

Report on energy data collection

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Outline

- Energy data collection
 - Annual data
 - Energy prices data
 - GHG emissions data
 - Energy Efficiency Indicators Template
 - Quarterly data
 - Monthly data
- Suggestion on cut-off date for data revisions on annual data
- Questions about other annual data
- How difficult is quarterly data submission
- JODI data, timeliness vs completeness
- Conclusions

Collection of 2022 annual energy data

Economy	Data submitted
OECD economies	Obtained the data from IEA's energy balances as per agreement with IEA and these economies
Chile	Obtained the data from IEA's energy balances except for 2022 data
Brunei Darussalam	Submitted the 5 annual energy questionnaires + Hydrogen questionnaire
China	Submitted the energy balance table and final energy consumption by industrial sector of the National Bureau of Statistics
Hong Kong, China	Submitted the 5 annual energy questionnaires
Indonesia	Provided the publication "Handbook of Energy and Economic Statistics of Indonesia 2022"
Malaysia	Provided the 2022 national energy balance
Papua New Guinea	Provided imports data of petroleum products from the Bureau of Customs and electricity data from the PNG Power Ltd. With the JODI data and renewable energy data from IRENA, the secretariat estimated other data to make the energy balance
Peru	Provided the 2022 national energy balance table
Philippines	Submitted the 5 annual energy questionnaires
Russia	Provided the energy resource balances from 2005 to 2021. With JODI and electricity data submitted by the Federal Bureau of Statistics (Rosstat), the secretariat developed the 2022 energy balance
Singapore	Submitted the 5 annual energy questionnaires but a lot of data are not reported and most data are aggregated. The secretariat process the aggregated data using IEA estimates.
Chinese Taipei	Submitted the 5 annual energy questionnaires + Hydrogen questionnaire
Thailand	Submitted the 5 annual energy questionnaires
Viet Nam	Provided the publication "Viet Nam Energy Statistics 2022"

Energy prices template

Energy prices

Economy: _____

Year: _____

Currency Exchange Rate

Currency Exchange Rate	Local currency / US Dollar	
Local Currency Unit		

IMPORT PRICES		WHOLESALE PRICES		CONSUMER PRICES	
	Unit	Amount		Unit	Amount
Coal and Coal Products			Coal and Coal Products		
Coking Coal			Coking Coal		
Anthracite			Anthracite		
Other bituminous coal			Other bituminous coal		
Sub-bituminous Coal			Sub-bituminous Coal		
Lignite			Lignite		
Peat			Peat		
Patent Fuel			Patent Fuel		
Coke			Coke		
Coal Tar			Coal Tar		
BKB/PB			BKB/PB		
			Gas Works Gas		
			Gas Works Gas		
Oil and Oil Products			Oil and Oil Products		
Crude Oil			Crude Oil		
Natural Gas Liquids			Natural Gas Liquids		
Ethane			Ethane		
LPG			LPG		
Naphtha			Naphtha		
Motor Gasoline			Motor Gasoline		
Aviation Gasoline			Aviation Gasoline		
Gasoline Type Jet Fuel			Gasoline Type Jet Fuel		
Kerosene Type Jet Fuel			Kerosene Type Jet Fuel		
Other Kerosene			Other Kerosene		
Gas/Diesel Oil			Gas/Diesel Oil		
Fuel Oil			Fuel Oil		
White Spirit SBP			White Spirit SBP		
Lubricants			Lubricants		
Bitumen			Bitumen		
Paraffin Waxes			Paraffin Waxes		
Petroleum Coke			Petroleum Coke		
Natural Gas			Natural Gas		
Natural Gas			Natural Gas		
Liquefied Natural Gas			Liquefied Natural Gas		
Compressed Natural Gas			Compressed Natural Gas		
Electricity			Electricity		
Electricity			Electricity		
Other Energy Products			Other Energy Products		
Condensate			Auto LPG		

Economy	Data submitted
Australia	Can provide consumer prices only
Brunei Darussalam	Submitted import and consumer prices
Canada	Submitted import, wholesale and consumer prices
Chile	Submitted import and consumer prices but until 2021 only
China	Doesn't submit prices data
Hong Kong, China	Submitted import and consumer prices
Indonesia	Submitted import, wholesale and consumer prices
Japan	Submitted import, wholesale and consumer prices
Korea	Submitted import, wholesale and consumer prices
Malaysia	Submitted import and consumer prices
Mexico	Submitted wholesale prices but until 2014 only
New Zealand	Submitted consumer prices only
Papua New Guinea	Doesn't submit prices data
Peru	Submitted import, wholesale and consumer prices but until 2021 only
The Philippines	Submitted import, wholesale and consumer prices
Russia	Submitted import, wholesale and consumer prices but no import prices in 2022
Singapore	Submitted consumer prices only
Chinese Taipei	Submitted import, wholesale and consumer prices
Thailand	Submitted import, wholesale and consumer prices
United States	Doesn't submit prices data
Viet Nam	Doesn't submit prices data

GHG emissions template

CO ₂ Emission Table			
Member Economy Name:	Select		
Unit:	kt-CO ₂ (kiloton of		
	1990	1991	1992
Total CO₂ emission	0	0	0
1A. Fuel combustion			
1. CO₂ emission by energy	0	0	0
1.1 Coal & coal products			
1.2 Crude oil & petroleum products			
1.3 Gas			
1.4 Other fossil fuels			
2. CO₂ emission by sector	0	0	0
2.1 Transformation sector	0	0	0
2.1.1 Main activity producer			
2.1.2 Autoproducers			
2.1.3 Gas processing			
2.1.4 Loss & own use			
2.2 Final energy consumption sector	0	0	0
2.2.1 Industry sector			
2.2.2 Transport sector			
2.2.3 Residential & commercial			
2.2.4 Other			
1B. Fugitive emissions from fuels	0	0	0
1. Solid Fuels			
2. Oil and natural gas			
1C. CO₂ transport and storage	0	0	0
1. Electricity generation			
2. Others			

CH ₄ Emission Table			
Member Economy Name:	Select		
Unit:	kt-CH ₄ (kiloton of		
	1990	1991	1992
Total CH₄ emission	0	0	0
1A. Fuel combustion			
1. CH₄ emission by energy	0	0	0
1.1 Coal & coal products			
1.2 Crude oil & petroleum products			
1.3 Gas			
1.4 Other fossil fuels			
2. CH₄ emission by sector	0	0	0
2.1 Transformation sector	0	0	0
2.1.1 Main activity producer			
2.1.2 Autoproducers			
2.1.3 Gas processing			
2.1.4 Loss & own use			
2.2 Final energy consumption sector	0	0	0
2.2.1 Industry sector			
2.2.2 Transport sector			
2.2.3 Residential & commercial			
2.2.4 Other			
1B. Fugitive emissions from fuels	0	0	0
1. Solid Fuels			
2. Oil and natural gas			

N ₂ O Emission Table			
Member Economy Name:	Select		
Unit:	kt-N ₂ O (kiloton of		
	1990	1991	1992
Total N₂O emission	0	0	0
1A. Fuel combustion			
1. N₂O emission by energy	0	0	0
1.1 Coal & coal products			
1.2 Crude oil & petroleum products			
1.3 Gas			
1.4 Other fossil fuels			
2. N₂O emission by sector	0	0	0
2.1 Transformation sector	0	0	0
2.1.1 Main activity producer			
2.1.2 Autoproducers			
2.1.3 Gas processing			
2.1.4 Loss & own use			
2.2 Final energy consumption sector	0	0	0
2.2.1 Industry sector			
2.2.2 Transport sector			
2.2.3 Residential & commercial			
2.2.4 Other			
1B. Fugitive emissions from fuels	0	0	0
1. Solid Fuels			
2. Oil and natural gas			

Submission of GHG emissions data

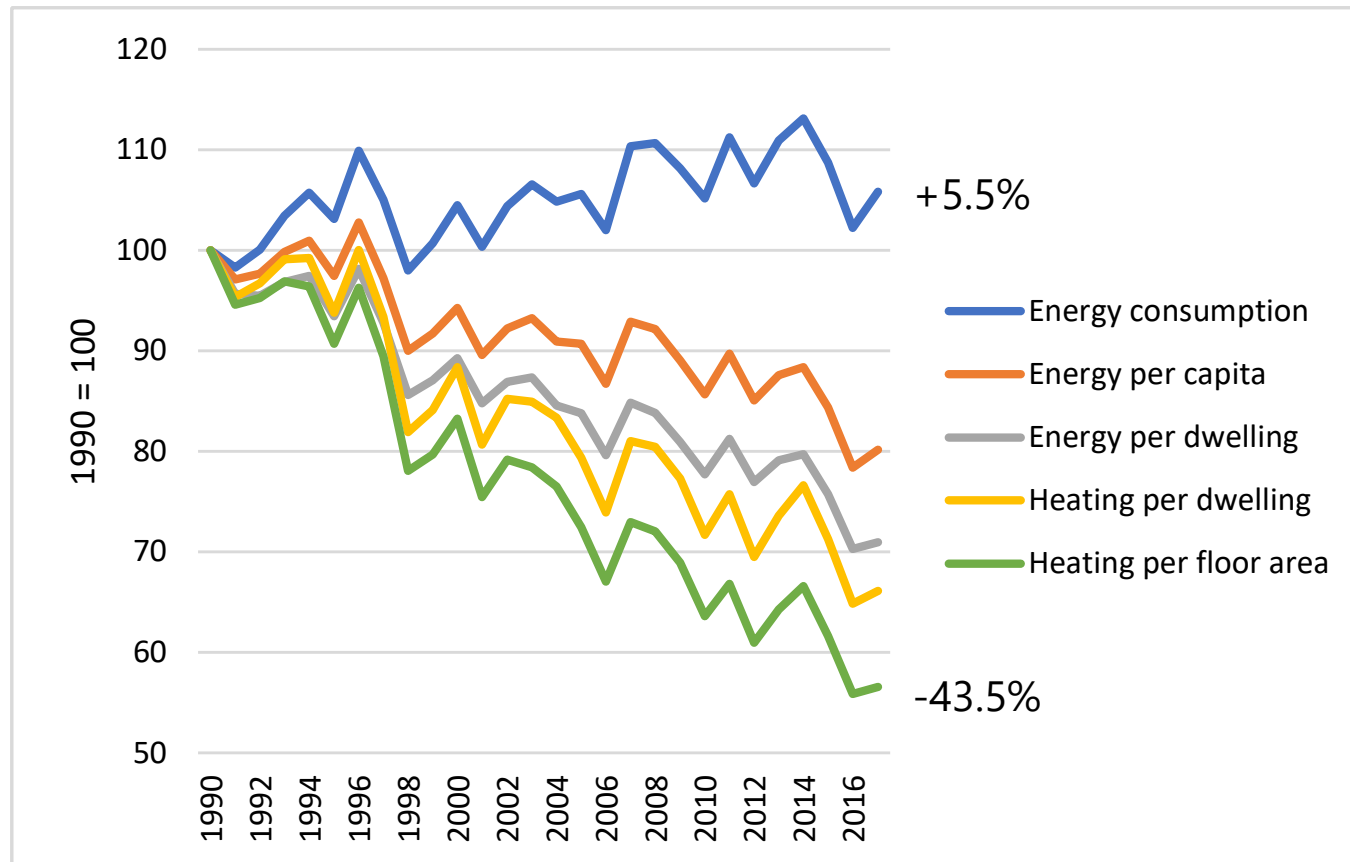
Economy	Data submitted
Australia	Downloaded from UNFCCC website
Brunei Darussalam	Submits GHG emissions data
Canada	Downloaded from UNFCCC website
Chile	Calculated by the EGEDA secretariat using energy balances
China	Calculated by the EGEDA secretariat using energy balances
Hong Kong, China	Calculated by the EGEDA secretariat using energy balances
Indonesia	Calculated by the EGEDA secretariat using energy balances
Japan	Downloaded from UNFCCC website
Korea	Calculated by the EGEDA secretariat using energy balances
Malaysia	Calculated by the EGEDA secretariat using energy balances
Mexico	Calculated by the EGEDA secretariat using energy balances
New Zealand	Downloaded from UNFCCC website
Papua New Guinea	Calculated by the EGEDA secretariat using energy balances
Peru	Calculated by the EGEDA secretariat using energy balances
The Philippines	Submits GHG emissions data
Russia	Downloaded from UNFCCC website except for 2022 that was calculated by EGEDA secretariat
Singapore	Submits GHG emissions data
Chinese Taipei	Submits GHG emissions data
Thailand	Calculated by the EGEDA secretariat using energy balances
United States	Downloaded from UNFCCC website
Viet Nam	Calculated by the EGEDA secretariat using energy balances

The energy efficiency indicators template

- A template that identifies the data needed for energy efficiency policies and regulations
- Sectors and sub-sectors that could be prioritized for energy efficiency policy improvement can be identified in the template
- Improvement in efficiency could be tracked
- End-use energy consumption data could be linked with activity data to determine energy efficiency
- Underlying factors that drives the increase or decrease in energy intensities could be decomposed
- Appropriate indicator helps uncover important trends

Appropriate indicator helps uncover important trends

Residential energy consumption



The energy efficiency indicators template

The screenshot shows an Excel spreadsheet with the following structure:

		P	Q	R	S	T	U	V	W
		2001	2002	2003	2004	2005	2006	2007	
1	ACTIVITY DATA								
2	Note: Definitions are found in the last worksheet								
3	I. Activity & Structure Indicators								
4	Total Population								
5	Urban								
6	Rural								
7	Total Employment								
8	Services Employment								
9	Industry employment								
10	Agriculture employment								
11									
12	Total Dwellings								
13	Occupied Dwellings								
14	New Dwellings								
15	Household Occupancy								
16	Total Dwelling Area (Residential Floor Area)								
17	Annual Heating Degree-Days								
18	Annual Cooling Degree-Days								
19									
20	U.S. Dollar Exchange Rate (national currency per USD)								
21	PPP conversion factor, GDP (LCU per international \$)								
22	Consumer Prices Index (2010=100)								
23	Household final consumption expenditure, PPP (constant 2011 international \$)								
24									

The energy efficiency indicators template

UNABLE TO REFRESH We couldn't get updated values from a linked workbook. Manage Workbook Links

	A	B	P	Q	R	S	T	U	V	W
			2001	2002	2003	2004	2005	2006	2007	
1		ACTIVITY DATA								
2	Note:	Definitions are found in the last worksheet								
3	I.	Activity & Structure Indicators								
24										
25		Total Services Floor Area								
26		New Services Floor Area								
27										
28	II.	Gross Domestic Product (from World Bank World Development Indicators Database)								
29		GDP (constant 2010 US\$)								
30		GDP (constant LCU)								
31		GDP (current LCU)								
32		GDP (current US\$)								
33		GDP, PPP (constant 2011 international \$)								
34		GDP, PPP (current international \$)								
35	III.	GDP deflator 2014=100								
36		GDP deflator (base year varies by country)								
37	IV.	Value-added								
38		Services Values added								
39		Services, etc., value added (constant 2010 US\$)								
40		Services, etc., value added (constant LCU)								
41		Services, etc., value added (current LCU)								
42		Services, etc., value added (current US\$)								
43		Services Values added by sub-sector (constant 2010 US\$)								
44		45-47: Wholesale and retail trade								
45		49-53: Transportation and storage								

The energy efficiency indicators template

The screenshot shows an Excel spreadsheet with the following structure:

		P	Q	R	S	T	U	V	W
1		2001	2002	2003	2004	2005	2006	2007	
2	Note: Definitions are found in the last worksheet								
3	I. Activity & Structure Indicators								
71	Industry value added (in 2010 USD PPP)								
72	10 - 32: Manufacturing								
73	10 - 12: Manufacture of food products, beverages, tobacco products								
74	13 - 15: Manufacture of textiles, wearing apparel, leather and related products								
75	16: Manufacture of wood and of products of wood and cork, except furniture								
76	17: Manufacture of paper and paper products								
77	18: Printing and reproduction of recorded media								
78	17 - 18: Paper & Printing								
79	19: Manufacture of coke and refined petroleum products								
80	20 - 21: Manufacture of chemicals and chemical products & basic pharmaceuticals								
81	22: Manufacture of rubber and plastics products								
82	23: Manufacture of other non-metallic mineral products								
83	24: Manufacture of basic metals								
84	Class 2410+2431: Manufacture + Casting of iron and steel								
85	Class 2420+2432: Manufacture + Casting of precious and non-ferrous metals								
86	25 - 28: Manufacture of fabricated metal products, machinery and equipment								
87	29 - 30: Manufacture of motor vehicles, trailers, other transport equipment								
88	31 - 32: Manufacture of furniture & Other manufacturing								
89	35 - 36: Electricity, gas, steam, air conditioning, and water supply								
90	41 - 43: Construction								
91	05 - 09: Mining and quarrying								

The energy efficiency indicators template

UNABLE TO REFRESH We couldn't get updated values from a linked workbook. [Manage Workbook Links](#)

		P	Q	R	S	T	U	V	W
		2001	2002	2003	2004	2005	2006	2007	2008
1	ACTIVITY DATA								
2	Note: Definitions are found in the last worksheet								
3	I. Activity & Structure Indicators								
139	Passenger transport [passenger-kilometres]								
140	Cars, SUV and personal light trucks								
141	- gasoline (spark ignition) engine								
142	- diesel (compression ignition) engine								
143	- natural gas								
144	- LPG								
145	Motorcycles (2 wheelers & 3 wheelers)								
146	Buses								
147	Trains (MRTs/LRTs)								
148	Domestic airplanes								
149	Domestic ships								
150									
151	Vehicle kilometres								
152	Cars, SUV and personal light trucks								
153	- gasoline (spark ignition) engine								
154	- diesel (compression ignition) engine								
155	- natural gas								
156	- LPG								
157	Motorcycles (2 wheelers & 3 wheelers)								
158	Buses								
159	Trains (MRTs/LRTs/Subways)								
160	Domestic airplanes								
161	Domestic ships								

Quarterly energy supply data

- Should be submitted four months after the end of the quarter
- Good advanced information on supply four months after the end of the year

APEC Energy Data Reporting Format for Collection of Quarterly Data								
Attention:								
For Coal and Electricity, please follow the unit that is shown on the tables.								
For Oil and Natural Gas, please select a unit among the units that are shown on the tables.								
The deadline set for the submission is by end of July 2023.								
Member Name:								
Coal		Unit: 1,000ton						
		Production	Imports	Exports	Stock Changes			
2023	JAN.							
	FEB.							
	MAR.							
	1st quarter	0	0	0	0			
Oil		Unit: thousand barrels per day						
		Crude Oil			Petroleum Products			
		Production	Imports	Exports	Stock Change	Imports	Exports	Stock Changes
2023	JAN.							
	FEB.							
	MAR.							
	1st quarter	0	0	0	0	0	0	0

Natural Gas (or LNG)		Unit: Billion Cubic Feet					
		Production	Imports	Exports	Stock Changes		
	(Unit)						
2023	JAN.						
	FEB.						
	MAR.						
	1st quarter	0	0	0	0		
Electricity		Unit: GWh					
		Gross Generation				Imports	Export
		Total	Thermal	Hydro	Nuclear	Others	
2023	JAN.						
	FEB.						
	MAR.						
	1st quarter	0	0	0	0	0	0

Note: ton=Metric ton.
 bbl=Barrel.
 kL=killoliter.
 CF=Cubic feet.
 CM=Cubic meter.
 GWh=Giga watt hour.
 Gross Generation is the sum of the electrical energy production by all the generating sets (including pumped storage).
 Consumption for Electricity exclude Own Use and Loss.

Quarterly energy supply data

Economy	Data submitted
Australia	Submits every quarter
Brunei Darussalam	Submits every quarter
Canada	Told the EGEDA secretariat to use JODI Oil and Gas data
Chile	Submits every quarter
China	Submits every quarter
Hong Kong, China	Submits every quarter
Indonesia	Submits every quarter
Japan	Submits every quarter
Korea	Submits every quarter
Malaysia	Does not submit quarterly data
Mexico	Does not submit quarterly data
New Zealand	Submits every quarter
Papua New Guinea	Does not submit quarterly data
Peru	Does not submit quarterly data
The Philippines	Submits every quarter
Russia	Submits every quarter
Singapore	Submits every quarter
Chinese Taipei	Submits every quarter
Thailand	Submits every quarter
United States	Submits every quarter
Viet Nam	Does not submit quarterly data

Monthly oil and gas data

- Known globally as JODI Oil and JODI Gas; JODI stands for Joint Organisations Data Initiative
- The objective of JODI is to improve the availability and reliability of timely oil and gas data for more data transparency in the oil and gas markets.
- Participation of member economies to the initiative is assessed using the following criteria:
 - **Sustainability** – the number of monthly submissions within a semester
 - **Timeliness** – data is submitted not later than 2 months after the end of the month
 - **Completeness** – number of data points submitted in the prescribed template
- Ratings given for all criteria are as follows:
 - 😊
 - 😐
 - ☹️

Smiley Faces of JODI Oil

Data submissions (July to December 2024)

Economy	Sustainability	Timeliness (M-1 & M-2)	Completeness (%)	Sustainability	Timeliness	Completeness (%)
Brunei Darussalam	6	6	99%	😊	😊	😊
China	6	2	67%	😊	😞	😐
Hong Kong, China	6	6	100%	😊	😊	😊
Indonesia	6	6	100%	😊	😊	😊
Malaysia	6	5	52%	😊	😐	😞
Papua New Guinea	6	6	43%	😊	😊	😞
Peru	6	0	100%	😊	😞	😊
Philippines	0	0	0%	😞	😞	😞
Russia	0	0	0%	😞	😞	😞
Singapore	6	6	50%	😊	😊	😞
Chinese Taipei	6	6	100%	😊	😊	😊
Thailand	6	6	100%	😊	😊	😊
Viet Nam	0	0	0%	😞	😞	😞

Number of 😊

10

7

6

Compared to Jul – Dec2023



Compared to Jan – Jun 2024



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Smiley Faces of JODI Gas

Data submissions (July to December 2024)

Economy	Sustainability	Timeliness (M-1 & M-2)	Completeness (%)	Sustainability	Timeliness	Completeness (%)
Brunei Darussalam	6	6	100%	😊	😊	😊
China	6	5	64%	😊	😐	😐
Hong Kong, China	6	6	100%	😊	😊	😊
Indonesia	6	6	100%	😊	😊	😊
Malaysia	6	6	61%	😊	😊	😐
Papua New Guinea	0	0	0%	😞	😞	😞
Peru	0	0	0%	😞	😞	😞
Philippines	6	6	100%	😊	😊	😊
Russia	6	5	23%	😊	😐	😞
Singapore	6	6	64%	😊	😊	😐
Chinese Taipei	6	6	100%	😊	😊	😊
Thailand	6	6	91%	😊	😊	😊
Viet Nam	0	0	0%	😞	😞	😞

Number of 😊

10

8

6

Compared to Jul – Dec2023



Compared to Jan – Jun 2024



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Cut-off data for revisions to annual data

- The Secretariat would like to propose a **cut-off date for revisions to the annual data** in the Energy Statistics publication.
- In the past, the Secretariat has asked member economies to submit their annual data by December 31 of the year following the reporting year. However, some member economies are unable to meet this timeline, providing final data 1 year and 9 months after the end of the year.
- As a result, the Secretariat prepares the publication 1 year and 10 months after the end of the year. Before the publication is released, the APEC Secretariat requires endorsement from both the EGEDA and EWG members. Due to this process, the Secretariat can publish the data up to 2 years and 3 months after the end of the reporting year.
- One of the main challenges faced by the Secretariat is the revision of data after the draft publication has been prepared. To address this issue, the Secretariat proposes that **no further revisions be made to the data after December 31, two years following the reporting year.**
- Any revisions would be included in the publication for the subsequent year.
- The Secretariat seeks members' approval of this proposed cut-off date for data revisions.

Secretariats' questions about other data

- Would concerned member economies agree that the secretariat continue to calculate the **GHG emissions**?
- What could the secretariat do to assist concerned member economies in filling-out the **energy efficiency indicators template**?
- Is the deadline for the submission of **quarterly energy supply data**, too early?
- How could the secretariat assist member economies in improving their participation in **JODI Oil and JODI Gas**?



Thank you.

<https://aperc.or.jp>

