EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ENERGY
DIRECTORATE-GENERAL FOR CLIMATE ACTION

# Reporting Guidelines
# Dataflow 2: Progress towards targets RES
# &
# Dataflow 16: Additional reporting obligations RES

**under Regulation (EU) 2018/1999 on Governance of the Energy Union and Climate Action**
**Implementing Regulation 2022/2299**
**Annex 2 & 16**

Disclaimer: these draft guidelines have been distributed for information in the context of the 5 November meeting of Energy Union Committee – Working Group I & Climate Change Committee – Working Groups I, II & Adaptation. A final version of the guidelines is to follow.



Prepared by the European Commission and European Environment Agency, with support from the European Topic Centre on Climate change Mitigation and Energy.

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European Environment Agency

CONTENTS

# 1. INTRODUCTION

## 1.1. This document

From 2023, reporting on 'Progress towards targets in renewable energy' & 'Additional reporting obligations in the area of renewable energy' is part of the national energy and climate progress reports (Article 17) under Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.

This document provides both technical and thematic guidance for the relevant reporting obligation and the use if the e-platform. The purpose of the guidelines is to support Member States in reporting this information by outlining:

- How to utilise the reporting platform
- Background information and examples for the information required,
    - *Technical guidelines* – facilitating how to report.
    - *Thematic guidelines* – facilitating what to report.
- Information on finalising reporting,
- The quality checks carried out.

Ultimately, the goal is to improve the quality of the information reported by Member States and disseminated through the e-platform, by making it more timely, transparent, complete, consistent, comparable, coherent and accurate.

These reporting guidelines has been prepared by the European Commission, the EEA and its ETC-CM to provide guidance and support to the Member States for this transition to the new reporting obligation and reporting tool.

Some additional and background information is annexed to this document:

- Annex 1: Reporting roles.

## 1.2. Legal background

According to Article 17(1) of the Regulation (EU) 2018/1999 (Governance Regulation), by 15 March 2023, and every two years thereafter, each Member State shall report to the Commission on the status of implementation of its integrated national energy and climate plan (NECP) by means of an integrated national energy and climate progress report (NECPR) covering all five dimensions of the Energy Union.

The recently adopted Commission Implementing Regulation (EU) 2022/2299 'Laying down rules for the application of Regulation (EU) 2018/1999 of the European Parliament and of the Council as regards the structure, format, technical details and process for the integrated national energy and climate progress identifies all the reporting requirements within 23 Annexes.

## 1.3. Overall process of reporting

Each Member State shall submit their NECPR by **15 March 2023**, and every two years thereafter.

The NECPR will be submitted through the e-platform established by the Commission ([1]). Different elements of the progress reporting will be submitted through one of the following systems: Reportnet 3 and ReportENER.

This reporting obligation will be reported in Reportnet.

## 1.4. Pre-filling, post-filling, pre-loading

### *1.4.1. Colour-coding*

The Implementing Regulation uses colour-coding for the fields in each table. The below table indicates the meaning of the different colours.

| | |
|---|---|
| Descriptive text (white/or light grey | Text describing the purpose of the table / fields (not to be filled by MS) |
| N/A | Not applicable (not to be filled by MS) |
| To be filled in by MS | Information to be completed by MS: can be mandatory (if applicable/available) or voluntary |
| Pre-filling | Information that is already provided by the MS to the Commission through another reporting exercise that finishes substantially before the deadline for the progress report, and if complete, fully covers the requirements of the NECPR, or that is determined by EU legislation. Therefore, MS will not submit the information again as part of the NECPR.<br><br>Data cannot be altered in the progress reporting, but through the primary process established for the source data.<br><br>**ReportNet specific**<br>Prefilled data will not appear directly in the reporting system, however, information on prefilled data will be accessible in the relevant export templates. |
| Post-filling | Information that is already provided by the MS to the Commission through another reporting exercise, ongoing in parallel to the progress reporting, and if complete, fully covers the requirements of the NECPR. Therefore, MS will not submit the information again as part of the NECPR.<br><br>Data cannot be altered in the progress reporting, but through the primary process established for the source data.<br><br>**ReportNet specific**<br>Post-filled data will not appear directly in the reporting system, however, information on where post-filled data is supposed to be provided will be visible in the relevant export templates. Once the QA/QC process is completed for the other reporting exercise, data will be stored and accessed together as one cohesive set of data. |

([1]) Article 28 of the Regulation (EU)2018/1999 on the Governance of the Energy Union and the Climate change. E-platform available at: Reporting system for EU countries | European Commission (europa.eu).

### *1.4.2. The process for pre-filling, pre-loading and post-filling of data*

The following tables of these dataflows rely (partially) on data that is either pre-filled, or post-filled.

| **Table** | **Type of filling** | **Source(s) of data** |
|---|---|---|
| Annex 2, table 1 to 5 | Pre-filling | Eurostat SHARES data |
| Annex 2, table 6 | Post-filling | Eurostat biomass questionnaire |
| Annex 16, table 9 | Pre-filling | Eurostat energy balances |

In the paragraphs below, the process for integrating this data in the progress report is described.

#### 1.4.2.1. Eurostat SHARES data

The SHARES tool ([2]) focuses on the harmonised calculation of the share of energy from renewable sources. The main benefit derived from the SHARES tool is that Member States are engaged to go through the exact same method in order to calculate the desired values. Its application prevents any irregularities from varying parameters and rules used in different calculation methods. Results of the completed SHARES exercises are available in the dataset [code: nrg_ind_ren] and in datasets on SHARES.

The Commission plans to pre-fill relevant tables in the e-platform in February in the year the NECPR is due (year X, first reporting in 2023), with data that were disseminated by Eurostat by the end of January in year X. In general this means data collections in the energy domain with mandatory reporting deadlines by the end of November (year X-1). To enable pre-filling, reporting countries need to respect mandatory deadlines and ensure high quality of reported statistics, with no gaps and no errors in the reported data.

It is preferred to that data is prepared and altered through the primary process established for the source data. However, it should be noted that the SHARES tool does not replace reporting obligations stated in Governance Regulation — it only assists in reporting, and data that is not pre-filled must be completed by the Member State directly in the e-platform.

### *1.4.3. Eurostat biomass questionnaire*

Reporting countries should transmit energy data as specified in Annex B of Regulation (EC) No 1099/2008 on energy statistics. The latest version of annual energy questionnaires that should be used for official data transmissions and accompanying reporting instructions can be found at: Annual - Energy - Eurostat (europa.eu).

The Commission plans to post-fill relevant tables in the e-platform in the year the NECPR is due (year X, first reporting in 2023), with data disseminated by Eurostat. In general this

([2]) See SHARES (Renewables) - Energy - Eurostat (europa.eu) for more information.

means data collections in the energy domain with mandatory reporting deadlines by the end of November (year X-1). To enable post-filling, reporting countries need to respect mandatory deadlines and ensure high quality of reported statistics, with no gaps and no errors in the reported data.

Data cannot be altered in the progress reporting, but through the primary process established for the source data.

If the data is submitted by the Member State through the primary process, the reporting obligation under Article 17 will also be considered fulfilled.

1.4.3.1. Eurostat energy balances

Reporting countries should transmit energy data as specified in Annex B of Regulation (EC) No 1099/2008 on energy statistics. The latest version of annual energy questionnaires that should be used for official data transmissions and accompanying reporting instructions can be found at: Annual - Energy - Eurostat (europa.eu).

The Commission plans to pre-fill relevant tables in the e-platform in February in the year the NECPR is due (year X, first reporting in 2023), with data that were disseminated by Eurostat by the end of January in year X. In general this means data collections in the energy domain with mandatory reporting deadlines by the end of November (year X-1). To enable pre-filling, reporting countries need to respect mandatory deadlines and ensure high quality of reported statistics, with no gaps and no errors in the reported data.

Data cannot be altered in the progress reporting, but through the primary process established for the source data.

If the data is submitted by the Member State through the primary process, the reporting obligation under Article 17 will also be considered fulfilled.

## 1.5. Dynamic references to years

Many tables in the annexes to the Implementing Regulation make dynamic references to years, which depend on the year of reporting.

The table below summarizes the dynamic references used in the annexes, and the years they refer to in the first two reporting exercises in 2023 and 2025.

Note: in the e-platform, the years themselves, rather than the dynamic references will be displayed.

**For the first reporting cycle in 2023, X-3 (i.e., 2020) reporting is not required but can be included by MS, where available and applicable.**

| Dynamic reference | Respective year in first reporting (2023) | Respective year in second reporting (2025) |
|---|---|---|
| X | 2023 | 2025 |
| X-1 | 2022 | 2024 |
| X-2 | 2021 | 2023 |
| X-3 | 2020 | 2022 |
| | | |
| t | 2025 | 2030 |

| | | |
|---|---|---|
| t+5 | 2030 | 2035 |
| t+10 | 2035 | 2040 |
| t+15 | 2040 | 2045 |
| t+20 | 2045 | 2050 |
| t+25 | 2050 | 2055 |

# 2. REPORTNET 3

## 2.1. Intro

The Governance Regulation specifies in Article 28 that the e-platform should be used for reporting on all dimensions of the Energy Union by Member States and the Commission, assisted by the European Environment Agency.

The e-platform consists of different elements, notably “ReportNet 3: and “ReportENER”. For the dataflows described in this document, ReportNet 3 is used.

Reportnet 3 (https://reportnet.europa.eu/) is the next generation platform for reporting environmental data to the EEA that hosts a number of reporting tasks for the European Commission. Reportnet 3 is a centralized e-Reporting platform, aiming at simplifying and streamlining the data flow steps across all environmental domains. The system acts as a one-stop-shop for all involved stakeholders.


## 2.2. Logging in

User authentication is carried out on the **EU login** platform, hence you need to have an EU login account before you can be authenticated for Reportnet 3 access.

**How to log in**. In this guide you will find the steps for the following:

A. Regular login process: Where you already have an EU account and you have logged on to Reportnet 3 before,
B. Creating an EU login account: Where you do not have an EU account,
C. Logging on for the first time: Where you have an EU account, but you have not logged on to Reportnet 3 before.

For a visual guide, please check this document.

### A. Regular login to Reportnet 3 (when you have an EU login account)

1. Navigate to Reportnet 3 and click on the “Login” button at the top right,
2. You will be redirected to authenticate using EU login,
3. With a successful login you will be redirected back to Reportnet 3,
4. You will see the dataflows you have authorisation to access.

### B. Creating an EU login

EU Login (https://webgate.ec.europa.eu/cas) is the entry gate to sign in to the Reportnet 3 platform as well as different European Commission services and/or other systems. EU

Login verifies your identity and allows recovering your personal settings, history and access rights in a secure way.

1. If you do not have EU account with the entered email, you will see the message ‘User not found’ and you will need to create an account,
2. Click on the "Create an account" link on the EU Login sign-in page,
3. Fill in the provided form with your personal details,
4. If the form is correctly filled in, an e-mail is sent to the address you provided in order to verify that you have access to it. If you cannot find the e-mail, check your spam or junk folder,
5. Click the link in the e-mail or copy/paste it in the address bar of your browser,
6. Select and confirm a password and click on "Submit",
7. You now have an EU Login account and can proceed with the login for Reportnet 3 from the home page,
8. As this is the first time you will login in to the Reportnet 3 platform, there are some additional steps to follow (next section) after you have been authenticated.

**C. First time login to Reportnet 3.0**

1. If this is your first login to Reportnet 3, after you have been authenticated by EU login, you will be asked to fill a form. Username should just be your email address,
2. You are now logged in. However, you will not see any dataflows the first time you log in. You will be sent an email when the reporting is open for your credentials.

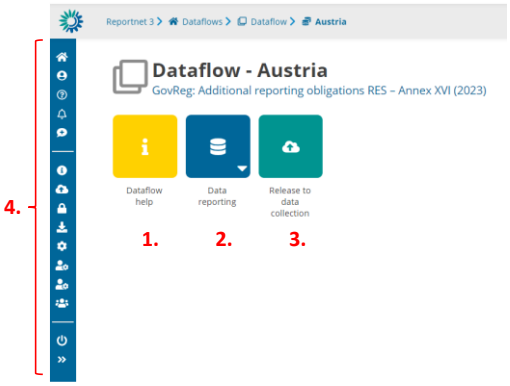
**If you need support, please contact the EEA:**

- Governance Regulation helpdesk: govreg@eea.europa.eu
- Reportnet helpdesk: helpdesk@reportnet.europa.eu

## 2.3. Dataflow overview

Once you are successfully logged-in to Reportnet 3 you will see the **dataflows assigned to you**. If this is your only reporting obligation in Reportnet, you will only see this obligation. If you are a reporting on multiple obligations, they should all appear here.

For historic dataflows, please note that these will still be visible in Reportnet. All dataflows will be labelled with the relevant reporting year (i.e., the first submission will be 2023). Furthermore, all dataflows in grey are closed.




Once selecting the relevant dataflow, you will see the **reporting window** for the dataflow.

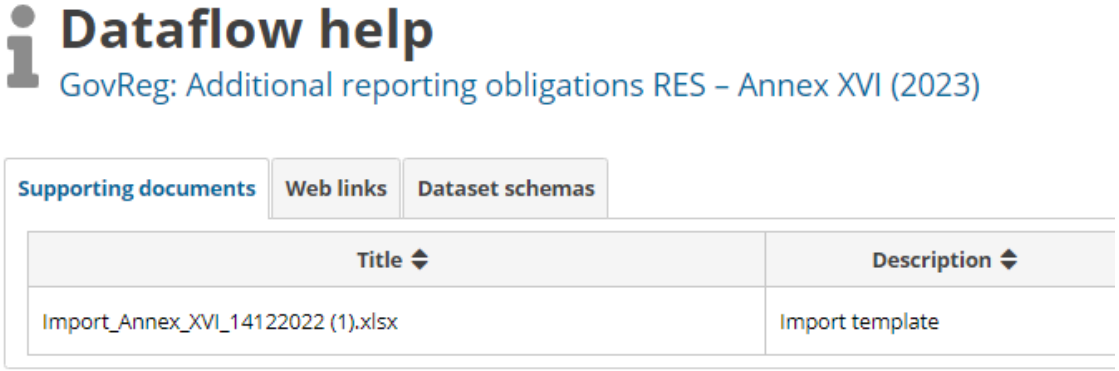
The reporting window is made up of several key elements:

1. Dataflow help,
2. Data schema(s),
3. Data submission,
4. Navigation bar.

**Dataflow help** is presented on the far left (in yellow), and provides relevant helpful documentation, including the present guidelines.

Inside dataflow help, useful documentation will be made available, including:

- **Supporting documents:**
  - These guidelines,
  - Excel import template.
- **Web links**:
  - Video trainings (technical and thematic) via YouTube,
  - Legislation,
  - Other possible guidance of relevance.




**Data schemas** (in blue) are the location where data can be reported. Please see Section 2.1 for detailed guidance on how to report. Different categories exist depending on the dataflow. For this dataflow the relevant data schemas include:

- **Data**: where reported data is provided,
- **Attachments**: where additional information (technical report and other supporting documentation) can be attached,

**Data submission features** (in green) are located on the right in the reporting window. For more information, please see Section 0. These include:

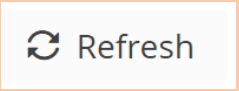
- **Release to data collection**: to submit your final reported information.
- **Confirmation receipt**: is available only after the data is submitted.



The blue **navigation bar** on the left provides many key pieces of information for reporters. Important icons include:

1. **Help**: which explains the main elements at each level.
2. **Notifications**: stores and monitors what happens in the dataflow, downloaded files are also available here.

**If the system doesn't react, click 'refresh' to reload page**

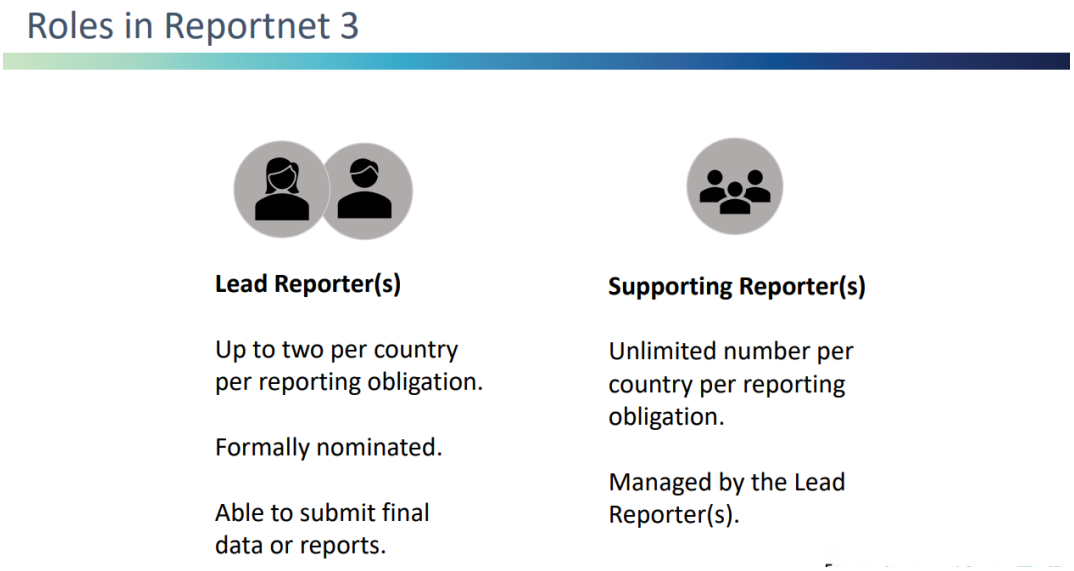



## 2.4. Organizing the reporting network

Lead reporters are officially nominated and are the ones that can submit data. They are also responsible for adding and managing supporting reporters (see guidance below).

Supporting reporters can upload and modify data in the system but cannot add other reporters or officially submit data.

For more information on the roles in the reporting process, please see the horizontal document on this topic available on CIRCABC and Eionet.




A lead reporter can nominate as many supporting reporters as is necessary. This is achieved by selecting the **'manage reporters'** icon in the blue bar.

Lead reporters are responsible to maintain the reporting network.

## 2.5. Technical details of reporting

This section provides the technical guidance required for reporting in Reportnet 3. This includes:

- Use of import/export templates,
- Use of Reportnet tabular data view.

To ensure that Member States can report as easily as possible, the recommended workflow for these dataflows is as follows.

1. Download import and/or export templates,
2. Input data in the template in excel,
3. Upload data using the either template to Reportnet,
4. Validate data (see Section 0),
5. Edit data in Reportnet (tabular data) only for minor updates. Align data in input template, by downloading the export template,
6. Submit data when final data is ready.

**Video trainings on the technical details of reporting are available through the EEA's YouTube channel: Reportnet 3 tutorials**

### *2.5.1. Use of import templates*

A dedicated Excel import file has been prepared for this dataflow, to ensure the ease-of-use for Member States and is the recommended method for filling in this dataflow. It is important to note that if this method is used, **the Excel document** utilised should **always be updated** to correspond to the reported data on Reportnet. This is to ensure that data is not accidentally overwritten.

**Note: The import and export templates for this dataflow are both useable as import templates (see Section 2.5.2).**

#### 2.5.1.1. Import template - downloading

The Excel import template can be **downloaded within the dataflow help icon** in the dataflow's reporting window. The files are called Import_Template_Annex_II and Import_Template_Annex_XVI for Annex II and Annex XVI reporting respectively.


#### 2.5.1.2. Overview of Excel import template

The document is designed to look and feel similar to the legislation you are accustomed to. The tables are grouped into worksheets, to make all the reporting information easily

accessible. **Some tables have been modified**, or **some additional worksheets have been included** to provide context or more structured information. These cases are justified and explained in detail in Section 2.1.

The template additionally contains an **instructions page** which provides:

- Basic instructions on understanding the dataflow,
- Links to guidance,
- Contents of the spreadsheet,
- Counter of answers,
- Information on pre-filling / post-filling.

This Excel import template includes the instructions sheet and a worksheet for each table to be reported:

**Annex II**:

**Table 1** Sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources
**Table 2** Total installed capacity from each renewable energy technology
**Table 3** Total actual contribution (gross electricity generation) from each renewable energy technology in electricity
**Table 4** Total actual contribution (gross final energy consumption) from each renewable energy technology in heating and cooling
**Table 5** Total actual contribution (gross final energy consumption) from each renewable energy technology in the transport sector
**Table 6** Biomass supply for energy use
**Table 7** Other national trajectories and objectives
**Table 8** Assessment of the support for electricity from renewable sources pursuant to Article 6(4) of Directive (EU) 2018/2001

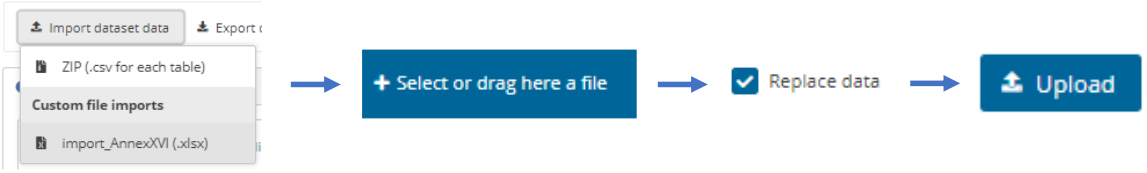
**Annex XVI**:

**Table 1** Functioning of the system of guarantees of origin
**Table 2** Changes in commodity prices and land use associated with use of biomass
**Table 3** Estimated excess production of energy from renewable sources
**Table 4** Technological development and deployment of biofuels made from feedstocks
**Table 5** Estimated impact of the production or use of biofuels, bioliquids and biomass fuels
**Table 6** Observed cases of fraud in the chain of custody of biofuels, bioliquids and biomass fuels
**Table 7** Share of biodegradable waste in waste-to-energy plants
**Table 8** Electricity and heat generation from renewable energy in buildings
**Table 9** The amount of solid biomass used for energy production

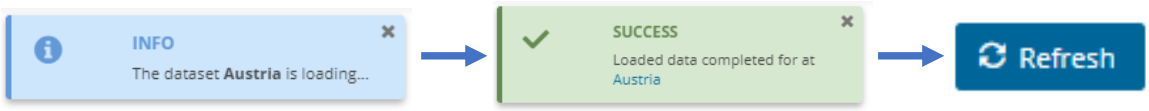
### 2.5.1.3. Importing data into Reportnet


To upload your data, go into the **data reporting schema** in your Reportnet dataflow.

Click on **Import dataset data** (do not confuse with *Import table data)* and select the button **Import_AnnexII (.xlsx)** or **Import_AnnexXVI (.xlsx)**. You will be prompted to select or drag your Excel template and click **Upload**. If you are re-uploading an Excel file, it is recommended to check the *Replace data* tickbox, to remove the old data and avoid duplication of records.




The file will be uploaded, and you will see a **blue info notification** on the top-right corner informing you the dataset is loading. Now the system will take the data from the Excel templates and manipulate it, so it fits the structure of the dataflow in Reportnet. Once the dataset has been loaded, you will see a **green success notification** (this should take a few minutes). Once the data is successfully loaded in, click the button **Refresh** in the top-right corner to display your data.

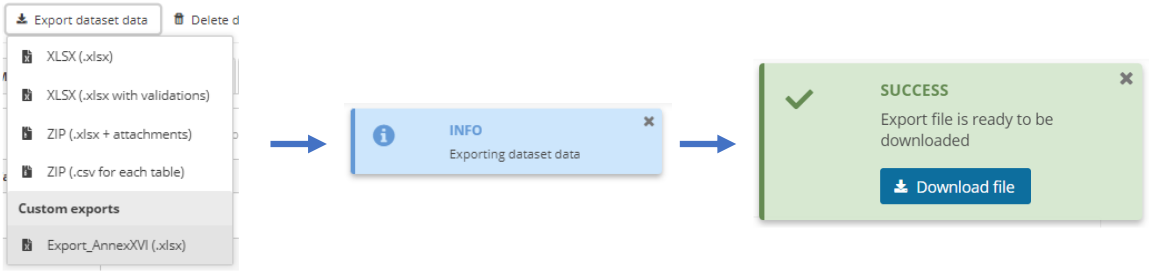



### *2.5.2. Special workflow with export templates*

The RES dataflows (Annex II and Annex XVI) include pre-filled and post-filled data information, that is not directly reported via Reportnet, but via other platforms. Therefore, a special workflow has been created to allow access/use of this information in the most efficient means for Member States in their reporting obligations.

Excel export templates can be downloaded from Reportnet to include the pre-filled information that is useful for reporting. To download the Excel export template, enter the data reporting schema and click on the **Export dataset data** icon. select the 'custom export' **Export_AnnexII (.xlsx)** or **Export_AnnexXVI (.xlsx)**.

Once selected Reportnet will prepare your download, collating pre-filled data (and additional data entered into Reportnet if you have already entered/imported data). You will be prompted by a **blue information icon**. Once successful a **green success icon** will appear with a download link, click here to download your export template.




If the **green success icon disappears**, or you close it, then **the download can still be accessed under the 'notifications'** icon in the blue bar. Here you will find a success notification titled "External reporting export file generated successfully", with a download file action to the right. This is the link that allows you to download the export file.

This document will look nearly identical to the import template (see Section 2.5.1). The main difference is that cells linked to pre-filling, post-filling, and aggregations are now colour coded according to the legislation (see Section 1.4.1).

You may now edit the data linked to green cells and re-import with the export template into Reportnet (see Section 2.5.1).

**It is <u>not possible</u> to import pre-filled or post-filled data into Reportnet**. If there are issues with the non-Reportnet data, please follow up with the relevant data owner (see Section 1.4).

### *2.5.3. Use of Reportnet tabular data view*

Once inside a data schema, you will have access to the **tabular data format** of your data within Reportnet 3. This is how your data is processed in the system and released into a database. The data schema is organised by table, which can be selected at the top of the data table.

**Data can be manually edited** within Reportnet by clicking on the relevant cell. However, it is highly recommended that if edits are made in Reportnet directly that the accompanying Excel import template is updated accordingly. This can be achieved via utilising the export functionality (see Section 2.5.2).

Please note that this information **only includes data reported to Reportnet 3** (green cells in the legislation). Data coming from other reporting obligations (i.e., pre-filled / post-filled / aggregated) will not be displayed here. On how to access this data see Section 2.5.2.

For Annex II the **attachments data schema** can be used to add an attachment to this dataflow, allowing you to clarify further details on the data provided. This is a useful tool for adding information not requested within the tables. Annex XVI allows attachments for some reporting elements to provide clarity.

# 3. THEMATIC GUIDELINES FOR REPORTING – ANNEX II - REPORTING INFORMATION REQUIRED UNDER ART 2. DECARBONISATION DIMENSION - RENEWABLE ENERGY

## 3.1. Introduction

This section provides the step-by-step guidelines for reporting. This includes visual guide **of how and where** to report for Reportnet (i.e., in excel templates), as well as information on the **purpose of reporting** and guidance on **what to report**. This is structured as follows:

- Purpose,
- Guidance (screenshot and data format included),
- Good examples (where available),
- Not recommended (where available),
- Level of obligation (Mandatory, Mandatory if applicable, Mandatory if available, Voluntary).

For tables that will be pre-filled or post-filled based on other reporting sources, or for annexes that are more straightforward, simplified guidance is provided.

This section provides guidance for reporting information on the Decarbonisation dimension (Article 2), according to Annex II of the Implementing Regulation and focusing on the Member State renewable energy objective. This includes:

- Table 1: Sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources
- Table 2: Total installed capacity from each renewable energy technology
- Table 3: Total actual contribution (gross electricity generation) from each renewable energy technology in electricity
- Table 4: Total actual contribution (gross final energy consumption) from each renewable energy technology in heating and cooling
- Table 5: Total actual contribution (gross final energy consumption) from each renewable energy technology in the transport sector
- Table 6: Biomass supply for energy use
- Table 7: Other national trajectories and objectives
- Table 8: Assessment of the support for electricity from renewable sources pursuant to Article 6(4) of Directive (EU) 2018/2001

## 3.2. Annex II, Table 1: Sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources

### Guidance

Most of this section will be pre-filled based on Eurostat SHARES data when available. Details on this process can be found in the introduction of this guidelines (Section 1). Only fields that are not pre-filled are further explained.

| Reporting element | Specification | Unit | Year X-3 | Year X-2 |
|---|---|---|---|---|
| Statistical transfers / Joint projects /joint support schemes – total amount to be added – total amount to be deducted | M | ktoe | | |
| Indigenous renewable hydrogen production | | ktoe | 1. | 1. |
| Indigenous biogas production | | ktoe | 2. | 2. |
| In case one or more of the RES shares in X-3 or X-2 have fallen below the national trajectory as reported in the integrated national energy and climate plan, or the baseline share of 2020, explain the reasons for this development and information on additional measures that are planned in order to cover the gap compared to the national reference point. | Miap | 3. | | |
| Please provide information on whether the MS intends to use waste heat and waste cold for the purposes of fulfilling the H&C target (Article 23) and DH&C targets (Article 24) of REDII (pursuant to Article 23(1) of REDII) and accordingly whether the MS plans to apply target 1.1 ppt (pure RES) or 1.3 (RES + waste heat/cold). | Miap | 4. | | |
| In case the average annual increase is lower than the H&C target in Article 23 of REDII, please state the achieved level and provide reasons, including of choice of measures (pursuant to the second and third sub-paragraphs of Article 23(2) of REDII) | Miap | 5. | | |

### *3.2.1. FIELD 1: Indigenous renewable hydrogen production*

**Purpose**

The purpose of this field is for the Member State to provide the volume of indigenous renewable hydrogen production (in ktoe) in the relevant year(s).

**Guidance, including format of the data**

Data format: number (integer)

**Level of obligation:** Voluntary

### *3.2.2. FIELD 2: Indigenous biogas production*

**Purpose**

The purpose of this field is for the Member State to provide the volume of indigenous biogas production (in ktoe) in the relevant year(s).

**Guidance, including format of the data**

Data format: number (integer)

**Level of obligation:** Voluntary

### *3.2.3. FIELD 3: In case one or more of the RES shares in X-3 or X-2 have fallen below the national trajectory as reported in the integrated national energy and climate plan, or the baseline share of 2020, explain the reasons for this development and information on additional measures that are planned in order to cover the gap compared to the national reference point.*

**Purpose**

The purpose of this field is for the Member State, in the case one or more of the RES shares in X-3 or X-2 have fallen below the national trajectory as reported in the integrated national energy and climate plan, or the baseline share of 2020, MS have to explain the reasons for this development and provide information on additional measures that are planned in order to cover the gap compared to the national reference point.

**Guidance, including format of the data**

Data format: text

**Level of obligation:** Mandatory, if applicable

*3.2.4. FIELD 4: Please provide information on whether the MS intends to use waste heat and waste cold for the purposes of fulfilling the H&C target (Article 23) and DH&C targets (Article 24) of REDII (pursuant to Article 23(1) of REDII) and accordingly whether the MS plans to apply target 1.1 ppt (pure RES) or 1.3 (RES + waste heat/cold).*

**Purpose**

The purpose of this field is for the Member State to provide information on whether the MS intends to use waste heat and waste cold for the purposes of fulfilling the H&C target (Article 23) and DH&C targets (Article 24) of REDII (pursuant to Article 23(1) of REDII) and accordingly whether the MS plans to apply target 1.1 ppt (pure RES) or 1.3 (RES + waste heat/cold).

**Guidance, including format of the data**

Data format: text

**Level of obligation:** Mandatory if applicable

*3.2.5. FIELD 5: In case the average annual increase is lower than the H&C target in Article 23 of REDII, please state the achieved level and provide reasons, including of choice of measures (pursuant to the second and third sub-paragraphs of Article 23(2) of REDII).*

**Purpose**

The purpose of this field is for the Member State, in case the average annual increase is lower than the H&C target in Article 23 of REDII, to report the achieved level as a percentage and provide reasons, including of choice of measures (pursuant to the second and third sub-paragraphs of Article 23(2) of REDII).

**Guidance, including format of the data**

Data format: text

**Level of obligation:** Mandatory if applicable

## 3.3. Annex II, Table 2: Total installed capacity from each renewable energy technology

### Guidance

Most of this section will be pre-filled based on Eurostat SHARES data when available. Details on this process can be found in the introduction of this guidelines (Section 1).

| Renewable energy technology | Specification | Unit | Year X-3 | Year X-2 |
|---|---|---|---|---|
| Relevant information, in case the evolution of installed capacity has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030. | M | 1. | | |

### *3.3.1. FIELD 1: Relevant information, in case the evolution of installed capacity has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.*

#### Purpose

The purpose of this field is for the Member State to provide relevant information, in case the evolution of installed capacity has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.

#### Guidance, including format of the data

Data format: text

**Level of obligation:** Mandatory

## 3.4. Annex II, Table 3: Total actual contribution (gross electricity generation) from each renewable energy technology in electricity

### Guidance

Most of this section will be pre-filled based on Eurostat SHARES data when available. Details on this process can be found in the introduction of this guidelines (Section 1).

| Renewable energy technology | Specification | Unit | Year X -3 | Year X -2 |
|---|---|---|---|---|
| Relevant information, in case the evolution of gross electricity generation has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030. | M | 1. | | |

*3.4.1. FIELD 1: Relevant information, in case the evolution of gross electricity generation has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.*

**Purpose**

The purpose of this field is for the Member State to provide relevant information, in case the evolution of gross electricity generation has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.

**Guidance, including format of the data**

Data format: text

**Level of obligation:** Mandatory

## 3.5. Annex II, Table 4: Total actual contribution (gross final energy consumption) from each renewable energy technology in heating and cooling

**Guidance**

Most of this section will be pre-filled based on Eurostat SHARES data when available. Details on this process can be found in the introduction of this guidelines (Section 1).

| Renewable energy technology | Specification | Unit | Year X -3 | Year X -2 |
|---|---|---|---|---|
| Relevant information, in case the evolution of final energy consumption for heating and cooling has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030. | M | 1. | | |

*3.5.1. FIELD 1: Relevant information, in case the evolution of final energy consumption for heating and cooling has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.*

**Purpose**

The purpose of this field is for the Member State to provide relevant information, in case the evolution of final energy consumption for heating and cooling has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.

**Guidance, including format of the data**

Data format: text

**Level of obligation:** Mandatory

## 3.6. Annex II, Table 5: Total actual contribution (gross final energy consumption) from each renewable energy technology in the transport sector

### Guidance

Most of this section will be pre-filled based on Eurostat SHARES data when available. Details on this process can be found in the introduction of this guidelines (Section 1).

| Renewable energy technology | Specification | Volumes | | | Greenhouse saving performance [1] | | |
|---|---|---|---|---|---|---|---|
| | | Unit | X-3 | X-2 | Unit[2] | X-3 | X-2 |
| **COMPLIANT biofuels in transport** | | | | | | | |
| all compliant biofuels in all transport modes | M | ktoe | | | 1a. | 1b. | 1b. |
| Annex IX (all transport modes) | M | ktoe | | | 1a. | 1b. | 1b. |
| Of which Art. 27.2(c) - in maritime sector | M[5] | ktoe | | | 1a. | 1b. | 1b. |
| Of which Art. 27.2(c) - in aviation sector | M[5] | ktoe | | | 1a. | 1b. | 1b. |
| By feedstock (all modes) | | | | | | | |
| Part A | M | ktoe | | | 1a. | 1b. | 1b. |
| Of which Part A in maritime sector (Art. 27.2c) | M[5] | ktoe | | | 1a. | 1b. | 1b. |
| Of which Part A in aviation sector (Art. 27.2c) | M[5] | ktoe | | | 1a. | 1b. | 1b. |
| Part A by feedstock (all modes) | | | | | | | |
| (a) | M | ktoe | | | 1a. | 1b. | 1b. |
| (b) | M | ktoe | | | 1a. | 1b. | 1b. |
| (c) | M | ktoe | | | 1a. | 1b. | 1b. |
| (d) | M | ktoe | | | 1a. | 1b. | 1b. |
| (e) | M | ktoe | | | 1a. | 1b. | 1b. |
| (f) | M | ktoe | | | 1a. | 1b. | 1b. |
| (g) | M | ktoe | | | 1a. | 1b. | 1b. |
| (h) | M | ktoe | | | 1a. | 1b. | 1b. |
| (i) | M | ktoe | | | 1a. | 1b. | 1b. |
| (j) | M | ktoe | | | 1a. | 1b. | 1b. |
| (k) | M | ktoe | | | 1a. | 1b. | 1b. |
| (l) | M | ktoe | | | 1a. | 1b. | 1b. |
| (m) | M | ktoe | | | 1a. | 1b. | 1b. |
| (n) | M | ktoe | | | 1a. | 1b. | 1b. |
| (o) | M | ktoe | | | 1a. | 1b. | 1b. |
| (p) | M | ktoe | | | 1a. | 1b. | 1b. |
| (q) | M | ktoe | | | 1a. | 1b. | 1b. |
| Part B | M | ktoe | | | 1a. | 1b. | 1b. |
| Of which Part B in maritime sector (Art. 27.2c) | M[5] | ktoe | | | 1a. | 1b. | 1b. |
| Of which Part B in aviation sector (Art. 27.2c) | M[5] | ktoe | | | 1a. | 1b. | 1b. |
| Part B by feedstock (all modes) | | | | | | | |
| (a) | M | ktoe | | | 1a. | 1b. | 1b. |
| (b) | M | ktoe | | | 1a. | 1b. | 1b. |
| Article 26(1) - From food and feed crops | M | ktoe | | | 1a. | 1b. | 1b. |
| of which from **NON** high ILUC risk | M[5] | ktoe | | | 1a. | 1b. | 1b. |
| Other compliant biofuels | M | ktoe | | | 1a. | 1b. | 1b. |
| Of which in maritime sector (Art. 27.2c) | M[5] | ktoe | | | 1a. | 1b. | 1b. |
| Of which in aviation sector (Art. 27.2c) | M[5] | ktoe | | | 1a. | 1b. | 1b. |
| **Renewable electricity in the grid used in the transport sector** | | | | | | | |
| All electricity in transport | M | ktoe | | | 1a. | 1b. | 1b. |
| All electricity in road transport | M | ktoe | | | 1a. | 1b. | 1b. |
| RE in road transport | M | ktoe | | | 1a. | 1b. | 1b. |
| non-RE in road transport | M | ktoe | | | 1a. | 1b. | 1b. |
| All electricity in rail transport | M | ktoe | | | 1a. | 1b. | 1b. |
| RE in rail transport | M | ktoe | | | 1a. | 1b. | 1b. |
| non-RE in rail transport | M | ktoe | | | 1a. | 1b. | 1b. |
| All electricity in all other transport modes | M | ktoe | | | 1a. | 1b. | 1b. |
| RE in all other transport modes | M | ktoe | | | 1a. | 1b. | 1b. |
| non-RE in all other transport modes | M | ktoe | | | 1a. | 1b. | 1b. |
| Relevant information, in case the evolution of final energy consumption for transport has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030. | M | 2. | | | | | |

### *3.6.1. FIELD 1a and FIELD 1b: Greenhouse gas saving performance.*

### Purpose

The purpose of this field is for the Member State to report the greenhouse gas savings performance for the different categories of biofuels used in transport.

### Guidance, including format of the data

Unit field: text.

Member States should specify what unit is used in conjunction with the data provided in the X-3 and X-2 fields. It is recommended that data provided here has the same unit for all rows. An example of a possible unit could be kt CO2-eq.

X-3/X-2 field: number

Greenhouse saving performance has to be reported for the row "all compliant biofuels in all transport modes". Data may be reported in more detail. If more detailed information is available, but information cannot be provided because of confidentiality, Member States should include "C" for the related category.

**Level of obligation:** Mandatory

### *3.6.2. FIELD 2: Relevant information, in case the evolution of final energy consumption for transport has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.*

**Purpose**

The purpose of this field is for the Member State to provide relevant information, in case the evolution of final energy consumption for transport has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.

**Guidance, including format of the data**

Data format: text

**Level of obligation:** Mandatory

## 3.7. Annex II, Table 6: Biomass supply for energy use

**Guidance, including format of the data**

Most of this section will be post-filled based on data from the Eurostat biomass questionnaire when available. Details on this process can be found in the introduction of this guidelines (Section 1).

We encourage Member States to include, to the extent possible, data on all the mandatory reporting elements. Completeness and quality should be ensured. In the 2023 reporting round, there have been several data categories where the values for the different types of biomass within a category would not add up to the aggregated data for that category. We urge Member States to ensure consistency in reporting the values but also in using correctly and consistently the units.

| | X-3 | | | | | X-2 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Indigenous production in 1000 m3 (1) | Imports in 1000 m3 (1) | Exports in 1000 m3 (1) | Stock changes in 1000 m3 (1) | Average net calorific value (TJ/1000 m3) (2) | Indigenous production in 1000 m3 (1) | Imports in 1000 m3 (1) | Exports in 1000 m3 (1) | Stock changes in 1000 m3 (1) | Average net calorific value (TJ/1000 m3) (2) |
| Specification | M[6] | M[6] | V | V | V | M | M | V | V | V |
| For forest biomass: Description how these meet the land-use, land-use change and forestry (LULUCF) criteria of Article 29(7) of Directive (EU) 2018/2001 [5] | 1. | | | | | | | | | |
| Relevant information, in case the evolution on bioenergy supply has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030. | 2. | | | | | | | | | |

### *3.7.1. FIELD 1: For forest biomass: Description how these meet the land-use, land-use change and forestry (LULUCF) criteria of Article 29(7) of Directive (EU) 2018/2001.*

**Purpose**

For forest biomass: Description how these meet the land-use, land-use change and forestry (LULUCF) criteria of Article 29(7) of Directive (EU) 2018/2001

**Guidance, including format of the data**

Data format: text

**Level of obligation:** Mandatory

### *3.7.2. FIELD 2: Relevant information, in case the evolution on bioenergy supply has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.*

**Purpose**

The purpose of this field is for the Member State to provide relevant information, in case the evolution on bioenergy supply has an impact on the overall and sectoral trajectories for renewable energy from 2021 to 2030.

**Guidance, including format of the data**

Data format: text

**Level of obligation:** Mandatory

## 3.8. Annex II, Table 7: Other national trajectories and objectives

| Trajectory or objective | Description | Target [1] | Target year | Progress towards target/ objective | Progress Indicator (if applicable) [2] | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Name of indicator to monitor progress [3] | Unit | X-3 | X-2 |
| M:,, | M:,, | M:,, | M:,, | M:,, | M:,, | M:,, | M:,, | M:,, |
| Renewable energy use in district heating | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Renewable energy use in buildings | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Renewable energy produced by cities | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Renewable energy communities | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Renewables self-consumers | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Energy recovered from the sludge acquired through the treatment of | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Other national objective and trajectory, including sectoral and long term - 1 | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Other national objective and trajectory, including sectoral and long term - 2 | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Other national objective and trajectory, including sectoral and long term - 3 | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Other national objective and trajectory, including sectoral and long term - 4 | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Other national objective and trajectory, including sectoral and long term - 5 | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Other national objective and trajectory, including sectoral and long term - 6 | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Other national objective and trajectory, including sectoral and long term - 7 | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Other national objective and trajectory, including sectoral and long term - 8 | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Other national objective and trajectory, including sectoral and long term - 9 | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Other national objective and trajectory, including sectoral and long term - 10 | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Other national objective and trajectory, including sectoral and long term - 11 | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |
| Other national objective and trajectory, including sectoral and long term - 12 | 2. | 3. | 4. | 5. | 6a. | 6b. | 6c. | 6d. |

1.

6.

### *3.8.1. FIELD 1: Trajectory / objective*

**Purpose**

The purpose of this field is for the Member State to identify the other national trajectory or objectives set by the Member State to increase the share of energy from renewable source in gross final consumption of energy in 2030, from 2021 onwards.

**Guidance, including format of the data**

The Member States have to integrate in their report other national trajectory and objectives, including those that are long-term and sectoral, such as:

~~The share of electricity produced from biomass without the utilisation of heat~~

- Renewable energy use in district heating
- Renewable energy use in buildings
- Renewable energy produced in cities
- Renewable energy communities
- Renewables self-consumers

- Energy recovered from the sludge acquired through the treatment of wastewater
- Other national objective and trajectory, including sectoral and long-term

The Member State have to select the categories for which a trajectory or an objective has been set at national level, different from the national contributions set in their National Energy and Climate Plan (NECP). When necessary, Member States may add more than one trajectory or objective per category (by adding additional columns).

Data format: text for *add further rows, as needed.*

**Level of obligation:** Mandatory, if applicable (i.e. Member States are required to provide the information if the relevant national objectives and targets have been set).

### *3.8.2. FIELD 2: Description*

**Purpose**

The purpose of this field is for the Member State to provide a description of the national trajectories or objectives set by the Member State to contribute to renewable energy progress.

The following questions should be answered in a short description:

- Which problem is the target/objective addressing?
- What is the aim of the target/objective?

**Guidance, including format of the data**

Each trajectory or objective should be described to allow clear understanding of its purpose and of how it will support progress in the renewable energy field.

If a reported trajectory or objective is set in a legal act (law, decree, regulation, etc.), it is good practice to report its exact name or code, preferably in English.

The Member States have to report the purpose of the legal act, and the expected impacts of the trajectory or the objective.

Data format: text.

**Good Example of description:**

**Share of renewables in heating and cooling networks in Germany**

The German Federal Government intends to achieve a further increase in the share of renewables in heating and cooling networks. According to the recast Renewable Energy Directive, the EU Member States are obliged to work towards an annual increase of 1% in the share of renewables in heating networks between 2020 and 2030 (calculated as a yearly average for the periods 2021- 2025 and 2025-2030). This ambitious goal is also enshrined in the NECP. The expected share of renewables in heating networks in 2021 is accordingly around 21%, with the figures for 2025 and 2030 being 25% and 30% respectively.

**Level of obligation:** Mandatory, if applicable (i.e. Member States are required to provide the information if the relevant national objectives and targets have been set)

### *3.8.3. FIELD 3: Target*

**Purpose**

The purpose of this field is for the Member State to capture the target for the national objective or trajectory.

**Guidance, including format of the data**

Member States have to provide a qualitative or quantitative target set for the category to contribute to renewable energy progress. For qualitative targets, a short description should be provided (as the description of the overall target will already provide sufficient information around the trajectory or objective).

In the case of multiple targets, all of them need to be reported.

Data format: text.

**Level of obligation:** Mandatory, if applicable (i.e. Member States are required to provide the information if the relevant national objectives and targets have been set).

### *3.8.4. FIELD 4: Target year*

**Purpose**

The purpose of this field is for the Member State to identify the target year by which the target must be achieved.

**Guidance, including format of the data**

Member States have to provide the target year set, if available.

Data format: number (integer).

**Level of obligation:** Mandatory, if applicable (i.e. Member States are required to provide the information if the relevant national objectives and targets have been set).

### *3.8.5. FIELD 5: Progress toward target / objective*

**Purpose**

The purpose of this field is for the Member State to capture information on the progress achieved towards the national target(s)/objective(s). The progress should clearly describe the timeframe and should refer to the most recent data available.

Progress made towards a national target/objective can be reported by providing an update on the progress made towards a specific indicator or by explaining which policies or actions have been put in place which will support the achievement of the target and how these policies and actions are performing against set milestones.

**Guidance, including format of the data**

Member States have to provide a qualitative description of the progress achieved up to date towards the national target/objective. The description should include the main policies or actions taken and milestones achieved and timeframe should be given relating to the national target/objective. Quantitative information on progress should be reported in the next field.

Data format: text.

**Level of obligation:** Mandatory, if applicable (i.e. Member States are required to provide the information if the relevant national objectives and targets have been set).

### *3.8.6. FIELD 6: Progress indicator*

**Purpose**

The purpose of this field is for the Member States to describe the indicators, if any, that a Member State has set to demonstrate progress towards achieving the national target/objective set up to support the renewable energy field, and the progress achieved towards these indicators.

**Guidance, including format of the data**

When Member States have set one or more indicators, used for monitoring progress with the target/ objective over time, they will also need to assess progress achieved against these indicators.

The 'Name of indicator to monitor progress' field (6a) requires the name of the indicator. The same indicators need to be used by Member States each year against the set national target(s)/objective(s), so that yearly progress can be measured. The "Unit" field (6b) is for Member States to specify the indicator unit (e.g., renewable energy share in the energy mix (%), renewable energy capacity installed (MW or GW), renewable energy production and consumption systems installed (number of installations or MWh), reduction in levelized cost of energy reduction in cost of renewable energy (%), etc.).

Values for multiple indicators and previous years may be reported (for the years X-2 and X-3 where X is the reporting year of the progress reporting exercise) in fields 6c and 6d.

Data format: text for *name of indicator to monitor progress* and *unit*, number (decimal) for *X-3, X-2.*

**Level of obligation:** Mandatory, if applicable (i.e. Member States are required to provide the information if the relevant national objectives and targets have been set).

## 3.9. Annex II, Table 8: Assessment of the support for electricity from renewable sources pursuant to Article 6(4) of Directive (EU) 2018/2001

### *3.9.1. FIELD 1:*

| | | |
|---|---|---|
| When applicable, provide information on the assessment of the support for electricity from renewable sources that Member States are to carry out pursuant to Article 6(4) of Directive (EU) 2018/2001[1] | $M_{iap}$ | 1. |

**Purpose**

The purpose of this field is for the Member State to report on the effectiveness of Member States' support schemes for electricity from renewable sources and their major distributive effects on different consumer groups, and on investment.

**Guidance, including format of the data**

The effect of the implemented supports for electricity from renewable sources needs to be presented in this field. The Member State will provide information on relevant policies and measures developed.

In accordance with Articles 7 to 13 of Directive 2018/2001/EU, Member States are to decide to which extent they support electricity from renewable sources which is produced in another Member State. They may also open participation in support schemes for electricity from renewable sources to producers located in other Member States.

In this field, Member States have to report the effectiveness of their support scheme, providing the information of the assessment made at least every five years. That assessment takes into account the effect of possible changes to the support schemes.

The description have to present consistent but condensed details. It is therefore recommended to make appropriate use of the references/links to direct users to documents and websites with a more detailed description of the changes implemented.

The description have to also include references to relevant PaMs set by the Member State providing support for electricity from renewable sources. PaMs have to be referred with references/links to direct users to documents and website.

Data format: text.

**Level of obligation:** Mandatory, if applicable (i.e. Member States are required to provide the information if they have set relevant policies and measures).

# 4. THEMATIC GUIDELINES FOR REPORTING – ANNEX XVI - REPORTING INFORMATION REQUIRED UNDER ART 13. ADDITIONAL REPORTING OBLIGATIONS IN THE AREA OF RENEWABLE ENERGY

## 4.1. Introduction

This section provides the step-by-step guidelines for reporting. This includes visual guide **of how and where** to report in Reportnet and the Excel template, as well as information on the **purpose of reporting** and guidance on **what to report**. This is structured as follows:

- Purpose,
- Guidance (screenshot and data format included),
- Good examples (where available),
- Not recommended (where available),
- Level of obligation (Mandatory, Mandatory if applicable, Mandatory if available, Voluntary).

For tables that will be pre-filled based on other reporting sources, or for annexes that more straightforward, simplified guidance is provided.

This section provides guidance for additional reporting obligations in the area of renewable energy (Article 13), according to Annex XVI of the Implementing Regulation. There is a section for each table. You can access the section in the guidance via the links:


- Table 1: Functioning of the system of guarantees of origin for electricity, gas and heating & cooling from RES
- Table 2: Changes in commodity prices and land use associated with use of biomass and other forms of energy from renewable sources
- Table 3: Estimated excess production of energy from renewable sources compared to the national trajectory towards the 2030 target
- Table 4: Technological development and deployment of biofuels made from feedstocks listed in Annex IX to Directive 2018/2001
- Table 5: Estimated impact of the production or use of biofuels, bioliquids and biomass fuels on biodiversity, water resources and availability, soils and air quality
- Table 6: Observed cases of fraud in the chain of custody of biofuels, bioliquids and biomass fuels
- Table 7: Share of biodegradable waste in waste-to-energy plants used for producing energy
- Table 8: Electricity and heat generation from renewable energy in buildings, including, where available, disaggregated data on energy produced, consumed and injected into the grid
- Table 9: The amount of solid biomass used for energy production

## 4.2. Annex XVI, Table 1: Functioning of the system of guarantees of origin for electricity, gas and heating & cooling from RES

The Member States have to report the functioning of the system of guarantees of origin for electricity, gas and heating and cooling from renewable sources, the levels of issuance and cancellation of guarantees of origin and the resulting annual national renewable energy consumption, as well as the measures taken to ensure the reliability and protection against fraud of the system (Annex IX of Directive 2018/1999/EU).

Member States are obliged to have established a system to issue Guarantees of Origin of both electricity, gas and heating/cooling when RES producers request them, but exceptions can apply, for e.g., supported RES production or minimum capacity limits (article 19 of RED II).

**Table 1: Functioning of the system of guarantees of origin for electricity, gas and heating & cooling from RES**

| Reporting Year (X) | 2023 |
|---|---|

| Reporting element | Specification | Unit | Year X-3 | Year X-2 |
|---|---|---|---|---|
| **Electricity** | | | | |
| Guarantees of origin – issued [1] | $M_{iap}$ | Number | 1. | |
| Guarantees of origin – canceled [2] | $M_{iap}$ | Number | | |
| Guarantees of origin - resulting annual national renewable energy consumption [3] | $M_{iap}$ | GWh | | |
| **Gas** | | | | |
| Guarantees of origin - issued | $M_{iap}$ | Number | | |
| Guarantees of origin - canceled | $M_{iap}$ | Number | | |
| Guarantees of origin - resulting annual national renewable energy consumption [4] | $M_{iap}$ | GWh | | |
| **Heating/cooling** | | | | |
| Guarantees of origin - issued | $M_{iap}$ | Number | | |
| Guarantees of origin - canceled | $M_{iap}$ | Number | | |
| Guarantees of origin - resulting annual national renewable energy consumption [4] | $M_{iap}$ | GWh | | |
| **Measures taken on Guarantees of Origin** | | | | |
| Measures taken to ensure reliability | $M_{iap}$ | n/a | 2. | |
| Measures taken to protect against fraud of the system | $M_{iap}$ | n/a | 3. | |

### *4.2.1. FIELD 1: Guaranties of origin issued, cancelled and resulting annual national renewable energy consumption for years X-3 and X-2 (electricity, gas, and heating/cooling)*

**Purpose**

The purpose of this field is for the Member State to report on quantities of guarantees of origin for energy generated from renewable energy sources for electricity, gas, and heating/cooling for the data years: X-3 and X-2.

**Guidance, including format of the data**

Member States have to indicate the details of the guarantees of origins for energy generated from renewable energy sources for electricity, gas and heating & cooling, including the following elements:

- Number of guarantees of origin **issued** for energy that is produced from renewable energy sources in the Member State during the reporting period.
- Number of guaranteed of origins **cancelled** for energy that is consumed in the Member State during the reporting period. Any **ex-domain cancellations ([3])** of guarantees of origin shall be counted towards the statistics of the country of the beneficiary for whom such GOs have been cancelled, and not of the country in which the cancellation took place.
- The resulting annual national renewable energy consumption in GWh.

For ***electricity***, the resulting annual national renewable energy consumption in reporting year Xi, $C_{RES\_(Xi)}$ is determined with the following formula:

$$C_{RES\_(Xi)} = GO_{c,RES\_(Xi)} + (C_{(Xi)} - GO_{C,RES\_(Xi)}) \times RM_{RES\_(Xi)}$$

Where:

- Xi= data year where i =-2 or i=-3
- $GO_{c,RES\_(Xi)}$ is defined as the amount of guarantees of origin cancelled, expressed in GWh, from renewable energy sources for energy that was consumed in the Member State during the year Xi
- $C_{(Xi)}$ = the total energy consumption in year Xi (in GWh)
- $RM_{RES\_(Xi)}$ = the renewable share of the residual mix (RM), as in art.2(13) of Directive 2018/2001/EU, determined for year Xi. This is important to account for consumption of energy, produced from RES, for which no guarantees of origin have been issued. As the $RM_{RES}$ is generally calculated for the a period 1st April to 31st March the following year, MS may for $RM_{RES\_(Xi)}$ use the residual mix for the period ¼ in the year $X_{(i)}$ to 31/3/ in the year $X_{(i+1)}$ . I.e. the "RM data year" is pushed by one quarter of a year.
- $C_{RES\_(Xi)}$ should include all energy from RES that has been consumed, including energy for which GOs have been issued and immediately cancelled, or supported energy for which no GOs have been issued.
-

For ***gas*** and ***heating & cooling***, the quantity of energy consumption for which the origin was proven to originate from renewable energy sources is according to footnote 4) in annex XVI of the Implementing Regulation determined as: "as the cancelled guarantees of origin for energy consumption from renewable energy sources in the reporting period + the energy consumption from renewable energy sources through other reliable tracking mechanisms([4]) that avoid double counting (which may include "the renewable share of the residual mix multiplied by the total energy consumption for the reporting period that is not covered with guarantees of origin cancellation nor other reliable tracking mechanisms")".

Using the similar approach as for electricity this can be expressed as follows in a formula:

([3]) Being the cancellation of guarantees of origin in another country than the country of consumption, which is only allowed when accepted by the Member State of destination and when the transfer of the respective guarantees of origin to the destination country is technically impossible.

([4]) This includes the Union Database as required under article 31a in Directive (EU) 2023/2413

$$C_{RES\_(Xi)} = GO_{c,RES\_(Xi)} + RTS_{c,RES\_(Xi)} + (C_{(Xi)} - GO_{C,RES\_(Xi)} - RTS_{c,RES\_(Xi)}) \times RM_{RES\_(Xi)}$$

Where:

- $C_{RES\_(Xi)}$ = The quantity of energy consumption for which the origin was proven to originate from renewable energy sources in gas or heating/cooling in year Xi
- Xi= data year where i =-2 or i=-3
- $RTS_{c,RES\_(Xi)}$ = the energy consumption from renewable energy sources proven through other reliable tracking mechanisms that prevent double counting, where such exist and are acknowledged.
- $GO_{c,RES\_(Xi)}$ is defined as the amount of guarantees of origin cancelled, expressed in GWh, from renewable energy sources for energy that was consumed in the Member State during the year Xi
- $C_{(Xi)}$ = the total energy consumption in year Xi (in GWh)
- $RM_{RES\_(Xi)}$ = the renewable share of the residual mix (RM), determined for year Xi. This is important to account for consumption of energy, produced from RES, for which no GOs have been issued. As the $RM_{RES}$ is generally calculated for the a period 1st April to 31st March the following year, MS may for $RM_{RES\_(Xi)}$ use the residual mix for the period ¼ in the year $X_{(i)}$ to 31/3/ in the year $X_{(i+1)}$ . I.e. the "RM data year" is pushed by one quarter of a year
- The intention is that $C_{RES\_(Xi)}$ includes all energy from RES that has been consumed, including energy for which GOs have been issued and immediately cancelled, or supported energy for which no GOs have been issued

Member States have to report the information for calendar years X-3 and X-2, where X is the reporting year.

Data format: number (decimal) ([5]) for *guarantees of origin issued and cancelled,* and number (decimal) for *guarantees of origin – resulting annual national renewable energy consumption.*

**Level of obligation:** Mandatory, if applicable

**Good practice**:

| | X-3 | X-2 |
|---|---|---|
| Guarantees of origin | 12500 | 12000.5 |
| RES consumption | 12.5 | 12 |
| GO Heating/cooling | NA | NA |

### *4.2.2. FIELD 2: Measures taken to ensure reliability*

**Purpose**

([5]) In case Member States have issued GOs for fractions of MWh, then these shall be accumulated to the nearest integer number of MWh

The purpose of this field is for the Member State to present measures taken by the Member State to ensure the reliability of the system of guarantees of origin for electricity, gas and heating & cooling from renewable sources. Reliability mechanisms are required according to article 19 (6) of RED II.

**Guidance, including format of the data**

Member States have to describe the measures taken to ensure the reliability of the system of guarantees of origin.

The description needs to present consistent but condensed details. It is therefore recommended to make appropriate use of references/links to documents and websites with a more detailed description of the measures implemented by submitting them as attachments or comments on the reporting platform.

If the measures taken correspond to a legal act (law, decree, regulation, etc.), it is good practice to report its full name in the national language and in English, and provide a link to the Official Journal.

Data format: text.

**Level of obligation:** Mandatory, if applicable

**Good practice:**

Example: "Guarantees of Origin issuing body ([...], electricity and gas market operator) is a member of European Association of Issuing Bodies (AIB, https://www.aib-net.org/). Therefore, all GOs issued by [...] to certify origin of electricity produced in Member State follow the harmonized EECS Rules (European Energy Certificate System) established by this association."

### *4.2.3. FIELD 3: Measures taken to protect against fraud of the system*

**Purpose**

The purpose of this field is for the Member State to present measures taken to protect against fraud of the system of guarantees of origin for electricity, gas and heating & cooling from renewable sources. Mechanisms to prevent fraud are required according to article 19 (6) of RED II.

**Guidance, including format of the data**

Member States have to describe the measures taken for protection against fraud of the system of guarantees of origin.

The description needs to present consistent but condensed details. It is therefore recommended to make appropriate use of references/links to documents and websites with a more detailed description of the measures implemented by submitting them as attachments or comments on reporting platform.

If the measures taken correspond to a legal act (law, decree, regulation, etc.), it is good practice to report its full name in the national language and in English, and provide a link to the Official Journal.

Data format: text.

**Level of obligation:** Mandatory, if applicable

**Good practice:**

Example: "AIB also establishes rules and maintains communication system and auditing process to guarantee the protection against fraud of the system. [...] and its' processes are periodically audited by professional reviewers of the AIB association."

## 4.3. Annex XVI, Table 2: Changes in commodity prices and land use associated with use of biomass and other forms of energy from renewable sources

**Table 2: Changes in commodity prices and land use associated with use of biomass and other forms of energy from renewable sources**

| Reporting element | Specification | Description | Attachments |
|---|---|---|---|
| Please report changes in commodity prices within the Member State associated with its increased use of biomass and other forms of energy from renewable sources [1] | $M_{up}$ | 1a | [Attachments can be provided in Reportnet] |
| Please report changes in land use within the Member State associated with its increased use of biomass and other forms of energy from renewable sources [2] | $M_{up}$ | 1b | [Attachments can be provided in Reportnet] |

2

### *4.3.1. FIELD 1a and FIELD 1b: Changes in commodity prices and land use*

**Purpose**

The purpose of these fields is for the Member State to report additional detailed information of the changes in commodity prices and land use within Member States due to feedstock used for bioenergy production (reported in Table 6, Annex II). The changes must be associated with an increased use by Member States of biomass and other forms of energy from renewable sources on an annual basis, as indirect land-use change is evaluated on an annual basis (see (EU) 2019/807).

**Guidance, including format of the data**

Member States have to provide a condensed description of the changes in commodity prices and land use within their territory at national level or sub-national level if applicable, due to the use of biomass and other forms of energy from renewable sources by Member States. The reporting template has split this field into two: one focused on commodity prices and one on land use, for convenience.

Changes in **commodity prices** (1a) include changes associated with:

- Shifts in prices related to food and feed crops used for bioenergy.

To determine/reduce the influence of other factors on the agriculture commodity prices dynamics, this data is to be supported by total land used to produce the feedstock (in ha), total annual yield (in tonnes), net trade balance of the feedstock (in tonnes) and share of feedstock in the net trade balance used for bioenergy for each feedstock type, including energy crops (e.g. short rotation coppice, perennial grasses etc.).

- Shifts in prices related to mounting solar panel systems on the ground.
- Shifts in prices related to increased demand for forest biomass.

To determine/reduce the influence of other factors on price dynamics of the woody biomass arising from sustainably managed forests and wood industry side streams, this data is to be supported by the annual supply of woody biomass (in tonnes, 30% dry

matter) to solid biomass plants that produce bioenergy as reported in the Annex II, Table 6. Tradeable solid biomass energy carriers (e.g. pellets, chips, biochar, charcoal etc.) annual production, production capacities and domestic use (all in tonnes and related dry matter content) are to be reported, too.

When it comes the relation between biofuel production and the changes in commodity prices, many responses in the 2023 reporting cycle mainly stated that commodity prices are determined at global level. Therefore, it was challenging to draw further conclusions. Member States are urged to provide a summary of recent commodity prices within their respective territories. It is also recommended that any price fluctuations that have been observed for specific crops are reported, as well as a short explanation or estimate on the cause of the fluctuation and the potential existence of a link to the use of biomass for energy production.

The changes in **land use** (1b) only concern changes in land used for biomass consumed for energy or ground mounted solar panel system installed on agricultural land. They do not include changes in all agricultural land. Total unutilised agricultural land as a total and percentage of the total agricultural land will complete the information on land availability and potential influence on land use change given the increased demand for biomass for non-food and feed purposes.

The description needs to present consistent but condensed details. It is therefore recommended to make appropriate use of the references/links to data sources (preferably Eurostat or national statistics). If land use change issue is flagged as important to your country, please provide direct links to documents and websites with a more detailed description of the land use changes observed and actions implemented.

If the changes correspond to a legal act (law, decree, regulation, etc.), report the full name in the national language and in English, and link to the Official Journal.

Data format: text.

It is further possible to provide relevant attachments, see Field 2.

**Level of obligation:** Mandatory, if applicable; i.e., if the MS is using biomass and/or agriculture land to produce renewable energy, verifiable by voluntary scheme

**Good practice:**

Answers should treat each relevant area (area can be a specific type of crop, ground mounted solar panels, …) individually and include concrete numbers. Land use change only refers to changes due to biomass grown/harvested for energy and ground mounted solar panels on agricultural land. Answers should be explicit and precise, but also concise. Submitting additional information as attachments on reporting platform can be very helpful in reaching this goal. If a cell is not applicable, insert X.

Example: "Changes in land use: in the case of PV, land use may decrease, and in the case of biomass use, the area may increase. We currently do not have statistical data showing a direct relationship. In total solar power plant corresponding to the below methodology 190 ha was established on arable land between January 1, 2020 and December 31, 2021. The initial data were provided by the capital and county government offices on the basis of the permits they issued between January 1, 2016 and December 31, 2021 for the utilization of

agricultural land for other purposes: the area units (total square meters) broken down into settlements with topographic numbers corresponding to the issued permits. Since there are 4 years to start the investments after the authorization and possible appeals can be expected, we therefore asked the government offices for the data for the period between January 1, 2016 and December 31, 2021. Based on the data received, the [Research centre] has provided the land parcels that were actually used for other purposes for the purpose of installing solar panels in the period between January 1, 2020 and December 31, 2021. The selections were made for the period between January 1, 2020 and December 31, 2021, based on the fact that the given plot of land was "taken out" for solar panels in the real estate register. The data does not include low-power power plants (producing electricity using solar energy and with a nominal capacity of less than 0.5 MW, as they do not require a license for other purposes to request if the farmer owner or farmer land user establishes or operates, or if a low-power power plant is established or operated on agricultural land with a maximum value of 15 AK per hectare"

## 4.4. Annex XVI, Table 3: Estimated excess production of energy from renewable sources compared to the national trajectory towards the 2030 target

**Table 3: Estimated excess production of energy from renewable sources compared to the national trajectory towards the 2030 target**

| Reporting element | Specification | Unit | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Estimated excess production resulting from domestic renewable sources (A) | $M_{iap}$ | ktoe | 1. | | | | | | | | |
| Estimated production resulting from joint projects between Member States or joint projects between Member States and third countries which counts toward the national contribution towards the 2030 target (B) | $M_{iap}$ | ktoe | | | | | | | | | |
| Estimated production resulting from joint support schemes which counts toward the national contribution towards the 2030 target (C) | $M_{iap}$ | ktoe | | | | | | | | | |
| Estimated excess production overall (excluding future statistical transfers) (=A+B+C) | $M_{iap}$ | ktoe | | | | | | | | | |
| Estimated deficit production resulting from domestic renewable sources (D) | $M_{iap}$ | ktoe | | | | | | | | | |

### *4.4.1. FIELD 1: Estimated excess / deficit production*

**Purpose**

The purpose of this field is for the Member State to report estimated excess productions of energy from renewable sources compared to the national trajectory towards the 2030 target set in the NECP).

**Guidance, including format of the data**

Member States may transfer excess production of energy from renewable sources to other Member States to ensure that their national policies and their support schemes achieve the national contributions and trajectories toward the 2030 target.

When available, Member States have to report the estimated excess production of energy from renewable sources (in thousand tonnes of oil equivalent, ktoe) resulting from:

- Domestic renewable sources
- Joint projects between Member States or joint projects between Member States and non-EU countries (which counts toward the national contribution towards the 2030 target)

- Joint support schemes (which counts toward the national contribution towards the 2030 targets)

Net trade of solid bioenergy carriers

Member States have to report the estimated production overall, that is, the total of the three previously mentioned sources, following the notification of Joint projects (article 9 –12, RED II), and joint support schemes (Article 13 RED II).

Additionally, estimated deficit production resulting from domestic renewable sources has to be reported.

All values should be in thousand tonnes of oil equivalent (ktoe) and provided for years from 2022 to 2030.

Data format: number (decimal) for values *A, B, C and A+B+C*, and negative number (decimal) for value *D*.

**Level of obligation:** Mandatory, if applicable (i.e. Member States are obliged to provide the information if they have estimated an excess / a deficit of production of energy from renewable sources)

**Good practices**:

Values are to be reported in ktoe. A, B, C and A+B+C are either 0 or positive, while D is 0 or negative. If a cell is not applicable, insert X.

| | 2022 | 2023 |
|---|---|---|
| Excess production (A) | 200 | 0 |
| Joint projects (B) | 25.3 | 0 |
| Joint support schemes (C) | 4.7 | 0 |
| Excess production overall (A+B+C) | 230 | 0 |
| Deficit production | 0 | -30.2 |

## 4.5. Annex XVI, Table 4: Technological development and deployment of biofuels made from feedstocks listed in Annex IX to Directive 2018/2001

Table 4: Technological development and deployment of biofuels made from feedstocks listed in Annex IX to Directive 2018/2001

| Reporting element | Specification | Data |
|---|---|---|
| Please report technological development and deployment of biofuels in your country made from feedstocks listed in Annex IX to Directive 2018/2001 (1) | M | 1. |

| Reporting element | Specification | Feedstock type | Installed capacity, ktoe/year | Number of installations | Actual production, ktoe | Description |
|---|---|---|---|---|---|---|
| Please report technological development and deployment of biofuels in your country made from feedstocks listed in Annex IX to Directive 2018/2001 (1) | V | Input feedstock type(s) here (see list above) | 2. | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |
| | V | Input feedstock type(s) here (see list above) | | | | |

### *4.5.1. FIELD 1: Technological development and deployment of biofuels made from feedstocks: qualitative description*

#### Purpose

The purpose of this field is for the Member State to report on the technological development and deployment of biofuels within Member States, as foreseen in the indicative national trajectory for mainstreaming the renewable energy in transport sector (Article 25, RED II).

#### Guidance, including format of the data

Member States have to report on technological development and deployment within their territories of biofuels made from the feedstocks listed in Annex IX, RED II, as follows:

Part A

a) Algae if cultivated on land in ponds or photobioreactors;
b) Biomass fraction of mixed municipal waste, but not separated household waste subject to recycling targets under point (a) of Article 11(2) of Directive 2008/98/EC
c) Biowaste as defined in point (4) of Article 3 of Directive 2008/98/EC from private households subject to separate collection as defined in point (11) of Article 3 of that Directive
d) Biomass fraction of industrial waste not fit for use in the food or feed chain, including material from retail and wholesale and the agro-food and fish and aquaculture industry (excluding used cooking oil and animal fats as categories 1 and 2 in accordance with regulation (EC) No 1069/2009)
e) Straw

f) Animal manure and sewage sludge
g) Palm oil mill effluent and empty palm fruit bunches
h) Tall oil pitch
i) Crude glycerine
j) Bagasse
k) Grape marcs and wine lees
l) Nut shells
m) Husks
n) Cobs cleaned of kernels of corn
o) Biomass fraction of wastes and residues from forestry and forest-based industries, namely, bark, branches, pre-commercial thinnings, leaves, needles, tree tops, saw dust, cutter shavings, black liquor, brown liquor, fibre sludge, lignin and tall oil
p) Other non-food cellulosic material
q) Other ligno-cellulosic material except saw logs and veneer logs

Part B

a) Used cooking oil
b) Animal fats classified as categories 1 and 2 in accordance with Regulation (EC) No 1069/2009.

In Field 1, Member States have to report technological development within their territories of biofuels made from feedstocks by listing the different technology pathways and give a description of their status in a qualitative manner:

- Development phase by technology readiness level (TRL)
- How close they are to market uptake (in years or date, if available)
- Recent developments (description)
- Investments or research funds acquired.
- Energy conversion efficiency (primary energy in feedstock vs final energy in biofuel)
- Own energy consumption (in ktoe), source (market, own supply) and type (fossil, renewable).

The description needs to present consistent but condensed details. It is therefore recommended to make appropriate use of references/links to documents and websites with a more detailed description. If the information corresponds to a legal act (law, decree, regulation, etc.), insert it in the national language and in English, and link to the Official Journal.

It is recommended to specify within Field 1 the date(s) for which the status reported applies. If possible, a good practice is to provide the status in X-3 or/and X-2 to allow comparability in the future reporting.

Data format: text

**Level of obligation:** Mandatory

**Good practice:**

Answer should contain explicit information (type and amount of materials used, type and amount of fuel produced) about current deployment of biofuels production for transport sector and expected effects of currently undergoing or planned developments. These values can also be added in the voluntary structural template in Reportnet 3. If MS does

not produce or does not plan to develop production of biofuels for traffic, please state so in the answer. As a minimum, we would expect to see the following elements in the new reports: (i) the amounts of Annex IX biofuels and biogas produced in the specific Member State in question in 2022 and 2023, (ii) the amount of Annex IX biofuels and biogas that have been imported in that Member State in 2022 and 2023, and (iii) an overview of recent technological developments with accompanying technology readiness levels.

Example: "In the [Member State] there are two production facilities for biofuels using annex IX feedstock. One produces biodiesel (HVO) and the other bioethanol. The HVO production is 1 Mton per year. The bioethanol is on a relatively small scale and amounts 32 kton per year. In 2021 about 50,000,000 m3 (1.7 PJ) of biogas, [...]"

### *4.5.2. FIELD 2: Technological development and deployment of biofuels made from feedstocks: quantitative information*

**Purpose**

Member States have to report on the technological deployment of biofuels within their territory made from feedstocks, as listed in Annex IX to Directive 2018/2001. In addition to the description in Field 1, it is recommended that this information is structured in a quantitative manner, which can be done voluntarily via the reporting template. The information to be reported covers:

- Feedstock types (selection of one or more items from the feedstocks listed in Annex IX, RED II – see list above) (format, e.g., A (a); A (p))
- Installed capacities and actual production of different advanced biofuels technologies (ktoe/year)
- Number of installations
- Explanations and detail can be provided in Field 1 above.

Data format: Feedstock types (text from list), multiple selection separated by ";", Installed capacities and production (decimal), Number of installations (integer).

When inserting into the voluntary reporting table, please type in the short code for the feedstock type with a semicolon (;) separator in case of multiple feedstocks: e.g., "A (a); A (b)".

**Level of obligation**: Voluntary

**Good practice:**

Feedstock type is selected from feedstocks listed in Annex IX to directive 2018/2001 (parts A and B) and written as A (a) (feedstock (a) from part A). If some information is not applicable, insert X.

Example:

| Feedstock type | Capacity | No. installations | Production | Description |
|---|---|---|---|---|
| A (d) | 64.78 | 8 | 21.1 | Nav |

## 4.6. Annex XVI, Table 5: Estimated impact of the production or use of biofuels, bioliquids and biomass fuels on biodiversity, water resources and availability, soils and air quality

Table 5: Estimated impact of the production or use of biofuels, bioliquids and biomass fuels on biodiversity, water resources and availability, soils and air quality

| Reporting element | Production of biofuels, bioliquids, biomass | | | | | Use of biofuels, bioliquids, biomass | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Estimated impact of production of biofuels, bioliquids, biomass [1] | Unit | Start_period (YYYY-MM-DD) | End_period (YYYY-MM-DD) | Description of methods to estimate the impact [1] | Estimated impact of use of biofuels, bioliquids, biomass [1] | Unit | Start_period (YYYY-MM-DD) | End_period (YYYY-MM-DD) | Description of methods to estimate the impact [1] | Attachments |
| | $M_{iav}$ | $M_{iav}$ | $M_{iav}$ | $M_{iav}$ | $M_{iav}$ | $M_{iav}$ | $M_{iav}$ | $M_{iav}$ | $M_{iav}$ | $M_{iav}$ | V |
| 1. Biodiversity | | | 2. | | | | | 3. | | | [Attachments can be provided in Reportnet] |
| Water stock (ground water, surface water) & water availability | | | | | | | | | | | [Attachments can be provided in Reportnet] |
| Soils | | | | | | | | | | | [Attachments can be provided in Reportnet] |
| Air quality | | | | | | | | | | | [Attachments can be provided in Reportnet] |

### *4.6.1. FIELD 1: Reporting element*

**Purpose**

This purpose of this field is for the Member State to identify the areas impacted by the production of the use of biofuels, bioliquids and biomass fuels.

**Guidance, including format of the data**

Member States have to estimate the potential impact is these four following areas:

- biodiversity
- water stock (ground water, surface water) & water availability
- soils
- air quality.

The field is pre-filled in the template and in the reporting platform, listing the four areas.

### *4.6.2. FIELD 2: Production of biofuels, bioliquids, biomass*

**Purpose**

The purpose of this field is for the Member State to report the estimated impact of the **production** of biofuels, bioliquids and biomass fuels on each of the reporting elements identified in field 1.

**Guidance, including format of the data**

Member States have to report on the estimated impact of the production of biofuels, bioliquids and biomass for each reporting element (i.e., biodiversity, water stock, soils and air quality when available. The impact may be measured with a qualitative or quantitative indicator.

If the impact is quantitative, the indicator unit needs to be specified in the "Unit" field, and the time period for which the estimated impact applies needs to be specified in the "Start_period" and "End_period" fields.

The method used to estimate the impact has to be described.. The description should provide a condensed explanation of the qualitative or quantitative method used. The description may mention the changes in the methodology.

It is recommended to make appropriate use of the references/links to documents and websites with a more detailed description of the methods. Member States can also attach the relevant documents within the relevant area of the reporting platform.

Data format: text for *estimated impact of production of biofuels bioliquids and biomass, unit* and *description,* and date (YYYY-MM-DD) for *start period* and *end period.*

**Level of obligation:** Mandatory, if available (i.e., Member States have to provide the information when they have estimated impacts of **the production** of biofuels, bioliquids & biomass fuels on biodiversity / water resources and availability / soils / air quality).

**Good practice:**

Impact information should be quantitative or short and concise text.

Unit should be short a provide an overview. If multiple units better to list them separated by ";" and detailed in the impact field.

Start and end period should refer to the scope of the study or data used for this reporting. Clear format YYYY-MM-DD should be used. If data refers to two calendar years broadly it is recommended to have the start date as YYYY-01-01 and end date as YYYY-12-30.

Description of methods includes a very short summary of study or data analysis – name of institution and methods used (i.e. numerical modelling, field work and modelling, self-reported by landowners, …).

Example:

| Reporting element | Biodiversity |
|---|---|
| Impact | Use of biofuels in transport has resulting in a 10% increased use of new agricultural land which resulted in a 2% increase in land fragmentation. The effects on biodiversity beyond this has not been quantified. |
| Unit | % increased use of new agricultural land; % increase in land fragementation |
| Start period | 2016-01-01 |
| End period | 2018-12-30 |
| Description | The study focuses on total use of biofuels in transport in [Member State] and considers imports of biofuels in its assessment. The data is calculated using an EEIO model. |

### *4.6.3. FIELD 3: Use of biofuels, bioliquids, biomass*

**Purpose**

The purpose of this field is for the Member State to report the estimated impact of the **use** of biofuels, bioliquids and biomass on the reporting element identified in field 1.

**Guidance, including format of the data**

Member States have to report on the estimated impact of the use of biofuels, bioliquids and biomass for each of the reporting elements when available. The impact may be measured with a qualitative or quantitative indicator. Multiple impacts may be reported in relevant fields.

If the impact is quantitative, the indicator unit has to be specified in the "Unit" field, and the time period for which the estimated impact relates to has to be specified in the "Start_period" and "End_period" fields.

The method used to estimate the impact has to be described. The description should provide a condensed explanation of the qualitative or quantitative method used. The description may mention the changes in the methodology.

It is recommended to make appropriate use of the references/links to documents and websites with a more detailed description of the method by submitting them on reporting platform as attachments or comments.

Data format: text for *estimated impact of production of biofuels bioliquids and biomass*, *unit* and *description*, and date (YYYY-MM-DD) for *start period* and *end period.*

**Level of obligation:** Mandatory, if available (i.e. Member States have to provide the information when they have estimated impact of the use of biofuels, bioliquids & biomass fuels on biodiversity / water resources and availability / soils / air quality).

**Good practice**:

See example in field 1.

## 4.7. Annex XVI, Table 6: observed cases of fraud in the chain of custody of biofuels, bioliquids and biomass fuels

**Table 6: Observed cases of fraud in the chain of custody of biofuels, bioliquids and biomass fuels**

| Reporting element | Specification | Description | Attachment |
|---|---|---|---|
| Please report observed cases of fraud in the chain of custody of biofuels, bioliquids and biomass fuels | $M_{iap}$ | 1. | [Attachments can be provided in Reportnet] 2. |

### *4.7.1. FIELD 1: Observed cases of fraud*

**Purpose**

The purpose of this field is for the Member State to report observed cases of fraud when demonstrating the biofuel, bioliquid and biomass fuels supplied were made from feedstock.

**Guidance, including format of the data**

Member States have to report observed cases of fraud in situations where the fuel supplier committed fraud in the chain of custody of biofuels, bioliquids and biomass fuels.

For the cases of fraud reported, Member States have to report details about the supplier (name, activity, localisation) and about the situation of fraud (e.g. terminated voluntary certification scheme). The description should remain short and consistent with condensed details. It is therefore recommended to make appropriate use of the references/links to documents and websites with a more detailed description of the relevant cases, e.g., link to a database of cases, list of biomass producers with terminated voluntary schemes, etc. These can be made in the specific section of the reporting tool.

If the fraud led to legal actions, the exact name of the legal action and legal decision if available has to be reported.

Data format: text.

**Level of obligation:** Mandatory, if applicable (i.e., Member States have to report information when cases of fraud have been observed).

**Good practice:**

Answer should include what kinds of frauds were detected, information about fraudulent actors, legal consequences and legal decisions if available. Refer explicitly to what reference period the data refers to.

Example: “In 2022 there were no cases of fraud notice. In 2021 two cases of non-compliance were noted during audits. Two operators had to suspend transactions until proof that transactions were non-intentional. This was proved in legal case [case number] available here [link].”

## 4.8. Annex XVI, Table 7: Share of biodegradable waste in waste-to-energy plants used for producing energy

| Table 7 Share of biodegradable waste in waste-to-energy plants used for producing energy | | | |
|---|---|---|---|
| Reporting Year (X) | 2023 | | |
| Reporting element | Year X-3 | | X-2 |
| Are waste-to-energy plants operated? (1) | 1. | | |
| If yes | | | |
| Share of biodegradable waste used (%) | 2. | | |
| Methodology for estimating the share | 3. | | |
| Steps taken to improve and verify the estimates | 4. | | |

### *4.8.1. FIELD 1: Operation of waste-to-energy plants*

**Purpose**

The purpose of this field is for the Member State to state whether there are waste-to-energy plants in operation.

**Guidance, including format of the data**

Member States have to report the existence of waste-to-energy plants in operation within their country by selecting one of the following options: Yes / No.

Information from previous years have to be reported, for X-2 and X-3 where X is the reporting year.

Data format: text (Yes/No).

**Level of obligation:** Mandatory, if applicable (i.e., Member States are obliged to provide the information when waste-to-energy plants are operated within the territory; if no such plants, Member States have to select "No").

### *4.8.2. FIELD 2: Share of biodegradable waste in waste-to-energy plants*

**Purpose**

The purpose of this field is for the Member State, for Member States with operating waste-to energy plants, to report the share of biodegradable waste used in operation of these plants.

**Guidance, including format of the data**

Member States have to report the share of biodegradable waste used to produce energy in operating waste-to-energy plants. Biodegradable waste is defined as biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises, and comparable waste from food processing plants. The share of bio-degradable waste used have to be calculated against total amount of waste used and have to be reported as a percentage (%).

Member States have to describe the "methodology for estimating the share" of biodegradable waste used, and the "steps taken to improved and verify the estimates". The description needs to be a short and condensed description. It is recommended to make references to the sources of information used for the calculation, if possible, by providing references/links to direct users to documents and websites.

Information from previous years has to be reported (X-2 and X-3 where X is the reporting year).

Data format: number (percentage). In the reporting import template (excel) data will be displayed as "XX%". On Reportnet this is displayed as a decimal where 1 = 100%, 0.5=50%.

If answer to "Are waste-to-energy plants" is "Yes", cells have to be filled in. Share of biodegradable waste used (%) is to be inserted as a decimal number on interval 0 to 1,

**Level of obligation:** Mandatory, if applicable (i.e. Member States are obliged to provide the information when waste-to-energy plants are operated within the territory).

### *4.8.3. FIELD 3: Methodology for estimating the share*

**Purpose**

The purpose of this field is to report on what methodology was used to estimate the share of biodegradable waste used, when it is used in waste-to-energy plants.

**Guidance**

Member States have to provide a description of the methodology used to calculate the percentage reported in field 2.

Data format: text.

**Level of obligation:** Mandatory, if applicable. If the Member State has reported on operating waste-to-energy plants, with a percentage of biodegradable waste used in such operations, they have to report on their methodology in this field.

**Good practice:**

The field should give a condensed description of methodology used, and it is best supported by additional documents submitted on reporting platform.

Example: "The percentage is the average number from municipal wastes and industrial wastes used in cement production plants which measure the share of biomass in municipal waste used in the plants. Tests are done in a laboratory. The cement production plant is an EU ETS operator that has to follow Regulation 2018/2066 and the annual emission report of this plant is verified by accredited verifier. More information available here: [link]."

### *4.8.4. FIELD 4: Steps taken to improve and verify the estimates*

**Purpose**

The purpose of this field is to report on what steps have been taken to improve and verify the estimates made with the methodology, as specified in field 3.

**Guidance**

Member States have to provide a description of the steps taken to improve and verify the estimates provided.

Data format: text.

**Level of obligation:** Mandatory, if applicable. If the Member State has reported on operating waste-to-energy plants, with a percentage of biodegradable waste used in such operations, they have to report on this field.

**Good practice:**

The field should give a condensed description of steps taken, and it is best supported by additional documents submitted on the reporting platform.

Example: "The cement production plant is EU ETS operator that has to follow Regulation 2018/2066 and the annual emission report of this plant is verified by accredited verifier. Observing MRR and AVR of the EU ETS the laboratory used is accredited."

## 4.9. Annex XVI, Table 8: Electricity and heat generation from renewable energy in buildings, including, where available, disaggregated data on energy produced, consumed and injected into the grid

**Table 8 Electricity and heat generation from renewable energy in buildings (1)**

| Reporting Year (X) | 2023 |
|---|---|

| Reporting element | Specification | Unit | Year X-3 | Year X-2 |
|---|---|---|---|---|
| **Total final energy consumption from renewables in buildings for heating purposes** | M,... | ktoe | | |
| Solar thermal systems | M,... | ktoe | | |
| Biomass [2] | M,... | ktoe | | |
| Heat pumps | M,... | ktoe | | |
| Geothermal systems | M,... | ktoe | | |
| Other decentralised renewable sources | M,... | ktoe | | |
| **Total renewable heat consumed in buildings** | M,... | ktoe | | |
| Solar thermal systems | M,... | ktoe | | |
| Biomass [2] | M,... | ktoe | | |
| Heat pumps | M,... | ktoe | | |
| Geothermal systems | M,... | ktoe | | |
| Other decentralised renewable sources | M,... | ktoe | | |
| **Total renewable heat produced and fed into the grid (district heating)** | M,... | ktoe | | |
| Solar thermal systems | M,... | ktoe | | |
| Biomass [2] | M,... | ktoe | | |
| Heat pumps | M,... | ktoe | | |
| Geothermal systems | M,... | ktoe | | |
| Other decentralised renewable sources | M,... | ktoe | | |
| **Total renewable electricity production in buildings** | M,... | ktoe | | |
| Solar PV systems | M,... | ktoe | | |
| Biomass [2] | M,... | ktoe | | |
| Geothermal systems | M,... | ktoe | | |
| Other decentralised renewable sources | M,... | ktoe | | |
| **Total renewable electricity consumption in buildings** | M,... | ktoe | | |
| Solar PV systems | M,... | ktoe | | |
| Biomass [2] | M,... | ktoe | | |
| Geothermal systems | M,... | ktoe | | |
| Other decentralised renewable sources | M,... | ktoe | | |
| **Total renewable electricity fed into grid** | M,... | ktoe | | |
| Solar PV systems | M,... | ktoe | | |
| Biomass [2] | M,... | ktoe | | |
| Geothermal systems | M,... | ktoe | | |
| Other decentralised renewable sources | M,... | ktoe | | |

### *4.9.1. FIELD 1: Progress in the use of electricity and heat generation from renewable energy in buildings*

**Purpose**

The purpose of this field is for the Member State to report on the evolution of the electricity and heat generation from renewable energy in buildings and its use in previous years (X-3 and X-2, where X is the reporting year).

**Guidance, including format of the data**

Member States have to report the related volume of electricity and heat generation from renewable energy in building and its use in thousand tonnes of oil equivalent (ktoe). The electricity and heat generated is consumed by the buildings directly or fed into the district heating system called the "grid" and consumed by other buildings.

Building is defined as a roofed construction having walls, in which energy is used to condition the indoor climate for purpose of service or household sector.

The data on energy from renewable energy generated in buildings have to be disaggregated for production / consumption / injection into the grid according to the following fields:

- Renewable heat consumed in buildings
  - Final energy consumption from renewables in buildings for heating purposes
  - This is the final direct consumption of renewable energy in buildings for heating purposes. This means, e.g., biomass directly combusted in households. It excludes heat produced from renewables in, e.g., district heating installations that is afterwards sold to households or services. For heat pumps it is the renewable energy consumed by the heat pump. In case of solar systems only heat from solar collectors is included here, photovoltaic systems, even if used for heating, are included in renewable electricity consumption in buildings.
  - This includes only heat consumed in buildings that is produced from renewables in a district heating installation and afterwards sold to buildings. It

excludes final energy consumption of renewables directly in buildings.

- Renewable heat produced and fed into the grid
  - Share of the total heat fed into the grid by e.g., district heating installations that is renewable.
  - Renewable electricity production in buildings
  - Electricity production in buildings (where electricity production is not primary activity) from a renewable source.
- Renewable electricity consumption in buildings
  - Part of renewable electricity produced in buildings that is consumed in buildings.
- Renewable electricity fed into grid
  - Part of renewable electricity produced in buildings that is fed into the electric grid

Progress reported has to include separate values for different renewable sources in each category (and for the total of each category):

- Solar thermal systems (only for heating reporting elements)
- Solar PV systems (only for electricity reporting elements)
- Biomass (as defined in RED II and following the Sustainability and greenhouse gas emissions saving criteria for biofuels, bioliquids and biomass fuels stipulated in Article 29 of Directive 2018/2001/EU)
- Heat pumps (only for heating reporting elements)
- Geothermal systems
- Other decentralised renewable sources

Information from previous years has to be reported (X-2 and X-3 where X is the reporting year).

Data format: number (decimal).

**Good example: *Buildings approximation in energy statistics***

Dedicated statistics on buildings is the best way to ensure high quality information on buildings. In the absence of such statistics, estimates and modelling could be used. As a matter of last resort and only in the absence of more detailed statistics/information that are able to identify buildings as a separate category, reporting entities can use the following approximation:

"Buildings = Service sector + Household sector".

In terms of NACE rev. 2, this approach means to sum sections from G to U (equivalent to the sum of divisions from 45 to 99).

In energy statistics, this general approximation is sometimes used for indicators. However, it has major limitations that need to be taken into account (and can be generalised beyond energy statistics into other statistical domains):

- It excludes energy consumption in industrial buildings (e.g. those classified in energy statistics under transformation sector, energy sector and final energy consumption in industry sector, agriculture, forestry and fishing). The exact scope/magnitude of this limitation depends on the definition of a building.
- It includes certain outdoor activities, such as street lighting or swimming pool heating. The exact scope/magnitude of this limitation depends on the definition of activities to be covered for building statistics and those to be excluded.
- Statistics in some countries might not be able to properly assign all activities to different sectors, such as charging of electric cars at home to be reported under transport instead of under households (buildings).
- Prosumers: flows related to autoproduced and autoconsumed energy (mostly electricity and heat) are difficult to fully capture in statistics and might be estimated, modelled or omitted. With the future increase of energy transformation and generation at the end-user level, this might be a significant issue. Technology already exists today and decreasing costs might result its widespread use with limited possibility for state authorities to correctly monitor it: micro CHP generation, off-grid solar panels, heat pumps capturing ambient heat.

## Broad Structure of NACE Rev. 2

| Section | Title | Divisions |
|---|---|---|
| A | Agriculture, forestry and fishing | 01 – 03 |
| B | Mining and quarrying | 05 – 09 |
| C | Manufacturing | 10 – 33 |
| D | Electricity, gas, steam and air conditioning supply | 35 |
| E | Water supply; sewerage, waste management and remediation activities | 36 – 39 |
| F | Construction | 41 – 43 |
| G | Wholesale and retail trade; repair of motor vehicles and motorcycles | 45 – 47 |
| H | Transportation and storage | 49 – 53 |
| I | Accommodation and food service activities | 55 – 56 |
| J | Information and communication | 58 – 63 |
| K | Financial and insurance activities | 64 – 66 |
| L | Real estate activities | 68 |
| M | Professional, scientific and technical activities | 69 – 75 |
| N | Administrative and support service activities | 77 – 82 |
| O | Public administration and defence; compulsory social security | 84 |
| P | Education | 85 |
| Q | Human health and social work activities | 86 – 88 |
| R | Arts, entertainment and recreation | 90 – 93 |
| S | Other service activities | 94 – 96 |
| T | Activities of households as employers; u0ndifferentiated goods- and services-producing activities of households for own use | 97 – 98 |
| U | Activities of extraterritorial organisations and bodies | 99 |

**Level of obligation:** Mandatory, if available (i.e. Member States are obliged to provide the information when electricity and heat is generated from renewable energy in buildings, consumed and/or injected to the grid).

**Good practice**:

Import template automatically sums total values to ensure aggregates = sub-aggregates. Ensure always aggregates = sub-aggregates. If sub-aggregate data is not available, then use notation key and only add a value the available value(s).

| | X-3 |
|---|---|
| Total final energy consumption from renewables in buildings for heating purposes | 2864 |
| Solar thermal systems | 309.7 |
| Biomass (2) | 1994.3 |
| Heat pumps | 450 |
| Geothermal systems | Nav |
| Other decentralised renewable sources | 110 |

## 4.10. Annex XVI, Table 9: The amount of solid biomass used for energy production

### Purpose

The purpose of this field is for the Member State report to include the amount of solid biomass used for energy production imported from Eurostat energy balance data.

### Guidance, including format of the data

Data format: number

This field will be pre-filled based on Eurostat energy balance data when available. Details on this process can be found in the introduction of this guidelines (Section 1).

**Level of obligation:** Mandatory (prefilled)

# 5. FINALIZING REPORTING

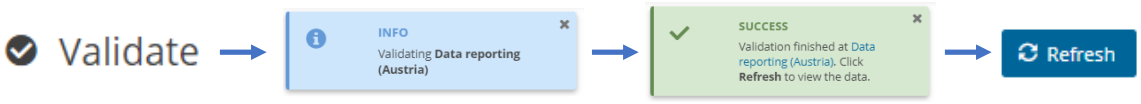
## 5.1. Validating your submission

Reportnet is designed to run a series of quality checks once data is reported. This assists you in the reporting process. See Section 0 for a detailed overview of the Quality Assurance and Quality Control (QAQC) procedures undertaken for the dataflows described in this document.

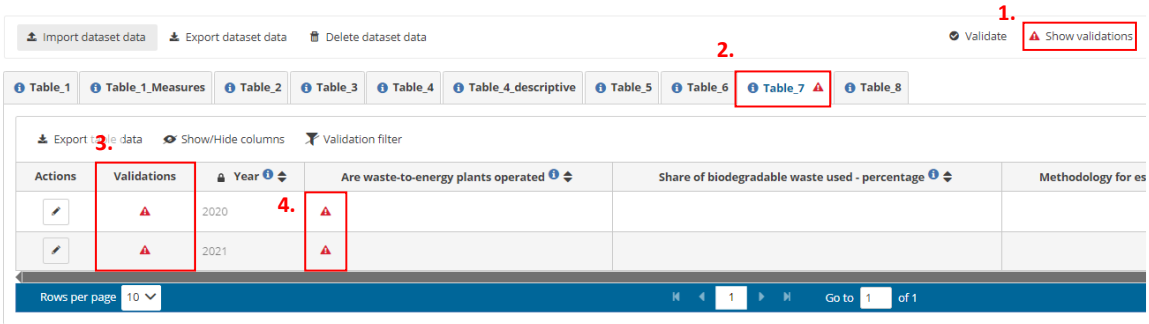
There are four types of errors in Reportnet 3:

- **Blocker** – serious issues, the data cannot be submitted,
- **Error** – the data may be release but some explanation is required. Please note, errors should be avoided. You should submit a dataset with errors only under exceptional circumstances,
- **Warning** – less serious issues, does not prevent the data to be submitted,
- **Information** – minor issues or simple notifications.

To begin the validation process, click **Validate (**and confirm). Validation takes several minutes, and depends heavily on the amount of data in the dataflow. Validation processes will begin with a blue notification icon and will end with a green success notification in the top right corner. Click the button **Refresh** to see the validations in the dataflow.




Validations can be viewed in multiple areas of the reporting window. For a full list click on **Show validations** (1), tables with validation errors can be viewed in **table tabs** (2), row-level validations can be found in the **Validations field** (3), and cell level validations are reported within the **relevant record** (4).



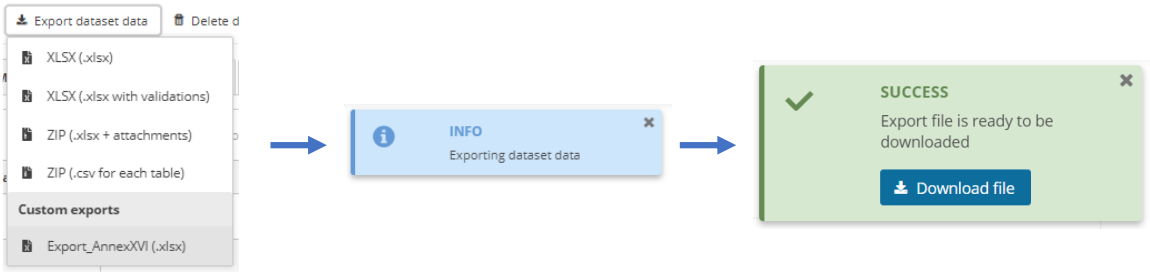

When you click on **Show validations**, **validations can be filtered** by type of QC, table name, field, level of error. There is a field that states the number of records which have this error.


## 5.2. Export functionality

Once data has been reported, there is a possibility to export the reported data from Reportnet. This has multiple advantages for reporters:

- To export reported data from Reportnet into Excel template format,
- To download pre-filled, post-filled, aggregated data that is not visible in Reportnet (this will be included with any data report in Reportnet by (a) reporter(s).
    - This template can be reused as an import template (see Section 2.5.2).

Once an export is initiated you will be notified by a blue notification icon. When the download is successful a green success icon will appear with the download link available. Click this link to download the export.




Exported files can also be **downloaded from the notification list** that can be accessed on the blue navigation pane on the left of the reporting window.


## 5.3. Releasing data

The green icon in the reporting window, **Release to data collection**, is used to submit your final data for this reporting obligation. Please align with the other lead reporter(s) prior to submitting your data. Once selected a **Confirmation receipt** will be made available, with a timestamped proof of submission.

European Environment Agency
Kongens Nytorv 6
Dk 1050 Copenhagen K

**Receipt date:** 2023-01-23
**Representative:** Italy

# To Whom It May Concern

This is a confirmation of receipt for national data submission under the reporting obligation

## ANNEX XVI 22112022

**Obligation:** National projections of anthropogenic greenhouse gas emissions - GovReg
https://rod.eionet.europa.eu/obligations/797

| Datasets | Release date |
|---|---|
| ANNEX XVI | 2023-01-23 19:28:54 CET |

Submitted by user: william.keeling@eea.europa.eu

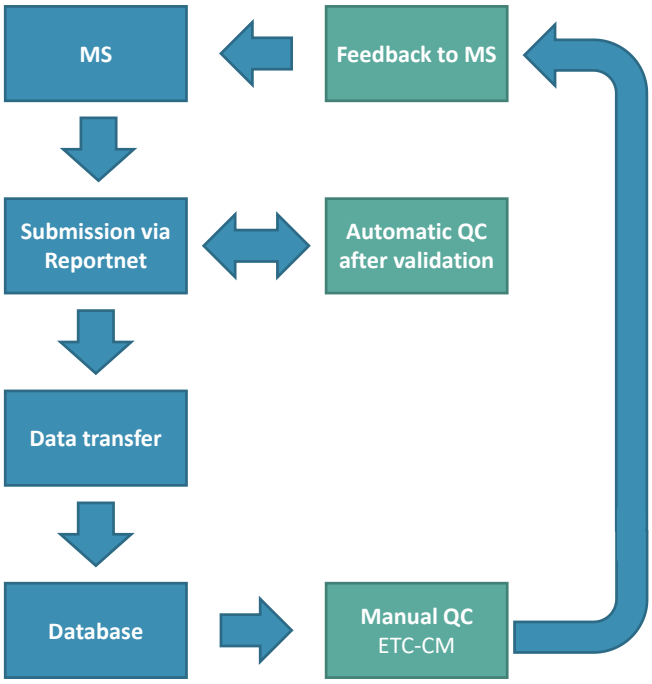
**Data can be submitted multiple times**. On each occasion the data will be saved. However please note that for data processing and analysis, **the EEA will always take the latest version** of the submitted data.

# 6. QUALITY ASSURANCE AND QUALITY CONTROL

## 6.1. Quality assurance and quality control structure

To ensure timeliness, completeness, consistency, comparability, coherence, transparency and accuracy of the reported information, specific quality checks are performed on the submissions by Member States. On behalf of the Commission and the EEA, the European Topic Centre (ETC-CM) carries out these quality checks for the dataflows covered in this guideline. However, Member States are strongly encouraged to adhere as much as possible to the reporting guidelines and to conduct a quality control of the information on the data reported. The results of the quality checks are communicated to Member States. After quality control, the data is stored in the EEA's database, made publicly available and used in the European Commission's assessment of the NECPRs and in certain EEA products. The figure below presents an overview of the process done on the reported information.

*Figure 1 - Overview of the quality control process*




The quality control procedure is aligned with the key reporting principles set out in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. More specifically, the information reported by Member States is assessed against seven criteria (five quality criteria so called 'TCCCA criteria' and timeliness and coherence):

- Timeliness,
- Transparency,
- Completeness,
- Consistency,
- Coherence,
- Comparability,
- Accuracy.

By performing quality checks each reporting cycle and providing additional reporting guidelines, the aim is to improve reporting along the seven criteria listed above.

Each criterion corresponds to a number of specific checks, which are performed in the sequential order. Below is an overview of what could be required per criteria.

| Criteria | Objective |
|---|---|
| Timeliness | To assess if data and report was submitted on time and identify as early as possible any gaps or inconsistencies to inform Member States about the need for a resubmission. |
| Transparency | To ensure the data is identifiable and underlying methods are clearly referenced. |
| Completeness | To ensure that all relevant data and information is included. |
| Consistency | Ensure that the reporting is consistent and in line with good practices and guidelines. Checks ensure both internal consistency and consistency across years. |
| Coherence and Comparability | To assess whether the reported data is coherent with other possibly relevant reporting obligations and data provided and to ensure reporting across Member States is comparable. |
| Accuracy | To assess whether the data provided are credible. |

## 6.2. Timeline & communication

Timeliness of reporting is an important quality criterion that helps ensure the smooth running of the quality control process. Member States must submit information on NECPR obligations required under the Governance Regulation by 15 March to allow for proper quality checking at EU level, prior to the publication of the submitted NECPRs and compilation of the European Commission's assessment of the NECPRs.

The number and the dates of additional resubmissions are also tracked. The main steps between the initial submission of information by the Member States, and the publication of the EU's progress report are described below. This includes the initial submission, quality control, a communication period, and the finalization and subsequent publication of the information. The Member States, ETC-CM, EEA and the European Commission are involved in these steps. The timeline below sets out the key dates associated with each of these steps (Table 1).

The effective implementation of the procedure requires efficient responses from all parties at each step and therefore the timeline is only indicative, assuming submission, quality control and resubmission is not delayed for any reason. Furthermore it is not necessary for the procedure to take the full anticipated period, presented below, if data quality is sufficient and clearly presented.

*Table 1 – Indicative timeline and the description of the action required by the organisations involved*

| When | What | Who |
|---|---|---|
| By 15 March | • Preparation of the submission and completion of the reporting obligation within relevant dataflow;<br>• Internal quality checks and via validation on Reportnet;<br>• Release submission via Reportnet. | Member States |
| 15 March – 15 April | Quality control (transparency, comparability, completeness, coherence, consistency and accuracy checks simultaneously). This includes feedback to Member States and communication on any issues found. Changes to Member States submissions will only be made, if Member States provide updates or corrections based on the findings communicated by the ETC-CM. | ETC-CM |
| 15 April – 30 April | If necessary, MS adjust and resubmit the dataflow via Reportnet. | Member States |
| 1 May – mid June | Review of the resubmitted report, if needed final follow up with the Member States. | ETC-CM (and Member States) |
| 30 June | Delivery of final information by Member States to the EEA for publication in the EEA database. | ETC-CM |
| End-August | Final checking of whole EU database and preparation of report compiling the outcome of the implementation of the quality control procedure on EU level, including individual feedback to Member States. | ETC-CM |
| July-October | Assessment, analysis and reporting in progress reports (Commission).<br><br>Publication of EEA products (trends and projections, data visualisations). | European Commission<br><br>EEA |

The central document in this quality control circle is the quality check feedback report. It ensures a consistent and complete quality control process and is a template to communicate the findings to the Member States. Every finding is added to the feedback report. These reports will be bilaterally shared with relevant lead reporters of a dataflow. If needed Member States will be asked to adjust the submission and resubmit.

If reviewers have a specific question concerning the latest submission, the Member States will be asked for clarification via the feedback report. The Member States then have the responsibility to provide a clarification, adjust the information provided (report or data)

and release the data again via Reportnet. The Member States are responsible for making the necessary changes to the dataflow.

### 6.3. Assessment of Member States submissions

After the quality control procedure has been concluded a short report presenting the outcome of the quality checks will be prepared. This will include information on:

- List of checks done;
- Overview of findings;
- Overview of corrective actions;
- An EU assessment summarizing the outcome of the implementation of the quality checking procedure;
- Recommendations for further improvements in reporting.

# ANNEXES

## Annex 1: Reporting roles

### Roles in the NECPR reporting

This document discusses the different roles envisioned in the technical implementation of the NECPR reporting.

### Member state roles

- Lead reporter (2 per dataflow)
- Reporter

| Function | Lead reporter |
|---|---|
| **Overall aim of the function** | The lead reporter is responsible for ensuring the complete and timely reporting of (a) data flow(s) |
| **Role/ responsibilities** | • Responsible for validating and submitting completed data flows.<br>• Coordinate the reporting exercise from a substantive perspective, following up overall completion and assigning the necessary reporters.<br>  ○ Acts as distribution point of relevant developments/information related to reporting to the necessary reporters.<br>  ○ Responsible for all reporters in their dataflow(s): that they are coordinated and updated on timelines, key meetings, processes (etc.).<br>• Key contact for Commission/EEA with regard to substantive issues of reporting. |
| **Competencies** | • Expertise of thematic area of relevant dataflow(s)<br>• Knowledge/coordination of supporting reporters and relevant supporting ministry/ministries<br>  ○ To be able to disseminate information related to the relevant dataflow(s)<br>• Understanding of the reporting system (ReportNet and/or ReportENER) for relevant dataflow(s) following guidance and training:<br>  ○ Ability to assign reporters<br>  ○ Ability to validate and release/submit data when completed |
| **Interfaces to** | • Data stewards, regarding thematic reporting queries<br>• Data custodians, regarding technical reporting queries<br>• Other lead reporters, for coordination and to ensure the overall reporting obligations of the Member State is accomplished<br>• Reporters, where assigned by lead reporter |
| **Note** | Lead reporters + back-ups for each data flow are nominated initially by mail through the Permanent Representation (November 2022). |

| | |
|---|---|
| | A lead reporter should be assigned for each individual data flow, however a lead reporter can be responsible for multiple or even all data flows for the NECPR.<br><br>Changes can only be requested by e-mail by the relevant lead reporter(s) or Permanent Representation to the relevant data steward. The data steward must inform the Assessment Coordinator and relevant reporting system coordinator (Reportnet or ReportENER).<br><br>Contact for changes:<br>(for dataflows in ReportNet) govreg@eea.europa.eu<br>(for dataflows in ReportENER) EC-E-PLATFORM-IT-SUPPORT@ec.europa.eu |

| Function | Reporter |
|---|---|
| **Overall aim of the function** | The reporter is responsible for contributing to complete and timely reporting of (a) data flow(s) |
| **Role/ responsibilities** | • Contributing to complete and timely reporting of (a) data flow(s). A reporter cannot submit completed data flows. |
| **Competencies** | • Expertise of thematic area of relevant dataflow(s)<br>• Understanding of the reporting system (ReportNet and/or ReportENER) for relevant dataflow(s) following guidance and training |
| **Interfaces to** | • Lead reporter |
| **Note** | A reporter is assigned to an individual dataflow by the relevant lead reporter (can be assigned to multiple dataflows). It is not required to officially nominate a reporter to a data flow (given that a lead reporter is nominated)<br><br>For ReportNet: lead reporters can assign reporters directly in the system (See section 2.4)<br><br>For ReportENER: lead reporters can request changes to the reporters by e-mail: EC-E-PLATFORM-IT-SUPPORT@ec.europa.eu |

**Commission/EEA roles**

- Assessment coordinator
- ReportNet coordinator
- ReportENER coordinator
- Data steward

| Function | Assessment coordinator |
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| **Overall aim of the function** | The assessment coordinator is responsible for the management of the overall process on the business/policy side, keeping track of the fulfilment of the other Commission/EEA roles, in particular data stewards & associated reviewers at COM side. |
| **Role/ responsibilities** | • Establishes and manages the business processes for the overall assessment<br>• Manages the meetings of the technical implementation group & ISG<br>• Keeps track of the fulfilment and assignment of process roles<br>• If needed, escalates issues to the management level |
| **Competencies** | |
| **Interfaces to** | • All core team coordinators<br>• All COM associated reviewers |

| Function | ReportNet coordinator |
|---|---|
| **Overall aim of the function** | The ReportNet coordinator is responsible for ensuring the technical implementation of the NECPR modules implemented through ReportNet, including relations with data stewards & data custodians on the EEA side |
| **Role/ responsibilities** | **NECPR management**<br>• Manages the technical implementation of the NECPR modules implemented through ReportNet<br>• Coordinates with data stewards and custodians on ReportNet dataflows, ensuring where possible a consistency of approach<br>• Coordinates internal business management approaches across dataflows, establishing common timelines and where necessary resource management.<br><br>**Stakeholder relations**<br>• Maintains institutional stakeholder relations (EC, EEA, Eurostat, JRC …) as main contact point<br>  o Ensures regular updates on progress are shared with relevant experts (coordinators, data stewards/custodians, other relevant internal stakeholders) |
| **Competencies** | • Overview of key developments/challenges faced within ReportNet (per dataflow)<br>• In-depth understanding of dataflow management processes<br>• High-level technical and thematic data collection knowledge |

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| **Interfaces to** | • All core team coordinators<br>• All ReportNet data stewards and custodians<br>• Where relevant, additional institutional stakeholders (EC, EEA, Eurostat, JRC …)<br>• Where relevant, data providers |

| **Function** | **ReportENER coordinator** |
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| **Overall aim of the function** | The ReportENER coordinator is responsible for ensuring the technical implementation of the NECPR modules implemented through ReportENER, including relations with data stewards & data custodians on the COM side |
| **Role/ responsibilities** | • Manages the technical implementation of the NECPR modules implemented through ReportENER.<br>• Coordinates with data stewards and custodians on the relevant ReportENER dataflows.<br>• Cooperates internally to align reportENER development plans and resources with NECPR modules implementation needs, escalates to Management if necessary.<br><br>**Stakeholder relations**<br><br>• Maintains institutional stakeholder relations (EC, EEA, Eurostat, JRC …) as main contact point.<br>o Ensures regular updates on progress are shared with relevant experts (coordinators, data stewards/custodians, other relevant internal stakeholders). |
| **Competencies** | • Project management<br>• Stakeholder relationship management<br>• High-level technical and thematic data collection knowledge |
| **Interfaces to** | • All core team coordinators<br>• ReportENER data steward, custodian and internal stakeholders (e.g. Product Owner, development team) |

| **Function** | **Data Steward** |
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| **Overall aim of the function** | Data Stewards are overall responsible for a data collection or dataflow, ensuring compliance with legislation and/or institutional regulations, interfaces to reporters, relevant coordinator and data users, ensures quality procedures are in place. |

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| **Role/**<br><br>**responsibilities** | **Dataflow management**<br><br>• Establishes and manages the business processes to ensure their dataflow is operational for data collection, data processing/validation and data dissemination.<br>• Ensures a project plan for their relevant dataflow and permanent quality improvement - the what, when, who, how and resources.<br>• Translate requirements to different expert groups (data custodian, analyst, communication).<br>• Coordinates with data custodian on technology improvements impacting data flow.<br>• Coordinate with main data users.<br>• Where necessary ensures that data collected is made visible/accessible.<br><br>**Stakeholder relations**<br><br>• Works with relevant coordinator to maintain institutional stakeholder relationships (EC, EEA, Eurostat, JRC …).<br>• Directly maintains stakeholder relationships with data providers/reporters at national level.<br>• Manages the assignment of reporters' rights to the relevant dataflow, after (re)-nomination.<br>• Monitoring reporting status (and initial follow up if there are reporting delays/issues) |
| **Competencies** | • Has in-depth thematic knowledge of the data collection<br>  o Understands the data from a content point of view.<br>  o Understands the data collection methodology.<br>  o Understands how this data can be used and not used.<br>• General understanding of ICT relevant for monitoring, data handling and reporting practices e.g. quality control, data formats (spatial, textual, tabular), and data sharing. |
| **Interfaces to** | • Core group institutional stakeholders (Commission, EEA, Eurostat, JRC …) with/via relevant coordinator.<br>• Implementation group thematic colleagues internally or externally (Commission, EEA, Eurostat, JRC …) directly.<br>• Relevant data custodian(s)<br>• Reporters/data providers<br>• Other final users of the data |