

SEECTRICITE DU CAMBODGE

ANNUAL REPORT 2010



Chairman's Statement

On behalf of the Board of Directors, I would like to express sincere

appreciation to EDC for bringing out its Annual Report for the year

2010. We are proud and appreciative of the achievements of EDC

during 2010 and strongly believe that EDC is moving towards its

goal and vision to be the foremost power utility in Cambodia that builds deep

customer relationship with a reputation for supplying of reliable and affordable

electricity to its value customers.

The Board of Directors takes great pride in acknowledging the huge success by

the EDC management and staff. The cumulative achievements for the last 3 years

have been unprecedented.

On this occasion, I wish to extend my personal and heartfelt thanks to the

management and staff of EDC who have worked tirelessly to create many

enduring achievements. It is through their dedication and hard works that EDC is

well placed to realize its vision and goal.

Tun Lean

Chairman of the Board

From RGC Delegate in charge of Managing EDC

It gives me a real pride to present the annual report for the year 2010. The vision of Electricité du Cambodge (EDC) is to become the leading power utility in the Kingdom of Cambodia by striving to meet the customers' load demand, and improving the quality and reliability of supply.

During 2010, our energy sale increased by 23.56% over the previous year to reach 2,031.50 GWh and revenue grew by 29.79% over the previous year to reach 1,598 Billion Riels. We have a combined workforce of 2,570 staff members serving 375,997 customers. Our system losses were 9.41% during 2010.

During 2010, the construction of two 230 kV line bays at West Phnom Penh substation, under ADB loan, was completed to connect the 230 kV lines from South Phnom Penh and future Preah Sihanouk substations. Three projects of 230 kV transmission lines are under construction. The projects are 230 kV line from Phnom Penh to Battambang under BOT with a length of 300 km, 230 kV line from Takeo to Kampot under KfW loan with a length of 74 km and 230 kV line project from Kamchay Hydropower plant to Kampot with a length of 12 km. These projects are expected to be completed by the end of 2011. With the completion of these projects, the Phnom Penh Grid will be extended to cover Kampot, Kampong Chhanang and Pursat provinces and will get connected to the Battambang - Banteay Meanchey – Siem Reap grid and will facilitate supply from Kamchay Hydro power plant into the grid.

In addition, the rural electrification and transmission project (RETP) under WB financing also provides for expansion of the 22 kV line to supply rural people who live in the potential area with available source of supply such as West Phnom Penh, Kampot, Preah Sihanouk, Takeo, Kampong Speu, and Battambang. The target of this project is to energize to 50,000 rural customers with construction of 516 km of MV line under WB financing and 536 km of LV line under EDC financing. During 2010, 554 km of MV line and 278 km of LV line were constructed and 30,388 customers were already energized.

Moreover, EDC have invested for 70 km of 35 kV sub-transmission line to import power from Vietnam to supply to Rattanakiri province.

In accordance with the strategy of Royal Government of Cambodia, EDC has attracted various grants and loan from World Bank, Ausaid, ADB, and China Exim Bank to implement grid expansion projects for rural electrification in many parts of Cambodia. These projects are under feasibility study and will be implemented in the following years.

To meet the power demand and expand the grid further, EDC worked with Royal Government of Cambodia to successfully attract some private companies to invest in transmission line and generation project like Phnom Penh-Kampong Cham 230 kV line, 270 MW Coal fired power plant. On the other hand 37 licensees have PPAs with EDC for bulk supply to provide electricity in their licensed areas.

The above efforts have resulted in a great many direct and indirect benefits to thousands of households and businesses across the country. This is clearly a concrete and real progress in helping Cambodia build a stronger foundation for sustainable economic and social development.

We would like to take this opportunity to acknowledge the contribution and commitment of all our employees who play such an indispensable role in the success of this organization. We are highly indebted to the great guidance and wisdom given to us by Samdech Akak Mohasena Padey Decho **Hun Sen**, Prime Minister of the Kingdom of Cambodia. We are grateful to the Ministry of Industry, Mines and Energy for their on-going sectoral direction and relentless efforts and to the Ministry of Economy and Finance for their support. Our special appreciation goes to the Electricity Authority of Cambodia for its valuable input and support and to the Board of Directors of EDC for its oversight. We also highly value the support by all our client groups. In addition, we are highly appreciative of continued assistance extended to us by all development partners and of a good professional and cooperative relationship by all IPP partners.

With these achievement and encouragement, we are ready to bring EDC and the power sector to higher level of development. We hold high hope for a better day ahead.

Keo Rottanak

RGC Delegate in charge of Managing EDC

VISION

EDC's vision is to become the leading power utility in the Kingdom of Cambodia by striving to meet the customers' demand, improving the quality and reliability of supply.

MISSION

Provide sufficient and consistently reliable power supply to consumers in its entire coverage areas at a competitive price. Improve the business operation to excellence and efficiency and participate in implementation of the government policies on poverty reductions, environmental preservation and socio-economic development.

FUNCTION AND RESPONSIBILITIES

EDC has the rights and responsibilities for generating, transmitting and distributing electricity throughout the Kingdom of Cambodia in conformity with its commercial obligations stipulated by laws, statute, license and other regulations of the Royal Government of Cambodia.

EDC operates as a commercial enterprise with independence to organize its business of generation, transmission and distribution of electricity and make capital investments, in appropriate response to market requirements and earn profit and raise productivity.

EDC is required to abide by the conditions of its license issued by the Electricity Authority of Cambodia (EAC) in providing electricity service. EDC is required to achieve its objectives by implementing its business plan approved by its Board of Directors and in accordance with the national energy policy and national development plan.

EDC shall limit its business activities to the types stipulated in its Statute and license granted by EAC.

EDC is permitted to be responsible for:

- 1- Generation, transmission, and distribution of electric power with the purpose of meeting the demand of all category of buyers;
- 2- Export electric power to neighboring countries and import electricity from neighboring countries;
- 3- Construct and operate national electric grid for energy transmission in order to ensure adequate and quality supply;
- 4- Construct and operate sub-transmission system for distribution of electricity and to facilitate connections and operations of EDC and other distribution systems;

- 5- Sell electric power and other related services;
- 6- Purchase, transfer, and exchange electricity from other generators.

EDC has its source of capital from:

- 1- grant contribution from the Royal Government;
- 2- assets and land transferred by the Royal Government to EDC as per Article 7 of the Sub-Decree No. 23;
- 3- capital generated from revenue as per the accounting rules of EDC;
- 4- grant and other financing received by EDC with approval from the Officers;
- 5- finance received by EDC from other financial sources with the approval of the Officers;

EVOLUTION OF ELECTRICITE DU CAMBODGE

Electricity has come to Cambodia in 1906. Before October 1958, power and light in Cambodia were provided by three private companies:

- Compagnie des Eaux et Electricité (CEE)
- Union d'Electricité d'Indochine (UNEDI)
- Compagnie Franco-Khmère d'Electricité (CFKE).

The CEE served the Greater Phnom Penh Area. The UNEDI took care of all other provinces, except Battambang. The CFKE has been serving Battambang-city all along.

By virtue of Kret N° 665-NS of October 10, 1958, the first two companies, CEE and UNEDI, merged under the name of ELECTRICITE DU CAMBODGE.

During 1971 to 1979, the power sector in the country passed through two dangerous events: civil war (1971-1975) and turbulent history during the Khmer Rouge Regime (1975-1979). During this time, all kinds of generation, transmission and distribution facilities were destroyed not only in Phnom Penh but also in other areas.

In 1979, EDC was re-integrated into an administrative structure under Ministry of Industry and then transferred to Phnom Penh Municipality in 1991, by the name Electricité de Phnom Penh (EDP) to manage the electric supply in Phnom Penh while the electric generations in the provinces were managed by the Department of Industry of the provincial authorities.

In 1992, EDP was re-named Electricité du Cambodge and was attached to the Ministry of Energy. After election in 1993, EDC was restructured under the Ministry of Industry, Mines and Energy (MIME) and was responsible for the development, management and operation of the power system in Phnom Penh.

Power utilities in few provinces continued to remain under the control of Provincial Authorities, which receive budgetary support through MIME.

In March 1996 by the Royal Decree # 0396/10, Electricité du Cambodge became an autonomous wholly state-owned limited liability company to generate, transmit and distribute electric power though-out Cambodia. EDC is a juridical organization with administrative, financial and managerial autonomy. EDC is responsible for its profit and losses and liable for its debts to the extent of the value of its assets.

MANAGEMENT STRUCTURE

On behalf of the Royal Government of Cambodia, the Ministry of Industry Mines and Energy and the Ministry of Economy and Finance are co-owners of the EDC.

Board of Directors

As of 2010, EDC's Board comprises of the following seven members:



H.E. Tun Lean
Chairperson
Representative of the Ministry of Industry, Mines and Energy



H.E. Keo Rottanak
Member
RGC Delegate in charge of Managing EDC
Advisor to the Prime Minister



H.E. Hang Chuon Naron Member Representative of the Ministry of Economy and Finance



H.E. Hem Kranh Tony Member Representative of the Council of the Ministers



Mr. Hang Touch
Member
Representative of EDC's Employees



Mr. Ku Khemlin Member Representative of the Ministry of Justice



Miss. Sok Sotheavy
Member
Representative of the Chamber of Commerce of Cambodia.

EDC's Management

EDC is headed by a RGC Delegate in charge of Managing EDC, with the ranking equivalence of a Secretary of State in the Government who reports to the Board of Directors, which in turn reports to the shareholding Ministers. EDC's Managing Director is assisted by three Deputy Managing Directors, eight Directors. As of 2010, the Management Level of EDC comprises of:



H.E. Keo Rottanak
RGC Delegate in charge of Managing EDC
Advisor to the Prime Minister



Mr. Chan Sodavath
Deputy Managing Director
Planning and Technique



Mr. Heu Vanthan
Deputy Managing Director
Finance and Commercial



Mr. Eng Kunthea
Deputy Managing Director
Administration and Training



Dr. Praing Chulasa **Executive Director** Dept of Corporate Planning and Projects Dept of Accounting and Finance



Mrs. Duong Vannay **Executive Director**



Mr. Suon Chhuob **Executive Director** Dept of Administration



Mr. Nou Sokhon **Executive Director** Dept of Transmission



Mr. Ros Chenda **Executive Director** Dept of Generation



Mr. Chea Sinhel **Executive Director** Dept of Distribution

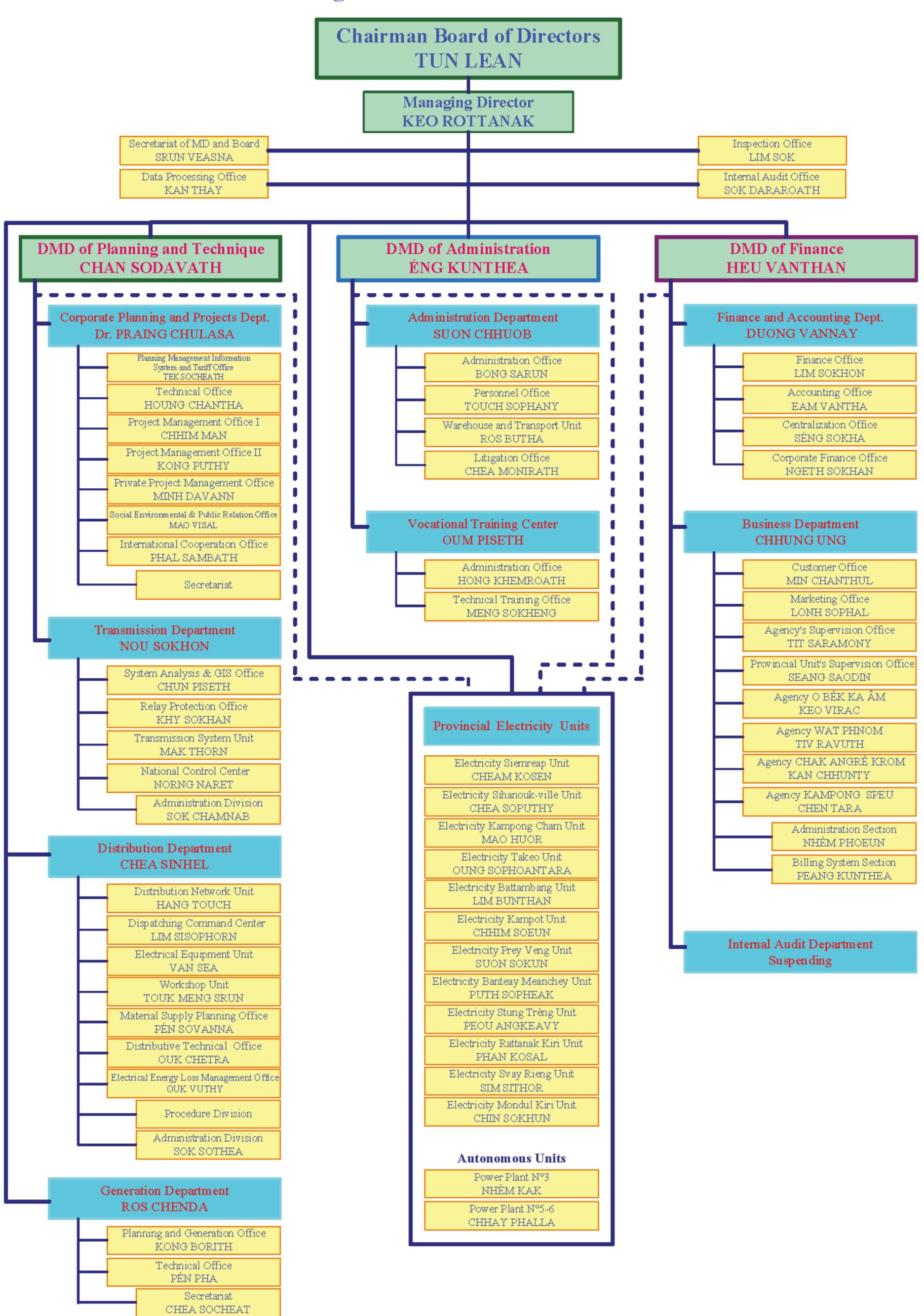


Mr. Chhung Ung **Executive Director** Dept of Commercial



Mr. Oum Piseth **Executive Director** Vocational Training Center

Organization Chart of EDC



HUMAN RESOURCES DEVELOPMENT

In 2010, 628 trainees have been trained in 50 batches at the EDC's Vocational Training Center. The breakups of the trainees for different trainings are: 161 trainees on distribution network, 81 trainees on Power Plant Protection, 162 trainees on metering, 119 trainees on safety, 61 trainees on Diesel Engine and 44 trainees on high voltage transmission line.

EDC is also collaborating with other educational institutes for training in order to improve the quality of work and provide new knowledge to its staff.

Table 1: EDC's Staff from 2005 to 2010

Туре	2005	2006	2007	2008	2009	2010
Doctorate	2	1	1	1	1	1
Post-graduated	30	62	71	85	91	104
Engineer & other graduated	310	343	381	390	446	551
Vocational Technicians	279	344	326	351	358	390
Skilled Workers	284	273	260	247	245	246
High school, Unskill	1,179	1,191	1,180	1,167	1,219	1,278
Total	2,084	2,214	2,219	2,241	2,360	2,570

The EDC's Management has the following Vision for the betterment of its Employees:

- To provide its employees with opportunities for professional growth and advancement on the basis of their performance, integrity and loyalty to the EDC.
- To provide its employee with competitive remuneration and benefits to ensure good living conditions.
- To guarantee fairness, equal treatment and opportunity to employees, to maximize their contribution to the development of EDC.

To provide suitable working conditions that facilitates an open and honest communication of information among employees to promote teamwork, productivity and cooperation for the organization's growth.

IMPORT FROM THAILAND AND VIETNAM AT HIGH VOLTAGE

EDC imports power from Thailand through 115 kV Aranya Prathet – Banteay Meanchey line which supplies to Banteay Meanchey, Battambang and Siem Reap grid substations. During 2010, EDC imported 272,123,600 kWh from Thailand through 115 kV connection.

The 230 kV double circuit transmission line from Vietnam to Takeo was commissioned on 31st March 2009. The 230 kV double circuit line from Takeo to GS4 in Phnom Penh was charged on 8th May 2009. During 2010, EDC imported 963,770,175 kWh from Vietnam. In coming years this grid system is expected to get connected to more lines and substations and cover more areas and take the form of the National Grid.

THE AREAS OF OPERATION, THEIR DEMAND & SUPPLY

The areas of operation of EDC and the position of demand and supply during the year 2010 are described below:

PHNOM PENH (PHN), KAMPONG SPEU AND SUB-URBAN AREA: Phnom Penh is the capital city of Cambodia. In this report the system supplied from GS1, GS2, GS3, GS4 and Kampong Speu substations is termed as Phnom Penh System. The EDC Phnom Penh's coverage area includes the suburban areas around Phnom Penh in Kandal Province, Kampong Speu town and also the areas along the national road No. 4.

Phnom Penh System has power plants of EDC and IPPs and import from Vietnam. Due to import from Vietnam, EDC has terminated the high cost PPA with SHC (Cambodia) International Pvt Ltd (TH) and Colben PPSEZ. The installed capacity of EDC is 44.00 MW and that of IPPs is 185.48 MW and import from Vietnam is about 120 MW. All power plants are located in the city except Kirirom hydro power plant with installed capacity of 12 MW, which is located in Kampong Speu province at about 110 km from Phnom Penh.

In 2010, for the Phnom Penh System, the peak demand was 300.20 MW. The supply from generation and import in Phnom Penh System has increased from 1,375.94 GWh in 2009 to 1,699.86 GWh in 2010 and the system loss has decreased from 9.40% in 2009 to 9.31% in 2010.

SIEM REAP (SRP): Siem Reap is the area of tourist attraction and located in Northwest part of Cambodia. Electricity supply in Siem Reap is from generation from own power plant and import from Thailand.

The main operational features of power system in Siem Reap for 2010 are: available capacity - 50.50 MW, peak demand - 34.97 MW, energy received by import from Thailand at 115/22kV substation and own generation - 193.98 GWh, total length of MV and LV lines - 417.02 cct-km and number of customers - 19,951.

SIHANOUKVILLE (SHV): Sihanoukville is the seaside tourist area, located in southwestern part of Cambodia. The isolated power system in Sihanoukville is supplied by Power Plants of IPP and EDC, together having a capacity of 19.60 MW. In 2010, the annual generation was 64.96 GWh, peak demand 13.40 MW and 10,636 customers were connected. The line length of MV and LV network was 265.61 cct-km.

KAMPONG CHAM (KGC): Kampong Cham is located in the eastern part of Cambodia. The isolated power system in Kampong Cham is supplied by an IPP. In 2010 the annual generation was 34.95 GWh, installed capacity 7.68 MW, peak demand 7.30 MW and 10,478 customers.

Memot and Ponhea Krek: The supply system for Memot and Ponhea Krek is located in Kampong Cham province and has MV system with rated voltage of 22 kV. In 2010, the system had total MV and LV lines of 85.92 cct-km, 6,404 customers and peak demand of 8.00 MW. The power supply to these areas is imported from Viet Nam since 2002 with the contracted capacity of 10 MW and in 2010 the import was 36.38 GWh.

BATTAMBANG (BTB): Battambang is located in the North-Western part of Cambodia. The 115 kV transmission line for import of power from Thailand is connected with Siem Reap and Banteay Meanchey system. Battambang city is supplied from import from Thailand and generation from own power plant. The Battambang power system has an available capacity of 23.20 MW, total MV and LV lines 248.73 cct-km and 23,902 customers. The energy available in 2010 was 49.73 GWh.

BANTEAY MEANCHEY (BTC) AND MONGKUL BOREI: Banteay Meanchey is located in northwestern part of Cambodia. Banteay Meanchey is supplied from import from Thailand and generation from own power plant. The capacity of power system is 23.08 MW. In 2010, the energy available was 24.63 GWh, peak demand of 5.51 MW and 14,816 customers were connected.

STUNG TRENG (STR): Stung Treng is a remote and sparsely populated province located in the northeast of Cambodia. In 2010, the power system of Stung Treng town was connected to the Laos system at 22 kV. The system has a capacity of 3.64 MW (1.64 MW of generation and 2 MW of import from Laos), total MV and LV lines 74.06 cct-km and 2,636 customers. The peak demand in 2010 was 1.96 MW and the available energy was 5.80 GWh.

RATTANAKKIRI (RTK): Rattanakkiri is situated bordering Vietnam's central Highlands and Laos. The power system of Rattanakiri is with an installed capacity of 0.96 MW of own hydro generation, 1.60 MW of IPP generation, has total MV and LV lines 54.12 cct-km and 2,910 customers. In 2010, the peak demand was 1.94 MW and annual generation was 8.18 GWh.

TAKEO (TKO) AND ANG TASOM: Takeo is located in the plain region of southern Cambodia. The 230 kV line from Vietnam and the Takeo substation was energized on 31st March 2009 to import power from Vietnam. Takeo continues to have its own generation system with installed capacity of 1.56 MW. In 2010, it had a peak demand of 2.68 MW, total MV and LV line of 105.93 cct-km, energy available of 9.28 GWh and 5,987 customers.

KAMPOT (KPT): Kampot is located in the Southern part of the country. EDC's own power plant with installed capacity of 3.08 MW and import from Viet Nam by 22 kV line via Kampong Trach (KGT) is used for supply to Kampot city. In 2010, generation and import was 20.82 GWh, peak demand 4.52 MW, 7,171 customers and a distribution system with total MV and LV lines 147.67 cct-km.

Kampong Trach (KGT): The power system is in Kampot province, and it imports electricity from Viet Nam since 2002. In 2010 the contracted capacity is 10 MW and the system has total MV and LV lines 45.18 cct-km, 2,515 customers, available energy 8.68 GWh and peak demand 2.13 MW.

PREY VENG (PRV): Prey Veng is located in the south east of the country. The power system of Prey Veng City has generation with installed capacity of 2.44 MW and also supply from Svay Rieng which imports power from Vietnam. The supply system has MV and LV line 100.27 cct-km, with 4,447 customers and peak demand of 0.93 MW. The energy available in 2010 was 4.68 GWh.

SVAY RIENG (SVR): Svay Rieng is located in the south-east of the country. The power supply is by import from Vietnam and own generation. Available capacity of power system is 8.30 MW; import and generation in 2010 was 18.15 GWh with peak demand 3.70 MW and 10,795 customers.

Bavet (BVT): The power system for Bavet is in Svay Rieng province and supply is by import from Vietnam. In 2010, the supply system had an available capacity of 5 MW, 2,495 customers and peak demand of 11.00 MW, energy imported of 60.86 GWh and total MV and LV lines of 31.74 cct-km.

Mondulkiri (MDKR): The power system of Mondulkiri was taken over by EDC in 2010. The installed capacity for generation is 370 kW of hydro generation and 300 kW of diesel generation. Under EDC control, in 2010 generation was 1.10GWh, and had 1328 customers.

Keosiema (KSM): The power system for Keosiema is in Mondulkiri province. Supply is by import from Vietnam with a contracted capacity of 0.36 MW. Import was 0.45 GWh, and customers 861.

Table 2: Installed Capacity and Output, MW

Yea	ar		0005	0000	0007	0000	0000	0040
Location		Capacity	2005	2006	2007	2008	2009	2010
DUN		Installed	178.50	214.78	224.78	247.28	453.48	429.48
PHN		Output	142.30	192.40	200.49	217.49	317.49	317.89
EDC		Installed	65.00	45.60	45.60	45.60	45.60	44.00
EDC		Output	43.40	42.60	42.60	42.60	42.60	41.00
CLIDI	IPP	Installed	37.10	37.10	37.10	37.10	37.10	37.10
CUPL	IPP	Output	31.90	31.90	31.99	31.99	31.99	31.99
II IDITED	IPP	Installed	26.40	-	-	-	-	-
JUPITER	IFF	Output	22.00	-	_	_	-	-
CETIC	IPP	Installed	12.00	12.00	12.00	12.00	12.00	12.00
CETIC	IPP	Output	10.00	11.00	11.00	11.00	11.00	11.00
KED	IDD	Installed	32.00	49.20	49.20	49.20	49.20	49.20
KEP	IPP	Output	30.00	45.00	45.00	45.00	45.00	45.00
OITY Davis	IDD	Installed	5.20	7.68	7.68	7.68	7.68	7.68
CITY Power	IPP	Output	5.00	6.90	6.90	6.90	6.90	6.90
OED	IDD	Installed	_	49.20	49.20	49.20	49.20	49.20
CEP	IPP	Output	_	45.00	45.00	45.00	45.00	45.00
OOL DEN	IDD	Installed	_	14.00	14.00	14.00	20.20	20.20
COLBEN	IPP	Output	_	10.00	10.00	10.00	10.00	10.00
·	IDD	Installed	_	_	10.00	10.00	10.00	_
TH	IPP	Output	-	-	8.00	8.00	8.00	-
COLDEN DDCEZ	IDD	Installed	-	-	-	12.40	12.40	-
COLBEN PPSEZ	IPP	Output	_	_	_	10.00	10.00	_
0	IDD	Installed	_	_	_	10.10	10.10	10.10
Suvannaphum	IPP	Output	_	-	_	7.00	7.00	7.00
W	IMP	PPA	_	-	_	_	200.00	200.00
West PP (VN)	IMP	Output	_	_	_	_	100.00	120.00
Dunaina		Installed	54.95	64.14	165.88	154.24	163.04	174.67
Provinces		Output	50.17	57.76	159.36	150.06	156.26	167.89
	IDD	Installed	_	5.30	8.30	_	-	_
	IPP	Output	-	4.50	8.30	-	-	-
CDD	EDC	Installed	10.50	10.50	10.50	10.50	10.50	10.50
SRP	EDC	Output	10.50	10.50	10.50	10.50	10.50	10.50
	IMD	PPA	_	_	40.00	40.00	40.00	40.00
	IMP	Output	-	-	40.00	40.00	40.00	40.00
	EDC	Installed	7.40	7.40	7.40	7.40	5.60	5.60
CH/	EDC	Output	6.20	6.20	6.20	6.20	5.00	5.00
SHV	IDD	Installed	-	-	8.00	8.00	14.00	14.00
	IPP	Output	-	-	7.00	7.00	10.00	10.00
KGC	IPP	Installed	4.71	3.40	3.40	7.68	7.68	7.68
KGC	IFF	Output	4.26	1.90	1.90	7.00	7.00	7.00
DKK	IMID	PPA	2.00	2.00	5.00	5.00	5.00	5.00
PKK	IMP	Output	2.00	2.00	5.00	5.00	5.00	5.00
NANAT.	IMP	PPA	3.00	3.00	5.00	5.00	5.00	5.00
MMT	IMP	Output	3.00	3.00	5.00	5.00	5.00	5.00

Table 2: Installed Capacity and Output, MW (Con't)

	Year		2005	2006	2007	2008	2009	2010
Location		Capacity	2005	2006	2007	2000	2009	2010
	EDC	Installed	1.56	1.56	1.56	1.56	1.56	1.56
TVO	EDC	Output	1.50	1.50	1.50	1.50	1.50	1.50
TKO	IMP	PPA	_	_	-	_	3.00	3.00
	IMP	Output	_	_	_	_	3.00	3.00
	ED0	Installed	1.60	1.60	1.60	1.60	1.60	3.20
	EDC	Output	0.80	0.80	0.80	0.80	0.80	2.40
DTD	IDD	Installed	7.12	7.12	7.62	_	_	_
ВТВ	IPP	Output	5.70	5.70	6.10	_	_	_
	IMP	PPA	_	_	20.00	20.00	20.00	20.00
	IMP	Output	_	_	20.00	20.00	20.00	20.00
KDT	ED 0	Installed	3.08	3.08	3.08	3.08	3.08	3.08
KPT	EDC	Output	3.00	3.00	3.00	3.00	3.00	3.00
LCOT		PPA	1.00	1.00	3.00	3.00	3.00	10.00
KGT	IMP	Output	1.00	1.00	3.00	3.00	3.00	10.00
		Installed	1.64	1.64	1.64	1.64	1.64	1.64
	EDC	Output	1.50	1.50	1.50	1.50	1.50	1.50
		Installed	1.10	_	_	-	_	_
PRV	IPP	Output	0.85	_	_	_	_	_
		Installed	_	_	_	_	0.80	0.80
	IMP	Output	_	_	_	_	0.80	0.80
		Installed	3.08	3.08	3.08	3.08	3.08	3.08
	EDC	Output	3.00	3.00	3.00	3.00	3.00	3.00
BTC		PPA	-	-	20.00	20.00	20.00	20.00
	IMP	Output	_	_	20.00	20.00	20.00	20.00
		Installed	1.64	1.64	1.64	1.64	1.64	1.64
-	EDC	Output	1.50	1.50	1.50	1.50	1.50	1.50
STR		PPA	-	-	-	-	-	2.00
	IMP	Output	_	_	_	_	_	2.00
		Installed	0.56	0.56	0.80	0.80	1.60	1.60
	IPP	Output	0.40	0.40	0.80	0.80	1.40	1.40
RTK		Installed	0.96	0.96	0.96	0.96	0.96	0.96
	EDC	Output	0.96	0.96	0.96	0.96	0.96	0.96
		Installed	-	0.80	0.80	0.80	0.80	0.80
	EDC	Output	_	0.80	0.80	0.80	0.80	0.80
SVR		PPA	2.00	7.50	7.50	7.50	7.50	7.50
	IMP	Output	2.00	7.50	7.50	7.50	7.50	7.50
		PPA	2.00	2.00	5.00	5.00	5.00	5.00
BVT	IMP	Output	2.00	2.00	5.00	5.00	5.00	5.00
		Installed	2.00	2.00	3.00	J.00 -	3.00	0.67
MDKR	EDC	Output	_	_	_	_	_	0.67
		PPA		_	_		-	0.36
KSM	IMP	Output						0.36
		•	232.65	279 02	300 66	A04 52	646 52	
Total		Installed		278.92	390.66	401.52 367.55	616.52 473.75	604.15
D.	Foortor	Output	192.47	250.16	359.85	367.55	473.75	485.78
P	ercentage	e, 70	82.73%	89.69%	92.11%	91.54%	76.84%	80.41%

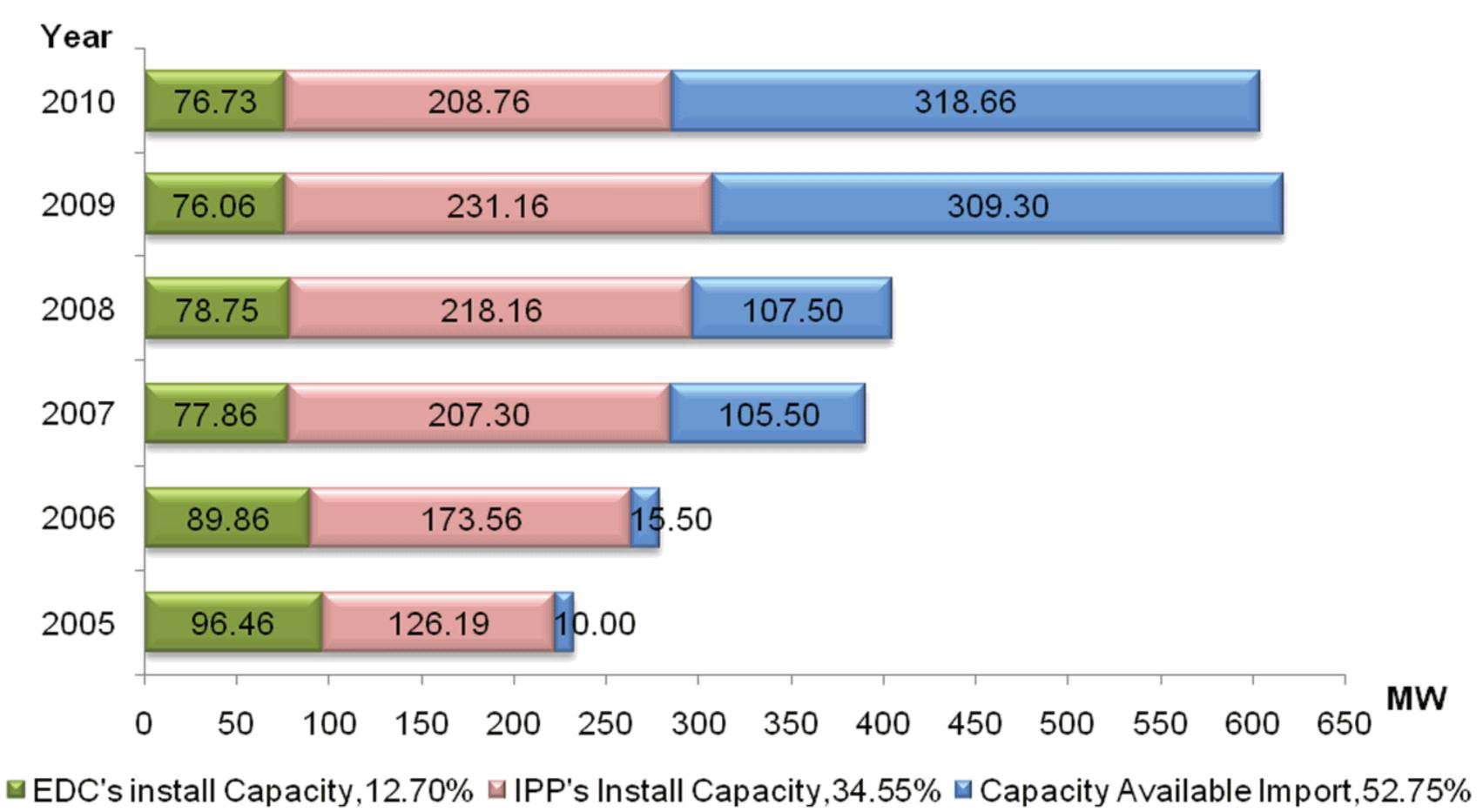


Figure 1: Install Capacity in 2010

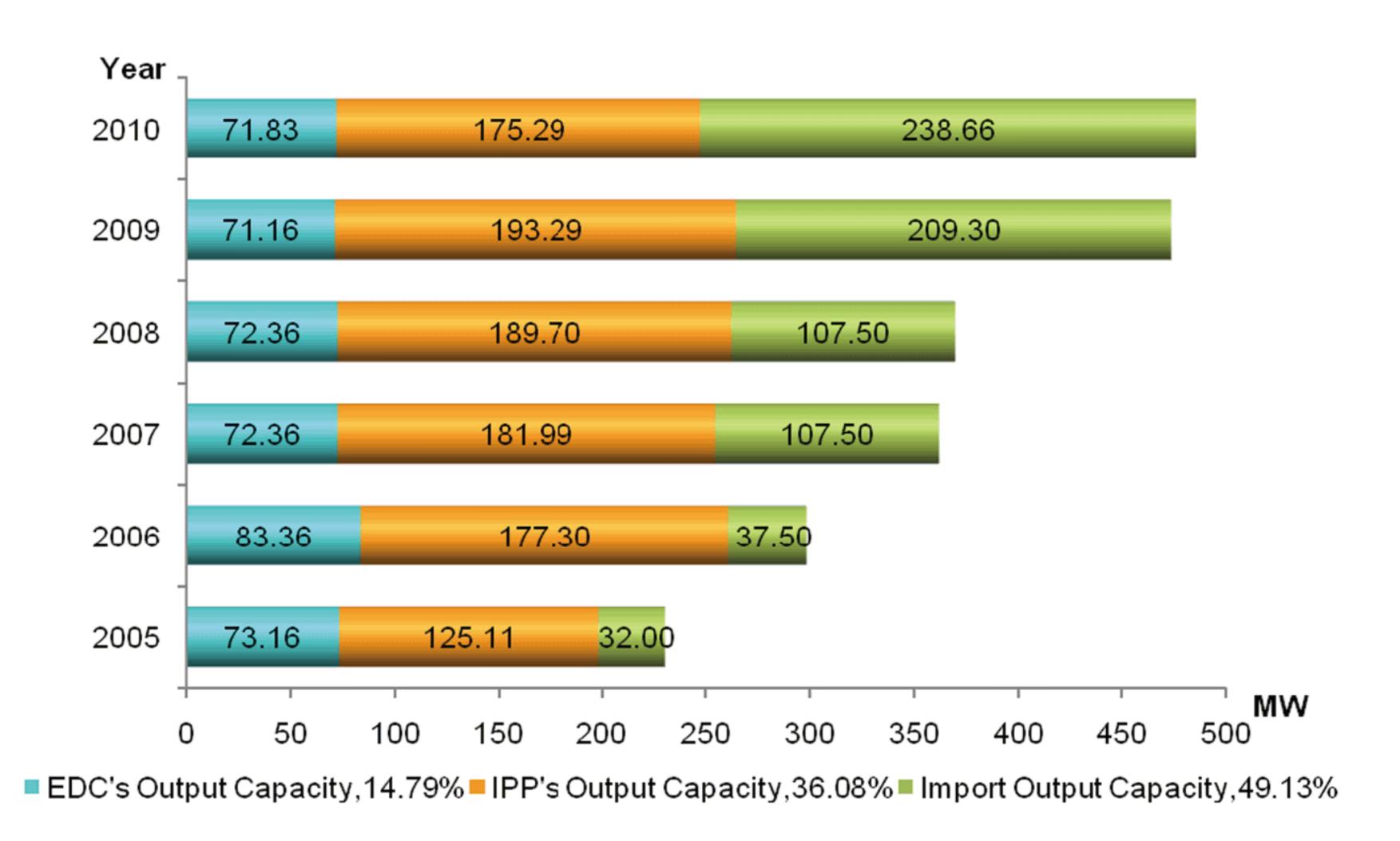


Figure 2: Output Capacity in 2010

Table 3: Energy Generation, GWh

Year	222-	0000	000-		2022	0040
Location	2005	2006	2007	2008	2009	2010
EDC	760.35	906.74	1,109.55	1,275.80	1,375.94	1,699.86
EDC's	168.02	113.6	98.9	143.85	82.861	33.08
CUPL	246.46	260.75	258.49	258.71	182.22	120.21
Jupiter	106.73	49.08	-	-	-	-
CETIC	40.88	47.69	46.53	43.32	44.41	24.21
T.H	5.68	-	14.7	34.5	17.31	-
KEP	171.94	223.98	277.99	317.85	256.25	230.38
CITY POWER	20.64	36.16	38.24	41.82	34.11	18.23
CEP	-	166.01	315.55	325.88	269.48	247.29
COLBEN	-	7.8	54.02	46.45	53.24	35.80
S.L Garment	-	1.67	5.13	4.41	5.76	4.05
COLBEN PPSEZ	-	-	-	35.66	45.06	-
Suvannaphum	-	-	-	23.36	28.03	32.07
VN	-	-	-	-	357.21	954.55
EDC Provinces	145.59	199.75	268.56	349.62	441.93	542.63
SRP	54.02	75.32	100.58	136.9	165.20	193.98
SHV	26.99	30.43	37.62	46.73	51.16	64.96
KGC	8.98	10.18	11.65	15.54	25.27	34.95
PKK	7.73	11.88	16.56	18.37	26.92	25.98
MMT	6.52	11.85	12.6	9.19	10.56	10.40
TKO	2.7	3.59	4.38	5.75	7.39	9.28
ВТВ	18.95	21.53	24.66	32.26	38.25	49.73
KPT	4.45	4.88	5.62	7.8	10.17	20.82
KGT	1.04	1.36	2.14	3.91	5.39	8.68
PRV	1.99	2.07	2.35	2.8	3.36	4.68
BTC	-	3.48	10.33	14.18	19.16	24.63
STR	_	1.58	2.56	3.53	4.39	5.80
RTK	3.6	4.79	5.01	5.78	6.41	8.18
SVR	_	2.11	5.44	9.45	12.91	18.15
BVT	8.62	14.7	27.07	37.42	55.37	60.86
MDKR	-	-	-	-	-	1.10
KSM	-	-	-	-	-	0.45
Total	905.98	1,106.48	1,378.12	1,625.42	1,817.87	2,242.49

Table 4: Generation Sources during 2010, GWh

LOCATION	EDC	IPP	HYDRO	IMPORT	TOTAL
EDC p.p	33.08	688.02	24.21	954.55	1,699.86
SRP	1.33	-	-	192.64	193.98
SHV	9.06	51.52	-	4.37	64.96
KGC	-	31.39	-	3.56	34.95
PKK	-	-	-	25.98	25.98
ммт	-	-	-	10.40	10.40
ТКО	0.04	-	-	9.24	9.28
ВТВ	0.02	-	-	49.71	49.73
KPT	0.69	-	4.29	15.84	20.82
KGT	-	-	-	8.68	8.68
PRV	0.64	-	-	4.03	4.68
BTC	0.03	-	-	24.60	24.63
STR	0.05	-	-	5.75	5.80
RTK	-	6.42	1.77	-	8.18
SVR	0.11	_	-	18.04	18.15
BVT	-	-	-	60.86	60.86
MDKR	0.43	-	0.67	-	1.10
KSM	-	-	-	0.45	0.45
TOTAL	45.48	777.35	30.94	1,388.72	2,242.49

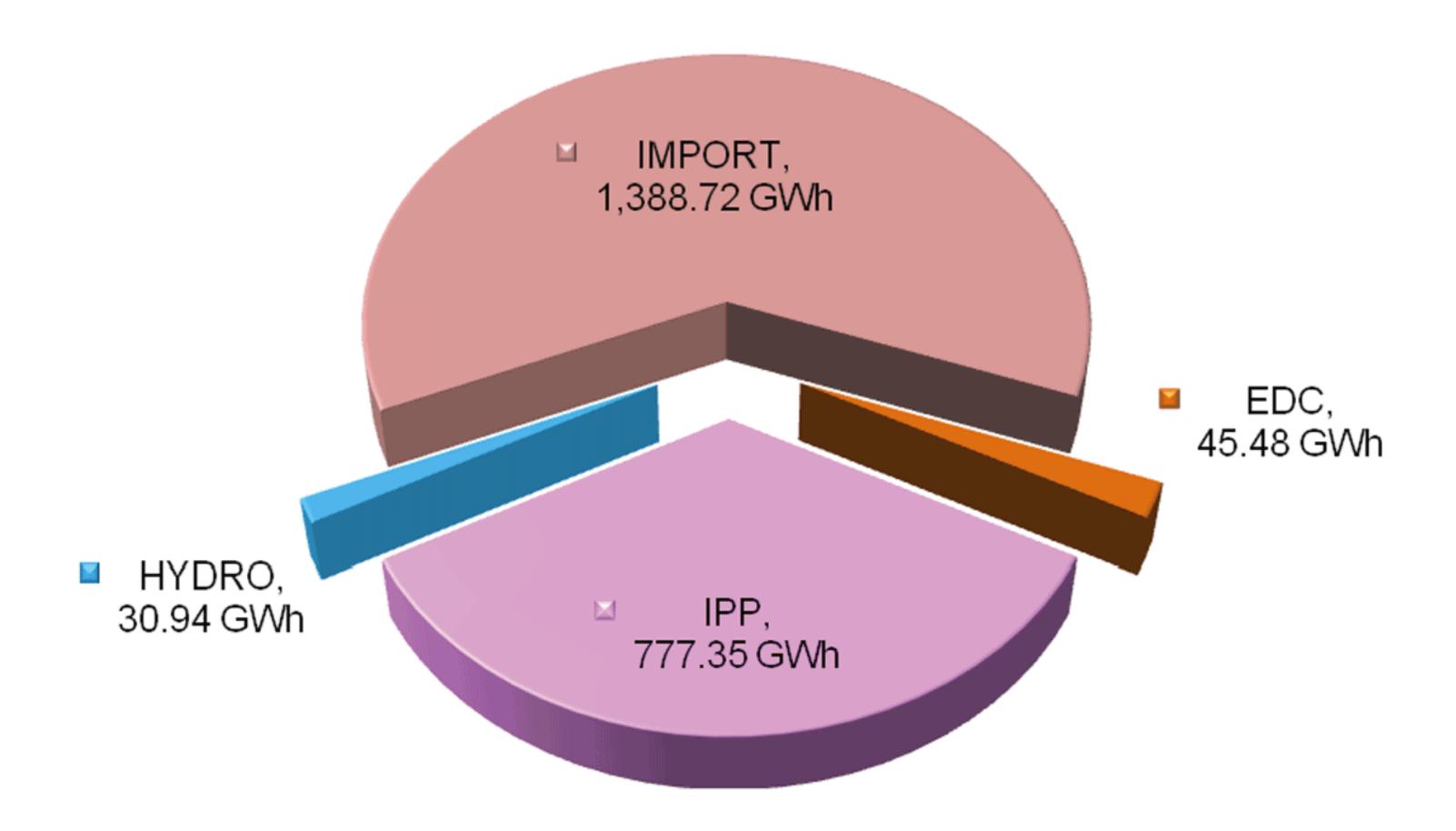


Figure 3: Power Generation by Sources in 2010

Table 5: Generation by types during 2010, GWh

LOCATION	HFO	DO	HYDRO	Thermal Wood	COAL	IMPORT	TOTAL
PHN	679.65	5.33	24.21	4.05	32.07	954.55	1,699.86
SRP	1.07	0.26	-	-	-	192.64	193.98
SHV	60.44	0.14	-	-	-	4.37	64.96
KGC	31.39	-	-	-	-	3.56	34.95
PKK	-	-	-	-	-	25.98	25.98
MMT	-	-	-	-	-	10.40	10.40
TKO	-	0.04	-	-	-	9.24	9.28
ВТВ	-	0.02	-	-	-	49.71	49.73
KPT	-	0.69	4.29	-	-	15.84	20.82
KGT	-	-	-	-	-	8.68	8.68
PRV	-	0.64	-	-	-	4.03	4.68
BTC	-	0.03	-	-	-	24.60	24.63
STR	-	0.05	-	-	-	5.75	5.80
RTK	-	4.71	1.77	1.71	-	-	8.18
SVR	-	0.11	-	-	-	18.04	18.15
BVT	-	-	-	-	-	60.86	60.86
MDKR	-	0.43	0.67	-	_	_	1.10
KSM	-	-	-	-	-	0.45	0.45
TOTAL	772.55	12.46	30.94	5.75	32.07	1,388.72	2,242.49

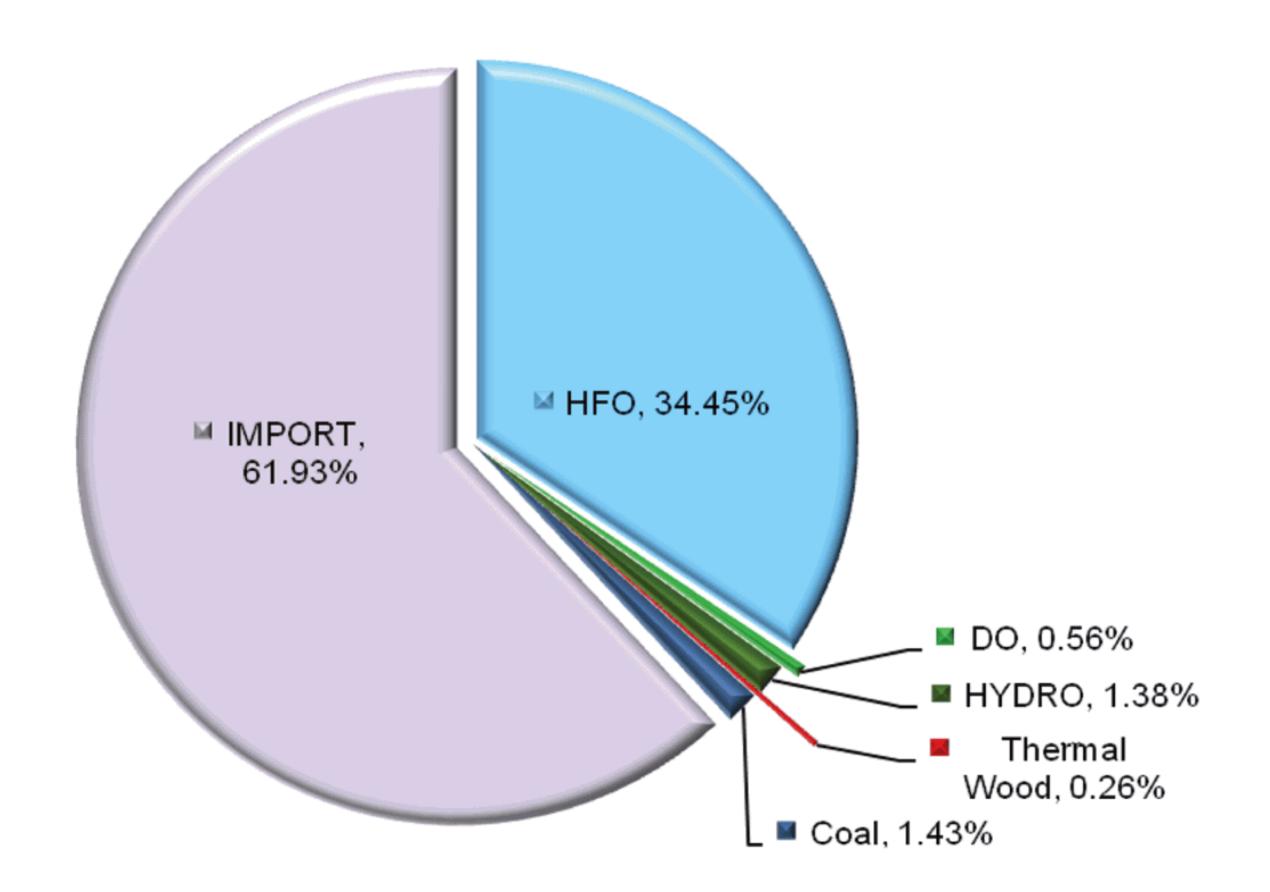


Figure 4: Generation by type in 2010

Table 6: Breakdown of Yearly Peak Demand, MW

Location	2003	2004	2005	2006	2007	2008	2009	2010
PHN	100.90	116.30	133.10	165.00	204.50	239.00	244.10	300.20
SRP	4.75	6.40	10.90	14.40	18.94	27.59	29.98	34.97
SHV	4.65	4.90	5.20	7.40	8.60	9.50	10.17	13.40
KGC	1.64	1.53	1.74	2.10	2.48	2.48	6.80	7.30
PKK	0.91	1.45	2.20	1.85	4.10	4.10	5.50	5.00
MMT	1.02	1.55	2.60	1.20	3.80	3.80	3.00	3.00
TKO	0.56	0.67	0.71	0.98	1.15	1.39	2.26	2.68
втв	3.20	3.90	4.40	5.15	5.55	7.02	7.98	10.45
KPT	-	1.10	1.26	1.25	1.34	1.85	2.36	4.52
KGT	0.14	0.24	0.27	0.20	0.66	0.83	1.20	2.13
PRV	-	0.70	0.18	0.52	0.64	0.83	0.79	0.93
BTC	-	-	1.50	2.34	2.64	3.94	4.32	5.51
STR	-	-	0.75	0.53	0.71	0.98	1.08	1.96
RTK	-	1.10	1.48	1.45	1.30	1.68	1.78	1.94
SVR	-	-	0.90	0.80	1.30	2.24	2.80	3.70
BVT	0.75	0.78	1.70	2.70	4.51	4.81	9.50	11.00
MDKR	-	-	-	-	-	-	-	0.46
TOTAL	118.52	140.62	168.89	207.87	262.17	312.04	333.62	409.14

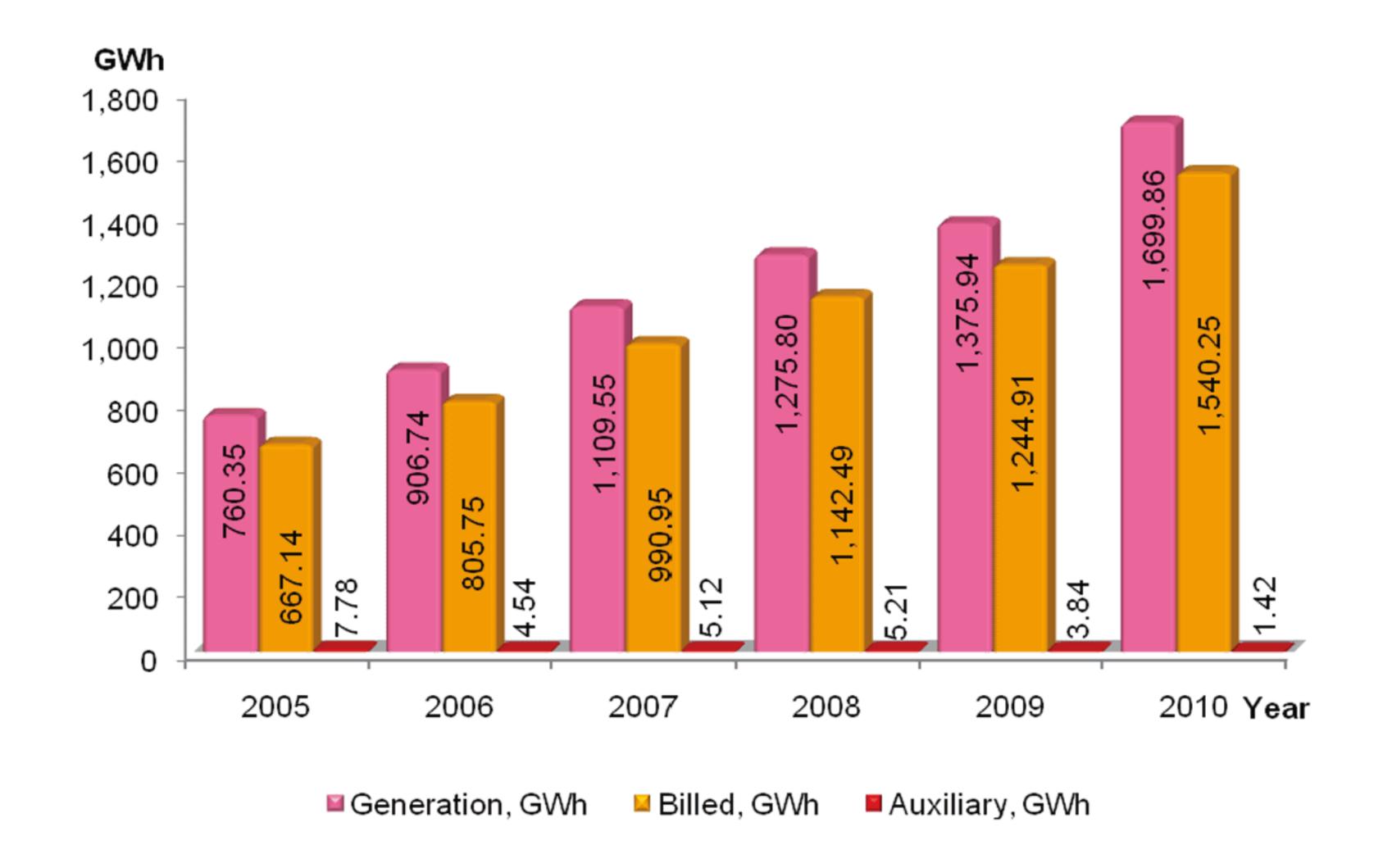


Figure 5: Break Down of Generation, Billed and Auxiliary in Phnom Penh System from 2005 to 2010

Table 7: Energy Sales, GWh

Year	2003	2004	2005	2006	2007	2008	2009	2010
PHN	478.10	558.10	667.14	805.75	990.95	1,142.49	1,246.53	1,540.25
SRP	19.20	28.70	42.99	62.84	83.14	117.29	145.12	170.97
SHV	18.20	20.60	22.67	25.74	32.46	41.26	45.48	58.13
KGC	5.40	6.30	7.30	8.40	9.65	13.26	22.23	31.31
PKK	1.70	3.70	7.37	11.27	15.73	17.43	25.56	24.99
ММТ	2.30	3.60	6.17	11.25	11.94	8.69	10.00	9.80
TKO	1.80	2.10	2.41	3.17	4.00	5.11	6.62	8.41
втв	10.20	13.10	15.05	16.82	21.17	28.59	34.27	45.41
KPT	-	1.50	3.06	3.45	4.95	7.01	9.09	15.21
KGT	0.15	0.60	0.93	1.22	2.06	3.68	5.11	8.20
PRV	-	0.70	1.24	1.62	1.97	2.41	2.88	4.17
втс	-	-	-	2.84	8.79	12.65	17.28	22.62
STR	-	-	-	1.44	2.23	3.06	4.10	4.84
RTK	-	0.80	2.19	2.93	3.83	4.99	5.77	7.53
SVR	-	-	-	1.91	4.78	8.53	11.81	16.51
BVT	3.50	4.70	8.31	13.98	24.87	34.95	52.22	61.96
MDKR	-	-	-	-	-	-	-	0.83
KSM	-	-	-	-	-	-	-	0.37
TOTAL	540.60	644.50	872.23	974.62	1,222.52	1,451.42	1,644.07	2,031.50

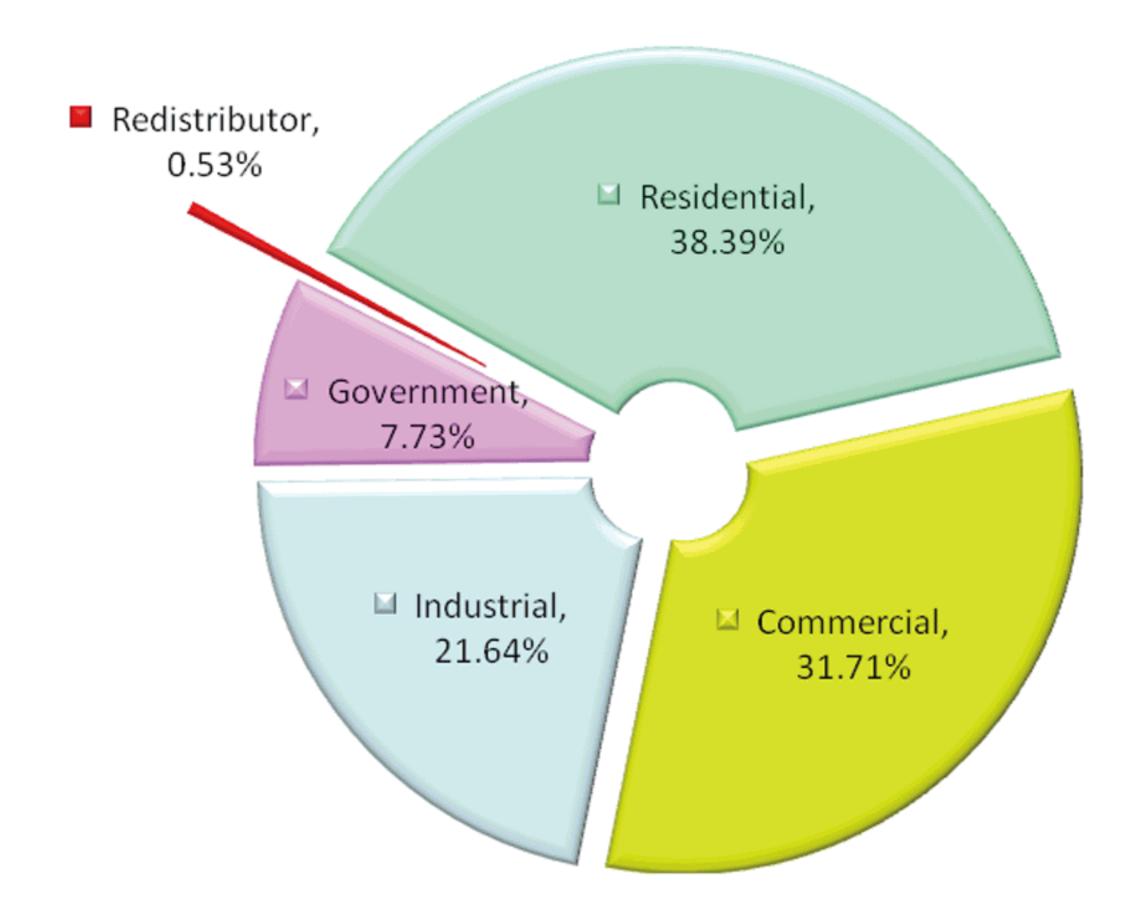


Figure 6: Energy Sale by Sector for Phnom Penh's System in 2010

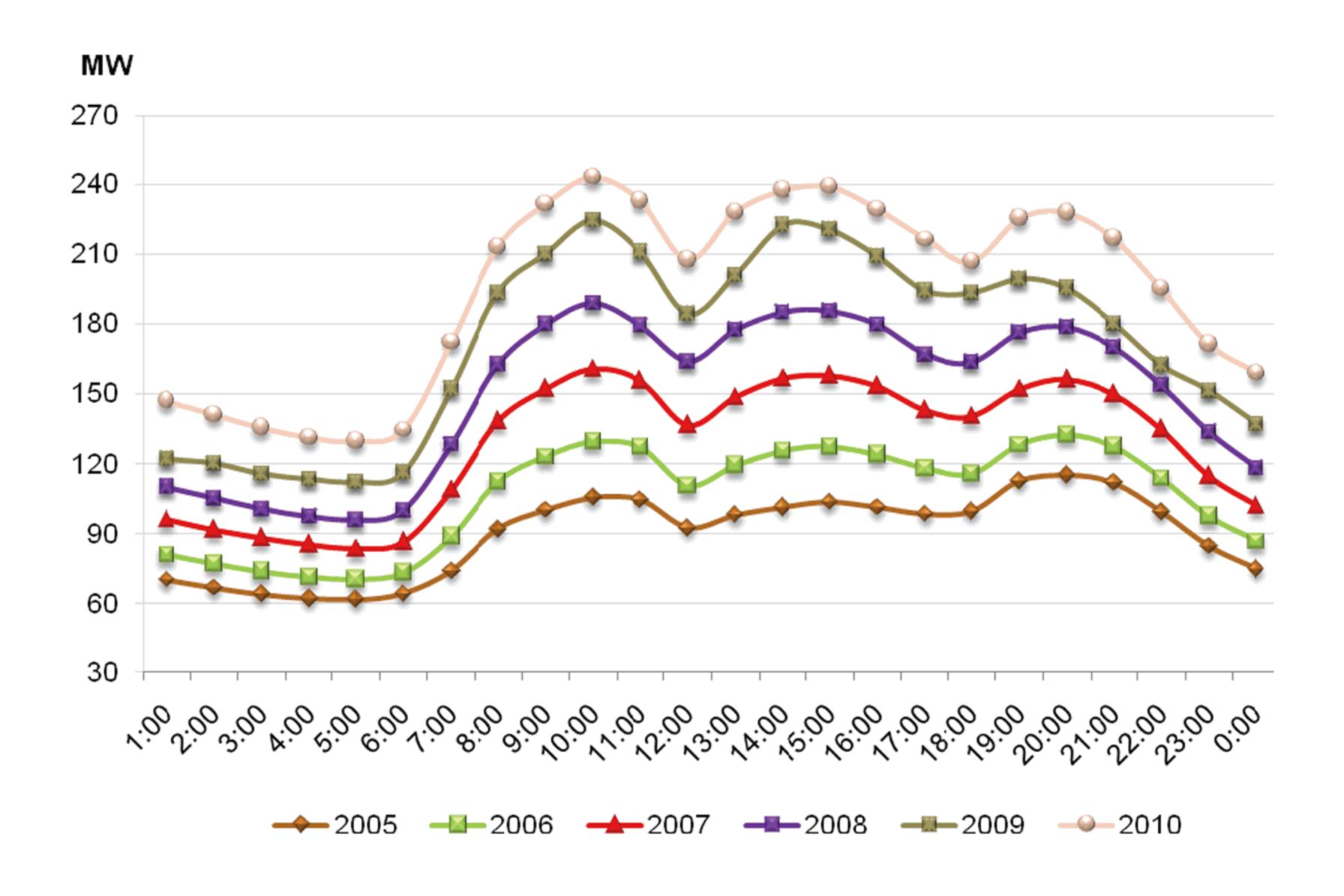


Figure 7: Average Daily Load Curve from 2005 to 2010 in Phnom Penh

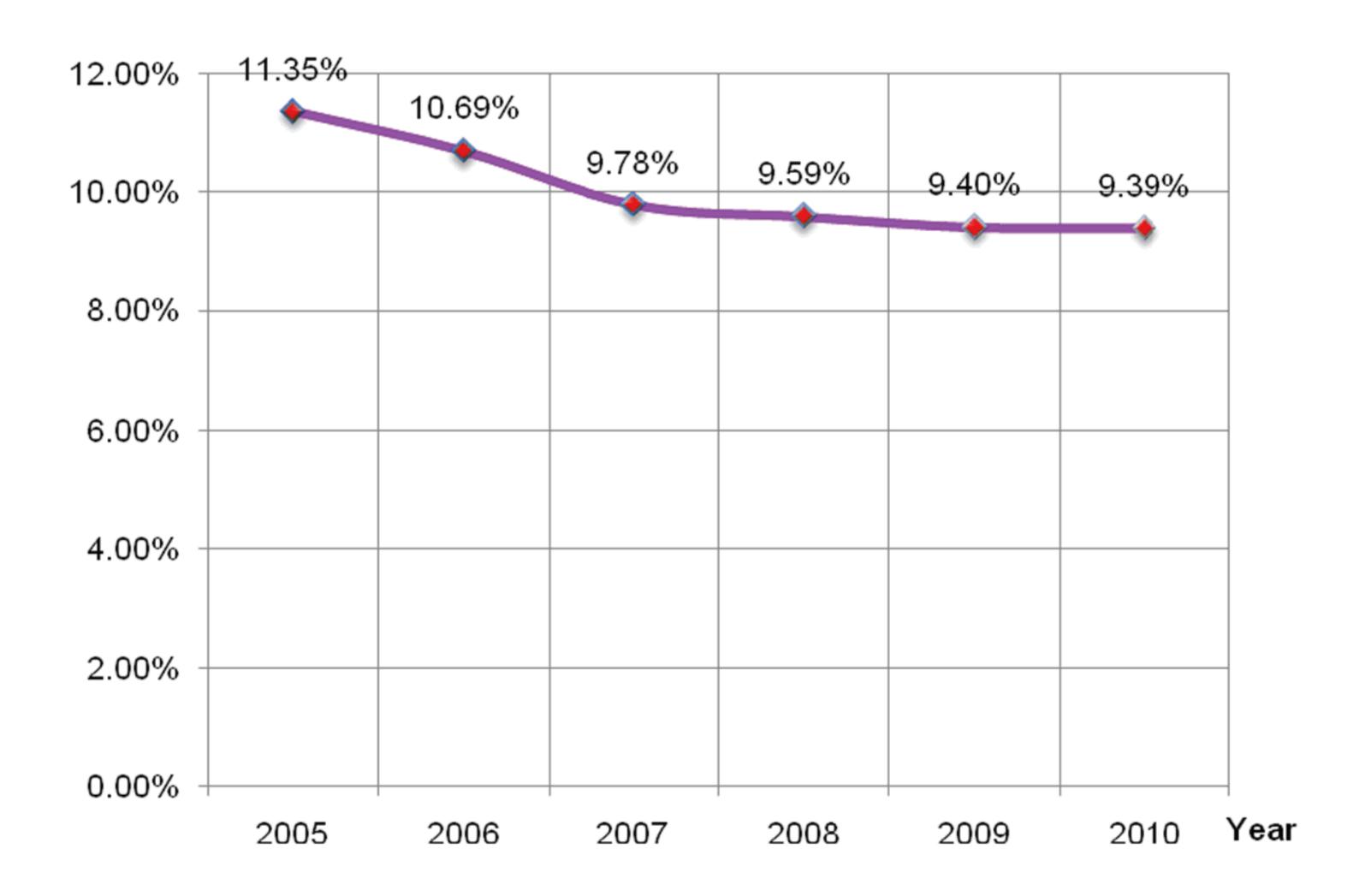


Figure 8: System Losses in Phnom Penh System from 2005 to 2010

* Average Daily Load Curve in 2010 (Phnom Penh and Takeo)

Table 8: Customer from 2005 to 2010

Year	2005	2006	2007	2008	2009	2010
PHN	162,605	177,172	192,697	211,680	224,593	240,992
SRP	12,180	13,717	14,862	16,601	18,229	19,951
SHV	8,195	8,441	8,852	9,254	9,767	10,636
KGC	5,368	5,848	6,533	7,101	8,225	10,478
PKK	1,427	1,688	1,824	2,095	2,210	2,386
MMT	2,774	3,067	3,282	3,644	3,731	4,018
тко	2,609	4,508	4,927	5,292	5,638	5,987
втв	16,271	17,117	18,316	20,093	23,902	31,575
KPT	-	4,565	5,480	6,079	6,314	7,171
KGT	1,778	1,882	2,028	2,159	2,287	2,515
PRV	-	2,944	3,255	3,460	3,554	4,447
втс	-	11,417	12,116	13,464	13,941	14,816
STR	-	1,923	2,158	2,378	2,502	2,636
RTK	2,569	2,722	2,569	2,667	2,770	2,910
SVR	-	4,917	5,717	7,325	8,565	10,795
BVT	1,677	1,802	2,044	2,213	2,301	2,495
MDKR	-	-	-	-	-	1,328
KSM	-	-	-	-	-	861
Total	217,453	263,730	286,660	315,505	338,529	375,997

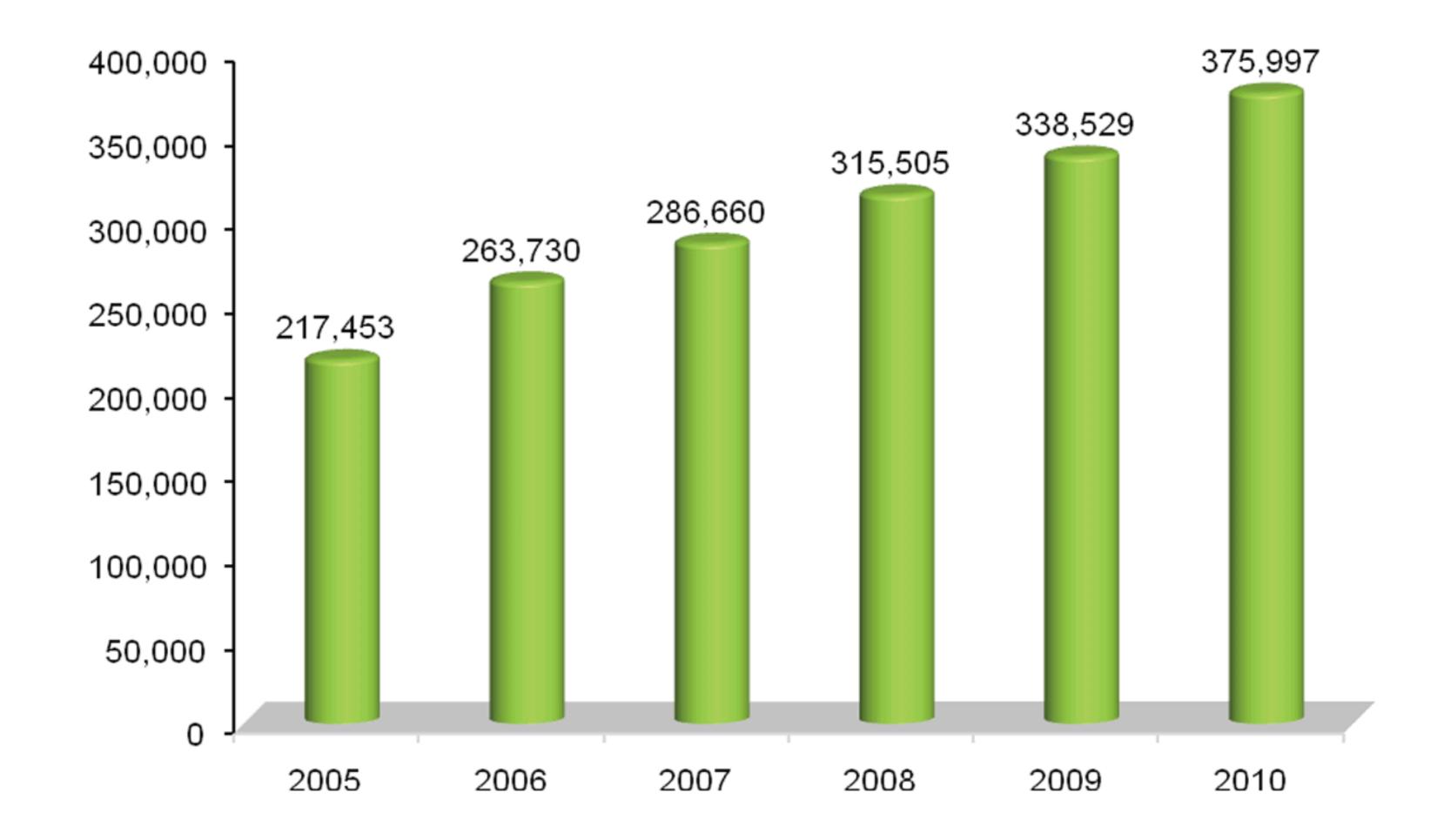


Figure 9: Number of Customer in 2010

TRANSMISSION AND DISTRIBUTION NETWORKS

The first 115 kV transmission line of 22.71 km length linking the three grid substations (GS1, GS2 and GS3) in Phnom Penh System was energized in 1999. In 2002, another 115kV transmission line of 111 km length was erected to link Kirirom Hydro Power Plant to GS1. The main purpose of the 115 kV ring bus line around Phnom Penh is to supply power to Phnom Penh area and to increase the reliability of PHN system by interlinking three grid substations.

The three provinces in North-Western Cambodia - Battambang, Banteay Meanchey, and Siem Reap are supplied by 115 kV transmission line of 185 km length by importing power from Thailand, and this line was commissioned at the end of 2007.

In 2009, the first 230 kV transmission line in Cambodian history with 97 km in length to supply to Takeo Grid Substation and the West Phnom Penh Substation (GS4) was put in service getting power supply from Vietnam. The 115 kV transmission line ring system connecting West Phnom Penh Substation (GS4) to the 3 existing substations in Phnom Penh was also put in operation.

The voltage of medium voltage systems of EDC generally is 22 kV. During 2009 and 2010, Distribution network in Phnom Penh, Kampong Speu, Prey Veng, Banlung (Rattanakiri), Stung Treng, and Sihanoukville have been strengthened with 22 kV medium voltage lines. The detailed data of lines of different voltages are shown in the following table.

Table 9: Distribution Facilities of EDC System

Location	ltem	2005	2006	2007	2008	2009	2010
	Line Length, cct-km	1,441.30	1,539.20	1,588.20	1,851.24	2,073.38	2,347.69
DUN	High Voltage *	128.70	128.70	332.70	332.70	470.53	470.53
PHN & Kandal	Medium Voltage	552.90	628.93	669.40	698.71	741.81	932.64
	Low Voltage	759.70	781.53	790.13	819.83	861.04	944.52
	# MV Substation	635.00	714.00	883.00	1,196.00	1,412.00	1,591.00
	Line Length, cct-km	-	-	-	75.03	116.22	134.72
KPS	Medium Voltage	-	-	-	20.13	61.32	60.94
IXI O	Low Voltage	-	-	-	54.90	54.90	73.78
	# MV Substation	-	-	-	22.00	23.00	20.00

Table 9: Distribution Facilities of EDC System (Con't)

Location	Item	2005	2006	2007	2008	2009	2010
	Line Length, cct-km	152.50	190.76	168.25	277.03	287.19	417.02
CDD	Medium Voltage	53.20	87.13	59.26	154.91	160.48	192.06
SRP	Low Voltage	99.30	103.63	108.99	122.12	126.71	224.96
	# MV Substation	50.00	52.00	58.00	91.00	95.00	126.00
	Line Length, cct-km	130.10	140.22	135.69	139.55	173.78	265.61
CIN/	Medium Voltage	53.00	58.31	65.09	65.09	99.32	213.36
SHV	Low Voltage	77.10	81.90	70.60	74.46	74.46	52.25
	# MV Substation	49.00	45.00	58.00	64.00	69.00	144.00
	Line Length, cct-km	93.70	123.26	116.63	50.08	52.60	141.62
V.C.C	Medium Voltage	46.70	66.07	59.48	22.56	22.84	50.80
KGC	Low Voltage	47.00	57.19	57.15	27.52	29.76	90.82
	# MV Substation	48.00	58.00	60.00	29.00	31.00	52.00
	Line Length, cct-km	27.90	28.65	-	33.35	33.35	39.55
DVV	Medium Voltage	18.70	18.70	-	22.55	22.55	23.59
PKK	Low Voltage	9.20	9.95	_	10.80	10.80	15.96
	# MV Substation	16.00	17.00	_	29.00	29.00	27.00
	Line Length, cct-km	36.80	52.76	-	42.41	45.17	46.37
ммт	Medium Voltage	18.30	32.30	-	21.64	23.10	23.10
141141 1	Low Voltage	18.50	20.46	-	20.77	22.07	23.27
	# MV Substation	19.00	19.00	-	27.00	30.00	31.00
	Line Length, cct-km	39.85	104.17	104.17	105.39	104.17	105.93
тко	Medium Voltage	29.85	31.30	31.30	31.30	31.29	31.77
	Low Voltage	10.00	72.88	72.88	74.10	72.88	74.16
	# MV Substation	13.00	28.00	28.00	29.00	31.00	31.00
	Line Length, cct-km	116.40	116.50	148.79	172.11	216.21	248.73
втв	Medium Voltage	40.60	40.70	38.42	56.18	44.05	74.89
	Low Voltage	75.80	75.80	110.36	115.93	172.16	173.84
	# MV Substation	47.00	47.00	47.00	55.00	96.00	79.00
	Line Length, cct-km	83.00	83.00	121.19	92.29	94.78	147.67
KPT	Medium Voltage	34.90	34.90	47.35	32.77	32.77	68.42
	Low Voltage	48.10	48.10	73.84	59.51	62.01	79.25
	# MV Substation	24.00	24.00	24.00	28.00	30.00	38.00
	Line Length, cct-km	38.70	38.70	-	39.73	39.93	45.18
KGT	Medium Voltage	20.90	20.90	-	21.68	21.68	25.05
	Low Voltage	17.80	17.80	-	18.05	18.25	20.13
	# MV Substation	12.00	12.00		13.00	12.00	24.00
	Line Length, cct-km	42.80	42.80	45.31	45.72	83.19	100.27
PRV	Medium Voltage	9.30	9.30	10.07	10.32	47.79	53.12
	Low Voltage	33.50	33.50	35.24	35.40	35.40	47.15
	# MV Substation	9.00	9.00	13.00	14.00	14.00	17.00
	Line Length, cct-km	179.40	179.40	183.08	146.68	146.69	136.40
втс	Medium Voltage	37.90	37.90	43.61	33.66	33.66	29.50
	Low Voltage	137.00	137.00	139.47	113.03	113.03	106.90
	# MV Substation	37.00	37.00	40.00	32.00	32.00	33.00

Table 9: Distribution Facilities of EDC System (Con't)

Location	Item	2005	2006	2007	2008	2009	2010
	Line Length, cct-km	_	_	_	46.10	46.95	49.60
MKB	Medium Voltage	_	_	_	13.40	14.25	15.37
	Low Voltage	-	-	_	32.70	32.70	34.23
	# MV Substation	-	-	-	13.00	13.00	17.00
	Line Length, cct-km	40.10	40.10	_	47.23	111.43	74.06
STR	Medium Voltage	10.30	10.30	-	12.98	77.18	39.81
	Low Voltage	29.80	29.80	-	34.25	34.25	34.25
	# MV Substation	10.00	10.00	_	12.00	12.00	14.00
	Line Length, cct-km	43.20	25.50	53.03	53.03	56.02	54.12
RTK	Medium Voltage	18.00	2.50	21.69	21.69	24.28	20.29
	Low Voltage	25.20	25.20	31.34	31.34	31.74	33.83
	# MV Substation	11.00	11.00	14.00	19.00	13.00	14.00
	Line Length, cct-km	20.90	28.00	28.97	209.27	212.37	235.50
SVR	Medium Voltage	6.70	12.80	10.71	120.29	121.99	127.98
	Low Voltage	14.20	15.20	18.26	88.98	90.38	107.52
	# MV Substation	10.00	10.00	24.00	40.00	40.00	53.00
	Line Length, cct-km	20.90	28.00	-	30.35	30.35	31.74
BVT	Medium Voltage	6.70	12.80	-	11.21	11.21	11.21
	Low Voltage	14.20	15.20	_	19.14	19.14	20.53
	# MV Substation	10.00	10.00	-	31.00	32.00	35.00
	Line Length, cct-km	-	-	-	-	-	61.67
MDKR	Medium Voltage	-	-	_	-	-	29.67
	Low Voltage	-	-	-	-	-	32.00
	# MV Substation	-	-	-	-	-	40.00
	Line Length, cct-km	-	-	-	-	-	44.00
KSM	Medium Voltage	_	-	_	-	_	20.00
	Low Voltage	-	-	-	-	-	24.00
	# MV Substation	-	-	-	-	-	16.00

Note: High Voltage* - 115 kV Transmission line: 373.53 km.

- 230 kV Transmission line: 97 km.

CAMBODIA POWER DEVELOPMENT PLAN

Power Sector Development Policy

The Royal Government of Cambodia formulated an energy sector development policy in October 1994, which aims at:

- Providing an adequate supply of electricity throughout Cambodia at reasonable and affordable price,
- Ensuring reliability and secure electricity supply which facilitates investment in Cambodia and development of the national economy,
- Encouraging exploration and environmentally and socially acceptable development of energy resources needed for supply to all sectors of the Cambodian economy,
- Encouraging efficient use of energy and to minimize environmental effects resulting from energy supply and use.

Power Demand Forecast

According to Power Development Plan of the Kingdom of Cambodia prepared in 2007, electricity demand is expected to face a significant increase for the next 14 years. Electricity generation in Cambodia is projected to grow from 278.92 MW and 1,106.48 GWh in year 2006 to 2,750 MW and 15,200 GWh in year 2020. To meet the future demand, the Royal Government has developed Power Development Plan up to 2024.

The majority of this growth will occur in Southern Grid which includes Phnom Penh. The Table bellow depicts the expected power and energy output for Cambodia.

Year	2010	2015	2020
Power, MW	485.78	1,500	2,750
Energy, GWh	2,242.49	8,800	15,200

Generation Master Plan

Generation Master Plan has been developed on the following criteria:

- Peak thermal generation in Phnom-Penh.
- Small and medium size diesel units for base and peak load generation in the provincial towns and cities.
- Expand hydro development based initially on smaller size hydro which are easily accessible such as Kirirom, Kamchay and subsequently mid size hydro projects like Stung Atay, Middle Stung Russei Chrum, Battambang, Lower Srepork II or Lower Sesan. The Kamchay hydropower plant with 193 MW capacity is under construction and planned for operation in 2011 on BOT basis.

Generation Planning-2008-2021

Year	Power Station	Туре	MW	Total MW (*) High Case	Peak Dem.	Reser. Mar.(%)	Remark	
2008 _	SR-BTB-BTC - Thai	Import	80	267	271	18.8	Completed in 2007	
	Kampong Cham-Viet Nam	Import	25				By 22 kV	
2009	Phnom Penh – Viet Nam (Increase)	Import	200	272	271	0	Completed	
	Stung Treng- Lao	Import	10			29.6	By 22kV	
2010	Kamchay	hydro	193	650	502		Postpone to 2011	
	Kampong Cham-Viet Nam	Import	10				Cancel	
2011	Kirirom III	hydro	18	650	650	561	15.9	
2011	Coal SHV	Coal	100			301		
2012	Stung Atay	Stung Atay hydro 120	977	719	36			
2012	Coal SHV	Coal	100	311	719	30		
	Retirement - C3 (GM)	(DO)	3	4006	800	00 28.4		
2013	Coal SHV	Coal	100					
2013	Lower Russei Chrum	hydro	338	1026				
	Upper Russei Chrum	hydro	330					
2014	Coal SHV	Coal	100	1203	979	22.9		
	Stung Tatay	hydro	246					
2015	Coal SHV	Coal	100	1202	1155	1155 19.6		
2015	Stung Treng- Lao	Import	20	1382				
Γ	Kampong Cham-Viet Nam	Import	22]				
2016	Lower Se San II	hydro	420	400	4507	4200	22.6	
2016	Lower Sre Pok II	hydro		1597	1302	22.6		
2017	Stung Chay Areng	hydro	240	1650	1435	15		
2018	Coal SHV	Coal	300	1800	1600	10		
2019	Sambour	hydro	450	2110	1746	20.8		
2020	Kampong Cham-Viet Nam	Import	31	2567	1985	29.3		
2021	Coal/Gaz SHV	Coal/Gaz	450	2567	2195	16.9		

Transmission Master Plan

Transmission Planning 2008-2021

	Name of Project				
Year		Line	Section	Line Length	Remark
2008	Establish 230kV Viet Nam-Phnom Penh	Type D-C	(mm2) 630,400	(Km) 111	Completed
2000	S/S connection*	D-0	000,400	'''	in 2009
2010	230kV Takeo-Kampot	D-C	400	100	Postpone to 2011
2011	115kV Kampong Cham-Kratie	D-C	630	87	Postpone to 2015
2010	115kV Laos-Stung Treng	D-C	240	56	Postpone to 2014
2010	115kV Vietnam-Suong-Kreak-Kampong Cham	D-C	400	64	Cancel
2010	230kV Kampot-Sihanoukville	D-C	630	82	Postpone to 2013
2011	230kV Kampot-Kamchay Hydro connection	D-C	630	20	
2011	115kV Stoeung Treng - Kra Tie	D-C	400	130	
2012	230kV WPP-Kampong Chhnang-pursat- Battambang	D-C	630*2B	310	
2012	230kV Pursat-O soam	D-C	630	80	
2012	115kV O soam-Attay include S/S	D-C	630	30	
2012	115kV GS1-SWS-NPP	D-C	250*2B	28	
2012	115kVGS2-SPP	D-C	250*2B	25	
2012	115/230kV NPP-Kampong Cham	D-C	400*2B	120	
2013	230kV Lower & upper Russei Chhroum- O soam	D-C	630	30	
2013	230kV WPP-SHV include Real Rinh S/S	D-C	630	220	
2014	115kV SPP-EPP-NPP	D-C	250	20	
2014	115kV EPP-Neak Loeung-Svay Rieng S/S connection	D-C	250*2B	122	
2017	230kV Kratie-Lower Se San2 - Vietnam	D-C	630	90	
2017	230kV WPP-NPP	D-C	630	25	
2017	230kV NPP-Kampong Cham-Kratie-Se san2- Viet Nam	D-C	630	300	
2018	230kV Sre Ambil-Koh Kong-O Soam	D-C	400	200	
2019	230kV Sambor - Kratie	D-C	630	30	
2021	230kV Kampong Cham-Kampong Thom-Siem Reap-Battambang-Thai	D-C	630	350	

Power Interconnection with Thailand

The Power Cooperation Agreement (MOU) with Thailand was signed in 3rd February 2000. This MOU provided a framework for the power trade and technical assistant between these two countries and opens the power access to the third countries. The PPA was signed in 2002 and amended in 2007. It encouraged the joint utilization of the existing natural resources of the two countries. When the power pool will be established, both countries can be participated widely in term of receiving and supplying the power.

At present Electric Power between Cambodia and Thailand is transmitted at 22 kV and 115 kV levels. An agreement was signed with Trat Province (Thailand) to supply power to Koh Kong province (Cambodia) and Poit Pet (Cambodia) by using 22 kV line. The above areas have been connected since 2001. Recently, 115 kV transmission line from Arranh Prathet substation, Thailand connection to BTC, BTB and SRP has been commissioned in 2007.

Power Interconnection with Viet Nam

The Power Cooperation with Viet Nam was signed in 10th June 1999. The agreement aims at the cooperation in Power Sector between the two countries. The supply of power to the areas along the border by medium voltage line and interconnection between high voltage links are encouraged.

Since 2002, EDC has imported power from PC2 to supply to Memut and Ponhea Krek Districts of Kampong Cham Province, Bavet in Svay Rieng Province, Kampong Trach in Kampot Province, Koh Thom in Kandal Province, Snuol District in Kratie Province, Chrey Thom in Kandal Province, Keo Seima District in Mondulkiri Province, Kompong Ro in Svay Rieng Province. The connection for import at Phnom Den Takeo Province was energized in 2009. The interconnection transmission project for import power from Viet Nam to Phnom Penh by 230 kV has been energized in March 2009.

Power Interconnection with Lao PDR

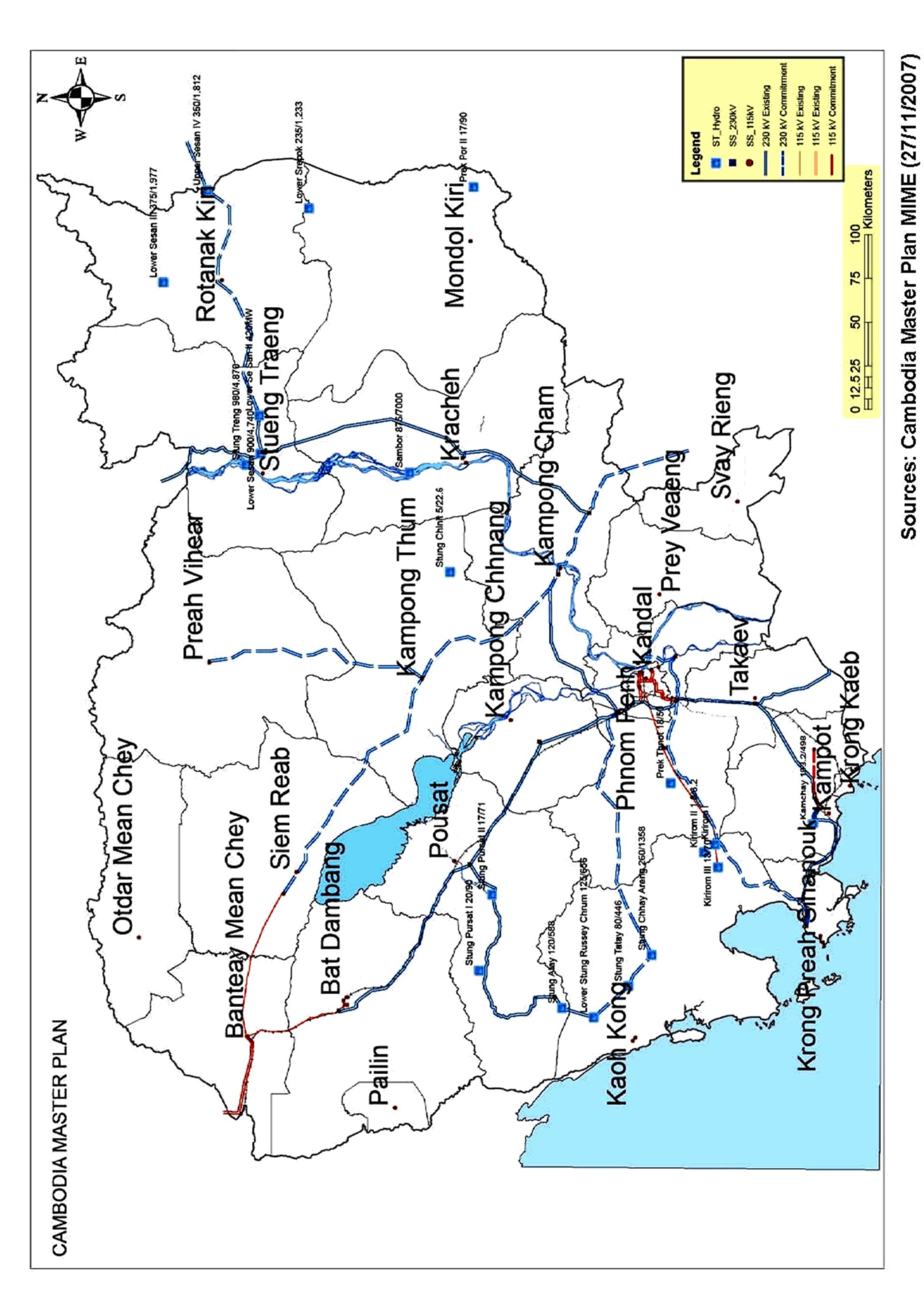
The Power Cooperation with Lao PDR was signed in 21th October 1999. The agreement aims at the cooperation in Power Sector between the two countries. The supply of power to the areas along the border by medium voltage (22kV) line and interconnection between high voltage links are also encouraged. The 22 kV interconnection line from Lao to Steung Treng was charged during 2010.

Both countries had discussed and agreed on power interconnection from Southern part of Lao PDR (Ban Hat, Cham Pasak Province) to Stung Treng of Cambodia by 115 kV line.

Sub-regional Interconnection

Interconnections between the isolated grids of the countries within the Mekong Basin (Cambodia, Laos, Thailand, Viet Nam, Yunan-China and Myanmar) or even a further extension of this grid to include Malaysia and Singapore have been subjected to a number of studies which aim at improving the utilization of energy resources. The report of ASEAN interconnection Master plan has been adopted in 2002, presenting a clear study about the ASEAN interconnection. Meanwhile, the revision of the ASEAN Interconnection Master Plan is under study by the ASEAN study team.

The study provides mostly an assessment of the viability and priority of regional interconnections based on the pre-feasibility studies. The study has postulated an urgent need to develop ASEAN Power Grid (APG). The ASEAN Power Grid Consultative Committee (APGCC) has been established. However, among the 10 interconnection options studies, the link between Cambodia and Viet Nam are ranked as fourth and classified as a potential short to medium term project for completion before 2010.



Plan 2010-2020 Development Line Figure 10: Transmission

ELECTRICITE DU CAMBODGE BALANCE SHEET AS AT 31 DECEMBER 2010

	2010	2009
	Riel' 000	Riel' 000
Assets		
Non-current assets		
Property, plant and equipment	969,951,942	790,960,747
Intangible assets	401,132	111,867
	970,353,074	791,072,614
Current assets		
Other assets	205,869,670	203,446,038
Inventories	117,391,960	79,074,471
Trade receivables	174,691,472	150,873,266
Cash and cash equivalents	289,457,512	153,350,951
	787,410,614	586,744,726
Total assets	<u>1,757,763,688</u>	<u>1,377,817,340</u>
Liabilities and owners' equity		
Non-current liabilities		
Borrowings	361,525,204	330,724,570
Customer deposits	68,164,789	59,898,913
Provision for retirement benefit	864,135	665,182
Deferred tax liabilities	1,585,002	
	432,139,130	391,288,665
Current liabilities		
Trade and other payables	272,301,325	234,557,571
Interest payables	61,969,026	42,701,150
Current income tax liabilities	30,908,713	23,313,944
Borrowings	138,279,382	94,906,670
	503,458,446	395,479,335
Total Liabilities	935,597,576	786,768,000
Owners' equity		
Assigned capital and grants	662,390,444	614,393,127
Retained earnings	159,775,668	(23,343,787)
	822,166,112	591,049,340
Total liabilities and owners' equity	1,757,763,688	1,377,817,340

ELECTRICITE DU CAMBODGE INCOME STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2010

	2010	2009
	Riel' 000	Riel' 000
Operating income		
Electricity revenue	1,577,667,850	1,215,763,623
Connection revenue	12,866,750	10,574,579
Other income	7,604,026	4,989,068
	1,598,138,626	1,231,327,270
Operating expenses		
Purchased power	(1,144,613,037)	(875,453,346)
Fuel costs	(32,782,648)	(61,018,894)
Imports duty	(31,262,376)	(10,596,794)
Employees salaries and benefit expenses	(47,764,116)	(29,764,019)
Other operating expenses	(43,199,471)	(34,410,007)
Depreciations and amortisations	(40,111,790)	(36,663,509)
	(1,339,733,438)	(1,047,906,569)
Operating profit/(loss)	258,405,188	183,420,701
Finance costs-net	(30,670,516)	(19,768,955)
Profit before income tax	227,734,672	163,651,746
Income tax expenses	(44,615,217)	(34,315,556)
Net profit for the year	183,119,455	129,336,190
Net profit attributable to owners	138,504,238	129,336,190

ELECTRICITE DU CAMBODGE STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 DECEMBER 2010

	2010	2009
	<u>Riel' 000</u>	<u>Riel' 000</u>
Cash flows from operating activities		
Cash generated from operations	257,239,702	130,229,827
Interest paid	(5,421,736)	-
Income tax paid	(35,435,446)	(14,507,858)
Net cash from operating activities	216,382,520	115,721,969
Cash flows from investing activities		
Purchases of property, plant and equipment (PPE)	(92,213,377)	(15,435,505)
Purchases of software	(357,010)	(20,950)
Proceeds from sales of PPE	4,765,678	357,908
Net cash used in investing activities	(87,804,709)	(15,098,547)
Cash flows from financing activities		
Proceeds from borrowings	6,235,352	6,872,146
Interest received	1,304,092	238,251
Repayments of borrowings	(10,694)	(181,088)
Net cash flows from financing activities	7,528,750	6,929,309
Net increase in cash and cash equivalents	136,106,561	107,552,731
Cash and cash equivalents at beginning of year	153,350,951	45,798,220
Cash and cash equivalents at end of year	289,457,512	153,350,951