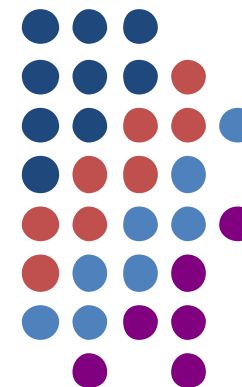


Energy Efficiency and APEC Energy Statistics

43rd Meeting
APEC Expert Group on Energy Efficiency and Conservation
Moana Surfrider, A Westin Resort & Spa
Honolulu, U.S.A
11 April 2014

Takuya MIYAGAWA
EDMC, IEEJ (EGEDA)



EGEDA: Expert Group on Energy Data Analysis

- The Expert Group on Energy Data and Analysis (EGEDA) is responsible for providing policy relevant energy information to APEC bodies and the wider community, through collecting energy data of the APEC region, managing the operation of the APEC Energy Data Base through the Coordinating Agency, collecting policy relevant information from member economies, and examining and advising on the research activities of the APERC.



EGEDA: Expert Group on Energy Data Analysis



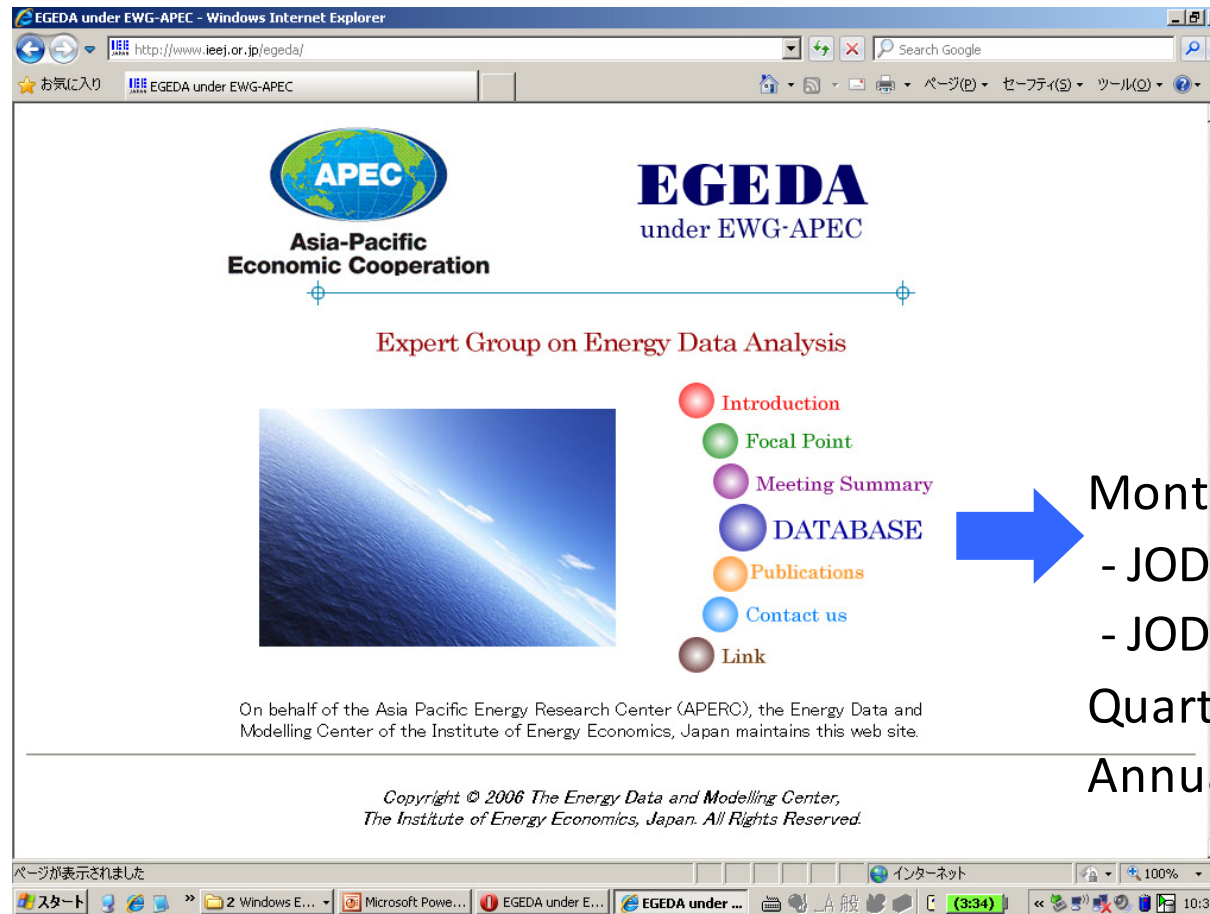
Energy Data

- **Monthly** Oil and Gas (JODI: Joint Organisations Data Initiative)
- **Quarterly** Energy Supply
Coal, Oil, Petroleum Products, Gas and Electricity
- **Annual** Energy Supply and Demand
Coal, Oil, Petroleum Products, Gas, Electricity / Heat, New and Renewables

Other Data (Energy Related Data)

- CO2 Emission
- Energy Prices
- Oil / Gas reserve and producing / refining capacity as JODI Annual

EGEDA: Energy Database Web-site



Monthly Oil & Gas data

- JODI Oil

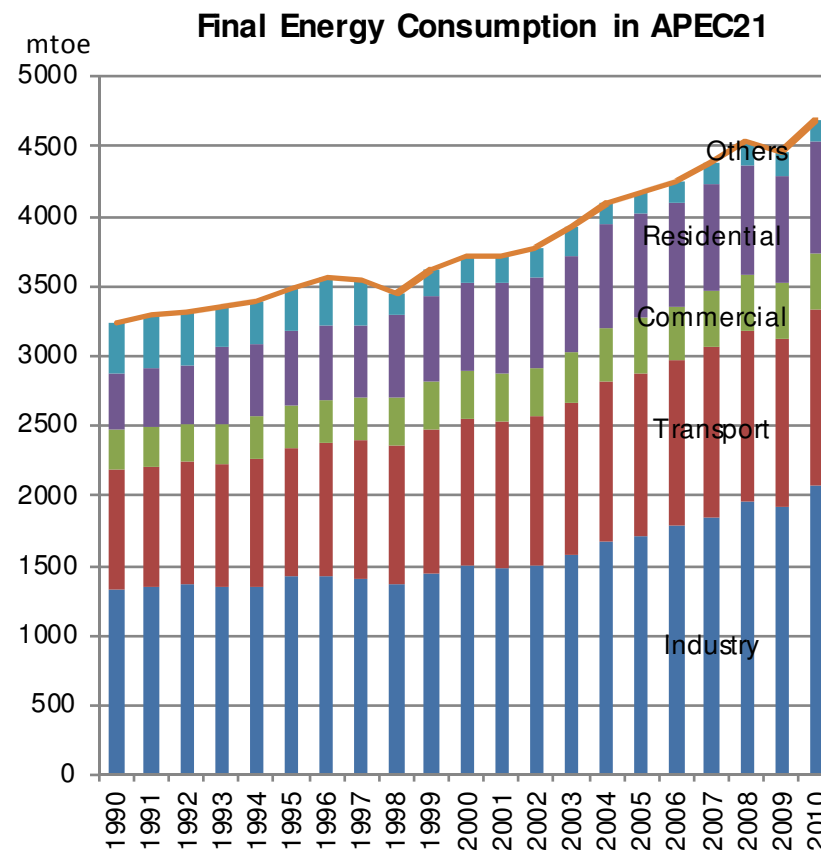
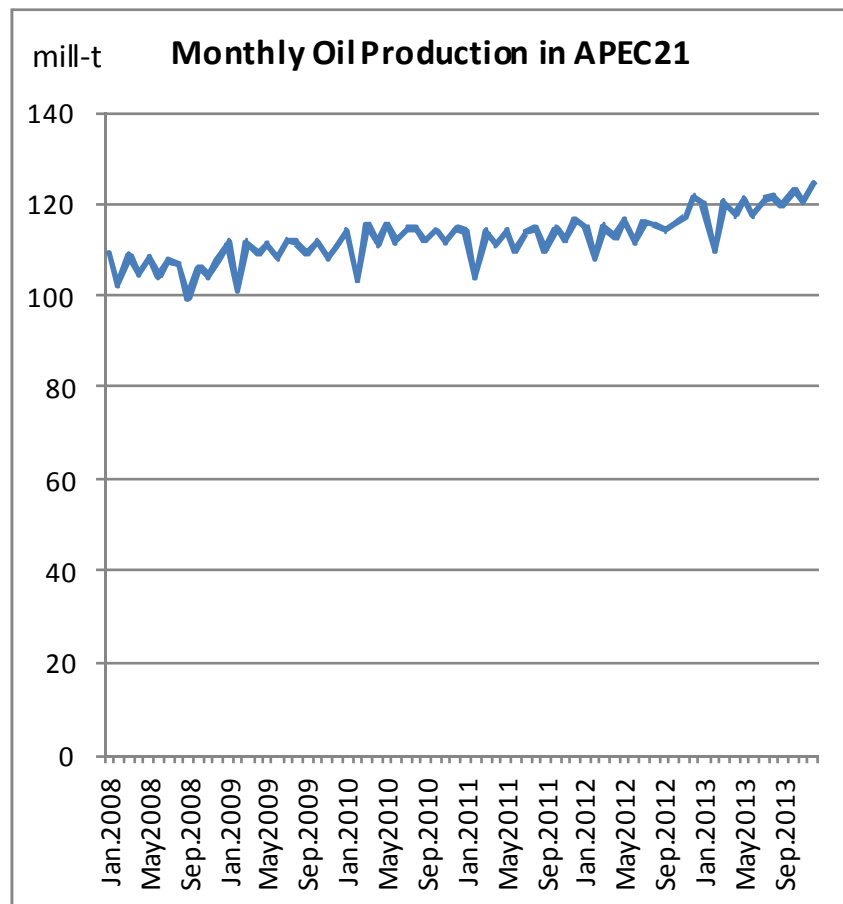
- JODI Gas

Quarterly Energy Supply Data

Annual Energy Data

<http://www.ieej.or.jp/egeda/>

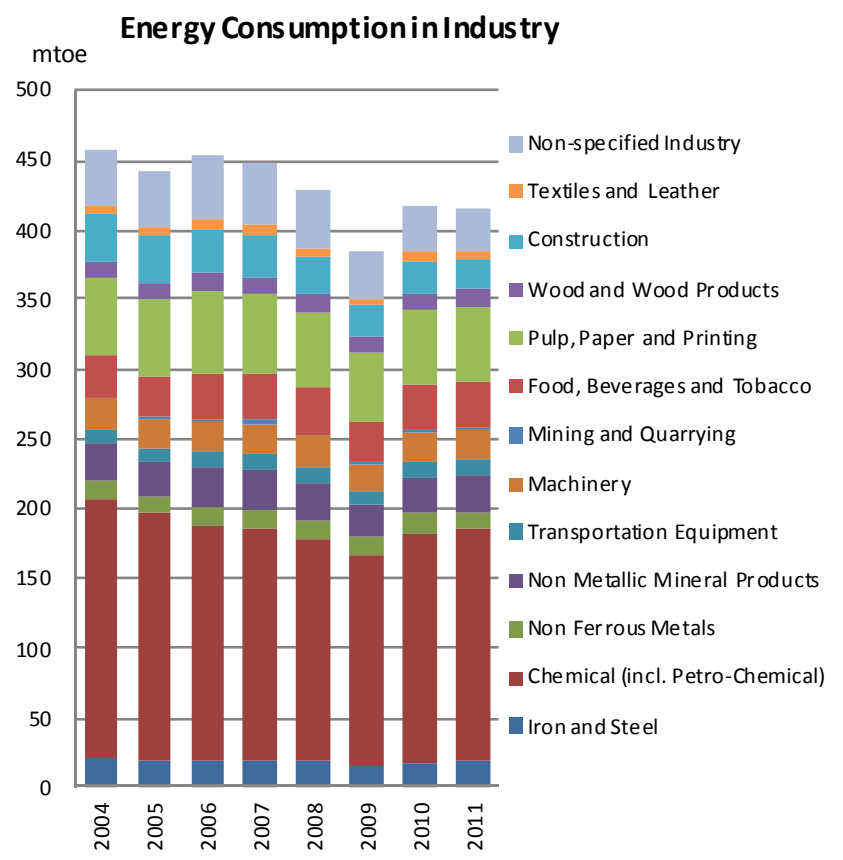
Energy Data Collection:



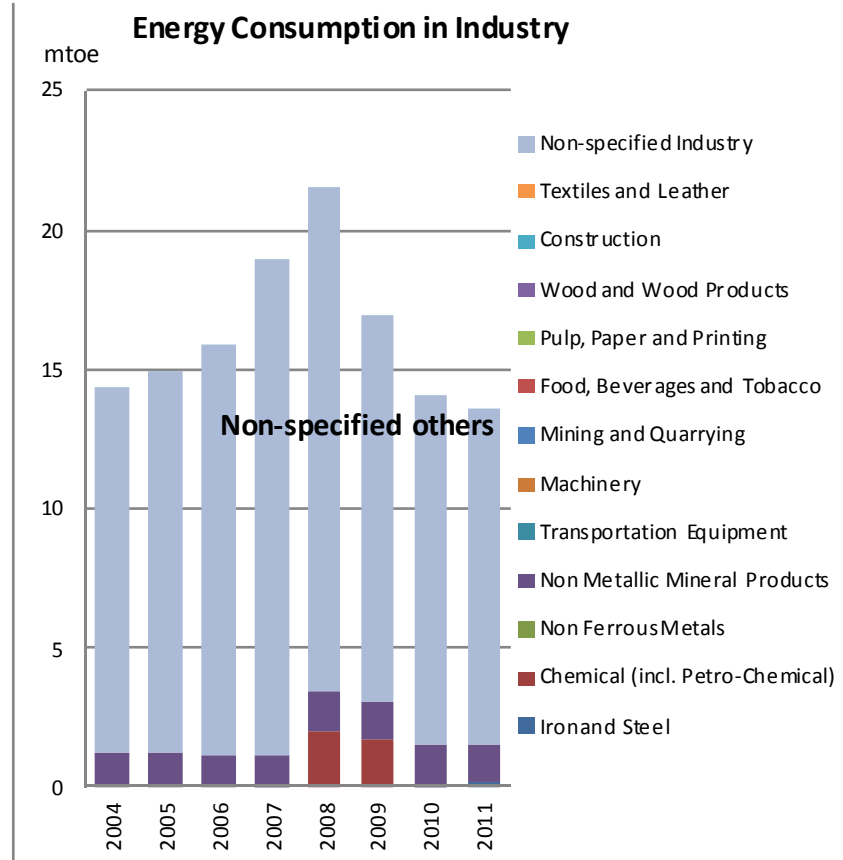
Statistics for Energy Consumption

- To collect appropriate information for analyzing energy situation, it is important to collect detailed energy supply / demand data.

Energy Consumption by Sector



Energy Consumption by Sector

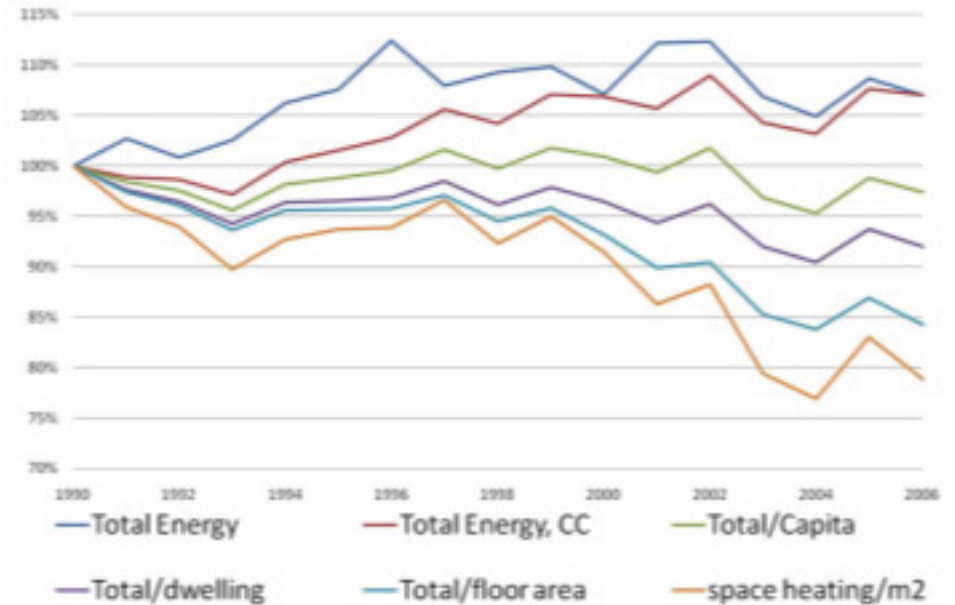


Energy Efficiency and Statistics

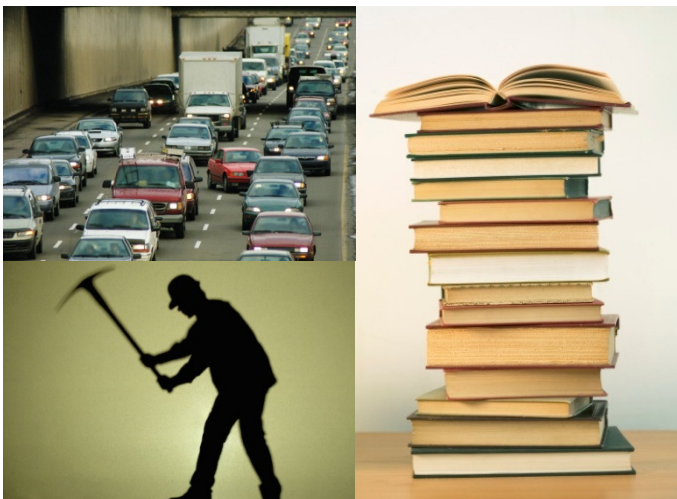
Energy Supply/Demand Data



Energy Efficiency Analysis



Energy Efficiency Indicators



IEA Efficiency Indicators Template



Energy Efficiency Indicators Template Japan		1991	1992	1993	1993	1994	1995	1994	1995	1996
COUNTRY DATA SECTION (to be reviewed and updated)										
MACRO ECONOMIC DATA	Macroeconomic and activity data	124.10	124.57	124.94						
COMMODITIES	Production output from selected energy-consuming industries	65.47	66.21	66.46						
INDUSTRY	Energy consumption by SIC categories	37.80	38.49	39.32						
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	Predefined index of aggregate energy and activity indicators									
SUPPORT TOOLS										
USER REMARKS	To incorporate comments associated to the data from the individual sheets									
DATA COVERAGE	Generates a graphical summary of data coverage (completed vs. expected)									
SINGLE INDICATOR GRAPHS	To generate a graph for one energy indicator									
MULTIPLE INDICATOR GRAPHS	To generate a graph comparing trends from multiple indicators									
CONSISTENCY CHECKS	To run the integrated consistency checks									
<p>If you have any questions or need assistance with this questionnaire visit the dedicated website http://indicators.iea.org</p> <p>username: indicators password: efficiency or write to energyindicators@iea.org</p> <p>Click on the START button to begin working</p> <p>If nothing happens adjust the macro security settings of EXCEL. For more info on macro security settings click on the following links: excel 2003 excel 2007</p>										
rates and PPPs)										
nuclear fuel)										
Electric Arc Furnace production	Mt	34.70	34.43	33.33	31.13	31.07	32.80	1,114.30	1,132.59	1,158.11
Direct Reduced Iron	Mt	0	0	0	0	0	0	0	0	0
Total Energy Use	TJ	1,201.00	1,177.71	1,207.02	1,207.02	1,200.00	1,200.00	4,337.95	4,383.15	4,438.46
Energy intensity (using GDP at US\$PPP)	MJ/US\$PPP	6.79	6.37	6.24	6.33	6.33	6.33	6.64	6.46	6.27
Energy intensity (using GDP at nat. currency)	MJ/JPY	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04

Efficiency Indicators

Category		Number of items				
		Data from Energy Database	Formula	Data Entry Required		
1	Macro Economic Data	104	0	52	52	Population, Total Dwellings, Exchange Rate, GDP, etc.
2	Commodities	29	0	0	29	Production of Commodities (Pulp, Paper, Chemical, Basic Metals, etc...)
3	Industry	216	119	34	63	Energy Consumption by Sector
4	Services	59	8	21	30	Space Heating, Space Cooling, Lighting, Other Building Energy Use in Services Sector, Total Building Use in Services Sector
5	Residential	113	8	26	79	Space Heating, Space Cooling, Water Heating, Cooking, Lighting, Refrigerators, Freezers, Refrigerator/Freezer Combinations, Dish Washers, Clothes Washers, Clothes
6	Transport	208	34	47	127	Passenger Transport, Freight Transport, Vehicle Km, Vehicle Stocks,
7	Electricity Generation	75	75	0	0	Electricity Generation by Type, by Fuel, etc.
8	Basic Indicators	56	37	19	0	
		860	281	199	380	

Contents of EET Residential



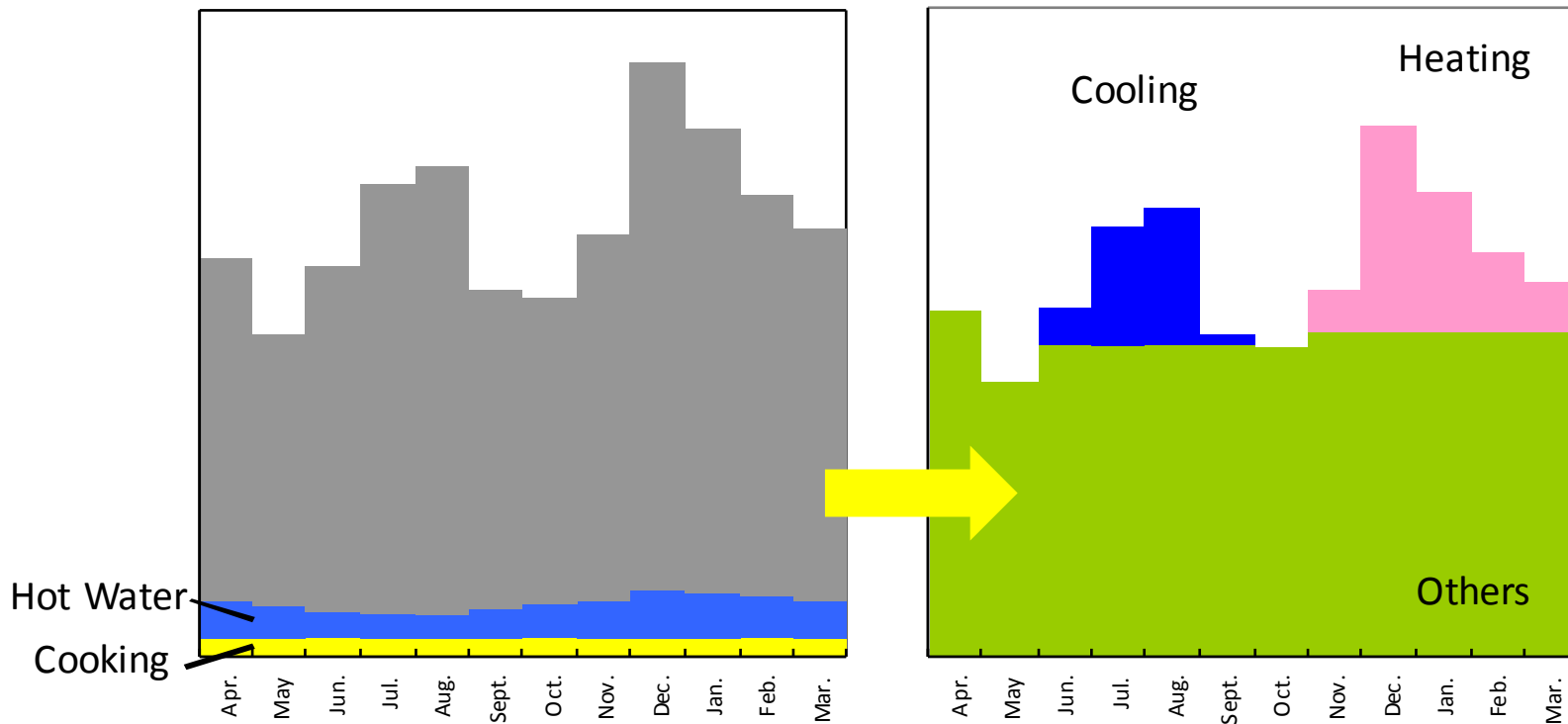
Contents:

- Space Heating / Cooling
- Water Heating
- Cooking
- Lighting
- Refrigerators / Freezers
- Dish Washers
- Clothes Washers / Clothes Dryers
- Television/Home entertainment
- PC/Information & communication technology
- Other Appliances
- Total Energy Use in Residential Sector
- Appliances Diffusion
- Appliances Stock

5. Residential Energy Consumption by Use

Estimation methodology to figure out energy consumption by end use

Electricity



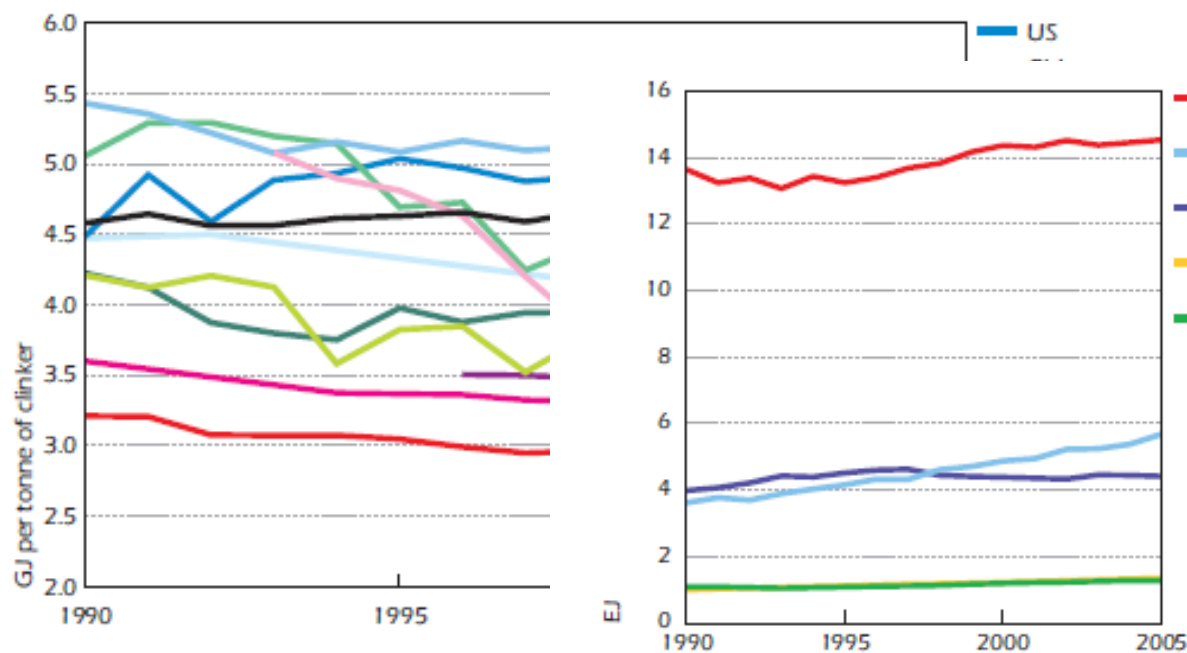
Energy Efficiency and Statistics

- To analyze energy demand and improve energy efficiency, detailed information for energy end-use / energy related data are important for policy makers & energy analysts.

Energy Related Data (Industrial Production, Number of Carhold, etc.)

Energy End-use (lighting / Water Heating / Cooking etc. in Residential)

Energy Consumption per Tonne of Clinker



Household Energy Use by End-use, IEA19

