Status and progress in the implementation of the 4 energy-related core indicators

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UNECE

Recalling the 4 templates of the UNECE recommendations

Units: ktoe, % of total

G1 – Final energy consumption

Total final energy consumption
Of which
Industry
Industry (Row 2 / row 1)
Transport
Transport (Row 4 / row 1)
Households
Households (Row 6 / row 1)
Commercial and public services
Commercial and public services (Row 8 / row 1)
Agriculture, forestry and fishery
Agriculture, forestry and fishery (Row 10 / row 1)
Non-specified
Non-specified (Row 12 / row 1)
Non-energy use
Non-energy use (Row 14 / row 1)

G3 – Energy intensity (ktoe/USD)

GDP at PPP at constant prices (2011)
Final en. consumption
Final energy consumption (= Table G-1, row 1)
Energy intensity (Row 3 / row 1)
TPES
Total primary energy supply (= Table G-2, row 6)
Energy intensity (Row 6 /row 1)

G2 – Total primary energy supply

Production of energy
Imports of energy
Exports of energy
International marine and aviation bunkers
Stock changes
Total primary energy supply (Row 1 + row 2 - row 3 - row 4 + row 5)
Of which
Coal
Coal (Row 7 / row 6)
Crude oil
Crude oil (Row 9 / row 6)
Oil products
Oil products (Row 11 / row 6)
Natural gas
Natural gas (Row 13 / row 6)
Nuclear energy
Nuclear energy (row 15 / row 6)
Hydropower
Hydropower (Row 17 / row 6)
Geothermal and solar energy, etc.
Geothermal and solar energy, etc. (Row 19 / row 6)
Biofuels and waste
Biofuels and waste (Row 21 / row 6)
Electricity
Electricity (row 23 / row 6)
Heat
Heat (Row 25 / row 6)

G4 – Renewable energy supply

Total primary energy supply (= Table G-2, row 6)
Of which
Hydropower
Hydropower (Row 2 / row 1)
Biomass
Biomass (Row 4 / row 1)
Biofuels
Biofuels (Row 6 / row 1)
Wind power
Wind power (Row 8 / row 1)
Solar power
Solar power (Row 10 / row 1)
Geothermal energy
Geothermal energy (Row 12 / row 1)
Other renewables (specify in footnote)
Other renewables (Row 14 / row 1)
Tot. renew. energy
Total renewable energy supply (Rows 2 + 4 + 6 + 8 + 10 + 12 + 14)
Total renewable energy supply (Row 16 / row 1)

Main issues with the 4 energy tables

1. Following closely IEA Energy Balances
2. Many data items are compiled from others (e.g. % of total)
3. Several data items are redundant (in more than 1 table), tables G1 and G2 contain almost all the basic statistics. Tables G3 and G4 are more detailed and calculate indicators.
4. Basic statistics needed to compile the indicators are:
   a) Final energy consumption by economic activity and households
   b) Non-energy use
   c) Supply of energy by energy product
   d) Imports and exports
   e) International marine and aviation bunkers
   f) GDP
5. Energy products in indicator table G2 (TPES) deviate partly from those used in IEA Energy Balances. This may lead to confusion. Examples:
   1. Some energy products are not included, e.g. peat, oil shale and oil sands
   2. Some aggregations are different, e.g. IEA Energy Balances keep “geothermal” separate from “solar, wind, others”

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Background

- 18 analysed: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Macedonia, Moldova, Montenegro, Russian Federation, Serbia, Tajikistan, Turkmenistan, Ukraine, UNMIK, Uzbekistan

Energy indicators

- **Final energy consumption (G1)**
  - Total final energy consumption
  - Final energy consumption by category
- **Total primary energy supply (G2)**
  - Total primary energy supply
  - Total primary energy supply by source
- **Energy intensity (G3)**
- **Renewable energy supply (G4)**
  - Total amount of renewable energy supply
  - The amount of renewable energy supply broken down by sources of energy

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Criteria for Review

I. Online accessibility
II. Update regularity
III. Production methodology
IV. Data interpretation and use
V. Data sources

The data set can be easily accessed by anybody at any time online.

The data set is updated with figures of the latest agreed production period.

Detailed information on standard methodologies and calculation methods for the production of the data set is provided. The detailed information should further confirm that the applied methodology is in accordance with the agreed standard methodology for the production of the particular data set.

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V. Data sources

The data set is supported by information about what it presents and how to understand the changes in data sets over time. Information should also be provided on how the collected data was interpreted and used (e.g., for state-of-the-environment reporting or to support environmental policymaking). Information should furthermore be provided in the national language and in an international language (English and/or Russian) to be accessible to the national and international community.

The institution responsible for the production of the data set, its source and contact details are available.

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Performance Score

	On-line accessibility		Update regularity		Production methodology		Data interpretation and use		Data source	
	20%		20%		20%		20%		20%	
Dataset	1	0.2	1	0.2	1	0.2	1	0.2	0	0

Aggregated score

Rating was done with a "yes" (value of 1) or "no" (value of 0)

80%

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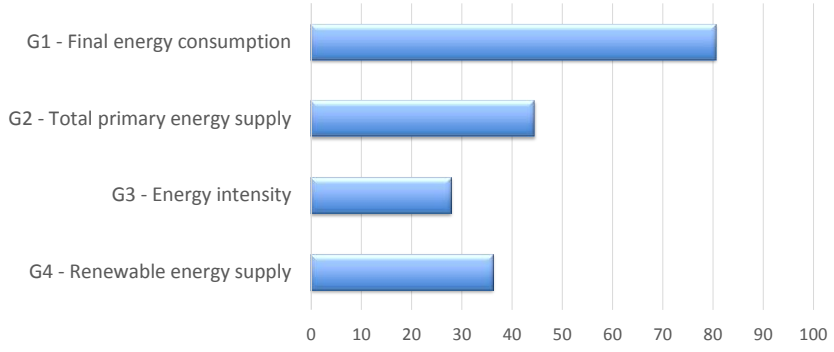
Average online accessibility of each indicator



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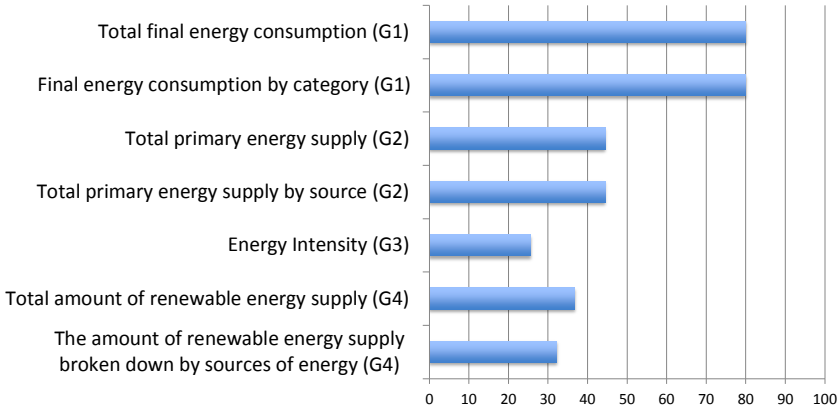
Average performance score of each energy indicator by category



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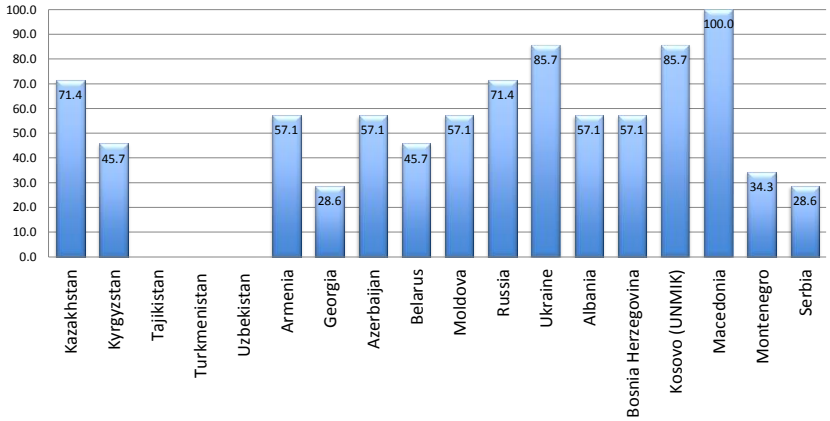
Performance score by country



Conclusions and issues for discussion

Conclusions

1. Final energy consumption (G1) is the best covered indicator
2. Most countries are able to produce all indicators
3. 3 out of 18 countries do not provide any of the indicators
4. The energy products are not fully consistent with IEA Energy Balances and the Standard International Energy Product Classification (SIEC)

Questions

- Is a revision of the indicator tables needed?
- What is needed to further improve completeness and quality of the data?