





# Singapore

The Singapore GDP grew 6.4 percent in 2005. The service industry grew by 8.9 percent. The unemployment rate stood at 3.4 percent. The annual growth in labour productivity stood at 1.9 percent and the annual inflation rate stood at a low of 0.5 percent.

## Singapore's Business Environment

Singapore is one of the most conducive nations in the Asian region to do business. A strong government ensures a sound financial system with high banking standards. Its strategically position right in the heart of Southeast Asia is enhanced by its level of technology, excellent infrastructure, and its economic and political stability. The country is an ideal investment location given these factors on top of its free trade outlook.

The competitive market remains a magnet for investors looking for a blend of east and west. The economic focus has moved from low end manufacturing and services to high value activities in a bid of attracting direct foreign investments. MNCs find this an ideal place to set up a foreign base where they can co-ordinate regional procurement, production, marketing and distribution of their operations. The investment promotion strategy now finds itself shifting towards knowledge-intensive manufacturing and service activities.

Hong Kong aside, Singapore is Southeast Asia's financial hub. It has a successful and mature free market economy. . Natural gas consumption in Singapore is forecast to increase as new



Photo: Bloomberg

combined-cycle gas turbines (CCGTs) come online and old power plants are re-engineered to use clean fuels. The increase in natural gas utilisation complements the government policy aimed at reducing carbon dioxide and sulphur emissions. It also serves to achieve Singapore's vision as a regional gas trading hub.

## GENERAL

Prior to 1995, the electricity industry in Singapore was vertically integrated. Today, the electricity industry has been restructured for greater efficiency and competition. Companies that operate in the competitive parts of the industry (e.g. generation and retail businesses) have been separated from those that operate the natural monopolies (e.g. the transmission and distribution business) at the ownership level. The Singapore electricity retail market has also been liberalised

## PROFILE

Capital Area	Singapore 692.7 km	Installed Capacity	8,700MW
Population	4.35 million	Population Electrified	100%
GDP	US\$120.9 billion	Main Voltages (kV)	400, 230, 66, 22, 6.6
Currency	Singapore Dollar	Natural Resources	-

## Demand/Availability position in 2004-2005

Region	Peak Demand (MW)	Peak Availability (MW)	Peak Shortage (%)	Energy Requirement (MU)	Energy Availability (MU)	Energy Shortage (%)
2004	5,279					
2005	5,475					

## Percentage of the population provided electricity.

Rural Electrification (100%)	2001	2002	2003	2004	2005
Per capita consumption (Kwh)	7,164	7,453	7,643	7,823	7,989

## GROWTH PATTERN

Licensed Capacity in Commercial Operation (MW)	2001	2002	2003	2004	2005
Hydro					
Thermal		8,726.2	8,726.2	8,721.2	10,106.2
Nuclear					
Others					
All categories		8,726.2	8,726.2	8,721.2	10,106.2

Generation (Gwh)	2001	2002	2003	2004	2005
Hydro					
Thermal	33,088.5	34,664.5	35,330.6	36,809.6	38,212.7
Nuclear					
Others					
All categories	33,088.5	34,664.5	35,330.6	36,809.6	38,212.7

Future Projection (MW)	2006	2008	2010	2011
Hydro				
Thermal	add 500	add 800	add 450	add 450
Nuclear				
Others				
All categories	add 500	add 800	add 450	add 450



to allow contestable consumers (currently those with annual consumption of 120,000 kWh and above) to buy electricity from retailers of their choice.

Singapore is totally dependent on imported fuel for power generation. But it is self-sufficient in its energy production. It does not import or export electricity.

There are currently 5 generation companies in commercial operation. Another 2 companies (Keppel Merlimau Cogen and Island Power Company) are expected to commence commercial operation in 2006 and 2008 respectively.

Generation Company	Licensed Capacity (MW)
Senoko Power Ltd	3,300
PowerSeraya Ltd	3,100
Tuas Power Ltd	2,670
SembCorp Cogen Pte Ltd	785
National Environment Agency	251.2
Island Power Company Pte Ltd	800
Keppel Merlimau Cogen Pte Ltd	1,400

Electricity tariffs are reviewed and adjusted quarterly to account for changes in fuel costs. They are not subsidized.

Non-contestable consumers (mainly the households and small companies) buy electricity at regulated electricity tariffs. The electricity tariffs are reviewed and adjusted quarterly to account for changes in fuel costs. Fuel cost makes up about half the cost of producing electricity, making it the single largest cost component in producing electricity. As Singapore produces no fuel of its own, we are totally dependent on imported fuel to generate electricity. Therefore, when fuel prices increase or decrease, electricity prices have to follow accordingly.

Contestable consumers (currently those with annual consumption of 120,000 kWh and above)

can choose to buy electricity from the wholesale electricity market or from licensed electricity retailers. If they buy from the wholesale electricity market, they will pay for electricity at half-hourly spot prices, which depend on the competition in the wholesale electricity market. If they buy from licensed retailers, they could negotiate an electricity price package with their retailer.

**ENVIRONMENT** (A brief write-up on the implementation to promote energy efficiency and policies for Environmental Preservation)

Extreme weather and natural disasters around the region impact Singapore. The melting of the polar ice caps would mean rising sea levels, thereby threatening the country. Singapore plays a major role in the global economy. Any issue, be it environmental, political, or social, is bound to affect the country.

Singapore needs to source out renewable energy sources. Therefore initiatives are more focussed on carbon emission reduction for power generation and transportation. The initiative for more efficient and price competitive gas-fired power generation has resulted significant reductions in emission levels. The never-ending quest for a commercially-viable and environmentally-friendly electricity generation industry will be a key characteristic for Singapore in the years to come.



## ELECTRICITY TARIFFS

## Electricity Tariff (2005)

Tariff Category	Usage Charge	Q1 05	Q2 05	Q3 05	Q4 05
Low Tension	Residential (S¢/kWh)	16.73	16.06	18.26	19.57
	Non-residential (S¢/kWh)	16.73	16.06	18.26	19.57
High Tension (Small) <1700kWh	Contracted Capacity Charge (\$\$/MW/Month)	7.04	7.04	7.04	7.04
	Uncontracted Capacity Charge (\$\$/MW/Month)	10.56	10.56	10.56	10.56
	Peak period (S¢/kWh) 7am to 11pm	13.54	12.83	15.27	16.68
	Off-peak period (S¢/kWh) 11pm to 7am	7.87	7.32	8.91	9.83
	Reactive power charge (S¢/kVArh)	0.59	0.59	0.59	0.59
High Tension (Large) 1700kWh	Contracted Capacity Charge (\$\$/MW/Month)	7.04	7.04	7.04	7.04
	Uncontracted Capacity Charge (\$\$/MW/Month)	10.56	10.56	10.56	10.56
	Peak period (S¢/kWh) 7am to 11pm	13.54	12.83	15.21	16.62
	Off-peak period (S¢/kWh) 11pm to 7 am	7.87	7.32	8.90	9.82
	Reactive power charge (S¢/kVArh)	0.59	0.59	0.59	0.59
Extra High Tension	Contracted Capacity Charge (\$\$/MW/Month)	6.74	6.74	6.74	6.74
	Uncontracted Capacity Charge (\$\$/MW/Month)	10.11	10.11	10.11	10.11
	Peak period (S¢/kWh) 7am to 11pm	12.64	11.93	14.29	15.69
	Off-peak period (S¢/kWh) 11pm to 7am	7.77	7.22	8.81	9.73
	Reactive power charge (S¢/kVArh)	0.48	0.48	0.48	0.48