



Training on Integrated Progress Report

- Energy Efficiency – Annex IV & XVII
- Renewable Energy – Annex II & XVI

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European Environment Agency

22-23 September 2025

In person training - Moldova

European Environment Agency



Agenda

- Reportnet
 - Q&A



Logging in & set-up
Data input – overview
Data input – excel import
Data input – excel export
Quality assurance – validations
Release of data - submission

- Thematic aspects
 - Q&A

Objective and expected result

At the end of the session, you will know

HOW to use the templates and the Reportnet 3 platform to report the data

WHAT in general these dataflows encompass.

Welcome

Stewards:

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National Energy and Climate Progress Reporting

Context



Energy Community Dataflows in Reportnet 3?

NECPR – Progress to targets (GHG)

NECPR – Progress to targets (RES)

NECPR – Progress to targets (EE)

NECPR – Adaptation (Article 17)

NECPR – Additional reporting (RES)

NECPR – Additional reporting (EE)

Integrated National Policies and Measures (PaMs)

National systems for reporting on PaMs and projections

National GHG projections

Adaptation planning and strategies (Article 19)

European Climate Law Recommendations (*)



Reportnet 3

Logging in & Overview



Dataflow: Logging into Reportnet

The screenshot shows the Reportnet 3 website at <https://reportnet.europa.eu>. The page features a dark blue header with the European Union flag and "European Union" text. A red arrow points from the top right towards the "Login" button. The main content area has a dark blue background with white text. It includes sections for "The next generation for e-Reporting environmental and climate data", information about the transition from Reportnet 2, and a large graphic of interconnected lines in yellow, green, and blue. On the right side, there's a "Need any help?" section with an email icon and a "Supporting documents:" section with a file icon.

An official website of the European Union How do you know? ▾

Reportnet 3

European Union

Reportnet

Login

The next generation for e-Reporting environmental and climate data

Reportnet 3 is the new e-Reporting platform for reporting environmental and climate data to the European Environment Agency (EEA). The platform embraces the strategic goals of the European Commission's Green Deal and Digital Strategy and hosts reporting tasks on behalf of EEA and the Commission.

The transition of reporting obligations from Reportnet 2 to Reportnet 3 will take a number of years. Therefore, Reportnet 2 will remain operational until all data flows are migrated and will then become an archive.

Reportnet 2 can be accessed here:
<http://cdr.eionet.europa.eu/>

Need any help?

Please contact us at helpdesk@reportnet.europa.eu

Supporting documents:

- Login
- Reporter
- Requester
- Webforms
- API

Dataflow status

**View by obligation
dataflow status and
download reported data**

**View by country dataflow
status and download
reported data**



Reporting dataflows (7)

Business dataflows (0)

Citizen science dataflows (0)

↑↓ Name

↑↓ Description

↑↓ Legal instrument

↑↓ Obligation

↑↓ Obligation id

Role

↓↑ Status

Pinned

↓↑

Delivery date range

Filter

Reset

Open dataflow: Purple
Closed dataflow: Grey

Total: 7 dataflows

Role: LEAD REPORTER

Delivery date: 2023-03-15



GovReg: Progress towards objectives, targets and contributions (Decarbonisatio...

Integrated according to Governance Regulation 2018/1999 Articles 4(a)(2) and 20(a), and Implementing Regulation 2022/2299 Annex II

Legal instrument: Regulation on the Governance of the Energy Union and Climate Action

Obligation: Progress towards objectives, targets and contributions (Decarbonisation: renewable energy) - GovReg

Delivery status: DRAFT

Dataflow status: OPEN

Role: LEAD REPORTER

Delivery date: 2023-03-15



TESTING - National projections of anthropogenic greenhouse gas emissions 2023

Pursuant to Governance Regulation Art.18 (1)(b) / Implementing Regulation Art.38

Overview of dataflow page

The screenshot shows the 'Dataflow - Spain' page. On the left is a vertical navigation bar with icons for Home, Help, Questions, Notifications, and User profile. The main content area has a title 'Dataflow - Spain' and a subtitle 'GovReg: Progress towards objectives, targets and contributions (Decarbonisation: Renewable energy) - Annex II [2023]'. Below this are four menu items: 'Dataflow help' (yellow icon), 'Data reporting' (blue icon with two databases), 'Attachments' (blue icon with two databases), and 'Release to data collection' (teal icon with an upward arrow). A red box highlights the 'Data reporting' and 'Attachments' buttons. Below the screenshot, numbered 1 through 4 point to these highlighted buttons.

1.

2. Dataflow help

3. Data reporting

4. Attachments

Release to data collection



1. Navigation bar

Reporter management

Notifications!



2. Dataflow help

Documentation

Guidance

Excel Template



3. Reporting schema

Where to report data

Focus on data reporting

Attachments to supplement reporting



4. Release data

The button to officially submit data

Where can I access “prefilled” data?

Prefilling / Post-filling is data that is not reported within this dataflow in Reportnet.



Reported data

To be filled in by CPs in Reportnet 3



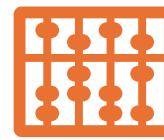
Prefilled data

Information provided by CPs prior to 15 March in other means (i.e. Eurostat)



Post-filled

Information being provided by CPs simultaneously to 15 March in other dataflow(s) (i.e. Eurostat)



Calculations

Calculations based on reported values

Prefilled data can be downloaded & reviewed via excel exports in Reportnet 3

If issue of prefilled data: contact data provider!!

New to 2025: Notation keys

What is a Notation Key?

A system to clarify lack of numerical data (where unavailable or not applicable).

Required for mandatory if applicable (Miap), if available (Miav), or voluntary (V) reporting.

Notation key	Description
NA	Not applicable - For data and activities in a reporting country that are not applicable or relevant to the context of the reporting country. Anticipated to be used in the context of Miap and V reporting fields. This notation key can be used instead of a value or 0, to ensure complete reporting.
NAv	Not available – For data and activities in a reporting country that are applicable to the context of the reporting country, however the data is not available. Anticipated to be used in the context of Miap, Miav and V reporting fields. This value can be used instead of a value or 0, to ensure complete reporting.
C	Confidential – Specifically for Annex II, Table 5, reporting on greenhouse gas savings performance of biofuels. This notation key is for data and activities in a reporting country that are available but are confidential and therefore cannot be reported publicly at a disaggregated level.

Import templates provide overview of when notation keys are accepted

For any issues check the reporting guidelines!

GHG (Annex I)

RES (Annexes II & XVI)

EE (Annexes IV & XVII)

← Applicable to these dataflows

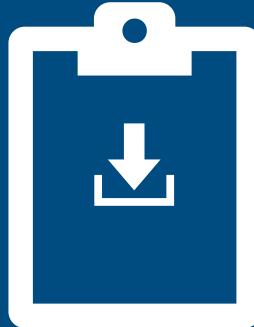
New to 2025: “Mandatory” data and Blockers

When a data is “mandatory”, it is expected that CPs populate the corresponding cell:

- **No notation key possible***
- **No empty cell possible**

⇒ **A blocker is systematically associated to “Mandatory” data**
⇒ **And you cannot release your data set if you have a blocker**

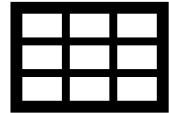
*To be used only for data “mandatory if” applicable (Miap), if available (Miav), or voluntary (V) reporting.



Reportnet 3

Data input – excel import

Reportnet: Excel import / Reportnet 3 tabular editing



Excel import

- **Easy to use** - Excel follows structure of legislation.

- **Prefilling/Post-filling overview** - Highlights where data should be reported (green cells) and where no reporting in Reportnet 3 is required (grey cells – prefilled / post-filled).

- **Risk** – If import not used correctly can cause issues on the finally imported data to Reportnet 3.

- *Do not edit data formats / structures – be careful when copying and pasting!*

- **Excel import does not equal reporting** – reporting is only considered complete once an official submission in the platform is made. Therefore, once data is imported, quality checks and final check of data is required!

Table 1: Sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources [1]			
Reporting Year (X)	2025		
Reporting element	Specification	Unit	Year
Gross final consumption of energy from renewable sources	M	ktoe	
Gross final consumption of energy with aviation adjustment	M	ktoe	X
Overall RES share	M	%	
Renewable electricity generation (with normalisation)	M	GWh	
Total Gross Electricity Consumption	M	GWh	
RES-T generation share	M	%	
RES-T numerator with multipliers	M	ktoe	
RES-T denominator with multipliers	M	ktoe	
RES-T consumption share	M	%	
RES-T & G consumption share	M	%	
RES-T & G numerator	M	ktoe	
RES-T & G denominator	M	ktoe	
RES-H&C share	M	%	
RES-H&C share with waste heat and cold	M	%	
Energy from renewable sources and from waste heat and cold used in district heating and cooling	M	ktoe	
Energy from all sources used for district heating and cooling	M	ktoe	
Share of energy from renewable sources and from waste heat and cold in district heating and cooling	M	%	
Statistical transfers / Joint projects / joint support schemes – total amount to be added	M	ktoe	
Statistical transfers / Joint projects / joint support schemes – total amount to be added – total amount to be deducted	M	ktoe	
Ingenious renewable hydrogen production	M	ktoe	
Ingenious renewable hydrogen production	M	ktoe	
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 in 2020, explain the reasons for this development and formulate additional measures that are planned in order to cover the gap compared to the national reference point.	Map		
Please provide information on whether the RES share from 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 11 ppt (pure RES)	Map		
In case the RES share from waste heat and cold for the purposes of fulfilling the H&C target (Article 23) and DH&C targets (Article 24) of REDII, please state the achieved level and provide reasons, including of choice of measures (pursuant to the second and third sub-	Map		

Notation: X = reporting year; M = mandatory if applicable; V = voluntary

Notes:

(1) All calculation provisions set out in Directive 2009/28/EC are applied to the total numerator and the total denominator.

Notation keys can be reported if values/numbers are not reportable. These include "NA" (not applicable), "N/A" (not available). Only one notation key can be reported and it must be instead of an otherwise value.

Using the excel import

Excel import templates are split into two parts:

Introduction

Provides information on the import template



Governance Regulation: Implementing Regulation 2022/2299
Annex II (Progress towards targets - Decarbonisation: renewable energy)

European Environment Agency 

Based on 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 reports

Instructions

Color codes:
When filling in the questionnaire, only green fields should be filled in. Not all fields are mandatory.
<please select> Cells with this phrase contain an in-cell dropdown menu. When clicking the cell, a dropdown icon appears on its right.
Grey shaded fields are cells in a table which should not be filled.

This import questionnaire does not include any "prefilling", "postfilling", or "aggregated" cells. This additional information will be provided in an export template automatically from Reportnet.

Submission: After filling this template, you can upload it and submit your data in Reportnet <https://reportnet.europa.eu/>

Guidance

Additional guidance can be found on reportnet under the yellow "dataflow help" button, within the relevant dataflow.

Contents of import template

 [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](#)



Legal reporting tables

Copies legislation format: green = CPs input!

Table 1: Sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources (1)

Reporting Year (X)	2025		
Reporting element	Specification	Unit	Year
	X-3	X-2	
Gross final consumption of energy from renewable sources	M	ktoe	
Gross final consumption of energy with aviation adjustment	M	ktoe	
Overall RES share	M	%	
Renewable electricity generation (with normalisation)	M	GWh	
Total Gross Electricity Consumption	M	GWh	
RES-E generation share	M	%	
RES-T numerator with multipliers	M	ktoe	
RES-T denominator with multipliers	M	ktoe	
RES-T consumption share	M	%	
RES-H&C numerator	M	ktoe	
RES-H&C denominator	M	ktoe	
- Of which waste heat and cold utilised through district heating/cooling networks	M	ktoe	
RES-H&C share	M	%	
RES-H&C share with waste heat and cold	M	%	
Energy from renewable sources and from waste heat and cold used in district heating and cooling	M	ktoe	
Energy from all sources used for district heating and cooling	M	ktoe	

! Do not edit formatting or structure of template !

It is the CPs responsibility to ensure the data is imported correctly to Reportnet 3.

Imports

Reportnet 3 > Dataflows > Dataflow > Spain > Dataset

GovReg Reporter

Data reporting Pending

GovRe: Progress towards objectives, targets and contributions (Decarbonisation: Renewable energy) - Annex II [2023] - Spain

Import dataset data Export dataset data Delete dataset data Validate Show validations QC rules Dashboards Manage copies Refresh

ZIP (.csv for each table)

Custom file imports

Import Annex II (.xlsx)

Actions Validations Reporting Element 2020 2021

Rows per page 10 Go to 1 of 1 Total: 0 records Add record Paste records

A red arrow points to the "Import dataset data" button, and a red box highlights the "Import Annex II (.xlsx)" button.

Imports – select the import file and upload!

The screenshot shows the Reportnet 3 Dataflows interface. In the center, a modal dialog box titled "Import Annex II (.xlsx)" is displayed. The dialog has a red border around its title bar and a red box highlighting the "Select or drag here a file" input area. Below this area is a dashed rectangular outline where a file can be dropped. At the bottom right of the dialog, there is another red box highlighting the "Upload" button. The background of the interface shows a dataset named "II [2023] - Spain" with various tables and actions like "Import dataset data" and "Export dataset".

Reportnet 3 > Dataflows > Dataflow > Spain > Dataset

GovReg Reporter

Data reporting

GovReg: Progress toward

Import Annex II (.xlsx)

Select or drag here a file

Import dataset data Export dataset

Table 1-1 Table 1-2 Table 2

Import table data Export table

Actions

Rows per page 10

Add record

Replace data

Reset

Upload

Close

II [2023] - Spain

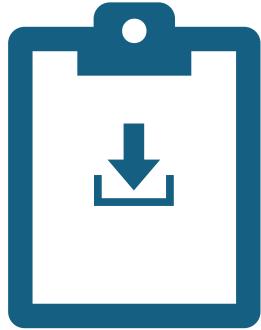
shboards Manage copies Refresh

Filter by value

2021 Total: 0 records

Paste records

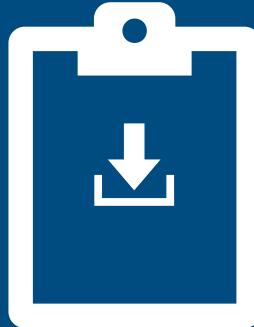
Imports – check final data in Reportnet!



**Review that data was imported
correctly**



**Validate data in system to ensure
format and data is to quality
standards**



Reportnet 3

Data input – excel export

Exports – where to download the file

The screenshot shows the Reportnet 3 Data reporting interface. At the top, there is a navigation bar with icons for Home, Help, Refresh, and Start. The main title is "Data reporting" with a status of "Pending". Below the title, the subtitle is "GovReg: Progress towards objectives, targets and contributions (Decarbonisation: Renewable energy) - Annex II [2023] - Spain". The main content area contains several buttons: "Import dataset data", "Export dataset data" (which is highlighted with a red arrow), "Delete dataset data", "Validate", "Show validations", "QC rules", "Dashboards", "Manage copies", and "Refresh". A dropdown menu under "Export dataset data" lists "XLSX (.xlsx)", "XLSX (.xlsx with validations)", "ZIP (.xlsx + attachments)", and "ZIP (.csv for each table)". Below this, there is a section titled "Actions" with a "Custom exports" button, which is also highlighted with a red box. Other buttons in this section include "Add record" and "Paste records". The bottom of the page has a footer with "Rows per page" set to 10, a "Reporting Element" filter, and date filters for "2020" and "2021".

Exports – download takes a few moments

The screenshot shows a user interface for managing datasets in Reportnet 3. At the top, the navigation path is: Reportnet 3 > Dataflows > Dataflow > Spain > Dataset. The user is identified as 'GovReg Reporter'. A sidebar on the left includes icons for Home, User, Help, Notifications (with 2), and Refresh.

The main area displays a 'Data reporting Pending' section for 'GovReg: Progress towards objectives, targets and contributions (Decarbonisation: Renewable energy) - Annex II [2023] - Spain'. Below this, there are tabs for various tables: Table 1-1, Table 1-2, Table 2, Table 3, Table 5-1, Table 5-2, Table 4, Table 6, Table 7, and Table 8. A modal window titled 'SUCCESS' appears, stating 'Export file is ready to be downloaded' and contains a blue button labeled 'Download file' which is highlighted with a red box.

Below the tables, there are buttons for Import table data, Export table data, Delete table data, Show/Hide columns, Validation filter, and a search bar. The table view includes columns for Actions, Validations, Reporting Element, 2020, and 2021. It shows 1 record on page 1 of 1, with a total of 0 records. Buttons for Add record and Paste records are also present.

Purpose of exports

Reporting element	Specification	Unit	Year	
			X-3	X-2
Gross final consumption of energy from renewable sources	M	ktoe	1000	1000
Gross final consumption of energy with aviation adjustment	M	ktoe	1000	1000
Overall RES share	M	%	22%	23%
Renewable electricity generation (with normalisation)	M	GWh	1000	1000
Total Gross Electricity Consumption	M	GWh	1000	1000
RES-E generation share	M	%	56%	59%
RES-T numerator with multipliers	M	ktoe	1000	1000
RES-T denominator with multipliers	M	ktoe	1000	1000
RES-T consumption share	M	%	13%	15%
RES-H&C numerator	M	ktoe	1000	1000
RES-H&C denominator	M	ktoe	1000	1000
- Of which waste heat and cold utilised through district heating/cooling networks	M	ktoe	1000	1000
RES-H&C share	M	%	15%	14%
RES-H&C share with waste heat and cold	M	%	16%	15%
Energy from renewable sources and from waste heat and cold used in district heating and cooling	M	ktoe	1000	1000
Energy from all sources used for district heating and cooling	M	ktoe	1000	1000
Share of energy from renewable sources and from waste heat and cold in district heating and cooling	M	%	30%	30%
Statistical transfers / Joint projects /joint support schemes – total amount to be added	M	ktoe	1000	1000
Statistical transfers / Joint projects /joint support schemes – total amount to be added – total amount to be deducted	M	ktoe	1000	1000
Indigenous renewable hydrogen production	V	ktoe	1000	1000
Indigenous biogas production	V	ktoe	1000	1000

Purpose of exports:

- To export reported values (green cells)
- To review prefilled (Eurostat data) (yellow cells)

Export templates can be used again as an import template.

! Please note: Eurostat (prefilled) data cannot be imported into Reportnet only 'green cell' values !

Dataflows with prefilling:

RES (Annexes
II & XVI)

EE (Annex IV)



Reportnet 3

Quality assurance - validations



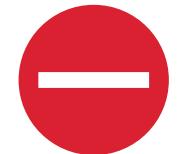
Validations – types of errors



- **Warning** (*can release data*)



- **Error** (*can release data*)



- **Blocker** (*can't release data*)

Validation

The platform validates imported data thanks to automatic quality checks implemented in Reportnet 3 and according to predefined validation rules.

→ After having imported the filled in template → click on **Validate**, and **Refresh**

The screenshot shows the Reportnet 3 interface for validating a dataset. At the top, there's a navigation bar with the European Union logo and the path: Reportnet 3 > Dataflows > Dataflow > Test datasets > Dataset. Below this, the main area is titled "Reporting data" with the subtitle "GovReg: Additional reporting obligations in the area of renewable energy - Annex XVI [2023] 09022023 - Test dataset". A modal window titled "Validate dataset" is open, containing the message: "This action will take some minutes and it will run in background. Do you want to continue with the validation?". Two buttons are at the bottom of the modal: "Yes" (highlighted with a red box) and "No". To the right of the modal, a green success toast notification says: "Validation finished at Reporting data (Test Dataset - Reporting data). Click Refresh to view the data." Below the modal, a table with 6 records is visible, and at the bottom, there are pagination controls and a "Total: 6 records" message.

Validations – reviewing errors in the dataflow



European Union

Reportnet 3 > Dataflows > Dataflow > Test datasets > Dataset



William
Keeling



Reporting data

GovReg: Additional reporting obligations in the area of renewable energy - Annex XVI [2023] 09022023 - Test dataset

Import dataset data Export dataset data Delete dataset data Validate Show validations QC rules Dashboards Manage copies Refresh

Table_1 Table_1_Measures Table_2 Table_3 Table_4 Table_4_quantitative Table_5 Table_6 Table_7 Table_8



1. Table level errors

Export table data Show/Hide columns Validation filter Filter by value						
Actions	Validations	Year	Sector	Guarantees of origin - issued	Guarantees of origin - cancelled	Resulting annual national RES consumption GWh
	2	2021	Electricity	2	3	5
	1	2020	Gas	7	9	11
	2	2021	Gas	8	10	12
	1	2020	Heating	13	15	17
	2	2021	Heating	14	16	18



2. Record level errors



3. Specific errors

Rows per page 10

1 Go to 1 of 1

Total: 6 records

Validations – overview of errors in dataset

EU Energy Reporting

Validations

Filtering options available here

Type of QC

Table

Field

Level error

Filter Reset

Entity Table Field Code Level error Message Number of records

Entity	Table	Field	Code	Level error	Message	Number of records
FIELD	Table_7	Share of biodegradable waste used - percentage	SV13 ⓘ	ERROR	The value should be between 0 and 1 (corresponding to 0 and 100%)	1
RECORD	Table_1		RD7 ⓘ	ERROR	The number of cancelled guarantees of origin exceed guarantees of origin issued during the reporting period	6
RECORD	Table_8		RD3 ⓘ	ERROR	The value for "Total renewable electricity production in buildings" should be higher than "Total renewable electricity fed into grid"	2
RECORD	Table_5		RD2 ⓘ	ERROR	The ending period should be later than the starting period	8
RECORD	Table_8		RD9Source 6 ⓘ	ERROR	Total energy consumption/production does not add up to its constituent parts	2
RECORD	Table_8		RD9Source 1 ⓘ	ERROR	Total energy consumption/production does not add up to its constituent parts	2
RECORD	Table_8		RD9Source 5 ⓘ	ERROR	Total energy consumption/production does not add up to its constituent parts	2
RECORD	Table_8		RD9Source 3 ⓘ	ERROR	Total energy consumption/production does not add up to its constituent parts	2
RECORD	Table_8		RD9Source 2 ⓘ	ERROR	Total energy consumption/production does not add up to its constituent parts	2
RECORD	Table_8		RD9Source 4 ⓘ	ERROR	Total energy consumption/production does not add up to its constituent parts	2

Rows per page 10

1 2 3 4 Go to 1 of 2 Total: 97 records (total errors: 41)

Download validations

Download validations in a csv. here

Close

Validations – overview of errors in dataset (csv)

Validation



Blocking errors require a change of the reporting data. Release cannot be performed.

Two ways to correct or update data:

- ✓ Correct the Excel template and re-import the updated template

When re-importing a modified template, always click on
“**Replace data**” before importing and validating an updated
template

- ✓ Correct the fields directly in Reportnet by clicking on the field.

In any case, the data must be validated → “Validate” and “Refresh”.



Reportnet 3

Release of data - submission

Data submission



European Union



Reportnet 3 > Dataflows > Dataflow > Belgium



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Keeling



Dataflow - Belgium

GovReg: Additional reporting obligations in the area of renewable energy - Annex XVI [2023] 08022023



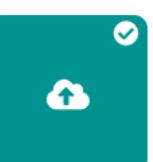
Dataflow
help



Reporting
data



Confirmation
receipt



Release to
data
collection



Releasing data can take a while

This can run in the background while you do
other tasks!

European Environment Agency
Kongens Nytorv 6
DK 1050 Copenhagen K

Receipt date: 2025-03-14
Representative: Italy

To Whom It May Concern

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

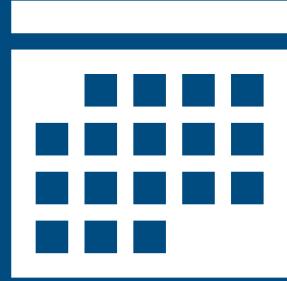
Integrated National Policies and Measures [2025]

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

Datasets
Integrated National Policies and Measures

Release date
2025-03-14 19:28:54 CET

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



Next steps

Quality assurance and final datasets

Steps – Submission, quality checks, assessment



Deadline for reporting:

15 March 2025



Quality assurance:

15 March – 15 June



Final dataset:

End June

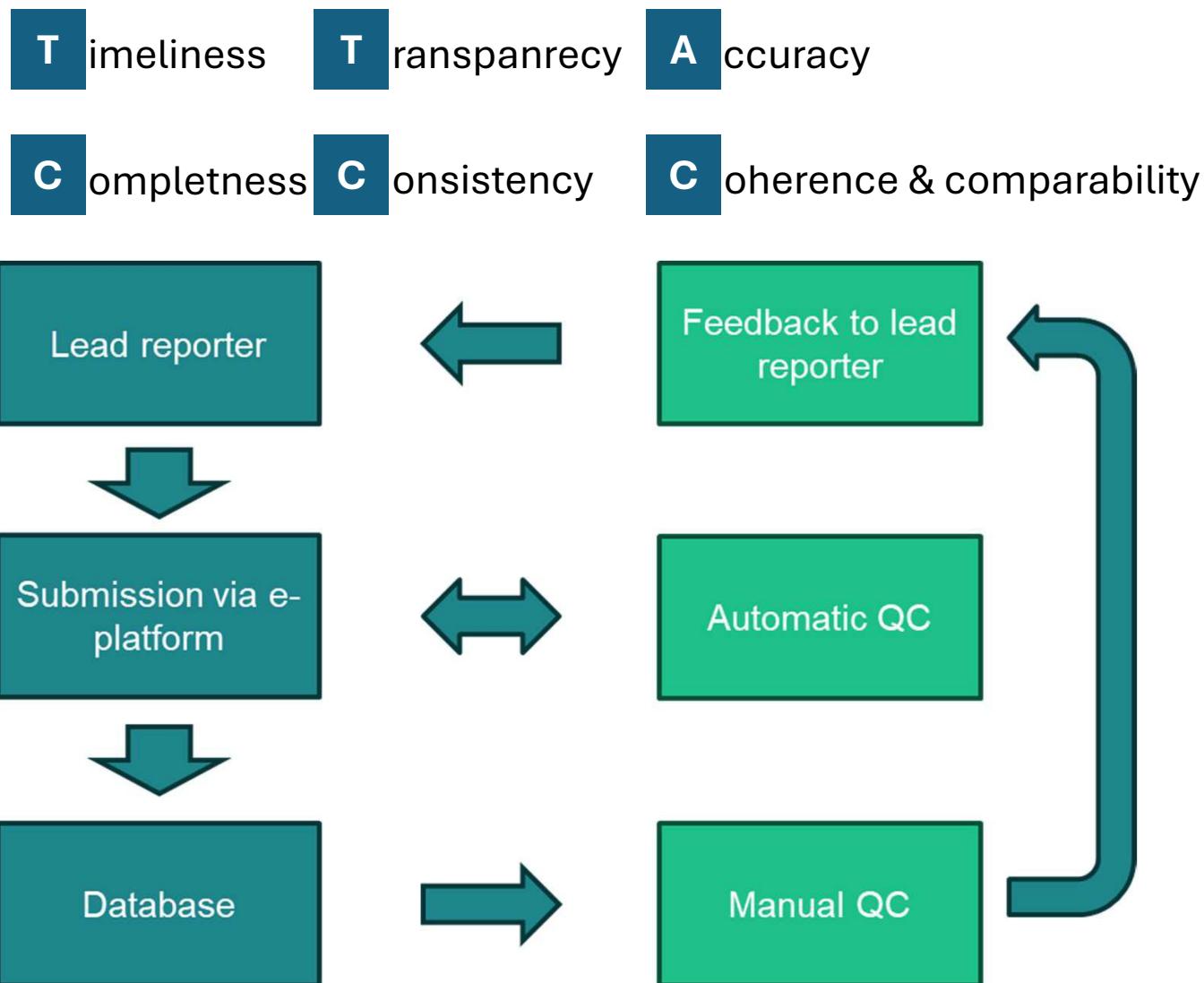


Assessment & analysis:

July – October



Next steps – quality checks



ETC to prepare list of possibly quality issues (COMLOG) to be shared with CPS after 15 March.

CPs requested to resubmit data officially in Reportnet 3.

ETC-EEA will only make updates to final dataset in communication with CPs.



Annex IV **Overview**

Thematic guidance



PROGRESS TO TARGET - Energy Efficiency

Article 21 (a) – Progress towards objectives, targets, and contributions within energy efficiency

By 15 March 2025 and every second year thereafter, CPs shall report to the Energy Community Secretariat their implementation of the following trajectories and objectives within energy efficiency:

- (1) National contribution for PEC and FEC;
- (2) the indicative trajectory PEC and FEC;
- (3) the indicative milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and non-residential buildings;
- (4) where applicable, an update of other national objectives set out in the national plan.

Reports due:

15 March – Biannually – To start in 2025

PROGRESS TO TARGET - energy efficiency – Tables

- Table 1: National contribution and indicative trajectory for primary and final energy consumption,
- Table 2: Milestones and progress indicators of the long-term strategy for the renovation (LTRS) of the national stock of residential and non-residential buildings – building stock ,
- Table 2_Other: Other milestones and progress indicators of the long-term strategy for the renovation (LTRS) of the national stock of residential and non-residential buildings – building stock,
- Table 3: Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and non-residential buildings – renovation rates,
- Table 4: Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and non-residential buildings – other indicators,
- Table 5: Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and non-residential buildings - the contributions to the Union's energy efficiency targets,
- Table 6: Update of other national objectives on energy efficiency as reported in the integrated national energy and climate plan.

The process for pre-filling:

Progress towards indicative trajectory 2021-2030 in PEC and FEC.

Table	Type of filling	Source(s) of data
Annex 4, table 1, fields 6 and 7	Pre-filling	Eurostat energy balances



Annex IV **Detailed**

Thematic guidance

Annex 4 – Table 1

National contribution and indicative trajectory for primary and final energy consumption

Reporting element	Specification	Unit	Indicator	
Definition of the 2030 savings contribution ⁽¹⁾	M	n/a	1	Data format: drop-down menu
Description of the 2030 contribution and indicative trajectory from 2021-2030 (2025)	M	n/a	2	Data format: text
Value of the savings contribution 2029 (2030)	M	3		Data format: text for unit, number (decimal) for indicator
Translation into absolute level of PEC	M	ktoe	4	
Translation into absolute level of FEC	M	ktoe	5	Data format: number (decimal)
			X-3 ⁽⁴⁾	X-2
Progress towards indicative trajectory 2021-2030 in PEC (2)	M	ktoe	6	These fields will be pre-filled based on Eurostat energy balance data when available.
Progress towards indicative trajectory 2021-2030 in FEC (2)	M	ktoe	7	
Baseline GDP level, if the contribution is set as an intensity target (2016)	M _{iap}	Mandatory if applicable	8	Data format: number (decimal)
General comments on the national contribution and indicative trajectory for primary and final energy consumption ⁽⁵⁾	V	Voluntary	9	Data format: number (decimal)

FIELD 1: The purpose of this field is to report their definition of the 2030 savings contribution in accordance with their NECP through the selection of a specific option (i.e., primary energy consumption; final energy consumption; primary energy savings; final energy savings; energy intensity.)

FIELD 2: The purpose of this field is to describe the 2030 contribution and indicative trajectory from 2025-2030;

FIELD 3: The purpose of this field is to document the value of the **savings contribution** in 2030 in accordance with their NECP.

Annex 4 – Table 1

National contribution and indicative trajectory for primary and final energy consumption

Reporting element	Specification	Unit	Indicator	
Definition of the 2030 savings contribution ⁽¹⁾	M	n/a	1	Data format: drop-down menu
Description of the 2030 contribution and indicative trajectory from 2021-2030 (2025)	M	n/a	2	Data format: text
Value of the savings contribution 2029	M	3		Data format: text for unit, number (decimal) for indicator
Translation into absolute level of PEC	M	ktoe	4	Data format: number (decimal)
Translation into absolute level of FEC	M	ktoe	5	
			X-3 ⁽⁴⁾	X-2
Progress towards indicative trajectory 2021-2030 in PEC (2)	M	ktoe	6	These fields will be pre-filled based on Eurostat energy balance data when available.
Progress towards indicative trajectory 2021-2030 in FEC (2)	M	ktoe	7	
Baseline GDP level, if the contribution is set as an intensity target	M _{rap}	Mandatory if applicable	8	Data format: number (decimal)
General comments on the national contribution and indicative trajectory for primary and final energy consumption ⁽⁵⁾	V	Voluntary	9	Data format: number (decimal)

FIELD 4-5: The purpose of this field is to translate the value of the savings contribution 2030 (field 3) into absolute level of PEC (Primary Energy Consumption) or FEC (Final Energy Consumption).

FIELD 8: The purpose of this field is to report the Baseline GDP level, if the contribution is set as an intensity target.

FIELD 9: The purpose of this field is to provide additional explanation on the national contribution and indicative trajectory for primary and final energy consumption, including their underlying methodology.

Annex 4 – Table 1 – Field 3 good examples

National contribution and indicative trajectory for primary and final energy consumption

The savings contribution in 2030 can for example be calculated as follows:

- **In case it is first defined in terms of maximum level of primary energy consumption**, then the value of the savings contribution corresponds to primary energy savings and can be calculated as the difference in the primary annual energy consumption in 2030 between a reference scenario and the target scenario (i.e. the absolute level of primary energy consumption indicated in field 4)
- **In case it is first defined in terms of maximum level of final energy consumption**, then the value of the savings contribution corresponds to final energy savings and can be calculated as the difference in the final annual energy consumption in 2030 between a reference scenario and the target scenario (i.e. the absolute level of final energy consumption indicated in field 5)
- **In case it is first defined in terms of primary energy savings**, then the value of the savings contribution corresponds to primary energy savings and is directly the target adopted by the CPs;
- **In case it is first defined in terms of final energy savings**, then the value of the savings contribution corresponds to final energy savings and is directly the target adopted by the CPs;
- **In case it is first defined in terms of primary or final energy intensity**, then the value of the savings contribution corresponds to either primary or final energy savings. The target in energy intensity needs to be translated in absolute level of energy consumption (as indicated in field 4 for primary energy consumption, or field 5 for final energy consumption). Then the savings contribution can be calculated as the difference in annual energy consumption in 2030 between a reference scenario and the target scenario (i.e. the absolute level of primary or final energy consumption indicated in field 4 or field 5).

Annex 4 – Table 2

Milestones and progress indicators of the long-term strategy (LTRS) for the renovation of the national stock of residential and non-residential buildings – building stock

	Number of buildings ⁽¹⁾			Total floor area (m ²) ⁽²⁾			Primary energy use of buildings (TJ) ⁽³⁾			Final energy use of buildings (TJ) ⁽³⁾			Direct GHG emissions in buildings (tCO ₂ e)			Total GHG emissions in buildings (tCO ₂ e)		
	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2
Specification	M _{gov}	M _{gov}	M _{gov}	M _{gov}	M _{gov}	M _{gov}	M _{gov}	M _{gov}	M _{gov}	M _{gov}	M _{gov}	M _{gov}	M _{gov}	M _{gov}	M _{gov}	M _{gov}	M _{gov}	
Residential buildings	Data format: number (integer and decimal)																	
Of which worst performing buildings ⁽⁵⁾	1	2	3	4	5	6												
Non-Residential buildings																		
Of which worst performing buildings																		
Public buildings ⁽⁶⁾																		
Of which worst performing buildings																		

Mandatory if available, 3 historical years. The years are identified as 2020, X-3 and X-2, where X is the reporting year.

The objective is to collect information on basic indicators related to the national building stocks that in most cases are already reported in the national strategies.

According to Article 2a of the *Energy Performance of Buildings Directive (2010/31/EU – EPBD)*, a long-term renovation strategy (LTRS) has to be developed which “shall set out a roadmap with measures and domestically established measurable progress indicators, with a view to the long-term 2050 goal of reducing greenhouse gas emissions in the Union by 80-95 % compared to 1990, in order to ensure a highly energy efficient and **decarbonized national building stock and in order to facilitate the cost-effective transformation of existing buildings into nearly zero-energy buildings**. The roadmap shall include indicative milestones for 2030, 2040 and 2050, and specify how they contribute to achieving the Union’s energy efficiency targets in accordance with Directive 2012/27/EU”

Annex 4 – Table 2

Residential and non-residential buildings include single family buildings and apartment blocks (multi apartment buildings) as a whole and not the individual number of apartments (building units). For example, if an apartment block has 10 apartments (building units) this should count for 1 building and not for 10 buildings. Non-residential buildings include offices, educational buildings, hospitals, hotels and restaurants, sports facilities, wholesale and retail trade services buildings and other types of energy-consuming buildings.

Worst performing building should be described in line with the national long-term renovation strategy. The Commission's Recommendation (EU) 2019/786 on building renovation provides examples to determine the worst-performing segments of the national building stock: (a) setting a specific threshold, such as an energy performance category (e.g. below 'D'); (b) using a primary energy consumption figure (expressed in kWh/m² per year); or even (c) targeting buildings built before a specific date (e.g. before 1980).

Annex 4 – Table 2

Milestones and progress indicators of the long-term strategy (LTRS) for the renovation of the national stock of residential and non-residential buildings – building stock

	Number of buildings ⁽¹⁾			Total floor area (m ²) ⁽²⁾			Primary energy use of buildings (TJ) ⁽³⁾			Final energy use of buildings (TJ) ⁽³⁾			Direct GHG emissions in buildings (tCO ₂ e)			Total GHG emissions in buildings (tCO ₂ e)		
	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2
Specification	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	M _{ISV}	
Residential buildings																		
Of which worst performing buildings ⁽⁵⁾																		
Non-Residential buildings																		
Of which worst performing buildings																		
Public buildings ⁽⁶⁾																		
Of which worst performing buildings																		

1 2 3 4 5 6

FIELD 3: Primary energy use of buildings reported in TJ should be as considered in the energy performance calculation of buildings defined by Directive 2010/31/EU: ‘primary energy’ means energy from renewable and non-renewable sources which has not undergone any conversion or transformation process.

FIELD 4: The final energy consumption of households by end-use type.

The purpose of this field is to report on and establish the total primary/final energy use of buildings in three historical years. The years are identified as 2020, X-3 and X-2, where X is the reporting year

Annex 4 – Table 2

Milestones and progress indicators of the long-term strategy (LTRS) for the renovation of the national stock of residential and non-residential buildings – building stock

FIELD 5: Direct GHG emissions in buildings In the context of the NECP reporting GHG emissions (direct and total) relate to operational GHG (linked to energy use, direct and indirect), not to embodied carbon.

	Number of buildings ⁽¹⁾			Total floor area (m ²) ⁽²⁾			Primary energy use of buildings (TJ) ⁽³⁾			Final energy use of buildings (TJ) ⁽³⁾			Direct GHG emissions in buildings (tCO ₂ e)			Total GHG emissions in buildings (tCO ₂ e)		
	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2
Specification	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	M _{3Y}	
Residential buildings																		
Of which worst performing buildings ^[5]		1				2				3			4			5		6
Non-Residential buildings																		
Of which worst performing buildings																		
Public buildings ^[6]																		
Of which worst performing buildings																		

The purpose of this field is to report on and establish the Direct GHG emissions in buildings in three historical years. The years are identified as 2020, X-3 and X-2, where X is the reporting year.

Once the national estimate the final (FEC) and primary (PEC) energy consumption, the GHG emissions are easy to be calculated: the direct GHG emissions are the FEC for direct use of fossil fuels multiplied by the default emission factors related to net calorific values (in t CO₂/TJ) for each fuel.

Annex 4 – Table 2

Milestones and progress indicators of the long-term strategy (LTRS) for the renovation of the national stock of residential and non-residential buildings – building stock

	Number of buildings ⁽¹⁾			Total floor area (m ²) ⁽²⁾			Primary energy use of buildings (TJ) ⁽³⁾			Final energy use of buildings (TJ) ⁽³⁾			Direct GHG emissions in buildings (tCO ₂ e)			Total GHG emissions in buildings (tCO ₂ e)		
	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2
Specification	M _{av}	M _{av}	M _{av}	M _{av}	M _{av}	M _{av}	M _{av}	M _{av}	M _{av}	M _{av}	M _{av}	M _{av}	M _{av}	M _{av}	M _{av}	M _{av}	M _{av}	
Residential buildings																		
Of which worst performing buildings ⁽⁵⁾	1	2	3	4	5	6												
Non-Residential buildings																		
Of which worst performing buildings																		
Public buildings ⁽⁶⁾																		
Of which worst performing buildings																		

FIELD 6: Total GHG emissions are the sum of direct emissions calculated in the previous field and indirect emissions. The indirect emissions, i.e. GHG emissions related to electricity or heat from district heating consumption, can be calculated by multiplying the average GHG emission intensity of electricity and heat generation in the given country or region with the corresponding electricity or heat from district heating consumption of the building stock. .

Annex 4 – Table 2 follow up

Other: Other milestones and progress indicators of the long-term strategy (LTRS) for the renovation of the national stock of residential and non-residential buildings – building stock

The purpose of this field is for the CPs to report the name and unit of any other indicators as presented in the national long-term renovation strategy.

e.g. investments for the renovation of the existing stock, construction's share in GDP, health issues

Specification	Other 1 ⁽¹⁾			Other 2 ⁽¹⁾			Other 3 ⁽¹⁾		
Indicator	M _{iav}	M _{iav}	M _{iav}	M _{iav}	M _{iav}	M _{iav}	M _{iav}	M _{iav}	M _{iav}
Unit	1								
Values	2020	X-3	X-2	2020	X-3	X-2	2020	X-3	X-2
Residential buildings	2								
Of which worst performing buildings ⁽³⁾									
Non-Residential buildings									
Of which worst performing buildings									
Public buildings ⁽⁴⁾									
Of which worst performing buildings									
Other (please specify replacing this text)									

1. Data format: free text

2: Data format: number (decimal)

Annex 4 – Table 3

Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and nonresidential buildings – renovation rate

This table refers to '**energy renovations**'. An energy renovation means the change of **one or more building elements** (building envelope and technical building systems), having the potential to significantly affect the calculated or metered amount of energy needed to meet the energy demand associated with a typical use of the building, which includes, inter alia, energy used for heating, cooling, ventilation, hot water and lighting.

		Number of buildings renovated		Total floor area renovated (m ²) ⁽²⁾		Renovation rate ⁽³⁾		Deep renovation equivalent rate ⁽⁵⁾	
Specification		X-3	X-2	M _{av}	M _{av}	X-3	X-2	M _{av}	M _{av}
Residential buildings	Light	1				2		3	
	Medium								
	Deep								
	Total								
Residential buildings - worst performing	Light								
	Medium								
	Deep								
	Total								
Non-residential buildings	Light								
	Medium								
	Deep								
	Total								
Non-residential buildings - worst performing	Light								
	Medium								
	Deep								
	Total								
Public buildings ⁽⁴⁾	Light								
	Medium								
	Deep								
	Total								
Public buildings - worst performing	Light								
	Medium								
	Deep								
	Total								

1. Data format: free text

2: Data format: number (decimal)

Annex 4 – Table 3

Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and nonresidential buildings – renovation rate

1. Data format: integer
2. Data format: numer(decimal)

Specification	Number of buildings renovated		Total floor area renovated (m ²) ⁽²⁾		Renovation rate ⁽³⁾		Deep renovation equivalent rate ⁽⁵⁾	
	X-3	X-2	X-3	X-2	X-3	X-2	X-3	X-2
Residential buildings	M _{inv}	M _{inv}	M _{inv}	M _{inv}	M _{inv}	M _{inv}	V	V
	Light	1		2		3		4
	Medium							
	Deep							
Total								
Residential buildings - worst performing	M _{inv}	M _{inv}	M _{inv}	M _{inv}	M _{inv}	M _{inv}	V	V
	Light							
	Medium							
	Deep							
Total								
Non-residential buildings	M _{inv}	M _{inv}	M _{inv}	M _{inv}	M _{inv}	M _{inv}	V	V
	Light							
	Medium							
	Deep							
Total								
Non-residential buildings - worst performing	M _{inv}	M _{inv}	M _{inv}	M _{inv}	M _{inv}	M _{inv}	V	V
	Light							
	Medium							
	Deep							
Total								
Public buildings ⁽⁴⁾	M _{inv}	M _{inv}	M _{inv}	M _{inv}	M _{inv}	M _{inv}	V	V
	Light							
	Medium							
	Deep							
Total								
Public buildings - worst performing	M _{inv}	M _{inv}	M _{inv}	M _{inv}	M _{inv}	M _{inv}	V	V
	Light							
	Medium							
	Deep							
Total								

FIELD 1: Each of the above categories is divided into 4 different indicators called renovation depths which should be reported for each of the years. These indicators are ‘Light’, ‘Medium’, Deep’ and ‘Total’.

FIELD 2-3-4: The purpose of this field is to report on and establish the total building floor area renovated in three historical years. The years are identified as X-3 and X-2, where X is the reporting year. The renovation rates and depths do not refer to individual buildings but to the whole renovated building stock.

Renovation depths are the ratio between primary energy saved and total primary energy before renovation of the respective part of the stock

Annex 4 – Table 4

Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and nonresidential buildings – other indicators

Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and non-residential buildings	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 _{isp}	M _{isp}	M _{isp}	M _{isp}	M _{isp}	M _{isp}	M _{isp}	M _{isp}	M _{isp}
1	2	3	4	5	6			
Data format: text	text	text	number (integer)	text	text	text	text	number (decimal)

FIELD 1: The purpose of this field is to provide the name of a **milestone/progress indicator** that is supporting the implementation of the long-term strategy for the renovation of the national stock of residential and non-residential buildings.

FIELD 3: The Commission's Staff Working Document SWD (2022) 375 final “Analysis of the national long-term renovation strategies”, and JRC’s report “Assessment of first longterm renovation strategies under the Energy Performance of Building Directive (Art. 2a)” present different examples of the indicative milestones selected and the relevant targets.

Annex 4 – Table 4

Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and non residential buildings – other indicators

Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and non-residential buildings	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 _{isp}	M _{isp}	M _{isp}	M _{isp}	M _{isp}	M _{isp}	M _{isp}	M _{isp}	M _{isp}
1	2	3	4	5	6			
Data format: text	text	text	number (integer)	text	text	text	text	number (decimal)

FIELD 4: his field shall indicate the target year(s) which should be in line with the national LTRSs. They should report the targets/indicative milestones for 2030, 2040 and 2050 (or for any other target year) in different rows.

FIELD 5: [...]providing an update on the progress made towards a specific indicator in quantitative terms 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 the set milestones.

FIELD 6: The purpose of this field is to report on the progress indicator towards the target outlined in FIELD 3. If the target/objective is quantifiable, they have to provide an indication of progress, with the latest available information. Indicators for reporting are to be determined on the basis of national objectives or targets

Annex 4 – Table 5

Milestones and progress indicators of the long-term strategy for the renovation of the national stock of residential and non residential buildings - the contributions to the Union's energy efficiency targets

	Specification	Description
Please describe how progress towards the milestones in the long-term renovation strategy contributed to achieving the Union's energy efficiency targets in accordance with Directive 2012/27/EU	M	1

In accordance with Article 2a paragraph 2, the LTRS must specify how the milestones for 2030, 2040 and 2050 contribute to the indicative headline target defined in accordance with Article 3 of the Energy Efficiency Directive, since buildings are a key pillar of energy efficiency policy.

Annex 4 – Table 6

Update of other national objectives on energy efficiency as reported in the integrated national energy and climate plan

Name of national target/ objective M _{iap}	Description M _{iap}	Progress towards target/ objective ⁽¹⁾ M _{iap}	Expected impacts of the set objective ⁽²⁾ M _{iap}
1	2	3	4
Data format: text (all)			

Purpose:

- provide the name of a national target/objective as reported in each CPs NECP
- give context on the national target/ objective and describe the aim
- report on progress towards meeting the national target/objective
- report on expected impacts of the set objective

IV: Table 1_Elements

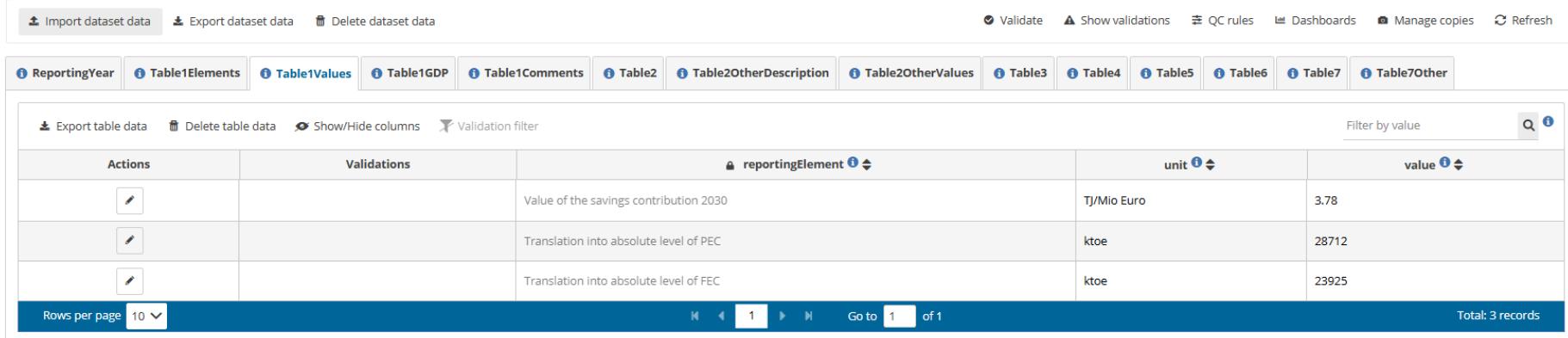
The screenshot shows the 'Reporting data Pending' interface for Austria's progress towards energy efficiency objectives. The top navigation bar includes links for Import dataset data, Export dataset data, Delete dataset data, Validate, Show validations, QC rules, Dashboards, Manage copies, and Refresh. Below the navigation is a breadcrumb menu with links for ReportingYear, Table1Elements, Table1Values, Table1GDP, Table1Comments, Table2, Table2OtherDescription, Table2OtherValues, Table3, Table4, Table5, Table6, Table7, and Table7Other. The main content area displays a table with two rows. The first row is for 'Energy intensity' and defines the 2030 savings contribution. The second row describes the 2030 contribution and indicative trajectory from 2021-2030, mentioning Austria's target of improving primary energy intensity by 25% to 30% compared to 2015. The table has columns for Actions, Validations, reportingElement, and indicator. A search bar labeled 'Filter by value' is located at the top right of the table. The bottom of the screen shows pagination controls (Rows per page: 10, Go to: 1 of 1), a total record count (Total: 2 records), and standard browser navigation buttons.

Actions	Validations	reportingElement	indicator
		Definition of the 2030 savings contribution	Energy intensity
		Description of the 2030 contribution and indicative trajectory from 2021-2030	Austria has set itself a target of improving primary energy intensity by between 25% and 30% when compared with 2015. In absolute terms, this corresponds to primary energy consumption of 30,763/28,712 ktoe and to final energy consumption of 25,634/23,925 ktoe in 2030.

Purpose:

- report the definition of the 2030 savings contribution in accordance with each CP's NECP through the selection of a specific option (i.e., primary energy consumption; final energy consumption; primary energy savings; final energy savings; energy intensity.)
- describe the 2030 contribution and indicative trajectory from 2021-2030 in accordance with each NECP

IV: Table 1_Values



The screenshot shows a reporting interface with the following details:

- Reporting data Pending**: A database icon followed by the text "Reporting data Pending".
- [TEST] GovReg: Progress towards objectives, targets and contributions (Energy Efficiency) Annex IV [2025] - Austria**: The dataset name.
- Actions Bar**: Includes "Import dataset data", "Export dataset data", "Delete dataset data", "Validate", "Show validations", "QC rules", "Dashboards", "Manage copies", and "Refresh".
- Navigation Bar**: Buttons for "ReportingYear", "Table1Elements", "Table1Values" (which is highlighted in blue), "Table1GDP", "Table1Comments", "Table2", "Table2OtherDescription", "Table2OtherValues", "Table3", "Table4", "Table5", "Table6", "Table7", and "Table7Other".
- Table Headers**: "Actions", "Validations", "reportingElement", "unit", and "value".
- Table Data**: Three rows of data:
 - Value of the savings contribution 2030 (reportingElement), unit TJ/Mio Euro, value 3.78.
 - Translation into absolute level of PEC (reportingElement), unit ktoe, value 28712.
 - Translation into absolute level of FEC (reportingElement), unit ktoe, value 23925.
- Pagination**: Shows "Rows per page" set to 10, page 1 of 1, and a total of 3 records.

Actions	Validations	reportingElement	unit	value
		Value of the savings contribution 2030	TJ/Mio Euro	3.78
		Translation into absolute level of PEC	ktoe	28712
		Translation into absolute level of FEC	ktoe	23925

Purpose:

- document the value of the savings contribution in 2030 in accordance with each CP's NECP
- translate the value of the savings contribution 2030 into absolute level of PEC
- translate the value of the savings contribution 2030 into absolute level of FEC

IV: Table 1_GDP

 **Reporting data Pending**
[TEST] GovReg: Progress towards objectives, targets and contributions (Energy Efficiency) Annex IV [2025] - Austria

Import dataset data Export dataset data Delete dataset data Validate Show validations QC rules Dashboards Manage copies Refresh

ReportingYear Table1Elements Table1Values Table1GDP Table1Comments Table2 Table2OtherDescription Table2OtherValues Table3 Table4 Table5 Table6 Table7 Table7Other

Export table data Delete table data Show/Hide columns Validation filter Filter by value

Actions	Validations	reportingElement	year	unit	value	valueNotation
		Baseline GDP level, if the contribution is set as an intensity target	2023	Million-euro, chain-linked volumes	365270	
		Baseline GDP level, if the contribution is set as an intensity target	2022	Million-euro, chain-linked volumes	349089	

Rows per page 10 Go to 1 of 1 Total: 2 records

Purpose:

- report the Baseline GDP level, if the contribution is set as an intensity target

IV: Table 1_ Comments

 **Reporting data Pending**

[TEST] GovReg: Progress towards objectives, targets and contributions (Energy Efficiency) Annex IV [2025] - Austria

Import dataset data Export dataset data Delete dataset data Validate Show validations QC rules Dashboards Manage copies Refresh

ReportingYear Table1Elements Table1Values Table1GDP Table1Comments Table2 Table2OtherDescription Table2OtherValues Table3 Table4 Table5 Table6 Table7 Table7Other

Export table data Delete table data Show/Hide columns Validation filter Filter by value

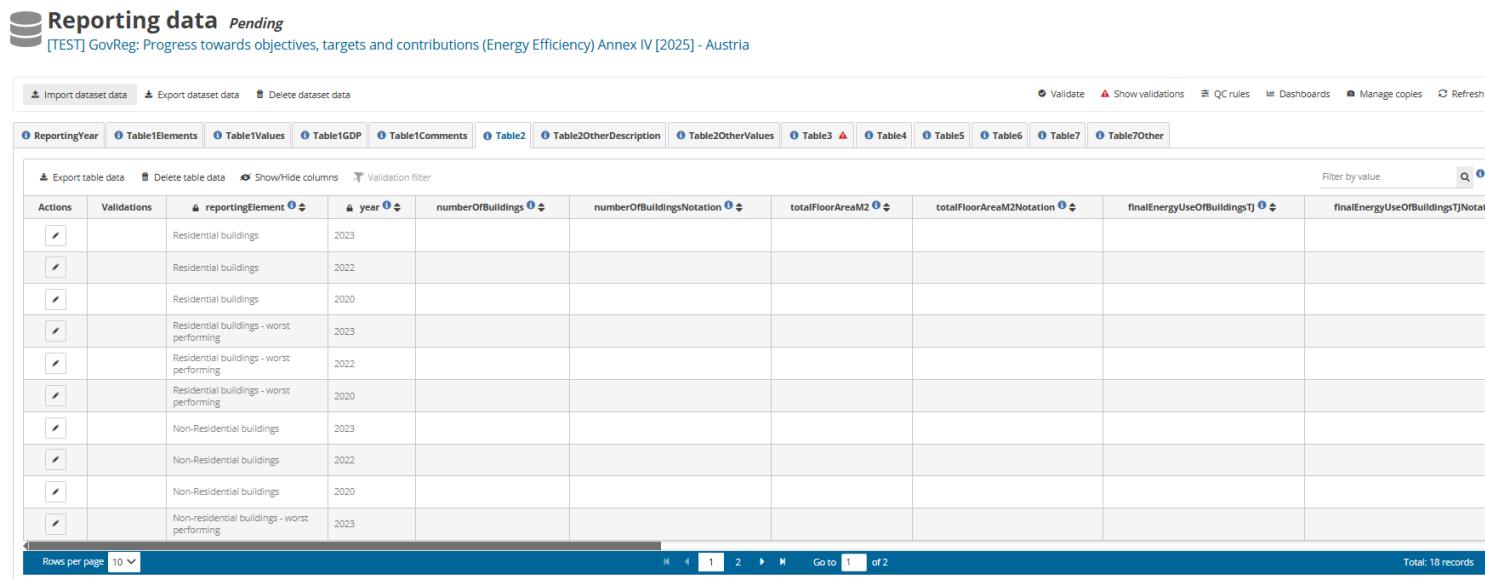
Actions	Validations	reportingElement	description
		General comments on the national contribution and indicative trajectory for primary and final energy consumption	If primary energy demand exceeds 1,200 petajoules (PJ) by 2030, the excess energy will have to be covered by energy from renewable sources. As the ratio of renewable energy to consumption and the greenhouse gas emission targets are fixed, if energy consumption increases, commensurately more renewable energy will have to be used.

Rows per page 10 Go to 1 of 1 Total: 1 record

Purpose:

- provide additional explanation on the national contribution and indicative trajectory for primary and final energy consumption, including their underlying methodology

IV: Table 2



The screenshot shows a data entry interface titled "Reporting data Pending". The top navigation bar includes links for Import dataset data, Export dataset data, Delete dataset data, Validate, Show validations, QC rules, Dashboards, Manage copies, and Refresh. Below the navigation is a breadcrumb trail: ReportingYear > Table1Elements > Table1Values > Table1GDP > Table1Comments > Table2 > Table2OtherDescription > Table2OtherValues > Table3 > Table4 > Table5 > Table6 > Table7 > Table7Other. The main content area displays a table with the following columns: Actions, Validations, reportingElement, year, numberOfWorkBuildings, numberOfWorkBuildingsNotation, totalFloorAreaM2, totalFloorAreaM2Notation, finalEnergyUseOfBuildingsTJ, and finalEnergyUseOfBuildingsTJNotation. The table contains 18 records, with the first few rows listed below:

Actions	Validations	reportingElement	year	numberOfWorkBuildings	numberOfWorkBuildingsNotation	totalFloorAreaM2	totalFloorAreaM2Notation	finalEnergyUseOfBuildingsTJ	finalEnergyUseOfBuildingsTJNotation
<input type="checkbox"/>		Residential buildings	2023						
<input type="checkbox"/>		Residential buildings	2022						
<input type="checkbox"/>		Residential buildings	2020						
<input type="checkbox"/>		Residential buildings -worst performing	2023						
<input type="checkbox"/>		Residential buildings -worst performing	2022						
<input type="checkbox"/>		Residential buildings -worst performing	2020						
<input type="checkbox"/>		Non-Residential buildings	2023						
<input type="checkbox"/>		Non-Residential buildings	2022						
<input type="checkbox"/>		Non-Residential buildings	2020						
<input type="checkbox"/>		Non-residential buildings - worst performing	2023						

Purpose: report on and establish the Member State's

- building stock (national data from statistical offices or data collected for administrative purposes, data and statistics for construction activity or statistical sampling, estimates and modelling)
 - total building floor area
 - final energy consumption of buildings
 - total primary energy use of buildings
 - Direct GHG emissions in buildings in
 - total GHG emissions in buildings
- Notation keys must be used if the requested data are not reportable indicating "NAv" if data is not available.

IV: Table 2_other_description

 **Reporting data Pending**
[TEST] GovReg: Progress towards objectives, targets and contributions (Energy Efficiency) Annex IV [2025] - Austria

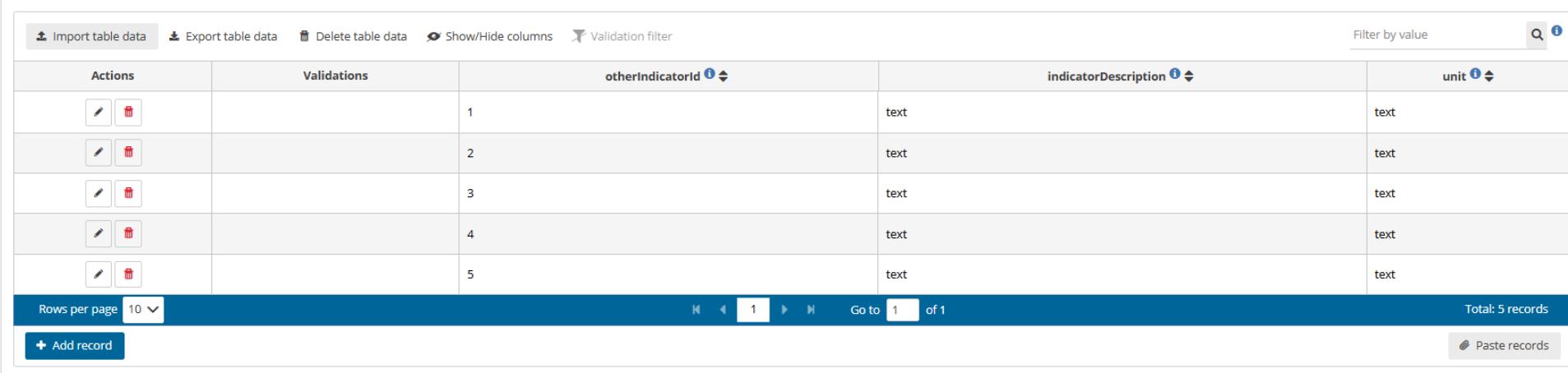
Import dataset data Export dataset data Delete dataset data Validate Show validations QC rules Dashboards Manage copies Refresh

ReportingYear Table1Elements Table1Values Table1GDP Table1Comments Table2 Table2OtherDescription Table2OtherValues Table3 Table4 Table5 Table6 Table7 Table7Other

Import table data Export table data Delete table data Show/Hide columns Validation filter Filter by value

Actions	Validations	otherIndicatorId	indicatorDescription	unit
 		1	text	text
 		2	text	text
 		3	text	text
 		4	text	text
 		5	text	text

Rows per page 10 ▾ 1 Go to 1 of 1 Total: 5 records + Add record Paste records



Purpose:

- report on the name and unit of any other indicators as presented in the national long-term renovation strategy
- Notation keys must be used if the requested data are not reportable indicating "NAv" if data is not available.

IV: Table 2_other_values

The screenshot shows a web-based reporting interface titled "Reporting data Pending". The top navigation bar includes links for "Import dataset data", "Export dataset data", "Delete dataset data", "Validate", "Show validations", "QC rules", "Dashboards", "Manage copies", and "Refresh". Below the navigation is a horizontal menu with tabs: ReportingYear, Table1Elements, Table1Values, Table1GDP, Table1Comments, Table2, Table2OtherDescription, Table2OtherValues, Table3, Table4, Table5, Table6, Table7, and Table7Other. The main content area displays a table with the following columns: Actions, Validations, otherIndicatorId, reportingElement, year, value, and valueNotation. The table contains 105 records, with the first few rows shown below:

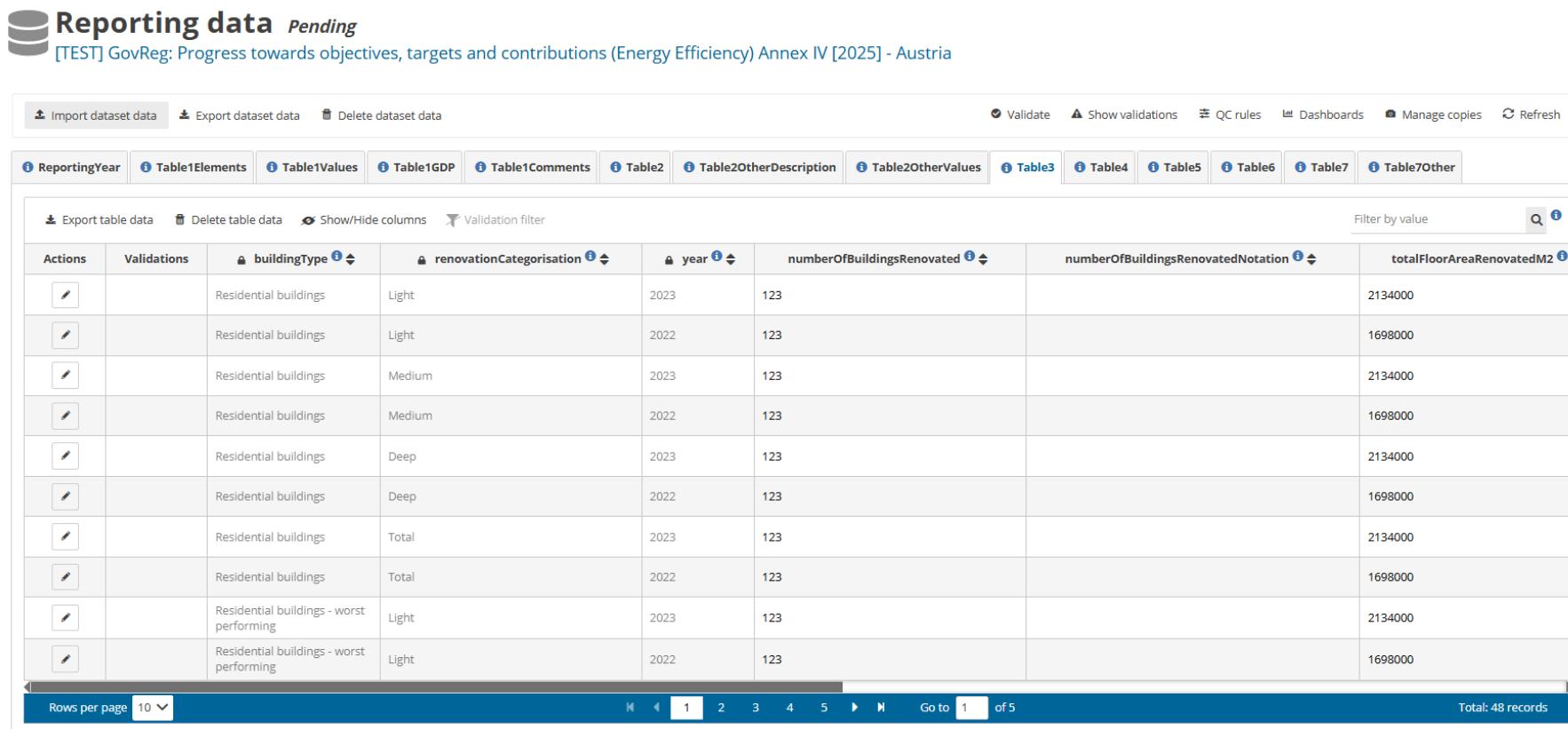
Actions	Validations	otherIndicatorId	reportingElement	year	value	valueNotation
		1	Residential buildings	2023	123	
		3	Residential buildings	2023	123	
		4	Residential buildings	2023	123	
		5	Residential buildings	2023	123	
		1	Residential buildings	2020	123	
		2	Residential buildings	2020	123	
		3	Residential buildings	2020	123	
		4	Residential buildings	2020	123	
		5	Residential buildings	2020	123	
		1	Residential buildings	2022	123	

At the bottom, there are buttons for "Rows per page" (set to 10), "Add record", "Paste records", and a total record count of "Total: 105 records".

Purpose:

- report on the value of any other indicators as presented in the national long-term renovation strategy
- Notation keys must be used if the requested data are not reportable indicating "NAv" if data is not available.

IV: Table 3



The screenshot shows a web-based reporting interface titled "Reporting data Pending". The title bar includes a database icon, the text "Reporting data Pending", and a subtitle "[TEST] GovReg: Progress towards objectives, targets and contributions (Energy Efficiency) Annex IV [2025] - Austria". Below the title is a navigation bar with links: Import dataset data, Export dataset data, Delete dataset data, Validate, Show validations, QC rules, Dashboards, Manage copies, and Refresh.

The main content area features a table with the following columns: Actions, Validations, buildingType, renovationCategorisation, year, numberOfBuildingsRenovated, numberOfBuildingsRenovatedNotation, and totalFloorAreaRenovatedM2. The table contains 10 rows of data, each with a edit icon in the Actions column. The data is as follows:

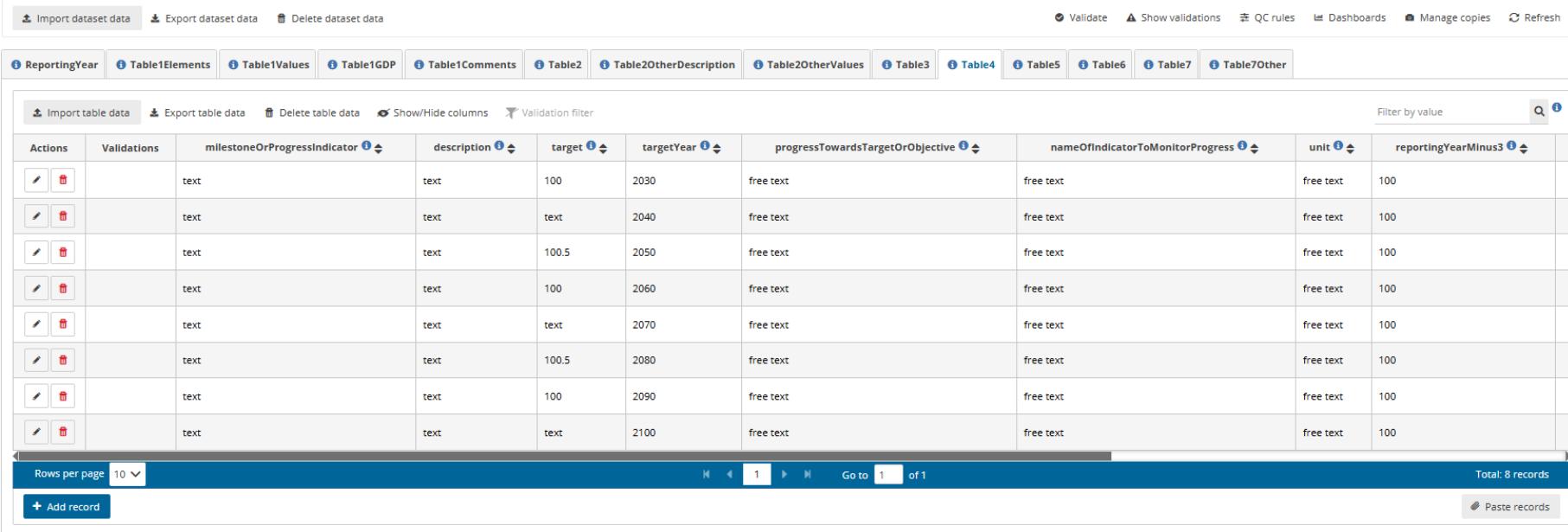
Actions	Validations	buildingType	renovationCategorisation	year	numberOfBuildingsRenovated	numberOfBuildingsRenovatedNotation	totalFloorAreaRenovatedM2
		Residential buildings	Light	2023	123		2134000
		Residential buildings	Light	2022	123		1698000
		Residential buildings	Medium	2023	123		2134000
		Residential buildings	Medium	2022	123		1698000
		Residential buildings	Deep	2023	123		2134000
		Residential buildings	Deep	2022	123		1698000
		Residential buildings	Total	2023	123		2134000
		Residential buildings	Total	2022	123		1698000
		Residential buildings - worst performing	Light	2023	123		2134000
		Residential buildings - worst performing	Light	2022	123		1698000

At the bottom, there are buttons for "Rows per page" (set to 10), navigation arrows, a "Go to" input field (set to 1 of 5), and a total record count of "Total: 48 records".

Purpose: report on and establish the CPs

- number of buildings renovated
- total building floor area renovated (renovation rates and depths refer to the whole renovated building stock)
- renovation rate (renovation rates and depths refer to the whole renovated building stock)
- renovation rate in certain calendar years (renovation rates and depths refer to the whole renovated building stock)

IV: Table 4



The screenshot shows a reporting interface for 'GovReg: Progress towards objectives, targets and contributions (Energy Efficiency) Annex IV [2025] - Austria'. The top navigation bar includes 'Import dataset data', 'Export dataset data', 'Delete dataset data', 'Validate', 'Show validations', 'QC rules', 'Dashboards', 'Manage copies', and 'Refresh'. Below this is a row of tabs: ReportingYear, Table1Elements, Table1Values, Table1GDP, Table1Comments, Table2, Table2OtherDescription, Table2OtherValues, Table3, Table4, Table5, Table6, Table7, and Table7Other. The main content area displays a table with the following columns: Actions, Validations, milestoneOrProgressIndicator, description, target, targetYear, progressTowardsTargetOrObjective, nameOfIndicatorToMonitorProgress, unit, and reportingYearMinus3. There are 8 records listed, each with a set of edit and delete icons. The table footer shows 'Rows per page' set to 10, 'Total: 8 records', and buttons for '+ Add record' and 'Paste records'.

Actions	Validations	milestoneOrProgressIndicator	description	target	targetYear	progressTowardsTargetOrObjective	nameOfIndicatorToMonitorProgress	unit	reportingYearMinus3
[Edit]		text	text	100	2030	free text	free text	free text	100
[Edit]		text	text	text	2040	free text	free text	free text	100
[Edit]		text	text	100.5	2050	free text	free text	free text	100
[Edit]		text	text	100	2060	free text	free text	free text	100
[Edit]		text	text	text	2070	free text	free text	free text	100
[Edit]		text	text	100.5	2080	free text	free text	free text	100
[Edit]		text	text	100	2090	free text	free text	free text	100
[Edit]		text	text	text	2100	free text	free text	free text	100

Purpose:

- provide the name of a milestone/progress indicator that is supporting the implementation of the long-term strategy for the renovation of the national stock of residential and non-residential buildings
 - give context on the national milestones and provide, if necessary, any relevant information that is needed to understand the scope of the indicator, what is covered, etc.
 - name the Target of the milestone in order to identify the goal to be achieved
 - record the target year that the milestones are expected to be achieved
 - report on progress towards meeting the target to be achieved
 - report on the progress indicator towards the target to be achieved (if the target/objective is quantifiable, Member States have to provide an indication of progress, with the latest available information)
- Notation keys must be used if the requested data are not reportable indicating "NA" if data is not applicable.

IV: Table 5

 **Reporting data** *Pending*

[TEST] GovReg: Progress towards objectives, targets and contributions (Energy Efficiency) Annex IV [2025] - Austria

Import dataset data Export dataset data Delete dataset data Validate Show validations QC rules Dashboards Manage copies Refresh

ReportingYear Table1Elements Table1Values Table1GDP Table1Comments Table2 Table2OtherDescription Table2OtherValues Table3 Table4 Table5 Table6 Table7 Table7Other

Export table data Delete table data Show/Hide columns Validation filter Filter by value

Actions	Validations	reportingElement <i>↳</i>	description <i>↳</i>
		Please describe how progress towards the milestones in the long-term renovation strategy contributed to achieving the Union's energy efficiency targets in accordance with Directive 2012/27/EU	Improvement of 25% of the energy consumption for space heating, ventilation and hot water in residential sector from 2020 - 2050. (2020: 153,2 kWh/sqm/year)

Rows per page: 10 Go to 1 of 1 Total: 1 record

Purpose:

- report on progress towards the contributions on the Union's energy efficiency targets

IV: Table 6

 **Reporting data** *Pending*
[TEST] GovReg: Progress towards objectives, targets and contributions (Energy Efficiency) Annex IV [2025] - Austria

Import dataset data Export dataset data Delete dataset data Validate Show validations QC rules Dashboards Manage copies Refresh

ReportingYear Table1Elements Table1Values Table1GDP Table1Comments Table2 Table2OtherDescription Table2OtherValues Table3 Table4 Table5 Table6 Table7 Table7Other

Import table data Export table data Delete table data Show/Hide columns Validation filter Filter by value

Actions	Validations	nameOfNationalTargetOrObjective	description	progressTowardsTargetOrObjective	expectedImpactsOfTheSetObjective
 		text	text	text	text
 		text	text	text	text
 		text	text	text	text
 		text	text	text	text
 		text	text	text	text

Rows per page 10 Go to 1 of 1 Total: 5 records

+ Add record Paste records

Purpose:

- provide the name of a national target/objective as reported in each CPs NECP
 - give context on the national target/ objective and describe the aim
 - report on progress towards meeting the national target/objective
 - report on expected impacts of the set objective
- Notation keys must be used if the requested data are not reportable indicating “NA” if data is not applicable.

ADDITIONAL REPORTING - Energy Efficiency

Article 21 (c) – Additional reporting obligations in the area of energy efficiency

By 15 March 2025 and every second year thereafter, CPs shall report on information pertaining to energy efficiency measures within buildings:

- (1) the reasons behind stable or growing energy consumption;
- (2) the condition and energy performance of public building;
- (3) the extent of energy audits conducted in large enterprises;
- (4) the new NZEBs and renovated buildings meeting NZEB standards.

Reports due:

15 March – Biannually – To start in 2025

Annex 17 – Table 1

Progress in each sector and reasons why energy consumption remained stable or was growing in FEC sectors

Sector	Specification	Reasons for growth/stable final energy consumption in year X-3 ⁽³⁾	If Other year X-3	Reasons for growth/stable final energy consumption in year X-2	If Other year X-2
Sectors		Select category(ies) from footnote (1); copy past the corresponding category label(s). if you include more than one category, please use " ; " as a separator between the different labels.	If you select "other" category, please specify which.	Select category(ies) from footnote (1); copy past the corresponding category label(s). if you include more than one category, please use " ; " as a separator between the different labels.	If you select "other" category, please specify which.
Industry	M	Choose (an) item(s) ⁽¹⁾		Choose (an) item(s) ⁽¹⁾	
Transport	M	Choose (an) item(s) ⁽¹⁾		Choose (an) item(s) ⁽¹⁾	
Households	M	Choose (an) item(s) ⁽¹⁾		Choose (an) item(s) ⁽¹⁾	
Services	M	Choose (an) item(s) ⁽¹⁾		Choose (an) item(s) ⁽¹⁾	
Agriculture	M	Choose (an) item(s) ⁽¹⁾	1.	Choose (an) item(s) ⁽¹⁾	2.

The purpose of these fields is to report on and establish the reasons why energy consumption remained stable or was growing in final energy consumption sectors (Industry, Transport, Households, Services, Agriculture, Other sectors) in past calendar years. Additional sectors may be added and specified under 'Other'. The years concerned are X-3 and X-2, where X is the reporting year.

- Economic growth;
- Decline of fuel prices;
- Increase of value added;
- Increase of employment;
- Increase of transport of goods;
- Increase of transport of passengers;
- Increase of population and/or households;
- Increase of disposable income of households;
- Worsening of winter climatic conditions;
- Worsening of summer climatic conditions;
- Exceptional event;
- Change in the methodology of measurement or calculation of energy consumptions;
- Other

Annex 17 – Table 2

Total building floor area of the buildings with a total useful floor area over 250 m² owned and occupied by the central government that, on 1 January in year X-2 and X-1, which did not meet the energy performance requirements referred to in Article 5(1) of EED

Reporting element	Specification	Unit	Indicators 1 st of January of Year X-2	Indicators 1 st of January of Year X-1	Additional information
Total building floor area of the buildings with a total useful floor area over 250 m ² owned and occupied by the Member States' central government	V	m ²	X	number (decimal)	text
Total building floor area of the buildings which did <u>not</u> meet the energy performance requirements	M	m ²	X	1. & 2.	3.

Field 1-2: The purpose of this field is to report on and establish the total building floor area of the buildings with a total useful floor area over 250 m² owned and occupied by the central government AND total building floor area of the buildings which did not meet the energy performance requirements.

Annex 17 – Table 3

Number of energy audits carried out in in year X-3 and X-2. In addition, the total estimated number of large companies in their territory to which Article 8(4) of EED is applicable and the number of energy audits carried out in those enterprises in the year X-3 and X-2

Reporting element	Specification	Unit	Year	
			X-3 ⁽²⁾	X-2
Total number of energy audits carried out	M	number	number (integer)	1.
Number of large companies ⁽¹⁾ to which Article 8(4) of Directive 2012/27/EU applies	M	number		2.
Number of energy audits carried out in large companies to which Article 8(4) of Directive 2012/27/EU is applicable	M	number		3.

FIELD 1-2: The purpose of this field is to report on total number of energy audits carried out in historic calendar years, as well as of large companies. The years are identified as X-3 and X-2, where X is the reporting year.

FIELD 3: The purpose of this field is to report on the number of energy audits carried out in large companies to which Article 8(4) of the Energy Efficiency Directive is applicable in historic calendar years. The years are identified as X-3 and X2, where X is the reporting year. According to Article 8(4), they shall ensure that enterprises that are not SMEs are subject to an energy audit carried out in an independent and cost-effective manner by qualified and/or accredited experts or implemented and supervised by independent authorities under national legislation. Energy audits need to be performed at least every four years.

Annex 17 – Table 4

Applied national primary energy factor for electricity and a justification, if this is different from the default coefficient referred to in footnote (3) of Annex IV to EED

National primary energy factor for electricity (number)	M	number (decimal)	1.
Justification, if factor is different from default coefficient referred to in footnote (3) of Annex IV to Directive 2012/27/EU	M	text	2.

FIELD 1: The purpose of this field is to report on the national primary energy factor for electricity.

FIELD 2: The purpose of this field is to provide justification if the factor in field 1 differs to the Directive.

Annex 17 – Table 5

Number and floor area of new and renovated nearly zero-energy buildings (1) in year X-2 and X-1, as provided in Article 9 of EPBD, where necessary based on statistical sampling

Reporting element	Specification	Number		Total floor area (m ²)	
		X-2	X-1	X-2	X-1
Residential sector: Total	M _{law}				
Residential sector: New NZEBs	V				
Residential sector: Renovation	V				
Non-residential (private): Total	M _{law}				
Non-residential (private): New NZEBs	V				
Non-residential (private): Renovation	V				
Non-residential (public) ⁽²⁾ : Total	M _{law}				
Non-residential (public): New NZEBs	V				
Non-residential (public): Renovation	V	number (integer)	1.	number (decimal)	2.
Definition of nearly zero-energy buildings ⁽³⁾	V				3.

FIELD 1: The purpose of this field is to report on the number per building sector (residential, public and private non-residential sector) of new and renovated Nearly Zero-Energy Buildings (NZEBs). The reporting is required for two consecutive historic years starting from 1 January of X-2 and 1 January of X-1 on a number of reporting elements: Total, New NZEBs and Renovation individually for Residential, Non-residential (private) and Non-residential (public) sectors

FIELD 3: The definition of NZEB can be provided in this field in the form of a short description. It is recommended to cite where the definition comes from (i.e., legislation, strategy)

Annex 17 – Table 6

Internet link to the website where the list or the interface of energy services providers referred to in Article 18(1), point (c) of Directive 2012/27/EU as adapted and adopted by Ministerial Council Decisions 2015/08/MC-EnC, 2021/14/MC-EnC and 2022/02/MC-EnC can be accessible

Internet link to the website of the list or the interface of energy services providers referred to in Article 18(1), point (c) of Directive 2012/27/EU ⁽¹⁾	M	
Further details or comments on data	V	

The purpose of this field is to record the website where the list or the interface of energy services providers is captured.

XVII: Table 1 / Table 1 - Other

Table 1	Table 1 - Other	Table 2	Table 3	Table 4	Table 5	Table 5 - Other	Table 6
Reasons for growth or stable FEC						Filter by value	
Actions	Validations	Sector	Year	Reasons for growth or stable FEC	If other		
		Industry	2021	other; Worsening of summer climatic conditions; Worsening of winter climatic conditions	Increase in overall production; increase of the number of industries		
		Industry	2020				
		Transport	2021	Increase of transport of passengers; other	Modal shift towards public transport post-pandemic counterbalanced the growth of traffic passengers; Increase in the flow of freight and growth of exports' amount; limited number of alternative fuel vehicles		
		Transport	2020				
		Households	2021	Increase of disposable income of households; other; Worsening of summer climatic conditions; Worsening of winter climatic conditions	No application of measures to reduce energy consumption		
		Households	2020				
		Services	2021	Increase of employment; other; Worsening of summer climatic conditions; Worsening of winter climatic conditions	Growth in activity levels; While energy consumption per m ² decreased, electricity consumption per employee increased due to the use of more electrical appliances		
		Services	2020				
		Agriculture	2021	Decline of fuel prices; other	Technological development led to changes in the structure of energy used in agriculture		
		Agriculture	2020				

Rows per page

10

1

Go to

1

of 1

Total: 10 records

Table 1	Table 1 - Other	Table 2	Table 3	Table 4	Table 5	Table 5 - Other	Table 6
Reasons for growth or stable FEC						Filter by value	
Actions	Validations	Sector	Year	Reasons for growth or stable FEC	If other		
		Mining, quarrying	2021	Economic growth			
		Mining, quarrying	2020				
		Water supply, sewerage	2021	Economic growth			
		Water supply, sewerage	2020				

Error: Consistency check on the sum of fields and the total reported.

Purpose: Report on reasons why energy consumption remained stable or was growing in final energy consumption sectors (Industry, Transport, Households, Services, Agriculture, Other sectors) in past calendar years.

- These fields should **NOT** be filled in case the final energy consumption has **decreased**.
- In sectors where final energy consumption decreased, the respective fields should be filled in with the notation key “NA” (not applicable)
- Member States have to report on each sector separately by choosing from the list (more than one reason can be selected, additional reasons can be specified under ‘other’)
- A dedicated table has been added to add one row per additional sector (Table 1 – Other)



Annex II **Overview**

Thematic guidance



Annex II **Detailed**

Thematic guidance



Annex XVI Overview

Thematic guidance

ADDITIONAL REPORTING - Renewable Energy

Article 20 (c) – Additional reporting obligations in the area of renewable energy

By 15 March 2025 and every second year thereafter, CPs shall report to the Energy Community Secretariat:

- (1) functioning of Guarantees of Origin (GO) system for electricity, gas and heating and cooling;
- (2) estimated excess / deficit in renewable energy projection compared to trajectory;
- (3) biomass usage functioning and effects on the country;
- (4) production and use of renewable energy in buildings.

Reports due: 15 March – Biannually – To start in 2025

The process for pre-filling, pre-loading and post-filling of data

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



Annex XVI **Detailed**

Thematic guidance

Annex 16 – Table 1

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

Reporting element	Specification	Unit	Year	
			X-3	X-2
Electricity				
Guarantees of origin – issued ⁽¹⁾	M _{iap}	Number	1. number (integer)	
Guarantees of origin – canceled ⁽²⁾	M _{iap}	Number		
Guarantees of origin - resulting annual national renewable energy consumption ⁽³⁾	M _{iap}	GWh	number (decimal)	
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. 	

FIELD 1: 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.
- The resulting annual national renewable energy consumption in GWh (formulas in the Guidance)

Annex 16 – Table 1

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

Reporting element	Specification	Unit	Year	
			X-3	X-2
Electricity				
Guarantees of origin – issued ⁽¹⁾	M _{iap}	Number	1. number (integer)	
Guarantees of origin – canceled ⁽²⁾	M _{iap}	Number		
Guarantees of origin - resulting annual national renewable energy consumption ⁽³⁾	M _{iap}	GWh	number (decimal)	
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. text	
Measures taken to protect against fraud of the system	M _{iap}	n/a	3.	

FIELD 2: The purpose is to present measures taken by the CPs 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.

- 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.

FIELD 3: The purpose of this field to present measures taken to protect against fraud of the system of guarantees of origin for ..[]. Mechanisms to prevent fraud are required according to article 19 (6) of RED II.

Annex 16 – 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 _{iap}	1a text	[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 _{iap}	1b text	[Attachments can be provided in Reportnet]

The purpose of these fields is to report additional detailed information of the changes in commodity prices and land use due to feedstock used for bioenergy production (reported in Table 6, Annex II).

The changes must be associated with an increased use 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).

Annex 16 – Table 2

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

Changes in commodity prices include changes associated with:

- Shifts in prices related to food and feed crops used for bioenergy.
- Shifts in prices related to mounting solar panel systems on the ground;
- Shifts in prices related to increased demand for forest biomass;

The changes in land use 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.

Annex 16 – 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		number (decimal)							
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		negative number (decimal)							

When available, the goal is 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 CPs, or CPS and MS, or joint projects between CPs 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).

Annex 16 – 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. text

FIELD 1: The purpose of this field is to report on the technological development and deployment of biofuels, as foreseen in the indicative national trajectory for mainstreaming the renewable energy in transport sector (Article 25, RED II).

In particular, 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)

Annex 16 – 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					Attachments
	Estimated impact of production of biofuels, bioliquids, biomass (1)	Unit	Start_period (YYYY-MM-DD)	End_period (YYYY-MM-DD)	Description methods to estimate impact ⁽¹⁾	Estimated impact of use of biofuels, bioliquids, biomass (1)	Unit	Start_period (YYYY-MM-DD)	End_period (YYYY-MM-DD)	Description methods to estimate the impact ⁽¹⁾	
	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]

Mandatory, if available

The purpose is to provide the information when they have estimated impacts of the production/use of biofuels, bioliquids & biomass fuels on biodiversity / water resources and availability / soils / air quality

Annex 16 – Table 6 and 7

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 2. be provided in Reportnet]

Share of biodegradable waste in waste-to-energy plants used for producing energy

Reporting Year (X) 2023 Mandatory, if applicable

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.	

Annex 16 – 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

Reporting element	Specification	Unit	X-3	Year	X-2
Total final energy consumption from renewables in buildings for heating purposes	Mtoe	ktoe	1		
Solar thermal systems	Mtoe	ktoe			
Biomass ¹⁸¹	Mtoe	ktoe			
Heat pumps	Mtoe	ktoe			
Geothermal systems	Mtoe	ktoe			
Other decentralised renewable sources	Mtoe	ktoe			
Total renewable heat consumed in buildings	Mtoe	ktoe			
Solar thermal systems	Mtoe	ktoe			
Biomass ¹⁸¹	Mtoe	ktoe			
Heat pumps	Mtoe	ktoe			
Geothermal systems	Mtoe	ktoe			
Other decentralised renewable sources	Mtoe	ktoe			
Total renewable heat produced and fed into the grid (district heating)	Mtoe	ktoe			
Solar thermal systems	Mtoe	ktoe			
Biomass ¹⁸¹	Mtoe	ktoe			
Heat pumps	Mtoe	ktoe			
Geothermal systems	Mtoe	ktoe			
Other decentralised renewable sources	Mtoe	ktoe			

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:

- Final energy consumption from renewables 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 (if we assume that buildings includes both households and services).
- Renewable heat consumed in buildings, it includes only heat produced from renewables in a district heating installation and afterwards sold to buildings
- Renewable heat produced and fed into the grid
- Renewable electricity production in buildings
- Renewable electricity consumption in buildings
- Renewable electricity fed into grid

Annex 16 – 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

Total renewable electricity production in buildings	Mtoe	ktoe		
Solar PV systems	Mtoe	ktoe		
Biomass ^[2]	Mtoe	ktoe		
Geothermal systems	Mtoe	ktoe		
Other decentralised renewable sources	Mtoe	ktoe		
Total renewable electricity consumption in buildings	Mtoe	ktoe		
Solar PV systems	Mtoe	ktoe		
Biomass ^[2]	Mtoe	ktoe		
Geothermal systems	Mtoe	ktoe		
Other decentralised renewable sources	Mtoe	ktoe		
Total renewable electricity fed into grid	Mtoe	ktoe		
Solar PV systems	Mtoe	ktoe		
Biomass ^[2]	Mtoe	ktoe		
Geothermal systems	Mtoe	ktoe		
Other decentralised renewable sources	Mtoe	ktoe		

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 source

If questions – please reach out!



For questions: marta.baldi@eea.europa.eu



A photograph showing a dense cluster of air conditioning units installed on the exterior walls of buildings in a city. The units are stacked vertically and horizontally, creating a complex web of metal frames and grilles. The buildings have a mix of modern and traditional architectural styles, with some featuring red-tiled roofs and others grey or white facades. The scene illustrates the significant impact of urban air conditioning on the built environment.

Thank you