

Introducing energy indicators

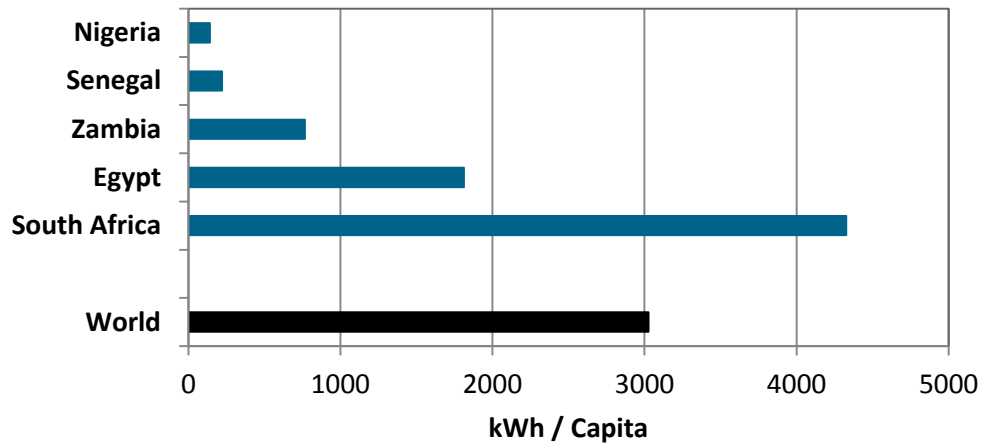
Aidan Kennedy
Senior Energy Statistician
IEA Energy Data Centre

**Mainstreaming Energy Sustainable Development Goals (SDGs),
Targets and Indicators into Statistical Programmes
in Select African Countries**

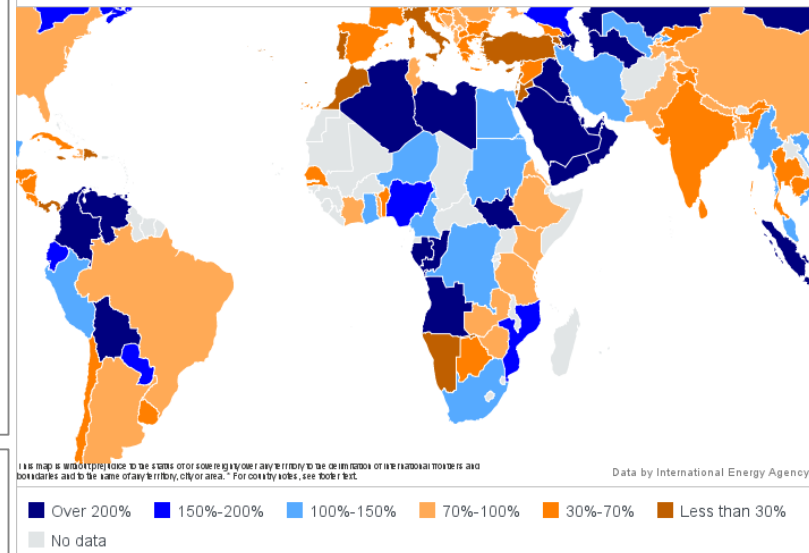
Addis Ababa, June 2016

Energy indicators: key across all dimensions of sustainable development

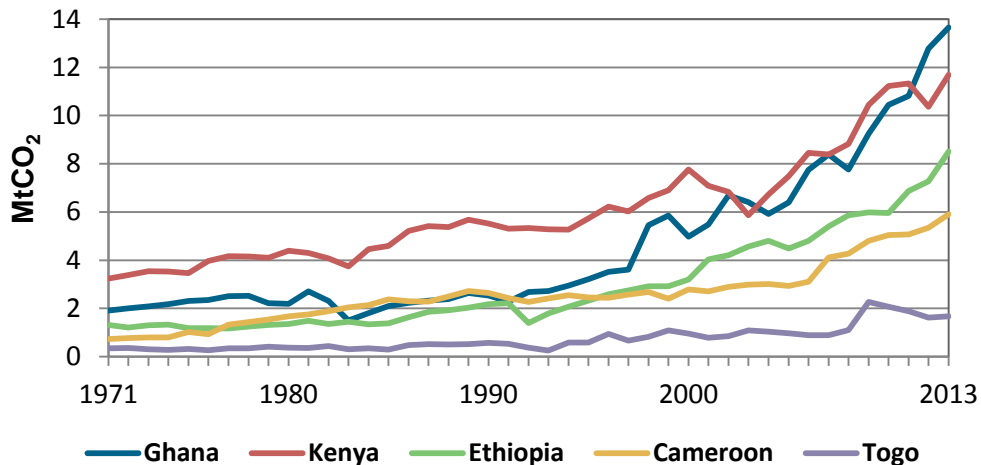
Electricity consumption per capita



Overall Energy Self-sufficiency (%) (2013)



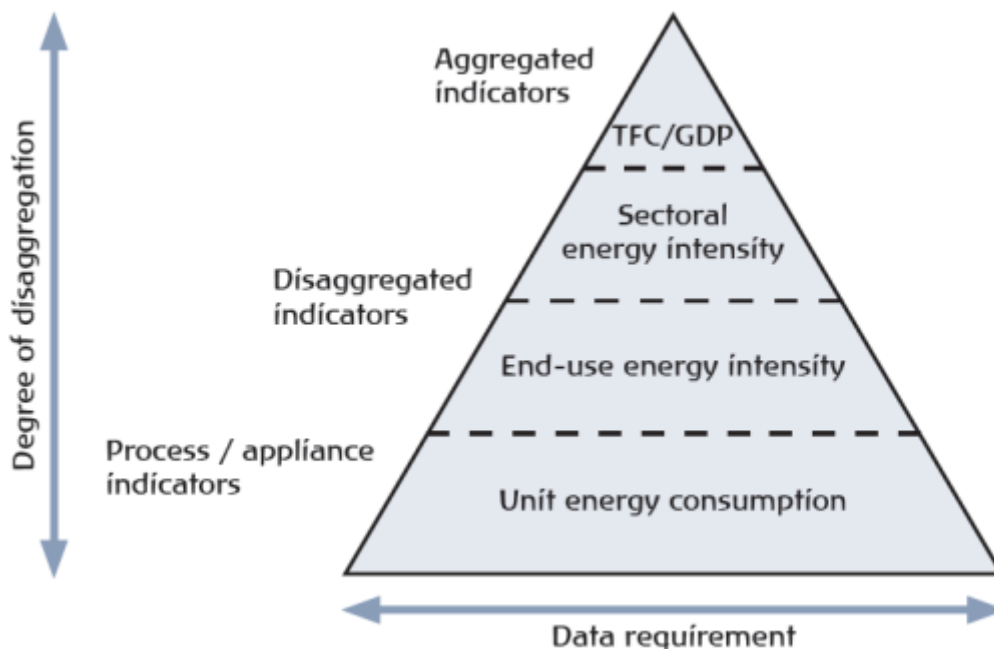
CO₂ Emissions from Fuel Combustion (MtCO₂)



Sources: IEA World Energy Balances, 2015
IEA CO₂ emissions from fuel combustion, 2015

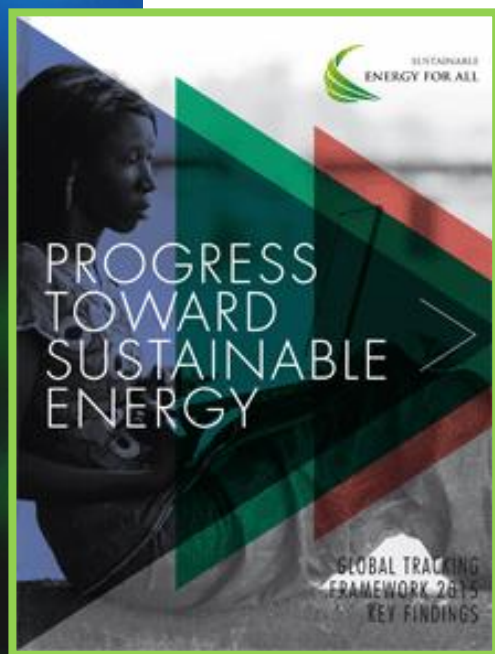
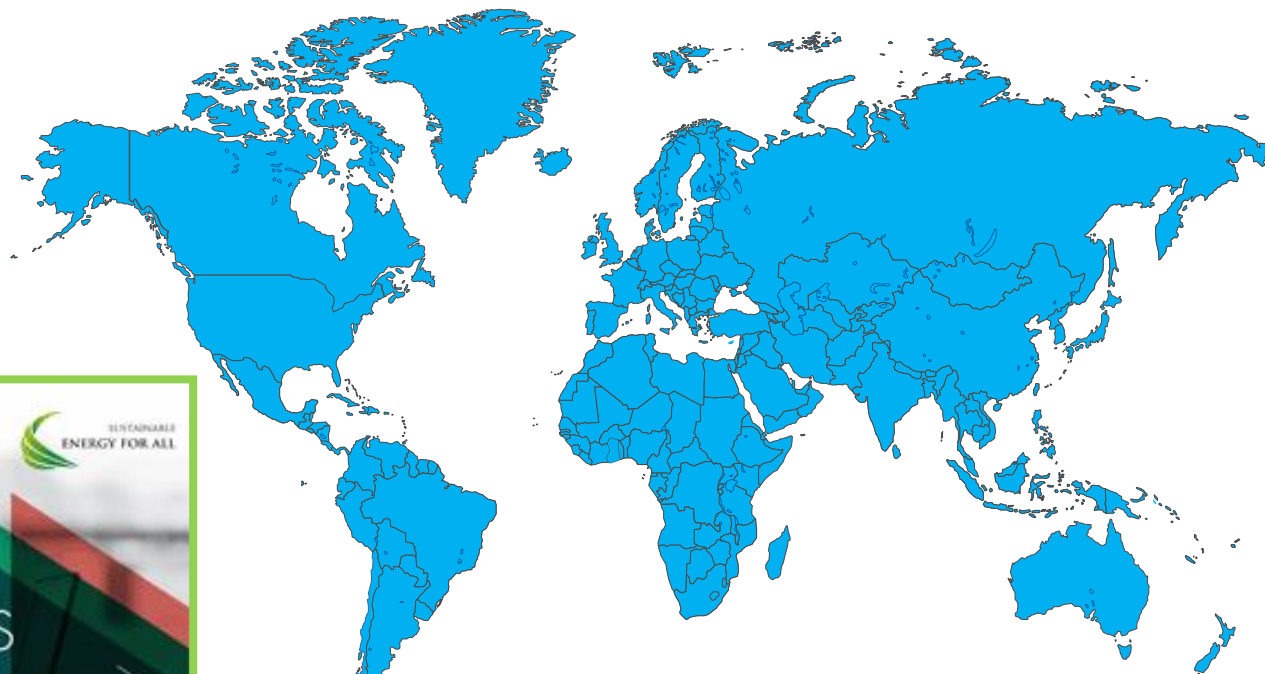
What energy indicators to develop and how?

- Identify priority areas for action
- Design optimal indicators for national policy impact assessment
- Review data requirements, availability and gaps



Need to understand country-specific context and priorities

Embedding national efforts in international framework



**SE4ALL Global Tracking Framework and SDG Indicators:
opportunities to strengthen statistical capacity worldwide**



To develop indicators globally: a global energy statistics community

InterEnerStat

Harmonisation of Definitions
of Energy Products and Flows



Statistical Commission
Forty-second session
22-26 February 2011
Item 3(e) of the provisional agenda
Items for discussion and decision: energy statistics

Background document
Available in English only

International Recommendations for Energy Statistics (IRES)

Draft version
(prepared by the United Nations Statistics Division)

United Nations
New York, 2011



United Nations
Statistics Division



International
Energy Agency

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THE WORLD BANK
IBRD • IDA



Oslo Group on
Energy Statistics



IRENA

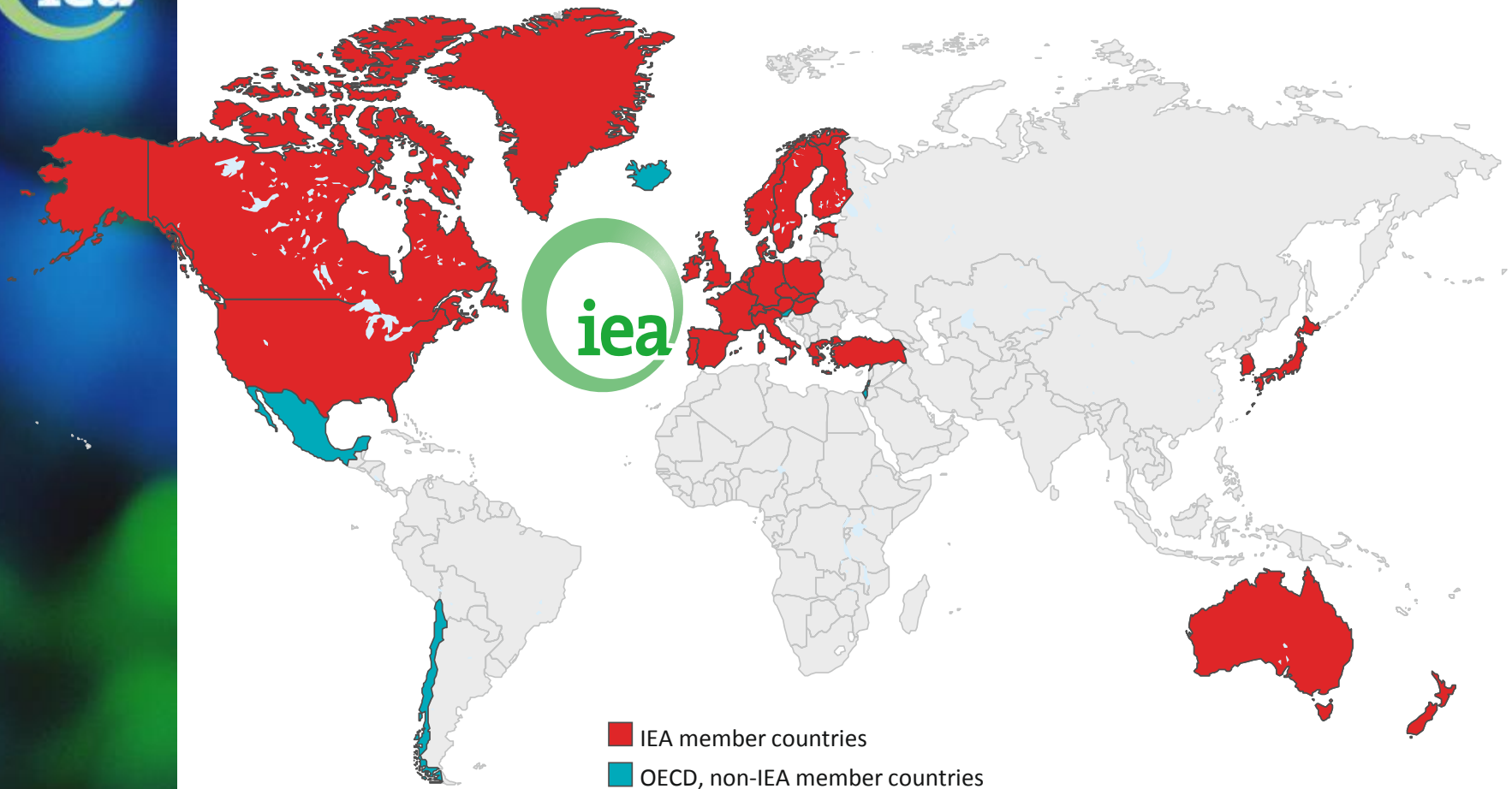
International Renewable Energy Agency

...

**Ongoing cooperation across international organisations to
discuss priorities, metrics and methodologies**



Introducing one player: the International Energy Agency



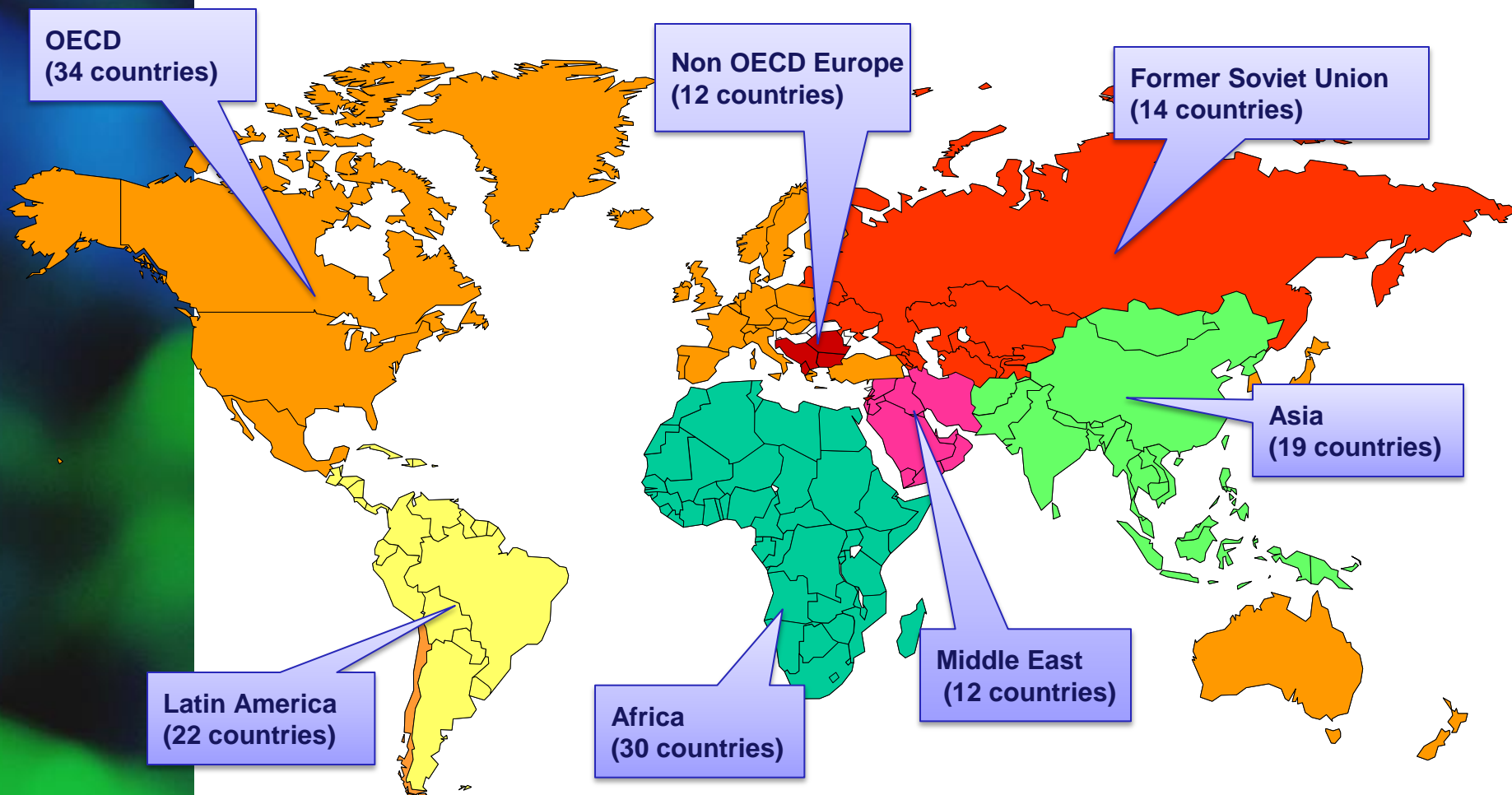
Autonomous Agency of the OECD

Established in 1974 after 1st Oil Crisis

29 Members Countries (vs. 34 for OECD)

4 Es: Energy security, Economy, Environment and Engagement

The IEA energy data collection is global



**A network of statistics contacts in more than 140 countries +
cooperation with other organisations**



The IEA work on energy indicators statistics

5 Questionnaires /
Various national sources



Coal

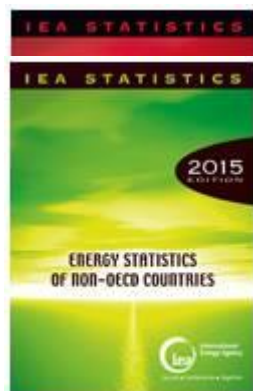
Oil

Gas

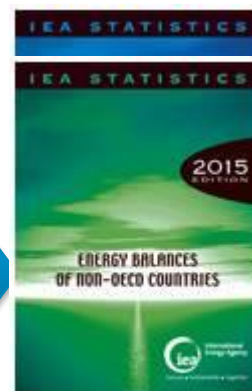
Renewables
+ Waste

Electricity
+ Heat

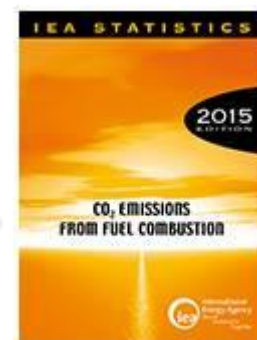
Basic energy
statistics



Energy
balances/
Indicators



CO₂ / GHG
emissions
indicators



An additional
energy efficiency questionnaire
(only Member countries)



Energy
efficiency
indicators

Collecting national data worldwide to develop
internationally comparable indicators



Disseminating IEA energy statistics through web

International Energy Agency
Energy Sustainable Together

ABOUT NEWS PUBLICATIONS TOPICS COUNTRIES STATISTICS

Statistics

STATISTICS

Energy balance flows Energy indicators European gas trade flows Key World Energy Statistics

Search statistics by country

Latest statistics and news

13 Nov: Release of Monthly statistics
Oil, Natural gas, Prices, Electricity
4 Nov: IEA Headline Energy Data

Publications

Energy Balances of Countries 2015

NEWS

Change in CO₂ emissions (2012-13)

Free IEA headline statistics aim to widen understanding of energy production and use

IEA updates carbon emissions data before climate change negotiations

www.iea.org/statistics

Topics

- Coal
- CO₂ emissions
- Electricity
- Energy balances
- Energy efficiency
- Natural gas
- Oil
- Prices and taxes
- RD&D
- Renewables

Monthly gas data service
Quarterly energy prices
Annual online data services
Pay-per-view data cards

IEA Energy Atlas

World map country profiles


Energy Indicators

Data by International Energy Agency

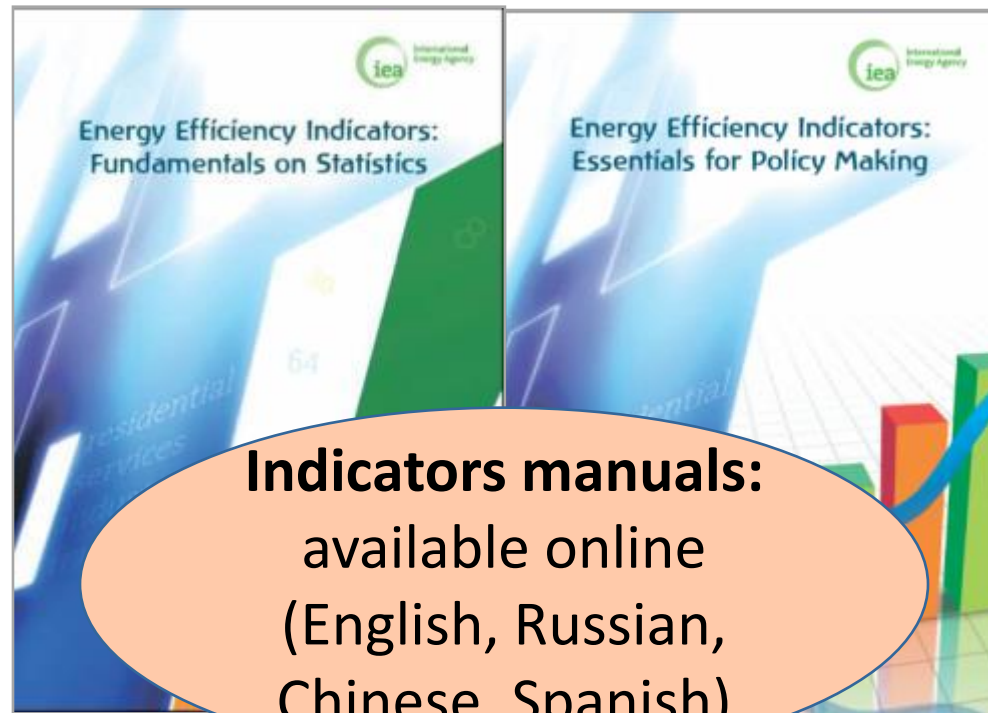
A lot of free data available!



Sharing tools for countries to develop technical capacity

Draft Energy Efficiency Indicators Template country name	
	
COUNTRY DATA SECTION (to be reviewed and updated)	
MACRO ECONOMIC DATA	Macro economic and activity data
COMMODITIES	Production outputs from selected energy-consuming industries
INDUSTRY	Energy consumption by ISIC categories
SERVICES	Energy consumption by end-uses in the services sector
RESIDENTIAL	Household energy consumption by end-uses and selected appliances data
TRANSPORT	Energy and activity data for passenger and freight transport
IEA DATA and AGGREGATE INDICATORS	
ELECTRICITY GENERATION	Electricity generation from combustible fuels and efficiencies
BASIC INDICATORS	Predetermined set of aggregate energy and activity indicators
SUPPORT TOOLS	
USER REMARKS	Individual sheets
DATA	

Data collection:
excel template



Indicators manuals:
available online
(English, Russian,
Chinese, Spanish)

<http://www.iea.org/statistics/topics/energyefficiency/>

<http://bit.ly/eei-statistics>

<http://bit.ly/eei-policy>

A template approved by IEA Ministers to collect data
Two manuals on indicators: statistics and policy
for a harmonised approach to set targets and monitor progress

Key to develop technical capacity: training and international cooperation



- **Two IEA statistics and one energy efficiency module per year**
- **Several regional events with key partners (APEC, UNSD, AFREC, ..)**

**International co-operation will be essential to develop capacity
towards monitoring sustainable development progress**