



# Classifications used in IRES - Is there a need for harmonization?

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# Classifications in IRES

- Classifications are needed to produce consistent and comparable statistics
  - In IRES, many classifications are used – either explicitly or by convention
    - Some are not recognized as such, e.g. modes of transport
    - Definitions for smaller classifications are not always available, but sometimes are obvious
  - Key classifications relate to: products, industries, reserves
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# New classifications in IRES

- Standard International Energy Product Classification (SIEC)
    - Result of InterEnerStat work
    - First comprehensive classification of energy products
    - Advances consistency and comparability of energy statistics
    - Hierarchical classification, describing 53 detailed products grouped through four levels into 10 Sections
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# SIEC

- 0 – Coal
  - 1 – Peat and peat products
  - 2 – Oil shale / oil sands
  - 3 – Natural gas
  - 4 – Oil
  - 5 – Biofuels
  - 6 – Waste
  - 7 – Electricity
  - 8 – Heat
  - 9 – Nuclear fuels and other fuels n.e.c.
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## Links to external classifications

- Activity classifications in IRES are linked to the International Standard Industrial Classification of All Economic Activities (ISIC) Rev.4
    - Used for energy industries, energy users
    - ISIC not detailed enough for energy industries
      - Unlikely to change
      - How are surveys done?
    - Energy uses could be more aligned with ISIC
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## Links to external classifications

- Reserves in IRES are classified according to the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources (UNFC)
    - Specifications for UNFC application to different types of reserves are being developed
    - No deviation from UNFC planned in IRES
    - Reference is made to the classification in SEEA, which is an aggregation of UNFC
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## Links to external classifications

- Products – SIEC relates to the Harmonized System (HS) and the Central Product Classification (CPC)
    - Useful for links to trade statistics and other economic statistics/surveys, including as data sources
    - Links are shown in SIEC/IRES, but may need review
    - Despite detailed descriptions in HS, CPC and SIEC, matches between the classifications are not always clear
      - Attempts to clarify boundaries did not yield tangible results
      - Due to detail, clarification of SIEC-HS link should have priority
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# SIEC-HS links

- Issues take different forms:
    - Terminology
      - Lignite vs. Brown coal
    - Extended detail required in SIEC
      - Black liquor (HS and CPC issue)
    - Lack of “standard” detail in HS
      - HS 2710
    - Definitions need improvement
      - Style of definitions
      - Clarity, e.g. industrial waste
    - Uncertainty of boundaries
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# SIEC-HS

Example for lack of detail:

- 27.10 Petroleum oils and oils obtained from bituminous minerals, other than crude; preparations not elsewhere specified or included, containing by weight 70 % or more of petroleum oils or of oils obtained from bituminous minerals, these oils being the basic constituents of the preparations; waste oils.
    - 2710.11 -- Light oils and preparations
    - 2710.19 -- Other
    - 2710.90 - Waste oils
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# SIEC-HS/CPC link

46		Oil products		
461	4610	Refinery gas	33420*, 34210*	2711.29*, 2804.10
462	4620	Ethane	33420*	2711.19*, .29*
463	4630	Liquefied petroleum gases (LPG)	33410	2711.12, .13
464	4640	Naphtha	33330*	2710.11*
465		Gasolines		
	4651	Aviation gasoline	33310*	2710.11*
	4652	Motor gasoline	33310*	2710.11*
	4653	Gasoline-type jet fuel	33320	2710.11*
466		Kerosenes		
	4661	Kerosene-type jet fuel	33342	2710.19*
	4669	Other kerosene	33341	2710.19*
467		Gas oil / diesel oil and Heavy gas oil		
	4671	Gas oil / Diesel oil	33360*	2710.19*
	4672	Heavy gas oil	33360*	2710.19*
468	4680	Fuel oil	33370	2710.19*
469		Other oil products		
	4691	White spirit and special boiling point industrial spirits	33350	2710.11*
	4692	Lubricants	33380*	2710.19*
	4693	Paraffin waxes	33500*	2712.20*
	4694	Petroleum coke	33500*, 34540*	2713.11, .12, 2708.20*

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# SIEC detail needed?

IRES	IEA	IRENA	APEC	APEC (draft proposal)
Landfill gas	Biogases	Landfill gas	<b>Biogases</b>	Landfill gas
Sew age sludge gas		Sew age sludge gas		Sew age sludge gas
Other biogases from anaerobic fermentation		Other biogases from anaerobic fermentation		Other biogases from anaerobic fermentation
Biogases from thermal processes		Biogases from thermal processes		Biogases from thermal processes
Biogasoline	Biogasoline	Conventional bioethanol	<b>Biogasoline</b>	<b>Biogasoline</b>
	Bioethanol	Advanced bioethanol	<b>Bioethanol</b>	<b>Bioethanol</b>
Biodiesels	Biodiesels	Advanced biodiesel	<b>Biodiesels</b>	<b>Biodiesels</b>
		Conventional biodiesel		
Bio jet kerosene	Bio jet kerosenes		<b>Bio jet kerosenes</b>	<b>Bio jet kerosenes</b>
Other liquid biofuels	Other liquid biofuels	Vegetable oil	<b>Liquid biofuels</b>	<b>Liquid biofuels</b>
Hydro electricity	Hydro	Hydro	<b>Hydro</b>	Hydro
	Hydro-1 MW	Hydro-1 MW		Hydro-1 MW
	Hydro 1-10 MW	Hydro 1-10 MW		Hydro 1-10 MW
	Hydro 10+ MW	Hydro 10+ MW		Hydro 10+ MW
	Pumped hydro	Pumped Hydro		Pumped Hydro

# SIEC review

- Classifications are regularly revised, but what needs to be addressed in SIEC?
  - Which aspects of SIEC create problems right now?
  - What can be addressed in short- and medium-term?
    - Short-term:
      - Review of SIEC-HS links
    - Medium-term:
      - Review of definitions
      - Inclusion of new products (sub-divisions)
      - Need for revising existing products?
      - Is there a need to revise the structure?
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# Future work

- Which of these issues can be addressed?
  - Are there other classifications in IRES that need attention?
  - How would we work on this?
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For further information  
on classifications:  
[unstats.un.org/unsd/class](https://unstats.un.org/unsd/class)

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