

30th Anniversary of the EIA

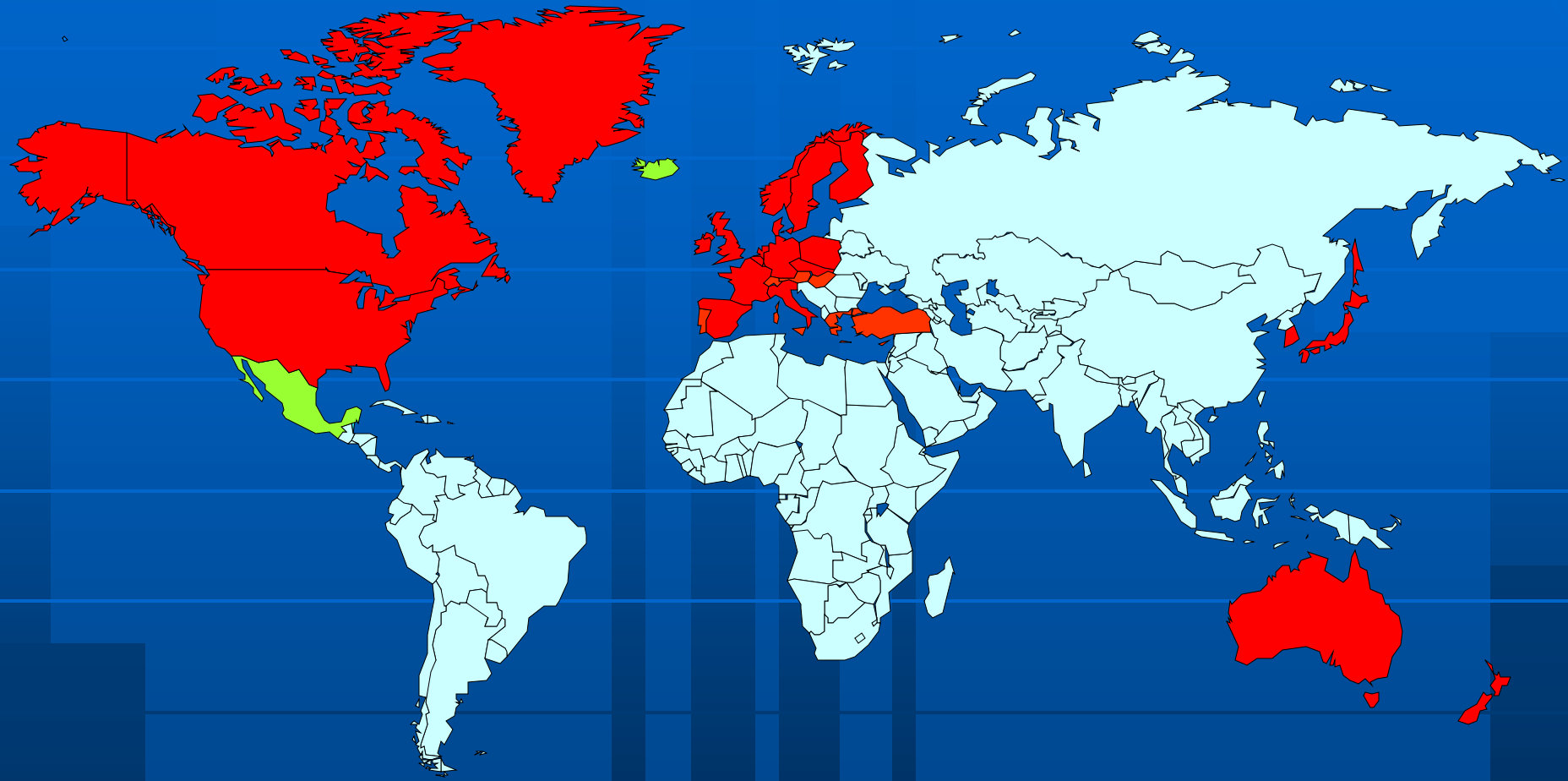
Washington, 7-8 April 2008

Energy Statistics at the IEA: From Supply to Energy Efficiency

Will the G8 Hokkaido Summit constitute a milestone on
the road to a global database on efficiency?

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International Energy Agency

A few words on the IEA

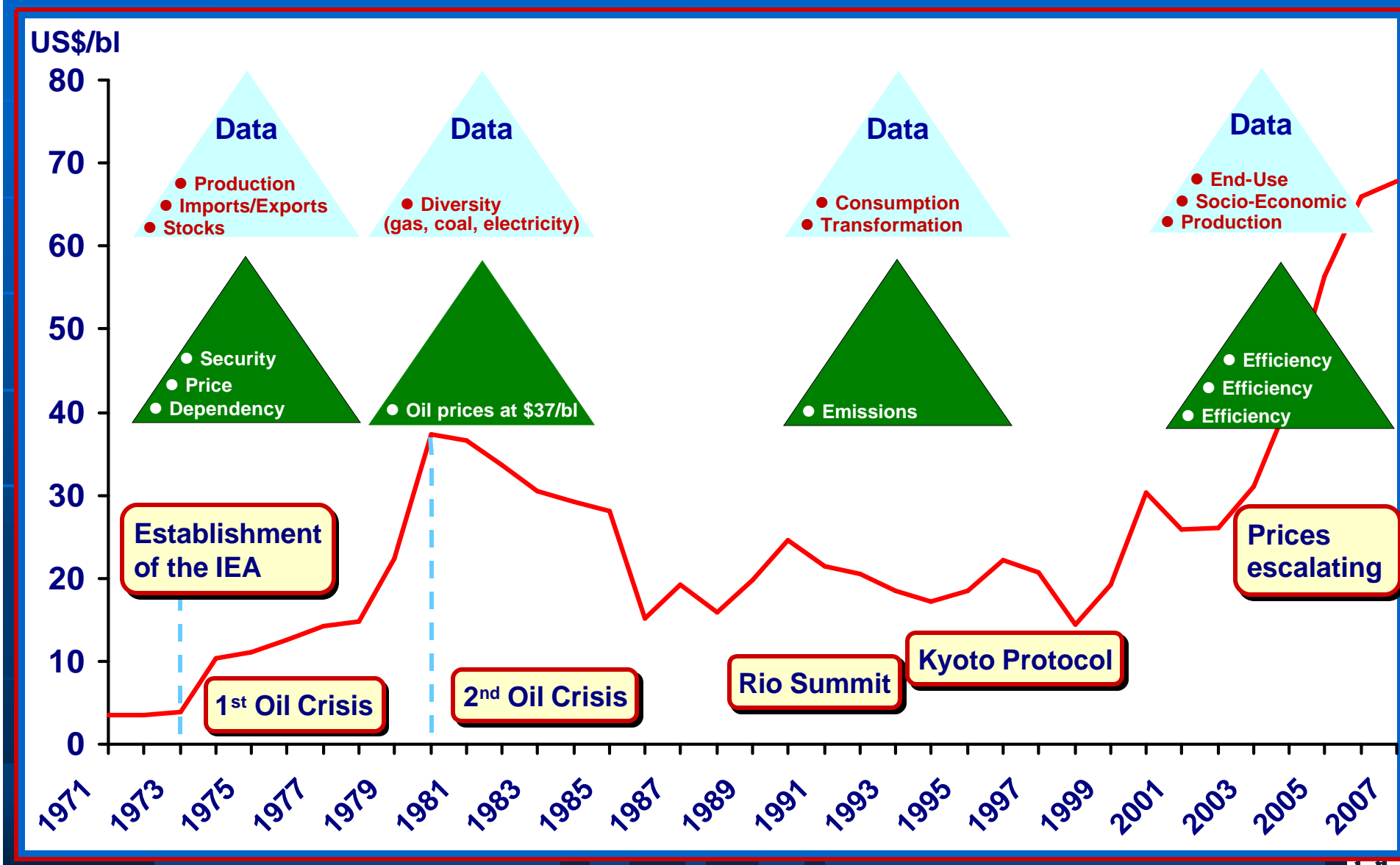


Member countries



- Autonomous Agency of the OECD
- Established in 1974 after 1st Oil Crisis
- 27 (+1) Members Countries (vs. 30 for OECD)
- 3 Es: Energy security, Economy and Environment

The evolution of IEA statistics over time



Why is it important to collect detailed data on energy efficiency for the IEA

3Es



Security of supply: the less you consume, the less dependent you are

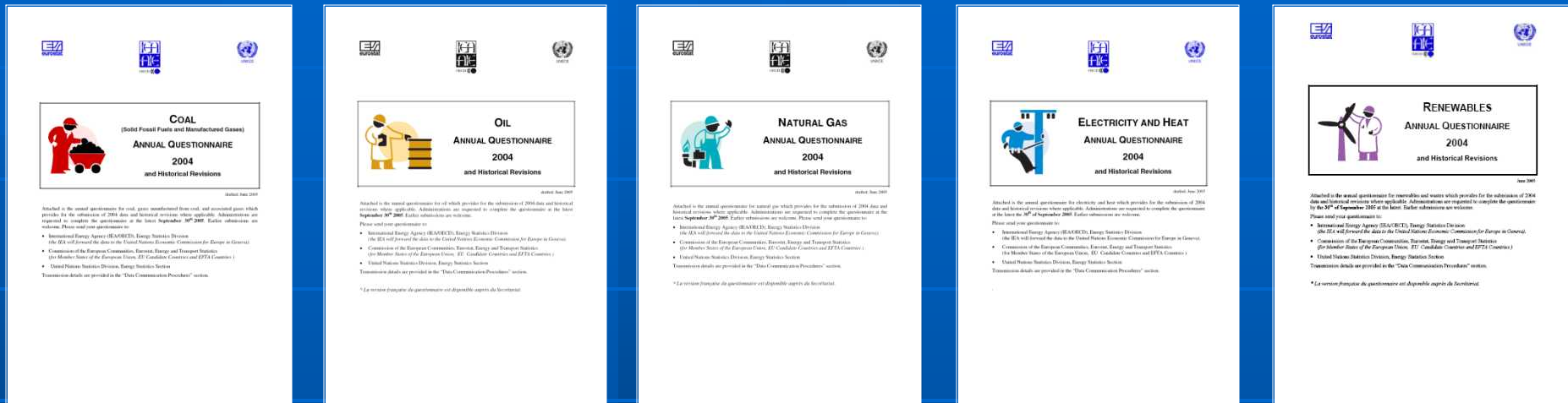
Price: The less you consume, the less pressure you put on production and maybe on price

Environment: The less you consume, the less you emit

Comparison between member countries stimulates exchange of experiences, leads to possible benchmarking, etc.

How does the IEA collect its data

👉 Five Annual Energy Questionnaires



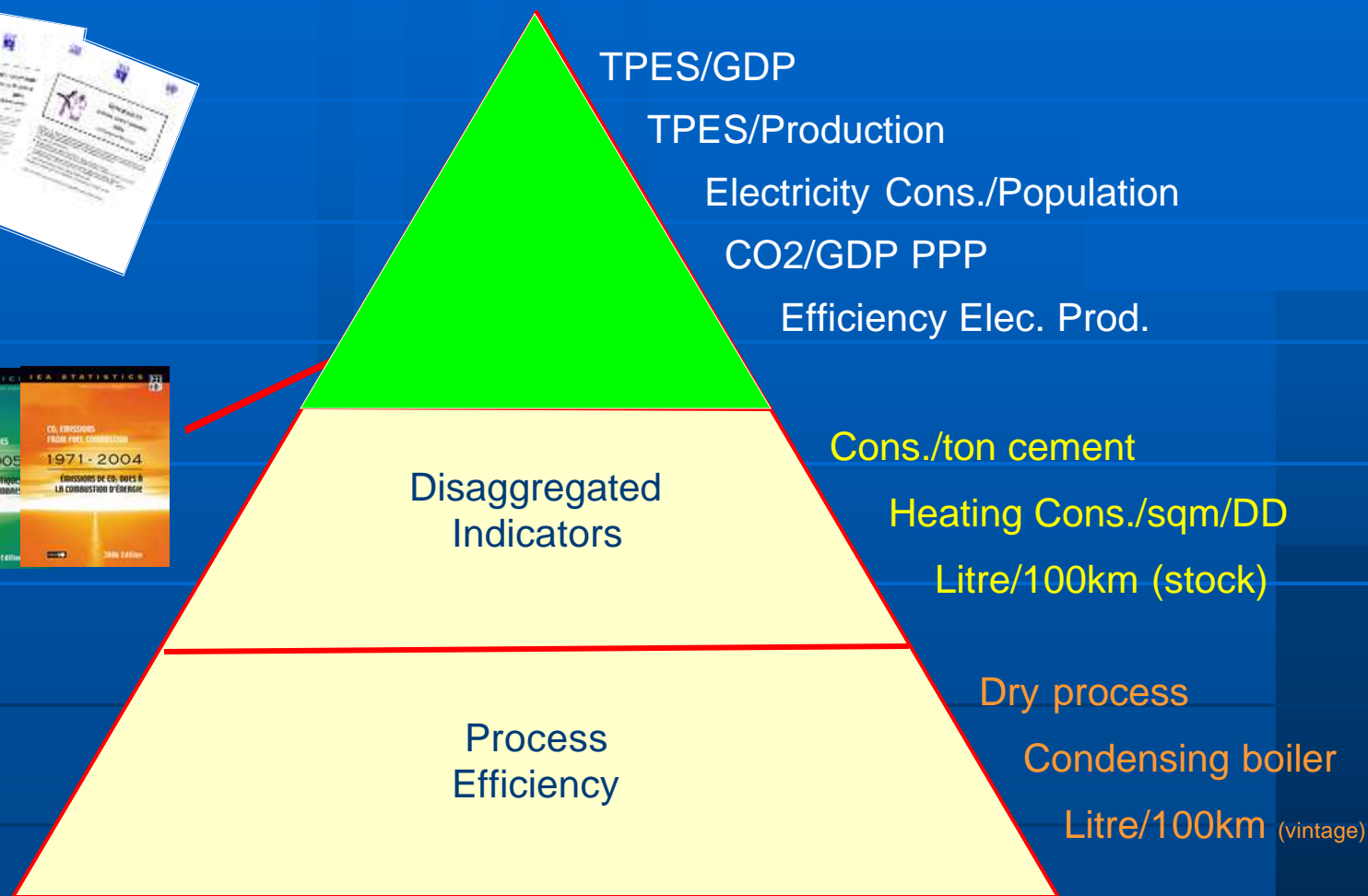
👉 Other Annual: Energy Forecast and R&D Budgets for IEA

👉 Quarterly Questionnaires: Prices and Taxes questionnaire

👉 Current data are limited to sectoral level and to energy units.

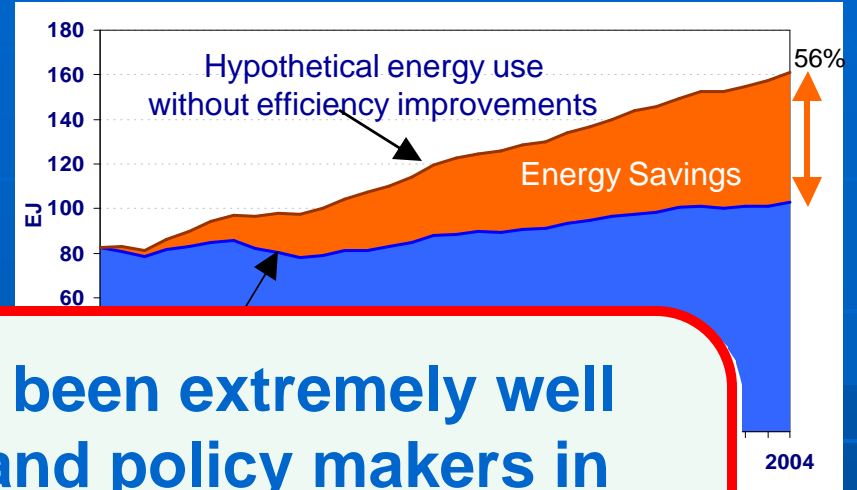
👉 Exceptional Questionnaires: Mainly in case of oil crisis, or ad-hoc activities (e.g.: Non-Energy Use Network)

Only a minimum set of indicators can be derived from basic statistics currently collected by the IEA

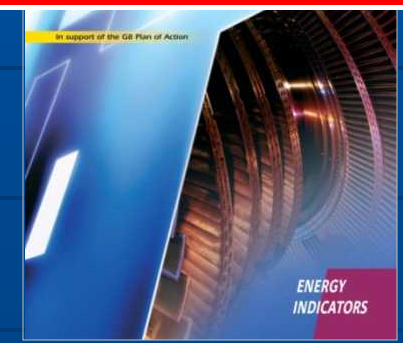
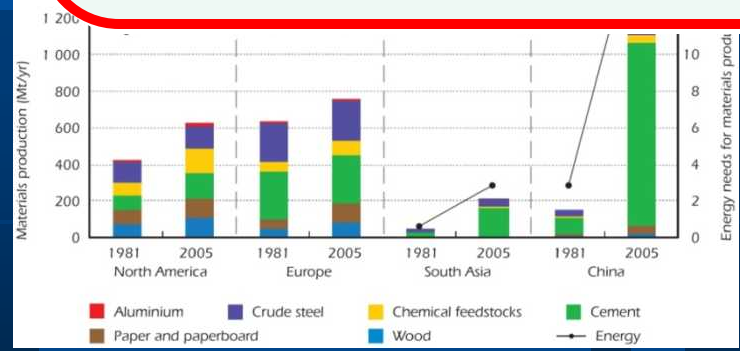


The Indicator Pyramid

Despite lack of official data, the IEA produced several energy efficiency indicators publications



The 3 publications have been extremely well received by analysts and policy makers in OECD countries and world wide. There was a clear demand for more: more countries covered, more indicators, more details.




Industrial Activity is Moving

So, how does the IEA try to bridge the gap

 Priority is given to cooperation

- Data on industry: network of industry association (WBCSD)
- Data on residential, services, transport: cooperation with the ODYSSEE programme of the European Commission for EU countries
- Cooperation with APEC for APEC Member Economies

 Direct contacts with national administrations (e.g. EIA for RECS, MECS, ...)

 In 2006, the IEA defined templates to ease the reporting of the basic data by countries. The templates have recently been updated.

A quick look at the new templates

Draft Energy Efficiency Indicators Template/Questionnaire

List of countries

Canada

Built-in indicators and graphs

Macro economic data

Industry

Basic indicators

Commodities production

Services

Interactive Graphs

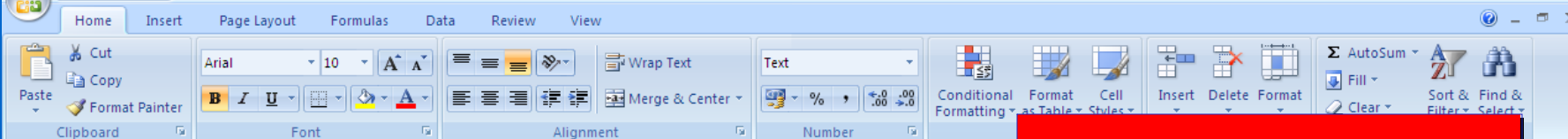
Residential

Transport

Notes

Menu driven





Pre-filled time series

RESIDENTIAL

		AC	AD	AE	AF	AG	2000	2001	2002	2003	2004	2005	2006	
5	Total Energy Use in Residential Sector (IEA balances) For information													
6	Oil & Petroleum Products	PJ	146.29	166.02	154.39	132.89	133.55	137.98	127.11	122.79	128.80	112.57	100.75	0
7	Natural Gas	PJ	567.27	626.19	583.09	519.85	548.17	580.17	540.72	576.03	602.89	585.80	581.77	0
8	Coal & Coal Products	PJ	2.26	2.16	1.88	1.67	1.58	1.51	1.26	1.02	0.99	1.05	1.05	0
9	Combust. Renewables & Waste	PJ	72.71	73.11	74.77	75.95	76.61	76.78	76.91	77.06	77.20	77.32	85.42	0
10	Heat	PJ	0	0	0	0	0	0	0	0	0	0	0.01	0
11	Electricity	PJ	473.88	486.98	484.25	465.64	479.91	497.73	504.96	513.60	532.86	543.62	543.65	0
12	Other	PJ	0	0	0	0	0	0	0	0	0	0	0	0
13	Total	PJ	1262.42	1354.46	1298.38	1196.00	1239.82	1294.18	1250.96	1290.50	1342.84	1320.37	1312.65	0

Space Heating

19	Natural Gas	PJ	130.57	148.21	136.91	115.03	117.41	120.32	109.70	106.30	111.97	98.89	88.18	0
20	Coal & Coal Products	PJ	409.44	461.44	416.01	357.45	384.90	419.37	371.20	415.50	439.26	425.94	418.01	0
21	Coal & Coal Products	PJ	0	0	0	0	0	0	0	0	0	0	0	0
22	Combust. Renewables & Waste	PJ	64.43	64.29	71.37	60.81	65.68	73.80	68.36	72.46	76.33	77.47	76.31	0
23	Heat	PJ	0	0	0	0	0	0	0	0	0	0	0	0
24	Electricity	PJ	159.22	170.21	167.24	143.09	152.27	169.92	161.38	172.56	187.30	192.54	185.73	0
25	Other	PJ	0	0	0	0	0	0	0	0	0	0	0	0
	Total		763.66	844.15	791.53	676.39	720.26	783.41	720.64	766.82	814.85	794.84	768.22	0

Space Cooling

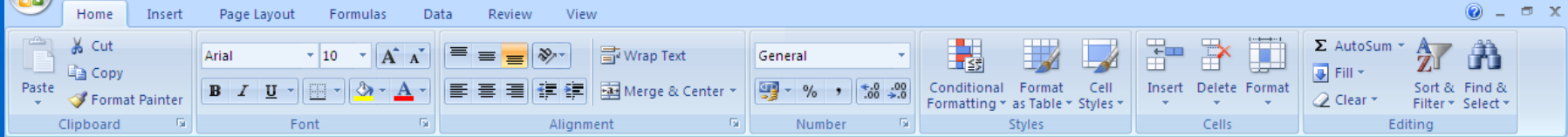
29	Oil & Petroleum Products	PJ	0	0	0	0	0	0	0	0	0	0	0	0
30	Natural Gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0
31	Natural Gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0
32	Coal & Coal Products	PJ	0	0	0	0	0	0	0	0	0	0	0	0
33	Coal & Coal Products	PJ	0	0	0	0	0	0	0	0	0	0	0	0
34	Combust. Renewables & Waste	PJ	0	0	0	0	0	0	0	0	0	0	0	0
35	Heat	PJ	0	0	0	0	0	0	0	0	0	0	0	0
36	Electricity	PJ	15.82	12.32	12.91	19.71	23.19	15.64	25.40	31.09	24.27	19.25	36.53	0
37	Other	PJ	0	0	0	0	0	0	0	0	0	0	0	0
	Total		15.82	12.32	12.91	19.71	23.19	15.64	25.40	31.09	24.27	19.25	36.53	0

Water Heating

41	Oil & Petroleum Products	PJ	16.52	18.32	17.84	18.15	18.61	17.77	17.72	16.19	16.49	13.61	12.49	0
42	Natural Gas	PJ	154.60	161.06	163.31	158.48	159.43	156.86	155.45	156.33	158.99	155.48	159.00	0
43	Coal & Coal Products	PJ	0	0	0	0	0	0	0	0	0	0	0	
44	Coal & Coal Products	PJ	1.10	1.35	1.55	1.72	1.92	2.11	2.15	2.14	2.10	2.11	2.16	0
45	Combust. Renewables & Waste	PJ	0	0	0	0	0	0	0	0	0	0	0	
46	Heat	PJ	0	0	0	0	0	0	0	0	0	0	0	
47	Electricity	PJ	57.57	57.99	56.98	56.55	56.08	56.50	56.49	55.50	56.51	57.30	55.43	0
48	Other	PJ	0	0	0	0	0	0	0	0	0	0	0	
	Total		229.78	238.71	239.67	234.89	236.05	233.24	231.81	230.15	234.08	228.50	229.08	0

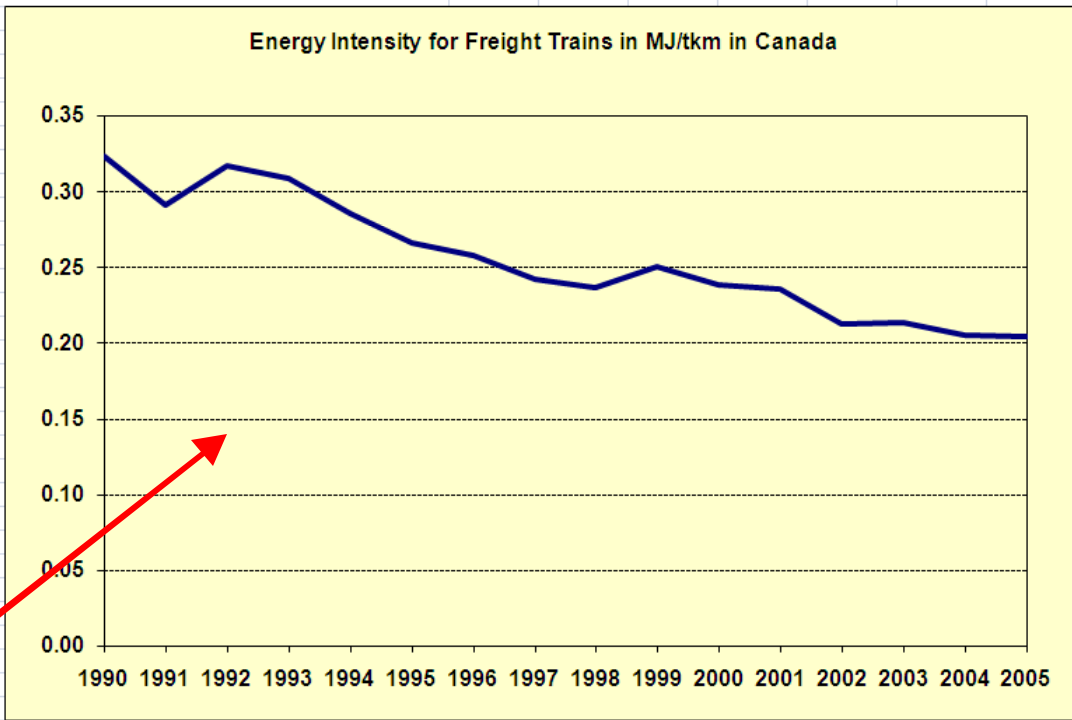
Cooking

51	Oil & Petroleum Products	PJ	0	0	0	0	0	0	0	0	0	0	0	0
52	Natural Gas	PJ	2.37	2.79	2.88	3.07	3.00	3.13	3.25	3.40	3.92	3.55	3.94	0



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2			
3	Select the sheet	TRANSPORT	▼ ▲
4			
5	Select the sector	Freight trains	▼ ▲
6			
7	Select the indicator	Energy intensity	▼ ▲
8			
9	Energy Intensity for Freight Trains in MJ/tkm in Canada		
10	1990	0.32	
11	1991	0.29	
12	1992	0.32	
13	1993	0.31	
14	1994	0.28	
15	1995	0.27	
16	1996	0.26	
17	1997	0.24	
18	1998	0.24	
19	1999	0.25	
20	2000	0.24	
21	2001	0.24	
22	2002	0.21	
23	2003	0.21	
24	2004	0.21	
25	2005	0.20	

A large choice of indicators for sector end use



Built-in graphs of indicators

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What is the current capacity of countries to complete the questionnaires

IEA Member Countries

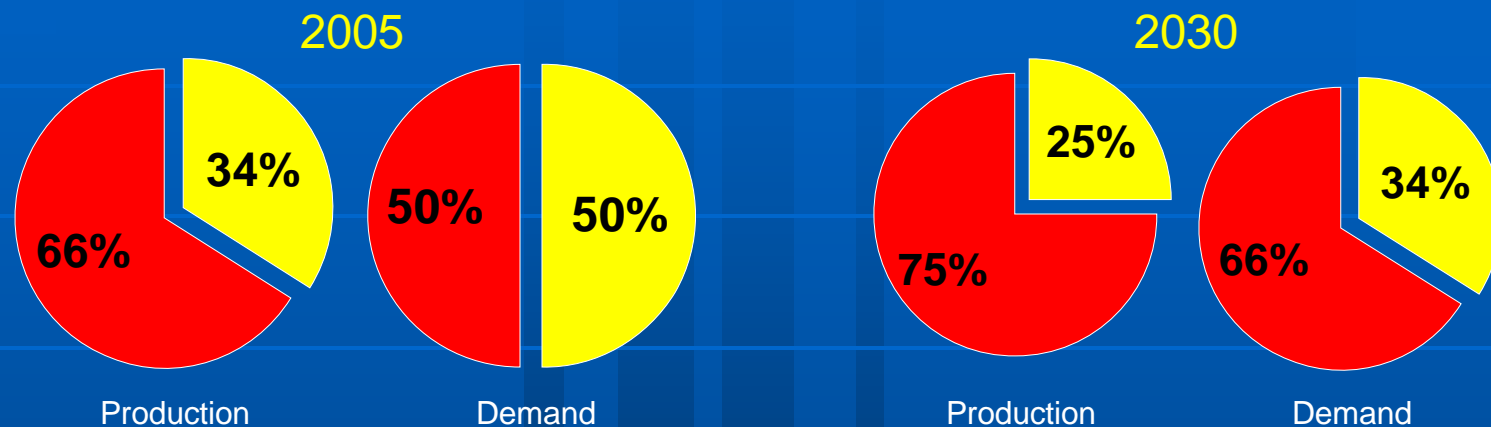
- **The capacity exists for most of the countries**
 - 20 countries were already covered in the Millennium book
 - Since then, Korea and Switzerland submitted questionnaires
- **However, most of the collecting is not done through the questionnaire**
 - Cooperation with the ODYSSEE network for EU countries
 - Various ways and means for other countries including US
- **Main issues:**
 - Data often not complete and not always official
 - The need to strengthen cooperation between countries and industry

Non-IEA Member Countries

- **APEC and IEA cooperate to use the same templates (presentation has been made at the March APEC EWG meeting)**
- **Thanks to financial contributions (mainly UK):**
 - Cooperation with China started in 2007 and has been extended to 2010
 - Cooperation with Russia will start in April 2008 for 2 years
 - Cooperation with Mexico will start in April 2008 for 2 years

The importance of associating Non-OECD countries

👉 2/3 of consumption and 3/4 of production in Non-Member Countries by 2030



Importance of having a detailed and reliable picture of the energy situation

👉 The additional demand in Non-OECD countries will come mostly from a few large countries (China, India, Russia, ...)

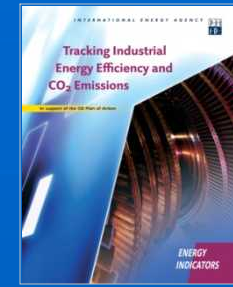
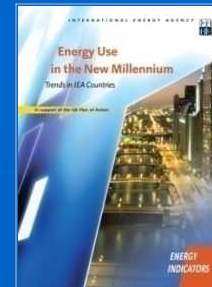
👉 The additional demand in these countries will come from new equipment and plants. Easier to act on the new equipment and plants than on existing ones.

Roadblocks to collecting detailed indicators

- 👉 Liberalisation of the market:
From one company to hundreds
- 👉 Confidentiality (linked to liberalisation)
- 👉 More work passed to statistics offices:
 - More companies to survey (liberalisation)
 - Renewables (remote information)
 - Energy efficiency indicators (including socio-economic data)
 - Environment (estimation of GHG emissions,)
 - Etc.
- 👉 Resources do not follow work load:
Statistics still have a low profile, budget cuts
- 👉 Fast turnover in staff: lack of experience, continuity

149
people

Despite all the efforts
there is a risk of widening
and worrying gap
between the interest for
indicators and the
resources allocated to
collect proper supporting
data



Increasing
Interest for
Indicators

The 3Is vs. the 3Ds

Dramatic
Decrease in
Data resources

?
people



There is an urgent need to act

- The Nobel Prize for Peace has been attributed to work on what the state of the planet could be in the next decades. In early March the OECD published another alarming report.
- However, we do not even know the current situation very well.
- There is a global consensus from and for Governments to urgently take a series of measures to promote efficiency.
- In order to optimise and prioritise these actions, there is first an obvious need to have an accurate view of the energy consumption in all sectors.
- Of course, there is a cost associated with collecting and processing the necessary data. Having said that, non-optimum decisions often lead to costs which are often much higher.
- A 1\$/bbl reduction in the price of oil is equivalent to “saving” 85 M\$ per day - a lot of money for collecting proper data which should help reduce the tension on the oil market and therefore the price of oil.

There is an urgent need to act (cont.)

- The 100 US\$/bbl sends a clear signal to consumers to do more on energy efficiency.
- Energy efficiency was at the centre of the discussion of the last IEA Ministerial meeting; it will also be discussed at the next G8 Summit in Hokkaido.
- The Summit constitutes a unique opportunity to get agreement to start collecting necessary information (at least from G8 countries), but this agreement should be extended to all G8+5 countries, G20, EU and OECD Member countries if not all APEC Economies.
- The current templates constitute a starting point to define a joint questionnaire on energy efficiency. The IEA Secretariat will continue to work closely with Member countries as well as other organisations (EU, APEC, etc.) to propose a model template. The Secretariat will also organise workshops and training sessions to ease the adoption of the template by countries.

EIA and IEA should work together on efficiency

- Efficiency starts at the local level (household, city, state).
- The federal/national level is essential to national energy policy and international commitment.
- Stronger together. Actions will be more effective if countries work/act together. Exchange of information is therefore key. This is one of the objectives of the IEA through a database covering all its Member Countries.
- US being by far the biggest consuming country, so the importance of a strong partnership and cooperation between the EIA and the IEA.
- EIA through MECS, RECS and other surveys collects a wealth of information on energy consumption on several sectors. Submitting annual questionnaires should not be a major problem for the EIA.
- In fact, because of the importance of the US in IEA and global energy consumption, EIA should be seen as an engine and a catalyst in bringing all IEA as well as key non-IEA countries to join the effort.

Thank you