

# MISCELLANEOUS



### **Water Supply**

The Public Utilities Board (PUB) manages Singapore's reservoirs, waterworks, rivers, drainage system, water reclamation plants and sewerage system. To ensure the sustainability of clean water supply, PUB not only diversifies the supply sources but also manages demand.

Singapore's water supply is diversified through the four National Taps, namely, water from local catchments, imported water from Johor, NEWater and desalinated water. PUB's total water supply system comprises raw water reservoirs, treatment works, desalination water plant, NEWater plants, storage or service reservoirs and an extensive network of pipelines. Potable water is supplied to all parts of Singapore including the main offshore islands. The fluoridated water is moderately soft and treated to a quality well within the World Health Organisation's Guidelines for Drinking Water Quality.

PUB also works with the various sectors including the community to adopt water conservation measures and promote the use of water-efficient household appliances and water saving devices in managing water demand.

### **Electricity**

The Energy Market Authority (EMA) was formed in April 2001 to promote competition in the electricity and gas industries and to ensure reliability of supply.

The generation companies bid to sell electricity every half hour at the National Electricity Market of Singapore (NEMS).

NEMS is operated and administered by the Energy Market Company.

Currently, there are eight generation licensees in the electricity market. Five of the eight generation licensees, namely, Senoko Power Ltd, PowerSeraya Ltd, Tuas Power Ltd, Keppel Merlimau Cogen Pte Ltd and SembCorp Cogen Pte Ltd compete to sell electricity in the NEMS. The National Environment Agency (NEA) operates the incineration plants and sells the electricity generated from these plants. The remaining two licensees, namely, Island Power Company Pte Ltd and Keppel Seghers Tuas Waste-To-Energy Plant Pte Ltd have not started operation.

As of December 2008, the total licensed generation capacity was 12,170 MW, and the total electricity produced was 41,717 GWh. Peak demand in 2008 was 6,073MW.

There are six licensed electricity retailers, of which five actively compete to sell electricity to contestable consumers, namely: Keppel Electric Pte Ltd, SembCorp Power Pte Ltd, Senoko Energy Supply Pte Ltd, Seraya Energy Pte Ltd and Tuas Power Supply Pte Ltd. Island Power Supply Pte Ltd, the sixth company, has not started operations.

About 75% of the total electricity demand has been opened to competition. EMA is now looking to implement full contestability in the electricity retail market, which will allow domestic consumers to buy electricity from retailers of their choice.

### **Piped Gas Industry**

Currently, the gas industry in Singapore consists of two wholly separate gas networks - the town gas network and the natural gas network.

The town gas network serves about 55% of the households in Singapore and is used mainly for cooking and water heating by domestic and commercial customers. Total town gas sold in 2008 was 1,456 million units.

Natural gas is supplied to Singapore via two pipelines from Indonesia, namely West Natuna and South Sumatra, as well as two pipelines from Malaysia. Natural gas is used mainly for power generation. In 2008, natural gas contributed to about 81% of the total electricity generated.

A new framework for the gas industry was implemented in 2008 to open up access to the natural gas network in Singapore, and facilitate greater competition.

To diversify our sources of energy and to meet rising demand for energy, Singapore will be importing Liquefied Natural Gas (LNG).

### **Solid Waste Disposed and Recycled**

Over the last 30 to 40 years, Singapore has been transformed into an urbanised and industrialised country. This has led to a rising trend in waste output.

Waste generated in Singapore is broadly classified into two categories. They are:

- (a) Domestic Waste - Collected from residential premises, markets, food retail outlets, schools and trade premises.

- (b) Non-domestic Waste - Collected from commercial and industrial premises.

With limited land resources available for waste disposal, the National Environment Agency (NEA) has adopted the following strategies to manage the growth in solid waste generation:

- (a) Minimise waste generation at source
- (b) Recycle waste to reduce the amount of waste disposed of
- (c) Reduce the volume of combustible waste by incineration

Today, Singapore has in place an integrated solid waste management system. For waste that are not recycled, they are collected and disposed of safely either at waste-to-energy plants for incinerable waste, or at the Semakau sanitary landfill for non-incinerable waste.

### **Fire Occurrences**

The Singapore Civil Defence Force's (SCDF) mission is to protect and save lives and property for a safe and secure Singapore. The data on fire occurrences are compiled by the SCDF.

### **Definitions**

*Residential buildings:* Refers to all buildings, either permanent or temporary, used for residential purpose only. It does not include hotels, boarding houses, hostels, etc.

*Public, commercial and industrial buildings:* Refers to all buildings, either permanent or temporary, used for other than residential purpose, such as commercial, manufacturing, storage, sales, services and public buildings.

*Non-building:* Refers to all other properties or things other than buildings, such as vehicles, vessels, aircraft, electrical cables, bridges, canals, discarded materials, vegetation, etc.

**Criminal offences**

Singapore's crime statistics are compiled from offences reported to the police during the reference period and not at the time the offences were actually committed.

**Bankruptcy Petitions/Applications, Orders Made and Discharges**

A Bankruptcy Petition/Application is filed with the High Court by the creditor or the debtor himself.

Upon the bankruptcy petition/application, the High Court may make a Bankruptcy Order declaring the individual a bankrupt.

A Discharge refers to the conclusion of the bankruptcy of the individual and the individual is no longer subject to the restrictions and disabilities of an undischarged bankrupt.

## 24.1 WATER SALES

	1000m <sup>3</sup> /Day						
	1998	2003	2004	2005	2006	2007	2008
Sales	1,205	1,224	1,203	1,206	1,230	1,246	1,262
Domestic	643	690	686	694	702	725	742
Non-domestic	562	534	517	512	528	521	521

Source : Ministry of the Environment and Water Resources  
Public Utilities Board

## 24.2 ELECTRICITY GENERATION AND SALES

	Gigawatt Hours						
	1998	2003	2004	2005	2006	2007	2008
Generation	28,374.8	35,281.5	36,809.6	38,212.7	39,442.1	41,137.7	41,716.8
Sales <sup>1</sup>	26,081.2	31,985.7	33,171.2	34,761.3	35,921.8	37,420.3	37,940.3
Domestic	5,328.4	6,507.1	6,524.8	6,750.3	6,764.3	6,820.8	6,748.5
Manufacturing	11,121.8	13,706.7	14,446.2	15,005.0	15,041.5	15,621.6	15,482.6
Other Industries	9,631.0	11,771.9	12,200.2	13,005.8	14,116.0	14,977.9	15,709.2

Source : Electricity Generation - Energy Market Authority (with effect from 2003)  
Electricity Sales - SP Services Ltd (with effect from 2003)  
SP PowerAssets Ltd (prior to 2003)

<sup>1</sup> Prior to August 2008, the sales data were recognised based on the meter-reading date.  
With effect from August 2008, the sales figures are recognised based on the invoice date.

## 24.3 GAS SALES

	1998	2003	2004	2005	2006	2007	2008
Piped Gas Sales (Town Gas) (million units)	1,266.2	1,371.1	1,344.6	1,374.0	1,398.2	1,426.0	1,455.5
Domestic	464.6	595.3	575.8	577.8	585.8	599.8	622.4
Non-Domestic	801.6	775.9	768.8	796.2	812.4	826.2	833.2
Liquefied Petroleum Gas Sales (net tonnes)	124,697.9	119,156.2	120,868.1	90,568.0	82,543.1	94,243.9	89,137.2
Domestic	78,179.7	45,925.4	40,296.0	34,165.2	35,174.2	35,868.1	33,128.0
Non-Domestic	46,518.2	73,230.8	80,572.1	56,402.8	47,368.9	58,375.8	56,009.2

Source : Liquefied Petroleum Gas Sales - Singapore Department of Statistics  
PowerGas Ltd (up till 4th quarter 2001)  
Piped Gas Sales - City Gas Pte Ltd (with effect from 1st quarter 2002)

One unit is equivalent to one kilowatt hour.

## 24.4 WASTE DISPOSED AND RECYCLED

	Million Tonnes						
	1998	2003	2004	2005	2006	2007	2008
Waste Disposed	2.84	2.51	2.48	2.54	2.56	2.57	2.63
Domestic	1.31	1.44	1.41	1.41	1.46	1.50	1.48
Non-domestic	1.53	1.07	1.07	1.13	1.10	1.07	1.14
Waste Recycled	1.86	2.22	2.31	2.47	2.66	3.03	3.34

Source : Ministry of the Environment and Water Resources  
National Environment Agency

## 24.5 FIRE OCCURRENCES

	Number						
Type of Property	1998	2003	2004	2005	2006	2007	2008
Total	6,047	4,540	4,916	5,039	4,702	4,796	4,973
Building	4,604	3,634	3,891	3,691	3,567	3,834	4,011
Residential	3,796	3,017	3,210	3,056	2,957	3,213	3,385
Public, Commercial & Industrial	808	617	681	635	610	621	626
Non-Building	1,443	906	1,025	1,348	1,135	962	962

Source : Singapore Civil Defence Force

## 24.6 CRIME CASES RECORDED

Type of Offence	1998	2003	2004	2005	2006	2007	2008
Number of Cases Recorded							
Overall Crime	40,090	30,282	30,623	37,093	33,263	32,796	32,412
Crimes Against Persons	3,904	4,292	4,108	4,608	4,103	4,113	4,354
Violent Property Crimes	1,028	1,053	925	1,190	1,004	1,027	960
Housebreaking and Related Crimes	1,770	1,411	1,299	1,551	1,201	926	889
Theft and Related Crimes	27,778	16,716	18,236	22,711	20,301	19,556	19,363
Commercial Crimes	2,717	3,230	3,111	3,389	3,159	3,565	3,490
Miscellaneous Crimes	2,893	3,580	2,944	3,644	3,495	3,609	3,356
Per 100,000 Population							
Overall Crime Rate	1,021	736	735	870	756	715	670
Crimes Against Persons	99	104	99	108	93	90	90
Violent Property Crimes	26	26	22	28	23	22	20
Housebreaking and Related Crimes	45	34	31	36	27	20	18
Theft and Related Crimes	707	406	438	532	461	426	400
Commercial Crimes	69	78	75	79	72	78	72
Miscellaneous Crimes	74	87	71	85	79	79	69

Source : Police Intelligence Department

## 24.7 NUMBER OF BANKRUPTCY PETITIONS/APPLICATIONS, ORDERS MADE AND DISCHARGES

	1998	2003	2004	2005	2006	2007	2008
Petitions/Applications For Bankruptcy	4,073	5,404	5,122	4,078	3,506	3,217	2,954
Bankruptcy Orders Made	2,585	4,484	4,553	3,542	2,983	2,767	2,327
Bankruptcy Discharges	3,339	1,698	1,718	1,682	1,634	1,626	1,500

Source : Insolvency and Public Trustee's Office