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UNITED NATIONS
DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION

Meeting of the Expert Group on International Economic and Social Classifications
New York, 1-4 September 2009

Towards a Standard International Energy Classification

UNSD

A. Background

1. The United Nations Statistical Commission at its 40th session (24-27 February 2009) welcomed the report of the Secretary General on the preparation of the revised and updated international recommendations for energy statistics and expressed its appreciation for the work accomplished so far by United Nations Statistics Division, the Oslo Group on Energy Statistics, the Inter-secretariat Working Group on Energy Statistics (InterEnerStat) and other stakeholders. The Commission endorsed the United Nations Statistics Division's strategy to prepare the *International Recommendations for Energy Statistics* (IRES) and suggested that the preparation of the recommendations be considered as a matter of high priority.

2. IRES is being developed in accordance with the decisions of the United Nations Statistical Commission at its 36th and 37th sessions which, inter alia, recognized the significance of energy statistics, recommended their development as part of official statistics and called for the revision and further development of the relevant international standards[1]. These decisions followed a programme review of energy statistics conducted by Statistics Norway and the recommendations of the Ad-Hoc Expert Group on Energy Statistics (New York, 23-25 May 2005). The preparation of the *Standard International Energy Classification (SIEC)* is seen as one of the key elements of the IRES. SIEC will be based on internationally harmonized definitions of energy products which are currently under discussion within InterEnerStat and provide their correspondence with the Harmonized Commodity Description and Coding System (HS) and Central Product Classification (CPC).

3. This report describes the current status of work on SIEC. The Expert Group is invited to comment on the intended scope of SIEC, possible classification criteria and structure of SIEC.

B. Purpose of SIEC

4. The initial request to prepare a classification for energy was issued by the UN Statistical Commission at its 24th session (1987). However, the lack of internationally harmonized definitions of energy products was the main reason for the unsuccessful efforts to develop such a classification at that time.

[1] Reports on the thirty-sixth session and on the thirty-seventh session of the Commission.

5. It is expected that now, in view of the progress being made in the harmonization of such definitions, the preparation of SIEC is feasible. It is envisaged that SIEC will:

i. Facilitate further improvements in national energy statistics programmes by providing internationally recognized standards for definitions of energy products and their aggregates;

ii. Facilitate national and international energy data processing by providing the coding system which is numerical and hierarchical;

iii. Ensure better international comparability of the disseminated national data;

iv. Facilitate linking of data on stocks and flows of energy products with data on international trade in energy products and other economic statistics;

v. Provide a correspondence of energy products with the Harmonized Commodity Description and Coding System (HS) and Central Product Classification (CPC).

C. Scope

6. The issue of the SIEC scope was discussed during the 4th Meeting of the Oslo Group on Energy Statistics (February 2009). The Group agreed that the classification should focus on energy products while classification of transactions, economic activities and processes relevant for energy statistics will be dealt with in other chapters of IRES[2].

7. In order to further define the scope of the standard international energy classification, it is important to clearly define the types of products to be covered. While it is agreed that SIEC will cover all energy products there are boundary issues which need to be discussed further. In general, energy products are understood as "combustible fuels, heat, renewable energy, electricity, or any other form of energy "[3]. Since almost every material can, in principle, be combusted and used for the generation of heat (and thus energy), defining energy products as any material that can be used as a source of energy is impractical. A number of products are included in energy statistics only when they are used for energy purposes and only the part used for energy purposes is included (for example, combusted waste). The issue is how to reflect such products in SIEC.

8. A draft list of products considered for classification in SIEC, and their hierarchy, is provided in Annex A. The clarification of the boundary of SIEC scope will be further discussed by both the InterEnerStat and the Oslo Group later this year.

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[2] See draft report of the 4th Oslo group meeting, available online at http://og.ssb.no/ogmeetings/fourthmeeting/Report_OG4.pdf

[3] EU regulation on energy statistics, 2008, Article 2(d).

D. Classification criteria and structure

9. The Oslo Group at its 4th meeting in Ottawa agreed that IRES should contain SIEC and agreed that:

a. While developing the list of basic headings and their definitions the following is taken into account as much as possible:

i. Definitions should be based on physical/chemical characteristics of products;

ii. Definitions should be as simple as possible;

iii. The correspondence between headings of SIEC, HS, CPC and ISIC should be established;

b. The work on the harmonization of definitions in energy statistics by InterEnerStat will be the basis for the development of the SIEC coding system, which will provide the unique identification of a given product (product group) in the data collection, processing and dissemination;

c. Took note on the difficulties of providing a definition for renewable and nonrenewable energy and recommended that, at the minimum, IRES would provide a listing of renewable and non-renewable energy products. The Group suggested to work on a definition of renewable and non renewable in a larger context and suggested to work in close cooperation with the London Group on Environmental-Economic Accounting.

d. Suggested that the concept of primary and secondary energy products will not be a classification criterion of SIEC. A listing of primary and secondary energy products will be provided.

e. Recommended that given the complexity of the nuclear life cycle, the scope of nuclear fuels in IRES will be limited to the recording of heat and electricity generated from nuclear processes.

10. The basic headings of SIEC are to be grouped into a hierarchy of the higher level classification headings to provide analytically important information by reflecting the agreed classification criteria. The classification criteria relevant for energy statistics are still under discussion within the Oslo Group on Energy Statistics and InterEnerStat including the use, for some products, of not only physical characteristics of products themselves, but also the processes through which the product is generated (this is the case, for example, of blast furnace gas).

11. It is envisaged that SIEC will provide a correspondence table with the HS and CPC. An example of such a draft correspondence for Coal and some other related energy products is provided in Annex B.

Annex A

Draft scope of SIEC

Level 1	Level 2	Level 3	Level 4	Level5
Solid fossil fuels and derived products				
	Coal			
		Hard Coal		
			Anthracite	
			Bituminous Coal	
				Coking Coal
				Other Bituminous Coal
		Brown Coal		
				Sub-Bituminous Coal
				Lignite
	Peat			
		Sod peat		
		Milled peat		
	Coke			
		Coke oven coke		
		Coke breeze		
		Gas coke		
		Brown coal coke		
		Semi cokes		
	Recovered gases			
		Coke oven gas		
		Gas works gas (a.k.a town gas)		
		Blast furnace gas		
		Basic Oxygen Steel Furnace Gas		
		Other recovered gases		
	Briquettes			
		Patent fuel		
		Brown coal briquettes		
		Peat Briquettes		
	Other solid fossil fuel or derived product, n.e.s.			
		Oil shale		
		Bituminous sands		
		Natural bitumen		
		Coal tar		
		Other energy products derived from coal, n.e.s.		
Heat and electricity				
	Electrical energy			
	Heat energy			
	Renewable energy and fuels			
		Solar energy		
		Wind Energy		
		Wave Energy		

		Hydro Energy		
		Tidal energy		
		Geothermal Energy		
Bioenergy and wastes				
	Solid biofuels			
		Fuelwood, wood residues and by-products		
		Agrofuels		
			Bagasse	
			Animal wastes	
			Other vegetal material and residues	
		Charcoal		
		Industrial waste		
		Municipal waste		
	Liquid Biofuels			
		Biogasoline		
		Biodiesels		
		Black liquor		
		Other liquid biofuels		
	Biogases			
		Landfill gas		
		Sewage sludge gas		
		Other biogases		
Liquid and gaseous fossil fuels and derived products				
	Crude Oil			
		Conventional		
		Unconventional (oils from oil sands, bitumen deposits, oil shale)		
	Natural Gas			
		Wet natural gas		
		Dry (marketable?) natural gas		
	Natural Gas Liquids (NGL)			
	Refinery Feedstock			
	Additives/Oxygenates			
	Other Hydrocarbons			
	Refinery Gas			
	Ethane			
	Liquefied Petroleum Gas (LPG)			
		Propane		
		Butane		
		LPG mix		
	Naphthas			
	Aviation Gasoline			
	Motor Gasoline			
	Gasoline Type Jet Fuel			
	Kerosene			
		Kerosene Type Jet Fuel		
		Other Kerosene		
	Gas/Diesel Oil (Distillate Fuel Oil)			

		Road Diesel		
		Heating and Other Gas Oil		
	Fuel Oil			
	White Spirit and SBP			
	Lubricants			
	Paraffin Waxes			
	Petroleum Coke			
	Bitumen			
	Other Petroleum Products			

Annex B

Draft correspondence between SIEC, HS and CPC

Coal, peat, coke, recovered gases and briquettes

Draft SIEC				Corr with HS	HS 2007	Related CPC, ver. 2
Coal						
	Hard Coal					
		Anthracite		?=	2701 11 Anthracite whether or not pulverised, but not agglomerated	1101 Coal, not agglomerated
		Bituminous Coal		?=	2701 12 Bituminous Coal, whether or not pulverised, but not agglomerated	1101 Coal, not agglomerated
			Coking Coal	ex	2701.12	
			Other Bituminous Coal	ex	2701.12	
	Brown Coal					
			Sub-Bituminous Coal	?=	2701.19 Other coal, whether or not pulverised, but not agglomerated	1101 Coal, not agglomerated
			Lignite	?=	2702.10 Lignite, whether or not pulverised, but not agglomerated	1103 Lignite, not agglomerated
Peat				?=	2703.00 Peat (including peat litter), whether or not agglomerated	1105 Peat
	Sod peat			ex	2703.00	
	Milled peat			ex	2703.00	
Coke				?=	2704.00 Coke and semi coke of coal, of lignite or of peat, whether or not agglomerated; retort carbon.	3310 Coke and semi-coke of coal, of lignite or of peat; retort carbon
	Coke oven coke			ex	2704.00	
	Coke breeze			ex	2704.00	
	Gas coke			ex	2704.00	
	Brown coal coke			ex	2704.00	
	Semi cokes			ex	2704.00	
Recovered gases				??=	2705.00 Coal gas, water gas, producer gas and similar gases, other than petroleum gases and other gaseous hydrocarbons.	1720 Coal gas, water gas, producer gas and similar gases, other than petroleum gases and other
	Coke oven gas			ex	2705.00	
	Gas works gas (a.k.a town gas)			ex	2705.00	
	Blast furnace gas			ex	2705.00	
	Basic Oxygen Steel Furnace Gas			ex	2705.00	
	Other recovered gases			ex	2705.00	

Briquettes						
	Patent fuel			ex	2701.20 Briquettes, ovoids and similar solid fuels manufactured from coal	1102 Briquettes and similar solid fuels manufactured from coal
	Brown coal briquettes			ex	2702.20 Agglomerated lignite	1102 Briquettes and similar solid fuels manufactured from coal
	Peat Briquettes			ex	2703.00 Peat (including peat litter), whether or not agglomerated	1105 Peat
Other solid fossil fuel or derived product, n.e.s.						
	Oil shale			ex	27.14 Bitumen and asphalt, natural; bituminous or oil shale and tar sands; asphaltites and asphaltic rocks.	1203 Bituminous or oil shale and tar sands
	Bituminous sands			ex	27.14	
	Natural bitumen			ex	27.14	
	Coal tar			ex	2706.00 Tar distilled from coal, from lignite or from peat, and other mineral tars, whether or not dehydrated or partially distilled, including reconstituted tars.	3320 Tar distilled from coal, from lignite or from peat, and other mineral tars
	Other energy products derived from coal, n.e.s.			ex	?	