



Energy end-use data collection

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UNSD data collection

- The Annual UNSD Energy Questionnaire is the primary source of data for the UNSD energy database and its subsequent publications (Energy Yearbook, Energy Balances, Electricity Profiles)
- The questionnaire includes end-use questions (for relevant products)
 - 3 top categories
 - 14 detailed categories
 - 11 optional more detailed categories identifying industrial users

Energy questionnaire

- Energy use top categories
 - 121 – Manufacturing, construction, non-fuel mining
 - 122 – Transport
 - 123 - Other

Energy questionnaire

- Energy use detailed categories
 - 121 – Manufacturing, construction, non-fuel mining
 - Iron and steel
 - Chemical and petrochemical
 - Other
 - 122 – Transport
 - Road
 - Rail
 - Domestic aviation
 - Domestic navigation
 - Pipeline
 - Other

Energy questionnaire

- Energy use detailed categories
 - 123 – Other
 - Households
 - Commerce and public services
 - Agriculture, forestry, fishing
 - Other (incl. defence)

Energy questionnaire

- Energy use optional breakdown
 - 1214 – Other manufacturing, construction, non-fuel mining
 - Non-ferrous metals
 - Non-metallic minerals
 - Transport equipment
 - Machinery
 - Mining and quarrying
 - Food and tobacco
 - Paper, pulp and print
 - Wood and wood products
 - Construction
 - Textile and leather
 - Other

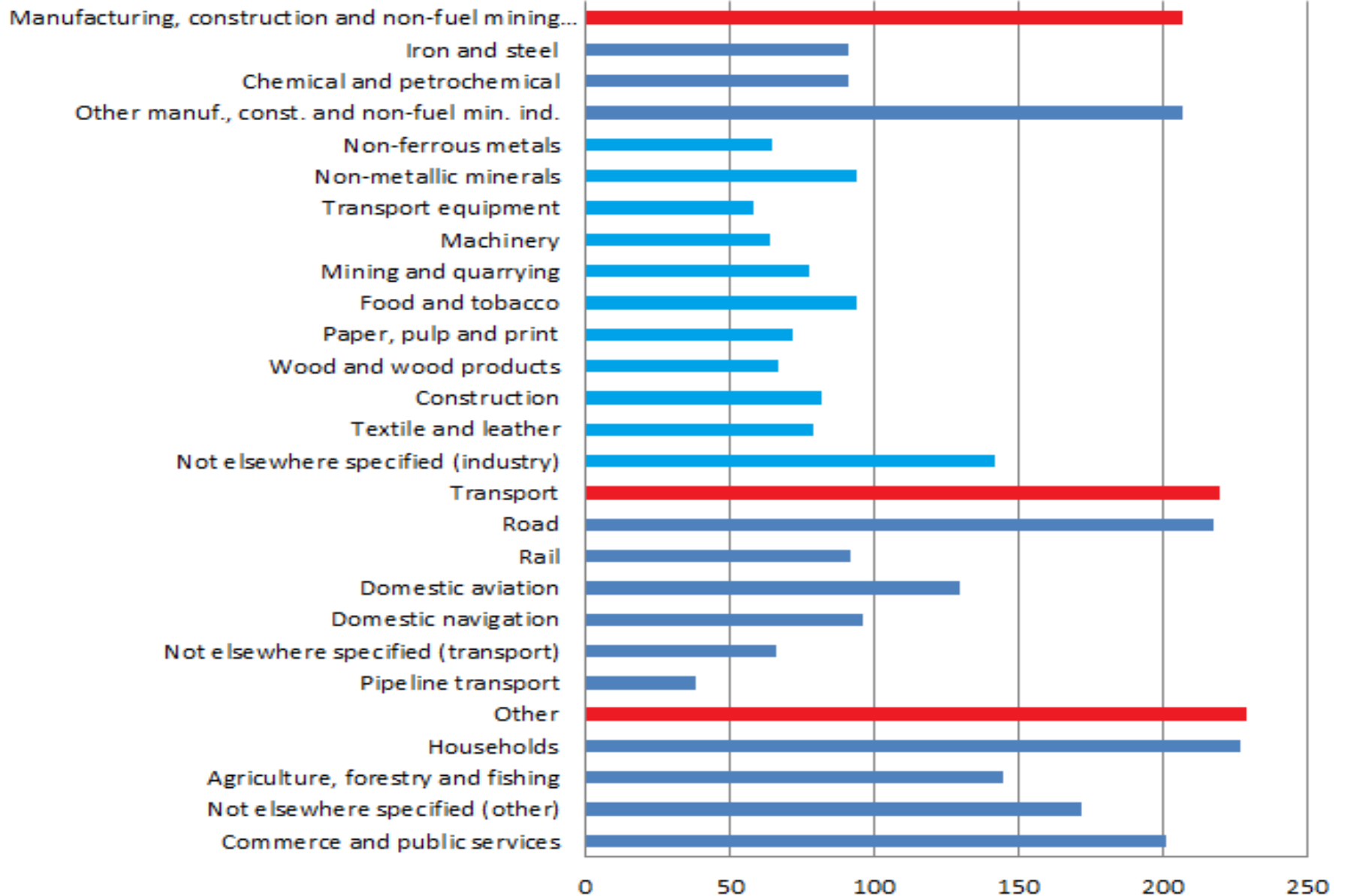
Data collection and processing

- Data at the top and detailed level have priority
- Estimates are sometimes necessary (for balance purposes)
 - May use knowledge of typical uses of certain fuels
 - May use information from specific country studies
 - May use additional secondary information
- For optional breakdown, no split estimates are usually not done
 - Except for continuing series

Data availability

- (data refer to 2014, but are similar for other years)
- Energy use data exists for 58 products
 - 18,345 data points (except TFEC)
 - 1,377 considered estimates
- Of course, not all products are equally represented across all uses or countries
 - Difficult to quickly quantify/judge what is available

Countries



Data availability

- Distribution of products and uses provides another tool for:
 - Quality checks
 - Cross-country checks
 - Flow analysis
 - Usage patterns
- Next screens: Use in transport and households

ID	Product	Transport	Road	Rail	Dom. aviation	Dom. navigation	Pipeline	Other
AL	Biogasoline	44	44			2		
AT	Anthracite	2		1				2
AV	Aviation Gasoline	79			79			1
BD	Biodiesel	47	47	9		6		2
BI	Biogases	7	7					1
BP	Peat Products	1		1				1
CC	Coking coal	1						1
CL	Hard Coal	13		10		1		6
CR	Conventional crude oil	2						2
DL	Gas Oil/ Diesel Oil	210	199	78	7	83	7	22
EL	Total Electricity	84	26	72			26	28
FW	Fuelwood	2						2
GJ	Gasoline-type jet fuel	4			4			
JF	Kerosene-type Jet Fuel	101	1		101			3
KR	Other kerosene	9	5	1	2	1	1	1
LB	Brown Coal	4		1		1		2
LN	Lignite	1		1				
LP	Liquified Petroleum Gas	74	66	3	1	2	2	12
LU	Lubricants	4	2			2		
MO	Motor Gasoline	219	215	4	4	23	3	11
NG	Natural Gas	68	56			2	32	12
NP	Naphtha	1	1					
OB	Other bituminous coal	8		6				2
OK	Coke Oven Coke	1		1		1		1
OL	Other liquid biofuels	4	4					
PP	Other oil products n.e.c.	5	1			1		4
RF	Fuel Oil	56	7	9	3	49	3	6
SB	Sub-bituminous coal	2				1		1
ST	Heat	2						2
WS	White spirit and special boiling point industrial spirits	1	1					
ZD	Of which: biodiesel	32	32	6		4		2
ZG	Of which: biogasoline	30	30			2		1

Most frequently reported for household use

ID	Product	Countries
EL	Total Electricity	218
FW	Fuelwood	185
LP	Liquified Petroleum Gas	181
KR	Other kerosene	144
CH	Charcoal	135
NG	Natural Gas	74
DL	Gas Oil/ Diesel Oil	63
VW	Other Vegetal Material and Residues	51
ST	Heat	48
DS	Direct use of solar thermal heat	40
CL	Hard Coal	36
OB	Other bituminous coal	27
LB	Brown Coal	24
RF	Fuel Oil	22
LN	Lignite	21

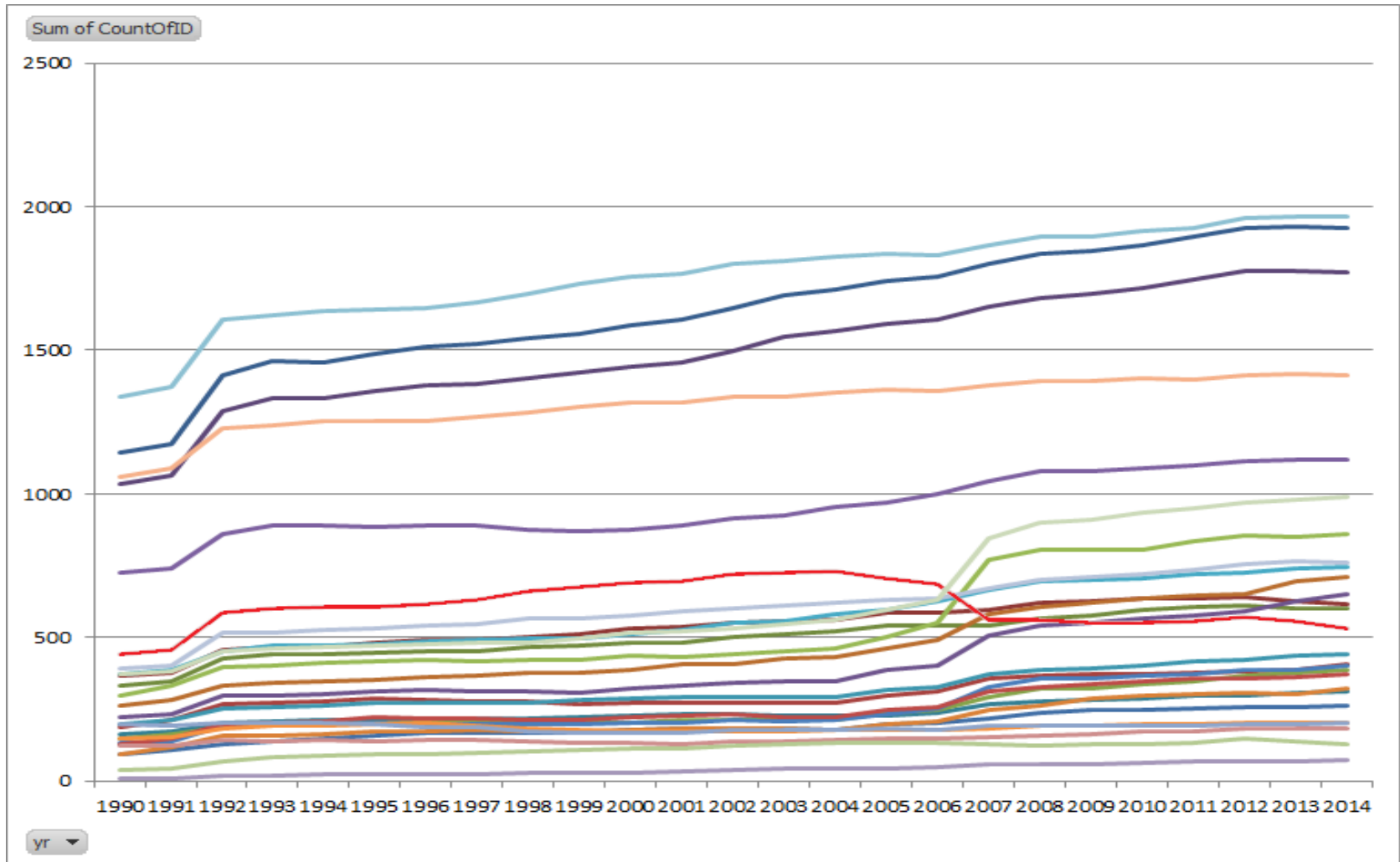
Energy efficiency data needs

- Energy use data is important for energy efficiency calculations
- Difficulties remain:
 - “Transport” follows balance concept
 - Efficiency using GDP per industry uses different scope
 - Household use lists only total use (by product)
 - More detailed breakdown (heating etc.) useful, but can only be obtained from separate specialized studies/collections

Future steps

- There are no current plans to increase/change the data collection detail
- Quality improvements will cover:
 - more emphasis on current “optional” breakdown
 - General increase of coverage
 - Indication of known zero vs. unknown data *
- Plans with DSD, DPAD for country studies that would provide better estimation techniques

History of data points (for all use series)



Red = “Other uses” (1234) has the only drop, showing quality improvements



Thank you