

1. For customers with a demand charge, a minimum charge is normally calculated at 70 per cent of the maximum demand charge during the last 12-month period including the current month. However, the Cabinet Resolution on February 16, 1999 had waived the minimum charge until September 2002.





2. *Customers under the existing TOD rate may opt for the TOU rate, but customers currently under the TOU rate cannot switch to use the TOD rate tariff.*

3. *For new customers beyond October 1, 2000, the TOU rate tariff is compulsory.*

4. *Should there be any change in the utilities' uncontrollable costs such as the fluctuation of fuel prices and etc., adjustments will be made to either increase or decrease the electricity charge in the electricity bills.*

5. *A value added tax rate of 7% should be added.*

In addition to wholesale tariff rates EGAT charges to MEA, PEA and the retail tariffs charged to its direct customers, the new tariff structure also includes an interruptible rate (IR) and standby rate for non-cogeneration and cogeneration customers. The interruptible rate is offered as an alternative for customers who can reduce consumption when notified by the utilities and thus benefitting from a deduction of electricity charges. The standby rate is charged to customers requiring standby power.

Automatic Adjustment Mechanism (F_t) On October 3, 2000, the Cabinet concurred with the resolution of the National Energy Policy Council derived from the meeting NO. 9/2543 on September 28, 2000 regarding the electricity tariff restructuring and the Automatic Adjustment Mechanism (F_t).

The revised Automatic Adjustment Mechanism (F_t) has been effective since October 2000. The key aspects included the following.

1. The F_t formula was revised by adjusting the F_t base to commence at zero since the new retail tariff structure had already included the previous F_t component at a rate of 64.52 stang/kWh.

2. With the enforcement of the new electricity tariff structure, the F_t charge had been zero for a four-month period from October 2000 to January 2001. The first adjustment of the F_t charge was undertaken in February 2001.

3. Expenditure on the Demand Side Management (DSM) was removed from the new F_t formula.

4. The three power utilities were to absorb partially the risks of foreign exchange rate fluctuations.

The key elements of the F_t formula are as follows :

$$F_t = FAC + FX + NF + MR$$

FAC *Changes in fuel prices and power purchasing costs from SPPs, IPPs, Laos and Malaysia*

FX *Impact of foreign exchange rate fluctuations on foreign debt repayments of the utilities*

- For the first six-month period from October 2000 to March 2001, the utilities could adjust the electricity prices through the F_t if the exchange rate changed from the base rate of 38 baht/US\$ 1.

- As from April 2001 onwards, the utilities have to absorb partially the losses on foreign exchange due to debt repayment, provided that the exchange rate depreciates from the base rate in the range of 38 - 40 baht/US\$, and exceeding 45 baht/US\$. Consumers shall bear the FOREX losses only at the range of 40 - 45 baht/US\$.

NF *Changes in non-fuel costs due to variations in demand and inflation rates that differ from the rates used in the F_t calculation.*

MR *Changes in revenue from the actual average sale prices which differ from the planned average sale prices of utilities.*

In fiscal year 2001, the Subcommittee on the Automatic Adjustment Mechanism (F_t) Monitoring had approved the F_t adjustments as follows:

1. F_t charge for the four-month period from February - May 2001 was 24.44 stang/kWh. The new F_t charge was due mainly to the escalating fuel prices and the depreciation of the Thai baht currency which resulted in higher costs of fuel and power purchasing prices from SPPs and IPPs. Furthermore, the devaluation of the baht currency also caused the increasing liabilities of the three power utilities.

However, the above impacts were softened by the lower inflation rate and the higher revenues of all three power utilities than projected, causing the F_t charge to increase by only 24.44 stang/kWh, representing an 11.06 per cent increase from the average base tariff.

2. The F_t charge for the period of June - September 2001 increased from the previous period to 27.13 stang/kWh. The slight increase of F_t charge was mainly caused by higher fuel prices offset by the lower inflation rate and EGAT's decreased consumption of heavy oil which helped reduce its fuel costs. In addition, as from April 2001, the power utilities had to partially absorb the FOREX risks by themselves, resulting in an increase of the F_t charge by only 2.69 stang/kWh. Consequently, an average sales price of electricity increased by 1.10 per cent compared with the preceding four-month period.



ORGANIZATIONAL DEVELOPMENT

Human Resource Development

With dynamic changes taking place in various businesses and industries, including the power industry, at home and abroad, EGAT has fully recognized a growing need to compete for its survival and growth. The key to EGAT's future success lies in its people and their competence. Over the past years, EGAT has increasingly focussed on human resource development and training programmes to develop EGAT people to their fullest potential. Training is also aimed at preparing them to quickly adapt to the changing work environments and get ready to create change and reinvent the organization's future.

Training provided for EGAT staff has been planned by considering the organization's needs, corporate policy and plan, national economic and social development plan, and etc. Training covers both standard training programmes to improve staff's knowledge and skills needed in the more competitive environment, and tailor-made training programmes to meet specific needs of individual units inside EGAT.



In the light of greater competition in the industry, EGAT needs to downsize its organization to streamline its operations. Since 1995, an early retirement scheme known as Mutual Separation Scheme has continually been implemented as an alternative to help EGAT manage its manpower. This voluntary scheme was continued in 2001 with a total of 227 employees resigning under the programme. Its Mutual Separation Scheme has to date resulted in an accumulative reduction of 2,629 employees at a total cost of 2,856 million baht. In addition, occupational training programmes have been provided for the employees who joined the scheme to help develop their quality of life after leaving EGAT. Despite its high cost, the scheme will contribute to considerable saving on EGAT's payroll expenses in the long run.

At the fiscal year end, EGAT work force decreased further from 29,175 in the prior year to 28,543, comprising 22,797 men and 5,746 women. Based on educational levels, approximately 25 per cent of the work force have bachelor's or higher degrees, 24 per cent with diploma of vocational education, 20 per cent with certificate of vocational education, and the remaining 31 per cent with lower educational levels.



Organizational Restructuring Trend

EGAT went ahead with its organizational restructuring process in order to conform to the government's policy on state enterprises reform. In 2001, a working committee was set up to study and provide the management with recommendations on appropriate approach to organizational restructuring and privatization. The committee members are equally composed of representatives from the management and EGAT's labour union known as EGAT Employee Association.

The committee are responsible for providing information and recommendations on organizational restructuring process that is consistent with EGAT's privatization trend. They are also to provide suggestions as to staffing in the new restructured organization and to study impacts on EGAT employees caused by the restructuring as well as countermeasures. A conclusive report will further be presented to the management. The formation of the bilateral committee was to lessen conflicts with EGAT's labour union and to ensure a restructuring approach more acceptable to employees. EGAT has also prepared a supporting plan to reduce the impact on human resources allocation to its new organization structure. The countermeasure plan will be implemented along with the restructuring process.

Pending a final decision on EGAT's organizational restructuring, all business and operative units have been adjusting their individual structures to EGAT's privatization trend in order to



streamline their operations and improve efficiency. In 2001, Transmission Business Unit completed the restructuring inside its unit by merging all maintenance functions of transmission lines, substations and communication system in the same operating area into a single division. Its restructuring will allow for higher efficiency, faster service and reduce its operating costs.

Productivity and Quality Development

Recognizing the importance of quality system as a key to customer satisfaction as well as the organization's prosperity, EGAT has put a lot of effort, both in terms of budget, human resources and time, in a variety of productivity and quality development programmes in order to systematically develop its work force, productivity and service quality. In 2001, a committee on productivity and quality improvement was set up to be responsible for formulating policies and guidelines for the organizationwide implementation of all productivity and quality improvement programmes.

Under the mentioned committee are six subcommittees responsible for specific programmes including efficiency improvement, ISO standard implementation, modern safety management (MSM), quality control circle (QCC), general quality circle (QC) and 5-S activities. These subcommittees serve to formulate strategic plans, promote and monitor the implementation of those activities in various functional units organizationwide.

Among important tools employed in developing quality and productivity are ISO management systems including ISO 9000 quality management system and ISO 14001 environmental management system (EMS). These quality management systems have presently been practiced across the organization. Fourteen units and divisions of EGAT have to date been accredited to ISO 9000 standards. Also, 13 of its power facilities and associated facilities including power plants,



substations and a lignite mine, have already been certified to ISO 14001 EMS. EGAT's major dams including Bhumibol, Sirikit, Srinagarind, Vajiralongkorn, Rajjaprabha and Nam Pung dams have been implementing the environmental management system and preparing to apply for the ISO 14001 certification.

Performance Appraisal System Development

EGAT has continuously developed its appraisal systems for the performance of individual business units and operative units to be consistent with international standards. Benchmarking system has been adopted in measuring the performance against best practice targets. Performance appraisal committees comprising both EGAT management and experts from business, energy and government sectors have commented and evaluated the performance of each unit against the performance agreement earlier committed by the unit.

Rewarding measures including salary increment and other promotions have been based more on performance. This will encourage the continuous development and improvement of operational efficiency while also complying with EGAT's policy of transparency in its organizational management.

BUSINESS DEVELOPMENT

EGAT has been striving to optimize the use of its existing resources including human resources. Various divisions have been urged to improve their performance and productivity by offering their services to outside organizations. Certain business units started to provide their lines of services to private companies since 1995. In addition, the economic crisis in 1997, which necessitated EGAT to slow down and postpone its power and transmission development activities, caused parts of its resources including human resources to be underemployed. The government's urge on its policy of privatization and electricity industry reform also had direct impacts on EGAT.

In the wake of these circumstances, strategic plans have been made to quickly adapt to the industry reform. Apart from fulfilling the main mission of providing the country with quality electricity service, EGAT's corporate strategies have also given more weight on exploring new business opportunities to create added value from its expertise and existing resources. Over recent years, EGAT has been awarded contracts by private and public companies for a variety of services which are EGAT's expertise such as power plant and transmission maintenance, engineering and consulting services, transport of heavy equipment, training, and etc. In addition, its power facilities, especially dam sites have also been developed to create added value from their recreational facilities. These efforts have generated EGAT an increasing amount of revenues in each year and also helped prepare EGAT people for business operations in the near future.



However, there exist certain constraints which have limited scope of EGAT's business expansion. Its state enterprise status, for instance, prohibits EGAT from running certain businesses including commercial telecommunication development. Besides, some enforced regulations have been a hindrance to the utilization of EGAT's existing resources for commercial purposes. The state's high criteria of rate of return on assets (ROA) for the investment used in providing services to outside companies cause EGAT lack of price competitiveness. Other constraints included a lack of rules for special fringe benefits to provide incentives for its people to do extra jobs, staff's deficiency in knowledge and skills on business, marketing and servicing operations.

In effort to lessen those constraints, since August 1997, EGAT planned to establish a wholly owned Sakol Engineering Limited Company to offer energy-related services to outsiders. However, in the following month the plan was halted pending a joint study on EGAT's privatization by EGAT management and its labour union. The company has, to date, not been established.

Notwithstanding, EGAT has continuously offered its energy related services to both private and public agencies when-and wherever permitted. Between 1998 and 2001, EGAT has earned additional income from services given to outsiders by various units as shown on the following page.

EGAT has well recognized the growing needs for marketing, and thus has focussed more on enhancing and developing its marketing strategies. Taking advantage of the advances in information technology, in 2001 EGAT opened a new commercial website "**egat.com**" to serve as a new channel for broadening its service markets and also enhancing business skills and experiences for EGAT people.

The new **egat.com** website publicizes, for the convenience of its customers and interested people, news and detailed information concerning EGAT's services, such as engineering, power plant operation and maintenance, construction, exploration, testing, laboratory services, and etc.



Business Performance of EGAT Business and Operative Units

Unit : Million Baht

	Fiscal Year			
	1998	1999	2000	2001
Business Units				
Transmission System Business Unit	222.79	146.61	129.10	94.79
Generation Business 1 Unit	10.77	20.22	33.63	3.65
Generation Business 2 Unit	14.71	37.11	55.17	77.18
Maintenance Business Unit	385.71	436.75	334.62	898.53
Engineering Business Unit	30.27	15.16	10.33	17.70
Operative Units				
Internal Audit Division	0.25	0.26	0.26	0.23
Policy and Planning Unit	4.76	3.67	7.83	6.35
Administration Unit	33.84	10.20	16.21	17.38
Construction Unit	91.39	86.03	26.87	14.31
Hydro Plant Unit	4.10	2.63	65.06	13.82
Demand Side Management Office	-	-	33.87	67.11
Total	798.59	758.64	712.94	1,210.90

ASSOCIATED COMPANIES

Electricity Generating Public Company Limited (EGCO)

In accordance with the government's privatization plan which aimed to increase private sector participation in electricity generation and distribution businesses and reduce the government's financial obligation, Electricity Generating Public Company Limited (EGCO) was established on May 12, 1992, with an initial registered capital of 100 million baht and 99.99% of shares held by EGAT. As at December 31, 2001, EGCO's total registered capital was 530 million shares (5,300 million baht), which have been issued and paid-up to 525,946,500 shares or 5,259,465,000 baht. For EGCO's corporate structure, the shareholders are as follows:

	% Ownership
• EGAT	25.43%
• CLP Power Projects (Thailand) Limited	20.12%
• General public	54.45%

EGCO is a holding company with four subsidiaries, namely Rayong Electricity Generating Company Limited, Khanom Electricity Generating Company Limited, EGCO Joint Ventures & Development Company Limited and EGCO Engineering & Service Company Limited. EGCO also invests in joint ventures including Gulf Electric Public Company Limited and Conal Holdings Corporation. Moreover, in order to expand its opportunity in core business and other energy-related businesses, EGCO has investments in associated companies such as Thai LNG Power Corporation Limited, Amata-EGCO Power Company Limited and Amata Power-ESCO Service Company Limited, and etc.



With regard to the operating performance of EGCO and its subsidiary companies, in 2001, their revenues from electricity sales and other income amounted to 11,612.02 million baht, an increase of 10.06 per cent from the previous year. Net profit increased from 1,216.74 million baht to 2,939.07 million baht in 2001. As a result of an increase in operating revenues and the intention to strengthen shareholders trust and confidence in EGCO's ability to continuously create return on investment and maximize rate of return in the future, EGCO's Board of Directors agreed to pay an interim dividend of 1 baht per share on September 26, 2001, thereby the dividend of 133,773,662 baht was acquired by EGAT.

Ratchaburi Electricity Generating Holding Public Company Limited

With an initial registered capital of 300 million baht, Ratchaburi Electricity Generating Holding Company Limited was established with 100 % of shares held by EGAT on March 7, 2000. As at December 31, 2001, its total registered capital was 1,450 million shares or 14,500 million baht. The shareholders of Ratchaburi Electricity Generating Holding Public Company Limited are as follows:

	% Ownership
• EGAT	45%
• General public	55%

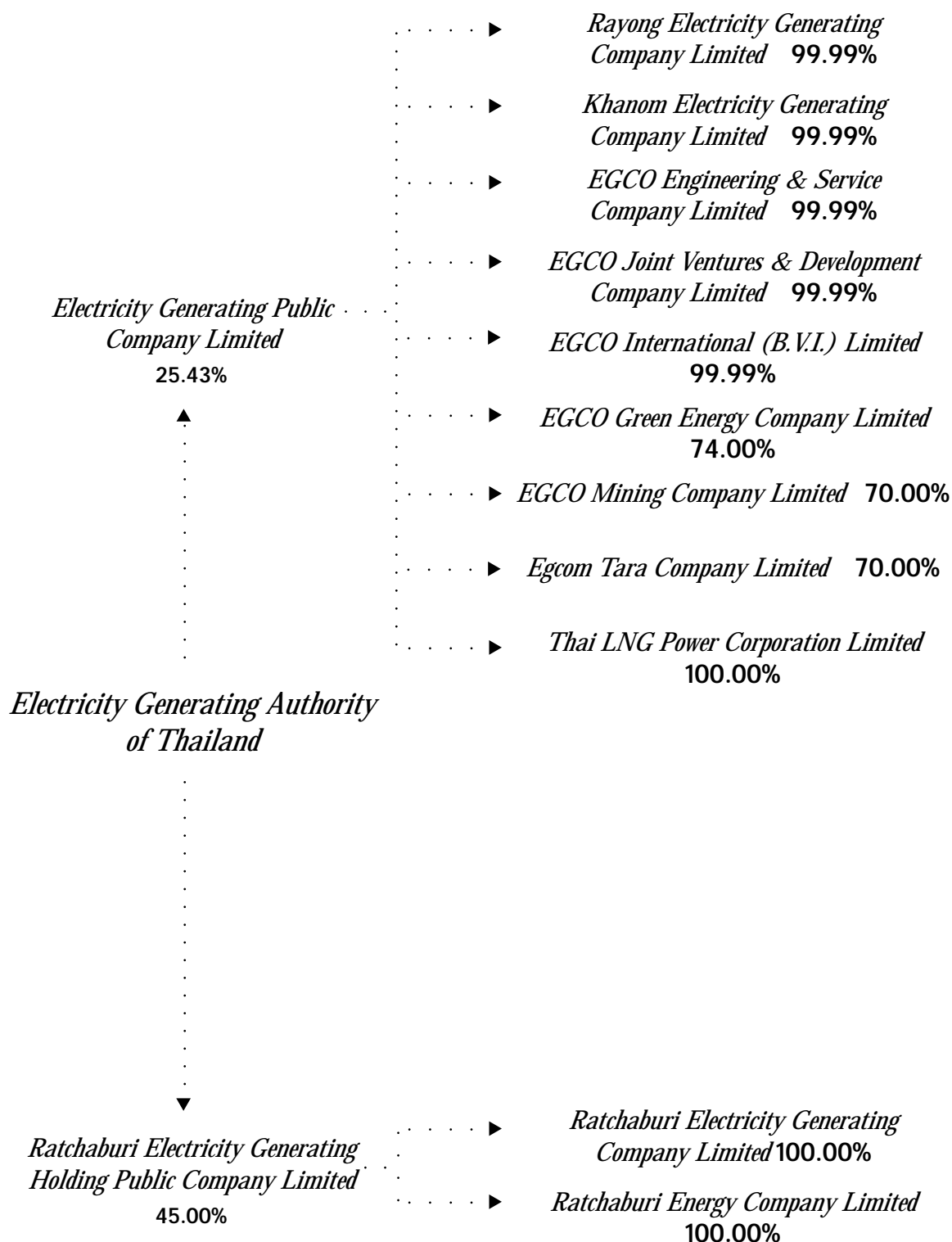


The company's structure is a holding company which Ratchaburi Electricity Generating Holding Public Company Limited is a parent company. The company presently has two subsidiaries, namely Ratchaburi Electricity Generating Company Limited and Ratchaburi Energy Company Limited.

For the operating performance of Ratchaburi Electricity Generating Holding Public Company Limited and subsidiary companies for the year ended December 31, 2001, revenues from energy sales and other income amounted to 17,914.30 million baht with a net profit of 3,059.54 million baht. EGAT planned to transfer Ratchaburi combined cycle power plant, blocks 1 and 2 to Ratchaburi Electricity Generating Company Limited in December 2001 and January 2002 respectively.



EGAT Associated Companies Structure



ENVIRONMENTAL CONCERN

EGAT has continued its firm commitment to pursuing a sustainable energy development approach with complete environmental and social responsibility and accountability as clearly stated in its Environmental Policy of 1999. Throughout fiscal year 2001, EGAT's environmental operations have efficiently and effectively complied with its stringent code of environmental practice. Openness and transparency in environmental affairs enabled EGAT to confidently and efficiently cope with environmental challenges and public issues during the year.

In addition to the impact prevention, pollution control, and compliance with environmental quality monitoring, which continued to be EGAT's overriding environmental mission, EGAT has also given strong continuous support to the development of environmental quality and the quality of life, particularly of those communities in the vicinity of EGAT's operations. Emphasis has been on sustainable community development approaches emphasizing the build-up of community strength, efficient management of local resources, and community self-sufficiency. In 2001, a new participatory approach of community development planning was introduced to the community, with a pilot campaign being launched for the community in the vicinity of EGAT's Krabi power project. The so-called Appreciation Influence Control or A-I-C Process is a participatory process through which the community and stakeholders will participate, influence and share control over the decisions and shapes of community development projects as well as project selection and management. In addition to building up community potential and strength, the A-I-C process has also led to constructive collaboration and the improved relationship between EGAT and the local community.



Also, a new paradigm of project development focussing on community and stakeholder participation was initiated in 2001. Following the Cabinet's approval for EGAT to develop indigenous lignite resources for electricity generation, site explorations and community consultation programmes have simultaneously been conducted for Saba Yoi mine development project in southern Songkhla province and for Wiang Haeng mine development project in northern Chiang Mai province. A variety of participatory activities have been organized to urge the local people to engage in participatory planning and decision-making of project development. EGAT is of the view that any natural resource development has to be primarily decided on a basis of benefits and satisfaction of the local people. The environmental works of both mine development projects exemplify EGAT's fully integrated development projects with complete environmental impact assessment covering all environmental and social dimensions and with community and stakeholder involvement in all steps through the project development.

With regard to best practice environmental management, in addition to six of its power plants that have earlier put in place a standardized ISO 14001 environmental management system (EMS), EGAT's Mae Moh lignite mine and six substations, namely

Bang Pa-In 2, Chiang Mai 2, Ratchadaphisek, Tha Lan 3, Nakhon Ratchasima 2 and Phuket 2 substations were certified to ISO 14001 international standard in 2001. EGAT's dams and hydropower plants led by Bhumibol dam also started to apply for the system certification during the year. These efforts which have been expanding organizationwide have confirmed EGAT's commitment to safeguarding the environment and minimizing impacts caused by its operations and activities. The standardized EMS achievements have not only created pride and confidence to those certified units themselves, but also strengthened society and community trust and confidence in EGAT's operations.

The following are reports of EGAT's environmental operations which were carried out in strict compliance with legislation and relevant environmental standards and regulations as well as EGAT's responses to environmental disputes in 2001.

Environmental Impact Prevention and Mitigation

Environmental impact assessment (EIA) reports for four projects, namely Surat Thani combined cycle power project, Lan Krabue power unit 11, the Oil Transfer Jetty for Krabi power project and the Fuel Oil



Supply System for Krabi power project, were approved by the National Environment Board in 2001. Impact prevention and mitigation as well as monitoring measures for these projects have been and will be rigorously implemented as prescribed in the reports. In addition, EGAT also completed in 2001 an EIA report for South Bangkok thermal units 1 - 5 repowering project, which has presently been submitted for further approval. Meanwhile, following the delayed operation schedule of Lam Takhong pumped storage units 1 - 2 from 2000 to 2001, aquatic ecology and fishery studies of Lam Takhong reservoir have been extended to correspond with the new operating schedule. Assessment of the impact from pumping-discharge operations is necessary for the conclusion of the study which, when completed, will significantly contribute to the formulation of the plant operating guidelines that will cause the least impact on the ecology system of water resources.

Environmental Monitoring

Environmental quality monitoring has regularly been conducted for all projects under construction which, in 2001, included three projects, namely Krabi thermal power project, a 230 kV transmission line project for Lam Takhong power plant, and Lan Krabue power plant unit 11. Monitoring results of these projects have been reported to the Office of Environmental Policy and Planning every six months. The continual environmental monitoring showed that the construction of these projects caused neither significant impact nor change on the environment and the quality of life of the surrounding community.

With regard to hydropower project construction, implementation of environmental impact mitigation plan for Lam Takhong pumped storage project was completed in 2001. This included mitigative measures to prevent adverse impacts caused by construction activities, reclamation of used land and development of quality of life of the community and villagers residing in the project vicinity.



Lam Takhong pumped storage project represents a typical participatory development project which involves all parties concerned, i.e. central and local administrations and, particularly, affected people and communities, thus enabling the optimization of water resources of the reservoirs.

The community of Lam Takhong reservoir now enjoy a higher living standard as a result of EGAT's community's quality of life development programmes which also include a reforestation programme covering 7,685 rai of forest planting in the watershed areas of Khao Tian - Khao Khuen Lan national reserved forest area; fishery development programme with an average annual release of 6 million fry and baby freshwater prawns into the reservoir since 1995 and creating over 11.50 million baht of income to villagers in 2001; and a reclamation programme under which dumping areas at the rim of reservoir were reclaimed and developed into a new roadside public park named "Suan Thao Suranaree" which is beautifully located along Friendship Highway and will serve its sustainable purposes to the local communities as well as the people travelling on this northeastern route.

Through fiscal year 2001, according to the regular environmental quality monitoring of all power plants and associated facilities, there was no report of adverse environmental impact or change caused by EGAT's operations and activities. The environmental performance of all power and associated facilities



have completely complied with relevant environmental legislation and regulatory standards such as gas emission control, noise control, water quality control, waste control and management, and etc. Moreover, the ISO 14001 EMS which is regularly reviewed and audited is a testimony to EGAT's efficient and accountable environmental management.

All power plants, substations and Mae Moh mine that have already been certified to ISO 14001 EMS, have pursued similar environmental directions and goals which focus on:

- Pollution prevention and control in compliance with relevant environmental legislation and regulatory standards
- Conservation and efficient use of energy and water resources
- Readiness to cope with environmental crisis or incident, and
- Strengthening staff commitment to their social and environmental responsibilities.

Environmental management practice of these power plants and facilities mainly involves the following issues:

Pollution Prevention and Control

- Waste water quality control
- Chemical spillage control
- Oil spillage and leakage
- Discharge cooling water temperature control
- Gas emission control
- Noise control
- Solid Waste and hazardous material management

Conservation of Natural Resources

- Water conservation measures
- Energy conservation measures
- Control of fuel and power losses in production process
- Reuse of water discharged from power plants for other activities, i.e. fire fighting, plant watering, water spraying for dust control, etc.



Corrective Responses to the Environmental and Community Problems

Fishery Resources Development for the Mun River Project Demands for the closure of the operation of Pak Mun dam to return the river to the nature remained a chronic incident in 2001. Major issues of the demands centred on impacts on fishery resources allegedly caused by the changing environment of the Mun river after the construction of the dam. The government appointed a Steering Committee representing various organizations and agencies concerned to conduct researches on fishery resources and ecological restoration of the Mun river. By the Cabinet's resolution, EGAT was commanded to open all rolling gates of Pak Mun dam, initially for a period of four months from May through August 2001, and later extended to a one full year period through June 2002, to enable fish spawning upstream of the dam to pave way for research purposes.

Since the construction of the dam in 1990, EGAT has continuously implemented a series of quality of life and environmental quality development programmes in the vicinity of Pak Mun dam. These included:

- Construction of fish ladder to enable fishes in the Mekong river to migrate upstream and have spawning grounds in the Mun river
- Continual releases of fry and young freshwater prawn in the Mun river
- Occupational promotion including cage-culture fish farming to the local people living along the riverbanks.

In addition, pending the conclusion of the researches by experts and academics, EGAT had prepared a five-year master plan for the improvement of fishery resources in the Mun river with an objective to increase income for fish farmers along the Mun river, from Warin Chamrab district down to the river mouth. Under the plan, one million fry and ten million freshwater prawns will be released into the river with a view to increasing annual fishery production by 1,000 tonnes. Fish farmers are estimated to earn a monthly income of 10,000 baht/household by selling fry and baby prawns to EGAT for later release in the Mun river. This project will enable the local people to earn stable income from fish nursery, shrimp breeding



and fish catch. EGAT also assigned Thailand Institute of Scientific and Technological Research (TISTR) to conduct a research on the community's socio-economic and environmental changes and to prepare action plans for sustainable development of quality of life of the Lower Mun Basin community. The study will be completed in 2002.

Complaints of Orange Growers in 5 Central Provinces

The incident occurred during February - August 2001 when orange growers in five central provinces including Pathum Thani, Saraburi, Ayutthaya, Nakhon Nayok, and Prachin Buri provinces staged protests alleging that gas emissions from EGAT's Wang Noi combined cycle power plant caused the blight of their orchards and damaging orange produce. A committee was set up by the government to investigate impacts caused by gas emissions and water discharge from the Wang Noi power plant. The allegations were found to be untrue as the findings of the investigation committee confirmed that quality of gas emissions and water discharged from the natural gas-fired Wang Noi power plant was very much better than the regulatory standards of the Ministry of Science, Technology and Environment and the Royal

Irrigation Department respectively. The committee's report concluded that the orange blight problem was not caused by the operation of Wang Noi power plant.

Following the findings, related government agencies were designated to prepare a rehabilitation plan to solve the orange growers' problem. In the meantime, EGAT launched a research project to study appropriate management of orange plantation for the central basin areas. The three-year research which started in November 2001 also included a test plot of tangerine growing in the compound of Wang Noi power plant. The research will build up community confidence and serve as a testimony to the green operation of Wang Noi power plant.



Community Problem Resolutions at Mae Moh

With regard to Mae Moh villagers' repeated calls to be compensated and provided with a new resettlement site out of Mae Moh mine and power plant vicinity for reason of air pollution, EGAT has made all the efforts to reassure the people that the air pollution in Mae Moh area was successfully mitigated. Ambient air quality has significantly improved and fully complied with regulatory standards, with regular audits strictly performed by regulatory bodies including Pollution Control Department and Department of Health.

In addition, both Mae Moh mine and Mae Moh power plant have already put in place an internationally standardized environmental management system (EMS) which has been certified to ISO 14001 standard by Management System Certification Institute (Thailand) - MASCI since July and April 2001 respectively. With the best practice environmental management system, EGAT is confident that Mae Moh mine and power plant will further operate in an environmentally and socially responsible manner. During the year, a consulting group and an ad hoc working group have been set up to improve communication with the community and build up trust and partnership for sustainable development of quality of life of the Mae Moh community.



Collaborations with Environmental Organizations and Agencies

As a founding member of Thailand Business Council for Sustainable Development (TBCSD), EGAT has continuously supported and participated in a variety of the council's activities as well as training programmes arranged to improve the environmental management efficiency of its members. Established in 1993, TBCSD is a non-profit organization to promote sustainable development for environmental protection, consisting of members from over 40 organizations and agencies both in government and private sectors, with Thailand Environment Institute (TEI) providing Secretariat support for the council.

As a partner of the E7 Group, EGAT has closely collaborated and participated in various activities of the Group in cooperative effort to reduce the emission of greenhouse gases under the Kyoto Protocol. In its part, EGAT has continuously implemented a demand side management programme to promote among

end users the efficient use of electricity and energy conservation. On the supply side management, modern power technology has been adopted to increase operating efficiency of the power plants. Both approaches are considered by power utilities worldwide as concrete and effective practices which help reduce greenhouse gas emissions.

The E7 Group consists of nine of the world's leading electricity companies from G7 countries, namely RWE AG of Germany, Electricite de France, ENEL SpA of Italy, Scottish Power of UK, Ontario Power Generation and Hydro-Quebec of Canada, Kansai Electric Power Company and Tokyo Electric Power Company of Japan, and American Electric Power of the USA. In 2001, the E7 Group invited partner utilities including EGAT to a concurrent closed workshop to discuss their cooperative effort and to examine possible recommendations for the practical implementation of the Clean Development Mechanism (CDM) which will contribute to sustainable reductions of global greenhouse gases emissions.

SOCIAL RESPONSIBILITY

Aware that its operations and activities are closely related to community, their way of life and the environment, EGAT is fully committed to its social responsibility, being a good corporate citizen and doing its utmost to help develop quality of life of the community and society when- and wherever possible.

Since establishment in 1969, EGAT has been fulfilling its social responsibility through a variety of social programmes, which have contributed to the better quality of life of the community. EGAT and its people organize, support or participate in various community development programmes in all provinces where it operates. These programmes range from construction of infrastructure and public facilities, educational and sport promotion, cultural and religious promotion, health promotion to occupational training. Apart from our effort to better the lives of communities, we occasionally give donations to charity organizations, needy people and victims of natural disasters to help alleviate their plight.

Apart from the above activities which are carried out regularly, EGAT's major social services in 2001 also included the construction of a new public park "Suan Thao Suranaree" in dumping areas alongside Lam Takhong reservoir in Nakhon Ratchasima province. Once the dumping areas of Lam Takhong pumped storage project, the areas have been reclaimed and developed into a beautiful roadside public park on Friendship Highway.



Lignite fly ash is a by-product of lignite burning from Mae Moh power plant which has been engineering tested for its solid and durable property as a high quality construction material. Over recent years, EGAT has supplied masses of lignite fly ash, free of charge, to a number of government agencies for use in construction and for other purposes. In 2001, EGAT donated approximately 0.7 million tonnes of lignite fly ash, worth around 49 million baht to be used as an ingredient of concrete substance, for the construction of the royally initiated Khlong Tha Dan irrigation dam project in Nakhon Nayok province.

EGAT has also collaborated with Chitralada Royal Development Project in conducting a research and development of biodiesel using palm oil for diesel engines especially used by farmers in agricultural and agro-industrial industries in rural areas. The research, which follows the royal concept of "self-sufficient economy" will contribute to practical approaches in using biodiesel from the locally available palm oil to replace the high priced diesel oil fuel and will also help reduce production cost of agricultural sector.

Support for education is an important part of EGAT's social responsibilities as it believes that the future of the country relies on education particularly of Thai children. Each year, EGAT provides a wide range of educational promotion programmes to students in all parts of the country. A large number of scholarships have been granted for needy students of all levels. In addition, EGAT also organizes a Youth Programme during every school vacation for secondary school students in various provinces with an aim to inculcate ethical values into Thai youth.





For younger students, a Green Learning Room Programme has been prepared and handed over to hundreds of schools countrywide. The learning room equipped with attractive teaching aids is aimed at instilling an attitude and a habit of energy conservation into Thai children from an early age. EGAT's Green Learning Room was awarded the second prize of the Energy Globe Awards 2001 in the category of Learning for the Future.



EVENTS



Her Majesty the Queen graciously paid a royal visit to Sirikit Dam in Uttaradit province during March 7 - 9, 2001. During her stay, Her Majesty also made a working visit to follow up the royally-initiated Cage Culture Fish Farming Project in the community of Ban Huai Charoen in the vicinity of Sirikit Dam. Upon the royal visit to the dam, Her Majesty was welcome by EGAT Management led by Governor Vitaya Kotcharug.



H.R.H. Princess Galyani Vadhana Krom Luang Naradhiwas Rajanagarind unveiled a statue of the Princess Mother in the compound of Time Memorial Park at Srinagarind Dam in Kanchanaburi province on January 22, 2001. The statue was installed by EGAT to commemorate the centenary birthday anniversary of the late Princess Mother.



H.E. the Privy Councilor, Air Vice Marshal Kamthon Sindhvananda (right) presided, upon royal command, over a handover ceremony of community forest at the office of Hoop Krapong Royal Development Project, on November 15, 2000. As part of EGAT's reforestation programme, EGAT had implemented the forest plantation in the 240 rai degraded land in the compound of the Royal Project for Land Development at Ban Hoop Krapong and Don Khun Huai in Phetchaburi province. After four years of reforestation and maintenance, EGAT handed over the burgeoning forest trees to the Royal Project. The reforested area will serve as community forest for the local people.



EGAT by Governor Vitaya Kotcharug and the Managing Director of Ratchaburi Electricity Generating Holding Public Company Limited (RATCH) Boonchoo Direksathapon signed a Memorandum of Intention for the sale of Ratchaburi power plant assets to Ratchaburi Electricity Generating Co., Ltd. at the Regent Hotel, Bangkok on October 9, 2000.



EGAT's Mae Moh Lignite Mine has been certified to ISO 14001 for its accredited environmental management system (EMS) by the Management System Certification Institute (Thailand) - MASCI. The certificate awarding ceremony was held on June 28, 2001 and presided over by H.E. Suriya Jungrungreangkit, Minister of Industry (right).



EGAT by Governor Vitaya Kotcharug entered into the Agreement for a Japanese Yen 14,850,000,000 equivalent five-year dual currency term loan facility with the Sumitomo Mitsui Bank Corporation Group at Conrad International Hotel, Hong Kong SAR on September 17, 2001. The new loan agreement which was guaranteed by the Ministry of Finance was made to refinance EGAT's existing loan facilities.



The Thai Power Cooperation Committee (TPCC) chaired by EGAT Governor Vitaya Kotcharug and the Cambodian Power Cooperation Committee (CPCC) chaired by H.E. Ith Praing, Secretary of State of Ministry of Industry, Mines and Energy (fourth from right), held a kick-off meeting on March 23, 2001 to discuss the potential of power export from Thailand to the northwestern part of Cambodia. The governments of Thailand and Cambodia had earlier entered into an agreement on the power sector cooperation programme, expressing their intention to cooperate on the power purchase between both countries.



EGAT awarded a contract to Mitsubishi Corporation for the five-year services for gas turbine hot parts supply and management for EGAT's four gas turbine power plants, namely Nam Phong, Nong Chok, Lan Krabue and Surat Thani power plants. The contract signed at EGAT Headquarters on March 28, 2001 will save over 500 million baht of spare parts inventory for EGAT.



EGAT hosted the ASEAN Power Utilities/Authorities Cooperation Project No. 10 - Combined Cycle Power Plant at Bang Pakong Training Centre, Chachoengsao province on December 13, 2000.



New Bangkok International Airport Company by its President Somchet Tinnapong (second from right) entered into an agreement with EGAT and Petroleum Public Company Limited for the District Cooling System and Power Plant (DCS PP) Project at Central Grand Plaza Hotel, Bangkok on December 15, 2000. Under this joint project between EGAT and PTT, a natural gas-fuelled power plant will be developed to supply electricity and a water cooling system for office buildings of the new Suvarnabhumi international airport to open in 2004.

KEY STATISTICAL DATA

1
Maximum Power Demand

2
System Peak Generation Requirement

3
Gross Energy Generation and Purchase

4
Thailand's System Installed Capacity

5
Transmission Line Length

6
Transformer Capacity

7
Substation

8
Fuel Consumption

9
Fuel Expenditure

10
Reservoir Operation

11
Energy Sales

12
Average Energy Sales Price

13
Work Force

14
EGAT and Private Power Plants

TABLE 1 *MAXIMUM POWER DEMAND*

Customer	Fiscal Year		Increase (Decrease) Percentage
	2001 MW	2000 MW	
Provincial Electricity Authority (PEA)	11,214.45	10,507.74	6.73
Metropolitan Electricity Authority (MEA)	6,228.58	5,799.70	7.39
Direct customers	317.29	295.50	7.37
Electricite du Laos (EDL)	57.79	37.67	53.41
Standby power supply *	146.56	194.72	(24.73)
Others	92.73	95.46	(2.86)

Coincident maximum power demand increased 8.30 per cent from 13,300.60 MW in 2000 to 14,404.31 MW in 2001.

* The power supplied on request to those SPPs and IPPs in case of their plant outages due to maintenance or other failures.

TABLE 2 *SYSTEM PEAK GENERATION REQUIREMENT*

Source	Fiscal Year 2001 (April 23, 2001)		Fiscal Year 2000 (April 5, 2000)		Increase (Decrease) Percentage
	MW	Percentage	MW	Percentage	
EGAT's power plants					
Thermal	4,301.90	26.68	5,967.90	40.00	(27.92)
Combined cycle	3,724.80	23.10	3,620.00	24.27	2.90
Hydro	1,742.40	10.80	1,673.90	11.22	4.09
Gas turbine	110.30	0.68	116.30	0.78	(5.16)
Subtotal	9,879.40	61.26	11,378.10	76.27	(13.17)
Purchase	6,247.00	38.74	3,540.20	23.73	76.46
Grand Total	16,126.40	100.00	14,918.30	100.00	(8.10)

TABLE 3

GROSS ENERGY GENERATION AND PURCHASE

Source	Fiscal Year 2001		Fiscal Year 2000		Increase (Decrease) Percentage
	Million kWh	Percentage	Million kWh	Percentage	
EGAT's power plants					
Natural gas	34,871.18	33.80	35,804.64	37.00	(2.61)
Lignite	17,306.58	16.78	15,450.51	15.96	12.01
Fuel oil	3,110.61	3.01	11,453.75	11.84	(72.84)
Hydro	6,310.55	6.12	5,296.03	5.47	19.16
Diesel oil	155.23	0.15	155.69	0.16	(0.30)
Renewable energy	1.74	-	1.82	-	(4.40)
Subtotal	61,755.89	59.86	68,162.44	70.43	(9.40)
Purchase from					
Domestic private power plants					
EGCO					
- REGCO	6,352.25	6.16	8,245.57	8.52	(22.96)
- KEGCO	5,831.74	5.65	5,749.71	5.94	1.43
IPT	3,723.62	3.61	772.49	0.80	382.03
TECO	4,273.03	4.14	1,424.29	1.47	200.01
RGCO	6,915.38	6.70	-	-	-
SPPs	11,389.29	11.04	9,408.82	9.72	21.05
DEDP	30.10	0.03	26.80	0.03	12.31
Subtotal	38,515.41	37.33	25,627.68	26.48	50.29
Neighbouring countries					
Laos	2,885.24	2.80	2,973.48	3.07	(2.97)
Malaysia	8.66	0.01	17.12	0.02	(49.42)
Subtotal	2,893.90	2.81	2,990.60	3.09	(3.23)
Total Purchase	41,409.31	40.14	28,618.28	29.57	44.70
Grand Total	103,165.20	100.00	96,780.72	100.00	6.60

EGCO Electricity Generating Public Company Limited

REGCO Rayong Electricity Generating Co., Ltd.

KEGCO Khanom Electricity Generating Co., Ltd.

IPT Independent Power (Thailand) Co., Ltd.

TECO Tri Energy Co., Ltd.

RGCO Ratchaburi Generating Co., Ltd.

SPPs Small power producers

DEDP Department of Energy Development and Promotion

TABLE 4

THAILAND'S SYSTEM INSTALLED CAPACITY

Source	Fiscal Year 2001		Fiscal Year 2000		Increase (Decrease) Percentage
	MW	Percentage	MW	Percentage	
EGAT's power plants					
Thermal	6,255.00	28.39	7,962.50	35.76	(21.44)
Combined cycle	5,074.60	23.03	5,534.60	24.85	(8.31)
Hydro	2,886.27	13.10	2,879.97	12.93	0.22
Gas turbine	778.00	3.53	656.00	2.95	18.60
Diesel	6.00	0.03	6.00	0.03	-
Renewable energy	0.53	-	0.53	-	-
Subtotal	15,000.40	68.08	17,039.60	76.52	(11.97)
Purchase from					
Domestic private power plants					
EGCO					
- REGCO	1,232.00	5.59	1,232.00	5.53	-
- KEGCO	824.00	3.74	824.00	3.70	-
IPT	700.00	3.18	700.00	3.14	-
TECO	700.00	3.18	700.00	3.14	-
RGCO	1,470.00	6.67	-	-	-
SPPs	1,768.40	8.02	1,433.40	6.44	23.37
Subtotal	6,694.40	30.38	4,889.40	21.96	36.92
Neighbouring power plants					
Laos					
- Theun-Hinboun	214.00	0.97	214.00	0.96	-
- Houay Ho	126.00	0.57	126.00	0.57	-
Subtotal	340.00	1.54	340.00	1.53	-
Total Purchase	7,034.40	31.92	5,229.40	23.48	34.52
Grand Total	22,034.80	100.00	22,269.00	100.00	(1.05)

EGCO Electricity Generating Public Company Limited

KEGCO Khanom Electricity Generating Co., Ltd.

TECO Tri Energy Co., Ltd.

SPPs Small power producers

REGCO Rayong Electricity Generating Co., Ltd.

IPT Independent Power (Thailand) Co., Ltd.

RGCO Ratchaburi Generating Co., Ltd.

DEDP Department of Energy Development and Promotion

TABLE 5 *TRANSMISSION LINE LENGTH*

Voltage Level (kV)	Fiscal Year 2001		Fiscal Year 2000		Increase Percentage
	Circuit-kilometres	Percentage	Circuit-kilometres	Percentage	
500	2,132.05	7.89	2,132.05	8.09	-
230	10,907.37	40.34	10,444.71	39.64	4.43
132	8.70	0.03	8.70	0.03	-
115	13,939.31	51.55	13,712.00	52.04	1.66
69	52.07	0.19	52.07	0.20	-
Total	27,039.50	100.00	26,349.53	100.00	2.62

TABLE 6 *TRANSFORMER CAPACITY*

Voltage Level (kV)	Fiscal Year 2001		Fiscal Year 2000		Increase Percentage
	kVA	Percentage	kVA	Percentage	
500	8,850,000	15.26	8,850,000	15.83	-
230	34,826,680	60.06	33,560,020	60.03	3.77
132	133,400	0.23	133,400	0.24	-
115	14,059,240	24.25	13,243,400	23.69	6.16
69	114,500	0.20	114,500	0.21	-
22	2,000	-	2,000	-	-
Total	57,985,820	100.00	55,903,320	100.00	3.73

TABLE 7 *SUBSTATION*

Voltage Level (kV)	Fiscal Year 2001		Fiscal Year 2000		Increase Percentage
	Number of Substations	Percentage	Number of Substations	Percentage	
500	7	3.61	7	3.63	-
230	54	27.83	53	27.46	1.89
132	1	0.52	1	0.52	-
115	130	67.01	130	67.35	-
69	2	1.03	2	1.04	-
Total	194	100.00	193	100.00	0.52

TABLE 8 *FUEL CONSUMPTION*

Type of Fuel	Fiscal Year 2001	Fiscal Year 2000	Increase (Decrease) Percentage
Natural gas (million cubic feet)	345,314.67	327,652.41	5.39
Fuel oil (million litres)	781.56	2,727.30	(71.34)
Lignite (million tonnes)	15.24	13.97	9.09
Diesel oil (million litres)	45.99	46.78	(1.69)



TABLE 9 *FUEL EXPENDITURE*

Type of Fuel	Fiscal Year 2001		Fiscal Year 2000		Increase (Decrease) Percentage
	Million Baht	Percentage	Million Baht	Percentage	
Natural gas	41,975.47	77.41	32,817.41	58.57	27.91
Fuel oil	5,204.38	9.60	17,586.13	31.39	(70.41)
Lignite	6,463.93	11.92	5,199.80	9.28	24.31
Diesel oil	580.48	1.07	423.56	0.76	37.05
Total	54,224.26	100.00	56,026.90	100.00	(3.22)

TABLE 10 *RESERVOIR OPERATION*

Operation	Fiscal Year 2001	Fiscal Year 2000	Increase (Decrease) Percentage
Reservoir capacity (million cubic metres)	62,330	62,330	-
Total storage at fiscal year end (million cubic metres)	54,963	53,318	3.09
Total water inflow (million cubic metres)	35,632	41,186	(13.49)
Total water release (million cubic metres)	42,437	35,265	20.34
- Passed through generators	35,287	31,274	12.83
- Extra release without passing through generators	656	1,218	(46.14)
- for additional irrigation	370	409	(9.54)
- for other purposes	286	809	(64.65)
- Evaporation and losses	2,919	2,773	5.27
Energy generation (million kWh)	6,311	5,296	19.17
Water rate (cubic metres/ kWh)	5.59	5.19	7.71
Pumped to upper reservoirs (million cubic metres)	625	941	(33.58)

TABLE 11

ENERGY SALES

Customer	Fiscal Year 2001		Fiscal Year 2000		Increase (Decrease) Percentage
	Million kWh	Percentage	Million kWh	Percentage	
PEA	60,303.38	61.90	56,093.01	61.83	7.51
MEA	35,327.39	36.27	32,888.80	36.25	7.41
Direct customers	1,333.11	1.37	1,225.94	1.35	8.74
Standby power supply	24.15	0.02	53.26	0.06	(54.66)
Electricite du Laos (EDL)	165.66	0.17	145.96	0.16	13.50
TNB (Malaysia)	5.36	0.01	0.72	-	644.44
Other minor customers	253.03	0.26	317.73	0.35	(20.36)
Total	97,412.08	100.00	90,725.42	100.00	7.37



TABLE 12 *AVERAGE ENERGY SALES PRICE*

Customer	Fiscal Year 2001		Fiscal Year 2000		Increase (Decrease) Percentage
	Baht/ kWh		Baht/ kWh		
PEA	198.67		158.36		25.45
MEA	187.87		198.23		(5.23)
Direct customers	190.64		172.45		10.55
Standby power supply	454.63		424.29		7.15
Electricite du Laos (EDL)	139.19		135.22		2.94
TNB (Malaysia)	158.00		162.48		(2.76)
Other minor customers	129.82		126.29		2.80
Overall Average *	194.42		173.01		12.38

* An overall average price included revenue from Automatic Adjustment Mechanism (F.) charge but excluded VAT and other revenues.

TABLE 13 *WORK FORCE*

Education	Fiscal Year 2001		Fiscal Year 2000		Increase (Decrease) Percentage
	Number of Employees	Percentage	Number of Employees	Percentage	
University degree	6,967	24.41	6,798	23.30	2.49
Diploma of vocational education	6,898	24.17	7,042	24.14	(2.04)
Certificate of vocational education	5,722	20.04	5,734	19.65	(0.21)
Others	8,956	31.38	9,601	32.91	(6.72)
Total	28,543	100.00	29,175	100.00	(2.17)

TABLE 14

EGAT AND PRIVATE POWER PLANTS (as at September 30, 2001)

Power Plant	Location (Province)	Number of Unit(s) x (MW)	Total Capacity (MW)
Thermal -Steam Turbine			
1. Mae Moh	Lampang	[3 x 75] + [4 x 150] + [6 x 300]	2,625
2. Bang Pakong	Chachoengsao	[2 x 550] + [2 x 600]	2,300
3. South Bangkok	Samut Prakan	[2 x 200] + [3 x 310]	1,330
Subtotal			6,255
Gas and Steam Turbine Combined Cycle			
1. Wang Noi	Ayutthaya		2,031
Blocks 1 - 2		2 x [2 x 223 + 1 x 205]	1,302
Block 3		1 x [2 x 236 + 1 x 257]	729
2. Bang Pakong	Chachoengsao		1,374.6
Blocks 1 - 2		2 x [4 x 60.7 + 1 x 137.5]	760.6
Blocks 3 - 4		2 x [2 x 104 + 1 x 99]	614
3. South Bangkok	Samut Prakan		959
Block 1		1 x [2 x 110 + 1 x 115]	335
Block 2		1 x [2 x 202 + 1 x 220]	624
4. Nam Phong	Khon Kaen		710
Blocks 1 - 2		2 x [2 x 121 + 1 x 113]	710
Subtotal			5,074.6
Gas Turbine			
1. Nong Chok	Bangkok	3 x 122	366
2. Lan Krabue	Kamphaeng Phet	[4 x 14] + [2 x 16] + [4 x 20]	168
3. Surat Thani	Surat Thani	2 x 122	244
Subtotal			778
Diesel			
1. Mae Hong Son	Mae Hong Son	6 x 1	6
Subtotal			6
Hydro			
1. Bhumibol	Tak	[6 x 76.3] + [1 x 115] + [1 x 171]	743.8
2. Srinagarind	Kanchanaburi	[3 x 120] + [2 x 180]	720
3. Sirikit	Uttaradit	4 x 125	500
4. Vajiralongkorn*	Kanchanaburi	3 x 100	300
5. Rajjaprabha	Surat Thani	3 x 80	240
6. Pak Mun	Ubon Ratchathani	4 x 34	136
7. Bang Lang	Yala	3 x 24	72
8. Chulabhorn	Chaiyaphum	2 x 20	40
9. Tha Thung Na	Kanchanaburi	2 x 19	38
10. Sirindhorn	Ubon Ratchathani	3 x 12	36

Power Plant	Location (Province)	Number of Unit(s) x (MW)	Total Capacity (MW)
11. Ubol Ratana	Khon Kaen	3 x 8.4	25.2
12. Kaeng Krachan	Phetchaburi	1 x 17.5	17.5
13. Mae Ngat	Chiang Mai	2 x 4.5	9
14. Nam Pung	Sakon Nakhon	2 x 3	6
15. Ban Santi	Yala	1 x 1.275	1.275
16. Huai Kum	Chaiyaphum	1 x 1.06	1.060
17. Ban Khun Klang	Chiang Mai	2 x 0.09	0.180
18. Ban Yang	Chiang Mai	[2 x 0.056] + [1 x 0.0125]	0.125
19. Huai Kui Mang	Kanchanaburi	1 x 0.100	0.100
20. Khlong Chong Klum	Sa Kaeo	1 x 0.024	0.024
Subtotal			2,886.264
Renewable Energy Source			
1. Fang	Chiang Mai		
- Geothermal		1 x 0.300	0.300
2. Khlong Chong Klum	Sa Kaeo		
- Photovoltaics		1 x 0.020	0.020
3. Phrom Thep	Phuket		
- Photovoltaics		1 x 0.008	0.008
- Wind turbine		[1 x 0.022] + [2 x 0.010] + [1 x 0.150]	0.192
4. San Kamphaeng	Chiang Mai		
- Photovoltaics		1 x 0.014	0.014
Subtotal			0.534
Total Capacity of EGAT's Power Plants			15,000.398
Private Power Companies			
IPPs			
1. Electricity Generating Public Company Limited (EGCO)			2,056
2. Ratchaburi Electricity Generating Holding Public Company Limited (RATCH)			1,470
3. Tri Energy Co., Ltd.			700
4. Independent Power (Thailand) Co., Ltd.			700
5. Laos			
Theun-Hinboun hydropower plant			214
Houay Ho hydropower plant			126
SPPs			
27 small power producers (SPPs) - firm energy			1,768.400
Total Capacity of Private Power Plants			7,034.400
Grand Total			22,034.798

* With a royal permission, Khao Laem dam has been renamed Vajiralongkorn dam since July 13, 2001.

FINANCIAL REPORT



Electricity Generating Authority of Thailand

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No. EGAT 48/ 2002

TO WHOM IT MAY CONCERN

This is to certify that the English version of the Report of Independent Auditor together with the Financial Statements for the years ended September 30, 2001 and 2000 of the Electricity Generating Authority of Thailand were translated by the Electricity Generating Authority of Thailand from that of the Thai version.

Issued on March 26, 2002

ELECTRICITY GENERATING AUTHORITY OF THAILAND

(Mrs. Angoon Kamolyabutr)
Deputy Governor - Account and Finance
Acting on behalf of Governor

Controller Division
Tel. 0 2436 5600
Fax 0 2424 0255

(TRANSLATION)
REPORT OF INDEPENDENT AUDITOR

To The Board of Directors,
Electricity Generating Authority of Thailand

1. The State Audit Office has audited the balance sheets as at September 30, 2001 and 2000, and the related statements of income, retained earnings and cash flows for the years then ended of Electricity Generating Authority of Thailand. The financial statements are the responsibility of the Electricity Generating Authority of Thailand's management as to their correctness and completeness of the information. The State Audit Office responsibility is to express an opinion on these financial statements based on the State Audit Office's audits.

2. The State Audit Office conducted the audits in accordance with generally accepted auditing standards. Those standards require that the State Audit Office plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. The State Audit Office believes that the audits provide a reasonable basis for the opinion.

3. As disclosed in the accompanying notes 2.14 and 4.22, Electricity Generating Authority of Thailand created the specific purpose Mine Reclamation Sinking Fund and contributed into the Fund, for the years 2001 and 2000, Baht 111.70 million and Baht 95.08 million respectively which are recorded as expenses in the statements of income. The amounts charged to the Fund are not actual expenses incurred and cannot be estimated reasonably in each year. Electricity Generating Authority of Thailand has not consolidated the revenue and expenses of the Fund in the statements of income which is not in conformity with the generally accepted accounting principles. This has resulted in the net income for the year ended September 30, 2001 and 2000 being lower by Baht 89.89 million and Baht 104.41 million respectively.

4. In the opinion of the State Audit Office, except for the matter referred to in paragraph 3, the aforementioned financial statements present fairly the financial positions of Electricity Generating Authority of Thailand as at September 30, 2001 and 2000, the results of its operations and cash flows for the years then ended in conformity with generally accepted accounting principles.

5. The State Audit Office draws the Board of Directors' attention to the accompanying Note 3 relating to change in accounting policy and accounting estimate.

(Signed) Lakhana Bunyamanonukul

(Lakhana Bunyamanonukul)

(Signed) Ratchanibun Huansuriya

(Ratchanibun Huansuriya)

Auditor-in-Charge

February 15, 2002

Electricity Generating Authority of Thailand
BALANCE SHEETS
as at September 30, 2001 and 2000

ASSETS	Accounting Policy	Supplementary Information	2001 Baht	2000 Baht (Restated)
CURRENT ASSETS				
Cash and Bank Balances		4.1	24,734,028,253	35,263,915,536
Trade Accounts Receivable - Net	2.3	4.2	29,351,617,638	31,523,634,883
Other Accounts Receivable - Net	2.3	4.3	1,108,111,836	1,218,843,212
Materials and Supplies - Net	2.4	4.4	7,945,914,096	7,436,161,104
Other Current Assets			2,055,942,613	2,284,581,154
Total Current Assets			<u>65,195,614,436</u>	<u>77,727,135,889</u>
INVESTMENT IN SUBSIDIARY AND ASSOCIATED COMPANIES				
	2.5	4.5	<u>12,939,448,016</u>	<u>13,051,395,593</u>
FIXED ASSETS				
Land, Buildings, Plant and Equipment - Net	2.6	4.6	218,833,902,754	213,452,353,660
Works under Construction		4.7	64,778,856,563	90,916,291,928
Total Fixed Assets			<u>283,612,759,317</u>	<u>304,368,645,588</u>
INTANGIBLE ASSETS				
Deferred Expenditures	2.7	4.8	21,475,624,083	22,054,427,719
Royalty on Real Property Services - Net	2.8	4.9	297,855,638	304,192,992
Total Intangible Assets			<u>21,773,479,721</u>	<u>22,358,620,711</u>
OTHER ASSETS				
Sinking Fund for Redemption of Long Term Debts	2.9	4.10	25,774,626,361	16,566,985,620
Loan to the Cooperatives Promotion Department		4.11	34,762,684	34,762,684
Total Other Assets			<u>25,809,389,045</u>	<u>16,601,748,304</u>
TOTAL ASSETS			<u>409,330,690,535</u>	<u>434,107,546,085</u>

The accompanying notes are an integral part of these financial statements.

Electricity Generating Authority of Thailand
BALANCE SHEETS
as at September 30, 2001 and 2000

LIABILITIES AND EQUITY	Accounting Policy	Supplementary Information	2001 Baht	2000 Baht (Restated)
CURRENT LIABILITIES				
Short Term Loans	2.10	4.12	7,802,065,941	2,356,120,774
Electricity Purchased Payable		4.13	14,405,036,558	9,305,505,198
Accrued Remittance to the Ministry of Finance		4.14	7,514,000,000	19,582,000,000
Other Accounts Payable			21,823,332,264	23,705,433,952
Current Portion of Long Term Debts	2.10	4.16	27,825,563,955	28,975,277,208
Accrued Borrowing Costs			3,846,231,678	4,625,554,790
Other Current Liabilities		4.15	6,204,171,994	4,738,693,479
Total Current Liabilities			<u>89,420,402,390</u>	<u>93,288,585,401</u>
LONG-TERM LIABILITIES	2.10	4.16	<u>183,721,889,879</u>	<u>216,409,757,145</u>
OTHER LIABILITIES				
Provident Fund	2.11	4.17	22,935,046	20,743,865
Deferred Interest on Long Term Debts			8,371,800	8,706,700
Deferred Contributions	2.12	4.18	2,057,567,760	2,059,912,112
Total Other Liabilities			<u>2,088,874,606</u>	<u>2,089,362,677</u>
TOTAL LIABILITIES			<u>275,231,166,875</u>	<u>311,787,705,223</u>
EQUITY				
Contribution from the Government	2.6	4.19	10,459,079,626	10,521,412,390
Surplus from Contributions	2.6	4.20	2,907,979,729	2,827,348,508
Surplus from Royalty on Real Property Service	2.8		474,767,280	474,767,280
Retained Earnings				
Appropriated				
Capital Expenditure Appropriation			80,186,366,913	80,186,366,913
Unappropriated			28,299,961,065	16,628,465,738
Welfare Fund	2.13	4.21	256,192,450	256,192,450
Specific Purpose Funds	2.14	4.22	11,515,176,597	11,425,287,583
TOTAL EQUITY			<u>134,099,523,660</u>	<u>122,319,840,862</u>
TOTAL LIABILITIES AND EQUITY			<u>409,330,690,535</u>	<u>434,107,546,085</u>

The accompanying notes are an integral part of these financial statements.

(Signed) SOMCHAI RICHUPAN
(MR. SOMCHAI RICHUPAN)
Chairman

(Signed) VITAYA KOTCHARUG
(MR. VITAYA KOTCHARUG)
Governor

Electricity Generating Authority of Thailand
STATEMENTS OF INCOME
for the Years Ended September 30, 2001 and 2000

	Accounting Policy	Supplementary Information	2001 Baht	2000 Baht (Restated)
OPERATING REVENUES				
Electric Energy Sales	2.1		185,194,069,863	161,134,303,066
Less : Social Contributions			<u>122,329,216</u>	<u>142,643,855</u>
Total Operating Revenues			<u>185,071,740,647</u>	<u>160,991,659,211</u>
OPERATING EXPENSES				
Electricity Purchased		4.23	84,436,995,439	46,984,865,328
Fuel		4.23	54,224,254,797	56,040,799,946
Other Energy Generating Expenses			9,920,593,785	8,961,410,047
Transmission Expenses			2,918,051,228	2,719,327,434
Administrative and General Expenses			4,535,153,689	5,527,546,984
Depreciation	2.6		<u>12,348,257,151</u>	<u>11,680,433,583</u>
Total Operating Expenses			<u>168,383,306,089</u>	<u>131,914,383,322</u>
OPERATING INCOME			<u>16,688,434,558</u>	<u>29,077,275,889</u>
OTHER REVENUES				
Profit on Sale of Ratchaburi Power Plants		4.24	2,203,777,008	-
Bank Interests	2.2		1,540,371,716	1,681,160,576
Profit from Services			518,713,793	221,879,644
Gain (Losses) on Foreign Exchange		4.25	2,226,366,670	(36,722,065)
Share of Profit from Associated Companies		4.26	2,464,373,409	489,462,430
Others			<u>1,273,116,235</u>	<u>1,008,123,843</u>
Total Other Revenues			<u>10,226,718,831</u>	<u>3,363,904,428</u>
OTHER EXPENSES				
Loss (Profit) on Disposal of Assets			158,591,119	(24,183,509)
Borrowing Costs	2.15	4.27	9,983,958,929	11,113,851,484
Share of Loss from Subsidiary Company			-	43,521,053
Others		4.28	<u>549,108,014</u>	<u>496,465,792</u>
Total Other Expenses			<u>10,691,658,062</u>	<u>11,629,654,820</u>
NET INCOME		4.29	<u>16,223,495,327</u>	<u>20,811,525,497</u>

The accompanying notes are an integral part of these financial statements.

(Signed) SOMCHAI RICHUPAN
(MR. SOMCHAI RICHUPAN)
Chairman

(Signed) VITAYA KOTCHARUG
(MR. VITAYA KOTCHARUG)
Governor

Electricity Generating Authority of Thailand
STATEMENTS OF RETAINED EARNINGS
for the Years Ended September 30, 2001 and 2000

	2001	2000
	Baht	Baht
		(Restated)
UNAPPROPRIATED RETAINED EARNINGS AT BEGINNING OF YEAR	15,992,315,435	12,376,907,007
Add (Less) : Prior Year Adjustments		
Reafforestation Expenditure for Prior Years	-	(328,370,735)
Bonus to Employees Year 1999	-	(799,469,250)
	<u>15,992,315,435</u>	<u>11,249,067,022</u>
Received from Provident Fund	-	59,873,219
Appropriation to the Ministry of Finance Year 1999	-	(7,000,000,000)
Net Profit of Specific Purpose Funds Year 2000	<u>636,150,303</u>	<u>-</u>
	16,628,465,738	4,308,940,241
Additional Appropriation to the Ministry of Finance Year 2000	<u>(38,000,000)</u>	<u>-</u>
	16,590,465,738	4,308,940,241
Add : Net Income for the Year	<u>16,223,495,327</u>	<u>20,811,525,497</u>
	32,813,961,065	25,120,465,738
Less : Provision for Appropriation to the Ministry of Finance	<u>(4,514,000,000)</u>	<u>(8,492,000,000)</u>
UNAPPROPRIATED RETAINED EARNINGS AT END OF YEAR	<u>28,299,961,065</u>	<u>16,628,465,738</u>

The accompanying notes are an integral part of these financial statements.

Electricity Generating Authority of Thailand
STATEMENTS OF CASH FLOWS
for the Years Ended September 30, 2001 and 2000

	Accounting Policy	Supplementary Information	2001 Baht	2000 Baht (Restated)
CASH FLOWS FROM OPERATING ACTIVITIES				
Net income			<u>16,223,495,327</u>	<u>20,811,525,497</u>
Adjustments to reconcile net income to net cash provided by operating activities				
Operating activities				
Depreciation			13,115,353,897	12,502,787,632
Amortization			3,895,609,079	2,596,312,128
Royalty on Real Property Services			6,337,354	6,337,354
Bad and doubtful debts			99,410,472	6,071,906
Provision on materials and supplies			228,212,332	135,253,744
Share of profit from associated companies			(2,464,373,409)	(489,462,430)
Share of loss from subsidiary company			-	43,521,053
Loss (Profit) on disposal of assets			158,591,119	(24,183,509)
Profit on sale of Ratchaburi power plants			(2,203,777,008)	-
Revenue from deferred contributions			(53,834,944)	(42,044,037)
Foreign exchange (gains) losses			(1,475,986,201)	499,918,110
Decrease (Increase) in assets				
Trade accounts receivable			2,148,677,446	(6,263,284,613)
Other accounts receivable			34,660,703	306,322,731
Materials and supplies			(1,493,197,735)	(2,018,829,044)
Other current assets			(320,145,360)	(634,482,176)
Deferred charges			(2,633,936,222)	(2,878,682,536)
Loan to the Cooperatives Promotion Department			-	5,237,316
Increase (Decrease) in liabilities				
Electricity purchased payable			5,099,531,360	4,026,457,320
Other accounts payable			(897,360,722)	1,159,624,724
Accrued borrowing costs			(779,658,012)	134,618,242
Other current liabilities			(665,692,662)	1,263,958,958
Provident Fund			2,191,181	(59,102,062)
Mine Reclamation Sinking Fund			89,889,014	104,405,246
Remittance to the Ministry of Finance payable			(16,620,000,000)	(7,975,120,000)
			<u>(4,729,498,318)</u>	<u>2,405,636,057</u>
Net Cash Inflows From Operating Activities			<u>11,493,997,009</u>	<u>23,217,161,554</u>

Electricity Generating Authority of Thailand
STATEMENTS OF CASH FLOWS
for the Years Ended September 30, 2001 and 2000

	Accounting Policy	Supplementary Information	2001 Baht	2000 Baht (Restated)
CASH FLOWS FROM INVESTING ACTIVITIES				
Short term investments - Deposits at banks			1,112,827,522	2,769,924,343
Investment in subsidiary company			-	(8,700,000,000)
Dividend received			401,320,986	267,547,324
Cash on sale of common share			2,175,000,000	-
Cash on disposal of assets			163,191,622	91,589,838
Cash on sale of Power Plant			30,453,414,259	-
Capital expenditure (including interest)			(19,273,327,011)	(22,165,530,370)
Amortization of land rights			300,462,820	177,988,215
Consumers contribution			51,490,592	733,907,966
Capital contribution			80,631,220	108,303,308
Net Cash Inflows (Outflows) From Investing Activities			<u>15,465,012,010</u>	<u>(26,716,269,376)</u>
CASH FLOWS FROM FINANCING ACTIVITIES				
Increase in sinking fund for				
redemption of long term debts			(9,207,640,741)	(6,858,565,461)
Repayment of short term loans			(15,598,940,350)	(18,320,432,970)
Short term debts received			21,608,423,500	19,834,786,839
Repayment of long term debts			(41,130,015,055)	(34,339,403,227)
Long term debts received			7,952,103,866	48,785,245,781
Net Cash Inflows (Outflows) From Financing Activities			<u>(36,376,068,780)</u>	<u>9,101,630,962</u>
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS				
			(9,417,059,761)	5,602,523,140
CASH AND CASH EQUIVALENTS				
AT BEGINNING OF YEAR			<u>23,600,520,078</u>	<u>17,997,996,938</u>
CASH AND CASH EQUIVALENTS				
AT END OF YEAR	2.16	4.1	<u>14,183,460,317</u>	<u>23,600,520,078</u>
ADDITIONAL CASH FLOWS INFORMATION :				
Cash payment during the year				
Interest expenses			14,388,769,790	14,451,485,186

The accompanying notes are an integral part of these financial statements.

Electricity Generating Authority of Thailand
NOTES TO FINANCIAL STATEMENTS
for the Years Ended September 30, 2001 and 2000

1. GENERAL INFORMATION

Electricity Generating Authority of Thailand (EGAT) was established by the Electricity Generating Authority of Thailand Act 1968 and subsequent amendments. EGAT is a juristic person with the following objectives:

1.1 To generate, acquire, transmit or distribute electric energy to:

- The Metropolitan Electricity Authority (MEA), the Provincial Electricity Authority (PEA) or other electricity authorities under the law thereon;
- Other electric energy consumers as prescribed by a Royal Decree;
- Neighbouring countries.

1.2 To undertake various activities concerning electric energy, energy sources deriving from natural resources and undertake business concerning electric energy and other businesses concerning or related to the activities of EGAT, or collaborate with other persons for the said activities.

1.3 To produce and sell lignite, or chemicals derived from lignite.

All properties, debts, rights and liabilities as well as other activities of the Yanhee Electricity Authority, the Lignite Authority and the Northeast Electricity Authority were transferred to EGAT. The said properties, when net of debts, became the capital of EGAT.

2. SIGNIFICANT ACCOUNTING POLICIES

2.1 REVENUE FROM ENERGY SALES

Revenue from energy sales is recorded according to metered delivery units at the selling point under the contract.

2.2 INTEREST RECEIVED

Interest received is recorded on a proportional basis according to the time and rate of return on assets.

2.3 ALLOWANCE FOR DOUBTFUL ACCOUNTS

The allowance for doubtful accounts is assessed by reference to the estimated losses arising from irrecoverable debts, exclusive of government agencies and state enterprises, which have been based on historical results of collection and the present events pertaining to trade accounts receivable at the end of the period. The allowance has been calculated on the following basis.

Outstanding Period	Percentage of Allowance for Doubtful Accounts
Over 6 months - 1 year	50 %
Over 1 - 2 years	75 %
Over 2 years	100 %

2.4 INVENTORIES

2.4.1 Fuel Oil is shown at average cost.

2.4.2 Lignite is shown at average cost.

2.4.3 Major spare parts are shown at average cost less provisions designed to write off the parts on a straight line basis over the useful lives of the plant.

2.4.4 Spare parts for mine equipment are shown at average cost less provisions for obsolescence of stocks which have not moved for one year or more. The provisions have been calculated at the following rates.

Outstanding Period	Valued ≤ Baht 100,000	Valued > Baht 100,000
1 - 2 years	5 %	5 %
Over 2 - 5 years	15 %	10 %
Over 5 - 7 years	25 %	20 %
Over 7 - 10 years	75 %	35 %
Over 10 years	100 %	50 %

2.4.5 General materials and supplies are shown at average cost less provisions for obsolescence of stocks which have not moved for one year or more. The provisions have been calculated at the following rates.

Outstanding Period	Valued ≤ Baht 40,000	Valued > Baht 40,000
1 - 2 years	15 %	10 %
Over 2 - 5 years	25 %	20 %
Over 5 - 7 years	50 %	30 %
Over 7 - 10 years	75 %	40 %
Over 10 years	100 %	50 %

2.5 INVESTMENT IN SUBSIDIARY AND ASSOCIATED COMPANIES

EGAT accounts for investment in its subsidiary and associated companies by the equity method.

2.6 LAND, BUILDINGS, PLANT AND EQUIPMENT - NET

Fixed assets are shown at cost on the date of acquisition or completion of construction after deduction of accumulated depreciation.

Depreciation of fixed assets is provided on a straight line basis by reference to historical cost over their estimated useful lives. No allowance is made for residual value or decommissioning costs.

The principal rates of depreciation used are:

Dams	1.25 %	to	1.33 %
Power plants	4 %	to	7.5 %
Structures	4 %	to	10 %
Transmission system	2.5 %	to	4 %
Mining equipment	4 %	to	20 %
Other plants and equipment	5 %	to	25 %

Depreciation of the Srinagarind, Bang Lang, Vajiralongkorn, Rajjaprabha and Pak Mun dams is included in the statement of income only to the extent that it relates to power generation. The remaining portion relating to irrigation is deducted from capital contribution for supporting construction of these dams.

Donated assets are recorded as fixed assets and the credit included under surplus from contributions.

Depreciation of donated assets is charged in the statement of income if the related asset is revenue generating or debited to surplus from contributions if it is non revenue generating.

2.7 DEFERRED EXPENDITURES

2.7.1 LAND RIGHTS

Land rights, which confer the right, to use areas of land but which do not give title to EGAT, are presented as deferred expenditure and amortized over the expected useful lives of the related assets.

2.7.2 DEFERRED EXPENDITURES OF THE LIGNITE MINE

2.7.2.1 Overburden Removal Costs

Overburden removal costs include depreciation of related equipment and a proportion, based on the ratio that the volume of overburden removed bears to lignite production, of the administrative expenses at the mine site.

The amount of overburden removal costs expended in each year is calculated as the product of the weighted average cost per cubic metre of overburden removed, the quantity of lignite extracted from the mine and the stripping ratio of 6.80:1 which is the ratio that the total volume of calculated overburden for the whole deposit bears to the total economically mineable reserves.

2.7.2.2 Exploration and Preliminary Development Costs

The exploration and preliminary development costs are written off in the year in which they are incurred except where they relate to a project included in the Power Development Plan and Long-Term Mining Plan. In such cases, these costs are deferred and amortized over the life of the mine in the proportion that the quantity of lignite extracted during the year bears to current mineable reserves.

2.7.2.3 Resettlement Costs

Resettlement costs charged against revenues are calculated by dividing the total actual resettlement costs by the total lignite mineable reserves over the useful lives of the power plants multiplied by the quantity of lignite extracted during the year.

2.7.2.4 Maintenance Expenses

Expenditures on reconditioning of 77 and 85 tonne dump trucks are deferred and amortized in the proportion that hours of usage bear to the total hours of usage in one life cycle of reconditioning.

2.8 ROYALTY ON REAL PROPERTY SERVICES - NET

With the approval of the Ministry of Finance, EGAT is entitled to use the Sirikit dam and surrounding area without charge and in 1990 set up a Royalty on Real Property Services account with part of the cost of the dam amounting to Baht 474.77 million. The amount which has been debited to the account equates to the benefits which will be derived from power generation. The accumulated amortization amount of Baht 100.86 million is written off by being amortized from the Royalty on Real Property Services. The balance on the Royalty on Real Property Services account is Baht 373.91 million, which is being amortized over 59 years, which is the remaining balance of estimated useful life of the dam.

2.9 SINKING FUND FOR REDEMPTION OF LONG TERM DEBTS

EGAT has set up a sinking fund for the redemption of certain loans which are repayable in large sums. Payments into the fund are made on a planned basis having regard to EGAT's financial and economic circumstances and funds are held in fixed deposit accounts separate from operative accounts. By a resolution of the Board of Directors, if EGAT faces liquidity problems it needs not make payments into the fund and may borrow from the fund as necessary.

2.10 FOREIGN CURRENCIES

Foreign currencies are recorded in Baht by using the Bank of Thailand's reference exchange rates on the date on which the transactions occur. Assets and liabilities in foreign currencies at the end of the year are revalued by using the Bank of Thailand's reference exchange rates on the date at the end of the year. Gains or losses from changes in foreign exchange rates are taken totally as revenue or expense in the year in which they arise.

2.11 PROVIDENT FUND

The Provident Fund is established for helping employees when they leave the employment of EGAT. EGAT makes monthly payments to the fund at the rate of 10% of salary of employees who are members. This amount is recorded as an expense in the statement of income and EGAT consolidates the accounting transactions of the fund in the financial statements and recognizes revenues and expenses of the fund as the revenues and expenses of EGAT.

2.12 DEFERRED CONTRIBUTIONS

2.12.1 Contributions for Construction Projects

Cash contributions towards certain construction projects received from EGAT's direct customers are treated as deferred contributions and amortized to revenue over the useful life of the related assets.

Cash contributions towards certain construction projects received from independent power producers are treated as deferred contributions and amortized to revenue over the period of the power purchase contracts.

Contributions of assets received from independent power producers are treated as assets contra with deferred contributions and amortized to revenue over the period of power purchase contracts.

2.12.2 Foreign Grants

Grants received for expenditures are recorded as revenue when the expenditure is incurred.

Grants received for acquisition of fixed assets or inventories are released to revenue over the useful lives of the assets or as the inventory is used.

2.13 WELFARE FUND

The Welfare Fund is established for the employee's welfare with EGAT making payments to the fund. Such payments are recognized as expenses in the statement of income and EGAT consolidates the accounting transactions of the fund in the financial statements and recognize revenues and expenses of the fund as the revenues and expenses of EGAT.

2.14 SPECIFIC PURPOSE FUNDS

EGAT has established a number of specific purpose funds, namely the Property Self Insurance Sinking Funds, Mine Reclamation Sinking Fund, EGAT Fund for Developing Affected People's Quality of Life after Project Construction, Human Resource Management Fund and Fund for Conferences on the Electric Power Supply Industry. The assets, liabilities and balances of these funds have been included in the balance sheets, and the revenues and expenses of the funds consolidated in the statements of income, except revenues and expenses of Mine Reclamation Sinking Fund.

2.14.1 Property Self Insurance Sinking Funds

EGAT has set up Property Self Insurance Sinking Funds to cover insurance for material damage to power plant, heavy equipment, aeroplane, vehicle, building, and for personal accident. The premiums are calculated so as to approximate to premiums that would be payable to an insurance company, and are treated as expenses in EGAT's statements of income.

2.14.2 Mine Reclamation Sinking Fund

A Mine Reclamation Sinking Fund was established to ensure that funds are available as reclamation work is carried out. The annual charge to the fund is treated as a provision of contingent liabilities according to the Mining Act and treated as an expense in EGAT's statements of income. The annual charge has been calculated by taking that proportion of the total estimated cost of reclamation work, adjusted by the annual CPI (Consumer Price Index) rate of inflation, that the quantity of lignite extracted during the year bears to the total economically mineable reserves.

2.14.3 EGAT Fund for Developing Affected People's Quality of Life after Project Construction

EGAT Fund for Developing Affected People's Quality of Life after Project Construction was established in 1995, for helping affected people after completion of dams, mines, power plants and transmission lines, etc. constructed by EGAT. The interest earned from the Fund is utilized for this purpose. The initial amount transferred to the Fund in 1996 of Baht 40 million was treated as administrative and general expenses.

2.14.4 Human Resource Management Fund

The Human Resource Management Fund was set up in 1998 by making a provision of 10% (Baht 874 million) of the profit realized on the sale of shares in Electricity Generating Public Company Limited. The Fund is utilized for compensation payable to employees who are affected by the Government's privatization policy and who join the Mutual Separation Scheme.

2.14.5 Fund for Conferences on the Electric Power Supply Industry

In November 1998, the 12th Conference on the Electric Power Supply Industry (CEPSI) was organized by EGAT on behalf of the host nation Thailand. CEPSI is a biennial conference and is hosted on a rotational basis by the countries in the Association of the Electricity Supply Industry of East Asia and Western Pacific (AESIEAP).

The Board of Directors of EGAT resolved that the surplus revenue realized from the conference amount of Baht 31.82 million should be deposited in a separate account to finance any costs incurred by EGAT in organizing or attending future power conferences.

2.15 BORROWING COSTS

Interest, commitment charges, and other expenses on long term debts incurred during works under construction period are capitalized while those incurred after the completion of construction period are expensed.

Interest, commitment charges, and other expenses on debts incurred for working capital are expensed.

2.16 CASH AND CASH EQUIVALENTS

Cash and cash equivalents as presented in the cash flow statement comprise cash in current accounts, saving accounts and short term fixed deposits (less than 3 months) to which EGAT has full access without any restriction.

3. CHANGE IN ACCOUNTING POLICIES AND ACCOUNTING ESTIMATES

3.1 CHANGE IN ACCOUNTING POLICY

In the year ended September 30, 2001, EGAT changed its accounting policy for the specific purpose sinking funds, except for the income recognition in the income statement of the Mine Reclamation Sinking Fund, by incorporating into the statements of income and balance sheets and balance of these funds under the appropriate account headings in conformity with generally accepted accounting principles. Previously, the performance of the specific purpose sinking funds was not recognized in the statement of income and their net assets were presented in aggregate. The restatement of the September 30, 2000 accounts has resulted in an increase in net profit by Baht 636.15 million and the September 30, 2001 brought forward retained earnings balance increased by the same amount. The total assets and liabilities as at September 30, 2000 decreased by Baht 303.31 million.

3.2 CHANGE IN ACCOUNTING ESTIMATES

For the year ended September 30, 2001 EGAT revised the estimates used in the accounting for certain deferred expenditure at the lignite mine.

3.2.1 Overburden Removal Costs

The old accounting estimate for lignite overburden removal costs expended in each year was calculated as the product of the quantity of lignite extracted from the mine at the ratio that the total volume of calculated overburden for the whole deposit bears to the total economically mineable reserves over the useful lives of the power plants ("The stripping ratio") which was equal to 5.3 : 1 and the weighted average cost per cubic metre of overburden removed. The revised accounting estimate for lignite overburden removal costs expended in each year is calculated as the product of the quantity of lignite extracted from the mine at the ratio that the total volume of calculated overburden for the whole deposit bears to the total economically mineable reserves over the useful life of the mine ("the stripping ratio") which is equal to 6.8 : 1 and the weighted average cost per cubic metre of overburden removed. As a result, the profit for the year ended September 30, 2001 has been reduced by Baht 842.73 million. The change in estimate reflects the intention to maximize the use of the country's resources efficiently and economically.

3.2.2 Resettlement Costs

The old accounting estimate for resettlement costs was calculated using the total estimated resettlement costs divided by the total lignite mineable reserves over the useful lives of the power plants multiplied by the quantity of lignite extracted during the year. The new accounting estimate for resettlement costs is calculated using the total actual resettlement costs divided by the total lignite mineable reserves over the useful lives of the power plants multiplied by the quantity of lignite extracted during the year. As the resettlement programme has been completed in the year ended September 30, 2001, the net profit increased by Baht 60.31 million.

4. SUPPLEMENTARY INFORMATION

4.1 CASH AND BANK BALANCES

	(Unit : Million Baht)	
	2001	2000
Cash in hand	14.46	14.83
Cash at banks		
Current accounts	(83.08)	(55.22)
Saving accounts	11,662.56	5,361.04
Fixed deposit accounts		
- Less than 3 months	2,589.52	18,282.27
- 6 months	7,117.92	8,319.09
- 1 year	3,432.65	3,341.91
Total	<u>13,140.09</u>	<u>29,943.27</u>
Total	<u>24,734.03</u>	<u>35,263.92</u>

As at September 30, 2001 cash in hand and cash at bank of Baht 24,734.03 million comprises EGAT working capital of Baht 12,117.19 million, Provident Fund of Baht 22.67 million, Welfare Fund of Baht 44.57 million and Specific Purpose Funds of Baht 12,549.60 million.

As at September 30, 2001 and 2000, the above fixed deposits amounting to Baht 13,140.09 million and Baht 29,943.27 million also included Baht 3,112.21 million and Baht 8,265.84 million of the Self Insurances Sinking Funds accounts deposited at Krung Thai Bank which are pledged as collateral for the overdraft facility of Baht 3,000 million at Bang Kruai branch.

The details of fixed deposit accounts put in pledge are:

	(Unit : Million Baht)	
	2001	2000
Cash at banks		
Fixed deposits		
- Less than 3 months	-	2.40
- 6 months	3,112.21	5,427.10
- 1 year	-	2,836.34
Total	<u>3,112.21</u>	<u>8,265.84</u>

Cash and cash equivalents in cash flow comprises:

	(Unit : Million Baht)	
	2001	2000
Cash in hand	14.46	14.83
Cash at banks		
Current accounts	(83.08)	(55.22)
Saving accounts	11,662.56	5,361.04
Fixed deposits less than 3 months without any restriction	2,589.52	18,279.87
Total	<u>14,183.46</u>	<u>23,600.52</u>

4.2 TRADE ACCOUNTS RECEIVABLE - NET

	(Unit : Million Baht)	
	2001	2000
Energy sales receivable - State enterprises and government agencies		
Metropolitan Electricity Authority	8,225.97	8,487.50
Provincial Electricity Authority	11,648.86	8,657.31
Government agencies	62.83	69.11
	<u>19,937.66</u>	<u>17,213.92</u>
Energy sales receivable - private companies	591.01	432.49
Services and other receivable - government agencies	27.21	45.58
Services and other receivable - private companies	241.42	87.10
Total	<u>20,797.30</u>	<u>17,779.09</u>
Less : Allowance for doubtful accounts	<u>90.96</u>	<u>67.63</u>
	<u>20,706.34</u>	<u>17,711.46</u>
Automatic energy price adjustment (Ft) receivable	8,645.28	13,812.17
At September 30,	<u>29,351.62</u>	<u>31,523.63</u>

For the year 2001, trade accounts receivable - net of Baht 29,351.62 million can be analyzed as follows:

							(Unit : Million Baht)	
Outstanding Period	State Enterprises and Government Agencies		Private Companies		Total		2001	2000
	Energy Sales	Services and Others	Energy Sales	Services and Others	Energy Sales	Services and Others		
1 - 6 months	19,937.67	22.69	506.32	222.74	20,443.99	245.43	20,689.42	17,687.59
Over 6 months - 1 year	-	-	0.07	12.05	0.07	12.05	12.12	1.38
Over 1 year - 2 years	-	2.64	-	1.38	-	4.02	4.02	84.90
Over 2 years	-	1.88	84.62	5.24	84.62	7.12	91.74	5.22
	<u>19,937.67</u>	<u>27.21</u>	<u>591.01</u>	<u>241.41</u>	<u>20,528.68</u>	<u>268.62</u>	<u>20,797.30</u>	<u>17,779.09</u>
Less : Allowance for doubtful accounts	<u>-</u>	<u>-</u>	<u>84.65</u>	<u>6.31</u>	<u>84.65</u>	<u>6.31</u>	<u>90.96</u>	<u>67.63</u>
	<u>19,937.67</u>	<u>27.21</u>	<u>506.36</u>	<u>235.10</u>	<u>20,444.03</u>	<u>262.31</u>	<u>20,706.34</u>	<u>17,711.46</u>
Automatic energy price adjustment (Ft) receivable					8,645.28	-	8,645.28	13,812.17
At September 30,					<u>29,089.31</u>	<u>262.31</u>	<u>29,351.62</u>	<u>31,523.63</u>

For the year 2001, the balance brought forward automatic energy price adjustment (Ft) receivable, according to the old Ft, of Baht 13,812.17 million was totally recovered. These was the automatic energy price adjustment (Ft) of Baht 12,915.42 million and VAT of Baht 896.75 million.

4.3 OTHER ACCOUNTS RECEIVABLE - NET

	(Unit : Million Baht)	
	2001	2000
Employee accounts receivable	633.16	700.13
Other accounts receivable	577.59	545.28
Less : Allowance for doubtful accounts	<u>102.64</u>	<u>26.57</u>
At September 30,	<u>1,108.11</u>	<u>1,218.84</u>

4.4 MATERIALS AND SUPPLIES - NET

	(Unit : Million Baht)			
	2001		2000	
Fuel oil		1,804.12		2,182.31
Lignite stock		307.50		417.97
Spare parts, other materials and supplies	8,404.47		7,177.85	
Less : Provision for obsolescence	<u>2,570.18</u>	<u>5,834.29</u>	<u>2,341.97</u>	<u>4,835.88</u>
At September 30,		<u>7,945.91</u>		<u>7,436.16</u>

4.5 INVESTMENT IN SUBSIDIARY AND ASSOCIATED COMPANIES

(Unit : Million Baht)

Company	Business	Relationship		Paid - Up Share Capital		Investment Portion		Investment				Dividend	
		2001	2000	2001	2000	2001	2000	Cost Method		Equity Method		2001	2000
								2001	2000	2001	2000		
Ratchaburi Electricity													
Generating Holding													
Public Company	Investment in Subsidiary	Associate	Subsidiary	14,500.00	8,700.00	45%	100%	6,525.00	8,700.00	8,389.73	8,656.48	-	-
Electricity Generating													
Public Company	Investment in Subsidiary	Associate	Associate	5,259.47	5,243.97	25.43%	25.51%	<u>1,587.55</u>	1,587.55	<u>4,549.72</u>	4,394.92	401.32	267.54
								<u>8,112.55</u>	10,287.55	<u>12,939.45</u>	13,051.40		

4.5.1 INVESTMENT IN RATCHABURI ELECTRICITY GENERATING

On November 30, 1999, the Cabinet approved the private participation plan for the Ratchaburi Power Project by authorizing EGAT to set up the Ratchaburi Electricity Generating Holding Company Limited (RHCO) with EGAT holding 100% of the shares. RHCO set up the Ratchaburi Electricity Generating Company Limited (RGCO), held 100% by RHCO, to acquire the power plant and other assets of the Ratchaburi Power Project being thermal power plant, combined cycle power plant, common facilities and land. The Cabinet instructed EGAT to put into place a privatization plan by selling RHCO's shares to the public and for RHCO to register on the Stock Exchange of Thailand (SET) by September 2000. Following this EGAT would hold between 44.99% and 49.99% of the shares in RHCO.

On March 7, 2000, RHCO was registered as a limited company with the objective of investment in other companies that had similar objectives and activities. RHCO had an initial registered capital of Baht 300 million with 30 million common shares in issue at par value of Baht 10 and on March 20, 2000, RGCO registered as a limited company with the objective of operating as an electricity generator and related businesses. RHCO held 100% of the fully paid common shares in RGCO.

On August 18, 2000, RHCO was registered as a public company and increased its registered capital of Baht 300 million by Baht 14,200 million to give a total capital of Baht 14,500 million. On August 23, 2000, RHCO issued 840 million common shares of Baht 10 each fully paid which provided further capital of Baht 8,400 million.

As at September 30, 2000, RHCO had an authorized capital of Baht 14,500 million. The issued and fully paid share capital was 870 million common shares of Baht 10 each, giving a total capital of Baht 8,700 million all of which was held by EGAT.

In October 2000, EGAT had 870 million common shares at Baht 10 each amounting to Baht 8,700 million in RHCO and then EGAT sold 217.50 million common shares at Baht 10 each amounting to Baht 2,175 million to EGAT employees and their Registered Provident Fund. EGAT has retained 652.50 million common shares of Baht 6,525 million.

Between October 18 and 20, 2000, RHCO issued 580 million common shares at Baht 10 par value by way of an Initial Public Offering (IPO) at Baht 13 per share. On October 26, 2000 all 1,450 million common shares were registered.

As at September 30, 2001 RHCO has registered common share amounting to Baht 14,500 million comprising 1,450 million fully paid common shares. EGAT owns 652.50 million common shares (par value Baht 10 per share or Baht 6,525 million) which is 45% of the total fully paid common shares. EGAT has significant influence but has not effective control over RHCO and EGAT accounts for the investment in RHCO are an investment in associated company.

4.5.2 INVESTMENT IN ELECTRICITY GENERATING PUBLIC COMPANY LIMITED

As at September 30, 2001, Electricity Generating Public Company Limited (EGCO) had 525.95 million fully paid common shares in issue of Baht 10 each amounting to Baht 5,300 million. EGAT's investment at that date was 133.77 million common shares or 25.43% of the fully paid issued common shares. EGAT has significant influence but has not effective control over EGCO and EGAT accounts for the investment in EGCO are an investment in associated company.

4.6 LAND, BUILDINGS, PLANT AND EQUIPMENT - NET

	(Unit : Million Baht)			
	2001		2000	
	Cost	Accumulated Depreciation	Net Book	Net Book
Land	6,963.61	-	6,963.61	7,723.17
Structure	14,443.30	8,246.72	6,196.58	6,743.15
Reservoir, dams and waterway	21,787.56	5,179.00	16,608.56	16,900.49
Power plant	193,205.47	76,186.84	117,018.63	117,585.53
Transmission system	89,981.45	24,281.43	65,700.02	58,003.02
Communication system	5,200.16	3,111.45	2,088.71	2,135.67
Coal handling system	4,573.45	2,695.59	1,877.86	1,839.00
Mine equipment	2,206.85	1,947.44	259.41	337.92
Aeroplane and helicopter	50.00	48.54	1.46	31.41
Transportation equipment	2,238.78	2,102.26	136.52	198.39
Other equipment	8,717.79	6,735.25	1,982.54	1,954.60
Total	<u>349,368.42</u>	<u>130,534.52</u>	<u>218,833.90</u>	<u>213,452.35</u>

Depreciation for the year 2001 amounting to Baht 13,356.20 million has been allocated as follows:

	(Unit : Million Baht)	
	2001	2000
Depreciation as shown in statement of income	12,348.26	11,680.43
Included in other lines on statement of income	488.90	522.43
Included in fuel cost in respect of items relating to lignite production	278.20	299.93
Capitalized in respect of items relating to projects under construction	81.57	110.40
Capitalized and charged against lignite mine development costs	96.94	122.38
Debited against capital contribution for benefits of multi-purpose dams	62.33	62.33
Total	<u>13,356.20</u>	<u>12,797.90</u>

On October 9, 2000, EGAT entered into a sale and purchase agreement (S & P) with Ratchaburi Electricity Generating Company for the sale of Ratchaburi thermal power plant units 1 and 2 and common facilities for Baht 30,472.49 million. As at October 31, 2000, EGAT received the proceeds in full from Ratchaburi Electricity Generating Company Limited.

During the year 2001, completed works of the Ratchaburi thermal power plant units 1 and 2 was transferred from works under construction to fixed assets at a value of Baht 22,510.49 million. Also during the year, EGAT transferred land, buildings, thermal power plant units 1 and 2, communication system and other equipment of Baht 23,596.99 million to Ratchaburi Electricity Generating Company Limited in accordance with the above mentioned agreement.

4.7 WORKS UNDER CONSTRUCTION

Project	(Unit : Million Baht)	
	2001	2000
Mae Moh Flue Gas Desulphurization System		
- Units 4 - 7	-	3,835.12
Lam Takhong Pumped Storage Project		
- Units 1 - 2	11,135.09	9,910.06
Ratchaburi Power Plant Project		
- Thermal Power Plant Project Units 1 - 2	-	22,171.35
- Combined Cycle Power Plant Project Blocks 1 - 3	22,066.49	20,016.79
Krabi Thermal Power Plant Project Unit 1	7,971.93	4,803.52
Surat Thani Combined Cycle Power Plant	-	1,873.80
Transmission System	21,106.82	25,321.38
Others	2,498.53	2,984.27
Total	<u>64,778.86</u>	<u>90,916.29</u>

In the year ended September 30, 2001 the works under construction relating to Ratchaburi thermal power plant units 1 and 2 had brought forward balances of Baht 22,171.35 million and during the year the works under construction increased by Baht 2,105.39 million, bringing the total Baht 24,276.74 million. EGAT transferred Baht 22,510.49 million to fixed assets and Baht 1,766.25 million remained in works under construction. All of the completed Ratchaburi thermal power plant units 1 and 2 were transferred to Ratchaburi Electricity Generating Company Limited in accordance with the sale and purchase agreement dated October 9, 2000.

Works under construction relating to Ratchaburi Combined Cycle Power Plant Blocks 1 to 3 of Baht 22,066.49 million included a penalty arising in September 2001 which EGAT has subsequently paid to Ratchaburi Generating Company Limited of Baht 88.43 million as EGAT had not transferred the Ratchaburi combined cycle power plant Blocks 1 and 2 by the due date of August 31, 2001 as required by the sale and purchase agreement dated October 9, 2000 as per note 4.31.2.

4.8 DEFERRED EXPENDITURES

	Land Right	(Unit : Million Baht)		
		Deferred Expenditures		Total
		of Lignite Mine	2001	2000
At October 1,	14,333.69	7,720.73	22,054.42	20,562.60
Add : Increase during the year	886.39	2,730.88	3,617.27	4,301.74
	15,220.08	10,451.61	25,671.69	24,864.34
Less : Amortized/charged to production	300.46	3,895.61	4,196.07	2,809.92
At September 30,	14,919.62	6,556.00	21,475.62	22,054.42

The deferred expenditures of lignite mine are as follows:

	Exploration and					(Unit : Million Baht)	
	Overburden Removal Costs	Preliminary Development Costs	Resettlement Costs	Maintenance Costs	Total		
					2001	2000	
					At October 1,	6,216.56	492.69
Add : Increase during the year	2,729.48	–	–	1.40	2,730.88	3,001.06	
	8,946.04	492.69	998.52	14.36	10,451.61	10,317.04	
Less : Charged to production	3,820.39	23.51	47.44	4.27	3,895.61	2,596.31	
At September 30,	5,125.65	469.18	951.08	10.09	6,556.00	7,720.73	

4.9 ROYALTY ON REAL PROPERTY SERVICES - NET

	(Unit : Million Baht)	
	2001	2000
Royalty on real property services in 1990	474.77	474.77
Less : Accumulated amortization 1974 - 1989	100.86	100.86
Net book value of royalty on real property services	373.91	373.91
Less : Accumulated amortization since 1990	69.72	63.38
Amortization for the year	6.34	6.34
At September 30,	297.85	304.19

4.10 SINKING FUND FOR REDEMPTION OF LONG TERM DEBTS

	(Unit : Million Baht)	
	2001	2000
At October 1,	16,566.99	9,708.42
Add : Payments into the fund	10,867.95	7,883.53
Interest received	639.71	578.82
Gain from foreign exchange rate	227.22	157.41
	28,301.87	18,328.18
Less : Withdrawals to meet debt repayment	2,527.24	1,761.19
At September 30,	25,774.63	16,566.99

4.11 LOAN TO THE COOPERATIVES PROMOTION DEPARTMENT

At September 30, 2001, the loan to the Cooperatives Promotion Department was Baht 34.76 million as EGAT financed the Cooperatives Promotion Department to operate a number of specific Cooperatives. Cooperative groups at 3 of EGAT's projects received interest-free loans from the Cooperatives Promotion Department to support their members affected by the project construction.

	(Unit : Million Baht)	
	2001	2000
Cooperative group at Vajiralongkorn Dam Project	7.76	7.76
Cooperative group at Mae Moh Mine Expansion Project for Mae Moh Power Plant Units 8 and 9	15.00	15.00
Cooperative group at Lam Takhong Pumped Storage Project	12.00	12.00
Total	<u>34.76</u>	<u>34.76</u>

Cooperative groups at Vajiralongkorn Dam and Mae Moh Mine Expansion Projects are financed with interest-free loans of Baht 13 million and Baht 15 million respectively with a payback period of 10 years from the date on which the Cooperative group received the first amount from the Cooperatives Promotion Department. The cooperative group at Vajiralongkorn Dam Project paid back in the amount of Baht 5.24 million.

In accordance with the agreement dated June 26, 1996, the Cooperative group at Lam Takhong Pumped Storage Project, was financed with an interest-free loan of Baht 23 million with a payback period of 15 years from the date on which the Cooperatives Promotion Department received funds from EGAT. In 1996, EGAT financed Baht 12 million to Cooperatives Promotion Department.

4.12 SHORT TERM LOANS

(Unit : Million Baht)

Date of Loan	Period (Months)	Loan Amount		(Gains) Losses from Foreign Exchange		(Gains) Losses from Foreign Exchange		Balance at Sept. 30, 2001
		Million Yen	Million Baht	Repayment	Repayment	at Year End		
Apr. 25, 26, 2000	6	5,971.00	2,356.12	76.11	(2,432.23)	–	–	–
Oct. 26, 2000	6	5,971.00	2,432.23	(185.88)	(2,246.35)	–	–	–
Nov. 1, 2000	3	14,850.00	6,009.48	(555.60)	(5,453.88)	–	–	–
Feb. 1, 2001	6	14,850.00	5,453.88	12.60	(5,466.48)	–	–	–
Apr. 26, 2001	6	5,971.00	2,246.35	–	–	(8.89)	2,237.46	
Aug. 1, 2001	2	14,850.00	5,466.48	–	–	98.13	5,564.61	
Total		<u>62,463.00</u>	<u>23,964.54</u>	<u>(652.77)</u>	<u>(15,598.94)</u>	<u>89.24</u>	<u>7,802.07</u>	

On November 1, 2000, the Ministry of Finance on behalf of EGAT issued Euro Commercial Paper (ECP) Yen 14,850.00 million (Baht 6,009.48 million) as a bridging loan to refinance loans from the Asian Development Bank as per note 4.16.

4.13 ELECTRICITY PURCHASED PAYABLE

	(Unit : Million Baht)	
	2001	2000
Neighbouring Countries' Supply		
Tenaga Nasional Berhad	10.05	20.73
Electricite du Laos	277.71	318.60
Houay Ho Power Company Limited	160.17	271.72
Theun Hinboun Power Company Limited	527.39	507.00
Independent Power Producers (IPP)		
Ratchaburi Electricity Generating Company	3,694.33	–
Rayong Electricity Generating Company	869.87	898.90
Khanom Electricity Generating Company	683.96	744.75
Independent Power (Thailand) Company Limited	1,041.47	844.12
Tri Energy Company Limited	1,390.40	1,803.42
Small Power Producers (SPP)	5,749.69	3,896.27
Total	<u>14,405.04</u>	<u>9,305.51</u>

4.14 ACCRUED REMITTANCE TO THE MINISTRY OF FINANCE

	(Unit : Million Baht)			
	Balance	Current Year		Balance
	at Oct. 1, 2000	Appropriation	Remitted	at Sept. 30, 2001
Unpaid remittance for				
Net income for the year 1996	1,090.00	–	(1,090.00)	–
Net income for the year 1997	6,000.00	–	(6,000.00)	–
Net income for the year 1999	4,000.00	–	(4,000.00)	–
Net income for the year 2000	8,492.00	38.00	(5,530.00)	3,000.00
Net income for the year 2001 Provision	–	4,514.00	–	4,514.00
Total	<u>19,582.00</u>	<u>4,552.00</u>	<u>(16,620.00)</u>	<u>7,514.00</u>

The provision for appropriation to the Ministry of Finance for the year 2001 was Baht 4,514 million.

4.15 OTHER CURRENT LIABILITIES

At September 30, 2001 there included in other current liabilities of Baht 6,204.17 million the estimated costs to complete Ratchaburi thermal units 1 and 2 of Baht 1,721.25 million and deferred income of Baht 409.92 million relating to items which EGAT has not yet transferred to Ratchaburi Electricity Generating Company Limited comprising a fuel oil transportation system of Baht 400 million, which EGAT has still to construct, spare parts for the thermal power plant of Baht 3.79 million and other equipment of Baht 6.22 million.

4.16 LONG TERM LIABILITIES

(Unit : Million Baht)

	Long Term Liabilities	Current Portion of Long Term Liabilities	Balance	
			2001	2000
Long Term Debts	205,711.05	27,510.91	178,200.14	210,253.65
Suppliers' Credit	5,836.40	314.65	5,521.75	6,156.11
Total	<u>211,547.45</u>	<u>27,825.56</u>	<u>183,721.89</u>	<u>216,409.76</u>

The details of long term debts are:

(Unit : Million Baht)

	2001	2000
Local sources		
EGAT Bonds	84,652.91	92,652.91
Government Saving Bank	6,351.41	11,351.42
Ministry of Finance	133.21	583.17
Total - Local sources	<u>91,137.53</u>	<u>104,587.50</u>
Foreign sources		
Ministry of Finance	3,692.37	3,514.64
Bank and Commercial Institutions	29,600.56	37,642.33
Export - Import Bank	53,415.17	63,129.66
Commercial Bank	14,281.55	16,972.21
Floating Rate Bonds	224.66	213.73
EGAT's Bonds	<u>13,359.21</u>	<u>12,709.65</u>
Total - Foreign sources	<u>114,573.52</u>	<u>134,182.22</u>
Total	<u>205,711.05</u>	<u>238,769.72</u>
Less : Current portion of long term debts	<u>27,510.91</u>	<u>28,516.07</u>
Balance at September 30,	<u>178,200.14</u>	<u>210,253.65</u>

The local and foreign interest rate for the years 2001 and 2000 are in the range between 0.75% and 14.45%.

Included in the loans from the Ministry of Finance of Baht 133.21 million at September 30, 2001 was originating from KFW. By a resolution of the Cabinet, the repayment terms of the these loans were deferred for eight years from 1975. Installments of principal have been repaid since 1983. The payment of interest in respect of those eight years has also been deferred and is being paid by equal installments over the remaining terms of the loans commencing in the year 1985.

The details of outstanding foreign debts of the bank and commercial institutions and the export-import banks are as follows:

	(Unit : Million Baht)	
	2001	2000
BANK AND COMMERCIAL INSTITUTIONS		
International Bank for Reconstruction and Development	12,535.38	12,944.29
Japan Bank for International Cooperation (JBIC - OECF)	12,057.79	13,316.45
Asian Development Bank	3,710.25	9,743.66
Kuwait Fund for Arab Economic Development	288.24	509.99
The OPEC Fund for Development	-	62.36
Saudi Fund for Development	-	39.54
Nordic Investment Bank	1,008.90	1,026.04
Total	<u>29,600.56</u>	<u>37,642.33</u>
EXPORT-IMPORT BANKS		
Kreditanstalt Fur Wiederaufbau	3,634.72	3,460.12
Japan Bank for International Cooperation (JBIC - EXIM Bank of Japan)	38,053.47	40,019.65
Export Development Corporation	784.40	2,859.01
Swiss Mixed Credit II	189.63	234.67
Natexis Banques Populaires	10,752.95	11,784.36
The Export-Import Bank of the United States (EXIM Bank of USA)	-	4,771.85
Total	<u>53,415.17</u>	<u>63,129.66</u>

On November 1, 2000, the Ministry of Finance on behalf of EGAT issued, as a bridging loan, Euro Commercial Paper (ECP) for Japanese Yen 14,850 million (Baht 6,009.48 million) from which was deducted upfront interest of Yen 19.52 million (Baht 7.90 million). The net amount of the ECP of Yen 14,830.48 million (Baht 6,001.58 million) plus EGAT's own funds of Baht 217.38 million with a total of US Dollar 137.66 million (Baht 6,218.96 million) was used to refinance a loan from the Asian Development Bank which had a book value of US Dollar 137.66 million (Baht 6,066.33 million). Accordingly, there arose from this refinancing an exchange loss of Baht 152.63 million.

4.17 PROVIDENT FUND

	(Unit : Million Baht)	
	2001	2000
Assets		
Cash at bank	22.67	-
Interest receivable	0.01	0.01
Account receivable - EGAT	0.27	-
Account receivable - Housing Loan	-	427.50
Total	<u>22.95</u>	<u>427.51</u>
Liabilities and fund		
Account payable - EGAT	-	406.77
Provident fund	22.94	20.74
Revenues over expenses	0.01	-
Total	<u>22.95</u>	<u>427.51</u>
Retirement liabilities (if all members left)	22.95	20.74

4.18 DEFERRED CONTRIBUTIONS

(Unit : Million Baht)

	Consumers Contribution	Foreign Contribution	Total	
			2001	2000
At October 1,	2,056.11	3.80	2,059.91	1,368.05
Add : Received during the year	<u>51.40</u>	<u>0.09</u>	<u>51.49</u>	<u>733.91</u>
	2,107.51	3.89	2,111.40	2,101.96
Less : Released to other revenue	<u>50.66</u>	<u>3.17</u>	<u>53.83</u>	<u>42.05</u>
At September 30,	<u>2,056.85</u>	<u>0.72</u>	<u>2,057.57</u>	<u>2,059.91</u>

4.19 CONTRIBUTION FROM THE GOVERNMENT

(Unit : Million Baht)

	2001		2000	
Capital		<u>7,201.17</u>		<u>7,201.17</u>
Contribution for supporting construction of the Srinagarind, Bang Lang, Vajiralongkorn, Rajjaprabha and Pak Mun Dam		4,364.75		4,364.75
Less : Accumulated depreciation	1,044.51		982.18	
Depreciation for the year	<u>62.33</u>	<u>1,106.84</u>	<u>62.33</u>	<u>1,044.51</u>
		<u>3,257.91</u>		<u>3,320.24</u>
At September 30,		<u>10,459.08</u>		<u>10,521.41</u>

4.20 SURPLUS FROM CONTRIBUTIONS

Surplus from contributions is assets or cash received from foreign governments and financial institutions in the form of discount, special interest rate loans and /or grants to finance development activities of EGAT specifically identified by donors.

(Unit : Million Baht)

	Donated Assets	Discount Interest	Grant	Total	
				2001	2000
At October 1,	406.37	1,730.51	690.47	2,827.35	2,719.05
Add : Received during the year	<u>0.80</u>	<u>79.83</u>	<u>—</u>	<u>80.63</u>	<u>108.30</u>
At September 30,	<u>407.17</u>	<u>1,810.34</u>	<u>690.47</u>	<u>2,907.98</u>	<u>2,827.35</u>

4.21 WELFARE FUND

	(Unit : Million Baht)	
	2001	2000
Assets		
Cash at Banks	44.57	29.55
Account receivable - Employees	175.00	185.80
Interest receivable	0.02	0.02
Building and equipment - net	58.44	60.79
Works under construction	-	1.64
Total	<u>278.03</u>	<u>277.80</u>
Liabilities and Fund		
Accrued expenses	0.06	0.02
Account payable	4.41	7.91
Welfare Fund	256.19	256.19
Revenues over expenses for the prior year	13.68	10.31
Revenues over expenses	<u>3.69</u>	<u>3.37</u>
Total	<u>278.03</u>	<u>277.80</u>

4.22 SPECIFIC PURPOSE FUNDS

	(Unit : Million Baht)						
	Property Self Insurance Sinking Funds	Mine Reclamation Sinking Fund	EGAT Fund for Developing Affected People's Quality of Life after Project Construction	Human Resource Management Fund	Fund for Conferences on the Electric Power Supply Industry	Total 2001	Total 2000
Assets							
Cash in hand	0.29	-	-	-	-	0.29	0.30
Cash at banks	10,603.38	1,462.64	44.43	415.63	23.23	12,549.31	11,652.58
Accrued insurance premium	1,337.54	-	-	-	-	1,337.54	1,080.05
Interest receivable	18.69	4.88	0.04	7.22	0.13	30.96	68.45
Prepaid expenses	-	-	-	-	-	-	0.40
Other accounts receivable	-	-	5.94	-	-	5.94	6.02
Structure and equipment (net)	-	38.23	-	-	-	38.23	39.39
Work under construction	-	2.18	-	-	-	2.18	2.07
Total	<u>11,959.90</u>	<u>1,507.93</u>	<u>50.41</u>	<u>422.85</u>	<u>23.36</u>	<u>13,964.45</u>	<u>12,849.26</u>
Liabilities and Funds							
Accrued claim	451.49	-	-	-	-	451.49	243.64
Account payable	433.56	5.31	-	0.01	-	438.88	544.18
Specific purpose funds	9,302.18	1,502.62	52.12	626.23	32.03	11,515.18	11,425.29
Revenues over (under)							
expenses year 2000	859.00	-	(1.69)	(216.47)	(4.69)	636.15	-
Revenues over (under) expenses	<u>913.67</u>	<u>-</u>	<u>(0.02)</u>	<u>13.08</u>	<u>(3.98)</u>	<u>922.75</u>	<u>636.15</u>
Total	<u>11,959.90</u>	<u>1,507.93</u>	<u>50.41</u>	<u>422.85</u>	<u>23.36</u>	<u>13,964.45</u>	<u>12,849.26</u>

The details of the movement of the Mine Reclamation Sinking Fund are:

	(Unit : Million Baht)	
	2001	2000
At October 1,	1,412.73	1,308.32
Amount charged against revenue for the year	111.70	95.08
Interest received	40.51	51.07
Expenses of mine reclamation	(57.62)	(36.40)
Depreciation	(4.70)	(5.34)
At September 30,	<u>1,502.62</u>	<u>1,412.73</u>

4.23 ELECTRICITY PURCHASED AND FUEL

In the year ended September 30, 2001, the cost of purchased power of Baht 84,436.99 million and fuel expenses of Baht 54,224.25 million included interest arising out of Take or Pay contracts of Baht 35.75 million and Baht 78.54 million respectively in connection with the delays in completing the Ratchaburi Power Plant Project by EGAT and the delay in completing the natural gas pipeline from Ratchaburi to Wang Noi by Petroleum Authority of Thailand (PTT). In addition, the demand for natural gas was below the minimum quantity stipulated in the natural gas fuel supply agreement between PTT and the supplier of natural gas from Yadana natural gas field. Consequently, PTT had to prepay for the shortfall in gas supplied to the Ratchaburi Power Plant and incurred interest on the funds required to meet the prepayments. The Cabinet, by a resolution dated July 25, 2000, ordered EGAT, PTT, the Government and the economy to bear the interest costs in the proportion of 12.80%, 11.40%, 27.80% and 48% respectively. In the year 2001, PTT invoiced EGAT with the interest arising from the Take or Pay provision in the agreement amounting to Baht 114.29 million.

4.24 PROFIT ON SALE OF RATCHABURI POWER PLANTS

On October 31, 2000, EGAT received Baht 30,472.49 million from Ratchaburi Electricity Generating Company Limited under the sale and purchase agreement dated October 9, 2000 for the sale of the Ratchaburi Thermal Power Plant units 1 and 2. EGAT subsequently refunded Baht 19.08 million for machinery and equipment which had not been delivered by the required date. The thermal power plant and facilities were transferred to Ratchaburi Electricity Generating Company Limited at Baht 30,043.49 million. The remaining deferred income of Baht 409.92 relates to items which have not yet been transferred as per note 4.15.

The details of Ratchaburi Thermal Power Plant fixed assets which were transferred to Ratchaburi Electricity Generating Company Limited are as follows:

	(Unit : Million Baht)
Selling price of fixed assets transferred	30,043.49
Cost of fixed assets sold	<u>27,839.71</u>
Profit on sale of Ratchaburi Power Plant	<u>2,203.78</u>

Cost of fixed assets sold amount of Baht 27,839.71 million comprises:

	(Unit : Million Baht)
Fuel oil	260.92
Spare parts, materials and supplies	485.03
Land, building, thermal power plant units 1 and 2, communication system and other equipment (note 4.6)	23,596.99
Work under construction of thermal power plant units 1 and 2 (note 4.7)	1,766.25
Estimated costs to be completed works units 1 and 2 (note 4.15)	1,721.25
Machinery and equipment	9.27
Total	<u>27,839.71</u>

4.25 GAINS OR LOSSES ON FOREIGN EXCHANGE

For the year ended September 30, 2001, the amount of Baht 2,104.69 million is recorded as gains on foreign exchange.

	(Unit : Million Baht)			
	Shown in Statement of Income		Total	
	Charged as Fuel cost	Gains (Losses) on Foreign Exchange	2001	2000
Gains (Losses) arising on repayment of loans	(3.75)	520.08	516.33	569.18
Gains (Losses) on rate of exchange from refinancing	-	(152.63)	(152.63)	867.03
Gains (Losses) on translation of foreign debts	(118.04)	977.55	859.51	(1,948.01)
Gains on exchange - others	0.11	881.37	881.48	554.13
Total	<u>(121.68)</u>	<u>2,226.37</u>	<u>2,104.69</u>	<u>42.33</u>

4.26 SHARE OF INTEREST IN ASSOCIATED COMPANIES

For the year ended September 30, 2001, EGAT recognized the interest in its associated companies under the equity method amount of Baht 1,908.25 million from Ratchaburi Electricity Generating Holding Public Company Limited and Baht 556.12 million from Electricity Generating Public Company Limited, bringing totally Baht 2,464.37 million.

4.27 BORROWING COSTS

For the year ended September 30, 2001, the total borrowing cost of Baht 13,681.81 million has been allocated as follows:

	(Unit : Million Baht)				
	Interest Expenses	Commitment Charges	Other Expenses Relating to the Loans	Total	
				2001	2000
Capitalized to projects under construction	3,331.97	16.13	50.19	3,398.29	3,135.62
Included in fuel costs in the statement of income	299.52	-	0.04	299.56	337.91
Shown as borrowing costs in the statement of income	<u>9,432.57</u>	<u>3.49</u>	<u>547.90</u>	<u>9,983.96</u>	<u>11,113.85</u>
Total	<u>13,064.06</u>	<u>19.62</u>	<u>598.13</u>	<u>13,681.81</u>	<u>14,587.38</u>

4.28 OTHER EXPENSES

The details are:

	(Unit : Million Baht)	
	2001	2000
Interest expenses (Loans for working capital)	548.21	465.81
Other expenses relating to the loans (Loans for working capital)	0.32	29.20
Interest for bank overdraft	0.50	1.45
Interest for Mine Reclamation Sinking Funds	0.08	–
Total	<u>549.11</u>	<u>496.46</u>

4.29 OPERATING RESULTS

The operating results for the year ended September 30, 2001 and 2000 are as follows:

	(Unit : Million Baht)			
	2001	2000	Increase/(Decrease)	
			Amount	%
Operating revenues	185,071.74	160,991.66	24,080.08	14.96
Operating expenses	<u>168,383.30</u>	<u>131,914.38</u>	<u>36,468.92</u>	27.65
Operating income	16,688.44	29,077.28	(12,388.84)	(42.61)
Other revenues	10,226.72	3,363.90	6,862.82	204.01
Other expenses	<u>10,691.66</u>	<u>11,629.65</u>	<u>(937.99)</u>	(8.07)
Net income	<u>16,223.50</u>	<u>20,811.53</u>	<u>(4,588.03)</u>	(22.05)

The net income for the year 2001 decreased by Baht 4,588.03 million. The operating income decreased by Baht 12,388.84 million, principally electric energy sales increasing by Baht 24,059.77 million, while electricity purchased increasing by Baht 37,452.13 million. Other revenues increased by Baht 6,862.82 million and other expenses decreased by Baht 937.99 million.

4.30 RECLASSIFICATION IN FINANCIAL STATEMENTS

For the year 2001, EGAT amended the classification in its financial statements. Where necessary, comparative figures in the year 2000 have been adjusted to conform with those changes.

4.31 COMMITMENT

4.31.1 Long-Term Power Purchase Agreements

As a result of decreasing the government's investment and encouraging private companies to be involved in generating electricity, the Government approved an investment programme for the generation of electricity by private companies as Independent Power Producers (IPP) who would sell power to EGAT.

EGAT has entered into 43 Power Purchase Agreements at September 30, 2001 with total commitments amounting to approximately Baht 3,510,649 million and total production capacity of 13,762 megawatts.

Power Producers	Company	Capacity (Megawatt)	Years	Contract Period	Amount (Million Baht)
Power Project Developers in Lao People's Democratic Republic					
Theun Hinboun Power Company Limited	1	187.00	21	(2002 - 2022)	58,158.00
Houay Ho Power Company Limited	1	126.00	28	(2002 - 2029)	15,944.00
Independent Power Producers (IPP)					
Rayong Electricity Generating Company (REGCO)	1	1,174.00	13	(2002 - 2104)	150,068.00
Khanom Electricity Generating Company (KEGCO)	1	818.00	15	(2002 - 2016)	121,399.00
Tri Energy Company Limited (TECO)	1	700.00	19	(2002 - 2020)	155,091.00
Eastern Power Electric Company Limited (EPEC)	1	350.00	21	(2002 - 2022)	92,118.00
Independent Power (Thailand) Company Limited (IPT)	1	700.00	23	(2002 - 2024)	198,834.00
Ratchaburi Electricity Generating Company (RGCO)	1	3,546.00	26	(2002 - 2027)	774,920.00
Bowin Power Company Limited (BOWIN)	1	713.00	26	(2002 - 2027)	215,295.00
GULF Power Generation Company Limited (GULF)	1	734.00	26	(2004 - 2029)	239,949.00
Union Power Development Company Limited (UPDC)	1	1,400.00	26	(2005 - 2030)	411,856.00
BLCP Power Company Limited (BLCP)	1	1,347.00	26	(2007 - 2032)	444,721.00
Small Power Producers (SPP)	31	1,967.00		14 - 25 Years	632,296.00
Total	43	13,762.00			3,510,649.00

4.31.2 Commitment under Asset Purchase Agreement Relating to Ratchaburi Combined Cycle Power Plant

On October 9, 2000, EGAT entered into the asset purchase agreement with Ratchaburi Electricity Generating Company Limited for the sale of combined cycle power plant blocks 1 to 3 for Baht 26,300.46 million. The agreement specified the schedule closing dates to transfer of the combined cycle power plant blocks 1 and 2 on August 31, 2001 and for block 3 on April 30, 2002. If EGAT was unable to transfer the power plant by the agreed dates, EGAT shall pay to Ratchaburi Electricity Generating Company Limited an amount equal to Baht 44.215 million with respect to each of the combined cycle blocks 1 and 2 and Baht 43.556 million with respect to the combined cycle block 3 for each month or fraction thereof delay of each such closing beyond the schedule closing date until the earlier to occur of the relevant closing and the termination of the agreement. However, that upon written notice to Ratchaburi Electricity Generating Company Limited by EGAT no later than 120 days prior to the schedule closing date, EGAT shall pay to Ratchaburi Electricity Generating Company Limited only Baht 0.659 million for each month or fraction. On December 18, 2001, EGAT has exercised its right thereof, and scheduled to transfer combined cycle block 3 by November 2002.

Electricity Generating Authority of Thailand
FIVE YEAR SUMMARY

At September 30:	2001	2000	1999	1998	1997
	Baht	Baht	Baht	Baht	Baht
	(Millions)	(Millions)	(Millions)	(Millions)	(Millions)
Assets:					
Current assets	65,196	66,010	54,690	46,361	38,407
Fixed assets	283,613	318,661	308,388	285,274	249,698
Net assets of specific sinking funds	–	12,062	11,321	9,128	8,376
Intangible assets	21,773	–	–	–	–
Other assets (Note 1)	38,749	37,678	21,963	17,682	19,579
Total assets	<u>409,331</u>	<u>434,411</u>	<u>396,362</u>	<u>358,445</u>	<u>316,060</u>
Liabilities and equity					
Liabilities:					
Current liabilities (Note 2)	89,421	93,592	66,763	63,744	52,924
Long-term liabilities (Note 3)	183,722	216,410	210,560	164,217	153,310
Other liabilities	2,089	2,089	1,377	849	404
Total Liabilities	<u>275,232</u>	<u>312,091</u>	<u>278,700</u>	<u>228,810</u>	<u>206,638</u>
Equity:					
Capital:					
Contribution from the government	10,459	10,522	10,584	10,646	10,708
Surplus from contributions	2,908	2,827	3,194	3,069	2,797
Royalty on Real Property Services - Net	475	475	–	–	–
Retained earnings:					
Capital expenditure appropriation	80,186	80,186	80,186	80,186	95,718
Unappropriated	28,300	15,992	12,377	43,811	15,876
Welfare Fund	256	256	–	–	–
Specific Purpose funds	11,515	12,062	11,321	10,603	8,376
Deferred losses from use of Managed Float systems	–	–	–	(18,680)	(24,053)
Total equity	<u>134,099</u>	<u>122,320</u>	<u>117,662</u>	<u>129,635</u>	<u>109,422</u>
Total liabilities and equity	<u>409,331</u>	<u>434,411</u>	<u>396,362</u>	<u>358,445</u>	<u>316,060</u>
For the years ended September 30:					
	kWh	kWh	kWh	kWh	kWh
	(Millions)	(Millions)	(Millions)	(Millions)	(Millions)
Electricity generated and purchased	103,165	96,781	90,414	92,134	92,725
Electricity sales	97,412	90,725	84,512	85,598	85,896

Electricity Generating Authority of Thailand
FIVE YEAR SUMMARY - CONTINUED

For the years ended September 30:	2001 Baht (Millions)	2000 Baht (Millions)	1999 Baht (Millions)	1998 Baht (Millions)	1997 Baht (Millions)
Electricity sales (Note 4)	185,072	160,992	134,335	146,572	125,376
Operating expenses (Note 5)	166,157	132,168	149,510	124,085	105,716
Net income (loss) before interest charges	26,207	31,289	(13,023)	31,422	21,420
Interest charges	9,984	11,114	11,238	11,112	8,592
Net income (loss)	16,223	20,175	(24,261)	20,310	12,828
Remittance to Ministry of Finance (paid)	16,620	7,975	5,837	2,000	8,449
Loan repayment	41,130	34,339	11,760	7,562	18,018
Capital expenditure (Note 6)	19,273	22,203	35,728	47,628	34,083
Net income (loss) as a percentage of sales	8.77%	12.53%	(18.06)%	13.86%	10.23%
Net income (loss) before interest charges as a percentage of sales	14.16%	19.44%	(9.69)%	21.44%	17.08%
Net income (loss) as a percentage of equity (Note 7)	12.10%	16.49%	(20.62)%	15.67%	11.72%
Net income (loss) before interest charges as a percentage of equity (Note 7)	19.54%	25.58%	(11.07)%	24.24%	19.58%
Net income (loss) as a percentage of total assets	3.96%	4.64%	(6.12)%	5.67%	4.06%
Net income (loss) before interest charges as a percentage of total assets	6.40%	7.20%	(3.29)%	8.77%	6.78%
Operating ratio	89.78%	82.10%	111.30%	84.66%	84.32%
Current ratio (Note 8)	0.78 : 1	0.71 : 1	0.91 : 1	0.77 : 1	0.73 : 1
Debt equity ratio	1.37 : 1	1.77 : 1	1.98 : 1	1.19 : 1	1.23 : 1
Debt service coverage	0.86	1.07	1.23	2.55	1.05
Self financing ratio					
- Annual	(25.91%)	23.54%	29.61%	43.60%	14.29%
- 3 years average	(24.27%)	18.61%	27.14%	50.23%	13.91%

- Notes :**
1. Includes investment in associated company
 2. Includes current portion of long-term debts
 3. Excludes current portion of long-term debts
 4. After deducting promotion of exports, industrial estate discount and natural disaster discount
 5. Includes losses/(gains) from foreign exchange
 6. Excludes mine development expenditures
 7. Equity - excludes deferred foreign exchange adjustment
 8. Excludes current portion of loan repayments to be paid out of sinking fund for redemption of long term debts.