International Workshop on Energy Statistics

Mexico, 2-5 December 2008

Do "traditional" supply-demand data give a sufficient basis for sound energy efficiency policies?

Introduction to Energy Efficiency Indicators

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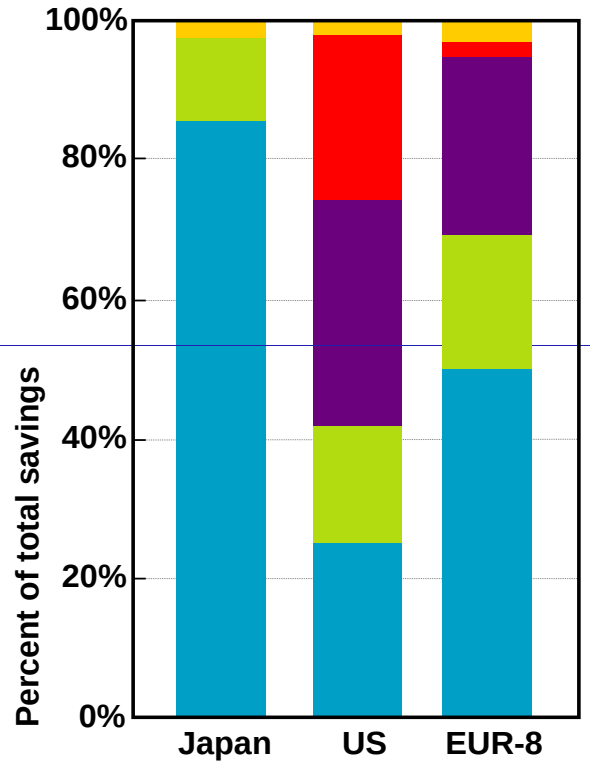
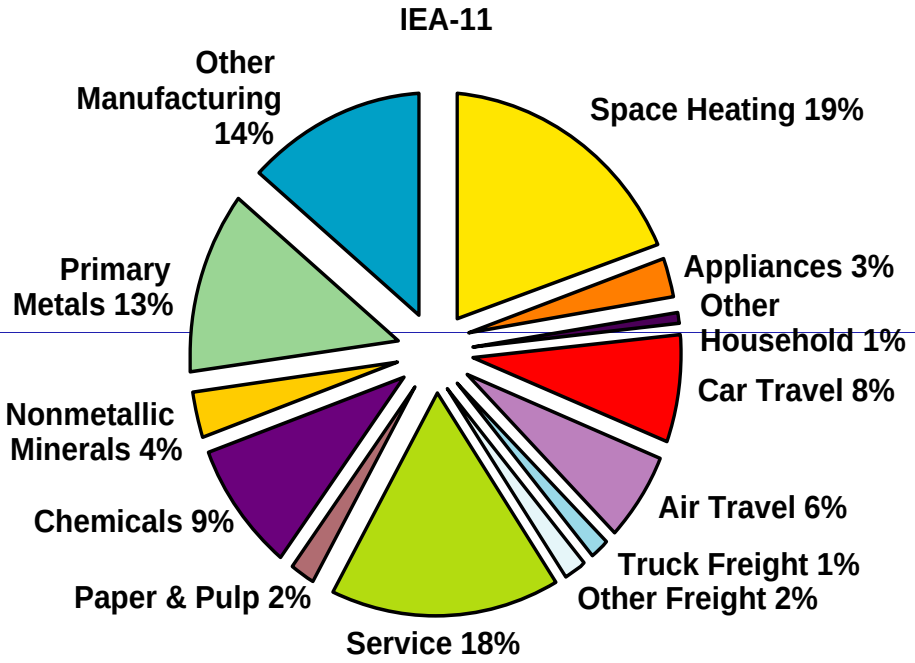
International Energy Agency

Why is it important to have detailed energy efficiency indicators?

- To support any sound energy policy
  - A need to know what are the sub-sectors which consume "too much" energy (ex: trucks, heating, cement, offices, ..)
  - What is 'too much"? A need to have benchmarking and best practices
  - A need to compare with the situation in "similar" countries (climate, size, economy, …)
- To monitor progresses (or failures) of actions and programs on energy efficiency
- To be used as the basis for detailed modeling and forecasts

Contribution to Energy Savings from Sectors and End Uses

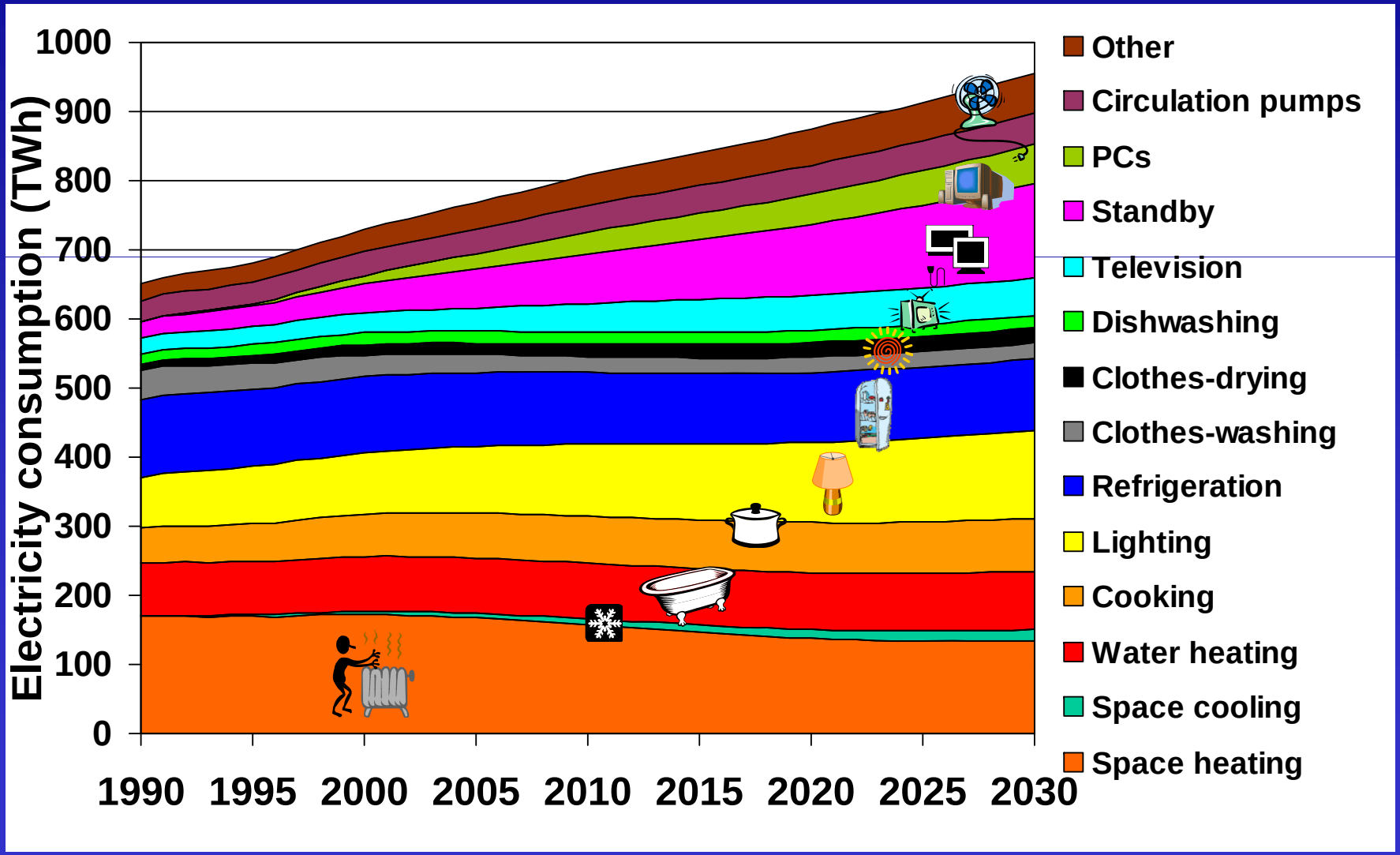




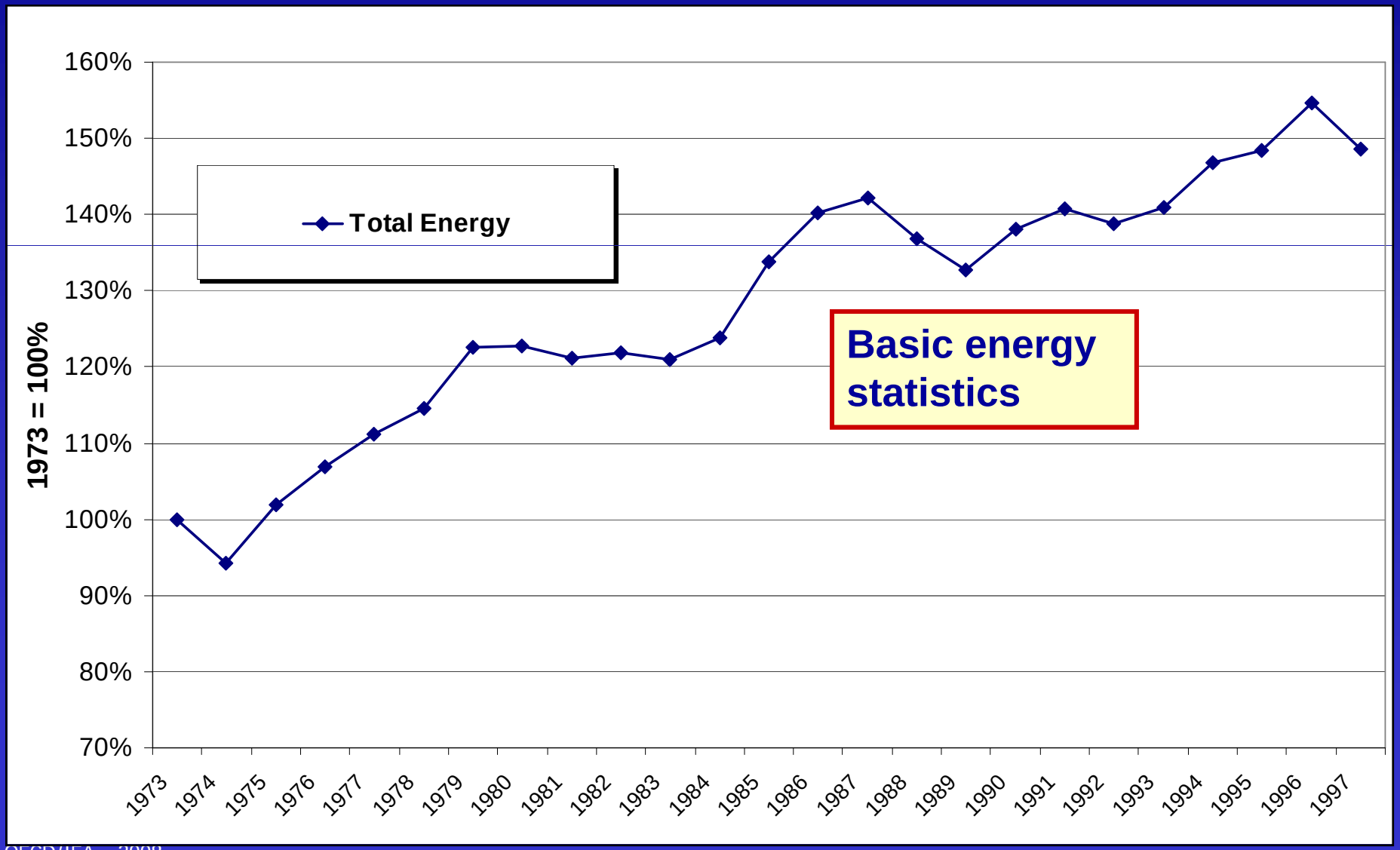
Freight Transport Passenger Transport
Households Service Manufacturing

Indicators are useful to understand the past…

… as well as the future



The more detailed information you collect the better you know what really happens



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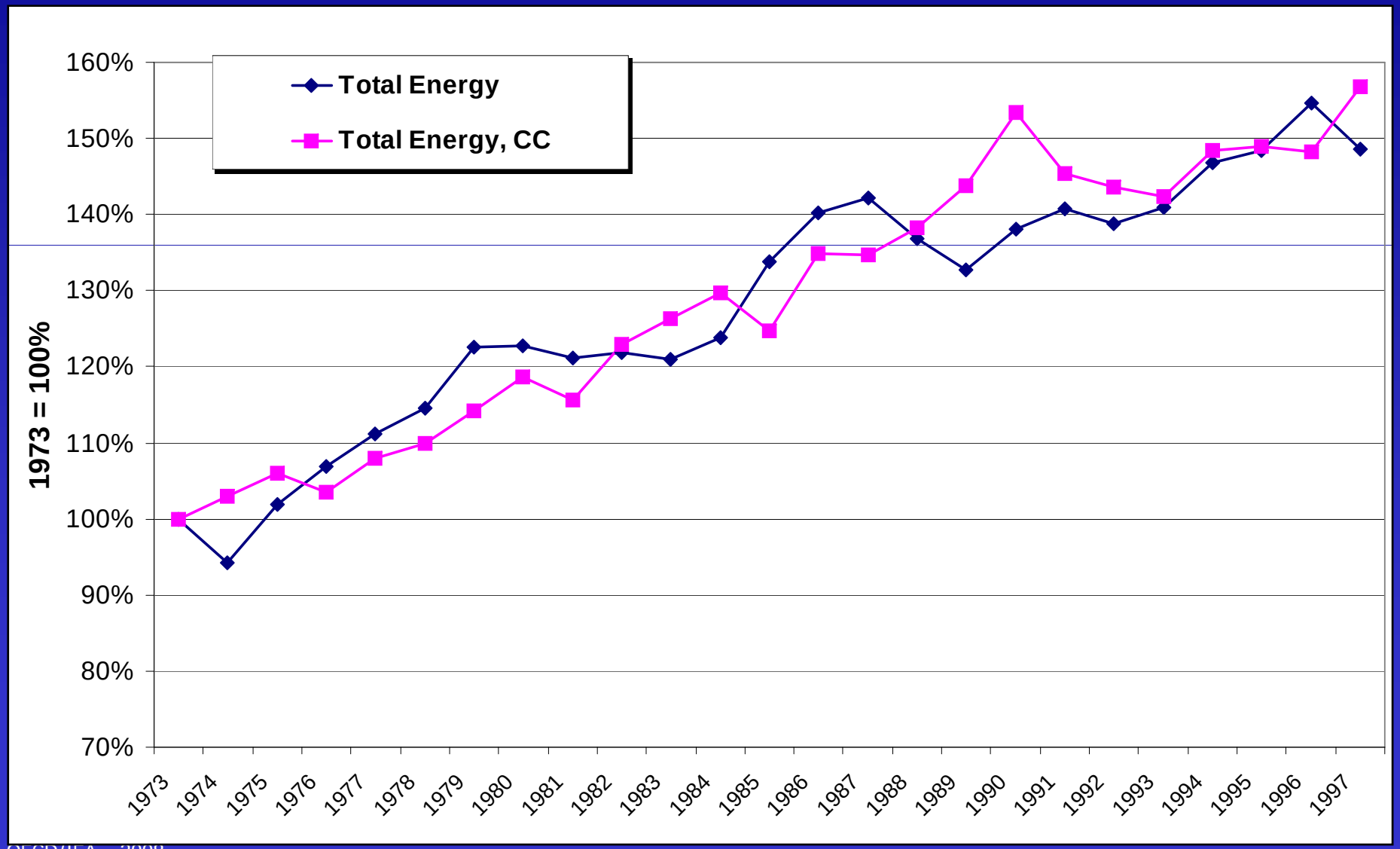

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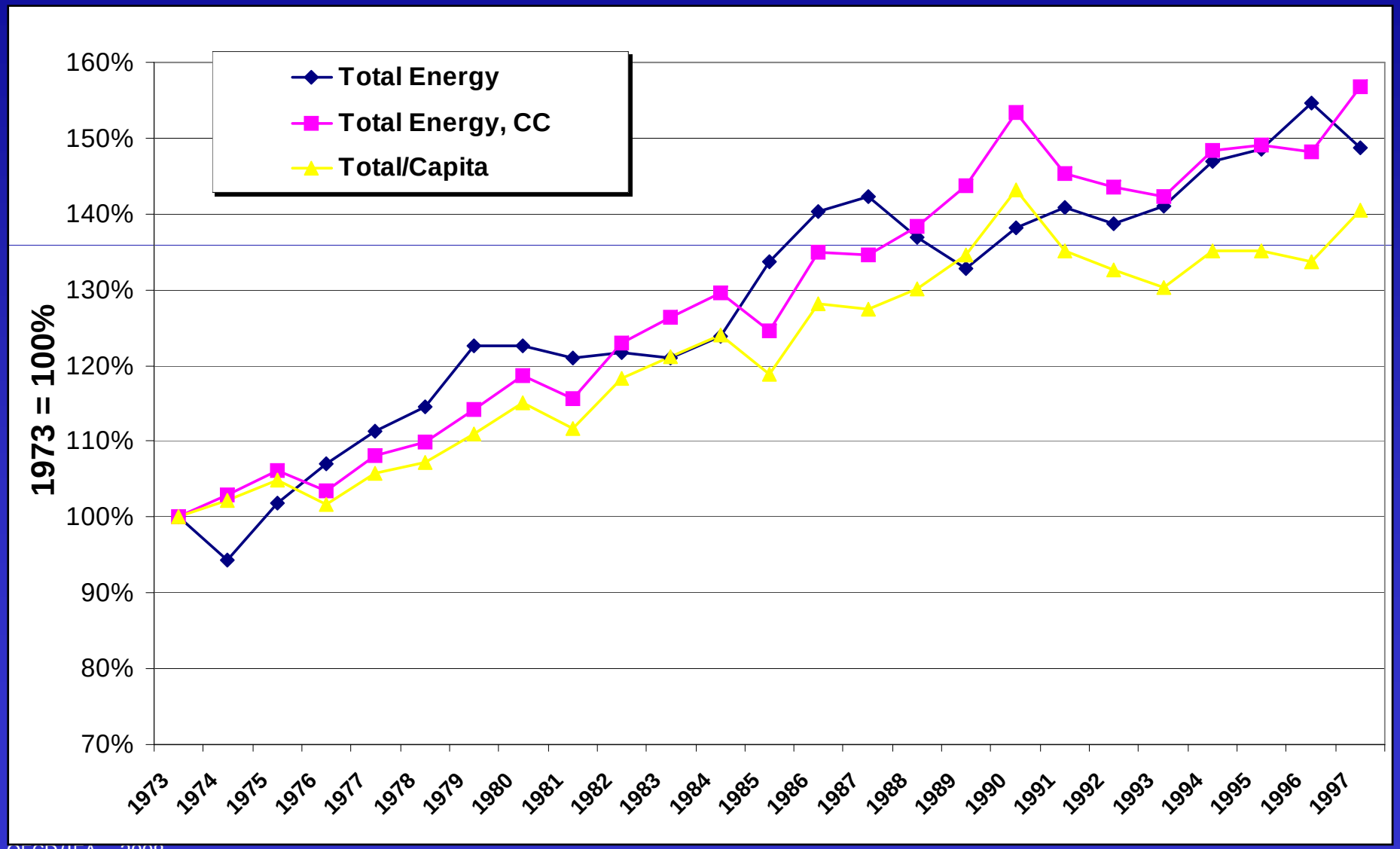

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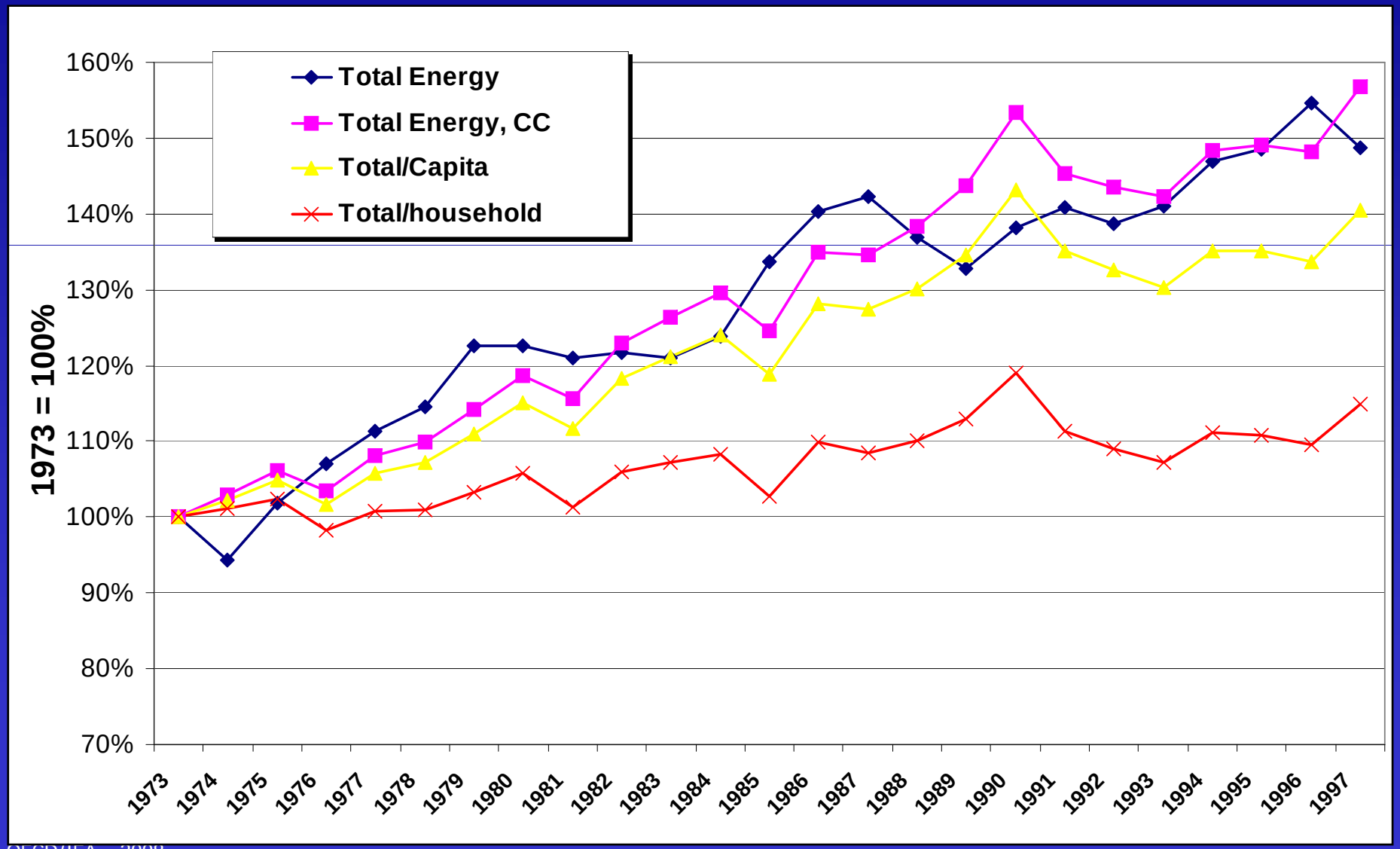

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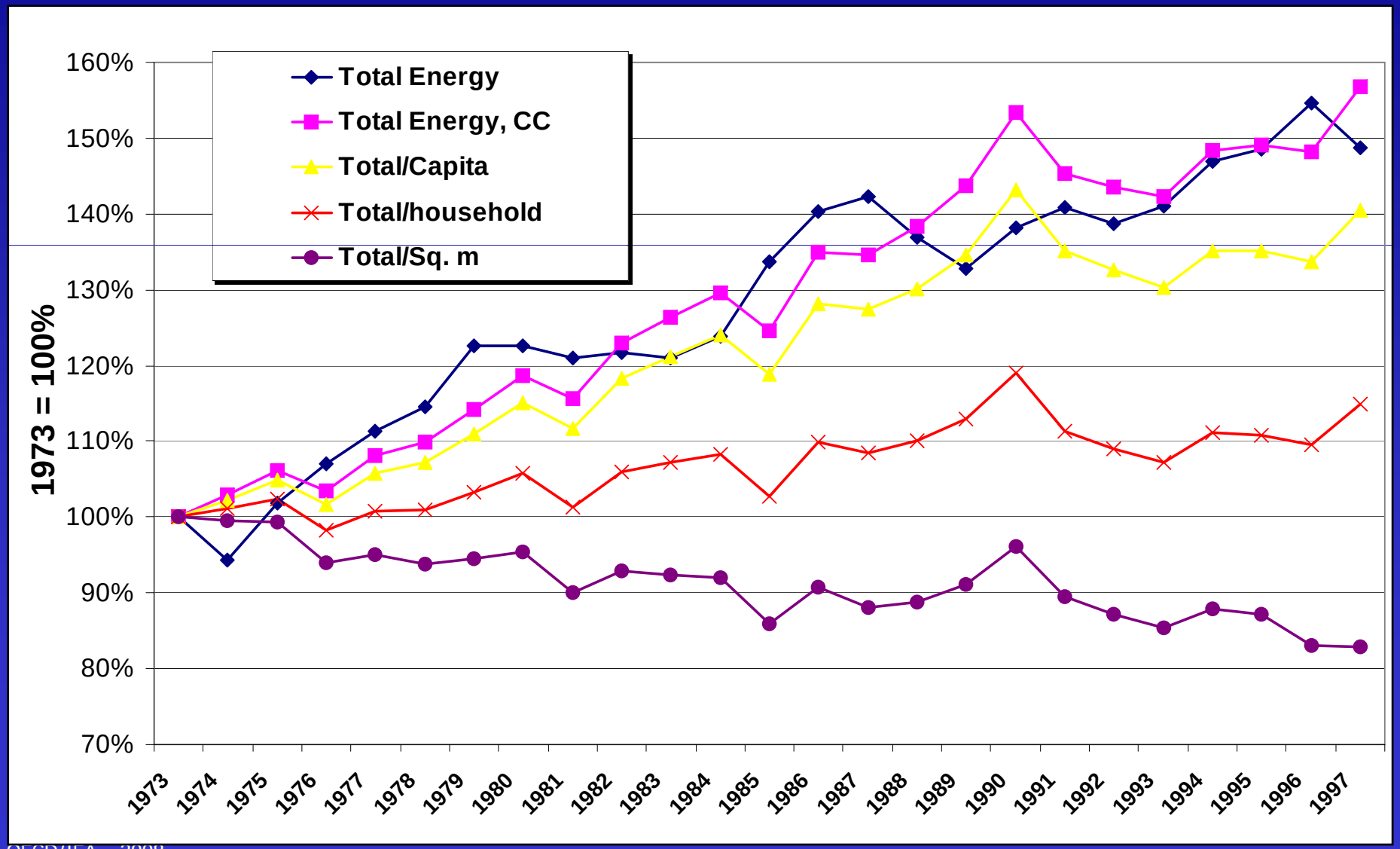

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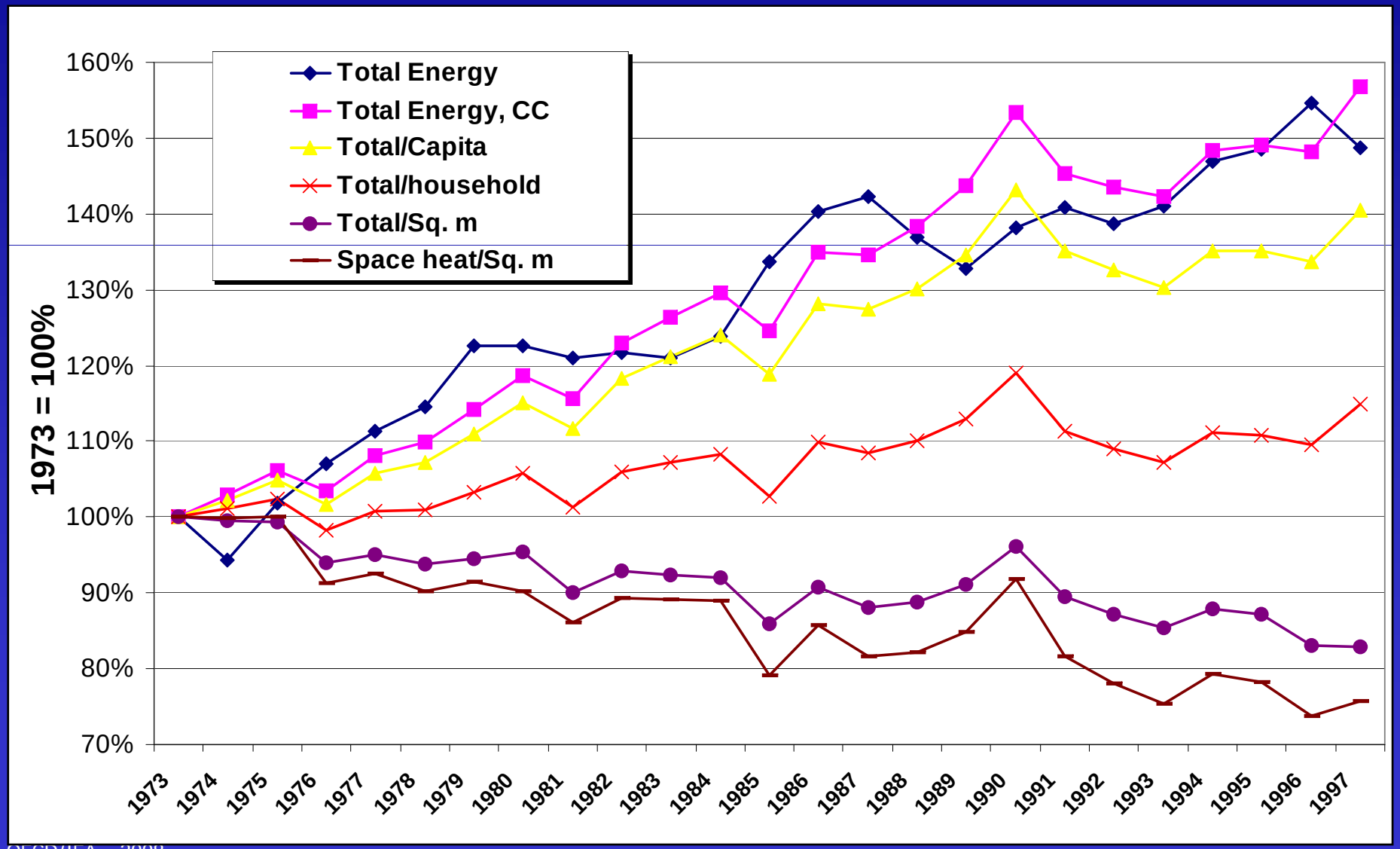

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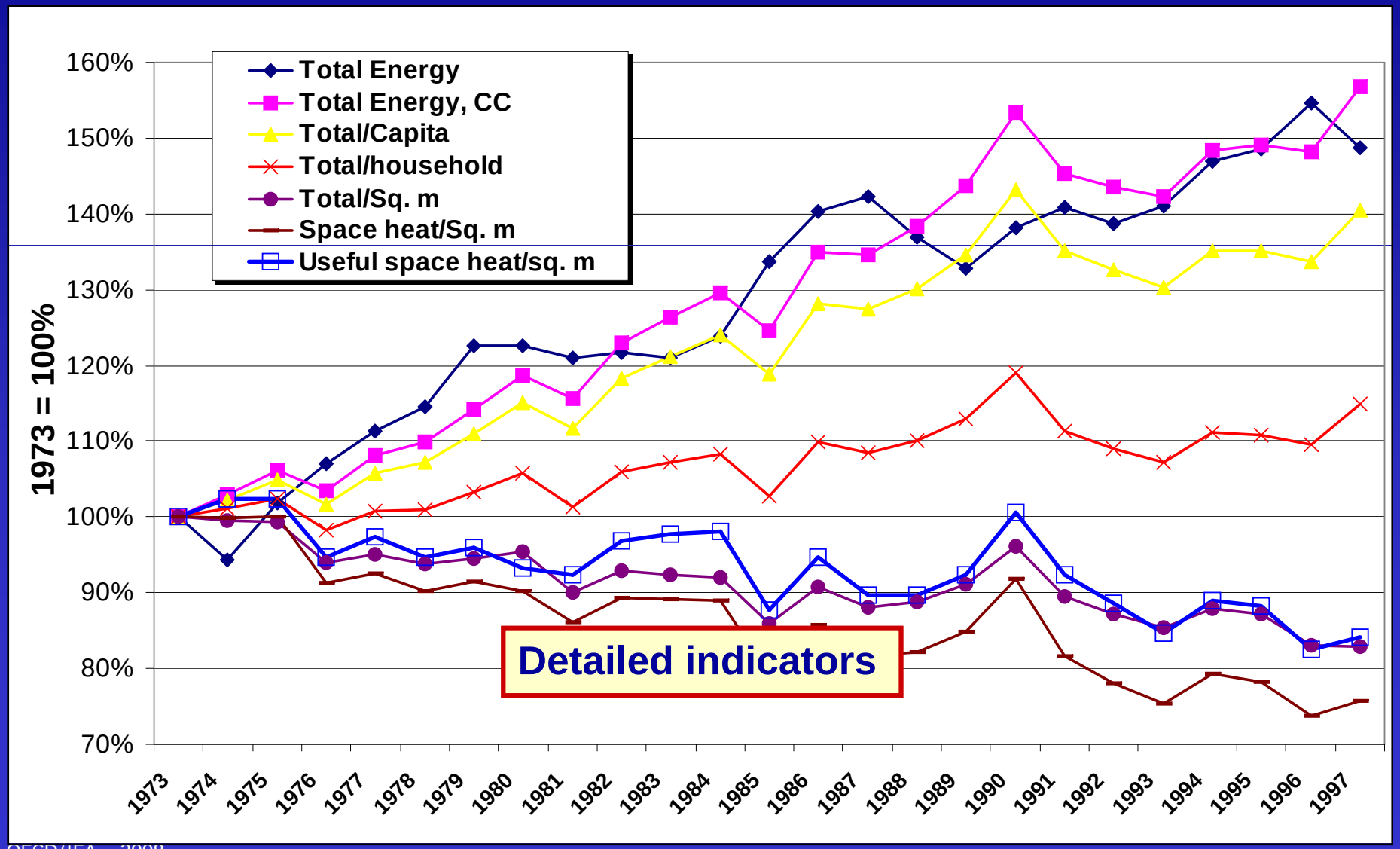

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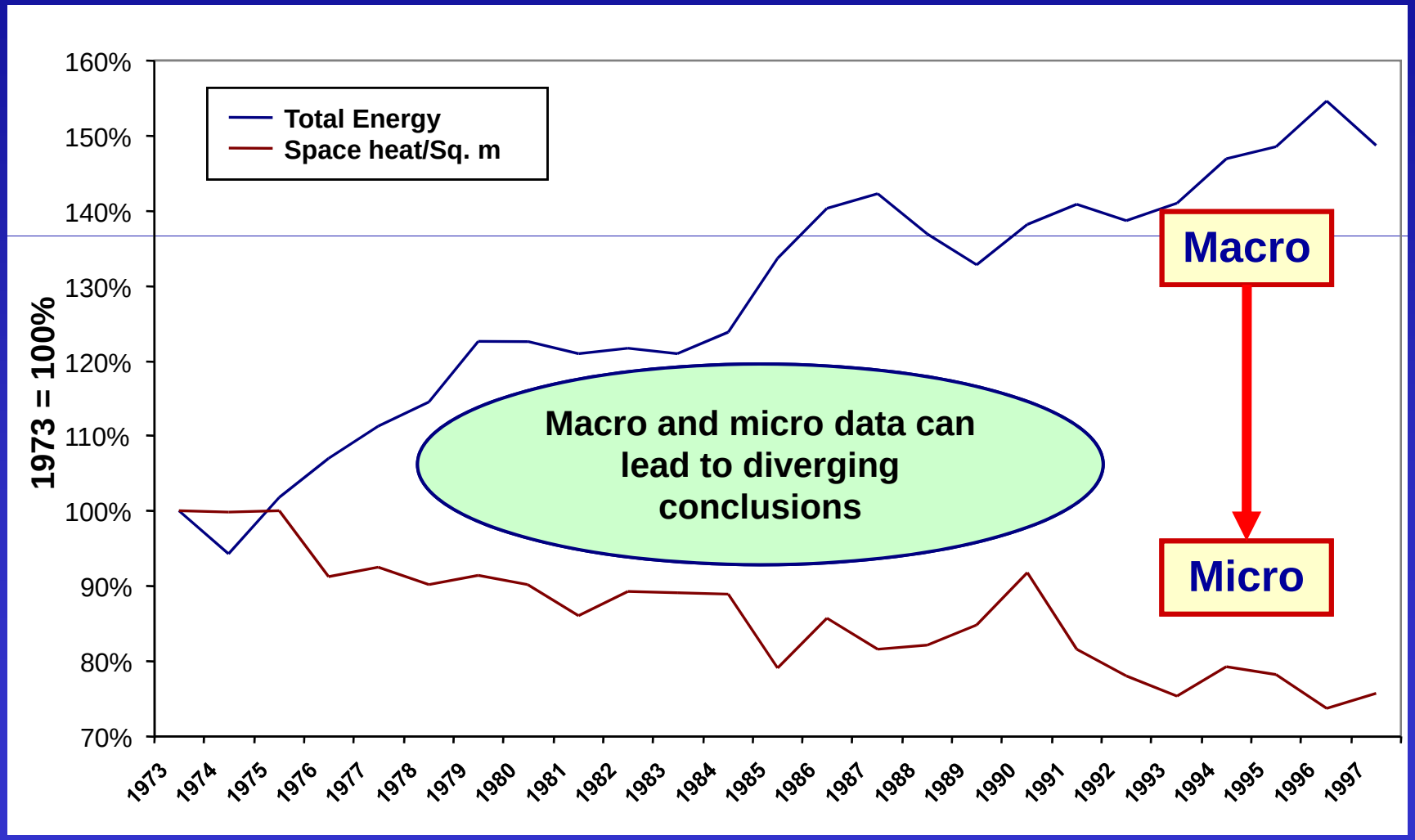
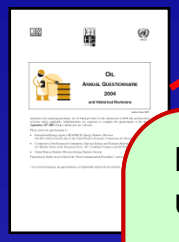
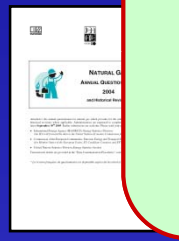
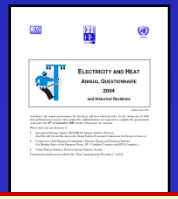








Energy Balance

Thousand tonnes of oil equivalent / *Milliers de tonnes d'équivalent pétrole*

SUPPLY AND CONSUMPTION / *APPROVISIONNEMENT ET DEMANDE*	Coal / *Charbon*	Crude Oil / *Pétrole brut*	Petroleum Products / *Produits pétroliers*	Gas / *Gaz*	Nuclear / *Nucléaire*	Hydro / *Hydro*	Geotherm. Solar etc. / *Géotherm. solaire*	Combust. Renew. & Waste / *Comb. ren. & déchets*	Electricity / *Electricité*	Heat / *C*	Total
Production	1145355	181427	-	42621	13835	34143	-	223561	-		
Imports	14893	126817	41493	-	-	-	-	-	431		
Exports	-55279	-8067	-16722	-2484	-	-	-	-	-963		
Intl. Marine Bunkers	-	-	-7642	-	-	-	-	-	-		
Stock Changes	-17345	788	288	-	-	-	-	-	-		
TPES	**1087624**	**300965**	**17417**	**40137**	**13835**	**34143**	**-**	**223561**	**-532**		
Transfers	-	-74	88	-	-	-	-	-	-		
l Differences	7118	-1328	917	-1137	-	-	-	-	-		
Plants	-527596	-213	-15059	-2637	-13835	-34143	-	-861	214780		
	-	-	-	-	-	-	-	-	-		
	-71089	-3	-2672	-1938	-	-	-	-503	-		
	-6640	-	-144	4841	-	-	-	-	-		
efineries	-	-290405	283439	-	-	-	-	-	-		
rmation	-69485	-	-	-	-	-	-	-	-		
Plants	-	-	-	-	-	-	-	-	-		
ormation	-	-	-	-	-	-	-	-	-		
	-46624	-5037	-17434	-6549	-	-	-	-	-28398		
Losses	-	-	-20	-864	-	-	-	-	-14494		
	373308	**3905**	**266532**	**31852**	**-**	**-**	**-**	**222197**	**171355**		
SECTOR	**279763**	**2509**	**35753**	**12366**	**-**	**-**	**-**	**-**	**116217**		
el	102809	-	3011	894	-	-	-	-	21882		
d Petrochemical	28095	-	5380	5589	-	-	-	-	21588	12	
Metals	8147							-	12639	1811	24947
Minerals	85282							-	12179	149	109054
uipment	3226							-	2580	625	7956
	9117							-	13801	978	29091
Quarrying	3628							-	4337	303	9644
obacco	11818							-	4123	1977	19714
p and Printing	8551							-	4019	2373	15768
od and Wood Products	1870							-	1114	127	3392
Construction	3200							-	2012	111	9608
Textile and Leather	9376							-	8288	3685	22987
Non-specified	4642							-	7656	448	17788
TRANSPORT SECTOR	**4080**							**-**	**1737**	**-**	**114230**
International Aviation								-	-	-	2095
Domestic Aviation	-							-	-	-	7566
Road	-							-	-	-	75740
Rail	4079	-	9129	-	-	-	-	-	1737	-	14944
Pipeline Transport		-	4627	9	-	-	-	-	-	-	4636
Domestic Navigation	1	-	9247	-	-	-	-	-	-	-	9248
Non-specified	1	-	-	-	-	-	-	-	-	-	1

No breakdown by end use:
- heating
- DHW
- lighting
- cooking
- air conditioning
- appliances

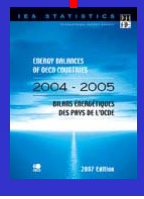
No breakdown by end use and by function of buildings (hospitals, schools, hotels, offices, restaurants, etc.)

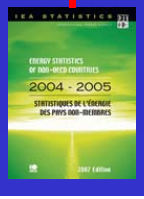
What most organisations collects on a regular basis is limited to aggregated levels

OTHER SECTORS	**67380**	**238**	**61076**	**12071**	**-**	**-**	**-**	**222197**	**53401**	**14230**	**188090**
Residential	**46162**	**-**	**17598**	**8895**	**-**	**-**	**-**	**222197**	**24293**	**12356**	**156840**
Comm. & Pub. Services	**5190**	**-**	**22302**	**3177**	**-**	**-**	**-**	**-**	**10040**	**867**	**11931**
Agriculture/Forestry	**12155**	**-**	**21175**	**-**	**-**	**-**	**-**	**-**	**7536**	**18**	**14286**
Fishing	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Non-specified	**3872**	**238**	**-**	**-**	**-**	**-**	**-**	**-**	**11532**	**988**	**5033**

Only a minimum set of indicators can be derived from basic statistics

		OECD	China	India	World





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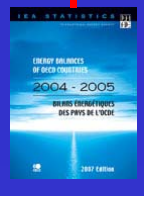
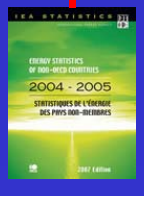
		OECD	China	India	World
Production	Mtoe	3 834	1 641	419	11 468
TPES	Mtoe	5 548	1 717	537	11 434
Electricity Consumption	TWh	9 800	2 322	525	16 695
CO_2 Emissions	Mt of CO_2	12 910	5 059	1 147	27 136





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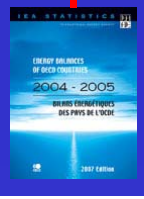
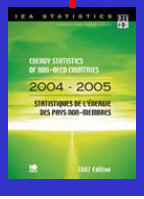
Production/TPES		0.69	0.96	0.78	1.00
TPES/GDP	toe / 000 2000$	0.20	0.91	0.83	0.32
TPES/GDP(PPP)	toe / 000 2000$ PPP	0.18	0.22	0.16	0.21
TPES/Population	toe / capita	4.74	1.32	0.49	1.78





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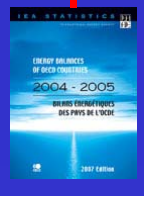
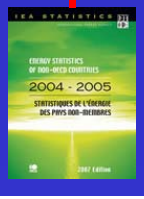
Elec. Cons/Population	kWh / capita	8 365	1 781	480	2 596





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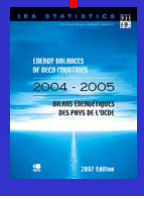
Elec. Cons/Population	kWh / capita	8 365	1 781	480	2 596
CO_2 / TPES	t CO_2 / toe	2.33	2.95	2.14	2.37
CO_2 / GDP	kg CO_2 / 2000 $	0.45	2.68	1.78	0.75
CO_2 / GDP (PPP)	kg CO_2 / 2000 $ PPP	0.43	0.65	0.34	0.50
CO_2 / Population	t CO_2 / capita	11.02	3.88	1.05	4.22



Efficiency of Electricity Generation in Electricity plants

A few more technical indicators can also be derived

Coal

Oil

The Indicator Pyramid

Aggregated Indicators

TPES/GDP

TPES/Production

Electricity Cons./Population

CO2/GDP PPP

Efficiency Elec. Prod.

Disaggregated Indicators

Cons./ton cement

Heating Cons./sqm/DD

Litre/100km (stock)

Process Efficiency

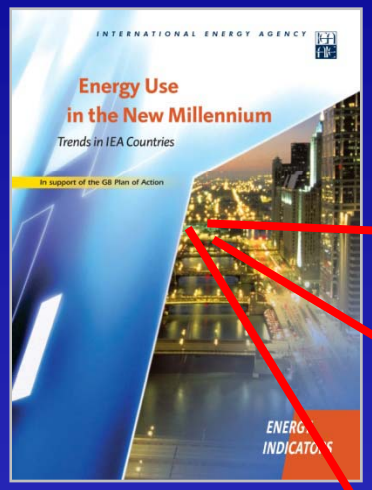
Dry process

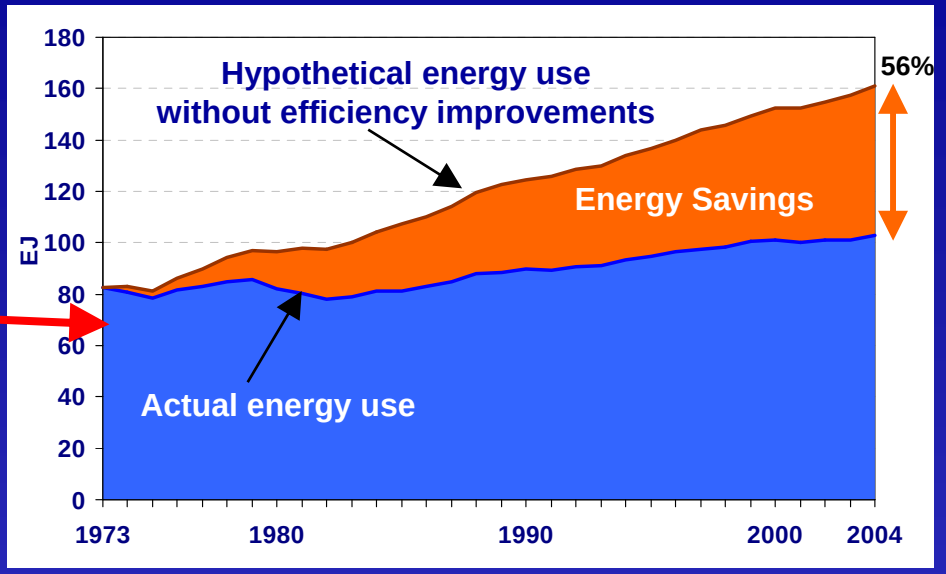
Condensing boiler

Litre/100km (vintage)

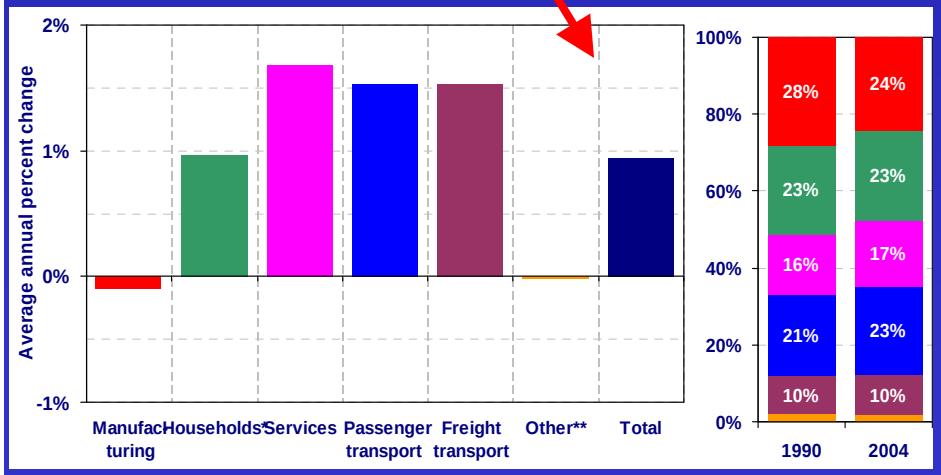
Only a minimum set of indicators can be derived from basic statistics

Analysts need more detailed data

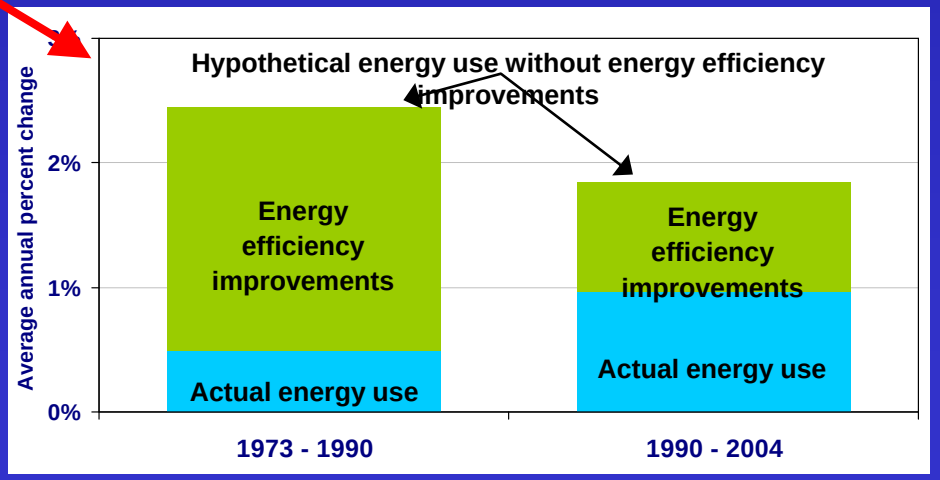




Contribution of energy efficiency to limited increases in IEA energy consumption



Long-term Economy-wide Energy Savings from Improvements in Energy Efficiency

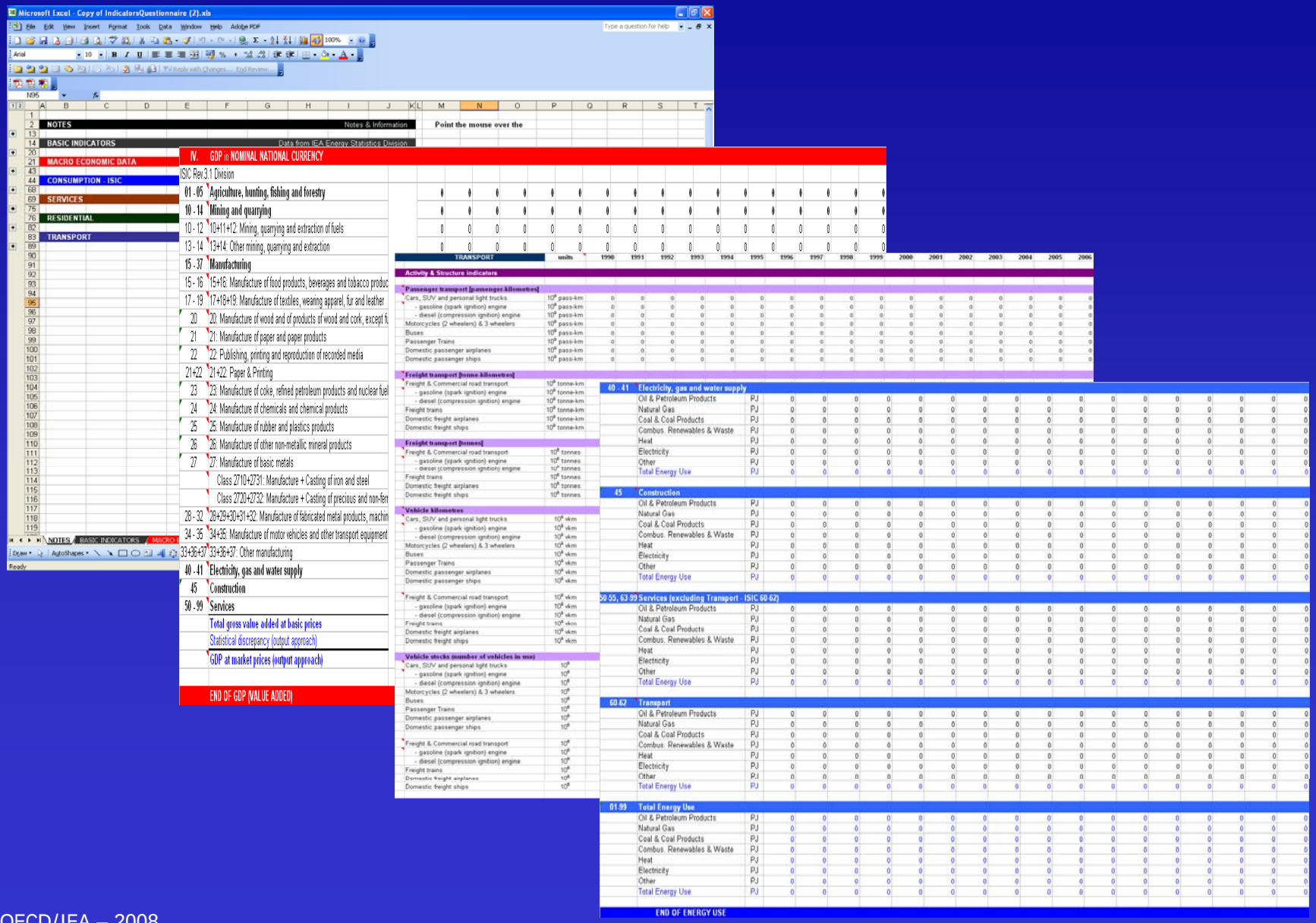


Impact of Energy Efficiency Improvements on Final Energy Use, IEA11

So, what could be done to bridge the gap (the IEA's example)

- Priority was 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 (USDOE) for RECS, MECS, …)
- In 2006, the IEA defined templates to ease the reporting of the basic data by countries

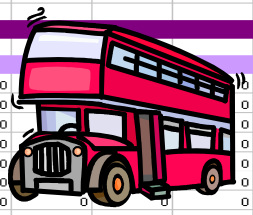
The initial templates

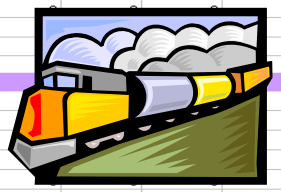


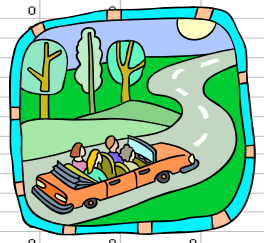
Detailed data on transport

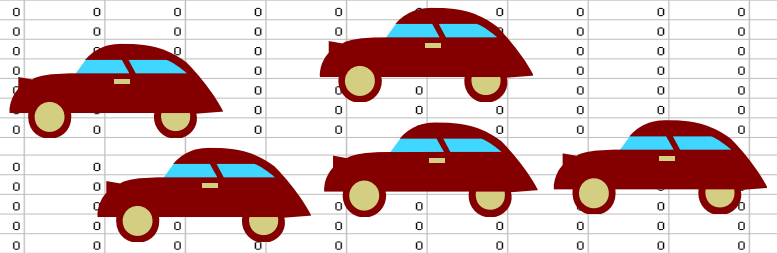
TRANSPORT

	units	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Passenger transport [passenger-kilometres]																		
Cars, SUV and personal light trucks	10^9 pass-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- gasoline (spark ignition) engine	10^9 pass-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- diesel (compression ignition) engine	10^9 pass-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles (2 wheelers) & 3 wheelers	10^9 pass-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	10^9 pass-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Passenger Trains	10^9 pass-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic passenger airplanes	10^9 pass-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic passenger ships	10^9 pass-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Freight transport [tonne-kilometres]																		
Freight & Commercial road transport	10^9 tonne-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- gasoline (spark ignition) engine	10^9 tonne-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- diesel (compression ignition) engine	10^9 tonne-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Freight trains	10^9 tonne-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic freight airplanes	10^9 tonne-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic freight ships	10^9 tonne-km	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Freight transport [tonnes]																		
Freight & Commercial road transport	10^9 tonnes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- gasoline (spark ignition) engine	10^9 tonnes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- diesel (compression ignition) engine	10^9 tonnes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Freight trains	10^9 tonnes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic freight airplanes	10^9 tonnes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic freight ships	10^9 tonnes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle kilometres																		
Cars, SUV and personal light trucks	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- gasoline (spark ignition) engine	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- diesel (compression ignition) engine	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles (2 wheelers) & 3 wheelers	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Passenger Trains	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic passenger airplanes	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic passenger ships	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Freight & Commercial road transport	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- gasoline (spark ignition) engine	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- diesel (compression ignition) engine	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Freight trains	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic freight airplanes	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic freight ships	10^9 vkm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle stocks (number of vehicles in use)																		
Cars, SUV and personal light trucks	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- gasoline (spark ignition) engine	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- diesel (compression ignition) engine	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycles (2 wheelers) & 3 wheelers	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Passenger Trains	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic passenger airplanes	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic passenger ships	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Freight & Commercial road transport	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- gasoline (spark ignition) engine	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- diesel (compression ignition) engine	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Freight trains	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic freight airplanes	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Domestic freight ships	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0









Energy consumption broken down by end use

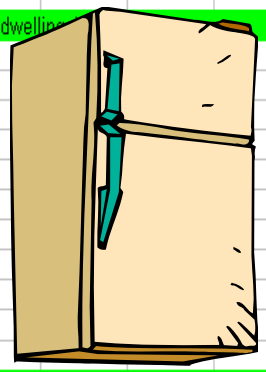
Services

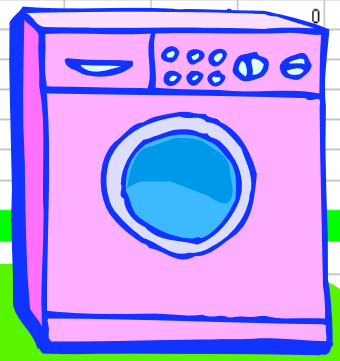
	nits	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Energy Use (total final energy use)																		
Space Heating																		
	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Natural Gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal & Coal Products	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combus. Renewables & Waste	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heat	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electricity	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Space Cooling																		
	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal & Coal Products	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combus. Renewables & Waste	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heat	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electricity	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lighting																		
	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Energy Use in Services Sector																		
						0	0	0	0	0	0	0	0	0	0	0	0	0
Natural Gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal & Coal Products	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combus. Renewables & Waste	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heat	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electricity	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Energy Use in Services Sector																		
Oil & Petroleum Products	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Natural Gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal & Coal Products	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combus. Renewables & Waste	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heat	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electricity	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
END OF SERVICES SECTOR																		

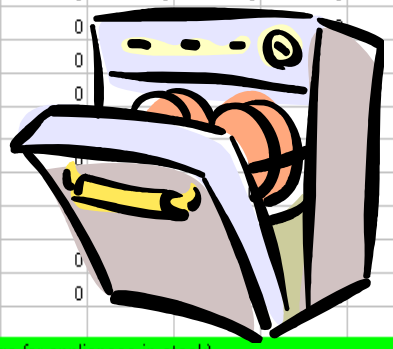
Diffusion, stocks and average consumption of selected appliances

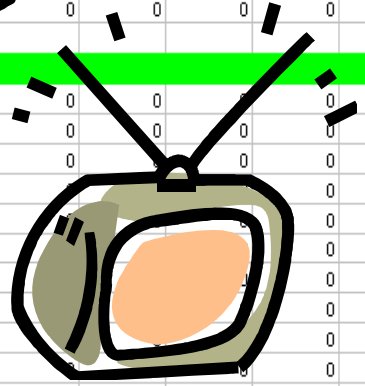
RESIDENTIAL

		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Appliances Diffusion (as a percentage of occupied dwellings)																		
Refrigerators	%				0	0	0	0	0	0	0	0	0	0	0	0	0	0
Freezers	%				0	0	0	0	0	0	0	0	0	0	0	0	0	0
Refrigerator/Freezer Combinations	%				0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dish Washers	%				0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clothes Washers	%				0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clothes Dryers	%				0	0	0	0	0	0	0	0	0	0	0	0	0	0
Room Air Conditioners	%				0	0	0	0	0	0	0	0	0	0	0	0	0	0
Central Air Conditioners	%				0	0	0	0	0	0	0	0	0	0	0	0	0	0
Television	%				0	0	0	0	0	0	0	0	0	0	0	0	0	0
PC	%				0	0	0	0	0	0	0	0	0	0	0	0	0	0
Appliances Stock (only within occupied dwellings)																		
Refrigerators	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Freezers	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Refrigerator/Freezer Combinations	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dish Washers	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clothes Washers	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clothes Dryers	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Room Air Conditioners	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Central Air Conditioners	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Television	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PC	10^6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Appliances, unit energy consumption per year (average for appliances in stock)																		
Refrigerators	kWh/unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Freezers	kWh/unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Refrigerator/Freezer Combinations	kWh/unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dish Washers	kWh/unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clothes Washers	kWh/unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clothes Dryers	kWh/unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Room Air Conditioners	kWh/unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Central Air Conditioners	kWh/unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Television	kWh/unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PC	kWh/unit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Energy Use (total final energy use - net calorific values)																		

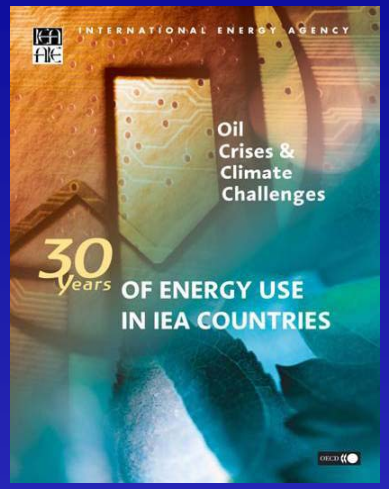








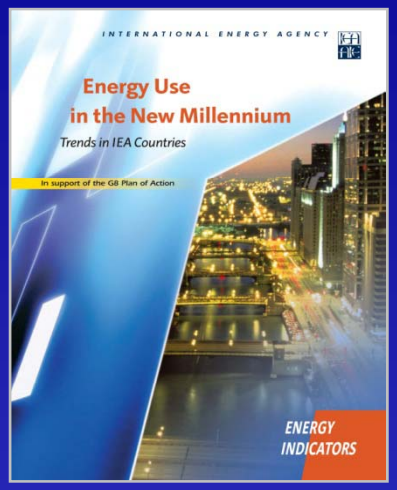
Payback on Investment…



Published in 2004

14 IEA countries

Last year: 1998 (Y-6)



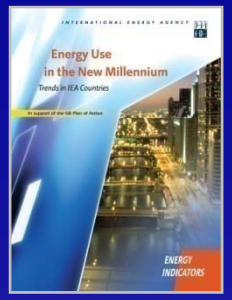
Published in 2007

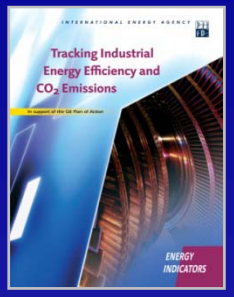
20 IEA countries

Last year: 2004 (Y-3)

- **Yes, but… still 10 OECD countries missing**
- **Data are not available for all sectors in all countries**
- **Coverage does not include major Non-OECD countries**
- **Joint work with World Bank/LBNL to extend coverage**

For instance, 149 participants in the meeting on efficiency goals





Increasing Interest for Indicators

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

The 3Is vs. the 3Ds

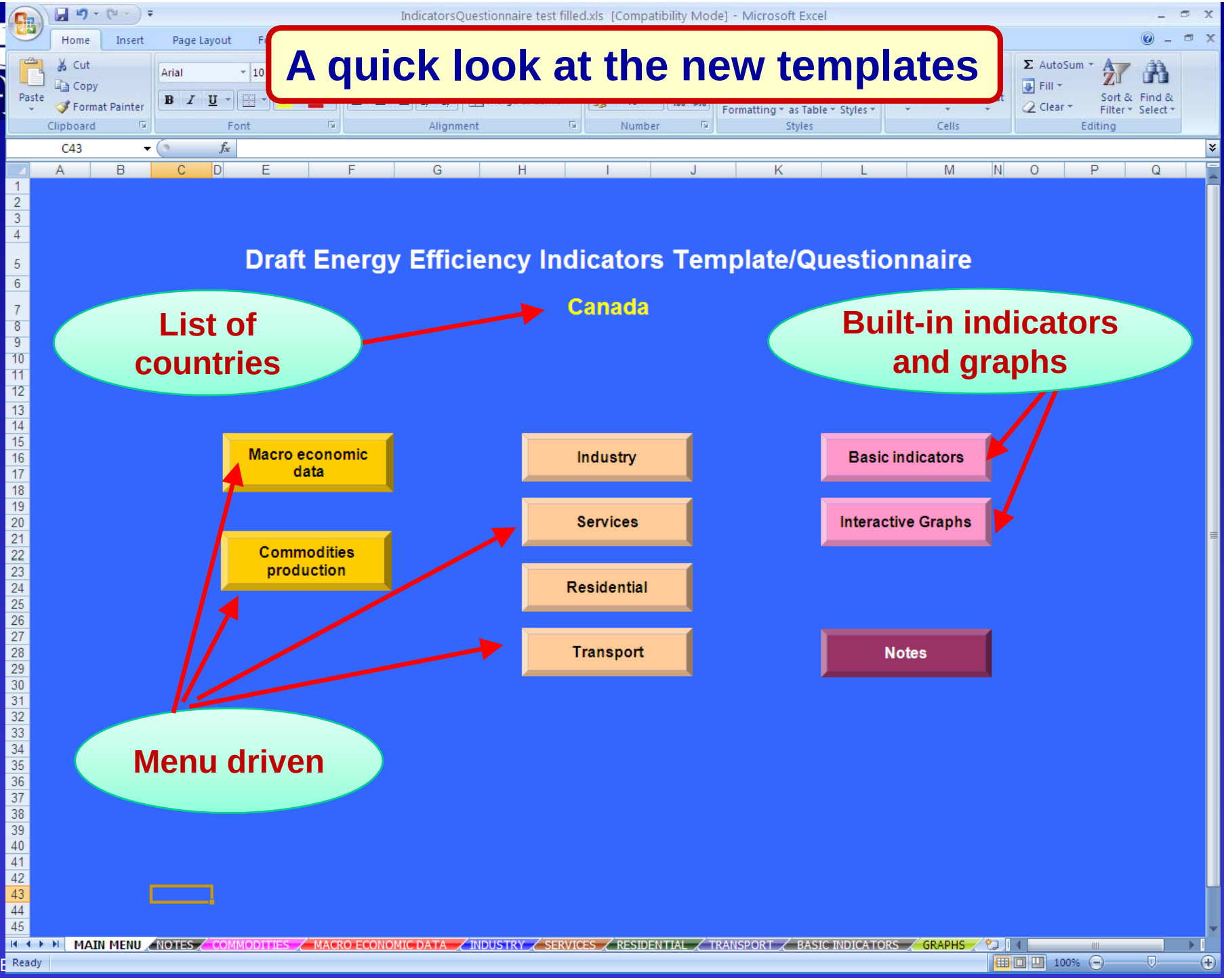
Dramatic Decrease in Data resources

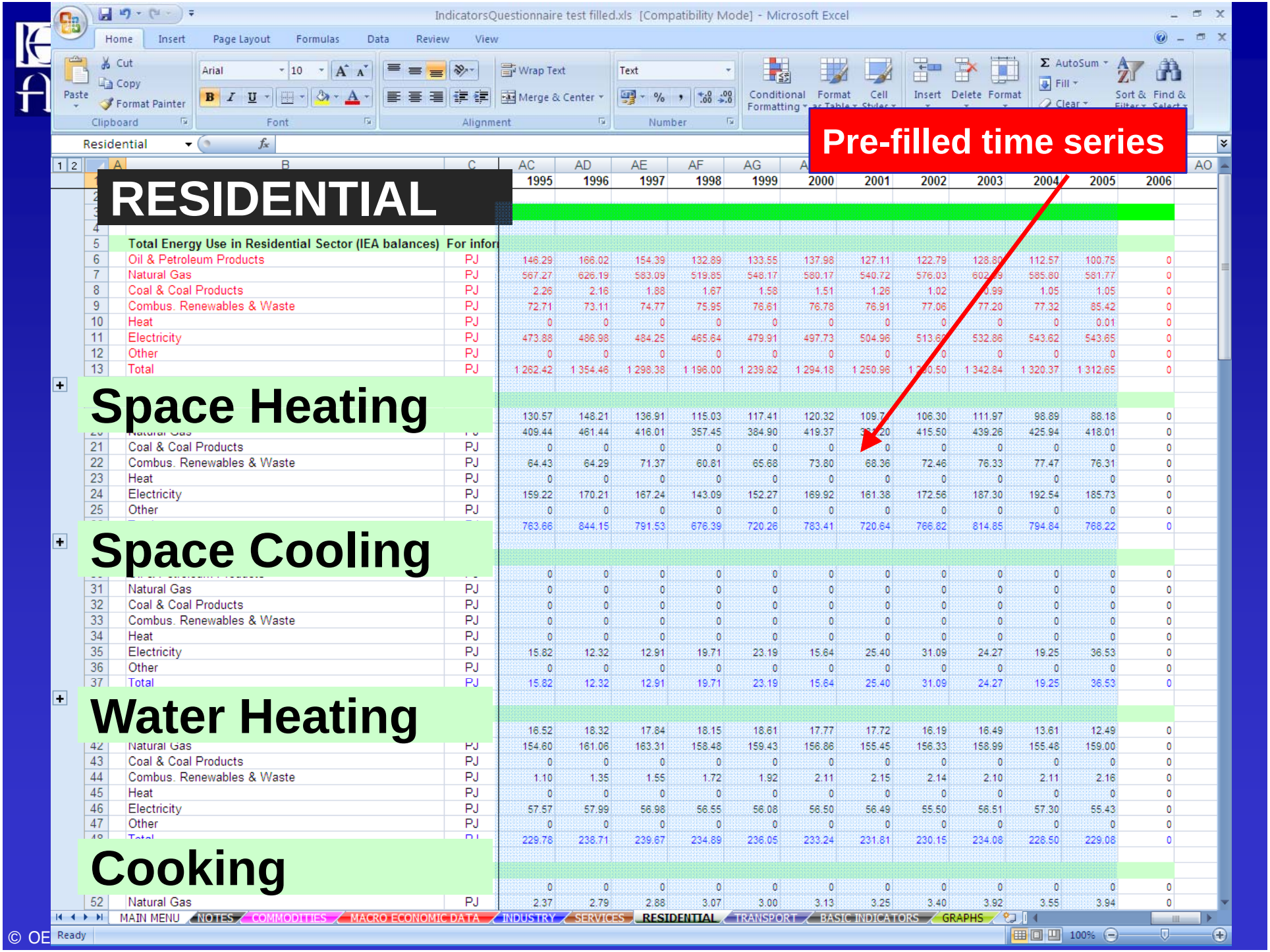
Statistics and statisticians are at the basis of the pyramid and constitute the foundation for any sound analysis and policy

So, an urgent need to fill the gap by collecting and providing proper data to analysts

- The initial templates could constitute a good common tool to collect the data
- Once again, priority was given to cooperation
  - A two-day retreat with the EU-ODYSSEE people to see how questionnaires could be harmonised
  - Cooperation with APEC
  - Meeting with LBNL to check consistency
  - Further workshop with industry association (WBCSD)
- The templates/questionnaire have been revised to take into consideration comments and be more user-friendly

A quick look at the new templates




IndicatorsQuestionnaire test filled.xls [Compatibility Mode] - Microsoft Excel
Pre-filled time series
RESIDENTIAL
Space Heating
Space Cooling
Water Heating
Cooking
Total Energy Use in Residential Sector (IEA balances)
Oil & Petroleum Products
Natural Gas
Coal & Coal Products
Combus. Renewables & Waste
Heat
Electricity
Other
Total
MAIN MENU
NOTES
COMMODITIES
MACRO ECONOMIC DATA
INDUSTRY
SERVICES
RESIDENTIAL
TRANSPORT
BASIC INDICATORS
GRAPHS
Ready

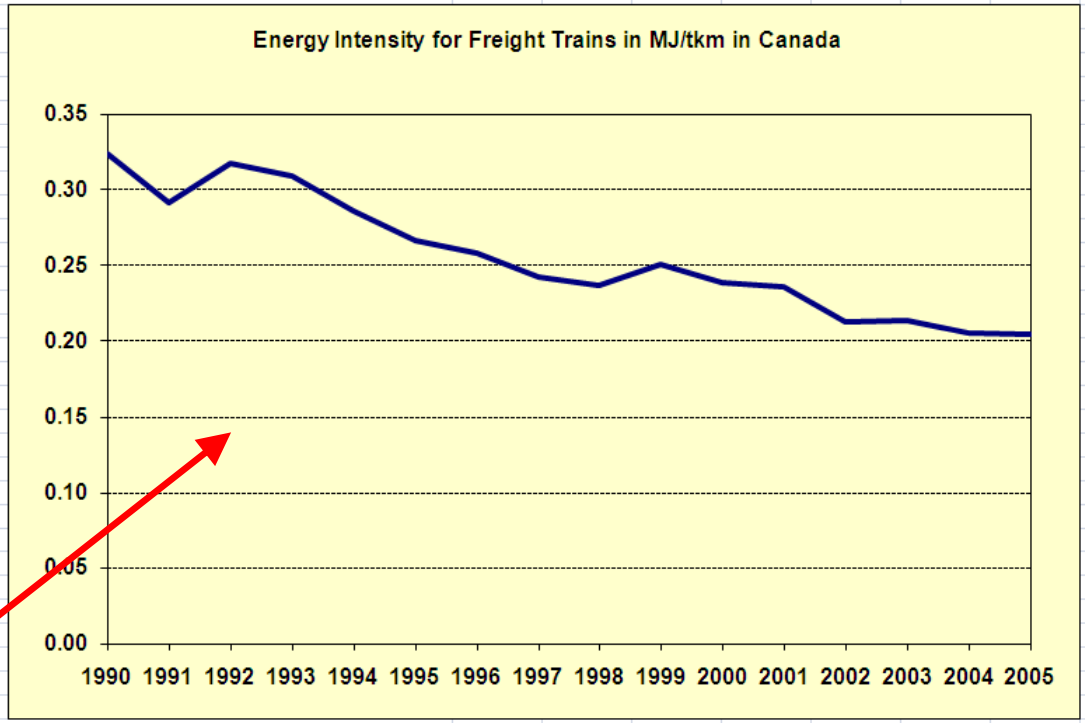
IndicatorsQuestionnaire test filled.xls [Compatibility Mode] - Microsoft Excel

Home | Insert | Page Layout | Formulas | Data | Review | View

A36

	A	B
3	Select the sheet	TRANSPORT
5	Select the sector	Freight trains
7	Select the indicator	Energy intensity
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



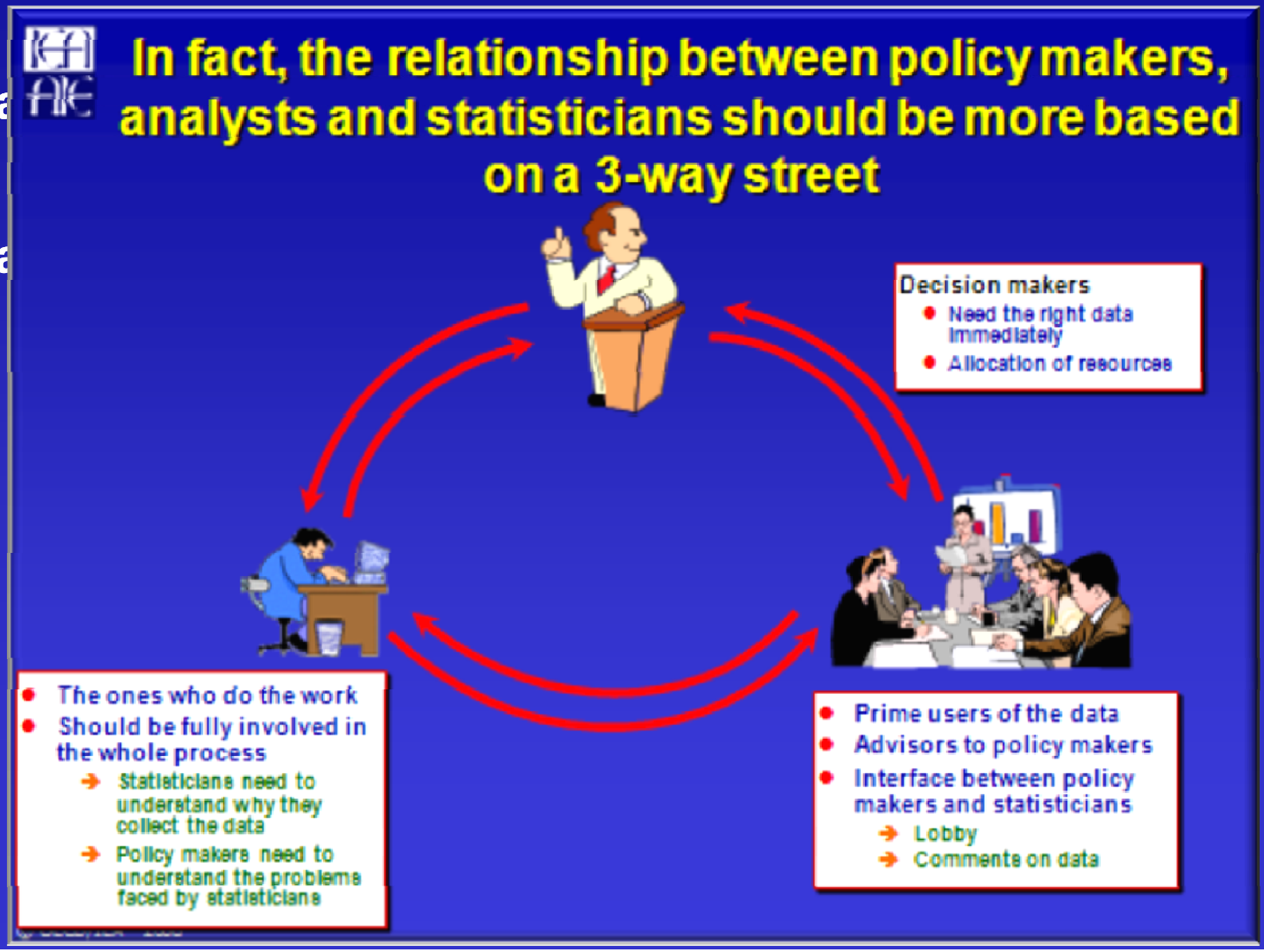
Built-in graphs of indicators

MAIN MENU | NOTES | COMMODITIES | MACRO ECONOMIC DATA | INDUSTRY | SERVICES | RESIDENTIAL | TRANSPORT | BASIC INDICATORS | GRAPHS

Ready

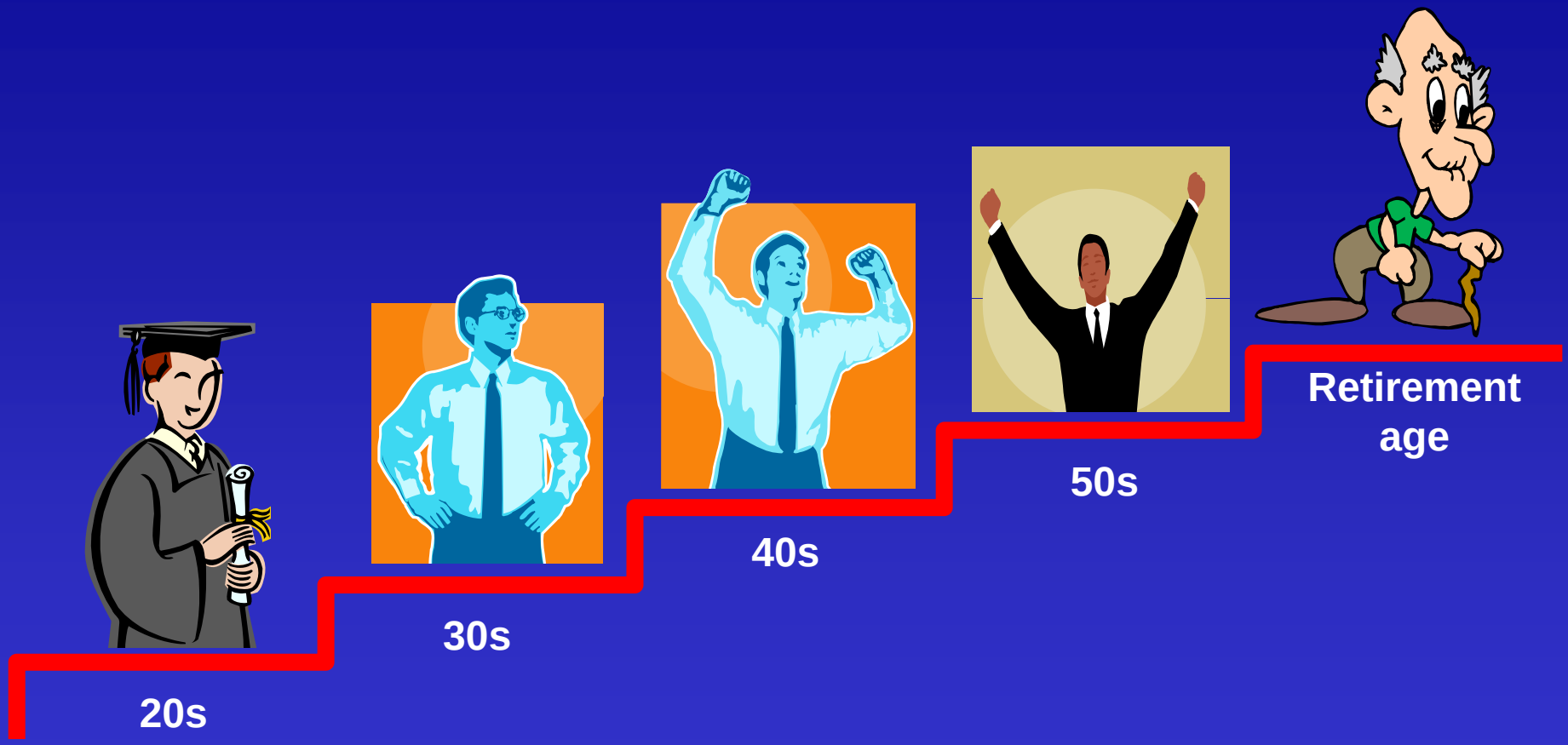
Why such a gap between the need to have detailed indicators and the difficulty to build them

- Lack of discussion and understanding between the parties
- La
- La

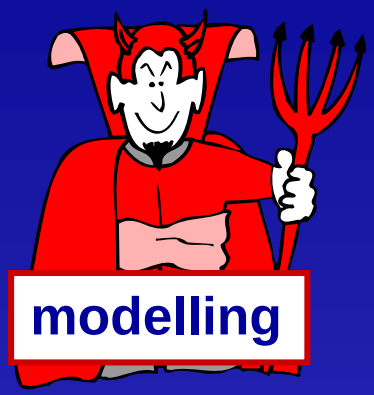


Lack of expertise and experience

The past situation in energy statistics offices



The current situation



modelling

environment

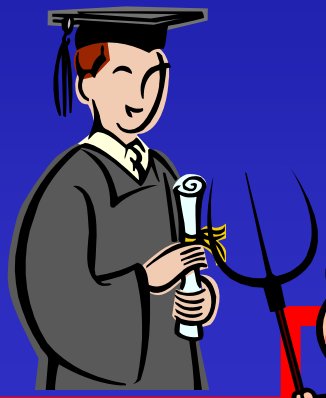
private sector

Retirement age

50s

s

policy



20s

efficiency

- Temptation to move away from statistics is high
- Young statisticians only stay a few years
- Not enough time to have a full grasp of energy statistics
- No time to transmit their expertise

Why such a gap between the need to have detailed indicators and the difficulty to build them

- Lack of discussion and understanding between the parties
- Lack of resources
- Lack of expertise and experience

On 21-22 January 2009, the IEA will organise a workshop to bring around the same table policy makers and energy analysts in charge of energy efficiency indicators as well as statisticians. The workshop is opened to both OECD and selected non-OECD countries.

The objective is to highlight gaps and barriers in building and using energy efficiency indicators and to hear from successful countries solutions and best practices. Another objective is to discuss the role of organisations in helping countries building the expertise and capacity to work on indicators.

There is an urgent need to act and react

- The Nobel Prize for Peace has been attributed to work on what the state of the planet could be in the next decades. In 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 to collecting and processing the necessary data. But non optimum decisions often lead to costs which are often much higher.
- A 1$/bl reduction in the price of oil is equivalent to “saving” of 85 M$ per day. A lot of money for collecting proper data which should lead to reduce the tension on the oil market and therefore price of oil.

There is an urgent need to act and react (cont.)

- The 145US$/bl sent a clear signal to consumers to do more on energy efficiency (even if prices have now dramatically decreased).
- Energy efficiency was at the centre of the discussion of the last IEA Ministerial meeting; it will also be one of the focuses of the discussions at the next G8 and G20 Summits in Hokkaido-Toyako.
- There is no one single silver bullet to establish sound energy efficiency policies. However, having a solid understanding of who consumes what is a prerequisite for any plan of actions. So the importance of having a detailed and timely database.
- Priorities vary from countries to countries (heating in some countries, biomass or rural electrification in others)
- A universal template should allow all countries to chose what to collect . The current template could be a starting point which needs to be enriched by inputs from many other organisations.
- As for the JODI initiative, cooperation between organisations is the main driver and their participation is essential for using the momentum and pulling their member countries with them.

Thank you