United Nations Statistics Division

Other topics in Energy Statistics

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http://unstats.un.org/unsd/energy

Other topics

- System of Environmental Economic Accounts – Energy Framework (SEEA-Energy)
  - Energy accounts

- Green economy indicators

What is SEEA-Energy?

- Subsystem of SEEA Central Framework, the international statistical standard for environmental-economic accounts
- Based on IRES concepts, definitions and classifications
- Applies accounting (SNA) principles, concepts and definitions to energy
- Uses internationally agreed classification (ISIC, CPC, SIEC) and concepts
- Organizes physical and monetary information related to energy extending the SNA accounting structure

SEEA-Energy Framework

Physical supply and use tables (PSUTs)

- Record the flows of energy from when they are:
  - extracted or captured (e.g. wind, solar, hydro) from the environment,
  - transformed and used within the economy, and
  - returned back to the environment in the form of air emissions, losses, waste or other residuals
- Used to assess the mix of energy products supplied and used by an economy **by activities**.

Monetary supply and use tables

- Record fees paid by users, energy taxes and subsidies, permits to extract energy resources and to emit energy-related emissions, investments in infrastructure for extracting and capturing energy
- Provide structural information on the energy sector and the level of activity in this sector
- Provide information on expenditures on energy compared to total expenditures by economic activities

SEEA-Energy (cont.)

Asset accounts

- Record the opening and closing "stock" of assets and changes in "stocks" over an accounting period
- Used to assess depletion of mineral and energy resources by economic activity
- Used to assess contribution of mineral and energy resources to national wealth

Combining the accounts

- Combine modules of SEEA-Energy to form a full-sequence of accounts and integrating physical and monetary accounts
- Indicators of end use of energy by economic activities, energy efficiency/productivity by economic activity (energy use/Value added)

Energy balances and accounts: similarities and differences

<u>Similarities</u>
- Energy balances and accounts are an integration/aggregation of basic energy statistics
- Basic energy statistics important as building blocks
- Both use the Standard International Energy Product Classification (SIEC)

<u>Differences</u>
- Residence vs. territory principle
  - Energy accounts use the residence principle
  - Energy balances use the territory principle

- Classifications of producing and consuming units
  - Energy accounts use **strictly** ISIC for economic activities;
  - Energy balances also use technology (e.g. transportation, blast furnaces)

Accounts can be compiled from the balances by making adjustments and adding information

UNSC

- The Committee of Experts on EEA presented SEEA-Energy for adoption at 47th Session of UNSC (2016)
  - but the Commission did not deem the document ready
- UNSC requested the Committee to finalize SEEA-Energy with urgency
  - given their importance for the implementation of energy accounts and in support of the implementation of the SEEA Central Framework.
- At the 48th Session of UNSC (2017), the Committee said SEEA-Energy was expected to be issued as a white cover publication in 2017. It is being prepared for publication.

SDGs, Green Economy

- With so many SDG indicators and just a few related to energy, they are not enough to inform national policymaking toward sustainable development.
- To address this, UNSD launched a project on Green Economy that includes energy as one of its priorities: http://unstats.un.org/unsd/greeneconomy/
- The overall goal of the project is to strengthen national statistical systems in developing countries
  - to enable them to effectively produce statistical indicators on green economy and green growth in the context of sustainable development.

SDG 7 - Ensure access to affordable, reliable, sustainable and modern energy for all

Target	Indicator
7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	7.1.1 Proportion of population with access to electricity
	7.1.2 Proportion of population with primary reliance on clean fuels and technology
7.2 By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1 Renewable energy share in the total final energy consumption
7.3 By 2030, double the global rate of improvement in energy efficiency	7.3.1 Energy intensity measured in terms of primary energy and GDP
7.a By 2030, enhance international cooperation... (means of implementation)	7.a.1 Mobilized amount of US$ ...
7.b By 2030, expand infrastructure and upgrade technology... (means of implementation)	7.b.1 Investments in energy efficiency ...

Green economy energy indicators

- The green economy project focuses on indicators more purely derived from energy statistics.
  - In this respect, they align with the SDG ones while being a bit more detailed.
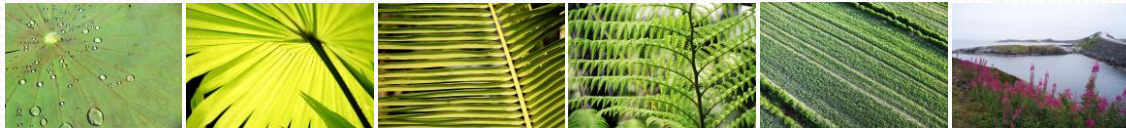
2.2	Energy	Core set
2.2.1	Energy productivity [US$ per ktoe]	NCS
2.2.2	Energy consumption per capita [total or final]	CS
2.2.3	Energy intensity by sector [manufacturing, transport, households, services]	NCS
2.2.4	Renewable energy supply [% total energy supply ,TES]	CS
2.2.5	Renewable electricity [% total electricity generation]	CS
2.2.6	Fuelwood, production [thousand cubic metres]	NCS
2.2.7	Proportion of bioenergy in total renewable energy production	NCS

Green Economy Indicators

- Even if more detailed than energy SDGs, energy GEIs will not be enough for national purposes

- As a result, countries are encouraged to complement international sets of indicators with other indicators relevant to national circumstances

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Thank you.

http://unstats.un.org/unsd/energy/