



# Hong Kong Energy Statistics Annual Report

Presenting statistics on different forms of energy, including oil products, coal products, electricity, and gas.

2022 Edition

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**All Issues**

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## 1. Overall Energy Balance

- Between 2012 and 2022, the primary energy requirements (PER) decreased by 14.7% to 491 petajoules. On a per capita basis, PER decreased at an annual rate of 1.8% to 66.8 gigajoules during this period.
- Between 2012 and 2022, the final energy requirements (FER) decreased by 6.9% to 278 petajoules. On a per capita basis, FER decreased at an annual rate of 1.0% to 37.8 gigajoules during this period.
- In 2022, the input of coal products and oil products for electricity generation amounted to 327 petajoules, accounting for about 66.5% of PER.

**Table 1.1 : Overall Energy Balance**

Year			2012					2022				
Type of products			Total	Coal products	Oil products	Electricity	Gas	Total	Coal products	Oil products	Electricity	Gas
		Type of energy requirement										
Primary energy requirements (1)	Terajoule	Total	575 789	305 268	236 978	33 543	0	491 034	150 357	296 225	44 452	0
		Indigenous production	2 461	0	2 461	0	0	6 266	0	6 266	0	0
		Imports	1 212 644	325 963	846 520	40 160	0	861 407	164 035	652 920	44 452	0
		Exports (2)	-40 657	-129	-33 911	-6 617	0	-3 308	-17	-3 292	0	0
		Bunker	-587 721	0	-587 721	0	0	-354 251	0	-354 251	0	0
		Supply from stock	-10 938	-20 566	9 628	0	0	-19 080	-13 661	-5 419	0	0
Per capita consumption of primary energy requirements	Megajoule	Total	80 529	-	-	-	-	66 843	-	-	-	-
Final energy requirements (3)	Terajoule	Total	298 413	145	114 844	155 064	28 360	277 949	103	88 952	161 496	27 398
		Gas manufacture	-3 586	0	-31 945	0	28 360	-3 458	0	-30 856	0	27 398
		Electricity generation	-255 651	-305 123	-90 188	139 659	0	-196 401	-150 254	-176 417	130 269	0
		Industry own use and loss	-18 139	0	0	-18 139	0	-13 225	0	0	-13 225	0
Per capita consumption of final energy requirements	Megajoule	Total	41 736	-	-	-	-	37 836	-	-	-	-
Estimated mid-year population	Number ('000)	Total	7 150	-	-	-	-	7 346	-	-	-	-

1 "Primary energy requirements" (PER) refers to the overall energy consumption within a geographic territory. It represents the total supply of energy available to the territory, which supports all the requirements for energy transformation and final consumption in that territory.

2 Including re-exports.

- 3 "Final energy requirements" (FER) refers to the amount of energy consumed by final users for all energy purposes such as heating, cooking and driving machinery. It differs from PER in that the latter includes all energy used or lost in the energy transformation and distribution processes.
- Not applicable

## 2. Oil Products

- Comparing 2022 with 2021, the quantity of net imports for aviation gasoline and kerosene decreased by 14.4% to 3.2 giga litres.
- Motor gasoline (unleaded petrol) decreased by 7.1% to 0.6 giga litres.
- Gas oil, diesel oil and naphtha decreased by 24.0% to 3.3 giga litres.
- Fuel oil decreased by 12.3% to 5.2 giga litres.
- Liquefied petroleum gas (LPG) decreased by 7.0% to 286 kilotonnes.
- Natural gas decreased by 6.4% to 3 541 kilotonnes.

**Table 2.1 : Quantity of Net Imports of Oil Products**

	Quantity of net imports					
	Kilolitres				Tonnes	
Type of oil products	Aviation gasoline and kerosene	Motor gasoline (unleaded petrol)	Gas oil, diesel oil and naphtha	Fuel oil	Liquefied petroleum gas	Natural gas
Year						
2020	4 072 214	607 810	5 877 116	6 089 536	302 152	3 877 847
2021	3 693 780	629 719	4 302 364	5 899 012	307 695	3 784 682
2022	3 163 629	584 889	3 271 457	5 171 156	286 254	3 540 787

- In 2022, the mainland of China was the major supplier for import of aviation gasoline and kerosene (94.6% of total quantity), LPG (99.9% of total quantity), and natural gas (100% of total quantity).
- Singapore was the major supplier for import of motor gasoline (unleaded petrol) (69.6% of total quantity), and fuel oil (44.1% of total quantity).
- Korea was the major supplier for import of gas oil, diesel oil and naphtha (35.9% of total quantity).

**Table 2.2 : Quantity of Imports of Oil Products by Supplier**

		Quantity of imports					
		Kilolitres			Tonnes		
Type of oil products		Aviation gasoline and kerosene	Motor gasoline (unleaded petrol)	Gas oil, diesel oil and naphtha	Fuel oil	Liquefied petroleum gas	Natural gas
Year	Countries/territories						
2022	The mainland of China	2 992 884	114 659	1 029 113	197 933	286 095	3 540 789
	Singapore	1 397	413 179	420 528	2 281 865	0	0
	Malaysia	10	0	149 373	1 990 097	0	0
	Korea	14	66 016	1 202 300	152 031	286	0
	Taiwan	0	0	262 426	168 890	13	0
	Japan	167 166	0	60 670	158 165	0	0
	Indonesia	0	0	0	206 970	0	0
	Papua New Guinea	0	0	80 910	0	0	0
	Australia	0	0	68 598	0	0	0
	Others	2 158	0	74 061	20 967	25	0
	Total		3 163 629	593 854	3 347 979	5 176 918	286 419

**Table 2.3 : Quantity of Re-exports of Oil Products by Destination**

		Quantity of re-exports					
		Kilolitres				Tonnes	
Type of oil products		Aviation gasoline and kerosene	Motor gasoline (unleaded petrol)	Gas oil, diesel oil and naphtha	Fuel oil	Liquefied petroleum gas	Natural gas
Year	Countries/territories						
2022	Cambodia	0	0	33 746	0	0	0
	Macao	0	8 965	12 413	3 600	20	0
	Australia	0	0	23 836	0	0	0
	Others	0	0	6 527	2 162	145	2
	Total	0	8 965	76 522	5 762	165	2

### 3. Coal Products

- Comparing 2022 with 2021, the quantity of net imports for steam coal and other coal decreased by 4.9% to 6 216 kilotonnes.
- Wood charcoal decreased by 21.6% to 2 797 tonnes.
- Anthracite increased to 714 tonnes.

**Table 3.1 : Quantity of Net Imports of Coal Products**

		Quantity of net imports		
		Tonnes		
Type of coal products		Steam coal and other coal	Wood charcoal	Anthracite
Year				
2020		5 485 015	3 935	0
2021		6 533 462	3 567	0
2022		6 215 976	2 797	714

- In 2022, Indonesia was the major supplier for import of steam coal and other coal (83.7% of total quantity), and wood charcoal (55.0% of total quantity).
- Vietnam was the major supplier for import of anthracite (100% of total quantity).

**Table 3.2 : Quantity of Imports of Coal Products by Supplier**

		Quantity of imports		
		Tonnes		
Type of coal products		Steam coal and other coal	Wood charcoal	Anthracite
Year	Countries/territories			
2022	Indonesia	5 203 764	1 833	0
	Russia	452 925	0	0
	Canada	401 444	0	0
	Australia	154 190	0	0
	Netherlands	2 455	0	0
	Vietnam	0	404	714
	Thailand	0	569	0
	Germany	424	1	0
	The mainland of China	56	305	0
	Others	751	222	0
	Total		6 216 009	3 333

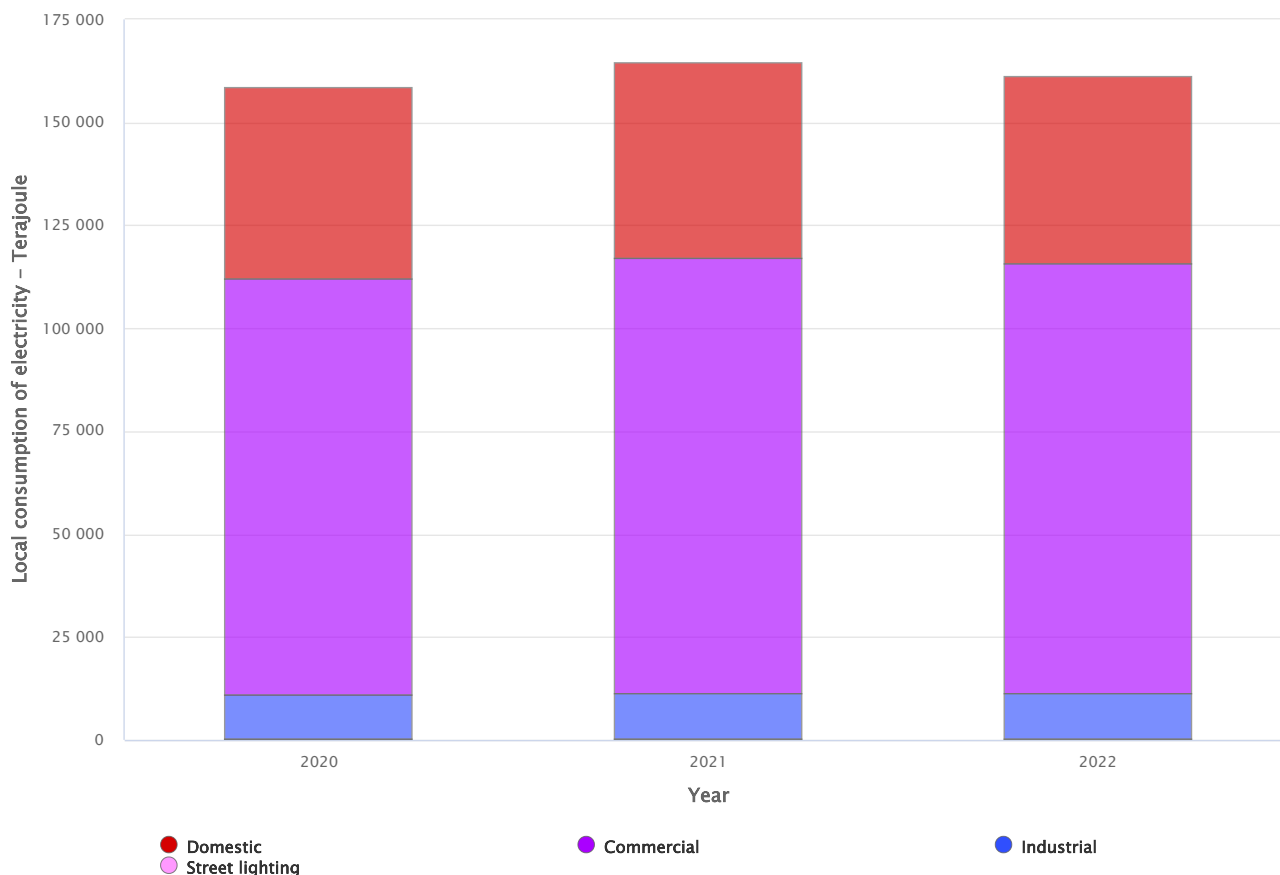
**Table 3.3 : Quantity of Re-exports of Coal Products by Destination**

		Quantity of re-exports		
		Tonnes		
Type of coal products		Steam coal and other coal	Wood charcoal	Anthracite
Year	Countries/territories			
2022	The mainland of China	0	281	0
	Macao	33	225	0
	Others	0	31	0
	Total	33	536	0

## 4. Electricity

- Comparing 2022 with 2021, the total local consumption of electricity decreased by 2.1% to 161 petajoules. The revenue of local sales of electricity increased by 10.8% to \$63.3 billion.
- In 2022, the shares of total local consumption of electricity were 64.8% for commercial users, 28.2% for domestic users, 6.9% for industrial users, and 0.2% for street lighting.

**Chart 4.1 : Local Consumption of Electricity by Type of Users**



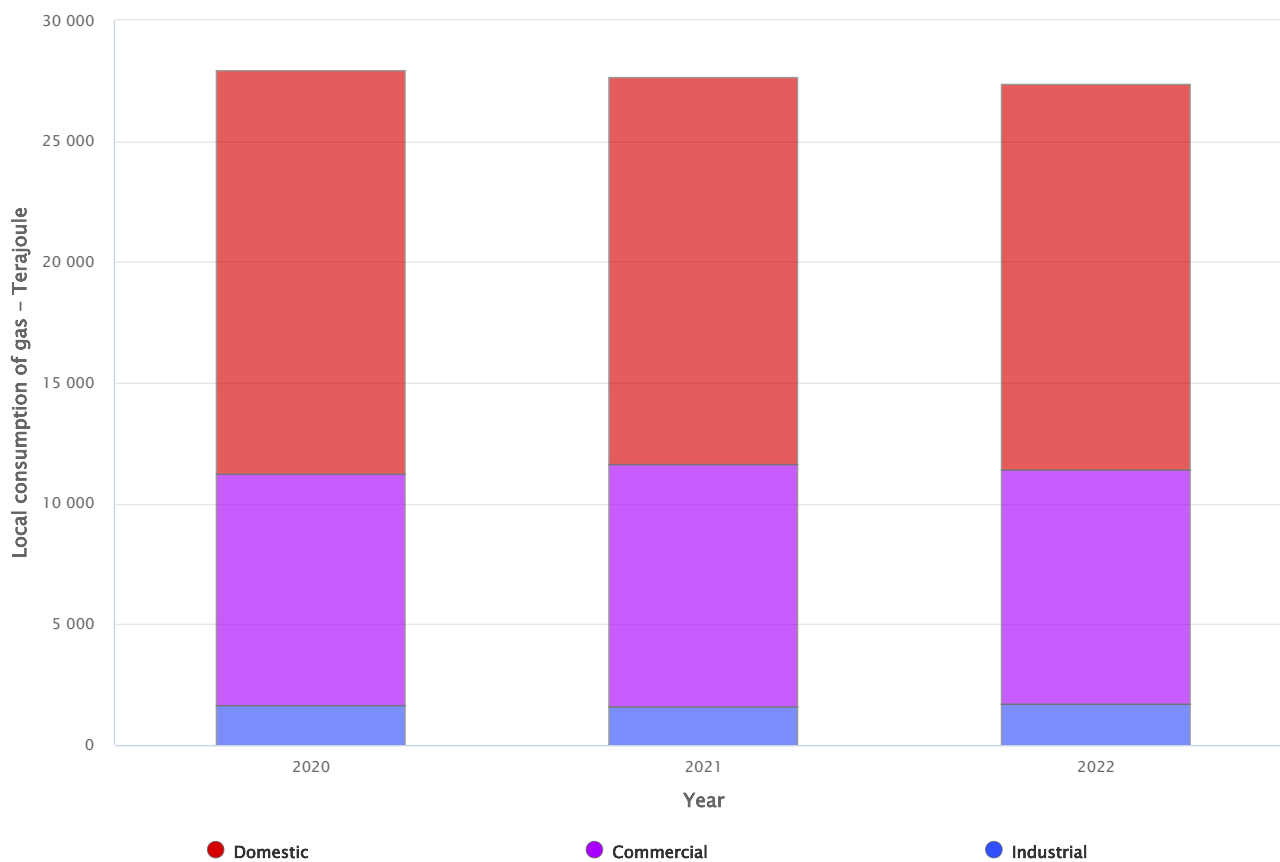
**Table 4.1 : Local Consumption of Electricity by Type of Users and Revenue from Local Sales**

	Local consumption of electricity										Revenue of local sales of electricity
	Terajoule					(% share)					HK\$ million
Type of users	Domestic	Commercial	Industrial	Street lighting	Total	Domestic	Commercial	Industrial	Street lighting	Total	
Year											
2020	46 675	101 041	10 672	362	158 751	29.4	63.6	6.7	0.2	52,871	
2021	47 464	105 631	11 163	320	164 578	28.8	64.2	6.8	0.2	57,138	
2022	45 427	104 350	11 087	291	161 155	28.2	64.8	6.9	0.2	63,307	

## 5. Gas

- Comparing 2022 with 2021, the total local consumption of gas decreased by 1.0% to 27 398 terajoules. The revenue of local sales of gas increased by 7.0% to \$8.3 billion.
- In 2022, the shares of total local consumption of gas were 58.3% for domestic users, 35.4% for commercial users, and 6.2% for industrial users.

**Chart 5.1 : Local Consumption of Gas by Type of Users**



**Table 5.1 : Local Consumption of Gas by Type of Users and Revenue from Local Sales**

	Local consumption of gas				Revenue of local sales of gas			
	Terajoule			Total	(% share)			HK\$ million
Type of users	Domestic	Commercial	Industrial	Total	Domestic	Commercial	Industrial	Total
Year								
2020	16 684	9 609	1 653	27 947	59.7	34.4	5.9	7,444
2021	16 015	10 066	1 596	27 677	57.9	36.4	5.8	7,733
2022	15 985	9 709	1 704	27 398	58.3	35.4	6.2	8,271

## 6. Detailed Statistics

**Table 6.1 : Unit Values of Imports of Oil Products and Coal Products**

Type of products	Unit values of imports							
	HK\$/litre				HK\$/kg		HK\$/tonne	
	Aviation gasoline and kerosene	Motor gasoline (unleaded petrol)	Gas oil, diesel oil and naphtha	Fuel oil	Liquefied petroleum gas	Natural gas	Steam coal and other coal	Wood charcoal
Year								
2020	2.54	2.66	2.46	2.51	4.08	3.61	419	5,389
2021	3.74	4.26	3.77	3.68	5.72	3.86	845	4,375
2022	6.13	6.29	6.20	5.16	6.47	4.93	1,964	4,415

The unit values of imports of anthracite are not presented in the above table, as the quantity of imports of these products was relatively small.

**Table 6.2 : Storage Capacity and Tank Stock of Oil Products**

Year		2017	2018	2019	2020	2021	2022
Type of oil products							
Aviation gasoline and aviation kerosene	Storage capacity	Kilolitres	484 000	484 000	484 000	484 000	484 000
	Tank stock	Kilolitres	354 381	338 799	283 598	270 170	223 124
	Percentage of tank utilisation	(%)	73.2	70.0	58.6	55.8	46.1
	Days-offtake of tank stock (1)	Days	15	14	13	29	25
Unleaded motor gasoline	Storage capacity	Kilolitres	104 492	101 282	101 282	101 696	104 096
	Tank stock	Kilolitres	57 379	57 815	46 894	55 844	69 934
	Percentage of tank utilisation	(%)	54.9	57.1	46.3	54.9	67.2
	Days-offtake of tank stock (1)	Days	35	34	22	36	45
Kerosene	Storage capacity	Kilolitres	5 100	5 100	5 100	5 100	5 100
	Tank stock	Kilolitres	2 979	915	2 014	2 956	1 980
	Percentage of tank utilisation	(%)	58.4	17.9	39.5	58.0	38.8
	Days-offtake of tank stock (1)	Days	210	83	260	434	330
Gas oil, diesel oil and naphtha	Storage capacity	Kilolitres	673 443	678 249	730 714	702 052	687 884
	Tank stock	Kilolitres	298 466	341 111	372 419	444 277	336 690
	Percentage of tank utilisation	(%)	44.3	50.3	51.0	63.3	48.9
	Days-offtake of tank stock (1)	Days	13	13	23	34	26
Fuel oil	Storage capacity	Kilolitres	593 545	597 433	522 791	601 361	554 588
	Tank stock	Kilolitres	249 339	219 916	223 659	287 972	244 343
	Percentage of tank utilisation	(%)	42.0	36.8	42.8	47.9	44.1
	Days-offtake of tank stock (1)	Days	10	10	12	19	16
Liquefied petroleum gas	Storage capacity	Tonnes	14 356	14 378	14 378	15 848	14 409
	Tank stock	Tonnes	8 615	8 605	6 883	7 581	8 183
	Percentage of tank utilisation	(%)	60.0	59.8	47.9	47.8	56.8
	Days-offtake of tank stock (1)	Days	10	8	7	9	11

The figures refer to the position as of end of the year.

1 Days-offtake = Tank stock as at the end of the specified period ÷ (Actual sales in the month that follows ÷ Number of days in the month that follows).



**Table 6.3 : Percentage of Sales of Oil Products by Type of Users**

Year	Sales of oil products					
	(% share)					
Year	2022					
Type of oil products	Aviation gasoline and aviation kerosene	Unleaded motor gasoline	Kerosene	Gas oil, diesel oil and naphtha	Fuel oil	Liquefied petroleum gas
Type of sales						
Sales for local consumption	0.3	98.4	100.0	64.8	0.0	98.6
By electricity and gas companies	0.0	0.0	0.0	12.9	0.0	18.0
By domestic, commercial and industrial users	0.2	98.1	100.0	51.7	0.0	80.5
By Government and other users	0.1	0.3	0.0	0.2	0.0	[-\$32]
Other sales (1)	99.7	1.6	0.0	35.2	100.0	1.4
Non-local sales	0.0	1.6	0.0	4.9	0.0	0.0
Ship stores	0.0	0.0	0.0	30.2	100.0	1.4
Aircraft stores	99.7	0.0	0.0	0.0	0.0	0.0
Overall Sales	100.0	100.0	100.0	100.0	100.0	100.0

1 "Ship stores" and "Aircraft stores" under "Other sales" include consumption of oil products by ships and aircrafts commuting between Hong Kong and other places. Consumption of oil products by helicopters and cross-harbour ferries in Hong Kong is included under "Sales for local consumption".

[-\$32] Less than 0.05%

**Table 6.4 : Electricity Production, Imports, Exports, and Consumption**

Year	Electricity generated at local plants	Imports of electricity from the mainland of China	Industry own use and losses (1)	Exports of electricity to the mainland of China	Local consumption of electricity
	Terajoule	Terajoule	Terajoule	Terajoule	Terajoule
2020	126 307	45 716	13 272	0	158 751
2021	133 104	45 197	13 724	0	164 578
2022	129 928	44 452	13 225	0	161 155

1 "Industry Own Use and Losses" includes (a) consumption of energy by power companies and (b) energy losses in electricity transformation and distribution.

**Table 6.5 : Generating Capacity and Peak Demand of Electricity and Gas**

Type of products	Electricity			Gas				
	Maximum installed generating capacity (1)	Peak demand (2)	Production (3)	Maximum installed generating capacity (1)	Peak demand (2)	Production (3)	Plant factor (4)	Load factor (5)
	Megawatt	Megawatt	Terajoule	Terajoule per day	Terajoule per day	Terajoule	(%)	(%)
Year								
2020	13 129	9 670	172 023	217.5	100.8	27 947	35.1	75.8
2021	13 240	9 942	178 301	221.4	111.6	27 677	34.2	67.9
2022	13 274	10 104	174 380	221.4	112.1	27 398	33.9	66.9

1 For Electricity: Refers to the average of the daily maxima during the year.

For Gas: Refers to the maximum installed generating capacity, as of end of year.

2 Electricity companies' peak demands in a year do not necessarily occur at the same time. As a broad indicator, the aggregate peak demand is taken to be the arithmetic sum of individual peak demands of the two electricity companies. As for gas company, peak demand in a year refers to the figure of the day with peak demand.

3 Electricity and gas production includes electricity and gas imported from the mainland of China (if any).

4 Plant factor = "Annual production for the year (measured in terajoule)" ÷ "Installed capacity (measured in terajoule) per day × 365 (or 366)" × 100%

5 Load factor = "Annual production for the year (measured in terajoule)" ÷ "Peak demand within the year (measured in terajoule) per day × 365 (or 366)" × 100%

## 7. Further Information

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For the latest and more detailed statistics on the Hong Kong Energy, please refer to the [Energy](#) subject page where you may customise the following tables to fit your needs:

- [Table 915-91001: Overall Energy Balance](#)
- [Table 915-91101: Value of Net Imports of Oil Products and Coal Products](#)
- [Table 915-91102: Quantity of Net Imports of Oil Products and Coal Products](#)
- [Table 915-91103: Unit Values of Imports of Oil Products and Coal Products](#)
- [Table 915-91104: Monthly Statistics on Quantity of Net Imports and Unit Values of Imports of Selected Oil Products](#)
- [Table 915-91105: Storage Capacity and Tank Stock of Oil Products](#)
- [Table 915-91106: Percentage of Sales of Oil Products by Type of Users](#)
- [Table 915-91107: Annual Quantity of Imports of Oil Products by Supplier](#)
- [Table 915-91108: Annual Quantity of Imports of Coal Products by Supplier](#)
- [Table 915-91109: Annual Quantity of Re-exports of Oil Products by Destination](#)
- [Table 915-91110: Annual Quantity of Re-exports of Coal Products by Destination](#)
- [Table 915-91201: Monthly Statistics on Consumption of Electricity and Gas by Type of Users](#)
- [Table 915-91202: Local Consumption of Electricity and Gas by Type of Users and Sales Revenue from Locally Sold](#)
- [Table 915-91203: Electricity Production, Imports, Exports, and Consumption](#)
- [Table 915-91204: Generating Capacity and Peak Demand of Electricity and Gas](#)

General tariff in respect of electricity and gas are presented in Appendix.

Appendix: [General tariff for electricity and gas 2021-2022.pdf](#)

## 8. Explanatory Notes

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### Introduction

#### Background

Hong Kong derives its energy almost entirely from external supplies. Energy is mainly imported directly (as in the case of oil products and coal products), or produced (as in the case of electricity and gas) through some intermediate transformation processes using imported fuel inputs.

Hong Kong also has very small scale wind power generation as from early 2006. In addition, landfill gas has been utilised as the fuel for gas production as from 2007. Biodiesel is also included in oil products as from 2010.

#### Units of measurement

1 petajoule	=	10 <sup>15</sup> joules
1 terajoule	=	10 <sup>12</sup> joules
1 gigajoule	=	10 <sup>9</sup> joules
1 megajoule	=	10 <sup>6</sup> joules
1 megawatt	=	10 <sup>6</sup> watts
1 gigalitre	=	10 <sup>9</sup> litres
1 kilotonne	=	10 <sup>3</sup> tonnes
1 kWh	=	3.6 megajoules

#### Data sources

Statistics in tables 2.1-3.3 and 6.1 are compiled based on Hong Kong external trade statistics. Net import statistics are derived by subtracting re-export statistics from the corresponding import statistics.

Statistics in tables 6.2-6.3 are compiled by the Electrical and Mechanical Services Department based on monthly returns submitted by the leading petroleum companies in Hong Kong.

Statistics in tables 4.1-5.1 and 6.4-6.5 as well as information contained in the Appendix are supplied by The Hongkong Electric Company, Limited; CLP Power Hong Kong Limited; and The Hong Kong and China Gas Company Limited.

Statistics in table 1.1 are compiled by collating the data from other tables.

## Terms and definition

### **Primary energy requirements (PER)**

It refers to the overall energy consumption within a geographic territory. It represents the total supply of energy available to the territory, which supports all the requirements for energy transformation and final consumption in that territory. In general, PER of a territory includes both its indigenous energy sources and imported energy commodities consumed within the territory. In the case of Hong Kong, it is calculated from indigenous energy and net imports of coal and oil products as well as electricity, net of bunkers' usage and after adjustment for changes in supply from stock. In 2006 or before, the amount of indigenous renewable energy was minimal.

### **Final energy requirements (FER)**

It refers to the amount of energy consumed by final users for all energy purposes such as heating, cooking and driving machinery. It differs from PER in that the latter includes all energy used or lost in the energy transformation and distribution processes.

## 9. Enquiries

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