EECS RULES FACT SHEET 5

TYPES OF ENERGY INPUTS AND TECHNOLOGIES

The attached tables set out the permissible energy inputs and technologies.

In Annex the previous version of Fact Sheet 5

Document Reference	AIB-EECS-FS05
Version Number	6
Release	8.0
Date of Release	01 December 2025
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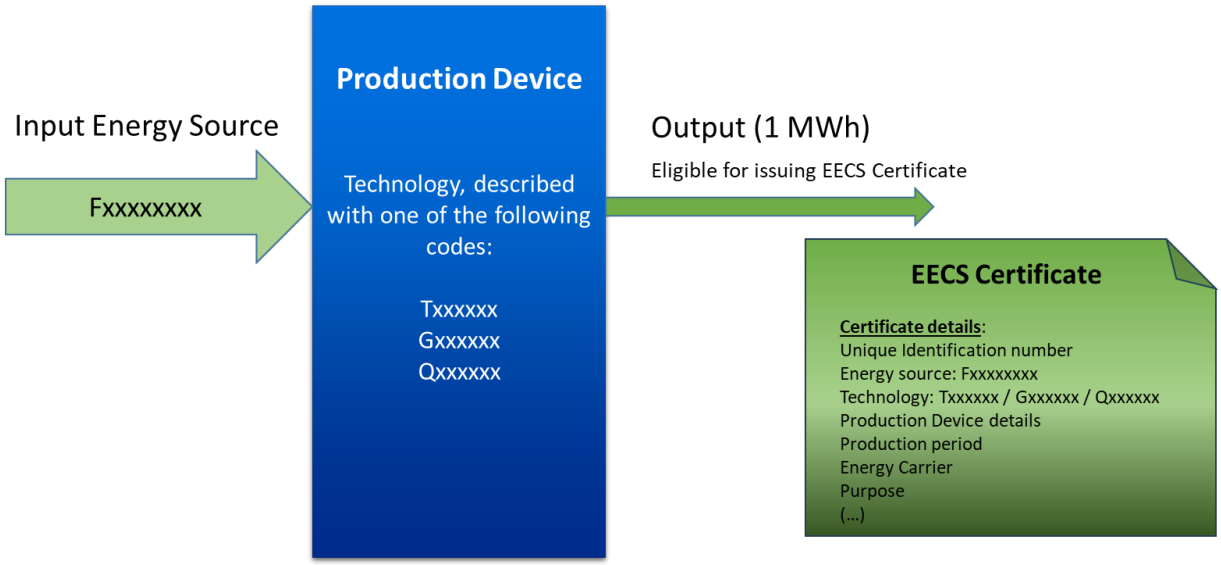
Author	EECS Unit

Release	Date and Author	Description
7.7	2/12/2019, EECS Unit	Addition of valid T & F Codes
7.8	15/07/2024, ESG	Addition of footnote on Solar Technology Code, correction of typos in Fuel Codes (F01040203 and F01030600), update lay-out, update reference to REDIII
7.9	02/12/2024 GSG	Integrating CEN Annex B for gas
8.0	27/11/2025 EECS Unit	Aligning with the CEN Standard EN 16325:2025 Annexes A and B

Introduction

This fact sheet establishes the permissible values of energy source and technology type of Originating Production Device as referred to in EECS Rules section C3.5.4 (f) and (g).
The Energy Source Code on an EECS Certificate establishes the energy source from which Output, for which the EECS Certificate is issued, was generated.
The Technology Code on an EECS Certificate establishes the technology of the production device which generated the Output, for which the EECS certificate is issued.
On each EECS certificate, one code is mentioned for the Input (energy source) and one for the Technology.



- **Earliest implementation**
  On 25 November 2025, EESCU agreed that members may start issuing certificates with the updated FS05 codes from **1 December 2025**. From that date, the AIB Hub will also support these codes.
  Member registries should be able to receive such GOs or reject them using error code 91.
  Members are advised to start accepting GOs with the new codes as early as possible and must do so by **1 May 2026**.
- **Ultimate implementation**
  From **1 January 2027**, all certificates issued by members must use the updated FS05 codes.

The codes that will phased-out as a result of the implementation of the Standard EN 16325:2025 can be found in the previous version of the Factsheet 05 (release 7.9 version 5) which is in annex of this document.

TECHNOLOGY CODES FOR PRODUCTION OF ELECTRICITY: TXXXXXX

(updated in line with CEN EN 16325:2025 Annex B Technology codes, Table B.1 — Technology codes for production of electricity)

Level 1		Level 2		Level 3		Full code
Code	Description	Code	Description	Code	Description	
01	Solar	00	Unspecified	00	Unspecified[1]	T010000
		01	Photovoltaic	00	Unspecified	T010100
				01	Building-integrated	T010101
				02	Open space	T010102
				03	Agri	T010103
				04	Road integrated	T010104
				05	Floating	T010105
		02	Concentration	00	Unspecified	T010200
				01	Compact linear Fresnel reflector	T010201
				02	Parabolic through	T010202
				03	Dish	T010203
				04	Solar power tower	T010204
02	Wind	00	Unspecified	00	Unspecified	T020000
				01	Onshore	T020001
				02	Offshore	T020002
03	Hydro-electric head installations	00	Unspecified	00	Unspecified	T030000
		01	Run-of-river head installation	00	Unspecified	T030100
		02	Storage head installation	00	Unspecified	T030200
		03	Pure pumped storage head installation	00	Unspecified	T030300
		04	Mixed pumped storage head	00	Unspecified	T030400
04	Marine	00	Unspecified	00	Unspecified	T040000
		01	Tidal	00	Unspecified	T040100
				01	Onshore	T040101
				02	Offshore	T040102
		02	Wave	00	Unspecified	T040200
				01	Onshore	T040201
				02	Offshore	T040202
		03	Currents	00	Unspecified	T040300
		04	Pressure	00	Unspecified	T040400

[1] As the use of T010000 gives no information on whether the technology used is photovoltaic or concentrated solar power, the use of a technology code with a higher specification level than T010000 is encouraged.

Level 1		Level 2		Level 3		Full code
Code	Description	Code	Description	Code	Description	
		05	Osmosis	00	Unspecified	T040500
05	Thermal	00	Unspecified	00	Unspecified	T050000
		01	Combined cycle gas turbine with heat recovery	00	Unspecified	T050100
				01	Non-CHP	T050101
				02	CHP	T050102
		02	Steam turbine with back-pressure turbine (open cycle)	00	Unspecified	T050200
				01	Non-CHP	T050201
				02	CHP	T050202
		03	Steam turbine with condensation turbine (closed cycle)	00	Unspecified	T050300
				01	Non-CHP	T050301
				02	CHP	T050302
		04	Gas turbine with heat recovery	00	Unspecified	T050400
				01	Non-CHP	T050401
				02	CHP	T050402
		05	Internal combustion engine	00	Unspecified	T050500
				01	Non-CHP	T050501
				02	CHP	T050502
		06	Micro-turbine	00	Unspecified	T050600
				01	Non-CHP	T050601
				02	CHP	T050602
		07	Stirling engine	00	Unspecified	T050700
				01	Non-CHP	T050701
				02	CHP	T050702
		09	Steam engine	00	Unspecified	T050900
				01	Non-CHP	T050901
				02	CHP	T050902
		10	Organic Rankine cycle	00	Unspecified	T051000
				01	Non-CHP	T051001
				02	CHP	T051002
06	Nuclear	00	Unspecified	00	Unspecified	T060000
		01	Heavy-water reactor	00	Unspecified	T060100
		02	Light water reactor	00	Unspecified	T060200
		03	Breeder	00	Unspecified	T060300
		04	Graphite moderate reactor	00	Unspecified	T060400

Level 1		Level 2		Level 3		Full code
Code	Description	Code	Description	Code	Description	
07	Other	00	Unspecified	00	Unspecified	T070000
08	Electro-chemical	00	Unspecified	00	Unspecified	T080000
		01	Fuel cell	00	Unspecified	T080100
				01	Non-CHP	T080101
				02	CHP	T080102

Note: the codes T0508xx are replaced with the codes T0801xx. The old codes will only be supported until the end of the transition period.

TECHNOLOGY CODES FOR PRODUCTION OF GAS: GXXXXXX

(updated in line with CEN EN 16325:2025 Annex B Technology codes, Table B.2 — Technology codes for production of Gas)

Level 1		Level 2		Level 3		Full code
Code	Description	Code	Description	Code	Description	
00	Other Technology	00	Unspecified	00	Unspecified	G000000
01	Anaerobic Digestion	00	Unspecified	00	Unspecified	G010000
02	Gasification	00	Unspecified	00	Unspecified	G020000
03	Catalytic methanation	00	Unspecified	00	Unspecified	G030000
04	Biomethanation	00	Unspecified	00	Unspecified	G040000
05	Steam reforming	00	Unspecified	00	Unspecified	G050000
06	Pyrolysis	00	Unspecified	00	Unspecified	G060000
07	Fischer Tropsch Synthesis	00	Unspecified	00	Unspecified	G070000
08	Steam Methane Reforming	00	Unspecified	00	Unspecified	G080000
09	Partial Oxidation	00	Unspecified	00	Unspecified	G090000
10	Autothermal Reforming	00	Unspecified	00	Unspecified	G100000
11	Methanol reforming	00	Unspecified	00	Unspecified	G110000
12	Ammonia reforming	00	Unspecified	00	Unspecified	G120000
13	Photobiological	00	Unspecified	00	Unspecified	G130000
14	Thermocatalysis (1)	00	Unspecified	00	Unspecified	G140000
15	Photocatalysis (2)	00	Unspecified	00	Unspecified	G150000
16	Chemical Synthesis	00	Unspecified	00	Unspecified	G160000
17	Water Electrolysis	00	Unspecified	00	Unspecified	G170000
18	Chlor-alkali electrolysis	00	Unspecified	00	Unspecified	G180000
19	Hydrotreatment	00	Unspecified	00	Unspecified	G190000
20	Landfill gas collection	00	Unspecified	00	Unspecified	G200000

(1) Thermocatalysis: The production of hydrogen in a catalytic process utilising heat as a source of energy, without making use of hydrocarbons as a feedstock

(2) Photocatalysis: The production of hydrogen in a catalytic process utilising light as a source of energy, without reliance on photosynthetic organisms.

TECHNOLOGY CODES FOR PRODUCTION OF HEAT AND COLD: QXXXXXX

(updated in line with CEN EN 16325:2025 Annex B Technology codes, Table B.3 — Technology codes for Heating and Cooling)

Level 1		Level 2		Level 3		Full code
Code	Description	Code	Description	Code	Description	
01	Combustion	00	Unspecified	00	Unspecified	Q010000
		01	Flue gas Condensing	00	Unspecified	Q010100
				01	CHP	Q010101
				02	Non-CHP	Q010102
		02	Non-condensing	00	Unspecified	Q010200
				01	CHP	Q010201
				02	Non-CHP	Q010202
02	Heat pump	00	Unspecified	00	Unspecified	Q020000
		01	Closed system	00	Unspecified	Q020100
				01	Compression	Q020101
				02	Absorption	Q020102
		02	Open system	00	Unspecified	Q020200
				01	Thermal vapor recompression	Q020201
				02	Mechanical vapor recompression	Q020202
03	Heating or cooling recovery	00	Unspecified	00	Unspecified	Q030000
04	Geothermal pumping installation	00	Unspecified	00	Unspecified	Q040000
		01	CHP	00	Unspecified	Q040100
		02	Non-CHP	00	Unspecified	Q040200
05	Solar thermal collector	00	Unspecified	00	Unspecified	Q050000
		01	Non-concentrating	00	Unspecified	Q050100
				01	Flat plate collector	Q050101
				02	Evacuated tube collector	Q050102
				03	Photovoltaic-thermal	Q050103
		02	Concentrating	00	Unspecified	Q050200
				01	Parabolic trough	Q050201
				02	Solar power tower	Q050202
				03	Linear Fresnel reflector	Q050203
				04	Dish reflector	Q050204
06	Electrical resistance heating	00	Unspecified	00	Unspecified	Q060000
		01	Electrical boiler	00	Unspecified	Q060100
07	Cooling machines	00	Unspecified	00	Unspecified	Q070100
		01	Compression	01	Unspecified	Q070101

Level 1		Level 2		Level 3		Full code
Code	Description	Code	Description	Code	Description	
		02	Absorption	02	Unspecified	Q070102
		03	Adsorption	03	Unspecified	Q070103
		04	Free cooling (water)	04	Unspecified	Q070104
		05	Cooling tower	05	Unspecified	Q070105
		06	Free cooling (aquifer)	06	Unspecified	Q070106
		07	Combined solutions	07	Unspecified	Q070107
08	Other	00	Unspecified	00	Unspecified	Q080000

ENERGY SOURCE (Terminology formerly used: FUEL)

(updated in line with CEN EN 16325:2025 Annex A Energy Source Type codes, Table A.1 — Energy Source codes)

Level 1 Code	Level 1 Description	Level 2 Code	Level 2 Description	Level 3 Code	Level 3 Description	Level 4 Code	Level 4 Description	Full code	CO2 Kg/GJ[2]
00	Unspecified	00	Unspecified	00	Unspecified	00	Unspecified	F00000000	0.0
01	Renewable	00	Unspecified	00	Unspecified	00	Unspecified	F01000000	0.0
		01	Solid biomass	00	Unspecified	00	Unspecified	F01010000	0.0
				01	Municipal waste	01	Biogenic	F01010101	0.0
				02	Industrial and commercial waste and residues	01	Biogenic	F01010201	0.0
				03	Biomass from forestry and forest industry	00	Unspecified	F01010300	0.0
						01	Wood and other forestry products	F01010301	0.0
						04	Forestry waste and residues	F01010304	0.0
						05	Saw products and other forest industry products	F01010305	0.0
						06	Forest industry waste and residues	F01010306	
				04	Animal fats	00	Unspecified	F01010400	0.0
				05	Agricultural biomass	00	Unspecified	F01010500	0.0
						01	Agricultural products (unspecified)	F01010501	0.0
						03	Food and feed crops	F01010503	
						04	Agricultural crops other than food and feed crops	F01010504	
						05	Grassy energy crops	F01010505	
						06	Short rotation coppice	F01010506	
						07	Intermediate crops, such as catch crops and cover crops	F01010507	
						08	Manure	F01010508	
						09	Agricultural waste and residues	F01010509	
				06		00	Unspecified	F01010600	

[2] *This reflects the IPCC statistics where these exist for an energy source, and otherwise the Dutch table of standard CO2 emission factors for energy production*

Level 1 Code	Description	Level 2 Code	Description	Level 3 Code	Description	Level 4 Code	Description	Full code	CO2 Kg/GJ[2]
					Biomass from aquaculture and fisheries	01	Algae	F01010601	
						02	Seaweed	F01010602	
						03	Aquaculture and fisheries waste and residues	F01010603	
				07	Bio-waste	00	Unspecified	F01010700	
				08	Mix of energy crops and organic waste and residues	00	Unspecified	F01010800	
				09	Mix of energy crops, manure and waste and residues	00	Unspecified	F01010900	
				10	Sludge	00	Unspecified	F01011000	
						01	Sewage sludge	F01011001	
				11	Other organic waste and residues	00	Unspecified	F01011100	
		02	Liquid biomass	00	Unspecified	00	Unspecified	F01020000	0.0
				01	Municipal waste	00	Biogenic	F01020100	0.0
				02	Black liquor	00	Unspecified	F01020200	0.0
				03	Pure plant oil	00	Unspecified	F01020300	0.0
						01	Rapeseed (Brassica napus L.)	F01020301	0.0
						02	Sunflower (Helianthus anuus L.)	F01020302	0.0
						03	Oil palm (Elaeis guineensis Jacq.)	F01020303	0.0
						04	Coconut (Cocos nucifera L.)	F01020304	0.0
						05	Yatropha	F01020305	0.0
				04	Waste plant oil	00	Unspecified	F01020400	0.0
				05	Refined vegetable oil	00	Unspecified	F01020500	0.0
						01	Biodiesel (mono-alkyl ester)	F01020501	0.0
						02	Biogasoline (C6-C12 hydrocarbon)	F01020502	0.0
				06	Organic waste and residues	00	Unspecified	F01020600	
						01	Agricultural waste and residues	F01020601	

Level 1 Code	Description	Level 2 Code	Description	Level 3 Code	Description	Level 4 Code	Description	Full code	CO2 Kg/GJ[2]
						02	Industrial and commercial waste and residues	F01020602	
						03	Aquaculture and fishery waste and residues	F01020603	
						04	Sewage	F01020604	
						05	Manure	F01020605	
		03	Gaseous	01	Landfill gas	00	Unspecified	F01030100	0.0
				02	Sewage gas	00	Unspecified	F01030200	0.0
		04	Heat	01	Solar	00	Unspecified	F01040100	0.0
				02	Geothermal	00	Unspecified	F01040200	0.0
						01	Conventional geothermal heat	F01040201	0.0
						02	Enhanced dry bed geothermal heat	F01040202	0.0
				03	Aerothermal	00	Unspecified	F01040300	0.0
				04	Hydrothermal	00	Unspecified	F01040400	0.0
				05	Process heat	01	Biogenic	F01040501	0.0
		05	Mechanical source or other	00	Unspecified	00	Unspecified	F01050000	0.0
				01	Wind	00	Unspecified	F01050100	0.0
				02	Hydro & marine	00	Unspecified	F01050200	0.0
02	Fossil	00	Unspecified	00	Unspecified	00	Unspecified	F02000000	247.4
		01	Solid	00	Unspecified	00	Unspecified	F02010000	111.9
				01	Hard coal	00	Unspecified	F02010100	111.9
						01	Anthracite	F02010101	98.3
						02	Bituminous coal	F02010102	94.7
						03	Coking coal	F02010103	94.0
						04	Coke-oven coke	F02010104	111.9
						05	Lignite coke	F02010105	111.9
				02	Brown coal	00	Unspecified	F02010200	106.0
						01	Sub-bituminous coal	F02010201	96.1
						02	Lignite	F02010202	101.2
						03	Brown coal briquette	F02010203	94.6
						04	Peat briquette	F02010204	106.0
				03	Peat	00	Unspecified	F02010300	106.0
				04	Municipal waste	00	Unspecified	F02010400	73.6
				05		00	Unspecified	F02010500	73.6

Level 1 Code	Description	Level 2 Code	Description	Level 3 Code	Description	Level 4 Code	Description	Full code	CO2 Kg/GJ[2]
					Industrial and commercial waste	01	Non-renewable	F02010501	73.6
		02	Liquid	00	Unspecified	00	Unspecified	F02020000	100.8
				01	Crude oil	00	Unspecified	F02020100	73.3
						01	Shale oil	F02020101	73.3
				02	Natural gas liquids (NGL)	00	Unspecified	F02020200	63.1
				03	Petroleum products	00	Unspecified	F02020300	77.4
						01	Ethane	F02020301	61.6
						02	Naphtha	F02020302	73.3
						03	Aviation gasoline	F02020303	72.0
						04	Motor gasoline	F02020304	72.0
						05	Aviation turbine fuel	F02020305	71.5
						06	Other kerosene	F02020306	71.9
						07	Gas/diesel oil	F02020307	74.3
						08	Fuel oil, low sulphur	F02020308	74.3
						09	Fuel oil, high sulphur	F02020309	77.4
						10	Liquid Petroleum Gas	F02020310	66.7
						11	Orimulsion	F02020311	80.7
						12	Bitumen	F02020312	80.7
						13	Lubricants	F02020313	73.3
						14	Petroleum coke	F02020314	100.8
						15	Refinery Feedstock	F02020315	73.3
		03	Gaseous	00	Unspecified	00	Unspecified	F02030000	247.4
				01	Natural gas	00	Unspecified	F02030100	56.1
				02	Coal-derived gas	00	Unspecified	F02030200	247.4
						01	Blast furnace gas	F02030201	247.4
						02	Coke-oven gas	F02030202	41.2
				03	Petroleum products	00	Unspecified	F02030300	73.7
						01	Propane	F02030301	73.7
						02	Butane	F02030302	73.7
						03	Refinery gas	F02030303	66.7
						04	Chemical waste gas	F02030304	66.7

Level 1 Code	Description	Level 2 Code	Description	Level 3 Code	Description	Level 4 Code	Description	Full code	CO2 Kg/GJ[2]
				04	Municipal gas plant	00	Unspecified	F02030400	User spec'd
				05	Process gas	00	Unspecified	F02030500	191.9
						01	Carbon monoxide	F02030501	155.2
						02	Methane	F02030502	54.9
						03	Hydrogen (fossil sourced)	F02030503	56.1
						04	Phosphor gas	F02030504	149.5
						05	Oxy gas	F02030505	191.9
		04	Heat	00	Unspecified	00	Unspecified	F02040000	User spec'd
						01	Non-renewable	F02040001	
				01	Process heat	00	Unspecified	F02040100	
						01	Non-renewable	F02040101	
03	Nuclear	01	Solid	01	Nuclear fuel	00	Unspecified	F03010100	0.0
						01	UOX	F03010101	0.0
						02	AGR	F03010102	0.0
						03	MOX	F03010103	0.0
04	Waste heat and cold	00	Unspecified	00	Unspecified	00	Unspecified	F04000000	
		01	By-product in industrial installation	00	Unspecified	00	Unspecified	F04010000	
		02	By-product in power generation	01	By-product in waste treatment	00	Unspecified	F04020100	
		03	By-product in tertiary sector	00	Unspecified	00	Unspecified	F04030000	

Permissible Combinations of Technology Code and Energy Source Code for Electricity Production [3], [4]

Technology code	Energy Source code	Comments
T01xxxx ***Solar – all forms***	F01040100 *Renewable > Heat > Solar*	*While solar power is actually energy conveyed by photons, it has been categorised under "heat"*
T02xxxx ***Wind – all forms***	F01050100 *Renewable > Mechanical source/other > Wind*	*All forms of wind power, whether onshore or offshore*
T03xxxx ***Hydro-electric head installations***	F01050200 *Renewable > Mechanical source/other > Hydro & marine*	*All forms of hydropower, whether run-of-river, storage head, or pumped storage*
T04xxxx ***Marine – all forms***	F01050200 Renewable > *Mechanical source/other > Hydro & marine*	*Marine power, which uses mechanical energy from tidal currents, waves, currents or pressurised water*
T05xxxx ***Thermal – all forms***	F00000000 *Unspecified*	*Thermal power uses heat energy from combustion, geothermal etc., and one of the below. Avoid it, as it does not categorise the fuel or heat source*
	F0100xxxx *Renewable > Unspecified*	*Any renewable fuel that cannot be further specified*
	F0101xxxx *Renewable > Solid*	*Any combustible renewable solid fuels including: Municipal waste, Industrial and commercial waste, Wood, Animal fats and Biomass from agriculture*
	F0102xxxx *Renewable > Liquid*	*Any combustible renewable liquid fuels including: Municipal biodegradable waste, Black liquor, Pure plant oil, Waste plant oil and Refined vegetable oil*
	F0103xxxx *Renewable > Gaseous*	*Any combustible renewable gaseous fuels including: Landfill gas, Sewage gas, Agricultural gas, Gas from organic waste digestion, Process gas and Bio natural gas*
	F0104xxxx *Renewable > Heat*	*Any form of renewable power from heat, including: Solar, Geothermal, Aerothermal, Hydro-thermal and Process heat*
	F01050000 *Renewable > Mechanical source/other > Unspecified*	*Any form of thermal renewable power from a mechanical source*

[3] Notation: T99xxxx or F9999xxxx, where T and F denote technology and fuel codes, 99 or 9999 is the second two or four characters of the code, and xxxx means that all other codes are included. Thus T03xxxx includes T030000, T030100, T030200, T030300 and T030400

[4] This relates to electricity only, and to the combinations of energy source and technology which exist when a GO is issued for consumption of the initial source of that energy, rather than as a result of conversion of a GO from another energy carrier

Technology code	Energy Source code	Comments
	F02xxxxxx *Fossil – all forms*	*All combustible fossil fuels, whether solid (coal, peat, waste …), liquid (oil, liquid gas, petroleum-based …), gaseous (coal-derived, petroleum, municipal gas, process gas …)*
T06xxxx ***Nuclear***	F03xxxxxx *Nuclear*	*Any form of nuclear power including heavy-water, light-water, breeder and graphite reactors running on UOX, AGR and MOX fuels*
T07xxxx ***Other***		*Unforeseen eventualities which do not fit into another category. Can be used with any Fuel code, but avoid using it as it gives no indication of technology*

Note that:

Any GO which breaks these rules is inaccurate and thus in breach of Directive EU/2023/2413 (REDIII).

ANNEX: PREVIOUS VERSION OF FACT SHEET 5

EECS RULES FACT SHEET 5

TYPES OF ENERGY INPUTS AND TECHNOLOGIES

The attached tables set out the permissible energy inputs and technologies.

Document Reference	AIB-EECS-FS05
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Author	EECS Unit

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Enterprise number 0864.645.330 – RPR Brussels

Release	Date and Author	Description
7.7	2/12/2019, EECS Unit	Addition of valid T & F Codes
7.8	15/07/2024, ESG	Addition of footnote on Solar Technology Code, correction of typos in Fuel Codes (F01040203 and F01030600), update lay-out, update reference to REDIII
7.9	02/12/2024 GSG	Integrating CEN Annex B for gas

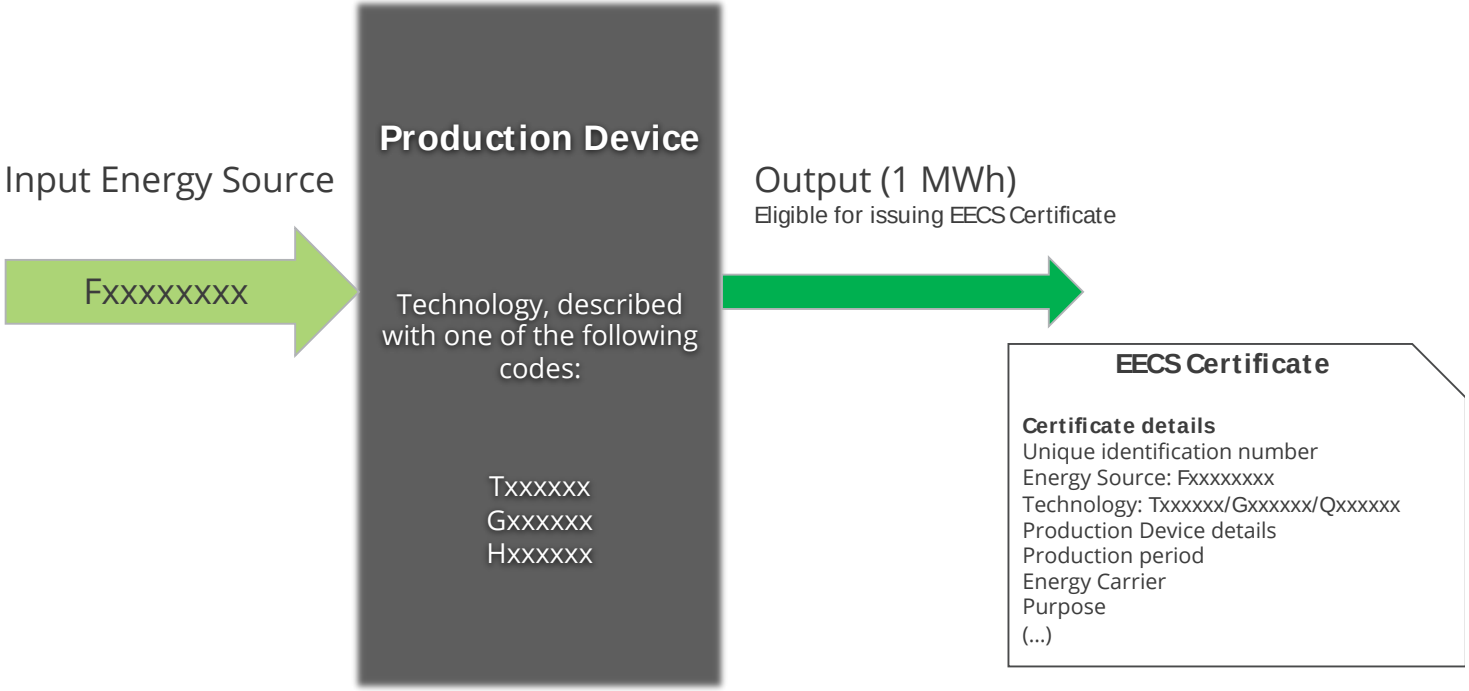
Introduction

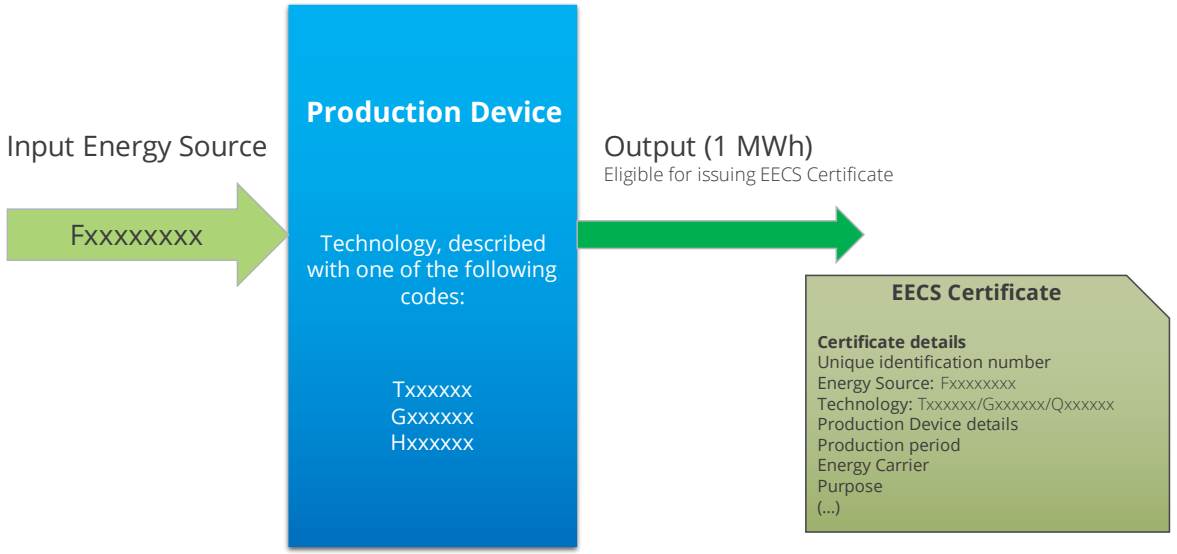
This fact sheet establishes the permissible values of energy source and type of Originating Production Device as referred to in EECS Rules section C.3.5.4 (f) resp. (g).

The Fuel (energy source) Code on an EECS Certificate establishes the energy source from which Output, for which the EECS Certificate is issued, was generated.

The Technology Code on an EECS Certificate establishes the technology of the production device which generated the Output, for which the EECS certificate is issued.

On each EECS certificate, one code is mentioned for the Input (energy source) and one for the Technology.





TECHNOLOGY CODES FOR PRODUCTION OF ELECTRICITY: TXXXXXX

Level 1		Level 2		Level 3		Full code
Code	Description	Code	Description	Code	Description	
01	Solar	00	Unspecified	00	Unspecified[1]	T010000
		01	Photovoltaic	00	Unspecified	T010100
				01	Classic silicon	T010101
				02	Thin film	T010102
		02	Concentration	00	Unspecified	T010200
02	Wind	00	Unspecified	00	Unspecified	T020000
				01	Onshore	T020001
				02	Offshore	T020002
03	Hydro-electric head installations	00	Unspecified	00	Unspecified	T030000
		01	Run-of-river head installation	00	Unspecified	T030100
		02	Storage head installation	00	Unspecified	T030200
		03	Pure pumped storage head installation	00	Unspecified	T030300
		04	Mixed pumped storage head	00	Unspecified	T030400
04	Marine	00	Unspecified	00	Unspecified	T040000
		01	Tidal	00	Unspecified	T040100
				01	Onshore	T040101
				02	Offshore	T040102
		02	Wave	00	Unspecified	T040200
				01	Onshore	T040201
				02	Offshore	T040202
		03	Currents	00	Unspecified	T040300
		04	Pressure	00	Unspecified	T040400
05	Thermal	00	Unspecified	00	Unspecified	T050000
		01	Combined cycle gas turbine with heat recovery	00	Unspecified	T050100
				01	Non-CHP	T050101
				02	CHP	T050102
		02	Steam turbine with back-pressure turbine (open cycle)	00	Unspecified	T050200
				01	Non-CHP	T050201
				02	CHP	T050202
		03	Steam turbine with condensation turbine (closed cycle)	00	Unspecified	T050300

[1] As the use of T010000 gives no information on whether the technology used is photovoltaic or concentrated solar power, the use of a technology code with a higher specification level than T010000 is encouraged.

Level 1		Level 2		Level 3		Full code
Code	Description	Code	Description	Code	Description	
				01	Non-CHP	T050301
				02	CHP	T050302
		04	Gas turbine with heat recovery	00	Unspecified	T050400
				01	Non-CHP	T050401
				02	CHP	T050402
		05	Internal combustion engine	00	Unspecified	T050500
				01	Non-CHP	T050501
				02	CHP	T050502
		06	Micro-turbine	00	Unspecified	T050600
				01	Non-CHP	T050601
				02	CHP	T050602
		07	Stirling engine	00	Unspecified	T050700
				01	Non-CHP	T050701
				02	CHP	T050702
		08	Fuel cell	00	Unspecified	T050800
				01	Non-CHP	T050801
				02	CHP	T050802
		09	Steam engine	00	Unspecified	T050900
				01	Non-CHP	T050901
				02	CHP	T050902
		10	Organic Rankine cycle	00	Unspecified	T051000
				01	Non-CHP	T051001
				02	CHP	T051002
		11	Gas turbine without heat recovery	00	Unspecified	T051100
06	Nuclear	00	Unspecified	00	Unspecified	T060000
		01	Heavy-water reactor	00	Unspecified	T060100
		02	Light water reactor	00	Unspecified	T060200
		03	Breeder	00	Unspecified	T060300
		04	Graphite reactor	00	Unspecified	T060400
07	Other	00	Unspecified	00	Unspecified	T070000

TECHNOLOGY CODES FOR PRODUCTION OF GAS: GXXXXXX

Level 1		Level 2		Level 3		Full code
Code	Description	Code	Description	Code	Description	
00	Other Technology	00	Unspecified	00	Unspecified	G000000
01	Anaerobic Digestion	00	Unspecified	00	Unspecified	G010000
02	Gasification	00	Unspecified	00	Unspecified	G020000
03	Catalytic methanation	00	Unspecified	00	Unspecified	G030000
04	Biomethanation	00	Unspecified	00	Unspecified	G040000
05	Steam reforming	00	Unspecified	00	Unspecified	G050000
06	Pyrolysis	00	Unspecified	00	Unspecified	G060000
07	Fischer Tropsch Synthesis	00	Unspecified	00	Unspecified	G070000
08	Steam Methane Reforming	00	Unspecified	00	Unspecified	G080000
09	Partial Oxidation	00	Unspecified	00	Unspecified	G090000
10	Autothermal Reforming	00	Unspecified	00	Unspecified	G100000
11	Methanol reforming	00	Unspecified	00	Unspecified	G110000
12	Ammonia reforming	00	Unspecified	00	Unspecified	G120000
13	Photobiological	00	Unspecified	00	Unspecified	G130000
14	Thermocatalysis (1)	00	Unspecified	00	Unspecified	G140000
15	Photocatalysis (2)	00	Unspecified	00	Unspecified	G150000
16	Chemical Synthesis	00	Unspecified	00	Unspecified	G160000
17	Water Electrolysis	00	Unspecified	00	Unspecified	G170000
18	Chlor-alkali electrolysis	00	Unspecified	00	Unspecified	G180000
19	Hydrotreatment	00	Unspecified	00	Unspecified	G190000
20	Landfill gas collection	00	Unspecified	00	Unspecified	G200000

(1) Thermocatalysis: The production of hydrogen in a catalytic process utilising heat as a source of energy, without making use of hydrocarbons as a feedstock

(2) Photocatalysis: The production of hydrogen in a catalytic process utilising light as a source of energy, without reliance on photosynthetic organisms.

TECHNOLOGY CODES FOR PRODUCTION OF HEAT AND COLD: QXXXXXX

Level 1		Level 2		Level 3		Full code
Code	Description	Code	Description	Code	Description	
01	Combustion for heating purpose	00	Unspecified	00	Unspecified	Q010000
		01	Flue gas Condensing	00	Unspecified	Q010100
				01	CHP	Q010101
				02	Non-CHP	Q010102
		02	Non-condensing	00	Unspecified	Q010200
				01	CHP	Q010201
				02	Non-CHP	Q010202
02	Heat pump	00	Unspecified	00	Unspecified	Q020000
		01	Electrical	00	Unspecified	Q020100
		02	Absorption	00	Unspecified	Q020200
03	Heating or cooling recovery	00	Unspecified	00	Unspecified	Q030000
		01	Water-water heat exchange	00	Unspecified	Q030100
				01	CHP	Q030101
				02	Non-CHP	Q030102
		02	Water-air heat exchange	00	Unspecified	Q030200
				01	CHP	Q030201
				02	Non-CHP	Q030202
		03	Air-air heat exchange	00	Unspecified	Q030300
				01	CHP	Q030301
				02	Non-CHP	Q030302
		04	Air-water heat exchange	00	Unspecified	Q030400
				01	CHP	Q030401
				02	Non-CHP	Q030402
		05	Refrigerant cooling	00	Unspecified	Q030500
				01	CHP	Q030501
				02	Non-CHP	Q030502
		06	Steam production	00	Unspecified	Q030600
				01	CHP	Q030601
				02	Non-CHP	Q030602
04	Geothermal pumping installation	00	Unspecified	00	Unspecified	Q040000
05	Solar thermal collector	00	Unspecified	00	Unspecified	Q050000
		01	Non-concentrating	00	Unspecified	Q050100
				01	Flat plate collector	Q050101

Level 1		Level 2		Level 3		Full code
Code	Description	Code	Description	Code	Description	
				02	Evacuated tube collector	Q050102
		02	Concentrating	00	Unspecified	Q050200
				01	Parabolic trough	Q050201
				02	Solar power tower	Q050202
				03	Linear Fresnel reflector	Q050203
				04	Dish reflector	Q050204
06	Electrical resistance heating	00	Unspecified	00	Unspecified	Q060000
		01	Electrical boiler	00	Unspecified	Q060100

FUEL (energy source)

Level 1 Code	Level 1 Description	Level 2 Code	Level 2 Description	Level 3 Code	Level 3 Description	Level 4 Code	Level 4 Description	Full code	CO2 Kg/GJ[2]
00	Unspecified	00	Unspecified	00	Unspecified	00	Unspecified	F00000000	0.0
01	Renewable	00	Unspecified	00	Unspecified	00	Unspecified	F01000000	0.0
		01	Solid	00	Unspecified	00	Unspecified	F01010000	0.0
				01	Municipal waste	01	Biogenic	F01010101	0.0
				02	Industrial and commercial waste	01	Biogenic	F01010201	0.0
				03	Wood	00	Unspecified	F01010300	0.0
						01	Forestry products	F01010301	0.0
						02	Forestry by-products & waste	F01010302	0.0
						03	Saw products, by-products and waste	F01010303	0.0
				04	Animal fats	00	Unspecified	F01010400	0.0
				05	Biomass from agriculture	00	Unspecified	F01010500	0.0
						01	Agricultural products	F01010501	0.0
						02	Agricultural by-products & waste	F01010502	0.0
		02	Liquid	00	Unspecified	00	Unspecified	F01020000	0.0
				01	Municipal biodegradable waste	00	Unspecified	F01020100	0.0
				02	Black liquor	00	Unspecified	F01020200	0.0
				03	Pure plant oil	00	Unspecified	F01020300	0.0
						01	Rapeseed (Brassica napus L.)	F01020301	0.0
						02	Sunflower (Helianthus anuus L.)	F01020302	0.0
						03	Oil palm (Elaeis guineensis Jacq.)	F01020303	0.0
						04	Coconut (Cocos nucifera L.)	F01020304	0.0
						05	Jatropha	F01020305	0.0
				04	Waste plant oil	00	Unspecified	F01020400	0.0
				05	Refined vegetable oil	00	Unspecified	F01020500	0.0
						01	Biodiesel (mono-alkyl ester)	F01020501	0.0

[2] *This reflects the IPCC statistics where these exist for an energy source, and otherwise the Dutch table of standard CO2 emission factors for energy production*

Level 1 Code	Level 1 Description	Level 2 Code	Level 2 Description	Level 3 Code	Level 3 Description	Level 4 Code	Level 4 Description	Full code	CO2 Kg/GJ[2]
						02	Biogasoline (C6-C12 hydrocarbon)	F01020502	0.0
		03	Gaseous	00	Unspecified	00	Unspecified	F01030000	0.0
				01	Landfill gas	00	Unspecified	F01030100	0.0
				02	Sewage gas	00	Unspecified	F01030200	0.0
				03	Agricultural gas	00	Unspecified	F01030300	0.0
						01	Pig manure	F01030301	0.0
						02	Cow manure	F01030302	0.0
						03	Chicken manure	F01030303	0.0
						04	Unspecified manure	F01030304	0.0
						05	Energy crops	F01030305	0.0
						06	Digestion of pure manure	F01030306	0.0
						07	Digestion of manure with energy crops	F01030307	0.0
				04	Gas from organic waste digestion	00	Unspecified	F01030400	0.0
						01	Organic waste unspecified	F01030401	0.0
						02	Agricultural waste unspecified	F01030402	0.0
						03	Agricultural waste from farm fertiliser	F01030403	0.0
						04	Agricultural waste from straw	F01030404	0.0
						05	Waste from food industry	F01030405	0.0
						06	Manure with organic waste	F01030406	0.0
						07	Manure with organic waste and energy crops	F01030407	0.0
						08	Other biogenic waste	F01030408	0.0
				05	Process gas	01	Biogenic	F01030501	0.0
				06	Other biogenic sources	00	Unspecified	F01030600	0.0
		04	Heating and cooling	01	Solar	00	Unspecified	F01040100	0.0
				02	Geothermal	00	Unspecified	F01040200	0.0
						01	Conventional geothermal heat	F01040201	0.0
						02	Enhanced dry bed geothermal heat	F01040202	0.0
						03	Shallow geothermal heat/cold	F01040203	0.0
				03	Aerothermal	00	Unspecified	F01040300	0.0
				04	Hydrothermal	00	Unspecified	F01040400	0.0
						01	River	F01040401	0.0
						02	Lake	F01040402	0.0

Level 1 Code	Description	Level 2 Code	Description	Level 3 Code	Description	Level 4 Code	Description	Full code	CO2 Kg/GJ[2]
				05	Process heat	01	Biogenic	F01040501	0.0
		05	Mechanical source or other	00	Unspecified	00	Unspecified	F01050000	0.0
				01	Wind	00	Unspecified	F01050100	0.0
				02	Hydro & marine	00	Unspecified	F01050200	0.0
02	Fossil	00	Unspecified	00	Unspecified	00	Unspecified	F02000000	247.4
		01	Solid	00	Unspecified	00	Unspecified	F02010000	111.9
				01	Hard coal	00	Unspecified	F02010100	111.9
						01	Anthracite	F02010101	98.3
						02	Bituminous coal	F02010102	94.7
						03	Coking coal	F02010103	94.0
						04	Coke-oven coke	F02010104	111.9
						05	Lignite coke	F02010105	111.9
				02	Brown coal	00	Unspecified	F02010200	106.0
						01	Sub-bituminous coal	F02010201	96.1
						02	Lignite	F02010202	101.2
						03	Brown coal briquette	F02010203	94.6
						04	Peat briquette	F02010204	106.0
				03	Peat	00	Unspecified	F02010300	106.0
				04	Municipal waste	00	Unspecified	F02010400	73.6
				05	Industrial and commercial waste	00	Unspecified	F02010500	73.6
						01	Non-renewable	F02010501	73.6
		02	Liquid	00	Unspecified	00	Unspecified	F02020000	100.8
				01	Crude oil	00	Unspecified	F02020100	73.3
						01	Shale oil	F02020101	73.3
				02	Natural gas liquids (NGL)	00	Unspecified	F02020200	63.1
				03	Petroleum products	00	Unspecified	F02020300	77.4
						01	Ethane	F02020301	61.6
						02	Naphtha	F02020302	73.3
						03	Aviation gasoline	F02020303	72.0
						04	Motor gasoline	F02020304	72.0
						05	Aviation turbine fuel	F02020305	71.5
						06	Other kerosene	F02020306	71.9

Level 1 Code	Description	Level 2 Code	Description	Level 3 Code	Description	Level 4 Code	Description	Full code	CO2 Kg/GJ[2]
						07	Gas/diesel oil	F02020307	74.3
						08	Fuel oil, low sulphur	F02020308	74.3
						09	Fuel oil, high sulphur	F02020309	77.4
						10	Liquid Petroleum Gas	F02020310	66.7
						11	Orimulsion	F02020311	80.7
						12	Bitumen	F02020312	80.7
						13	Lubricants	F02020313	73.3
						14	Petroleum coke	F02020314	100.8
						15	Refinery Feedstock	F02020315	73.3
		03	Gaseous	00	Unspecified	00	Unspecified	F02030000	247.4
				01	Natural gas	00	Unspecified	F02030100	56.1
				02	Coal-derived gas	00	Unspecified	F02030200	247.4
						01	Blast furnace gas	F02030201	247.4
						02	Coke-oven gas	F02030202	41.2
				03	Petroleum products	00	Unspecified	F02030300	73.7
						01	Propane	F02030301	73.7
						02	Butane	F02030302	73.7
						03	Refinery gas	F02030303	66.7
						04	Chemical waste gas	F02030304	66.7
				04	Municipal gas plant	00	Unspecified	F02030400	User spec'd
				05	Process gas	00	Unspecified	F02030500	191.9
						01	Carbon monoxide	F02030501	155.2
						02	Methane	F02030502	54.9
						03	Hydrogen (fossil sourced)	F02030503	56.1
						04	Phosphor gas	F02030504	149.5
						05	Oxy gas	F02030505	191.9
		04	Heat	00	Unspecified	00	Unspecified	F02040000	User spec'd
						01	Non-renewable	F02040001	
				01	Process heat	00	Unspecified	F02040100	
						01	Non-renewable	F02040101	
03	Nuclear	01	Solid	01	Radioactive fuel	00	Unspecified	F03010100	0.0
						01	UOX	F03010101	0.0
						02	AGR	F03010102	0.0

Level 1 Code	Description	Level 2 Code	Description	Level 3 Code	Description	Level 4 Code	Description	Full code	CO2 Kg/GJ[2]
						03	MOX	F03010103	0.0
04	Gas synthesis	00	Unspecified	00	Unspecified	00	Unspecified	F04000000	
		01	Furnace Gas	00	Unspecified	00	Unspecified	F04010000	
05	Waste heat and cold	00	Unspecified	00	Unspecified	00	Unspecified	F05000000	
		01	By-product in industrial installation	00	Unspecified	00	Unspecified	F05010000	
		02	By-product in power generation	00	Unspecified	00	Unspecified	F05020000	
		03	By-product in tertiary sector	00	Unspecified	00	Unspecified	F05030000	

Permissible Combinations of Technology Code and Fuel Source Code for Electricity Production [3], [4]

Technology code	Fuel source code	Comments
T01xxxx ***Solar – all forms***	F01040100 *Renewable > Heat > Solar*	*While solar power is actually energy conveyed by photons, it has been categorised under "heat"*
T02xxxx ***Wind – all forms***	F010501xx *Renewable > Mechanical source/other > Wind*	*All forms of wind power, whether onshore or offshore*
T03xxxx ***Hydro-electric head installations***	F010502xx *Renewable > Mechanical source/other > Hydro & marine*	*All forms of hydropower, whether run-of-river, storage head, or pumped storage*
T04xxxx ***Marine – all forms***	F010502xx Renewable > *Mechanical source/other > Hydro & marine*	*Marine power, which uses mechanical energy from tidal currents, waves, currents or pressurised water*
T05xxxx ***Thermal – all forms***	F00000000 *Unspecified*	*Thermal power uses heat energy from combustion, geothermal etc., and one of the below. Avoid it, as it does not categorise the fuel or heat source*
	F0100xxxx *Renewable > Unspecified*	*Any renewable fuel that cannot be further specified*
	F0101xxxx *Renewable > Solid*	*Any combustible renewable solid fuels including: Municipal waste, Industrial and commercial waste, Wood, Animal fats and Biomass from agriculture*
	F0102xxxx *Renewable > Liquid*	*Any combustible renewable liquid fuels including: Municipal biodegradable waste, Black liquor, Pure plant oil, Waste plant oil and Refined vegetable oil*
	F0103xxxx *Renewable > Gaseous*	*Any combustible renewable gaseous fuels including: Landfill gas, Sewage gas, Agricultural gas, Gas from organic waste digestion, Process gas and Bio natural gas*
	F0104xxxx *Renewable > Heat*	*Any form of renewable power from heat, including: Solar, Geothermal, Aerothermal, Hydro-thermal and Process heat*
	F010500xx *Renewable > Mechanical source/other > Unspecified*	*Any form of thermal renewable power from a mechanical source*

[3] Notation: T99xxxx or F9999xxxx, where T and F denote technology and fuel codes, 99 or 9999 is the second two or four characters of the code, and xxxx means that all other codes are included. Thus T03xxxx includes T030000, T030100, T030200, T030300 and T030400

[4] This relates to electricity only, and to the combinations of fuel source and technology which exist when a GO is issued for consumption of the initial source of that energy, rather than as a result of conversion of a GO from another energy carrier

Technology code	Fuel source code	Comments
	F02xxxxxx *Fossil – all forms*	*All combustible fossil fuels, whether solid (coal, peat, waste …), liquid (oil, liquid gas, petroleum-based …), gaseous (coal-derived, petroleum, municipal gas, process gas …)*
T06xxxx ***Nuclear***	F03xxxxxx *Nuclear*	*Any form of nuclear power including heavy-water, light-water, breeder and graphite reactors running on UOX, AGR and MOX fuels*
T07xxxx ***Other***		*Unforeseen eventualities which do not fit into another category. Can be used with any Fuel code, but avoid using it as it gives no indication of technology*

Note that:

Any GO which breaks these rules is inaccurate and thus in breach of Directive EU/2023/2413 (REDIII).

Such GOs which are already held on member registries should be considered to have the appropriate generic technology code for the fuel source – for instance “hydropower using solar heat energy” should be considered to be “solar photovoltaic using solar heat energy”. On request, the registry which issued such GOs shall inform the registry in which the GO is currently held of the correct T/F code combination (in the above example, either hydropower or solar power).