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ANNEX

ANNEXES

to the

Commission Implementing Regulation (EU) .../...

laying down rules for the application of Regulation (EU) 2023/1804 of the European Parliament and of the Council as regards specifications and procedures relating to the availability and accessibility of data on alternative fuels infrastructure

ANNEX

Specifications related to the data format for making available the data types referred to in Article 20(2) of Regulation (EU) 2023/1804

Table A - Static data for publicly accessible recharging and refuelling infrastructure for alternative fuels

Table B - Further static data for publicly accessible electric recharging infrastructure

Table C - Further static data for publicly accessible hydrogen refuelling infrastructure

Table D - Further static data for publicly accessible refuelling infrastructure for liquified methane

Table E - Further static data for publicly accessible refuelling infrastructure for alternative fuels

Table F - Dynamic data for publicly accessible recharging and refuelling infrastructure for alternative fuels

Table G - Further dynamic data for publicly accessible hydrogen recharging infrastructure

Table A - Static data for publicly accessible recharging and refuelling infrastructure for alternative fuels

Number	Type of alternative fuels infrastructure	Type of data	Data category	Data type	Data level	Description	Data format
1	Recharging and refuelling infrastructure of alternative fuels	Static	General information	Legal name of the recharging or refuelling point operator or owner	Station	Legal name of the operator responsible for the management and operation of the publicly accessible recharging and refuelling points for alternative fuels, or, in accordance with the arrangements between them, the owner of those points, which provides a recharging or refuelling service to end users, including in the name and on behalf of a mobility service provider.	Discrete value (string/text)
2	Recharging and refuelling infrastructure of alternative fuels	Static	General information	Commercial name of the recharging or refuelling point operator or owner	Station	Commercial name of the recharging or refuelling point operator or, in accordance with the arrangements between them, the owner of those points as it is presented to the public when offering recharging or refuelling services.	Discrete value (string/text)
3	Recharging and refuelling infrastructure of alternative fuels	Static	General information	Number of recharging or refuelling points	Station	Number of recharging points or refuelling points that can be used at the same time in a recharging or refuelling station. An electric recharging point may have one or more connectors, however only one can be used at the same time.	Numeric value (number)
4	Recharging and refuelling infrastructure of alternative fuels	Static	General information	Service support	Station	Information regarding the presence of physical persons attending the recharging or refuelling station.	Discrete value (string/text)
5	Recharging and refuelling infrastructure of alternative fuels	Static	General information	Helpdesk telephone	Station	Telephone number of the helpdesk, managed by the recharging or refuelling point operator or owner, that is readable in the recharging station.	Format based on notation applicable to Union telephone numbers containing at least the following elements: Country code <space> complete number including the regional

							code (if there is one) in one separate block with the starting zero. Extension numbers shall be added with a dash directly after the complete number. No other dashes, spaces or brackets may be used in the helpdesk telephone number.
6	Recharging and refuelling infrastructure of alternative fuels	Static	General information	Facilities offering associated services to the user	Station	The recharging or refuelling station has in its immediate surrounding area facilities offering associated services to customers. The following facilities and services shall be reported (yes/no): <ul style="list-style-type: none"> • Roofed recharging or refuelling parking location. • Illuminated recharging or refuelling parking location. • Catering service (e.g., food, beverage) • Bathrooms. • Resting facilities. • Other (expressed as free text). 	Discrete value (string/text) in list format
7	Recharging and refuelling infrastructure of alternative fuels	Static	Geographic location	Global Navigation Satellite System (GNSS) geographic location information	Station	Latitude and longitude coordinates of the recharging or refuelling station.	Latitude and Longitude coordinated in WGS84 decimal standard.
8	Recharging and refuelling infrastructure of alternative fuels	Static	Geographic location	Additional geographic location information	Station	Additional concrete information that may be relevant to reach the recharging or refuelling station in certain situations, such as parking level, parking lot, etc.	Discrete/numeric value (combination of string/text and numeric)
9	Recharging and	Static	Geographic	Country	Station	Name of the Member States where the recharging or refuelling	Format according to

	refuelling infrastructure of alternative fuels		location			station is located.	standard ISO 3166-1 alpha-2 codes
10	Recharging and refuelling infrastructure of alternative fuels	Static	Geographic location	Region	Station	Name of the Member States region where the recharging or refuelling station is located, expressed in the nomenclature of territorial units for statistics (NUTS) 1 level.	Format according to NUTS-1 geocode standard
11	Recharging and refuelling infrastructure of alternative fuels	Static	Geographic location	City or town	Station	Name of the Member States city or town where the recharging station is located. It shall include information on the municipality or stop name (e.g., highway, area) if not directly associated with the city or town.	Discrete value (string/text)
12	Recharging and refuelling infrastructure of alternative fuels	Static	Geographic location	Postal code	Station	Postal code where the recharging or refuelling station is located, including potential additional identification information attending to the concrete characteristics of the postal code in that location.	Discrete/numeric value (combination of string/text and numeric)
13	Recharging and refuelling infrastructure of alternative fuels	Static	Geographic location	Address name	Station	Where relevant, name of the street where the recharging or refuelling station is located, including the number.	Discrete/numeric value (combination of string/text and numeric) indicating the street name followed by the street number
14	Recharging and refuelling infrastructure of alternative fuels	Static	Accessibility	Opening time	Station	Information regarding the time periods when a recharging or refuelling station is open and accessible to the public for recharging or refuelling, where applicable taking into account the time schedules of the building/facility that gives physical access to that recharging or refuelling station.	Discrete/numeric value (combination of string/text and numeric) indicating the week days followed by the time ranges when a recharging or refuelling station is open and accessible to the public

15	Recharging and refuelling infrastructure of alternative fuels	Static	Accessibility	Time zone	Station	Time zone where the recharging or refuelling station is located. This data type shall be used in combination with other data types to ensure that the availability of a recharging or refuelling point is shown correctly and to make reservation possible and accurate.	Format according to standard ISO 8601
16	Recharging and refuelling infrastructure of alternative fuels	Static	Accessibility	Vehicle-type compatibility	Station	Type of vehicle that may use a recharging or refuelling station. The type of vehicle shall be specified in accordance with UNECE vehicle categorisation ¹ . The following vehicle categories shall be reported (yes/no): <ul style="list-style-type: none"> • Two and three wheel vehicles and quadricycles (L) • Passenger cars (M1) • Buses and coaches (M2 or M3) • Vans (N1) • Trucks (N2 or N3) • Other (expressed as free text) 	Discrete/numeric value (combination of string/text and numeric) in list format
17	Recharging and refuelling infrastructure of alternative fuels	Static	Accessibility	Vehicle specifications permitted	Station	Where relevant, specific limitations to the weight and dimensions of vehicles (including trailers, semi-trailers, etc.) ² , allowed to access the recharging or refuelling station. The following vehicle specifications, including trailers, shall be reported (yes/no): <ul style="list-style-type: none"> • Maximum vehicle weight/mass. • Maximum vehicle height. • Maximum vehicle length. • Maximum vehicle width. 	Discrete/numeric value (combination of string/text and numeric) indicating maximum vehicle weight/mass in tonnes and maximum vehicle height, length and width in metres, including trailer.
18	Recharging and refuelling infrastructure of alternative fuels	Static	Accessibility	Number of parking spaces	Station	Number of parking spaces that may be used at a recharging or refuelling station to conduct a recharging or refuelling session. It may be different to the number of recharging or refuelling points of that station.	Numeric value (integer number)
19	Recharging and	Static	Accessibility	Number of	Station	Number of parking spaces with accessible recharging or	Numeric value

¹ <https://unece.org/fileadmin/DAM/trans/main/wp29/wp29resolutions/ECE-TRANS-WP.29-78r6e.pdf>

² This covers vehicles and vehicle combinations as defined in the Weights and Dimensions Directive.

	refuelling infrastructure of alternative fuels			parking spaces for people with disabilities		refuelling points for people with disabilities in compliance with relevant accessibility requirements defined in existing standards, guidelines or national legislation.	(integer number)
20	Recharging and refuelling infrastructure of alternative fuels	Static	Payment options	Payment device with bank card reader	Station	Indication on the existence (yes/no) of a payment terminal with the ability to enable the bank card (debit/credit) to be physically inserted in the terminal for the Europay, Mastercard and Visa (EMV) chip to be read.	Discrete value (string/text)
21	Recharging and refuelling infrastructure of alternative fuels	Static	Payment options	Payment device with a contactless functionality that is at least able to read payment cards	Station	Indication on the existence (yes/no) of a payment terminal that is at least able to read bank cards (debit/credit) with a contactless functionality (e.g., Near Field Communication - NFC).	Discrete value (string/text)
22	Recharging and refuelling infrastructure of alternative fuels	Static	Payment options	Other ad-hoc payment option	Station	Indication on the existence (yes/no) of the following ad-hoc payment options: <ul style="list-style-type: none"> • Specific (i.e., dynamically generated) QR code • Payment through a website (e.g., static QR code) • Cash • Other (expressed as free text) 	Discrete value (string/text)
23	Recharging and refuelling infrastructure of alternative fuels	Static	Payment options	Additional information about payment providers accepted	Station	Additional information indicating the payment service providers that accept electronic payments in the ad hoc payment option.	Discrete value (string/text) in list format
24	Recharging and refuelling infrastructure of alternative fuels	Static	Payment options	Contract-based (subscription) payment option	Station	Possibility to pay for a recharging or refuelling service on the basis of a contract-based payment (yes/no) between the end user and the mobility service provider.	Discrete value (string/text)

Table B – Further static data for publicly accessible recharging infrastructure

Number	Type of alternative fuels infrastructure	Type of data	Data category	Data type	Data level	Description	Data format
1	Electric recharging infrastructure	Static	General information	Recharging Point ID code (Connector)	Point	Unique ID of the recharging point, which includes the unique ID code of the recharging point operator issued by the IDRO (ID Registration Organisation). It supports the identification, including for billing and booking purposes, of the recharging point within a recharging station.	Discrete/numeric value (combination of string/text and numeric)
2	Electric recharging infrastructure	Static	General information	Number of connectors	Point	Number of connectors in a recharging point. An electric recharging point may have one or more connectors, however only one can be used at the same time.	Numeric value (integer number)
3	Electric recharging infrastructure	Static	General information	Type of connector (plug)	Point	Identification of connectors available in each recharging point within a recharging station: <ul style="list-style-type: none"> • Type 2 (AC) • Combo2/CCS (DC) • Megawatt Charging System (MCS) • CHAdeMO (DC) • Other (expressed as free text) 	Discrete value (string/text) in list format
4	Electric recharging infrastructure	Static	Type of current	Type of current	Point	Type of electric current flow delivered at the recharging point, differentiating between alternating current (AC) or direct current (DC)	Discrete value (string/text) differentiating between AC and DC
5	Electric recharging infrastructure	Static	Power output	Recharging station maximum power	Station	Total maximum power that the recharging points of the station can provide at the same time.	Numeric value (number) expressed in kW
6	Electric recharging infrastructure	Static	Power output	Recharging point maximum power	Point	Maximum power that can be provided by the recharging point to the electric vehicle at a given time.	Numeric value (number) expressed in kW

7	Electric recharging infrastructure	Static	Payment options	Mobility service providers offering contract-based recharging	Station	Information indicating the name of those mobility service providers that are offering contract-based payment options and are accepted in a recharging station.	Discrete value (string/text) in list format
8	Electric recharging infrastructure	Static	Automatic authentication	Plug-and-charge	Point	Possibility of conducting automatic authentication and authorisation of the recharging session on the basis of a contract-based payment concluded between the end user and the mobility service provider (yes/no) in a recharging point.	Discrete value (string/text)
9	Electric recharging infrastructure	Static	Smart recharging functionalities	Smart recharging services	Point	<p>Possibility of using smart recharging services in a recharging point. The possibility of using the following smart recharging services must be indicated (yes/no):</p> <ul style="list-style-type: none"> • Remote monitoring and control recharging. • User preference configuration for recharging power optimization. • Bidirectional recharging. • Other (expressed as free text) 	Discrete value (string/text)
10	Electric recharging infrastructure	Static	Renewable electricity	Electricity supplied is 100 % renewable	Station	The recharging station exclusively supplies 100% renewable electricity (yes/no) (EU Guarantee of Origin (GO) scheme).	Discrete value (string/text)

Table C – Further static data for publicly accessible hydrogen refuelling infrastructure

Number	Type of alternative fuels infrastructure	Type of data	Data category	Data type	Data level	Description	Data format
1	Hydrogen refuelling infrastructure	Static	Hydrogen delivery	Hydrogen state	Station	Type of hydrogen delivered at a refuelling station, differentiating between gaseous and liquified hydrogen.	Discrete value (string/text) expressed as gaseous or liquified hydrogen
2	Hydrogen refuelling infrastructure	Static	Hydrogen delivery	Hydrogen pressure	Point	Pressure at which a refuelling station supplies hydrogen via a refuelling point (i.e., dispenser)	Discrete/numeric value (combination of string/text and numeric) expressed in bar
3	Hydrogen refuelling infrastructure	Static	Hydrogen delivery	Daily cumulative capacity	Station	Indication of the cumulative capacity per day (expressed in kg/day) of a hydrogen refuelling station.	Discrete/numeric value (combination of string/text and numeric) expressed in kg/day
4	Hydrogen refuelling infrastructure	Static	Renewable hydrogen	Hydrogen supplied is 100 % renewable	Station	The refuelling station exclusively supplies hydrogen produced from 100 % renewable sources in accordance with rules established under Directive (EU) 2018/2001 and relevant secondary legislation (yes/no)	Discrete value (string/text)

Table D – Further static data for publicly accessible refuelling infrastructure for liquified methane

Number	Type of alternative fuels infrastructure	Type of data	Data category	Data type	Data level	Description	Data format
1	Refuelling infrastructure for liquified methane	Static	Renewable liquified methane	Liquified methane supplied is 100 % renewable	Station	The refuelling station exclusively supplies liquified methane produced from 100 % renewable sources in accordance with rules established under Directive (EU) 2018/2001 and relevant secondary legislation (yes/no) (EU Guarantee of Origin (GO) scheme).	Discrete value (string/text)

Table E – Further static data for publicly accessible refuelling infrastructure for liquified methane

Number	Type of alternative fuels infrastructure	Type of data	Data category	Data type	Data level	Description	Data format
1	Refuelling infrastructure for liquified methane	Static	General information	Type of connector (dispenser)	Station	Identification of type of connectors available in each refuelling point within a refuelling station, stating the type of fuel applicable: <ul style="list-style-type: none"> • Hydrogen refuelling (gaseous) • Hydrogen refuelling (liquified) • Methane refuelling (CNG) • Methane refuelling (LNG) • Other (expressed as free text) 	Discrete value (string/text) in list format

Table F – Dynamic data for publicly accessible recharging and refuelling infrastructure

Number	Type of alternative fuels infrastructure	Type of data	Data category	Data type	Data level	Definition	Data format
1	Recharging and refuelling infrastructure of alternative fuels	Dynamic	Functionality	Operational status	Point	<p>Capability of the recharging or refuelling point to perform its function. The operational status of a recharging or refuelling point expressed as operational or non-operational:</p> <ul style="list-style-type: none"> Operational: it can be used in normal conditions during the opening time that is accessible to the public. Non-operational: it cannot be used due to a technical problem or maintenance works. 	Discrete value (string/text) expressed as operational or non-operational
2	Recharging and refuelling infrastructure of alternative fuels	Dynamic	Functionality	Availability	Point	<p>Possibility to use a recharging or refuelling point at present time and, when technically possible, at a specific future time, The availability of a recharging or refuelling point expressed as in use, reserved or not in use:</p> <ul style="list-style-type: none"> In use: it is occupied Reserved: it is booked by an end user Not in use: it is non-occupied, thus available for use 	Discrete value (string/text) expressed as in use, reserved or not in use
3	Recharging and refuelling infrastructure of alternative fuels	Dynamic	Price	Ad hoc price	Station	<p>For recharging infrastructure, indication of the end user price for recharging on an ad hoc basis, including all applicable price components. These must be indicated and expressed in national currency per kWh, national currency/min, or national currency/session. Any other price component that may apply in addition must be equally indicated.</p> <p>For refuelling infrastructure, indication of the end user price for refuelling on an ad hoc basis, expressed in national currency per kg of fuel.</p>	Discrete/numeric value (combination of string/text and numeric) in list format expressed for recharging infrastructure in national currency per kWh, national currency/min, or national currency/session and for refuelling infrastructure in national currency per kg of fuel. National currencies shall

							be expressed according to ISO 4217, which establishes internationally recognised codes for the representation of currencies.
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Table G – Further dynamic data for publicly accessible hydrogen refuelling infrastructure							
Number	Type of alternative fuels infrastructure	Type of data	Data category	Data type	Data level	Description	Data formal
1	Hydrogen refuelling infrastructure	Dynamic	Hydrogen delivery	Limited amount of hydrogen available	Station	Indication about limited amount of hydrogen available (less than 100 kg) in the refuelling station (yes/no)	Discrete value (string/text)