The cover features a dark blue background with a grid pattern and a photograph of a power transmission tower against a cloudy sky. A pink banner at the top left contains the title. In the lower right, there is a line graph with several upward-pointing arrows, and the APEC logo is positioned at the bottom right.

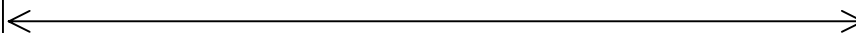
# APEC

ENERGY HANDBOOK 2004

ENERGY WORKING GROUP  
DECEMBER 2006

COORDINATING AGENCY:  
THE ENERGY DATA AND MODELLING CENTER  
THE INSTITUTE OF ENERGY ECONOMICS, JAPAN





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## Preface

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APEC Energy Handbook 2004 is a handy, pocket-sized summary of key energy data and a supplement to APEC Energy Statistics 2004 which has been released at November 2006 from APEC Secretariat in Singapore.

This handbook consists of the following parts:

1. Primary Energy Supply
2. Transformation
3. Final Energy Consumption
4. Energy Balances
5. Outlook
6. Energy Indicators

The Supply part describes Total Primary Energy Supply by energies while Transformation part shows Oil refining and Power Generation. The Consumption part indicates both Final Energy Consumption by Sectors and Consumption by fossil energies. The Energy Balances part includes regional energy balance tables while Outlook part shows projected energy demand by year 2020 under a BAU (Business As Usual) case which was prepared by Asia Pacific Energy Research Centre as of September 2002. The Energy Indicators part contains several indicators based on Population, GDP and Energy consumption amount.

This handbook has been derived from the APEC Energy Database, the purpose of which is to establish a comprehensive and consistent energy database within the APEC region. This database will be used to assist in the identification of significant trends in energy supply and demand consistent with projects and priorities under the APEC Energy Working Group. It has been prepared in close cooperation with twenty-one member economies.

Inquiries about figures and graphs in this handbook could be addressed to The Energy Data and Modelling Center, The Institute of Energy Economics, Japan.

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### Definition of Region

	APEC 21	APEC 20	East Asia	Other East Asia	South-east Asia	Oceania	North America	Latin America
Australia	0	0				0		
Brunei Darussalam	0	0			0			
Canada	0	0					0	
Chile	0	0						0
China	0	0	0					
Hong Kong, China	0	0	0	0				
Indonesia	0	0			0			
Japan	0	0	0					
Republic of Korea	0	0	0	0				
Malaysia	0	0			0			
Mexico	0	0						0
New Zealand	0	0				0		
Papua New Guinea	0	0				0		
Peru	0	0						0
Philippines	0	0			0			
Russia	0							
Singapore	0	0			0			
Chinese Taipei	0	0	0	0				
Thailand	0	0			0			
United States of America	0	0					0	
Viet Nam	0	0			0			

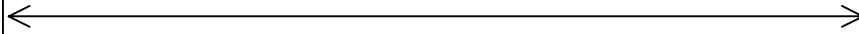
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Primary Energy Supply

### Total Primary Energy Supply by Energy APEC 20

The chart shows a steady increase in total primary energy supply from approximately 3,700 Mtoe in 1990 to over 5,400 Mtoe in 2004. Oil and coal are the dominant sources, with oil's share increasing significantly over the period. Gas, nuclear, hydro, and other sources also contribute to the total supply.

	Mtoe					
	1990	1995	2000	2002	2003	2004
Coal++	1,142.2	1,327.4	1,422.9	1,491.0	1,615.7	1,796.4
Oil	1,504.1	1,693.8	1,901.6	1,922.4	1,979.8	2,090.5
Gas++	631.0	769.4	883.5	889.4	907.9	913.2
Nuclear	252.6	318.8	355.1	361.8	342.8	369.9
Hydro	80.0	95.3	96.2	102.0	102.2	108.7
Others	104.2	133.1	149.5	140.8	141.0	155.2
<b>Total</b>	<b>3,714.1</b>	<b>4,337.7</b>	<b>4,808.8</b>	<b>4,907.4</b>	<b>5,089.5</b>	<b>5,433.9</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
Coal++	30.8	30.6	29.6	30.4	31.7	33.1
Oil	40.5	39.0	39.5	39.2	38.9	38.5
Gas++	17.0	17.7	18.4	18.1	17.8	16.8
Nuclear	6.8	7.3	7.4	7.4	6.7	6.8
Hydro	2.2	2.2	2.0	2.1	2.0	2.0
Others	2.8	3.1	3.1	2.9	2.8	2.9

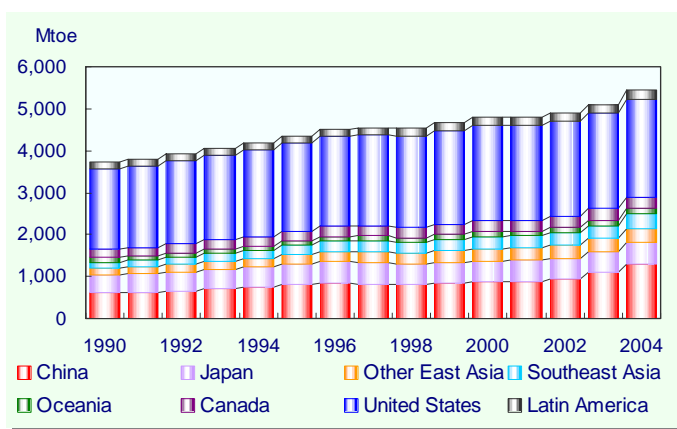
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### Total Primary Energy Supply by Region APEC 20



Primary Energy Supply

	Mtoe					
	1990	1995	2000	2002	2003	2004
China	621.2	815.4	860.1	933.5	1,089.0	1,288.2
Japan	432.5	490.8	509.3	502.2	500.0	518.7
Other East Asia	149.3	223.5	285.4	306.6	314.6	334.6
Southeast Asia	138.9	217.6	285.5	300.6	314.2	354.2
Oceania	102.5	111.0	128.4	131.4	132.0	135.7
Canada	209.4	231.7	251.0	250.9	263.5	270.0
United States	1,914.3	2,087.7	2,301.8	2,290.6	2,280.9	2,326.8
Latin America	146.0	159.9	187.4	191.5	195.2	205.7
<b>APEC 20</b>	<b>3,714.1</b>	<b>4,337.7</b>	<b>4,808.8</b>	<b>4,907.4</b>	<b>5,089.5</b>	<b>5,433.9</b>

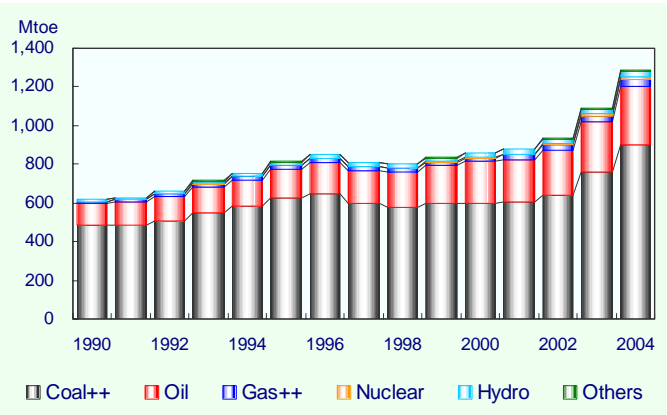
	Share (%)					
	1990	1995	2000	2002	2003	2004
China	16.7	18.8	17.9	19.0	21.4	23.7
Japan	11.6	11.3	10.6	10.2	9.8	9.5
Other East Asia	4.0	5.2	5.9	6.2	6.2	6.2
Southeast Asia	3.7	5.0	5.9	6.1	6.2	6.5
Oceania	2.8	2.6	2.7	2.7	2.6	2.5
Canada	5.6	5.3	5.2	5.1	5.2	5.0
United States	51.5	48.1	47.9	46.7	44.8	42.8
Latin America	3.9	3.7	3.9	3.9	3.8	3.8

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Primary Energy Supply

### Total Primary Energy Supply by Energy China



	Mtoe					
	1990	1995	2000	2002	2003	2004
Coal++	486.5	626.2	599.7	638.9	761.5	900.8
Oil	108.7	150.6	213.4	234.8	260.1	305.4
Gas++	12.8	15.0	20.2	24.7	27.8	33.3
Nuclear	-	3.3	4.4	6.5	11.3	13.2
Hydro	10.9	16.4	19.1	24.8	24.4	30.4
Others	2.3	3.8	3.4	3.9	4.0	5.2
<b>Total</b>	<b>621.2</b>	<b>815.4</b>	<b>860.1</b>	<b>933.5</b>	<b>1,089.0</b>	<b>1,288.2</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
Coal++	78.3	76.8	69.7	68.4	69.9	69.9
Oil	17.5	18.5	24.8	25.2	23.9	23.7
Gas++	2.1	1.8	2.3	2.6	2.5	2.6
Nuclear	-	0.4	0.5	0.7	1.0	1.0
Hydro	1.8	2.0	2.2	2.7	2.2	2.4
Others	0.4	0.5	0.4	0.4	0.4	0.4

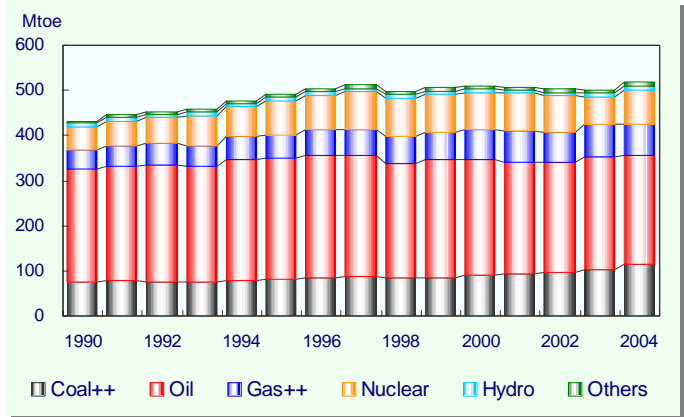
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### Total Primary Energy Supply by Energy Japan



Primary Energy Supply

	Mtoe					
	1990	1995	2000	2002	2003	2004
Coal++	75.6	82.8	91.0	97.4	102.6	113.1
Oil	249.1	267.5	255.8	244.4	250.8	243.2
Gas++	43.5	52.0	64.9	64.4	71.8	69.3
Nuclear	51.0	75.0	83.3	82.1	60.0	74.5
Hydro	7.8	7.1	7.5	7.5	8.4	8.9
Others	5.5	6.4	6.7	6.5	6.4	9.7
<b>Total</b>	<b>432.5</b>	<b>490.8</b>	<b>509.3</b>	<b>502.2</b>	<b>500.0</b>	<b>518.7</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
Coal++	17.5	16.9	17.9	19.4	20.5	21.8
Oil	57.6	54.5	50.2	48.7	50.2	46.9
Gas++	10.1	10.6	12.8	12.8	14.4	13.4
Nuclear	11.8	15.3	16.4	16.3	12.0	14.4
Hydro	1.8	1.5	1.5	1.5	1.7	1.7
Others	1.3	1.3	1.3	1.3	1.3	1.9

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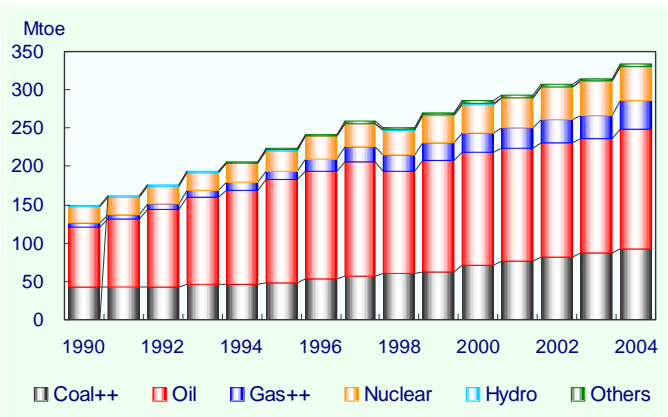


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Primary Energy Supply

Total Primary Energy Supply by Energy Other East Asia



	Mtoe					
	1990	1995	2000	2002	2003	2004
Coal++	42.1	48.3	71.1	82.0	87.2	93.3
Oil	79.3	134.0	147.1	149.8	149.5	154.8
Gas++	4.5	12.0	24.6	30.2	30.5	37.2
Nuclear	22.3	26.7	38.4	41.3	43.9	44.4
Hydro	1.3	1.2	1.2	1.0	1.2	1.1
Others	-0.2	1.3	2.9	2.3	2.4	3.9
<b>Total</b>	<b>149.3</b>	<b>223.5</b>	<b>285.4</b>	<b>306.6</b>	<b>314.6</b>	<b>334.6</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
Coal++	28.2	21.6	24.9	26.7	27.7	27.9
Oil	53.1	60.0	51.6	48.9	47.5	46.3
Gas++	3.0	5.4	8.6	9.8	9.7	11.1
Nuclear	15.0	11.9	13.5	13.5	14.0	13.3
Hydro	0.8	0.6	0.4	0.3	0.4	0.3
Others	-0.1	0.6	1.0	0.8	0.8	1.2

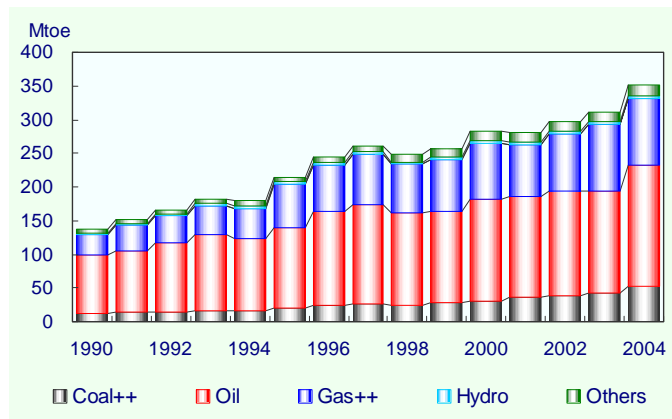
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### Total Primary Energy Supply by Energy Southeast Asia



Primary Energy Supply

	Mtoe					
	1990	1995	2000	2002	2003	2004
Coal++	12.5	19.9	29.6	38.8	41.5	52.3
Oil	86.5	119.9	152.0	154.4	152.2	179.5
Gas++	29.4	64.0	82.6	85.5	98.3	100.5
Nuclear	-	-	-	-	-	-
Hydro	2.7	3.7	3.9	4.1	4.2	4.1
Others	5.7	7.5	14.7	14.5	14.2	15.9
<b>Total</b>	<b>136.8</b>	<b>214.9</b>	<b>282.8</b>	<b>297.3</b>	<b>310.4</b>	<b>352.2</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
Coal++	9.1	9.2	10.5	13.1	13.4	14.8
Oil	63.2	55.8	53.7	51.9	49.0	51.0
Gas++	21.5	29.8	29.2	28.8	31.7	28.5
Nuclear	-	-	-	-	-	-
Hydro	2.0	1.7	1.4	1.4	1.3	1.2
Others	4.2	3.5	5.2	4.9	4.6	4.5

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Primary Energy Supply

### Total Primary Energy Supply by Energy Oceania

The chart illustrates the composition of primary energy supply in Oceania from 1990 to 2004. Coal++ is the dominant source, followed by Oil and Gas++. Hydro and Others contribute smaller, relatively stable shares. The total supply shows a steady upward trend over the period.

	Mtoe					
	1990	1995	2000	2002	2003	2004
Coal++	36.1	38.7	48.2	50.3	50.1	51.3
Oil	37.9	41.1	43.7	42.1	44.0	45.5
Gas++	18.8	20.7	24.5	26.7	26.1	26.3
Nuclear	-	-	-	-	-	-
Hydro	3.3	3.8	3.7	3.6	3.5	3.8
Others	6.4	6.7	8.3	8.6	8.3	8.7
<b>Total</b>	<b>102.5</b>	<b>111.0</b>	<b>128.4</b>	<b>131.4</b>	<b>132.0</b>	<b>135.7</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
Coal++	35.2	34.8	37.6	38.3	37.9	37.8
Oil	37.0	37.0	34.0	32.1	33.3	33.5
Gas++	18.3	18.6	19.0	20.3	19.8	19.4
Nuclear	-	-	-	-	-	-
Hydro	3.2	3.4	2.8	2.8	2.7	2.8
Others	6.3	6.1	6.5	6.6	6.3	6.4

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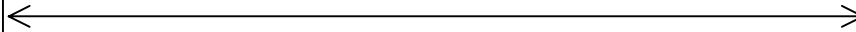
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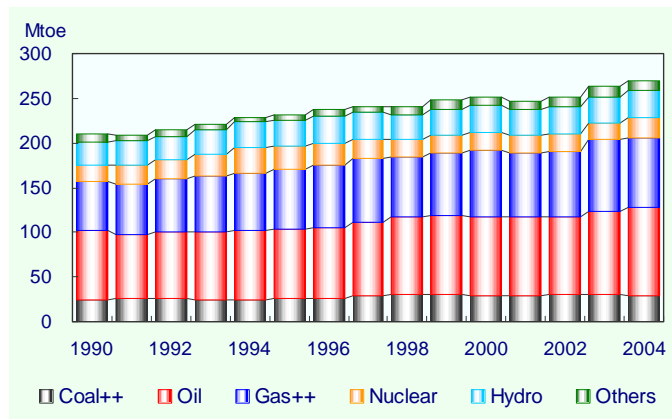
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### Total Primary Energy Supply by Energy Canada



	Mtoe					
	1990	1995	2000	2002	2003	2004
Coal++	24.3	25.2	28.8	30.5	30.3	28.7
Oil	77.7	78.4	88.2	86.8	93.3	98.8
Gas++	54.7	67.0	75.3	73.3	79.7	78.1
Nuclear	19.0	25.5	19.0	19.7	19.5	23.6
Hydro	25.5	28.9	30.8	30.2	29.0	29.3
Others	8.1	6.7	8.8	10.4	11.6	11.6
<b>Total</b>	<b>209.4</b>	<b>231.7</b>	<b>251.0</b>	<b>250.9</b>	<b>263.5</b>	<b>270.0</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
Coal++	11.6	10.9	11.5	12.2	11.5	10.6
Oil	37.1	33.8	35.1	34.6	35.4	36.6
Gas++	26.1	28.9	30.0	29.2	30.3	28.9
Nuclear	9.1	11.0	7.6	7.8	7.4	8.7
Hydro	12.2	12.5	12.3	12.0	11.0	10.9
Others	3.9	2.9	3.5	4.1	4.4	4.3

Primary Energy Supply

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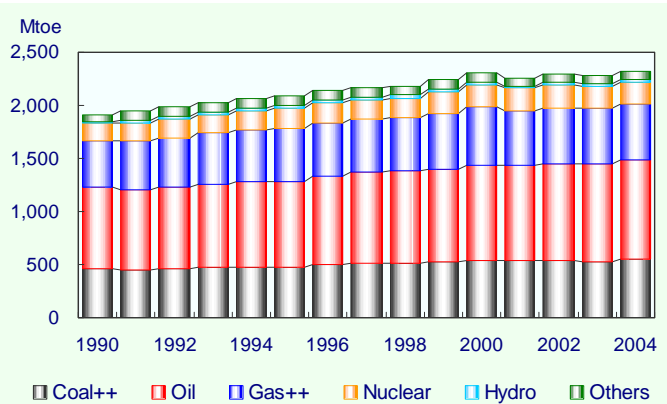
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Primary Energy Supply

**Total Primary Energy Supply by Energy  
United States of America**



	Mtoe					
	1990	1995	2000	2002	2003	2004
Coal++	458.3	478.0	543.6	542.2	531.2	545.2
Oil	770.2	801.5	891.0	900.5	921.5	947.5
Gas++	439.5	508.6	548.8	535.8	520.1	514.9
Nuclear	159.4	186.0	207.9	209.7	205.3	212.0
Hydro	24.9	29.1	24.1	25.1	26.3	25.6
Others	62.0	84.4	86.5	77.4	76.5	81.6
<b>Total</b>	<b>1,914.3</b>	<b>2,087.7</b>	<b>2,301.8</b>	<b>2,290.6</b>	<b>2,280.9</b>	<b>2,326.8</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
Coal++	23.9	22.9	23.6	23.7	23.3	23.4
Oil	40.2	38.4	38.7	39.3	40.4	40.7
Gas++	23.0	24.4	23.8	23.4	22.8	22.1
Nuclear	8.3	8.9	9.0	9.2	9.0	9.1
Hydro	1.3	1.4	1.0	1.1	1.2	1.1
Others	3.2	4.0	3.8	3.4	3.4	3.5

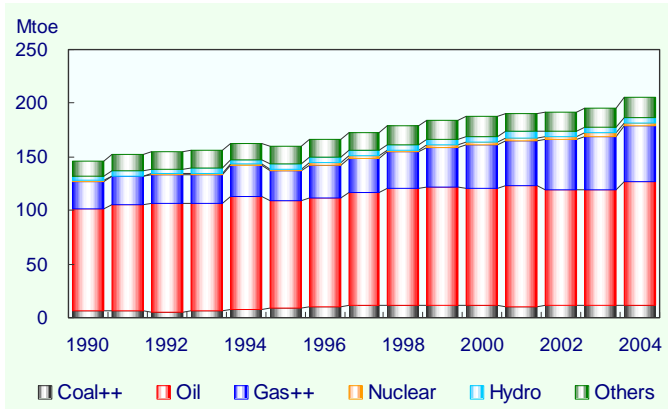
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### Total Primary Energy Supply by Energy Latin America



Primary Energy Supply

	Mtoe					
	1990	1995	2000	2002	2003	2004
Coal++	6.7	8.3	10.9	11.0	11.3	11.7
Oil	94.7	100.2	109.8	108.9	107.7	115.5
Gas++	25.9	27.9	40.5	46.2	50.4	52.0
Nuclear	0.8	2.2	2.1	2.5	2.7	2.4
Hydro	3.7	5.1	5.9	5.7	5.2	5.5
Others	14.3	16.1	18.2	17.3	17.8	18.6
<b>Total</b>	<b>146.0</b>	<b>159.9</b>	<b>187.4</b>	<b>191.5</b>	<b>195.2</b>	<b>205.7</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
Coal++	4.6	5.2	5.8	5.7	5.8	5.7
Oil	64.9	62.7	58.6	56.9	55.2	56.1
Gas++	17.7	17.5	21.6	24.1	25.8	25.3
Nuclear	0.5	1.4	1.1	1.3	1.4	1.2
Hydro	2.5	3.2	3.1	3.0	2.7	2.7
Others	9.8	10.1	9.7	9.0	9.1	9.0

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Primary Energy Supply

### Indigenous Production of Coal APEC 20

The chart displays the indigenous production of coal in Mtoe for APEC 20 countries from 1990 to 2004. The total production shows a consistent upward trend, starting around 1,200 Mtoe in 1990 and reaching approximately 1,823 Mtoe by 2004. China and the United States are the two largest producers, with China's share increasing significantly over the period.

	1990	1995	2000	2002	2003	Mtoe 2004
China	513.0	646.4	617.1	690.9	818.0	946.4
United States	539.1	531.5	544.8	555.1	526.1	546.5
Australia	106.1	127.8	163.2	184.3	185.2	192.6
Indonesia	5.8	24.0	44.0	56.2	62.1	72.0
Canada	37.9	40.8	34.4	32.6	30.3	32.3
Viet Num	2.6	4.7	6.5	8.9	10.6	15.3
Others	24.8	19.8	17.9	17.4	16.7	18.2
<b>APEC 20</b>	<b>1,229.3</b>	<b>1,395.0</b>	<b>1,428.0</b>	<b>1,545.4</b>	<b>1,649.1</b>	<b>1,823.2</b>

	1990	1995	2000	2002	2003	Share (%) 2004
China	41.7	46.3	43.2	44.7	49.6	51.9
United States	43.9	38.1	38.2	35.9	31.9	30.0
Australia	8.6	9.2	11.4	11.9	11.2	10.6
Indonesia	0.5	1.7	3.1	3.6	3.8	3.9
Canada	3.1	2.9	2.4	2.1	1.8	1.8
Viet Num	0.2	0.3	0.5	0.6	0.6	0.8
Others	2.0	1.4	1.3	1.1	1.0	1.0

Coal: Hard Coal, Anthracite and Lignite

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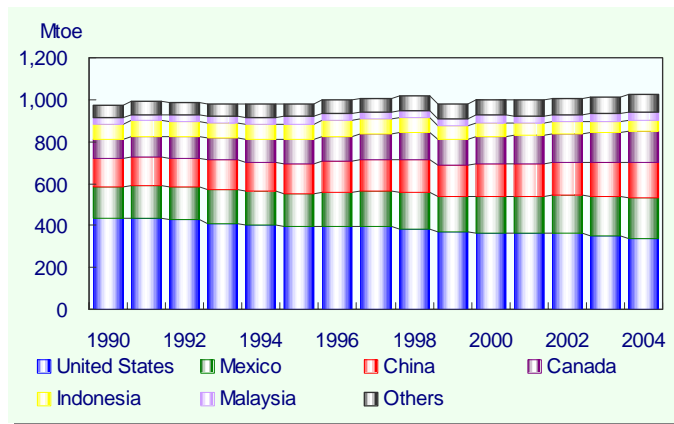
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### Indigenous Production of Crude Oil APEC 20



	1980	1990	2000	2002	2003	Mtoe 2004
United States	490.8	432.6	365.6	360.0	350.8	339.1
Mexico	102.8	154.1	172.6	181.9	185.8	195.0
China	100.7	131.5	154.9	158.7	161.1	167.1
Canada	85.3	94.5	128.9	136.9	144.7	150.2
Indonesia	76.7	70.7	69.0	57.7	53.0	53.4
Malaysia	13.7	30.6	33.8	34.8	37.0	38.7
Others	44.9	57.0	76.7	77.3	77.1	83.9
<b>APEC 20</b>	<b>914.9</b>	<b>971.0</b>	<b>1,001.5</b>	<b>1,007.3</b>	<b>1,009.5</b>	<b>1,027.4</b>

	1980	1990	2000	2002	2003	Share (%) 2004
United States	53.7	44.5	36.5	35.7	34.7	33.0
Mexico	11.2	15.9	17.2	18.1	18.4	19.0
China	11.0	13.5	15.5	15.8	16.0	16.3
Canada	9.3	9.7	12.9	13.6	14.3	14.6
Indonesia	8.4	7.3	6.9	5.7	5.3	5.2
Malaysia	1.5	3.2	3.4	3.5	3.7	3.8
Others	4.9	5.9	7.7	7.7	7.6	8.2

Crude Oil includes NGL and condensate

Primary Energy Supply

=66x48+231+0

=66x48+231+162



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Primary Energy Supply

### Indigenous Production of Natural Gas APEC 20

The chart displays the indigenous production of natural gas in Mtoe for APEC 20 from 1990 to 2004. The total production grows from approximately 640 Mtoe in 1990 to 853.3 Mtoe in 2004. The United States consistently leads in production, followed by Canada, Mexico, and Australia. The 'Others' category also shows a significant increase over the period.

	Mtoe					
	1990	1995	2000	2002	2003	2004
United States	419.3	435.8	448.0	442.5	448.2	438.5
Canada	88.6	130.3	148.4	153.3	151.2	150.7
Indonesia	41.0	68.0	65.8	55.2	63.6	69.7
Malaysia	15.5	26.7	44.8	45.0	46.1	49.0
Mexico	22.8	24.1	31.4	32.4	34.0	35.5
China	12.8	15.0	22.8	27.4	29.3	35.3
Australia	17.1	25.0	28.5	30.3	31.3	32.0
Others	22.8	28.2	39.1	45.2	46.6	42.5
<b>APEC 20</b>	<b>640.0</b>	<b>753.1</b>	<b>828.8</b>	<b>831.4</b>	<b>850.3</b>	<b>853.3</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
United States	65.5	57.9	54.1	53.2	52.7	51.4
Canada	13.8	17.3	17.9	18.4	17.8	17.7
Indonesia	6.4	9.0	7.9	6.6	7.5	8.2
Malaysia	2.4	3.5	5.4	5.4	5.4	5.7
Mexico	3.6	3.2	3.8	3.9	4.0	4.2
China	2.0	2.0	2.7	3.3	3.5	4.1
Australia	2.7	3.3	3.4	3.6	3.7	3.8
Others	3.6	3.7	4.7	5.4	5.5	5.0

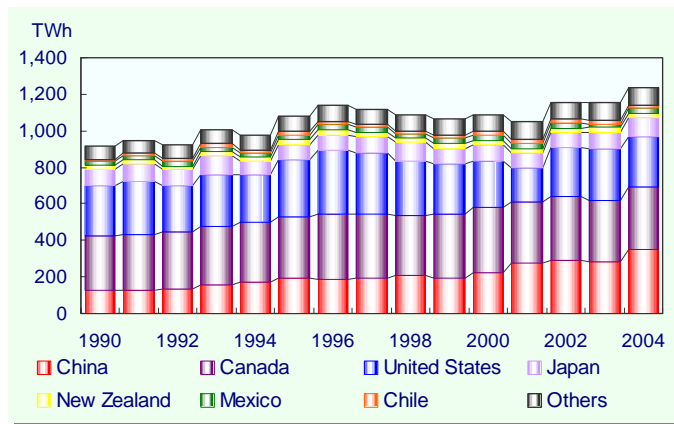
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APEC ENERGY HANDBOOK 2004

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### Indigenous Production of Hydro Power APEC 20



	TWh					
	1990	1995	2000	2002	2003	2004
China	126.7	190.6	222.4	288.0	283.7	353.5
Canada	296.7	335.9	358.5	350.6	337.4	341.0
United States	273.2	314.1	253.2	267.0	278.6	271.1
Japan	91.0	82.8	87.0	83.3	93.7	103.2
New Zealand	23.3	27.3	24.4	25.2	23.7	27.0
Mexico	23.5	27.5	33.1	25.0	19.9	25.2
Chile	9.0	18.4	19.1	23.2	22.6	21.1
Others	70.6	84.3	92.1	92.4	95.6	93.7
<b>APEC 20</b>	<b>914.0</b>	<b>1,080.9</b>	<b>1,089.9</b>	<b>1,050.1</b>	<b>1,154.6</b>	<b>1,155.3</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
China	13.9	17.6	20.4	27.4	24.6	30.6
Canada	32.5	31.1	32.9	33.4	29.2	29.5
United States	29.9	29.1	23.2	25.4	24.1	23.5
Japan	10.0	7.7	8.0	7.9	8.1	8.9
New Zealand	2.6	2.5	2.2	2.4	2.1	2.3
Mexico	2.6	2.5	3.0	2.4	1.7	2.2
Chile	1.0	1.7	1.8	2.2	2.0	1.8
Others	7.7	7.8	8.5	8.8	8.3	8.1

Primary Energy Supply

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Primary Energy Supply

### Indigenous Production of Nuclear Power APEC 20

The chart displays the indigenous production of nuclear power in TWh for APEC 20 countries from 1990 to 2004. The y-axis represents TWh, ranging from 0 to 1,600. The x-axis represents the years. The bars are stacked by country: United States (blue), Japan (purple), Korea (yellow), Canada (pink), China (red), Chinese Taipei (grey), and Mexico (green). The total production increases from approximately 969 TWh in 1990 to 1,419.5 TWh in 2004.

	TWh					
	1990	1995	2000	2002	2003	2004
United States	611.6	713.8	797.7	804.5	787.8	813.3
Japan	195.8	287.9	319.8	300.9	220.2	285.9
Korea	52.9	67.0	109.0	119.1	129.7	130.7
Canada	73.0	97.8	72.8	75.5	74.9	90.4
China	-	12.8	16.7	25.1	43.3	50.5
Chinese Taipei	32.9	35.3	38.5	39.6	38.9	39.5
mexico	2.9	8.4	8.2	9.7	10.5	9.2
Others	-	-	-	-	-	-
<b>APEC 20</b>	<b>969.0</b>	<b>1,223.1</b>	<b>1,362.7</b>	<b>1,374.5</b>	<b>1,305.3</b>	<b>1,419.5</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
United States	63.1	58.4	58.5	58.5	60.4	57.3
Japan	20.2	23.5	23.5	21.9	16.9	20.1
Korea	5.5	5.5	8.0	8.7	9.9	9.2
Canada	7.5	8.0	5.3	5.5	5.7	6.4
China	-	1.0	1.2	1.8	3.3	3.6
Chinese Taipei	3.4	2.9	2.8	2.9	3.0	2.8
mexico	0.3	0.7	0.6	0.7	0.8	0.6
Others	-	-	-	-	-	-

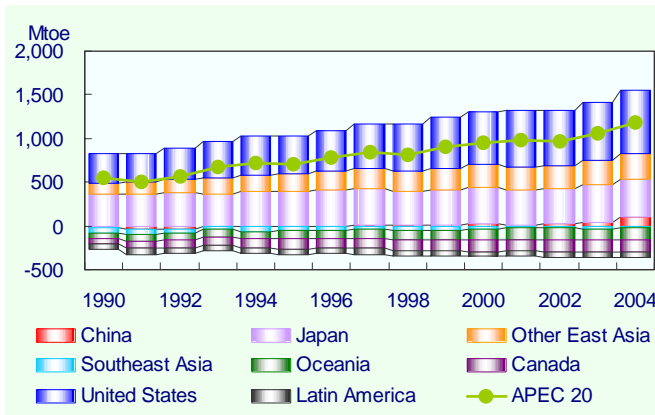
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### Net Import by Region APEC 20



	Mtoe					
	1990	1995	2000	2002	2003	2004
Australia	-64.7	-89.4	-126.6	-139.7	-138.8	-143.8
Brunei Darussalam	-12.9	-14.6	-14.8	-17.5	-18.0	-19.8
Canada	-59.4	-119.9	-130.6	-135.1	-127.0	-134.1
Chile	7.0	10.7	16.2	16.0	16.4	19.4
China	-29.0	-8.4	30.9	26.1	47.0	100.0
Hong Kong, China	10.8	14.3	18.2	20.0	20.6	25.0
Indonesia	-65.9	-85.2	-82.4	-74.8	-81.4	-72.7
Japan	361.6	394.0	406.8	397.5	423.4	429.3
Korea	70.1	135.0	165.5	171.3	176.9	184.1
Malaysia	-25.4	-28.3	-27.4	-27.2	-26.2	-29.2
Mexico	-70.1	-69.7	-73.9	-79.9	-82.6	-86.1
New Zealand	2.1	3.0	3.4	3.6	4.1	5.3
Papua New Guinea	-3.7	-4.0	-2.7	-1.4	-1.1	-0.5
Peru	-0.6	1.8	3.3	2.9	3.2	3.8
Philippines	11.4	16.9	20.0	18.3	17.7	19.1
Singapore	22.9	31.9	40.3	45.1	44.3	43.2
Chinese Taipei	39.4	55.7	76.4	79.6	83.0	96.1
Thailand	18.2	32.6	34.6	39.6	43.8	49.3
United States	343.5	436.0	608.4	630.0	662.5	714.3
Viet Nam	-0.2	-4.7	-9.8	-10.8	-11.6	-16.2
<b>APEC 20</b>	<b>555.2</b>	<b>707.7</b>	<b>955.9</b>	<b>963.7</b>	<b>1,056.0</b>	<b>1,186.3</b>

Primary Energy Supply

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Transformation

### Refining of Petroleum Products by Fuel APEC 20

	Mtoe					
	1990	1995	2000	2002	2003	2004
Mogas	461.0	513.4	565.0	579.6	586.8	598.9
Naphtha	37.5	49.3	63.3	65.6	61.4	88.6
Jet Fuel	103.7	110.7	128.8	123.5	120.2	137.7
Kerosene	39.8	48.1	59.5	53.7	56.6	46.3
Gas/Diesel Oil	303.6	370.5	443.5	446.3	467.7	497.2
Fuel Oil	243.2	261.7	239.5	213.0	225.4	214.7
LPG	34.8	45.4	53.5	54.3	56.6	59.5
Others	187.7	197.6	237.3	238.4	252.9	257.5
<b>Total</b>	<b>1,411.3</b>	<b>1,596.6</b>	<b>1,790.3</b>	<b>1,774.5</b>	<b>1,827.7</b>	<b>1,900.3</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
Mogas	32.7	32.2	31.6	32.7	32.1	31.5
Naphtha	2.7	3.1	3.5	3.7	3.4	4.7
Jet Fuel	7.3	6.9	7.2	7.0	6.6	7.2
Kerosene	2.8	3.0	3.3	3.0	3.1	2.4
Gas/Diesel Oil	21.5	23.2	24.8	25.1	25.6	26.2
Fuel Oil	17.2	16.4	13.4	12.0	12.3	11.3
LPG	2.5	2.8	3.0	3.1	3.1	3.1
Others	13.3	12.4	13.3	13.4	13.8	13.6

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### Refining of Petroleum Products by Region APEC 20

	Mtoe					
	1990	1995	2000	2002	2003	2004
China	102.0	133.6	188.2	198.8	219.8	254.4
Japan	178.5	211.9	215.6	207.6	213.7	209.0
Other East Asia	62.3	117.4	164.8	156.2	160.3	171.4
Southeast Asia	108.2	140.0	152.4	146.1	148.1	158.5
Oceania	37.0	41.3	43.7	42.4	42.0	41.6
Canada	87.0	86.5	96.7	102.6	106.6	108.4
United States	755.2	780.3	845.4	837.1	850.5	867.1
Latin America	81.2	85.7	83.6	83.7	86.8	89.7
<b>APEC 20</b>	<b>1,411.3</b>	<b>1,774.3</b>	<b>1,968.3</b>	<b>1,944.2</b>	<b>2,007.9</b>	<b>2,085.4</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
China	7.2	7.5	9.6	10.2	10.9	12.2
Japan	12.6	11.9	11.0	10.7	10.6	10.0
Other East Asia	4.4	6.6	8.4	8.0	8.0	8.2
Southeast Asia	7.7	7.9	7.7	7.5	7.4	7.6
Oceania	2.6	2.3	2.2	2.2	2.1	2.0
Canada	6.2	4.9	4.9	5.3	5.3	5.2
United States	53.5	44.0	43.0	43.1	42.4	41.6
Latin America	5.8	4.8	4.2	4.3	4.3	4.3

Transformation

APEC ENERGY HANDBOOK 2004

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Transformation

### Electricity Power Generation by Type APEC 20

The chart displays the growth of electricity power generation in APEC 20 from 1990 to 2004. The total generation increases from approximately 5,861 TWh in 1990 to 9,751.3 TWh in 2004. Thermal power remains the dominant source, while Hydro and Nuclear also show significant growth. Geothermal and Others represent smaller but increasing shares.

	TWh					
	1990	1995	2000	2002	2003	2004
Thermal	3,926.1	4,754.8	5,912.7	6,283.1	6,696.2	6,972.0
Hydro	914.0	1,080.9	1,089.9	1,154.6	1,155.3	1,235.8
Nuclear	969.0	1,223.1	1,362.7	1,374.5	1,305.3	1,419.5
Geothermal	31.5	34.0	43.3	43.0	43.5	45.2
Others	20.4	24.2	26.8	32.2	33.9	78.8
<b>Total</b>	<b>5,861.0</b>	<b>7,117.1</b>	<b>8,435.4</b>	<b>8,887.4</b>	<b>9,234.2</b>	<b>9,751.3</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
Thermal	67.0	66.8	70.1	70.7	72.5	71.5
Hydro	15.6	15.2	12.9	13.0	12.5	12.7
Nuclear	16.5	17.2	16.2	15.5	14.1	14.6
Geothermal	0.5	0.5	0.5	0.5	0.5	0.5
Others	0.3	0.3	0.3	0.4	0.4	0.8

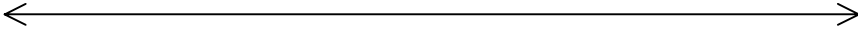
"Others" comprises power generated from renewable energy.

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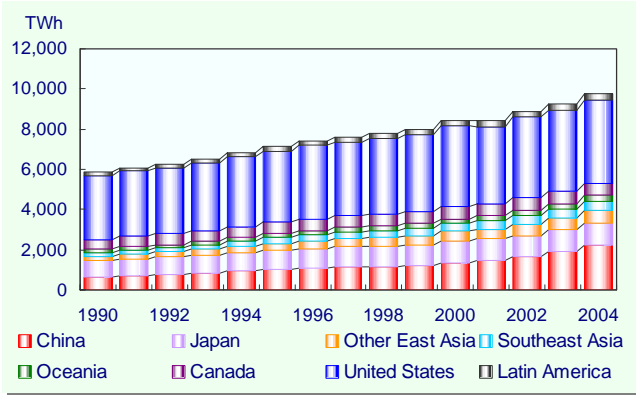
APEC ENERGY HANDBOOK 2004

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### Electricity Power Generation by Region APEC 20



	TWh					
	1990	1995	2000	2002	2003	2004
China	621.2	1,007.7	1,353.3	1,651.2	1,907.4	2,203.3
Japan	833.6	963.1	1,072.5	1,052.2	1,061.5	1,127.6
Other East Asia	221.3	332.0	479.9	563.5	589.4	622.1
Southeast Asia	156.3	289.9	393.2	442.7	469.0	466.4
Oceania	188.2	203.8	241.0	270.4	273.1	286.7
Canada	481.9	559.9	605.5	601.0	589.9	598.4
United States	3,202.8	3,558.4	4,025.7	4,026.1	4,054.4	4,147.7
Latin America	155.7	202.4	264.3	280.3	289.6	299.1
<b>APEC 20</b>	<b>5,861.0</b>	<b>7,117.1</b>	<b>8,435.4</b>	<b>8,887.4</b>	<b>9,234.2</b>	<b>9,751.3</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
China	10.6	14.2	16.0	18.6	20.7	22.6
Japan	14.2	13.5	12.7	11.8	11.5	11.6
Other East Asia	3.8	4.7	5.7	6.3	6.4	6.4
Southeast Asia	2.7	4.1	4.7	5.0	5.1	4.8
Oceania	3.2	2.9	2.9	3.0	3.0	2.9
Canada	8.2	7.9	7.2	6.8	6.4	6.1
United States	54.6	50.0	47.7	45.3	43.9	42.5
Latin America	2.7	2.8	3.1	3.2	3.1	3.1

Transformation



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Transformation

### Power Generation Capacity by Type APEC 20

The chart displays the growth of power generation capacity in the APEC 20 region from 1990 to 2004. The y-axis represents capacity in GW, ranging from 0 to 2,200. The x-axis shows years from 1990 to 2004. The bars are stacked by type: Thermal (red), Hydro (blue), Nuclear (yellow), and Others (green). Thermal capacity grows from approximately 900 GW in 1990 to nearly 1,600 GW in 2004. Hydro capacity increases from about 260 GW to 360 GW. Nuclear capacity starts at 158 GW in 1990 and reaches 195 GW by 2004. Others capacity grows from 8.5 GW to 21.1 GW.

	1990	1995	2000	2002	2003	2004
GW						
Thermal	902.6	1,061.4	1,240.5	1,466.2	1,543.8	1,598.6
Hydro	262.5	307.4	338.2	339.5	349.1	356.2
Nuclear	157.8	174.4	181.3	192.6	195.4	194.9
Others	8.5	9.3	11.4	14.4	16.7	21.1
<b>Total</b>	<b>1,331.4</b>	<b>1,552.6</b>	<b>1,771.4</b>	<b>2,012.7</b>	<b>2,105.0</b>	<b>2,170.9</b>

	1990	1995	2000	2002	2003	2004
Share (%)						
Thermal	67.8	68.4	70.0	72.8	73.3	73.6
Hydro	19.7	19.8	19.1	16.9	16.6	16.4
Nuclear	11.8	11.2	10.2	9.6	9.3	9.0
Others	0.6	0.6	0.6	0.7	0.8	1.0

"Others" comprises power generated from renewable energy.

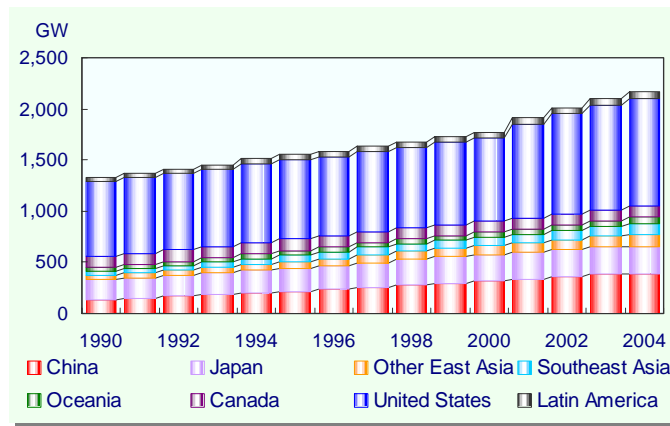
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### Power Generation Capacity by Region APEC 20



	GW					
	1990	1995	2000	2002	2003	2004
China	137.9	217.2	319.3	353.0	382.1	382.1
Japan	194.7	227.0	258.8	266.1	268.3	272.7
Other East Asia	46.2	64.2	87.4	97.3	101.1	116.1
Southeast Asia	37.0	59.8	82.1	90.3	96.9	109.2
Oceania	42.6	46.5	51.7	55.6	54.6	58.3
Canada	102.9	115.5	102.5	111.9	102.8	113.4
United States	733.6	776.3	812.6	975.2	1,031.7	1,049.6
Latin America	36.5	46.0	57.0	63.2	67.5	69.4
<b>APEC 19</b>	<b>1,331.4</b>	<b>1,552.6</b>	<b>1,771.4</b>	<b>2,012.7</b>	<b>2,105.0</b>	<b>2,170.9</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
China	10.4	14.0	18.0	17.5	18.2	17.6
Japan	14.6	14.6	14.6	13.2	12.7	12.6
Other East Asia	3.5	4.1	4.9	4.8	4.8	5.3
Southeast Asia	2.8	3.9	4.6	4.5	4.6	5.0
Oceania	3.2	3.0	2.9	2.8	2.6	2.7
Canada	7.7	7.4	5.8	5.6	4.9	5.2
United States	55.1	50.0	45.9	48.5	49.0	48.4
Latin America	2.7	3.0	3.2	3.1	3.2	3.2

Transformation

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Final Energy Consumption

### Total Final Energy Consumption by Region APEC 20

	Mtoe					
	1990	1995	2000	2002	2003	2004
China	469.3	630.1	607.4	653.3	762.9	884.8
Japan	305.1	339.9	360.0	353.2	355.1	356.8
Other East Asia	100.5	154.2	191.3	212.1	214.7	218.6
Southeast Asia	89.5	139.1	173.8	194.4	197.0	221.6
Oceania	68.2	76.2	86.1	85.5	86.6	89.1
Canada	159.9	175.0	190.4	189.7	197.0	201.4
United States	1,306.9	1,390.5	1,561.0	1,543.8	1,562.5	1,593.8
Latin America	105.7	117.3	129.6	128.0	128.7	136.2
<b>APEC 20</b>	<b>2,600.9</b>	<b>3,484.2</b>	<b>3,722.4</b>	<b>3,767.4</b>	<b>3,923.0</b>	<b>4,127.4</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
China	18.0	18.1	16.3	17.3	19.4	21.4
Japan	11.7	9.8	9.7	9.4	9.1	8.6
Other East Asia	3.9	4.4	5.1	5.6	5.5	5.3
Southeast Asia	3.4	4.0	4.7	5.2	5.0	5.4
Oceania	2.6	2.2	2.3	2.3	2.2	2.2
Canada	6.1	5.0	5.1	5.0	5.0	4.9
United States	50.2	39.9	41.9	41.0	39.8	38.6
Latin America	4.1	3.4	3.5	3.4	3.3	3.3

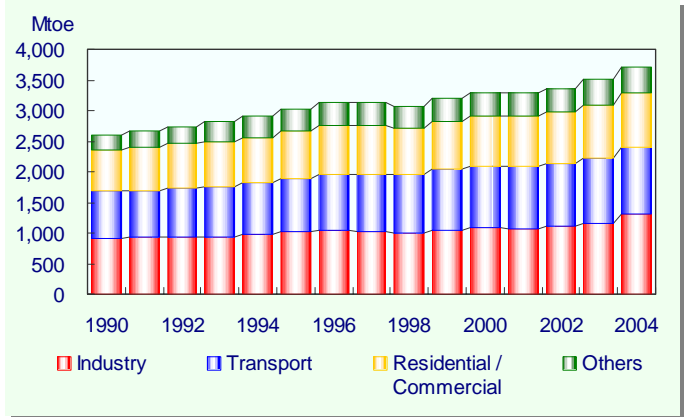
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### Total Final Energy Consumption by Sector APEC 20



	1990	1995	2000	2002	2003	Mtoe 2004
Industry	912.1	1,021.0	1,097.0	1,107.9	1,165.8	1,307.3
Transport	768.6	878.7	1,002.7	1,028.8	1,053.3	1,091.8
Residential / Commercial	684.3	765.9	822.0	835.3	874.3	879.0
Others	240.2	356.8	377.8	388.0	411.2	424.3
<b>Total</b>	<b>2,605.1</b>	<b>3,022.3</b>	<b>3,299.5</b>	<b>3,360.0</b>	<b>3,504.6</b>	<b>3,702.4</b>

	1990	1995	2000	2002	2003	Share (%) 2004
Industry	35.0	33.8	33.2	33.0	33.3	35.3
Transport	29.5	29.1	30.4	30.6	30.1	29.5
Residential / Commercial	26.3	25.3	24.9	24.9	24.9	23.7
Others	9.2	11.8	11.4	11.5	11.7	11.5

Final Energy Consumption

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Final Energy Consumption

### Total Final Energy Consumption by Sector China

	1990	1995	2000	2002	2003	Mtoe 2004
Industry	316.8	390.9	363.4	387.7	462.3	568.3
Transport	27.3	34.6	57.2	63.2	74.3	91.2
Residential / Commercial	112.1	102.2	92.0	101.3	116.4	123.9
Others	13.1	102.4	94.7	101.1	109.9	101.3
<b>Total</b>	<b>469.3</b>	<b>630.1</b>	<b>607.4</b>	<b>653.3</b>	<b>762.9</b>	<b>884.8</b>

	1990	1995	2000	2002	2003	Share (%) 2004
Industry	67.5	62.0	59.8	59.3	60.6	64.2
Transport	5.8	5.5	9.4	9.7	9.7	10.3
Residential / Commercial	23.9	16.2	15.2	15.5	15.3	14.0
Others	2.8	16.2	15.6	15.5	14.4	11.5

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APEC ENERGY HANDBOOK 2004

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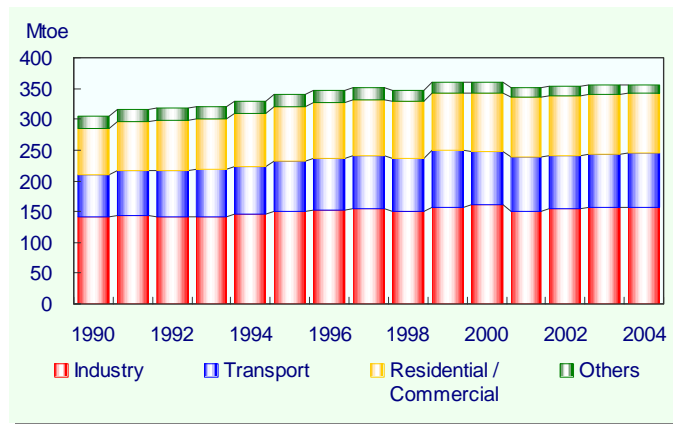
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### Total Final Energy Consumption by Sector Japan



	1990	1995	2000	2002	2003	Mtoe 2004
Industry	140.8	150.4	160.7	154.2	156.2	157.9
Transport	70.1	81.3	86.9	86.4	86.3	87.1
Residential / Commercial	74.7	89.2	95.5	96.5	97.2	97.4
Others	19.6	19.0	16.8	16.1	15.3	14.5
<b>Total</b>	<b>305.1</b>	<b>339.9</b>	<b>360.0</b>	<b>353.2</b>	<b>355.1</b>	<b>356.8</b>

	1990	1995	2000	2002	2003	Share (%) 2004
Industry	46.1	44.2	44.7	43.7	44.0	44.2
Transport	23.0	23.9	24.1	24.5	24.3	24.4
Residential / Commercial	24.5	26.2	26.5	27.3	27.4	27.3
Others	6.4	5.6	4.7	4.5	4.3	4.1

Final Energy Consumption

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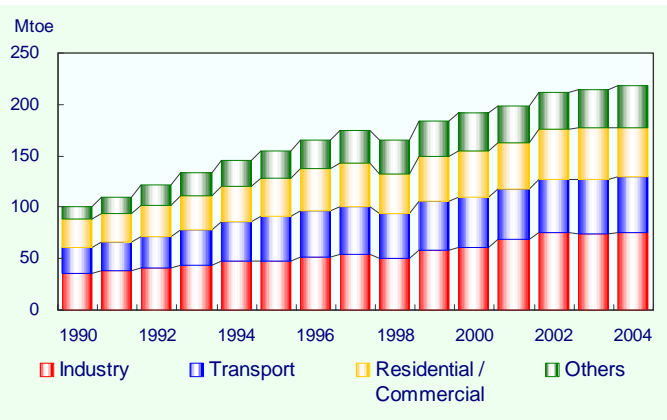
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Final Energy Consumption

### Total Final Energy Consumption by Sector Other East Asia



	1990	1995	2000	2002	2003	Mtoe 2004
Industry	35.4	48.1	61.5	75.6	74.5	76.0
Transport	25.3	42.8	48.6	52.0	52.7	53.8
Residential / Commercial	28.2	37.6	44.1	47.9	49.5	47.8
Others	11.7	25.7	37.2	36.6	37.9	41.0
<b>Total</b>	<b>100.5</b>	<b>154.2</b>	<b>191.3</b>	<b>212.1</b>	<b>214.7</b>	<b>218.6</b>

	1990	1995	2000	2002	2003	2004
Industry	35.2	31.2	32.1	35.7	34.7	34.7
Transport	25.2	27.7	25.4	24.5	24.5	24.6
Residential / Commercial	28.0	24.4	23.0	22.6	23.1	21.9
Others	11.6	16.7	19.4	17.2	17.7	18.8

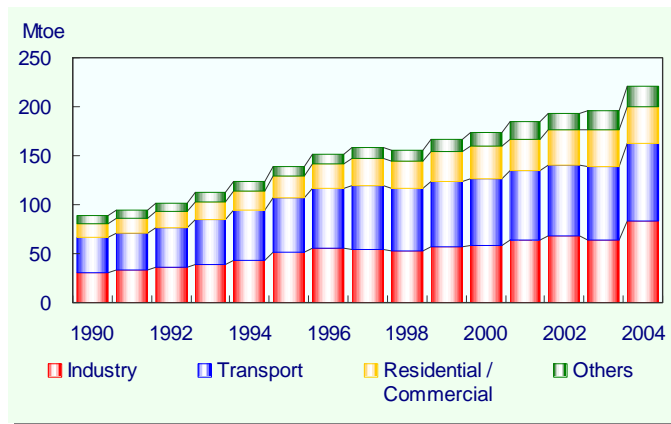
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### Total Final Energy Consumption by Sector Southeast Asia



	1990	1995	2000	2002	2003	Mtoe 2004
Industry	30.4	51.0	58.5	67.7	64.5	82.7
Transport	35.6	55.5	68.5	73.0	74.4	79.8
Residential / Commercial	15.1	22.2	33.2	36.0	37.6	36.8
Others	8.0	9.7	13.0	17.1	19.8	21.5
<b>Total</b>	<b>89.1</b>	<b>138.5</b>	<b>173.2</b>	<b>193.7</b>	<b>196.3</b>	<b>220.8</b>

	1990	1995	2000	2002	2003	Share (%) 2004
Industry	34.1	36.8	33.8	34.9	32.8	37.4
Transport	40.0	40.1	39.5	37.7	37.9	36.1
Residential / Commercial	16.9	16.1	19.2	18.6	19.1	16.7
Others	9.0	7.0	7.5	8.8	10.1	9.7

Final Energy Consumption

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Final Energy Consumption

### Total Final Energy Consumption by Sector Oceania

The chart shows a steady increase in total final energy consumption in Oceania from 1990 to 2004. The total consumption grows from approximately 68.2 Mtoe in 1990 to 89.1 Mtoe in 2004. The sectors contributing to this growth are Industry, Transport, Residential/Commercial, and Others, with Transport showing the most significant increase in its share over the period.

	1990	1995	2000	2002	2003	Mtoe 2004
Industry	22.5	24.5	27.5	24.9	25.7	27.4
Transport	26.4	29.7	33.5	34.0	35.2	35.5
Residential / Commercial	12.8	14.5	16.4	17.6	17.7	17.9
Others	6.5	7.5	8.7	9.1	8.1	8.2
<b>Total</b>	<b>68.2</b>	<b>76.2</b>	<b>86.1</b>	<b>85.5</b>	<b>86.6</b>	<b>89.1</b>

	1990	1995	2000	2002	2003	2004
Industry	33.0	32.1	32.0	29.2	29.6	30.8
Transport	38.7	39.0	38.9	39.7	40.6	39.9
Residential / Commercial	18.8	19.0	19.0	20.5	20.4	20.1
Others	9.5	9.9	10.1	10.6	9.4	9.2

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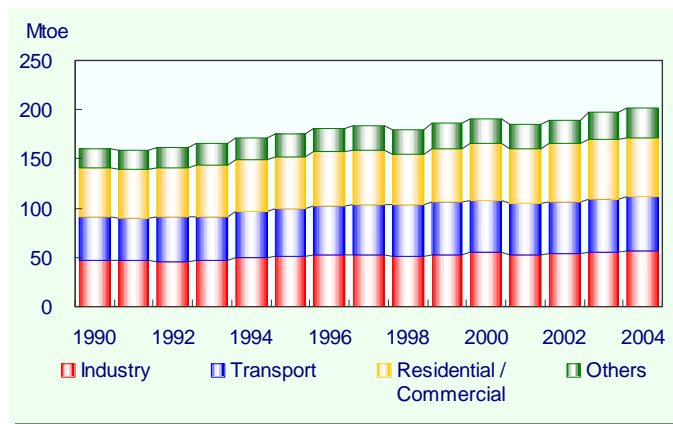
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### Total Final Energy Consumption by Sector Canada



	1990	1995	2000	2002	2003	Mtoe 2004
Industry	47.2	50.5	55.0	53.5	55.3	56.3
Transport	44.2	48.8	53.2	53.2	53.7	55.5
Residential / Commercial	50.0	52.9	57.0	58.6	60.8	60.0
Others	18.5	22.7	25.1	24.4	27.1	29.6
<b>Total</b>	<b>159.9</b>	<b>175.0</b>	<b>190.4</b>	<b>189.7</b>	<b>197.0</b>	<b>201.4</b>

	Share (%)					
	1990	1995	2000	2002	2003	2004
Industry	29.5	28.9	28.9	28.2	28.1	27.9
Transport	27.6	27.9	28.0	28.1	27.3	27.5
Residential / Commercial	31.3	30.2	29.9	30.9	30.9	29.8
Others	11.6	13.0	13.2	12.9	13.8	14.7

Final Energy Consumption

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Final Energy Consumption

### Total Final Energy Consumption by Sector United States of America

	1990	1995	2000	2002	2003	Mtoe 2004
Industry	285.9	271.8	331.2	307.2	291.3	300.2
Transport	502.1	542.0	606.3	617.2	624.3	632.4
Residential / Commercial	369.7	421.6	455.9	448.9	466.8	465.9
Others	149.2	155.1	167.5	170.6	180.2	195.3
<b>Total</b>	<b>1,306.9</b>	<b>1,390.5</b>	<b>1,561.0</b>	<b>1,543.8</b>	<b>1,562.5</b>	<b>1,593.8</b>

	1990	1995	2000	2002	2003	Share (%) 2004
Industry	21.9	19.5	21.2	19.9	18.6	18.8
Transport	38.4	39.0	38.8	40.0	40.0	39.7
Residential / Commercial	28.3	30.3	29.2	29.1	29.9	29.2
Others	11.4	11.2	10.7	11.0	11.5	12.3

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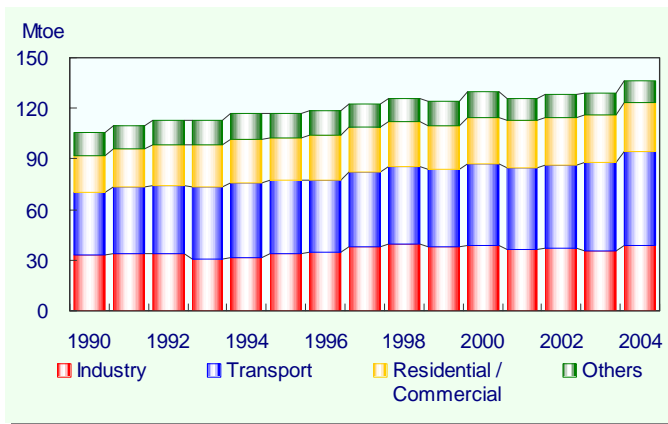
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### Total Final Energy Consumption by Sector Latin America



	1990	1995	2000	2002	2003	2004
Industry	33.0	33.7	39.0	37.0	35.9	38.5
Transport	37.3	43.6	48.1	49.4	52.0	56.2
Residential / Commercial	21.7	25.6	27.7	28.3	28.1	28.9
Others	13.6	14.5	14.8	13.2	12.8	12.6
<b>Total</b>	<b>105.7</b>	<b>117.3</b>	<b>129.6</b>	<b>128.0</b>	<b>128.7</b>	<b>136.2</b>

	1990	1995	2000	2002	2003	2004
Industry	31.3	28.7	30.1	28.9	27.9	28.2
Transport	35.3	37.2	37.2	38.6	40.4	41.3
Residential / Commercial	20.5	21.8	21.4	22.1	21.8	21.2
Others	12.9	12.4	11.4	10.3	9.9	9.3

Final Energy Consumption

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Final Energy Consumption

### Coal++ Demand by Sector APEC 20

The chart displays the demand for coal and other solid fuels across four sectors: Industry, Transport, Residential/Commercial, and Others. The total demand peaks around 1995-1996 at approximately 505 Mtoe, then declines to a low of about 389 Mtoe in 2000, before rising again to 537 Mtoe by 2004. The Industry sector consistently accounts for the largest share of demand, starting at 324.8 Mtoe in 1990 and reaching 458.7 Mtoe in 2004.

	1990	1995	2000	2002	2003	Mtoe 2004
Industry	324.8	380.2	307.5	308.6	360.6	458.7
Transport	10.6	6.8	5.4	5.1	5.7	4.0
Residential / Commercial	110.9	84.0	49.2	51.3	58.4	58.9
Others	6.6	34.3	26.7	27.2	32.2	15.6
<b>Total</b>	<b>452.9</b>	<b>505.4</b>	<b>388.7</b>	<b>392.2</b>	<b>456.9</b>	<b>537.2</b>

	1990	1995	2000	2002	2003	Share (%) 2004
Industry	71.7	75.2	79.1	78.7	78.9	85.4
Transport	2.3	1.3	1.4	1.3	1.3	0.8
Residential / Commercial	24.5	16.6	12.7	13.1	12.8	11.0
Others	1.5	6.8	6.9	6.9	7.0	2.9

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APEC ENERGY HANDBOOK 2004

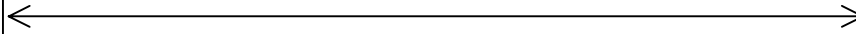
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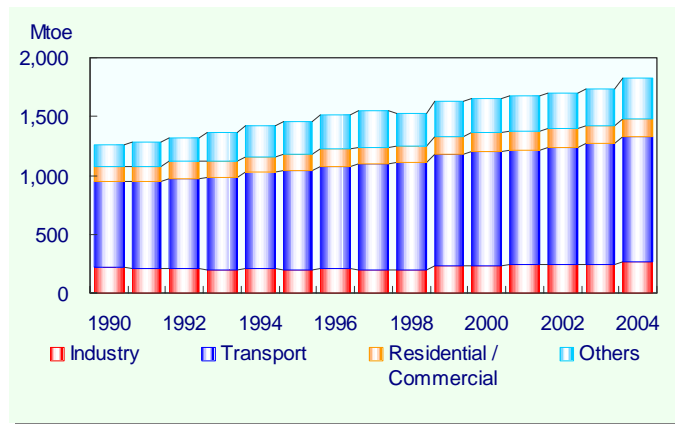
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### Oil Demand by Sector APEC 20



	1990	1995	2000	2002	2003	Mtoe 2004
Industry	215.3	195.6	235.2	244.1	245.7	267.5
Transport	735.9	844.9	970.6	995.9	1,021.3	1,060.6
Residential / Commercial	126.5	141.4	157.1	153.2	159.0	154.9
Others	187.8	273.9	293.2	304.8	305.4	341.7
<b>Total</b>	<b>1,265.6</b>	<b>1,455.8</b>	<b>1,656.1</b>	<b>1,698.0</b>	<b>1,731.3</b>	<b>1,824.7</b>

	1990	1995	2000	2002	2003	Share (%) 2004
Industry	17.0	13.4	14.2	14.4	14.2	14.7
Transport	58.1	58.0	58.6	58.6	59.0	58.1
Residential / Commercial	10.0	9.7	9.5	9.0	9.2	8.5
Others	14.8	18.8	17.7	18.0	17.6	18.7

Final Energy Consumption

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Final Energy Consumption

### Gas++ Demand by Sector APEC 20

The chart displays the gas demand in Mtoe for APEC 20 from 1990 to 2004, broken down by sector. The total demand shows a steady upward trend from approximately 406 Mtoe in 1990 to 504 Mtoe in 2004. The Industrial sector is the largest consumer, followed by Residential/Commercial, Transport, and Others.

	1990	1995	2000	2002	2003	Mtoe 2004
Industry	161.8	179.4	209.8	198.7	197.2	203.0
Transport	18.4	22.4	21.0	21.7	19.4	19.6
Residential / Commercial	200.9	230.6	247.1	248.7	257.3	249.0
Others	24.6	32.5	36.6	36.7	39.0	32.0
<b>Total</b>	<b>405.7</b>	<b>464.9</b>	<b>514.5</b>	<b>505.8</b>	<b>512.9</b>	<b>503.6</b>

	1990	1995	2000	2002	2003	2004
Industry	39.9	38.6	40.8	39.3	38.4	40.3
Transport	4.5	4.8	4.1	4.3	3.8	3.9
Residential / Commercial	49.5	49.6	48.0	49.2	50.2	49.4
Others	6.1	7.0	7.1	7.3	7.6	6.3

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APEC ENERGY HANDBOOK 2004

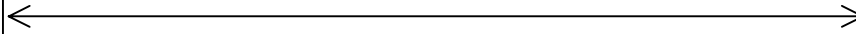
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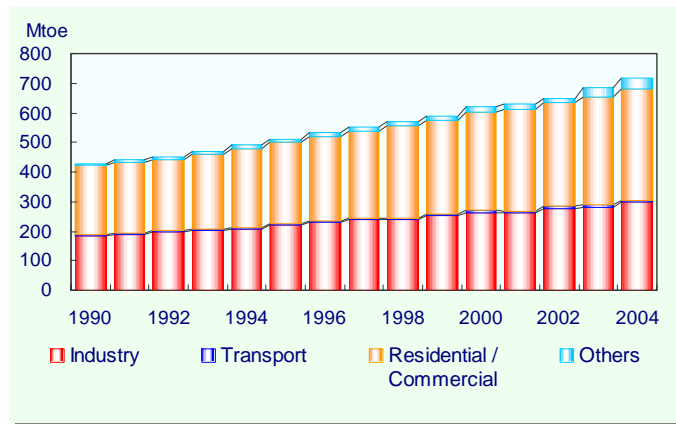
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### Electricity Demand by Sector APEC 20



Final Energy Consumption

	1980	1990	2000	2002	2003	Mtoe 2004
Industry	140.4	185.9	264.1	277.1	281.1	296.7
Transport	2.2	3.6	5.8	6.2	6.9	7.6
Residential / Commercial	153.8	231.5	334.6	349.4	364.4	377.6
Others	3.9	7.1	15.0	17.0	33.0	34.0
<b>Total</b>	<b>300.3</b>	<b>428.0</b>	<b>619.4</b>	<b>649.7</b>	<b>685.4</b>	<b>715.9</b>

	1980	1990	2000	2002	2003	2004
Industry	46.8	43.4	42.6	42.7	41.0	41.4
Transport	0.7	0.8	0.9	0.9	1.0	1.1
Residential / Commercial	51.2	54.1	54.0	53.8	53.2	52.7
Others	1.3	1.7	2.4	2.6	4.8	4.8

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## APEC 21, 2004

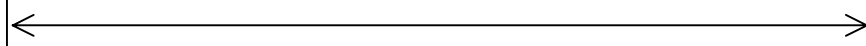
	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	1,953,249	-	1,485,939	1,035
2 Import	276,841	10,405	1,310,531	383,945
3 Export	-322,049	-15,227	-564,287	-300,687
4 International Marine Bunkers	-	-	-	-71,447
5 Stock Change	1,229	-2,900	-10,807	-5,716
6 Total Primary Energy Supply	1,908,270	-7,722	2,221,376	7,131
7 Public Electricity	-1,124,696	-84,303	-4,749	-88,353
8 Autoproducers of Electricity	-46,693	-12,818	-1,089	-53,592
9 Gas Processing	-7,936	3,014	-	-2,645
10 Petroleum Refineries	-	-	-2,117,518	2,085,367
11 Coal Transformation	-330,534	341,276	-	-575
12 Other Transformation	-	-	-1	-16,004
13 Loss & Own Use	-49,678	-8,379	-10,125	-108,741
14 Discrepancy	4,673	1,097	-14,681	92
15 Total Final Energy Consumption	353,405	232,165	3,851	1,903,962
16 Industry Sector	280,741	219,893	3,756	513,905
17 Transport Sector	4,296	15	37	1,113,361
18 Other Sector	68,367	12,258	58	276,697
18.1 Agriculture	11,398	637	11	58,171
18.2 Residential & Commercial	52,593	11,447	-	163,955
18.3 Other	4,376	173	47	54,571

## Australia, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	192,611	-	30,643	-
2 Import	-	-	21,648	6,448
3 Export	-141,545	-159	-18,630	-2,271
4 International Marine Bunkers	-	-	-	-819
5 Stock Change	-1,152	-297	45	-20
6 Total Primary Energy Supply	49,914	-456	33,707	3,337
7 Public Electricity	-43,890	-569	-	-209
8 Autoproducers of Electricity	-	-19	-	-512
9 Gas Processing	-	-	-	-28
10 Petroleum Refineries	-	-	-37,456	35,850
11 Coal Transformation	-3,595	2,333	-	-22
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-	-323	-19	-2,483
14 Discrepancy	-25	125	1,255	3,800
15 Total Final Energy Consumption	2,404	1,090	-	37,492
16 Industry Sector	2,308	1,008	-	5,905
17 Transport Sector	66	-	-	28,742
18 Other Sector	30	81	-	2,845
18.1 Agriculture	-	-	-	1,996
18.2 Residential & Commercial	30	81	-	849
18.3 Other	-	-	-	-

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Unit: ktoe							
Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
1,362,724	124,031	407,647	44,507	198,266	-	-	5,577,398
245,977	-	-	-	23	7,489	-	2,234,211
-341,800	-	-	-	-3	-7,730	-	-1,551,784
-	-	-	-	-	-	-	-71,447
-6,993	-	-	-	-283	-	-	-25,469
1,259,907	124,031	407,647	44,507	198,003	-242	-	6,162,908
-380,501	-119,989	-407,647	-37,579	-15,462	857,369	86,407	-1,319,503
-102,855	-4,042	-	-3,332	-29,093	63,573	121,581	-68,361
-17,457	-	-	-	-	-	-	-25,023
-	-	-	-	-	-	-	-32,151
-	-	-	-	-	-	-	10,167
-989	-	-	-0	-6,892	-	-	-23,888
-104,431	-	-	-0	-	-140,891	-20,041	-442,287
-37,569	0	-	-0	2,503	-8,408	-12,809	-65,102
616,104	-	-	3,595	149,059	771,402	175,138	4,208,681
257,589	-	-	415	62,408	325,407	78,773	1,742,886
50,525	-	-	-	-	14,510	-	1,182,744
307,990	-	-	3,180	86,651	431,485	96,365	1,283,050
868	-	-	96	151	10,896	3,119	85,348
287,106	-	-	3,084	86,259	389,907	85,201	1,079,552
20,016	-	-	-	241	30,682	8,046	118,151

Energy Balances

Unit: ktoe							
Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
32,001	1,417	-	123	5,003	-	-	261,798
-	-	-	-	-	-	-	28,096
-9,255	-	-	-	-	-	-	-171,859
-	-	-	-	-	-	-	-819
-	-	-	-	-	-	-	-1,424
22,747	1,417	-	123	5,003	-	-	115,792
-4,986	-1,393	-	-61	-264	19,576	-	-31,795
-2,829	-24	-	-	-593	1,021	-	-2,956
-	-	-	-	-	-	-	-28
-	-	-	-	-	-	-	-1,605
-	-	-	-	-	-	-	-1,284
-432	-	-	-	-	-	-	-432
-2,772	-	-	-	-	-3,505	-	-9,103
0	-0	-	-	-	3	-	5,157
11,728	-	-	62	4,146	17,094	-	74,017
7,641	-	-	-	2,549	7,685	-	27,097
338	-	-	-	-	197	-	29,343
3,749	-	-	62	1,597	9,212	-	17,576
2	-	-	-	-	159	-	2,158
3,746	-	-	62	1,597	9,052	-	15,419
-	-	-	-	-	-	-	-

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## Energy Balances

## Brunei Darussalam, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	-	-	10,492	-
2 Import	-	-	-	14
3 Export	-	-	-9,926	-88
4 International Marine Bunkers	-	-	-	-
5 Stock Change	-	-	-35	-1
6 Total Primary Energy Supply	-	-	531	-75
7 Public Electricity	-	-	-	-6
8 Autoproducers of Electricity	-	-	-	-1
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-641	639
11 Coal Transformation	-	-	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-	-	-	-78
14 Discrepancy	-	-	0	4
15 Total Final Energy Consumption	-	-	-	482
16 Industry Sector	-	-	-	39
17 Transport Sector	-	-	-	409
18 Other Sector	-	-	-	34
18.1 Agriculture	-	-	-	0
18.2 Residential & Commercial	-	-	-	16
18.3 Other	-	-	-	18

## Canada, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	32,267	-	150,194	-
2 Import	11,340	173	47,169	12,270
3 Export	-15,345	-85	-89,188	-22,119
4 International Marine Bunkers	-	-	-	-602
5 Stock Change	239	126	1,324	-254
6 Total Primary Energy Supply	28,502	214	109,499	-10,705
7 Public Electricity	-23,365	-	-	-4,608
8 Autoproducers of Electricity	-3	-128	-	-483
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-105,786	108,446
11 Coal Transformation	-2,957	1,880	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-168	-	-	-8,858
14 Discrepancy	-712	52	-1,347	2,026
15 Total Final Energy Consumption	1,296	2,018	-	91,380
16 Industry Sector	1,271	2,018	-	23,667
17 Transport Sector	-	-	-	51,732
18 Other Sector	26	-	-	15,981
18.1 Agriculture	-	-	-	2,306
18.2 Residential & Commercial	26	-	-	11,139
18.3 Other	-	-	-	2,536

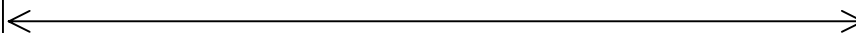
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Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
11,401	-	-	-	3	-	-	21,895
-	-	-	-	0	-	-	14
-9,826	-	-	-	-	-	-	-19,841
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-36
1,574	-	-	-	3	-	-	2,033
-997	-	-	-	-	250	-	-753
-113	-	-	-	-	28	-	-86
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-3
-	-	-	-	-	-	-	-
-	-	-	-	-0	-	-	-0
-449	-	-	-	-	-16	-	-544
-0	-	-	-	-	-	-	4
14	-	-	-	3	262	-	762
-	-	-	-	-	54	-	93
-	-	-	-	-	-	-	409
14	-	-	-	3	208	-	260
-	-	-	-	-	-	-	0
14	-	-	-	3	104	-	137
-	-	-	-	-	104	-	122

Energy Balances

Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
150,717	29,331	23,555	123	12,336	-	-	398,523
8,920	-	-	-	-	1,960	-	81,832
-86,307	-	-	-	-	-2,859	-	-215,903
-	-	-	-	-	-	-	-602
4,732	-	-	-	-	-	-	6,167
78,062	29,331	23,555	123	12,336	-900	-	270,017
-6,033	-26,530	-23,555	-123	-9	47,099	982	-36,140
-1,272	-2,801	-	-	-2,525	4,373	-	-2,841
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	2,660
-	-	-	-	-	-	-	-1,077
-557	-	-	-	-3	-	-	-561
-14,488	-	-	-	-	-7,257	-	-30,770
-3,038	-	-	-	0	-60	-0	-3,079
52,674	-	-	-	9,798	43,255	982	201,403
23,565	-	-	-	7,951	17,555	970	76,997
3,605	-	-	-	-	339	-	55,676
25,504	-	-	-	1,847	25,361	11	68,730
457	-	-	-	-	869	1	3,633
25,047	-	-	-	1,847	24,492	10	62,561
-	-	-	-	-	-	-	2,536

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## Chile, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	451	-	2,156	-
2 Import	2,794	358	11,306	2,552
3 Export	-	-26	-1,969	-1,554
4 International Marine Bunkers	-	-	-	-
5 Stock Change	-6	104	-323	-356
6 Total Primary Energy Supply	3,239	436	11,170	642
7 Public Electricity	-1,961	-559	-	-86
8 Autoproducers of Electricity	-8	-	-	-119
9 Gas Processing	-	-169	-	-4
10 Petroleum Refineries	-	-	-11,231	11,987
11 Coal Transformation	-843	574	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-1	-0	-	-1,287
14 Discrepancy	27	184	61	-0
15 Total Final Energy Consumption	454	467	-	11,133
16 Industry Sector	438	444	-	2,574
17 Transport Sector	-	-	-	7,271
18 Other Sector	17	22	-	1,289
18.1 Agriculture	-	-	-	11
18.2 Residential & Commercial	5	22	-	1,055
18.3 Other	11	-	-	222

## China, 2004

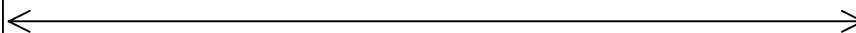
	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	946,373	-	167,080	-
2 Import	9,607	1,071	116,584	45,143
3 Export	-41,871	-9,939	-5,217	-12,820
4 International Marine Bunkers	-	-	-	-399
5 Stock Change	-769	-3,706	-2,830	-2,164
6 Total Primary Energy Supply	913,340	-12,575	275,617	29,760
7 Public Electricity	-457,444	-5,628	-	-
8 Autoproducers of Electricity	-	-	-174	-21,648
9 Gas Processing	-6,252	2,519	-	-100
10 Petroleum Refineries	-	-	-263,504	254,431
11 Coal Transformation	-147,606	161,437	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-48,578	-997	-6,162	-6,252
14 Discrepancy	13,724	3,877	-2,499	-868
15 Total Final Energy Consumption	267,184	148,632	3,279	255,324
16 Industry Sector	206,110	138,843	3,279	104,518
17 Transport Sector	3,952	12	-	82,399
18 Other Sector	57,122	9,778	-	68,407
18.1 Agriculture	10,692	637	-	19,422
18.2 Residential & Commercial	42,959	8,969	-	27,680
18.3 Other	3,472	172	-	21,305

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Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
1,966	1,814	-	-	4,311	-	-	10,699
5,758	-	-	-	-	164	-	22,931
-	-	-	-	-	-	-	-3,549
-215	-	-	-	-	-	-	-796
7,509	1,814	-	-	4,311	164	-	29,284
-3,169	-1,814	-	-	-100	4,341	-	-3,347
-48	-	-	-	-238	8	-	-404
-	-	-	-	-	-	-	-173
-	-	-	-	-	-	-	756
-	-	-	-	-	-	-	-268
-	-	-	-	-	-	-	-
-262	-	-	-	-	-413	-	-1,963
-2,496	-	-	-	0	-8	-	-2,231
1,534	-	-	-	3,974	4,091	-	21,653
989	-	-	-	1,074	2,784	-	8,303
27	-	-	-	-	20	-	7,318
518	-	-	-	2,900	1,287	-	6,033
-	-	-	-	-	-	-	11
438	-	-	-	2,900	1,276	-	5,696
80	-	-	-	-	12	-	325

Energy Balances

Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
35,341	30,405	13,152	-	5,770	-	-	1,198,120
-	-	-	-	-	292	-	172,697
-2,044	-	-	-	-	-815	-	-72,707
-	-	-	-	-	-	-	-399
-	-	-	-	-	-	-	-9,469
33,296	30,405	13,152	-	5,770	-523	-	1,288,243
-	-30,405	-13,152	-	-2,428	176,961	25,855	-306,240
-3,301	-	-	-	-	12,524	21,252	8,652
-	-	-	-	-	-	-	-3,833
-	-	-	-	-	-	-	-9,073
-	-	-	-	-	-	-	13,830
-	-	-	-	-329	-	-	-329
-6,286	-	-	-	-	-41,153	-10,272	-119,699
-59	-	-	-	-6	-120	-843	13,206
23,650	-	-	-	3,006	147,690	35,992	884,756
15,128	-	-	-	3,006	100,433	24,719	596,036
935	-	-	-	-	3,867	-	91,165
7,586	-	-	-	-	43,389	11,273	197,555
-	-	-	-	-	6,661	18	37,430
6,402	-	-	-	-	27,519	10,421	123,948
1,185	-	-	-	-	9,210	834	36,177

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## Hong Kong, China, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	-	-	-	-
2 Import	6,242	-	-	17,594
3 Export	-0	-0	-	-1,415
4 International Marine Bunkers	-	-	-	-8,466
5 Stock Change	-397	-	-	-
6 Total Primary Energy Supply	5,845	-0	-	7,713
7 Public Electricity	-5,867	-	-	-60
8 Autoproducers of Electricity	-	-	-	-
9 Gas Processing	-	648	-	-712
10 Petroleum Refineries	-	-	-	-
11 Coal Transformation	-	-	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-	-	-	-
14 Discrepancy	22	0	-	-619
15 Total Final Energy Consumption	0	648	-	6,322
16 Industry Sector	0	23	-	2
17 Transport Sector	-	-	-	5,681
18 Other Sector	-	625	-	639
18.1 Agriculture	-	-	-	-
18.2 Residential & Commercial	-	625	-	-
18.3 Other	-	-	-	639

## Indonesia, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	71,960	-	53,388	-
2 Import	-	-	19,791	21,321
3 Export	-50,977	-	-23,841	-12,090
4 International Marine Bunkers	-	-	-	-
5 Stock Change	-	-	-	-
6 Total Primary Energy Supply	20,983	-	49,339	9,231
7 Public Electricity	-8,380	-	-	-7,718
8 Autoproducers of Electricity	-4,061	-	-	-496
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-48,787	47,688
11 Coal Transformation	-10	8	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-	-	-	-992
14 Discrepancy	-1,355	0	-552	426
15 Total Final Energy Consumption	7,177	8	-	48,138
16 Industry Sector	7,164	-	-	12,019
17 Transport Sector	-	-	-	22,605
18 Other Sector	13	8	-	13,514
18.1 Agriculture	-	-	-	-
18.2 Residential & Commercial	13	8	-	9,716
18.3 Other	-	-	-	3,798

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Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
-	-	-	-	95	-	-	95
2,048	-	-	-	-	788	-	26,672
-	-	-	-	-	-265	-	-1,680
-	-	-	-	-	-	-	-8,466
-	-	-	-	-	-	-	-397
2,048	-	-	-	95	523	-	16,224
-2,048	-	-	-	-	3,193	-	-4,782
-	-	-	-	-47	-	-	-47
-	-	-	-	-	-	-	-64
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-342	-	-342
-	-	-	-	-47	-0	-	-644
-	-	-	-	-	3,373	-	10,344
-	-	-	-	-	369	-	394
-	-	-	-	-	119	-	5,800
-	-	-	-	-	2,886	-	4,150
-	-	-	-	-	-	-	-
-	-	-	-	-	2,886	-	3,511
-	-	-	-	-	-	-	639

Energy Balances

Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
69,693	832	-	5,723	38,199	-	-	239,795
-	-	-	-	-	-	-	41,113
-26,945	-	-	-	-	-	-	-113,853
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
42,748	832	-	5,723	38,199	-	-	167,054
-4,058	-769	-	-2,706	-	8,272	-	-15,359
-369	-63	-	-3,017	-	2,061	-	-5,945
-6,567	-	-	-	-	-	-	-6,567
-	-	-	-	-	-	-	-1,099
-	-	-	-	-	-	-	-2
-	-	-	-	-	-	-	-
-17,460	-	-	-	-	-1,333	-	-19,785
389	-	-	-0	-7	116	-	-982
14,682	-	-	-	38,192	9,117	-	117,315
14,628	-	-	-	1,939	3,468	-	39,218
12	-	-	-	-	5	-	22,623
42	-	-	-	36,253	5,645	-	55,475
-	-	-	-	-	-	-	-
42	-	-	-	36,253	5,135	-	51,167
-	-	-	-	-	510	-	4,307

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## Japan, 2004

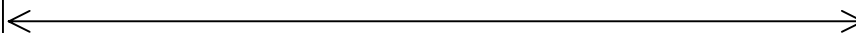
	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	684	-	725	-
2 Import	112,547	2,179	210,520	50,898
3 Export	-	-1,549	-	-4,818
4 International Marine Bunkers	-	-	-	-5,755
5 Stock Change	-793	68	-1,246	78
6 Total Primary Energy Supply	112,438	697	209,999	40,403
7 Public Electricity	-46,202	-4,472	-4,749	-10,166
8 Autoproducers of Electricity	-9,287	-2,954	-	-12,466
9 Gas Processing	-	-82	-	-1,672
10 Petroleum Refineries	-	-	-209,817	209,040
11 Coal Transformation	-40,263	36,914	-	-553
12 Other Transformation	-	-	-1	-
13 Loss & Own Use	-106	-3,161	-	-12,935
14 Discrepancy	-1,259	-3,392	-324	25
15 Total Final Energy Consumption	15,322	23,551	-	211,677
16 Industry Sector	15,322	22,519	-	78,569
17 Transport Sector	-	-	-	92,336
18 Other Sector	-	1,031	-	40,773
18.1 Agriculture	-	-	-	5,594
18.2 Residential & Commercial	-	1,031	-	32,350
18.3 Other	-	-	-	2,828

## Republic of Korea, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	2,006	-	437	-
2 Import	49,908	447	116,545	23,436
3 Export	-	-	-12	-32,130
4 International Marine Bunkers	-	-	-	-6,956
5 Stock Change	-1,407	-	1,079	-973
6 Total Primary Energy Supply	50,507	447	118,049	-16,624
7 Public Electricity	-29,724	-	-	-4,929
8 Autoproducers of Electricity	-1,474	-2,605	-	-
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-119,564	119,680
11 Coal Transformation	-14,684	6,874	-	-
12 Other Transformation	-	-	-	-6,461
13 Loss & Own Use	-	-1,611	-	-4,698
14 Discrepancy	181	144	1,440	-599
15 Total Final Energy Consumption	4,807	3,248	-	86,791
16 Industry Sector	4,807	2,591	-	39,342
17 Transport Sector	-	-	-	34,299
18 Other Sector	-	657	-	13,150
18.1 Agriculture	-	-	-	1,504
18.2 Residential & Commercial	-	657	-	9,403
18.3 Other	-	-	-	2,243

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Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
2,534	8,871	74,497	3,806	5,923	-	-	97,040
66,757	-	-	-	-	-	-	442,900
-	-	-	-	-	-	-	-6,367
-	-	-	-	-	-	-	-5,755
-2	-	-	-	-	-	-	-1,895
69,289	8,871	74,497	3,806	5,923	-	-	525,923
-45,139	-8,186	-74,497	-2,737	-	80,858	643	-114,646
-2,068	-685	-	-305	-6,423	16,021	-	-18,167
1,746	-	-	-	-	-	-	-8
-	-	-	-	-	-	-	-777
-	-	-	-	-	-	-	-3,901
-	-	-	-	-7	-	-	-8
-1,546	-	-	-	-	-11,087	-	-28,835
1,154	0	-	-0	2,752	649	-63	-459
23,436	-	-	763	2,245	86,441	580	364,014
8,771	-	-	-	2,211	36,132	-	163,524
-	-	-	-	-	1,920	-	94,255
14,665	-	-	763	34	48,389	580	106,235
-	-	-	96	-	321	-	6,011
14,665	-	-	667	34	48,068	580	97,396
-	-	-	-	-	-	-	2,828

Energy Balances

Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
-	506	34,064	42	1,743	-	-	38,799
25,919	-	-	-	-	-	-	216,255
-	-	-	-	-	-	-	-32,142
-	-	-	-	-	-	-	-6,956
-632	-	-	-	-	-	-	-1,933
25,288	506	34,064	42	1,743	-	-	214,022
-9,945	-506	-34,064	-	-52	29,166	1,381	-48,673
-650	-	-	-5	-273	2,496	3,036	526
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	116
-	-	-	-	-	-	-	-7,810
-	-	-	-	-0	-	-	-6,461
-565	-	-	-	-	-2,599	-83	-9,557
386	-	-	-	26	-0	-	1,578
14,514	-	-	37	1,444	29,063	4,334	144,239
3,940	-	-	-	1,131	15,248	2,885	69,944
228	-	-	-	-	213	-	34,740
10,345	-	-	37	313	13,602	1,449	39,554
22	-	-	0	-	420	-	1,946
10,323	-	-	37	313	13,042	1,449	35,225
-	-	-	-	-	140	-	2,383

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## Malaysia, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	229	-	38,713	1,031
2 Import	7,118	-	8,123	8,974
3 Export	-81	-	-19,321	-8,898
4 International Marine Bunkers	-	-	-	-100
5 Stock Change	184	-	-443	338
6 Total Primary Energy Supply	7,451	-	27,072	1,345
7 Public Electricity	-5,057	-	-	-546
8 Autoproducers of Electricity	-	-	-	-123
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-25,636	22,940
11 Coal Transformation	-	-	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-	-	-	-
14 Discrepancy	-1,154	-	-1,437	-831
15 Total Final Energy Consumption	1,239	-	-	22,785
16 Industry Sector	1,239	-	-	5,326
17 Transport Sector	-	-	-	15,317
18 Other Sector	-	-	-	2,143
18.1 Agriculture	-	-	-	87
18.2 Residential & Commercial	-	-	-	1,431
18.3 Other	-	-	-	626

## Mexico, 2004

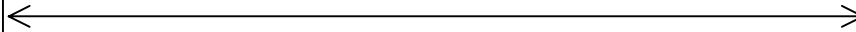
	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	4,749	-	195,021	-
2 Import	2,027	334	302	13,158
3 Export	-	-1	-107,168	-4,064
4 International Marine Bunkers	-	-	-	-784
5 Stock Change	-373	396	-517	173
6 Total Primary Energy Supply	6,404	729	87,639	8,483
7 Public Electricity	-5,333	-	-	-15,916
8 Autoproducers of Electricity	-	-205	-	-
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-74,784	70,313
11 Coal Transformation	-991	693	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-	-20	-	-6,325
14 Discrepancy	0	-	0	-2,342
15 Total Final Energy Consumption	80	1,196	-	68,293
16 Industry Sector	80	1,196	-	12,481
17 Transport Sector	-	-	-	44,447
18 Other Sector	-	-	-	11,365
18.1 Agriculture	-	-	-	2,267
18.2 Residential & Commercial	-	-	-	9,098
18.3 Other	-	-	-	-

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Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
49,046	501	-	-	-	-	-	89,520
848	-	-	-	-	-	-	25,063
-25,970	-	-	-	-	-	-	-54,270
-	-	-	-	-	-	-	-100
-	-	-	-	-	-	-	80
23,924	501	-	-	-	-	-	60,293
-9,549	-501	-	-	-	6,632	-	-9,021
-532	-	-	-	-	179	-	-476
-12,082	-	-	-	-	-	-	-12,082
-	-	-	-	-	-	-	-2,696
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-134	-	-134
4,117	-	-	-	-	-39	-	656
5,877	-	-	-	-	6,638	-	36,539
4,471	-	-	-	-	3,340	-	14,375
49	-	-	-	-	-	-	15,365
1,357	-	-	-	-	3,298	-	6,799
-	-	-	-	-	-	-	87
21	-	-	-	-	3,298	-	4,750
1,337	-	-	-	-	-	-	1,962

Energy Balances

Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
35,496	2,168	2,396	5,734	8,308	-	-	253,873
9,348	-	-	-	-	4	-	25,174
-	-	-	-	-	-87	-	-111,320
-	-	-	-	-	-	-	-784
-1,132	-	-	-	-	-	-	-1,452
43,713	2,168	2,396	5,734	8,308	-82	-	165,491
-16,462	-2,157	-2,396	-5,657	-	17,942	-	-29,977
-2,059	-11	-	-4	-1,114	1,328	-	-2,065
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-4,470
-	-	-	-	-	-	-	-299
-	-	-	-	-	-	-	-
-8,890	-	-	-	-	-4,567	-	-19,802
-2,168	-0	-	0	-	-0	-	-4,511
14,134	-	-	73	7,195	14,621	-	105,592
12,473	-	-	-	1,023	8,749	-	36,002
605	-	-	-	-	98	-	45,150
1,055	-	-	73	6,172	5,774	-	24,440
-	-	-	-	-	601	-	2,868
1,055	-	-	73	6,172	5,173	-	21,572
-	-	-	-	-	-	-	-

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## New Zealand, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	3,102	-	1,151	-
2 Import	450	-	4,808	2,209
3 Export	-1,375	-	-741	-79
4 International Marine Bunkers	-	-	-	-225
5 Stock Change	-291	-	58	-148
6 Total Primary Energy Supply	1,887	-	5,277	1,757
7 Public Electricity	-955	-	-	-5
8 Autoproducers of Electricity	-20	-	-	-
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-5,214	5,340
11 Coal Transformation	-	-	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-	-	-	-318
14 Discrepancy	-0	-	119	-25
15 Total Final Energy Consumption	912	-	-	6,934
16 Industry Sector	733	-	-	691
17 Transport Sector	-	-	-	5,777
18 Other Sector	179	-	-	466
18.1 Agriculture	12	-	-	169
18.2 Residential & Commercial	166	-	-	184
18.3 Other	-	-	-	114

## Papua New Guinea, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	-	-	1,927	-
2 Import	-	-	-	1,262
3 Export	-	-	-1,512	-285
4 International Marine Bunkers	-	-	-	-
5 Stock Change	-	-	-	-4
6 Total Primary Energy Supply	-	-	415	973
7 Public Electricity	-	-	-	-513
8 Autoproducers of Electricity	-	-	-	-44
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-415	434
11 Coal Transformation	-	-	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-	-	-	-15
14 Discrepancy	-	-	-0	-0
15 Total Final Energy Consumption	-	-	-	835
16 Industry Sector	-	-	-	419
17 Transport Sector	-	-	-	377
18 Other Sector	-	-	-	39
18.1 Agriculture	-	-	-	-
18.2 Residential & Commercial	-	-	-	39
18.3 Other	-	-	-	-

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114



Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
3,453	2,324	-	2,713	896	-	-	13,640
-	-	-	-	-	-	-	7,467
-	-	-	-	-	-	-	-2,195
-	-	-	-	-	-	-	-225
-0	-	-	-	-	-	-	-381
3,453	2,324	-	2,713	896	-	-	18,306
-1,185	-2,324	-	-2,359	-34	3,511	-	-3,350
-120	-	-	-	-154	83	-	-211
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	126
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-153	-	-	-	-	-620	-	-1,091
7	-	-	-	-0	62	-	163
2,002	-	-	354	709	3,035	-	13,946
1,665	-	-	294	645	1,203	-	5,230
5	-	-	-	-	36	-	5,817
332	-	-	60	64	1,797	-	2,898
-	-	-	-	-	119	-	300
332	-	-	60	64	1,673	-	2,480
-	-	-	-	-	5	-	119

Energy Balances

Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
107	77	-	-	-	-	-	2,111
-	-	-	-	-	-	-	1,262
-	-	-	-	-	-	-	-1,797
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-4
107	77	-	-	-	-	-	1,572
-	-47	-	-	-	199	-	-361
-107	-30	-	-	-	99	-	-81
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	18
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-9	-	-25
-	0	-	-	-	0	-	0
-	-	-	-	-	289	-	1,124
-	-	-	-	-	218	-	637
-	-	-	-	-	-	-	377
-	-	-	-	-	70	-	110
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	39
-	-	-	-	-	70	-	70

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## Peru, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	16	-	4,623	-
2 Import	636	170	4,219	1,737
3 Export	-	-	-841	-2,125
4 International Marine Bunkers	-	-	-	-
5 Stock Change	109	-8	-85	6
6 Total Primary Energy Supply	761	162	7,916	-382
7 Public Electricity	-262	-	-	-537
8 Autoproducers of Electricity	-	-	-	-157
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-7,273	7,401
11 Coal Transformation	-13	-108	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-	-	-	-160
14 Discrepancy	-8	-2	-258	-138
15 Total Final Energy Consumption	478	52	-	6,565
16 Industry Sector	478	52	-	1,400
17 Transport Sector	-	-	-	3,849
18 Other Sector	0	-	-	1,317
18.1 Agriculture	-	-	-	42
18.2 Residential & Commercial	0	-	-	941
18.3 Other	-	-	-	334

## Philippines, 2004

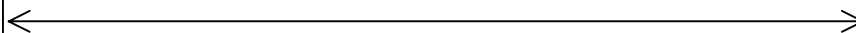
	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	1,310	-	466	4
2 Import	3,681	-	10,175	6,613
3 Export	-	-	-442	-899
4 International Marine Bunkers	-	-	-	-139
5 Stock Change	-	-	350	-62
6 Total Primary Energy Supply	4,991	-	10,548	5,517
7 Public Electricity	-3,446	-	-	-2,011
8 Autoproducers of Electricity	-	-	-	-
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-9,759	9,534
11 Coal Transformation	-	-	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-30	-	-	-458
14 Discrepancy	-460	-	-331	-19
15 Total Final Energy Consumption	1,055	-	-	13,021
16 Industry Sector	1,055	-	-	2,186
17 Transport Sector	-	-	-	8,662
18 Other Sector	-	-	-	2,173
18.1 Agriculture	-	-	-	69
18.2 Residential & Commercial	-	-	-	1,767
18.3 Other	-	-	-	336

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Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
828	1,529	-	2	2,083	-	-	9,080
-	-	-	-	-	-	-	6,762
-	-	-	-	-	-	-	-2,966
-	-	-	-	-	-	-	23
828	1,529	-	2	2,083	-	-	12,899
-689	-1,491	-	-	-	1,964	-	-1,016
-	-37	-	-0	-53	145	-	-102
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	128
-	-	-	-	-	-	-	-121
-	-	-	-0	-82	-	-	-82
-85	-	-	-	-	-228	-	-473
0	-	-	-0	-0	-27	-	-433
55	-	-	1	1,948	1,853	-	10,952
54	-	-	0	148	1,139	-	3,272
-	-	-	-	-	-	-	3,849
0	-	-	1	1,799	714	-	3,831
-	-	-	-	-	-	-	42
0	-	-	1	1,799	714	-	3,455
-	-	-	-	-	-	-	334

Energy Balances

Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
2,059	739	-	8,843	10,284	-	-	23,705
-	-	-	-	-	-	-	20,469
-	-	-	-	-	-	-	-1,341
-	-	-	-	-	-	-	-139
-	-	-	-	-194	-	-	93
2,059	739	-	8,843	10,090	-	-	42,787
-1,963	-739	-	-8,843	-	4,812	-	-12,189
-	-	-	-0	-	-	-	-0
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-226
-	-	-	-	-	-	-	-
-	-	-	-	-1,360	-	-	-1,360
-94	-	-	-	-	-1,022	-	-1,604
-2	-	-	-	-0	0	-	-811
0	-	-	-	8,730	3,791	-	26,597
-	-	-	-	1,683	1,291	-	6,215
0	-	-	-	-	6	-	8,668
-	-	-	-	7,048	2,494	-	11,715
-	-	-	-	-	7	-	76
-	-	-	-	7,048	2,486	-	11,301
-	-	-	-	-	2	-	338

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## Russia, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	130,063	-	458,534	-
2 Import	12,196	141	4,230	581
3 Export	-37,515	-2,683	-258,912	-72,177
4 International Marine Bunkers	-	-	-	-
5 Stock Change	1,987	-50	-1,388	-36
6 Total Primary Energy Supply	106,730	-2,591	202,464	-71,633
7 Public Electricity	-50,711	-	-	-5,875
8 Autoproducers of Electricity	-20,099	-5,159	-915	-11,009
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-197,399	185,053
11 Coal Transformation	-26,849	47,614	-	-
12 Other Transformation	-	-	-	-9,301
13 Loss & Own Use	-527	-12	-3,945	-11,548
14 Discrepancy	-28	0	0	1
15 Total Final Energy Consumption	8,517	39,852	206	75,688
16 Industry Sector	2,144	39,838	111	5,940
17 Transport Sector	279	3	37	44,613
18 Other Sector	6,094	10	58	25,136
18.1 Agriculture	109	-	11	4,348
18.2 Residential & Commercial	5,093	9	-	4,119
18.3 Other	892	1	47	16,669

## Singapore, 2004

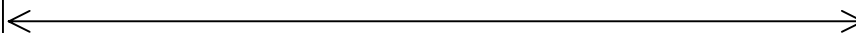
	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	-	-	-	-
2 Import	1	6	45,085	47,989
3 Export	-	-	-	-54,506
4 International Marine Bunkers	-	-	-	-20,506
5 Stock Change	-	-	-	-
6 Total Primary Energy Supply	1	6	45,085	-27,023
7 Public Electricity	-	-	-	-2,426
8 Autoproducers of Electricity	-	-	-	-
9 Gas Processing	-	98	-	-128
10 Petroleum Refineries	-	-	-45,085	40,459
11 Coal Transformation	-	-	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-	-	-	-620
14 Discrepancy	-1	-	-	-0
15 Total Final Energy Consumption	-	104	-	10,261
16 Industry Sector	-	60	-	5,559
17 Transport Sector	-	-	-	4,453
18 Other Sector	-	45	-	250
18.1 Agriculture	-	-	-	-
18.2 Residential & Commercial	-	45	-	-
18.3 Other	-	-	-	250

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Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
509,407	15,289	37,735	347	7,134	-	-	1,158,510
5,566	-	-	-	-	1,047	-	23,761
-161,895	-	-	-	-	-1,703	-	-534,885
-6,362	-	-	-	-89	-	-	-5,938
346,716	15,289	37,735	347	7,046	-655	-	641,449
-110,272	-15,191	-37,735	-347	-	76,024	51,907	-92,201
-70,154	-99	-	-	-4,237	4,117	97,293	-10,262
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-12,346
-	-	-	-	-	-	-	20,765
-	-	-	-	-	-	-	-9,301
-9,804	-	-	-	-	-15,690	-7,132	-48,658
-43,977	-	-	-	-176	-8,279	-11,986	-64,445
112,508	-	-	-	2,633	55,516	130,081	425,002
25,714	-	-	-	725	28,732	47,745	150,949
30,895	-	-	-	-	6,908	-	82,735
55,899	-	-	-	1,908	19,876	82,336	191,318
387	-	-	-	119	1,547	3,100	9,621
38,098	-	-	-	1,548	12,325	72,025	133,217
17,415	-	-	-	241	6,004	7,212	48,480

Energy Balances

Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
-	-	-	-	-	-	-	-
4,662	-	-	-	-	-	-	97,742
-	-	-	-	-	-	-	-54,506
-	-	-	-	-	-	-	-20,506
-	-	-	-	-	-	-	-
4,662	-	-	-	-	-	-	22,730
-4,662	-	-	-	-	3,083	-	-4,005
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-30
-	-	-	-	-	-	-	-4,626
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-230	-	-850
-	-	-	-	-	-	-	-1
-	-	-	-	-	2,853	-	13,218
-	-	-	-	-	1,242	-	6,861
-	-	-	-	-	28	-	4,480
-	-	-	-	-	1,583	-	1,877
-	-	-	-	-	3	-	3
-	-	-	-	-	1,579	-	1,624
-	-	-	-	-	-	-	250

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## Chinese Taipei, 2004

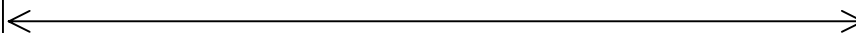
	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	-	-	40	-
2 Import	37,778	16	52,601	9,258
3 Export	-	-	-	-13,040
4 International Marine Bunkers	-	-	-	-2,305
5 Stock Change	-1,288	-53	-269	-643
6 Total Primary Energy Supply	36,490	-37	52,372	-6,730
7 Public Electricity	-19,843	-	-	-2,465
8 Autoproducers of Electricity	-6,501	-652	-	-1,241
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-52,282	51,760
11 Coal Transformation	-4,308	2,675	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-	-	-	-2,440
14 Discrepancy	-930	19	-90	473
15 Total Final Energy Consumption	4,908	2,004	-	39,004
16 Industry Sector	4,908	2,004	-	20,611
17 Transport Sector	-	-	-	13,676
18 Other Sector	-	-	-	4,717
18.1 Agriculture	-	-	-	4
18.2 Residential & Commercial	-	-	-	2,285
18.3 Other	-	-	-	2,427

## Thailand, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	5,610	-	10,316	-
2 Import	3,330	1,418	43,531	1,511
3 Export	-	-	-2,892	-5,473
4 International Marine Bunkers	-	-	-	-
5 Stock Change	136	-	1,294	-605
6 Total Primary Energy Supply	9,077	1,418	52,250	-4,567
7 Public Electricity	-4,656	-	-	-1,715
8 Autoproducers of Electricity	-	-	-	-
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-46,816	37,244
11 Coal Transformation	-	-	-	-
12 Other Transformation	-	-	-	-243
13 Loss & Own Use	-	-	-	-
14 Discrepancy	97	-1	-512	-28
15 Total Final Energy Consumption	4,518	1,417	367	35,247
16 Industry Sector	4,518	1,417	367	7,191
17 Transport Sector	-	-	-	22,780
18 Other Sector	-	-	-	5,276
18.1 Agriculture	-	-	-	3,500
18.2 Residential & Commercial	-	-	-	1,777
18.3 Other	-	-	-	-

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Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
695	564	10,291	85	1,412	-	-	13,087
9,447	-	-	-	-	-	-	109,100
-	-	-	-	-	-	-	-13,040
-	-	-	-	-	-	-	-2,305
-273	-	-	-	-	-	-	-2,527
9,869	564	10,291	85	1,412	-	-	104,316
-6,807	-564	-10,291	-1	-	15,301	-	-24,670
-169	-	-	-1	-1,412	3,481	-	-6,495
-554	-	-	-	-	-	-	-554
-	-	-	-	-	-	-	-522
-	-	-	-	-	-	-	-1,633
-	-	-	-	-	-	-	-
-284	-	-	-0	-	-1,993	-	-4,716
-164	-	-	-0	-	-705	83	-1,314
1,891	-	-	83	-	16,084	83	64,059
854	-	-	-	-	8,684	-	37,062
-	-	-	-	-	113	-	13,789
1,037	-	-	83	-	7,287	83	13,208
-	-	-	-	-	122	-	126
1,037	-	-	83	-	7,071	83	10,561
-	-	-	-	-	94	-	2,522

Energy Balances

Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
14,877	519	-	2	16,381	-	-	47,706
7,607	-	-	-	23	291	-	57,712
-	-	-	-	-3	-32	-	-8,400
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	825
22,484	519	-	2	16,401	259	-	97,843
-19,786	-519	-	-2	-	9,650	-	-17,027
-	-	-	-	-1,033	1,162	-	129
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-9,571
-	-	-	-	-	-	-	-
-	-	-	-	-4,852	-	-	-5,094
-	-	-	-	-	-1,218	-	-1,218
-357	-	-	-	1	-0	-	-801
2,341	-	-	-	10,517	9,854	-	64,260
2,314	-	-	-	4,870	4,538	-	25,214
27	-	-	-	-	4	-	22,811
-	-	-	-	5,647	5,312	-	16,235
-	-	-	-	-	19	-	3,519
-	-	-	-	5,647	5,249	-	12,673
-	-	-	-	-	43	-	43

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## United States of America, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	546,503	-	339,092	-
2 Import	16,187	4,092	593,892	99,292
3 Export	-26,825	-785	-3,823	-48,287
4 International Marine Bunkers	-	-	-	-24,390
5 Stock Change	5,500	522	-7,262	-1,044
6 Total Primary Energy Supply	541,365	3,829	921,899	25,570
7 Public Electricity	-415,924	-73,076	-	-28,092
8 Autoproducers of Electricity	-5,240	-1,095	-	-5,293
9 Gas Processing	-1,684	-	-	-
10 Petroleum Refineries	-	-	-856,070	867,129
11 Coal Transformation	-88,416	80,383	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-270	-2,253	-	-49,274
14 Discrepancy	-3,446	91	-10,206	-1,195
15 Total Final Energy Consumption	26,385	7,879	-	866,393
16 Industry Sector	23,413	7,879	-	183,221
17 Transport Sector	-	-	-	618,138
18 Other Sector	2,973	-	-	65,033
18.1 Agriculture	562	-	-	16,429
18.2 Residential & Commercial	2,410	-	-	48,604
18.3 Other	1	-	-	-

## Viet Nam, 2004

	Coal	Coal Products	Crude Oil, NGL	Petroleum Products
1 Indigenous Production	15,315	-	20,940	-
2 Import	-	-	-	11,687
3 Export	-6,516	-	-19,852	-1,550
4 International Marine Bunkers	-	-	-	-
5 Stock Change	-454	-	-560	-
6 Total Primary Energy Supply	8,346	-	528	10,137
7 Public Electricity	-1,678	-	-	-471
8 Autoproducers of Electricity	-	-	-	-
9 Gas Processing	-	-	-	-
10 Petroleum Refineries	-	-	-	-
11 Coal Transformation	-	-	-	-
12 Other Transformation	-	-	-	-
13 Loss & Own Use	-	-	-	-
14 Discrepancy	-1	-	0	0
15 Total Final Energy Consumption	6,667	-	-	10,194
16 Industry Sector	4,754	-	-	2,246
17 Transport Sector	-	-	-	5,797
18 Other Sector	1,914	-	-	2,151
18.1 Agriculture	23	-	-	422
18.2 Residential & Commercial	1,891	-	-	1,503
18.3 Other	-	-	-	226

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Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
438,497	25,619	211,956	16,963	63,651	-	-	1,642,282
99,096	-	-	-	-	2,942	-	815,501
-19,556	-	-	-	-	-1,969	-	-101,246
-	-	-	-	-	-	-	-24,390
-3,109	-	-	-	-	-	-	-5,393
514,928	25,619	211,956	16,963	63,651	973	-	2,326,754
-128,169	-25,327	-211,956	-14,744	-12,576	344,558	5,639	-559,667
-19,063	-291	-	-	-10,993	14,448	-	-27,528
-	-	-	-	-	-	-	-1,684
-	-	-	-	-	-	-	11,058
-	-	-	-	-	-	-	-8,034
-	-	-	-	-259	-	-	-259
-41,294	-	-	-	-	-46,933	-2,554	-142,577
8,640	-	-	-0	-38	0	0	-6,154
335,043	-	-	2,220	39,785	313,046	3,086	1,593,835
135,360	-	-	121	30,381	81,003	2,453	463,831
13,798	-	-	-	-	608	-	632,544
185,885	-	-	2,099	9,403	231,435	633	497,460
-	-	-	-	33	-	-	17,024
185,885	-	-	2,099	9,371	216,946	633	465,948
-	-	-	-	-	14,488	-	14,489

Energy Balances

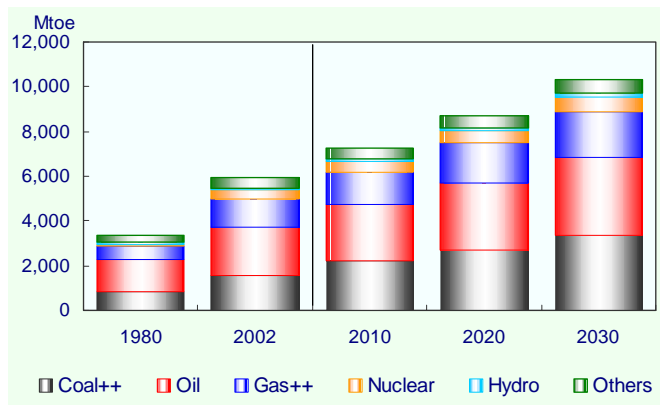
Unit: ktoe

Natural Gas, LNG	Hydro	Nuclear	Geothermal, Solar, etc.	Others	Electricity	Heat	Total
4,606	1,526	-	-	14,734	-	-	57,121
-	-	-	-	-	-	-	11,687
-	-	-	-	-	-	-	-27,918
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-1,014
4,606	1,526	-	-	14,734	-	-	39,877
-4,585	-1,526	-	-	-	3,977	-	-4,283
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
0	0	-	-	-0	0	-	-0
21	-	-	-	14,734	3,437	-	35,053
21	-	-	-	3,072	1,539	-	11,632
-	-	-	-	-	33	-	5,829
-	-	-	-	11,662	1,866	-	17,592
-	-	-	-	-	47	-	492
-	-	-	-	11,662	1,818	-	16,874
-	-	-	-	-	-	-	226

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### Primary Energy Supply Outlook by Energy



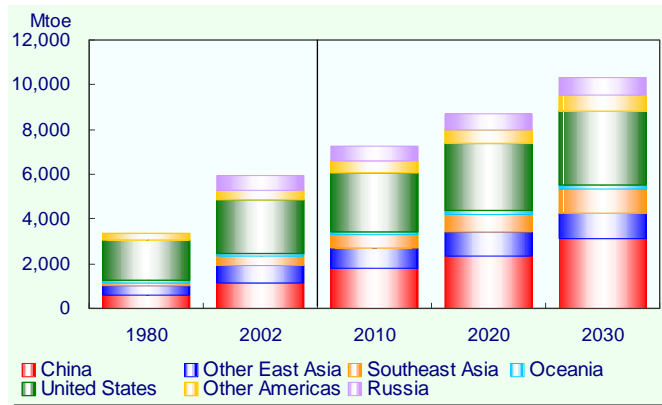
	1980	2002	2010	2020	2030
Coal++	822	1,570	2,211	2,716	3,366
Oil	1,445	2,165	2,523	2,982	3,488
Gas++	595	1,255	1,469	1,783	2,050
Nuclear	104	382	442	540	643
Hydro	65	114	132	159	197
Others	332	454	489	526	589
<b>Total</b>	<b>3,363</b>	<b>5,939</b>	<b>7,266</b>	<b>8,706</b>	<b>10,332</b>

	1999	2005	2010	2015	2020
Coal++	24.4	26.4	30.4	31.2	32.6
Oil	43.0	36.4	34.7	34.2	33.8
Gas++	17.7	21.1	20.2	20.5	19.8
Nuclear	3.1	6.4	6.1	6.2	6.2
Hydro	1.9	1.9	1.8	1.8	1.9
Others	9.9	7.6	6.7	6.0	5.7

By Asia Pacific Energy Research Centre, September 2006.

### Primary Energy Supply Outlook by Region



	Mtoe				
	1980	2002	2010	2020	2030
China	599	1,119	1,777	2,345	3,096
Other East Asia	422	812	921	1,057	1,152
Southeast Asia	140	408	575	802	1,066
Oceania	80	133	151	181	212
United States	1,812	2,394	2,659	2,985	3,318
Other Americas	311	438	512	613	720
Russia	0	635	671	723	769
<b>APEC 21</b>	<b>3,363</b>	<b>5,939</b>	<b>7,265</b>	<b>8,706</b>	<b>10,333</b>

	Share (%)				
	1980	2002	2010	2020	2030
China	17.8	18.8	24.5	26.9	30.0
Other East Asia	12.5	13.7	12.7	12.1	11.1
Southeast Asia	4.2	6.9	7.9	9.2	10.3
Oceania	2.4	2.2	2.1	2.1	2.1
United States	53.9	40.3	36.6	34.3	32.1
Other Americas	9.3	7.4	7.0	7.0	7.0
Russia	-	10.7	9.2	8.3	7.4

Other East Asia includes Hong Kong, China; Japan; Republic of Korea and Chinese Taipei.  
 Other Americas includes Canada, Chile, Mexico, and Peru.  
 Southeast Asia includes Viet Nam.

Outlook



## Selected Energy Indicators APEC Region

	Population			Real GDP			Real GDP	
	Millions			Billions of 1995 Price and 1995 USD			Billions of 1995 Price and 1995 PPP	
	1980	1990	2004	1980	1990	2004	1980	1990
APEC 19	1,787	2,063	2,397	9,624	13,855	21,253	10,140	15,215
APEC 21	1,980	2,277	2,623	-	14,256	21,623	10,140	16,823
East Asia	1,159	1,328	1,502	3,242	5,122	7,773	3,025	5,411
China	981.2	1,135.2	1,296.2	182.9	444.6	1,715.0	816.7	1,984.8
Hong Kong, China	5.1	5.7	6.9	57.2	106.2	188.9	59.4	110.5
Japan	116.8	123.5	127.8	2,806.1	4,130.4	4,932.9	1,966.0	2,893.8
Republic of Korea	38.1	42.9	48.1	122.8	283.6	613.1	182.8	422.1
Chinese Taipei	17.8	20.4	22.6	73.5	157.5	323.5	-	-
Southeast Asia	259	315	392	195	338	650	617	1,043
Brunei Darussalam	0.2	0.3	0.4	4.4	3.8	4.8	4.4	3.8
Indonesia	148.3	178.2	217.6	58.8	109.2	197.2	222.6	413.1
Malaysia	13.8	17.8	24.9	25.4	45.5	106.8	58.7	104.9
Philippines	48.1	61.1	81.6	47.6	56.2	88.5	191.3	226.2
Singapore	2.4	3.0	4.2	21.5	43.9	102.5	22.3	45.5
Thailand	46.3	54.6	63.7	37.3	79.4	150.1	117.1	249.4
Oceania	21	25	30	238	315	509	310	409
Australia	14.7	17.1	20.1	202.9	273.2	444.1	255.8	344.4
New Zealand	3.1	3.4	4.1	32.7	39.4	61.0	47.7	57.5
Papua New Guinea	3.2	4.1	5.8	1.9	2.1	3.5	6.7	7.6
North America	252	277	326	5,536	7,591	11,553	5,518	7,561
Canada	24.6	27.8	32.0	408.2	535.6	789.4	480.8	630.9
United States of America	227.2	249.6	293.7	5,128.0	7,055.0	10,764	5,037.5	6,930.5
Latin America	96.1	118.2	147.5	412.5	489.8	767.7	669.8	789.7
Chile	11.2	13.2	16.1	27.9	40.4	87.4	52.2	75.5
Mexico	67.6	83.2	103.8	345.6	413.3	619.5	527.5	630.9
Peru	17.3	21.8	27.6	39.0	36.0	60.9	90.2	83.3
Russia	139.0	148.3	143.8	-	385.9	328.8	-	1,532.6
Viet Nam	53.7	66.2	82.2	-	15.0	41.2	-	76.2

Note: Chinese Taipei is not included in the Real GDP (1995 Price and 1995 PPP) of APEC 19, APEC 21 and East Asia. APEC 19 is not included Russia and Viet Nam.

	Energy Indigenous Production				Net Import			Total Primary Energy Supply			
	Mtoe				Mtoe			Mtoe			
2004	1980	1990	2004	1980	1990	2004	1980	1990	2004		
27,567	2,558	3,271	4,296	501	555	1,203	3,031	3,709	5,409		
29,082	2,558	3,277	5,497	501	555	675	3,031	3,714	6,075		
12,221	478	776	1,347	341	453	834	821	1,203	2,142		
7,656.2	414.1	670.5	1,198.1	-18.6	-29.0	100.0	399.6	621.2	1,288.2	CHN	
196.4	0.0	0.0	0.1	6.0	10.8	25.0	5.3	10.6	16.2	HKG	
3,456.1	48.7	72.6	97.0	303.2	361.6	429.3	352.6	432.5	518.7	JPN	
912.8	9.2	21.9	38.8	29.6	70.1	184.1	38.3	92.6	214.0	KOR	
-	5.7	10.7	13.1	20.3	39.4	96.1	25.1	46.0	104.3	TWN	
1,931	132	199	359	-54	-52	-10	71	133	329		
4.8	20.7	15.3	21.9	-17.4	-12.9	-19.8	3.2	2.1	2.0	BRN	
746.3	92.1	119.4	201.6	-60.7	-65.9	-72.7	31.1	53.3	128.9	IDN	
246.3	16.1	46.5	89.5	-5.0	-25.4	-29.2	10.6	21.0	60.3	MYS	
356.1	2.7	6.0	13.4	10.4	11.4	19.1	12.4	17.3	32.7	PHL	
106.3	0.0	0.0	0.0	6.7	22.9	43.2	2.0	9.9	22.7	SGP	
471.5	0.5	11.9	32.4	12.0	18.2	49.3	12.1	29.9	82.5	THA	
661	92	174	278	-14	-66	-139	79	103	136		
559.8	86.1	157.5	261.8	-18.3	-64.7	-143.8	69.3	87.5	115.8	AUS	
89.0	6.0	12.4	13.6	4.0	2.1	5.3	9.5	14.1	18.3	NZL	
12.4	0.0	4.6	2.1	0.6	-3.7	-0.5	0.6	0.9	1.6	PNG	
11,504	1,689	1,911	2,041	278	284	580	1,943	2,124	2,597		
929.8	207.7	273.7	398.5	-11.0	-59.4	-134.1	194.2	209.4	270.0	CAN	
10,574	1,481.4	1,637.1	1,642.3	288.6	343.5	714.3	1,748.6	1,914.3	2,326.8	USA	
1,249.3	167.2	211.2	271.7	-49.9	-63.7	-63.0	116.3	146.0	205.7		
163.1	7.0	7.8	10.7	4.1	7.0	19.4	11.0	14.3	29.3	CHL	
945.5	149.0	195.2	253.9	-51.0	-70.1	-86.1	97.2	124.2	165.5	MEX	
140.6	11.1	8.2	7.1	-3.0	-0.6	3.8	8.2	7.5	11.0	PER	
1,305.9	0.0	0.0	1,158.5	0.0	0.0	-511.1	0.0	0.0	641.4	RUS	
209.2	0.0	5.8	42.4	0.0	-0.2	-16.2	0.0	5.4	25.1	VNM	

Energy Indicators

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## Energy Indicators

	Total Final Energy Consumption			Final Consumption of Electricity			Total Primary Energy Supply	
	Mtoe			TWh			toe / Person	
	1980	1990	2004	1980	1990	2004	1980	1990
APEC 19	2,388	2,601	3,682	3,492	4,971	8,284	1.70	1.80
APEC 21	2,388	2,605	4,127	3,492	4,977	8,970	1.53	1.63
East Asia	610.2	874.9	1,460.2	864.1	1,510.1	3,286.6	0.71	0.91
China	301.4	469.3	884.8	271.6	573.1	1,717.3	0.41	0.55
Hong Kong, China	3.5	6.7	10.3	10.9	23.8	39.2	1.05	1.87
Japan	252.7	305.1	356.8	511.9	744.8	1,005.1	3.02	3.50
Republic of Korea	35.7	64.0	144.2	32.7	94.4	337.9	1.01	2.16
Chinese Taipei	17.0	29.8	64.1	36.9	74.0	187.0	1.41	2.26
Southeast Asia	48.1	85.3	201.3	50.5	123.2	378.1	0.28	0.42
Brunei Darussalam	0.2	0.4	0.8	0.3	1.0	3.1	16.81	8.06
Indonesia	21.1	34.0	79.1	7.3	30.5	106.0	0.21	0.30
Malaysia	6.4	13.1	36.5	8.7	19.9	77.2	0.77	1.18
Philippines	9.0	10.3	17.9	15.0	19.3	44.1	0.26	0.28
Singapore	2.1	5.3	13.2	6.1	14.2	33.2	0.82	3.25
Thailand	9.3	22.2	53.7	13.1	38.3	114.6	0.26	0.55
Oceania	59.3	68.2	89.1	101.6	158.7	237.4	3.77	4.16
Australia	51.5	58.1	74.0	81.0	129.2	198.8	4.72	5.13
New Zealand	7.3	9.6	13.9	19.4	27.8	35.3	3.05	4.09
Papua New Guinea	0.4	0.6	1.1	1.2	1.7	3.4	0.19	0.21
North America	1,591.0	1,466.8	1,795.2	2,404.6	3,051.6	4,143.0	7.72	7.66
Canada	156.7	159.9	201.4	307.4	418.0	503.0	7.90	7.53
United States of America	1,434.3	1,306.9	1,593.8	2,097.2	2,633.6	3,640.1	7.70	7.67
Latin America	79.6	105.7	136.2	70.7	127.4	239.1	1.21	1.24
Chile	8.3	11.0	21.7	9.7	15.4	47.6	0.98	1.08
Mexico	65.1	88.5	105.6	52.3	100.2	170.0	1.44	1.49
Peru	6.2	6.2	9.0	8.7	11.8	21.5	0.47	0.35
Russia	0.0	0.0	425.0	0.0	0.0	645.5	0.00	0.00
Viet Nam	0.0	4.2	20.3	0.0	6.2	40.0	0.00	0.08

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	Total Primary Energy Supply per Real GDP				Total Primary Energy Supply per Real GDP			Total Final Energy Consumption per Capita			
	toe / Million 1995 USD				toe / Million 1995 PPP			toe / Person			
2004	1980	1990	2004	1980	1990	2004	1980	1990	2004		
2.26	314.9	267.7	254.5	296.4	240.7	192.4	1.3	1.3	1.5		
2.32	-	0.3	281.0	298.9	220.8	205.3	1.2	1.1	1.6		
1.43	253.2	234.9	275.5	263.1	213.8	166.7	0.5	0.7	1.0		
0.99	2,184.5	1,397.3	751.2	489.3	313.0	168.3	0.3	0.4	0.7	CHN	
2.36	92.6	100.2	85.9	89.0	96.3	82.6	0.7	1.2	1.5	HKG	
4.06	125.7	104.7	105.2	179.3	149.5	150.1	2.2	2.5	2.8	JPN	
4.45	312.0	326.7	349.1	209.6	219.5	234.5	0.9	1.5	3.0	KOR	
4.61	341.3	292.0	322.5	-	-	-	1.0	1.5	2.8	TWN	
0.84	365.9	395.0	506.4	115.8	128.0	170.4	0.2	0.3	0.5		
5.56	731.7	551.8	421.0	731.7	551.8	421.0	1.2	1.6	2.1	BRN	
0.59	528.2	487.9	653.5	139.5	128.9	172.6	0.1	0.2	0.4	IDN	
2.42	414.9	461.3	564.6	179.9	200.0	244.8	0.5	0.7	1.5	MYS	
0.40	261.5	308.0	369.3	65.0	76.6	91.8	0.2	0.2	0.2	PHL	
5.36	91.7	225.5	221.8	88.4	217.5	213.9	0.9	1.7	3.1	SGP	
1.29	324.7	377.3	549.6	103.3	120.1	174.9	0.2	0.4	0.8	THA	
4.53	334.3	325.6	266.7	256.0	250.3	205.2	2.8	2.8	3.0		
5.76	341.4	320.4	260.7	270.9	254.2	206.8	3.5	3.4	3.7	AUS	
4.51	290.4	357.8	299.9	199.1	245.4	205.7	2.3	2.8	3.4	NZL	
0.27	334.2	404.3	450.9	94.1	113.8	126.9	0.1	0.1	0.2	PNG	
7.97	350.9	279.8	224.8	352.1	280.9	225.7	6.3	5.3	5.5		
8.44	475.9	390.9	342.1	404.0	331.9	290.4	6.4	5.8	6.3	CAN	
7.92	341.0	271.3	216.2	347.1	276.2	220.0	6.3	5.2	5.4	USA	
1.39	281.9	298.0	268.0	173.7	184.9	164.7	0.8	0.9	0.9		
1.82	392.6	352.5	335.1	210.3	188.8	179.5	0.7	0.8	1.3	CHL	
1.59	281.2	300.4	267.2	184.2	196.8	175.0	1.0	1.1	1.0	MEX	
0.40	209.7	209.2	179.9	90.8	90.5	77.9	0.4	0.3	0.3	PER	
4.46	-	0.0	1,950.8	-	0.0	491.2	0.0	0.0	3.0	RUS	
0.31	-	0.4	609.6	-	0.1	120.2	0.0	0.1	0.2	VNM	

Note: Chinese Taipei is not included in the Total Primary Energy Supply per Real GDP (1995 PPP) of APEC 19, APEC 21 and East Asia.

Energy Indicators

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## Energy Indicators

	Energy Related CO <sub>2</sub> Emission			CO <sub>2</sub> Emission per Capita		
	Mt-C			t-C / Person		
	1980	1990	2004	1980	1990	2004
APEC 19	-	-	4,011	-	-	1.674
APEC 21	-	-	4,463	-	-	1.702
East Asia	661.2	946.6	1,791.7	0.570	0.713	1.193
China	354.4	554.2	1,259.3	0.361	0.488	0.972
Hong Kong, China	4.0	9.2	10.2	0.789	1.613	1.485
Japan	251.5	287.2	331.4	2.154	2.325	2.594
Republic of Korea	32.8	65.4	120.2	0.861	1.525	2.500
Chinese Taipei	18.4	30.6	70.6	1.035	1.504	3.120
Southeast Asia	-	-	217.9	-	-	0.555
Brunei Darussalam	0.6	1.6	1.5	3.336	6.214	3.973
Indonesia	17.3	39.3	92.7	0.117	0.221	0.426
Malaysia	8.1	15.5	40.9	0.586	0.868	1.642
Philippines	8.2	9.7	18.6	0.171	0.159	0.228
Singapore	1.7	8.3	13.4	0.688	2.714	3.150
Thailand	-	-	50.9	-	-	0.799
Oceania	-	-	105.5	-	-	3.524
Australia	-	69.2	96.0	-	4.057	4.772
New Zealand	-	6.1	8.3	-	1.768	2.038
Papua New Guinea	-	-	1.3	-	-	0.219
North America	1,415.8	1,490.5	1,771.5	5.622	5.373	5.440
Canada	119.1	123.2	159.1	4.844	4.434	4.976
United States of America	1,296.7	1,367.3	1,612.4	5.707	5.477	5.491
Latin America	75.2	91.4	124.8	0.783	0.774	0.846
Chile	6.4	9.3	17.5	0.576	0.702	1.085
Mexico	63.0	76.8	99.9	0.932	0.923	0.963
Peru	5.7	5.4	7.4	0.332	0.248	0.267
Russia	-	-	431.1	-	-	2.997
Viet Nam	-	4,659	20.6	-	70.378	0.251

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CO <sub>2</sub> Emission per Real GDP			CO <sub>2</sub> Emission per Real GDP			CO <sub>2</sub> Emission per Total Primary Energy Supply			
kt-C / Billions of 1995 USD			kt-C / Billions of 1995 PPP			t-C / toe			
1980	1990	2004	1980	1990	2004	1980	1990	2004	
-	-	188.7	-	-	143.0	-	-	0.742	
-	-	206.4	-	-	151.0	-	-	0.735	
203.9	184.8	230.5	212.5	169.3	140.8	0.805	0.787	0.837	
1,937.5	1,246.6	734.3	434.0	279.2	164.5	0.887	0.892	0.978	CHN
69.9	86.6	54.1	67.2	83.3	52.0	0.755	0.864	0.630	HKG
89.6	69.5	67.2	127.9	99.3	95.9	0.713	0.664	0.639	JPN
267.1	230.6	196.1	179.4	154.9	131.7	0.856	0.706	0.562	KOR
250.8	194.4	218.2	-	-	-	0.735	0.666	0.677	TWN
-	-	335.3	-	-	112.8	-	-	0.662	
145.2	425.4	300.8	145.2	425.4	300.8	0.198	0.771	0.715	BRN
294.3	360.4	470.0	77.8	95.2	124.2	0.557	0.739	0.719	IDN
317.0	340.5	382.7	137.4	147.6	165.9	0.764	0.738	0.678	MYS
172.3	173.0	210.5	42.8	43.0	52.3	0.659	0.562	0.570	PHL
77.0	188.5	130.4	74.3	181.8	125.7	0.840	0.836	0.588	SGP
-	-	339.1	-	-	107.9	-	-	0.617	THA
-	-	207.4	-	-	159.6	-	-	0.778	
-	253.4	216.1	-	201.0	171.4	-	0.791	0.829	AUS
-	154.6	135.6	-	106.0	93.0	-	0.432	0.452	NZL
-	-	362.0	-	-	101.9	-	-	0.803	PNG
255.7	196.4	153.3	256.6	197.1	154.0	0.729	0.702	0.682	
291.9	230.0	201.5	247.8	195.3	171.1	0.613	0.588	0.589	CAN
252.9	193.8	149.8	257.4	197.3	152.5	0.742	0.714	0.693	USA
182.2	186.7	162.6	112.2	115.8	99.9	0.646	0.626	0.607	
230.3	228.8	200.2	123.3	122.6	107.2	0.587	0.649	0.597	CHL
182.3	185.8	161.3	119.4	121.7	105.7	0.648	0.618	0.604	MEX
147.3	149.6	121.0	63.7	64.8	52.3	0.702	0.715	0.672	PER
-	-	1,311.2	-	-	330.2	-	-	0.672	RUS
-	310.2	500.1	-	61.2	98.6	-	860.537	0.820	VNM

Note: Chinese Taipei is not included in the CO<sub>2</sub> Emission per Real GDP (1995 PPP) of APEC 19, APEC 21 and East Asia.

Energy Indicators

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## Glossary

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### General note

For editing convenience the definition for some items with “++” mark are different with APEC Energy Statistics 2002. In the Energy Balance sector the definition for all item are same as APEC Energy Statistics 2002.

### Energies

#### Coal++

Defined as coal in narrow sense (all primary coal such as hard coal, lignite and brown coal) plus coal products (all fuels derived from coal including patent fuel, coke oven coke, gas coke, briquettes, coke oven gas and blast furnace gas).

#### Coal

Coal includes all primary coal, such as hard coal, lignite and brown coal.

#### Coal Products

Coal Products includes all fuels derived from coal including patent fuel, coke oven coke, gas coke, briquettes, coke oven gas, blast furnace gas and gas works gas.

#### Oil

Defined as crude oil (which comprises crude oil, refinery feedstocks and natural gas liquids and Natural LPG) plus petroleum products.

#### Crude Oil

Crude Oil comprises crude oil, refinery feedstocks and natural gas liquids.

#### Petroleum Products

Total of all petroleum products, such as LPG, naphtha, MOGAS(including AVGAS), jet fuel, kerosene, diesel oil, fuel oil, refinery gas and other petroleum products.

#### Mogas

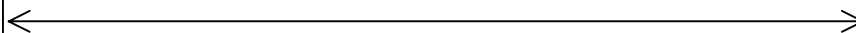
Mogas is light hydrocarbon oil for use in internal engines such as motor vehicles. Motor gasoline is distilled between 35 °C and 215 °C and treated by reforming, catalytic cracking or blending with aromatic fraction to reach a sufficiently high octane number (≥80 RON).

#### Naphtha

Naphtha includes light or medium oils, a cut covering the end of the motor spirit and the beginning of the kerosene range. Naphtha distills between 30 °C and 210 °C.

#### Jet Fuel

Jet fuel comprises both gasoline and kerosene type jet fuels meeting



specifications for use in aviation turbine power units.

**Gasoline type:** This includes all light hydrocarbon oils, distilling between 100 °C and 250 °C. It distills at least 20 percent in volume at 143 °C.

**Kerosene type:** This medium oil with same distillation characteristics and flash point as kerosene, with a maximum aromatic content of 22 percent in volume, and treated to give a kinematic viscosity of less than 18cST at -20 °C (and a freezing point below -47 °C), octane number varying from 80 to 145 RON.

**Kerosene**

Kerosene comprises refined petroleum distillate intermediate in volatility between gasoline and gas/diesel oil. It is a medium oil distilling between 150 °C and 300 °C, which distills at least 65 percent in volume at 250 °C. Its specific gravity is in the region of 0.80 and the flash point is above 38 °C.

**Diesel Oil**

Diesel oil includes heavy gas oils. Gas oils are obtained from the lowest fraction from atmospheric distillation of crude oil, while heavy gas oils obtained by vacuum redistillation of the residual from atmospheric distillation.

**Fuel Oil**

Fuel oil defines oils that make up the distillation residue. It comprises all residual fuel oils (including those obtained by blending). Its kinematic viscosity is above 10 cSt at 80 °C. The flash point is always above 50 °C, and the density is always more than 0.90.

**LPG**

LPG is the light hydrocarbon fraction of the paraffin series, derived from refinery processes and from crude oil stabilization plants comprising propane (C<sub>3</sub>H<sub>8</sub>) and butane (C<sub>4</sub>H<sub>10</sub>) or a mixture of these two hydrocarbon.

**Others**

The category, "Other petroleum products", groups together white spirit and SBP, lubricants, bitumen, paraffin waxes, refining gas and others (tar, sulfur, grease).

**Gas++**

Defined as natural gas and LNG.

**Natural Gas**

Natural gas consists mainly of methane occurring naturally in underground deposits associated with crude oil or gas recovered from coal mines (colliery gas). Sewage gas is also included.

**LNG**

LNG is liquefied natural gas.



## Glossary

## Hydro

The primary equivalent is calculated with an efficiency of 100%.

## Nuclear

The primary equivalent is calculated with an efficiency of 33%.

## Others

Defined as sum of geothermal power, wind, tide, photovoltaic power, etc.

The primary equivalent is calculated with an efficiency of 100% except for of geothermal power, which assumed efficiency is 10%.

## Sectors

## Indigenous Production

Quantities of fuels extracted within the economy.

## Net Imports

Defined as imports minus exports.

## Total Primary Energy Supply (TPES)

Defined as indigenous production plus imports minus exports minus international marine bunkers plus or minus stock change.

## Refining

Petroleum refineries shows the transformation of crude oil, NGL and condensate to petroleum products. The production of synthetic petrol from natural gas is also included.

## Power Generation

Gross electricity (including power stations' own use) produced from thermal, hydro, nuclear, geothermal and other power plants of public utilities and auto-producers. An auto-producer is an establishment which, in addition to its main activities, generates electricity wholly or partially for its own use, such as industries, railways, refineries, etc.

## Total Final Energy Consumption

Defined as industry plus transport plus residential and commercial plus others sector.

## Industry

Consumption of the industry sector is specified in the following sub-sectors (energy use for transport by industry is not included here but reported under transport):

- Iron and steel industry
- Chemical industry
- Non-ferrous metals basic industries
- Non-metallic mineral products such as glass, ceramic, cement, etc.
- Transport equipment
- Machinery. Fabricated metal products, machinery and equipment other

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- than transport equipment
- Mining (excluding fuels) and quarrying
- Food processing, beverages and tobacco
- Pulp, paper and printing
- Wood and wood products (other than pulp and paper)
- Construction
- Textiles and leather
- Collection, purification and distribution of water
- Non-specified (any manufacturing industry not included above)

Transport

Consumption of the transport sector covers all transport activity regardless of the economic sector to which it is contributing, and is divided into the following sub-sectors:

- Air transport (international and domestic)
- Road transport
- Railways
- Internal navigation (including small craft and coastal vessels not purchasing their bunker requirements under international marine bunker contracts).

Residential and Commercial

Defined as residential plus commercial.

\*Residential shows all consumption by households

\*Commercial shows consumption of the commercial and public sectors.

Others

Agriculture and non-energy use sectors are included.

Glossary

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