

Guideline for the provision of recharging infrastructure data in accordance with the AFIR Regulation

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Federal Ministry
of Transport

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1 About this document

This document explains the handling of Article 20 of the Alternative Fuels Infrastructure Regulation (EU) 2023/1804 ¹, or AFIR for short, in Germany.

According to the AFIR Regulation, operators or owners of publicly accessible recharging points and refuelling points for alternative fuels are required to provide static and dynamic data of their charging and refuelling facilities free of charge². To do this, the operators or owners must set up an application programming interface (API) that allows non-discriminatory and unrestricted access to the required data.³ Access to these APIs shall be provided in accordance with Article 20(3) of Regulation (EU) 2023/1804 on the European National Access Points. In Germany, this means provision via Mobilithek, which is operated by the Federal Ministry of Digital and Transport (BMDV). The Mobilithek can be reached at <https://mobilithek.info>.

The modalities for providing the static and dynamic data for the alternative fuel recharging points via Mobilithek are explained below. The provision of corresponding data for refueling points is covered in a separate document.

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R1804>

² See Article 20(2) of Regulation (EU) 2023/1804

³ See Article 20(3) of Regulation (EU) 2023/1804

2 File Format, Data Elements, Refresh Rates

In accordance with Article 1 of the Implementing Regulation (EU) 2025/655⁴ laying down rules for the application of Regulation (EU) 2023/1804 as regards specifications and procedures related to the availability and accessibility of data on alternative fuels infrastructure, the data format shall be DATEX II⁵.

The general DATEX II data model was specified as the so-called German DATEX II-AFIR Recharging Profile for the data provision of AFIR-relevant data for the recharging infrastructure in Germany. In particular, this profile describes the syntax and semantics of the data elements to be supplied in accordance with the Annex to the Implementing Regulation. Since the standard currently published by CEN⁶ does not cover all data elements according to AFIR, a so-called Level-C extension of the standard was developed and introduced as a national data profile. This data model will be incorporated into the European standardization at CEN and will become the basis for the further development of the next version of the CEN standard 16157-10.

The profile consists of two parts ("publications"), one for static and one for dynamic data. Accordingly, two separate data offers must also be created on Mobilithek:

1. Static publication (also known as a static model part)

EnergyInfrastructureTablePublication

Here, the structural/operational and (environmental) technical details of all charging stations and points are described, embedded in a hierarchy of charging hub, charging station, charging point and plug (see next chapter). This information must be updated in the event of changes, for example when new charging points are added or there are conversions.

The Implementing Regulation requires an update "no later than 24 hours after a change".

2. Dynamic publication (also referred to as dynamic model part)

EnergyInfrastructureStatusPublication

Related to and with reference to the static elements defined above, occupancy and reservation information, errors and failures or changes in the AdHoc price are transmitted here. Accordingly, a significantly higher update rate is to be expected.

The Implementing Regulation requires an update "no later than 1 minute after a change".

The required data elements for both types of publication are described in more detail in the profile documentation⁷. The documentation also contains schema and sample files for using the profile.

⁴ https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202500655

⁵ <https://datex2.eu/>

⁶ DIN CEN/TS 16157-10:2022-05: Intelligent Transport Systems - DATEX-II Data Exchange Specifications for Traffic Management and Traffic Information - Part 10: Energy Infrastructure Publication

⁷ <https://github.com/MobilithekDE/AFIR-DATEX-II-Recharging-Profil>

3 Registration as a data-providing organisation

Please note that you must be registered with Mobilithek with your organisation before creating your data offers. Find more information on this on the [Mobilithek help page](#) under "Organisations". Please note that during registration, be sure to indicate in the "Data provider" section that your organization would also like to provide data itself.

The definition of such a data-providing organization has two implications:

- Once you have published your data offers, your organisation name will be visible to all authorized users of Mobilithek under the "Data provider" field.
- The organisation is responsible for the provision of data and is available for any queries from data users or the administrators of Mobilithek.

In the narrower sense of the AFIR Regulation, the operator or owner of accessible charging points can be named as an organisation. However, data can also be provided by proxies, e.g. IT service providers acting on behalf of such operators. In this case, the proxy can offer the data of several operators or owners under the same organisation and even under the same data offers. In this context, a separate metadata "sovereign" must indicate for which operators or owners the proxy is acting (see section 4, section 16).

4 Creation and management of a data offer

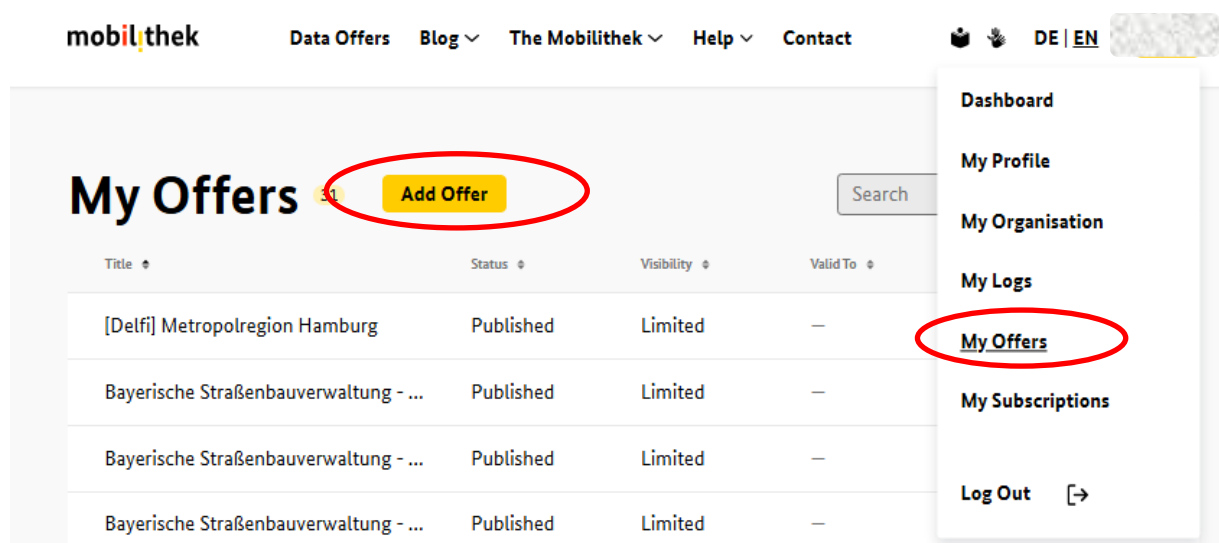
4.1 Creation of a data offer on Mobilithek

The following section specifies the information for providing a data offer on Mobilithek. The section thus complements the section "Providing Data Offers" on [Mobilithek's help page](#).

Please note that you must create two data offers – for static and dynamic data, see also section 2.

To create a new offer, please complete the following steps after registering at Mobilithek:

1. Open the "My Offers" page.



2. Click on "Add Offer". The Add Offer dialog opens.

General information

3. Enter a **title** for your data offer. Please use the following convention:
 - For static data: "AFIR-recharging-stat-<name of your company>" (e.g. "AFIR-recharging-stat-CPO XYZ")
 - For dynamic data: "AFIR-recharging-dyn-<name of your company>" (e.g. "AFIR-recharging-dyn-CPO XYZ")
4. Check the "**Brokered**" selection box.
5. For **Visibility**, select "**Public**". Public data services are visible to all users.
6. In the **description**, please enter any details of your data offer that may be useful for data users. For example, you could enter here whether a single hub, a state-wide or Germany-wide network of hubs is published here.

7. Select "Filling and charging stations" as the subject area. Please **mark the following option** as topic area details:
 - For static data: "Locations and conditions of charging stations"
 - For dynamic data: "Availability of charging stations for electric vehicles" and "Prices of ad-hoc recharging /refuelling"
8. The appropriate **OpenData category** is "Transport".
9. Please leave **HVD Category** and **keywords** blank.
10. At **Mode of transport**, you can choose whether your recharging infrastructure is designed for specific means of transport, such as cars or trucks.
11. At **Network coverage**, you choose the types of roads (e.g. motorways) where your recharging infrastructure is located. If this is outside the street space, please take "Other".
12. At **Language**, you may specify that free text information contained in your content data is described in German and/or English.
13. At **Quality Description**, you may enter quality measurements or statements about your data as free text, e.g. correctness checks carried out.

Temporal Information

No information required.

Geographic Information

14. Select "WGS84" and "OpenLR" if necessary⁸.
15. For **Spatial Coverage**, specify the cities or districts in which your recharging infrastructure is located. The NUTS codes are generated automatically.

Responsibilities

16. By default, the **Sovereign** is assigned the name of your organization. If you act as a proxy for operators or owners of recharging points (see section 3), please overwrite this field and enter the names of these operators or owners here instead.
17. Select the responsible **Contact Person**. This is one of the members of your organisation who holds the Offer Manager role. This contact person can be reached via Mobilithek's contact form if users

⁸ In accordance with the specifications of the DATEX II-AFIR profile, see documentation, section 2.4.9

have questions about the data. The name and email address of this contact person will not be published.

Reference Files and Examples

No action required.

Content data

18. Select **"JSON"** as the syntax and **"DATEX II V3"** as the data model.
19. The **Data package retention time** field remains blank.
20. At **Support Delta Delivery**, select the following:
 - For static data: deactivate (do not check the box)
 - For dynamic data: activate (check the box)
21. As **Communication method**, take "Push".
22. For **Update Interval**, take "On occurrence". Please note the maximum refresh intervals for your data specified by the Implementing Regulation, see Section 2.
23. For **Access Protocol**, take HTTPS.
24. For **Schema**, select the following:
 - For static data: AFIR-Recharging-Static-01-00-00
 - For dynamic data: AFIR-Recharging-Dynamic-01-00-00

Terms of use

25. Leave **Offer valid from/to** blank, unless you can foresee that you will only offer the data for a certain period of time, for example because contracts end on a certain date.
26. Set the **Type of terms of use** to **"License, free use/open data"**.
27. Set the **Standard license** to "Creative Commons CC-Zero License".⁹
28. Leave the **Instructions for use** and **Source note** blank, unless you wish to provide further special notices in relation to the terms of use.

⁹ The AFIR Regulation stipulates that data on alternative fuels infrastructure is made available as open data via the National Access Point. The data must be available free of charge and the application programming interface (API) must provide free and unrestricted access to the data. Against this background, the use of the CC0 license is recommended.

29. The **Approval required** check mark allows you to control whether data interested parties can access your data immediately or only after your approval. Since the data must be freely and unrestrictedly available, the check mark must be removed¹⁰.

Declarations

30. Please read the statement under "I hereby confirm..." and confirm it. You may disregard the remaining declarations.
31. By clicking on "**Publish Offer**", your offer will be saved and published. It is now searchable for Mobilithek users.

Declarations ⓘ

I hereby confirm that the data provided are free of any personal
☒ information and third party rights or that I have the corresponding
consents that allow a publication.

☐ This is a data offer according to the German Passenger Transportation Act
(Personenbeförderungsgesetz) §3a. ⓘ

☐ This is a data offer according to the German Act on Intelligent Transport
Systems in Road Traffic and their Interfaces to other Transport Modes
(IVSG) or according to the Delegated Regulations of the ITS Directive of
the EU.

☐ This is a data offer in connection with the mFUND funding programme.

☐ This is a data offering according to Section 12a of the German E-
Government Act (E-Government-Gesetz).

☐ This is a data offer according to the German Act governing the use of
public sector data (Data Use Act – DUA).

Publish Offer **Save** **Discard Changes**

¹⁰ For the modalities of data retrieval, please refer to [Mobilithek's help page](#) under "Obtaining data and subscriptions".

4.2 Linking static and dynamic data offers

As mentioned in Section 2, you must create two separate offers for static and dynamic data. To allow data users to establish a unique reference between these two offers, provide the following additional metadata.

1. Remember the ID of the two data offers that you want to reference together. Firstly, note the ID of the static data supply, and secondly, the ID of the dynamic data supply. To do this, go to the "Offer Details" page. You can access this page via the path 'My offers' → (select offer) → click on offer title. Write down the number under **ID**.
2. On the same page, go to 'More actions' → '**Add reference**'.
3. Enter "supplements" as the **type of reference**, as well as the ID of the related (i.e. the other) offer. So if you are currently in the mask for the static data offer, enter the ID of the dynamic offer here, and vice versa.
4. Save your entries.
5. Repeat steps 2 to 4 in the "opposite direction".

4.3 Management of a data offer at Mobilithek

If you change the offer description, you must check the fields and information mentioned in section 4.1 and adjust them if necessary. This could be the case, for example, if the geographical reference of the data or the name of the data owner changes.

The change of an offer is described on the [Mobilithek help page](#), under "Can I change my data offer?".

5 Implementation of the IT interface

As an IT prerequisite for data delivery to Mobilithek, you will implement a data provider interface and secure data communication by means of client authentication.

Further details and notes for your implementation can be found in the Technical Interface Description¹¹.

You can also apply OpenAPI to generate code for the data provision via the API interface. Find more information on this on the [Mobilithek help page](#) under “Providing Data Offers”/”How can I use OpenAPI to generate code for data provision via the API interface for a brokered data offer?”.

¹¹ <https://mobilithek.info/cms/downloads/tssb-en>