EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR ENERGY
Directorate-General for CLimate ACtion

Reporting Guidelines

Dataflow 7: Research, innovation and competitiveness

under Regulation (EU) 2018/1999 on Governance of the Energy Union and Climate Action Implementing Regulation 2022/2299 Annexes VII

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

European Environment Agency

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1. INTRODUCTION

1.1. This document

Reporting on Research, innovation and competitiveness is part of the national energy and climate progress reports (Article 17) under Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.

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

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

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

Some additional and background information is annexed to this document:

- Annex 1: Reporting Roles

1.2. Legal background

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

The Commission Implementing Regulation (EU) 2022/2299 specifies all the reporting requirements within 21 Annexes ([1]).

([1]) The initial legal act had 23 Annexes. Through the amendment by COMMISSION IMPLEMENTING REGULATION (EU) 2026/1807, Annexes VIII, and XVIII were merged with current Annex XV and Annex XIX respectively.

1.3. Overall process of reporting

Each Member State shall submit their NECPR by 15 March 2027, and every two years thereafter.

The NECPR will be submitted through the e-platform established by the Commission ([2]). Different elements of the progress reporting will be submitted through one of the following systems: Reportnet 3 and the Policy Reporting Platform.

This reporting obligation will be reported in the Policy Reporting Platform.

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

1.4.1. Colour-coding

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

Descriptive text (white/or light grey	Text describing the purpose of the table / fields (not to be filled by MS)
N/A	Not applicable (not to be filled by MS)
To be filled in by MS	Information to be completed by MS: can be mandatory (if applicable/available) or voluntary
Pre-filling	Information that is already provided by the MS to the Commission through another reporting exercise that finishes substantially before the deadline for the progress report, and if complete, fully covers the requirements of the NECPR, or that is determined by EU legislation. Therefore, MS will not submit the information again as part of the NECPR. Data cannot be altered in the progress reporting, but through the primary process established for the source data.
Post-filling	Information that is already provided by the MS to the Commission through another reporting exercise, ongoing in parallel to the progress reporting, and if complete, fully covers the requirements of the NECPR. Therefore, MS will not submit the information again as part of the NECPR.

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

	Data cannot be altered in the progress reporting, but through the primary process established for the source data.
Pre-loading	Information that is already collected by the Commission from past exercises or provided to the Commission through another source, but which does not fully cover the requirements of the NECPR. Information can be pre-loaded in the relevant template. Data should be checked, completed, and commented by the Member States, where applicable.
Automatically calculated	Fields automatically calculated based on other fields.

1.5. Dynamic references to years

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

The table below summarizes the dynamic references used in the annexes, and the years they refer to in the first three reporting exercises in 2023, 2025 and 2027.

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

Dynamic reference	Respective year in first reporting (2023)	Respective year in second reporting (2025)	Respective year in third reporting (2027)
X	2023	2025	2027
X-1	2022	2024	2026
X-2	2021	2023	2025
X-3	2020	2022	2024
t	2025	2030	2030
t+5	2030	2035	2035
t+10	2035	2040	2040
t+15	2040	2045	2045
t+20	2045	2050	2050
t+25	2050	2055	2055

2. POLICY REPORTING PLATFORM

2.1. Introduction

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

The e-platform consists of different elements, notably "ReportNet 3: and "Policy Reporting Platform". For the dataflows described in this document, the Policy Reporting Platform is used.

2.2. Getting access to the Policy Reporting Platform

The Commission Policy Reporting Platform uses the EU Login account for user authentication. An EU Login account must be acquired prior to accessing the Policy Reporting Platform.

Please refer to the separate Policy Reporting Platform account creation guideline ([3]) for the process description.

NOTE: EU Login is associated with an e-mail. If the user uses different e-mail addresses and creates another EU Login account associated with the new e-mail, a new Policy Reporting Platform request needs to be made and all authorization privileges granted to the old account would not apply).

In such a case a user should update the e-mail associated with the EU Login account, which will allow Policy Reporting Platform to detect e-mail change and adjust Policy Reporting Platform user account after user confirmation for the changed e-mail.

Please note that next to a Policy Reporting Platform account, a user needs to have the right credentials to access each of the dataflows, for more details see section 2.5.

2.3. Dataflow overview

In Policy Reporting Platform a dataflow represents a single occurrence of a reporting obligation (that may be repeating) for a specific reporting entity. The scope of information to be reported within a dataflow depends on how the reporting obligation is decomposed and configured. In the case of complex reporting there may be a reporting campaign that binds together and includes a set of sub-reports.

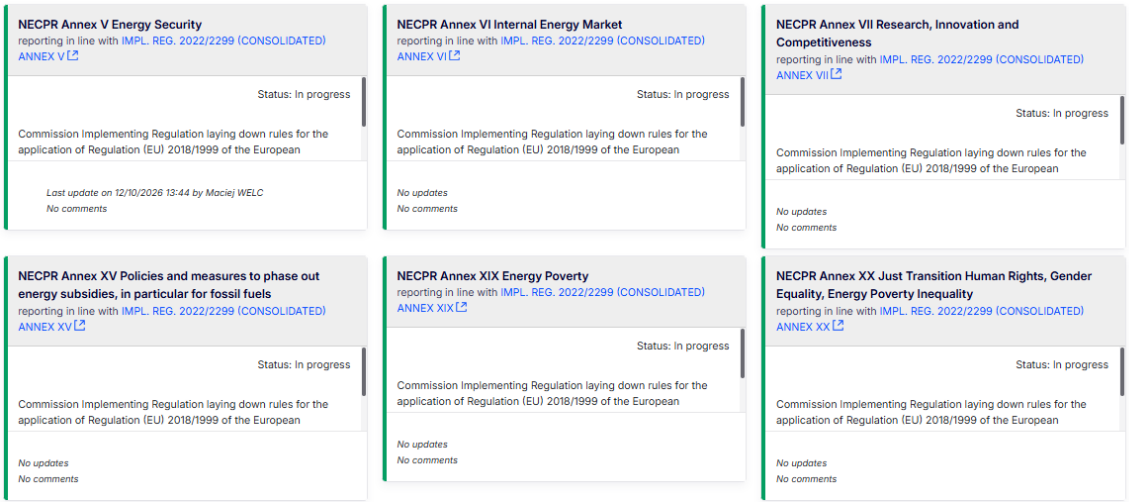
Example: The NECPR is based on an implementing regulation that has 21 annexes that requires Member States to report every two years. Policy Reporting Platform supports reporting for 9 of those annexes and the dataflows are configured that way – 1 per annex. They are brought together in a reporting campaign that binds the 9 dataflows.

The dataflows are listed under the "Reports" menu item and can be accessed by an authorized user when double clicking the name.

If too many reports are visible, they can be filtered with use of obligation name, type or deadline.

([3])https://ec.europa.eu/assets/move-ener/eplatform/Manuals/Policy.Reporting.Platform.User.Management.Manual.pdf

Example: 2027 NECPR dataflows are of the type “Energy & Climate Progress” with the deadline on 15 March 2027 and the name following the pattern “NECPR Annex …”



The dataflow’s accessibility and editability depends on:

- the date – The dataflow will be opened in a certain time window (e.g. a month) prior to the reporting obligation deadline;
- the user authorization – a reporting obligation’s workflow configuration defines what user roles need to be granted to enable a user to view/edit a report;
- the workflow step (or status) – a reporting obligation configuration’s workflow defines user role access level (e.g. read-only/write) for each status (e.g. user role may be authorized to edit a report in the DRAFT status but read-only in the IN REVIEW status)
- the sensitivity – to access reports containing Sensitive Non-Classified data, in addition to the user role defined in a workflow, the user needs to be a member of the group indicated in the reporting obligation configuration.

A campaign can also be accessed from the “Reports” menu. The dataflows can be also accessed from within a campaign where they are listed. In such a case the selected dataflow will be opened in a new browser tab for convenience.

2.4. Organizing the reporting network

Each dataflow is processed in accordance with a preconfigured workflow (which may be to some point customized for specific country work delegation needs – but can’t be changed once report is started) and User Roles (to define workflow step read/write access level and user privileges) as requested by reporting obligation business manager.

For the NECPRs, **lead reporters** need to be nominated by the Member State. A request for nomination has been sent to the Energy & Climate attachés. In case the nomination has been made in time, a user nominated as a lead reporter should be able to directly access the relevant dataflow.

In case a lead reporter does not have access to a relevant dataflow, you can request access directly in the system ([4]). If the issue persists, please contact: EC-E-PLATFORM-IT-SUPPORT@ec.europa.eu.

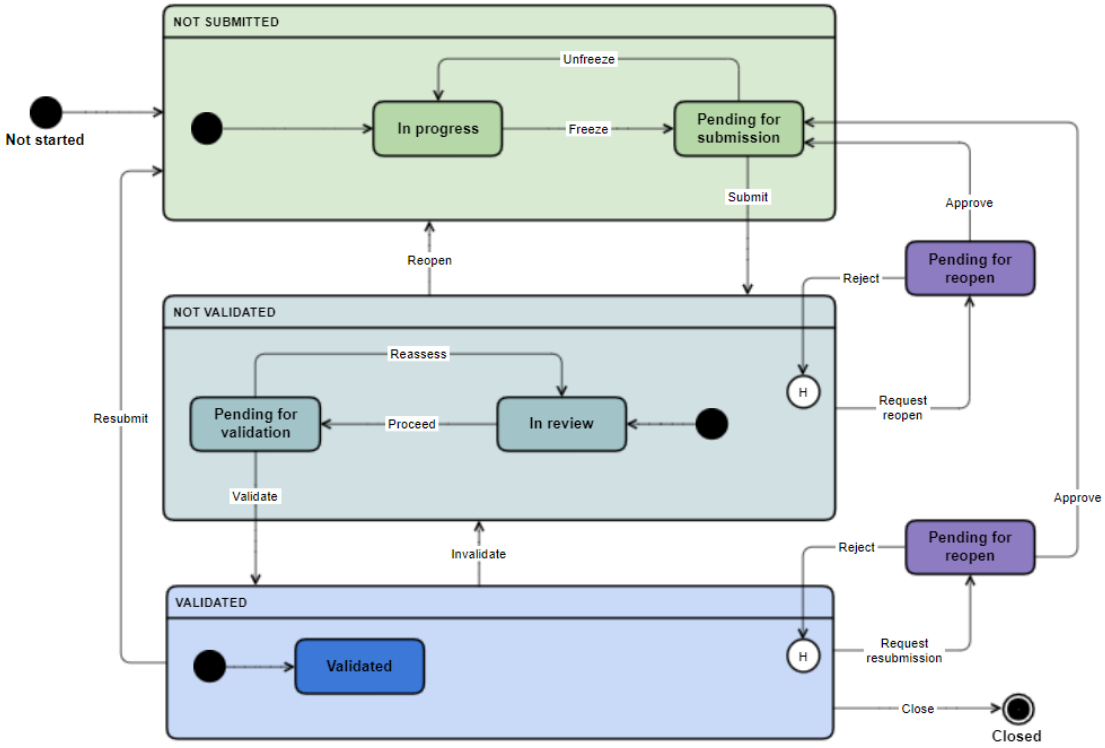
Supporting reporters (when needed), need to be approved by the lead reporter for the relevant dataflow. For this the following steps need to be taken:

- The supporting reporter should create (1) an EU log-in and (2) a Policy Reporting Platform account and (3) request the supporting reporter role for the relevant dataflows ([5])
- The lead reporters should then grant the supporting reporter role through the user management menu. ([6])

The different NECPR roles are described in the table below.

NOTE: Please only request roles for which you have been explicitly assigned/nominated.

Example: User Roles and standard workflow for NECPR



([4]) As described in section 2.3.2 of the Policy Reporting Platform account creation guideline.

([5]) See section 2.2 and the Policy Reporting Platform account creation guideline for more details.

([6]) As described in section 3 of the Policy Reporting Platform account creation guideline.

Workflow Role	Role Purpose	Required Request Approvals
NECPR MS Lead Reporter for Annex <annex number>	MS reporting participant who is authorized to edit and submit a specific Annex report to EC	Either other Lead Reporter for Annex <annex number> from user's country or EC Coordinator
NECPR MS Reporter for Annex <annex number>	MS specific annex reporting participant who is authorized to edit but not to submit a report to EC	Either Lead Reporter for Annex <annex number> from user's country or EC Coordinator
NECPR MS Viewer for Annex <annex number>	MS user authorized to view a specific annex report	Either Lead Reporter for Annex <annex number> from user's country or EC Coordinator
NECPR External Reviewer	External reviewer (e.g. consultant working on Commission's behalf or auditor)	EC Coordinator
NECPR EC Reviewer	EC subject matter expert performing assessment	EC Coordinator
NECPR EC Data Steward	NECPR data steward	EC Coordinator
NECPR EC Coordinator	NECPR processing coordinator	Business Manager
NECPR Admin	Support team member	Product Owner or Development Team Coordinator

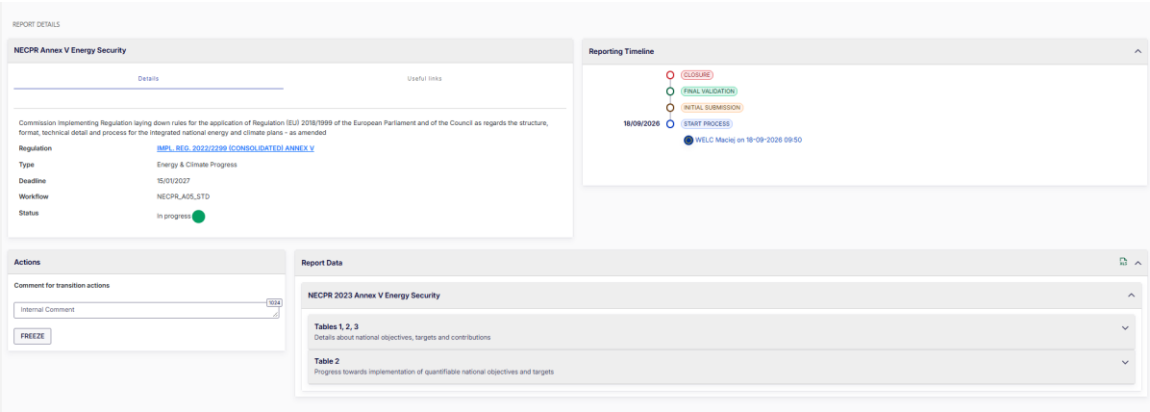
2.5. Technical details of reporting

2.5.1. Dataflow layout

The reporting dataflow layout is composed with sections:

1) the dataflow information (e.g. deadline, link to underlying regulation),
2) the workflow transition comments (e.g. for submission or reopening)
3) the actions (e.g. to trigger workflow transition),
4) the report data (i.e. the content being reported).

If the user is authorized, there is also the country selector that allows user to switch to the other country report for the same obligation and deadline.

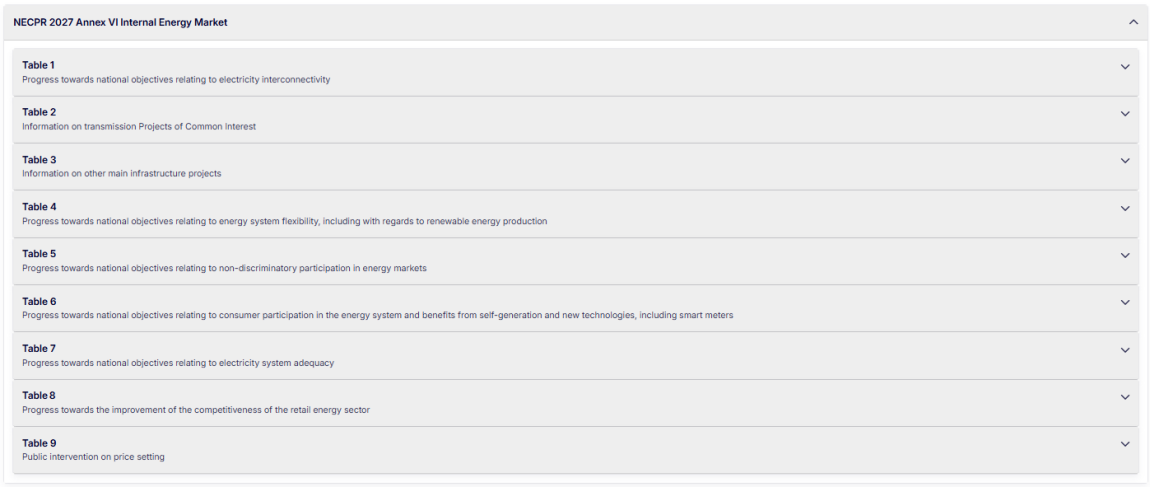


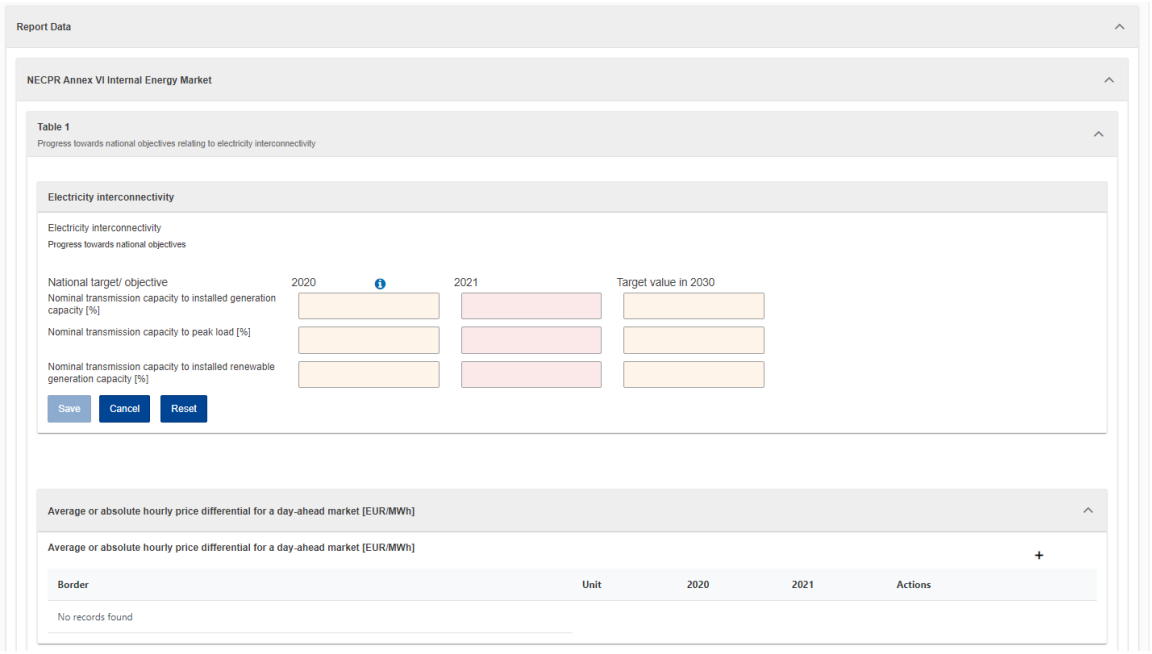
2.5.2. Report data collection with web forms

2.5.2.1. Report data section composition

The report data section can be composed of one or more reports. Each report includes sections that aggregate one or more web forms.

Example: The “NECPR Annex VI Internal Energy Market” consists of 9 sections. The “Table 1” section contains the “Electricity interconnectivity” form and “Average or absolute hourly price differential for a day-ahead market [EUR/MWh]” form table.

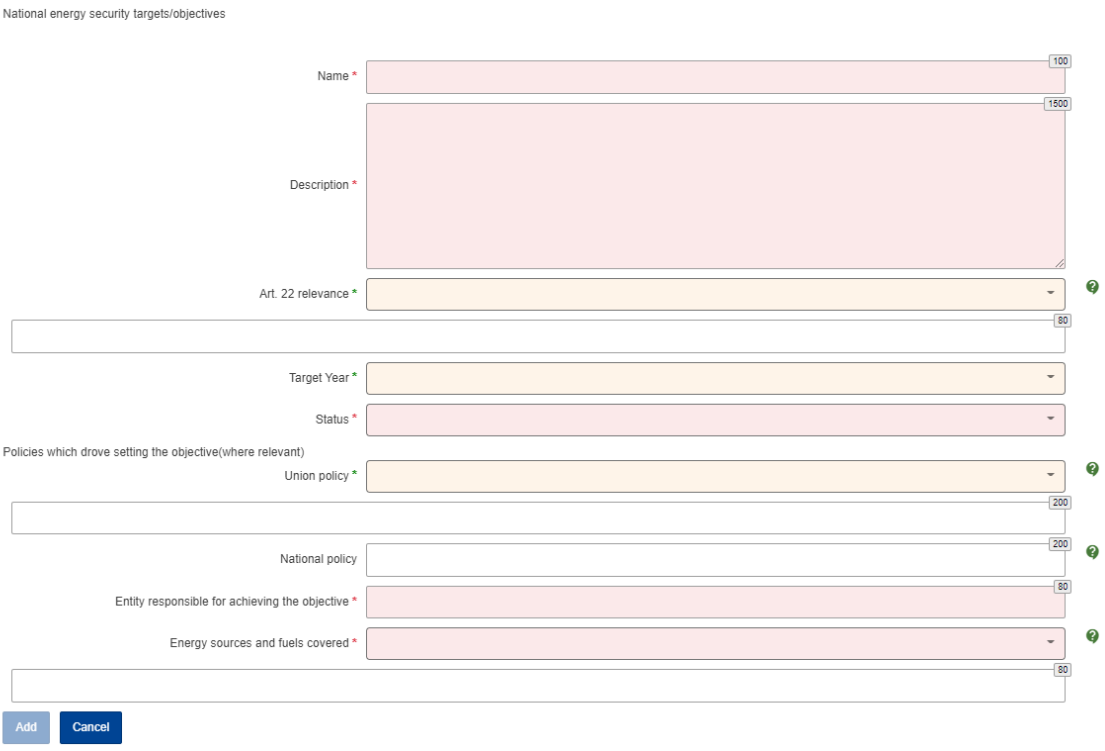




2.5.2.2. Filling web form

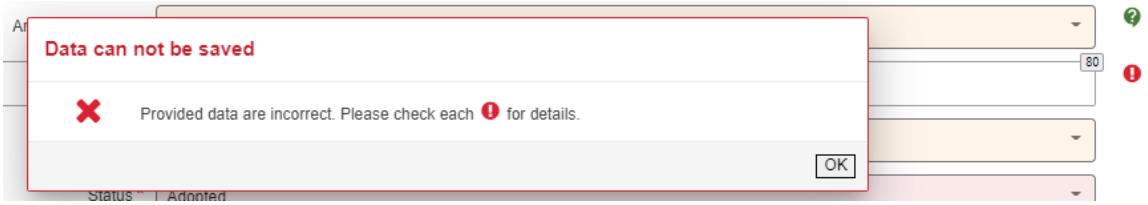
Each web form is composed of form fields that are configured to be:

1) mandatory (signified by a red background) – a form can't be saved until all form's mandatory field values are provided,
2) requisite (yellow background) – a form doesn't require values to be provided for these fields, just indicate that they are expected to be provided (e.g. if available, applicable) from the reporting perspective,
3) optional (white background) – neither a form nor reporting require these field values.

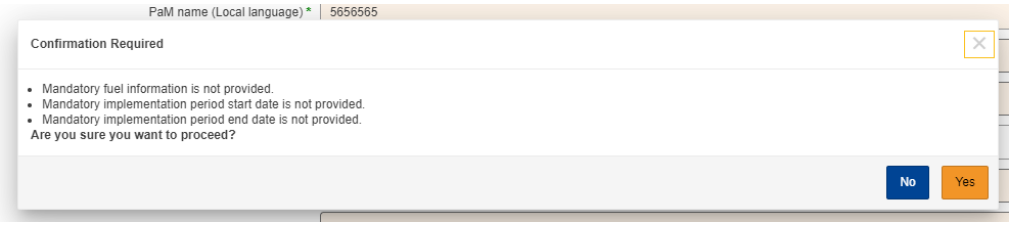


Furthermore, a form may have custom validation rules. These can be:

a) form validation rules – if violated (example: details not provided if "other" is selected) a form can't be saved, and the error message and icon is displayed.

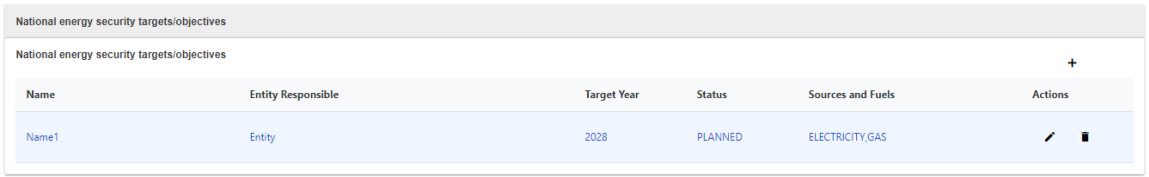


b) report validation rules – if violated (example: for instance to confirm requisite field is not applicable when not filled in) a user is asked for a confirmation before a form is saved.



2.5.2.3. Form table

A form table is a way that the Policy Reporting Platform collects multiple records for the same form. If the Add new record is requested the underlying form pops up. Once a form is saved a table row is added that can later be edited or removed.

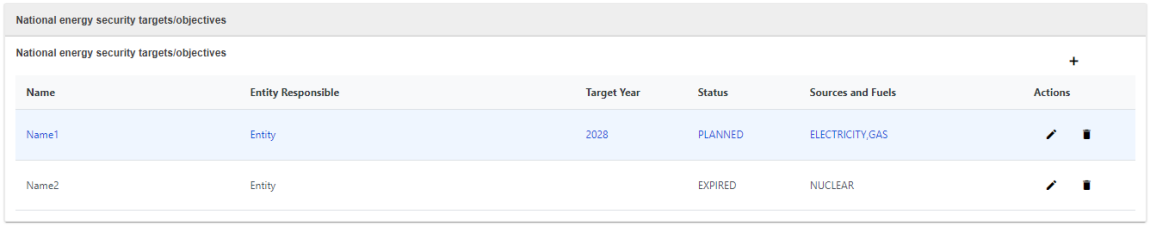


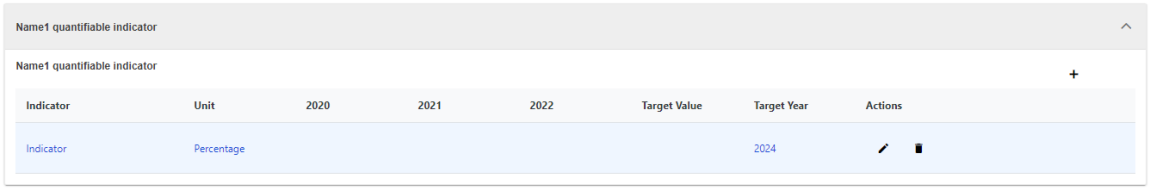
In some cases, there can be a Master-Detail bond between form tables. In such a case Detail form table records represent information referring to a specific Master form table record. In such a case Detail form table header and content would refer to the selected (and highlighted) Master form table record.

Example: The "National energy security targets/objectives" is a Master table form for the "… quantifiable indicator" and the "… non- quantifiable indicator" Detail table forms. Each Detail table forms has one entry corresponding to Master entry "Name1" and no entry corresponding to Master entry "Name2".

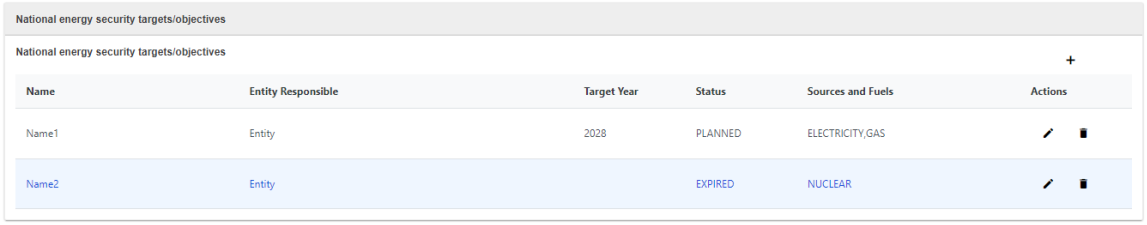
NOTE: to enter information in the Detail table forms, information should first be entered in the respective Master table form.

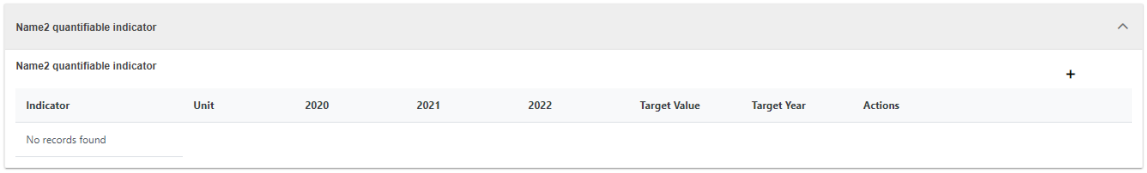
Example: First ""National energy security targets/objectives" should be entered in Master table form, before related "indicators can be added in the Detail table forms.

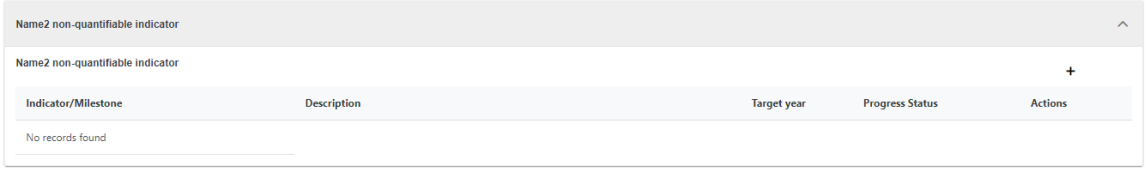








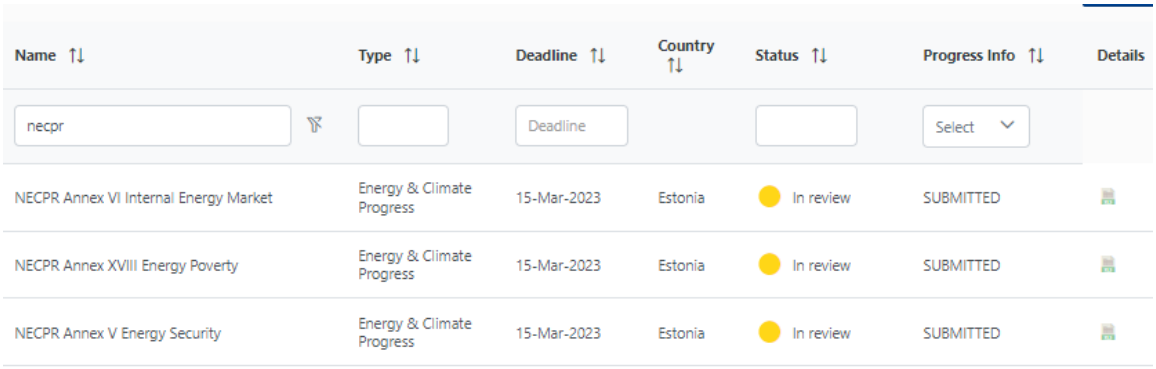




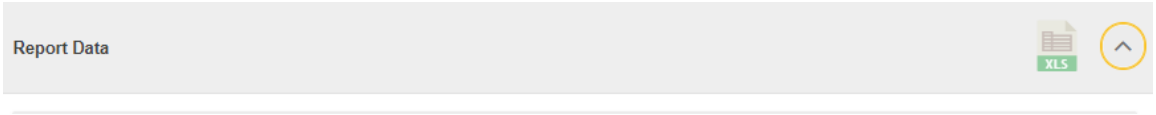
2.5.3. Data export

Authorised users can export the current data status of the report to an Excel workbook at any time.

The data export function is available by either clicking on the Excel icon in the report list in the Details column for the report to be exported.



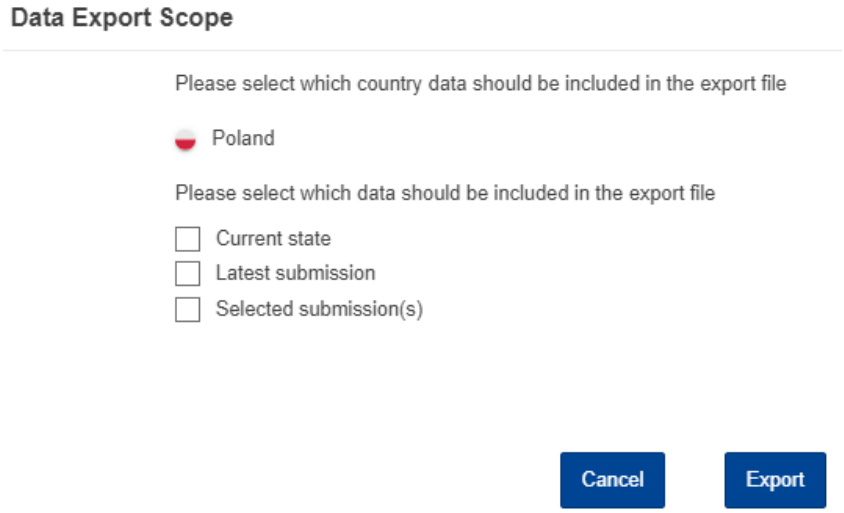
or from the dataflow by clicking on the Excel icon in the header of the Report Data area.



When the campaign data export function is called, all data flows to which the calling user has access are included.

2.5.4. Single country data export

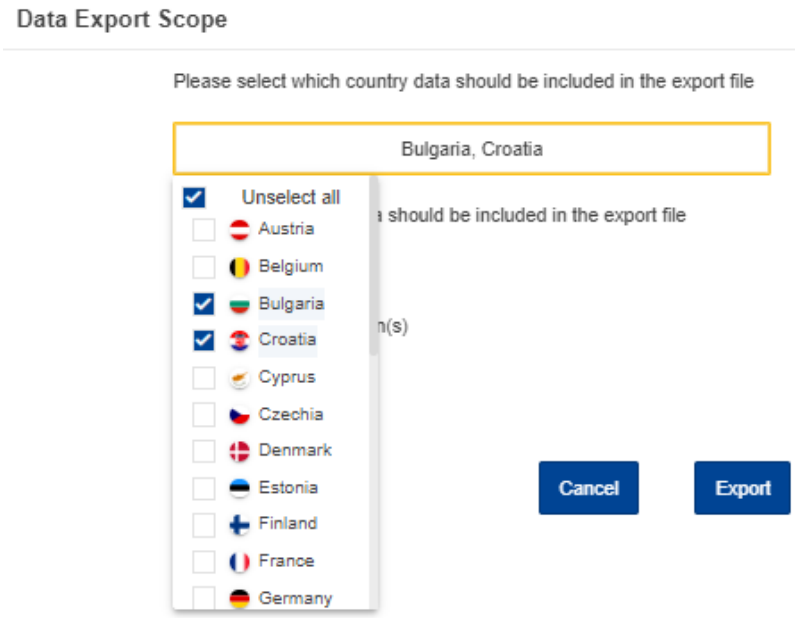
There are different data to be exported scope options available for single country:



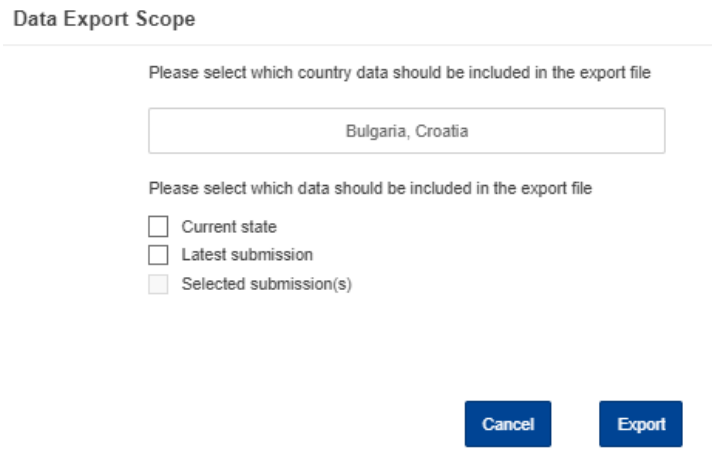
- current state – the AS IS data state at the moment of data dump is exported,
- latest submission – each time report is being (re)submitted its data snapshot is automatically generated; this option enables to include the latest saved snapshot into the data export scope,
- selected submission(s) – enables user to select not only the latest but also any of the snapshots reflecting previous submissions done by the specific country.

2.5.5. Multiple countries data export

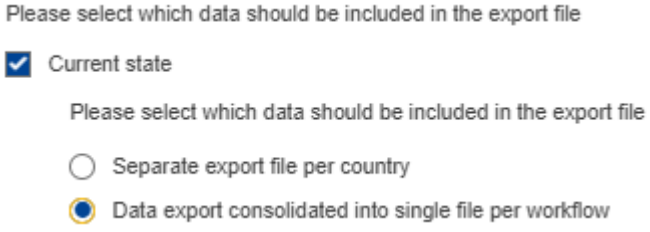
When the export function is used by the user authorized to export multiple countries data then user is enabled to select which ones should be included.



The selected submission(s) option is not available in such a case (i.e. past submission are downloadable only when single country is selected).



For the current state option the user needs to decide whether each country data should be exported to a separate file or consolidated to as few files as possible (i.e. number of files would depend on how many workflows are in use for particular dataflow; in such a case there is going to be a one file per workflow that would include all countries the workflow is applied to).



3. THEMATIC GUIDELINES FOR REPORTING INFORMATION REQUIRED UNDER ART 6. REPORTING ON ENERGY POVERTY AND JUST TRANSITION

Introduction

This section provides guidance for reporting information on research, innovation and competitiveness, according to Annex VII of the Implementing Regulation This includes:

- Table 1: Progress towards national objectives translating the SET Plan objectives and policies to a national context ;
- Table 2: Progress towards quantifiable national objectives for total public and, where available, private spending in research and innovation relating to clean energy technologies as well as for technology cost and performance development;
- Table 3: Progress towards non-quantifiable national objectives for total public and, where available, private spending in research and innovation relating to clean energy technologies as well as for technology cost and performance development;
- Table 4: Progress towards national objectives, including long-term targets for 2050 for the deployment of technologies for decarbonising energy- and carbon-intensive industrial sectors and, where applicable, for related carbon , capture, transport use, and storage infrastructure;
- Table 5: Progress towards national objectives with regard to competitiveness.

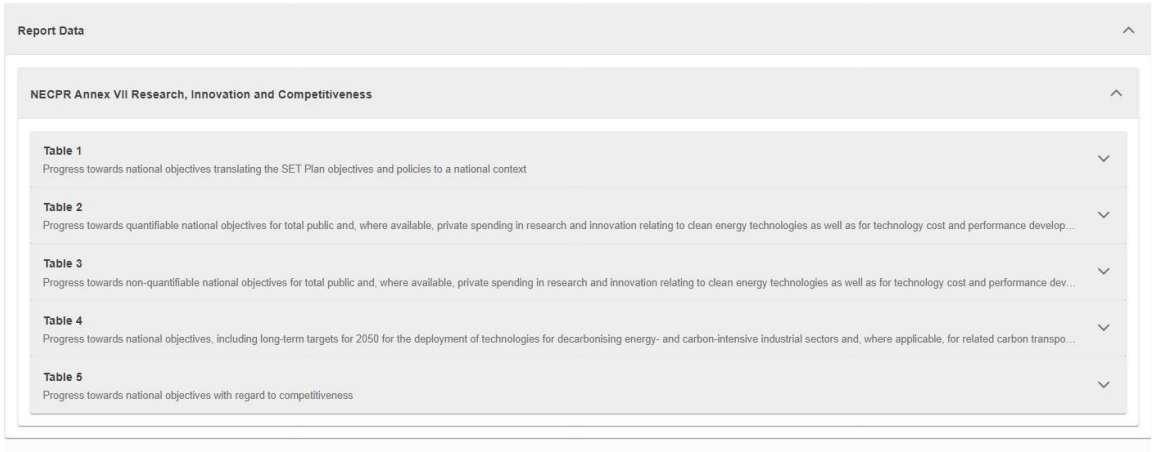


Figure 1: Overview of Annex VII data flow

It provides the step-by-step guidelines for reporting. This includes visual guide **of how and where** to report in the Policy Reporting Platform as well as information on the **purpose of reporting** and guidance on **what to report**. This is structured as follows:

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

3.1. Annex VII, Table 1: Progress towards national objectives translating the SET Plan objectives and policies to a national context

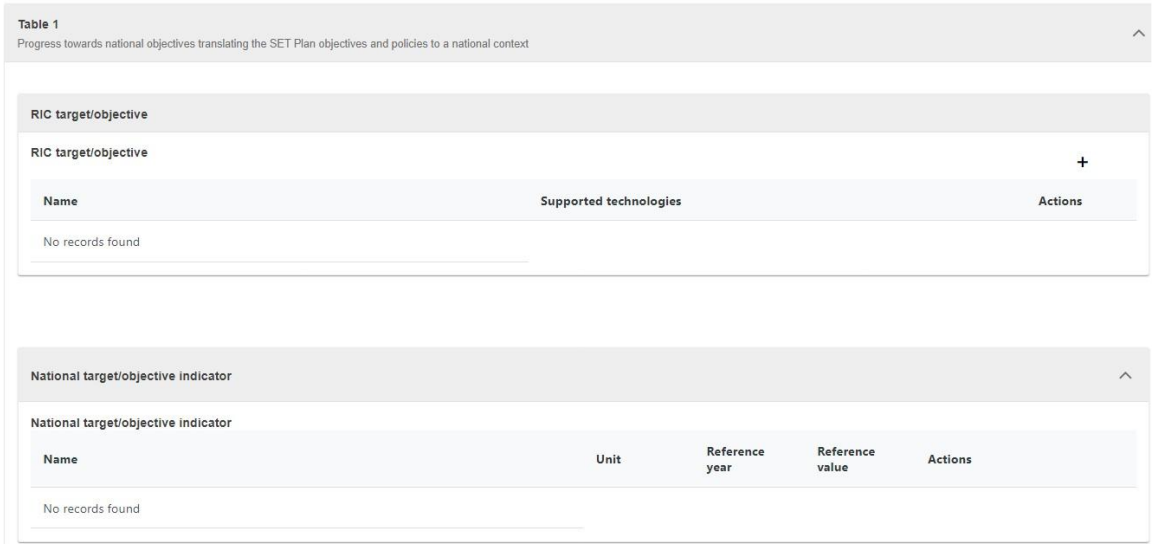


Figure 2: Webform for Annex 7 - table 1

Purpose of the Table

The purpose of this table is for Member States to provide quantitative and qualitative information on:

- The national target(s)/objective(s) that translate the SET Plan objectives defined in the Implementation Plans dedicated to the SET Plan technologies(7)to a national context.
- How the national target(s)/objective(s) supports the implementation of the Energy Union R&I priorities.
- Progress towards the achievement of the target(s)/objective(s), based on progress indicator(s) when applicable.

In case Member States are part of SET Plan Implementation Working Groups, they are highly incentivised to report in this table the Working Groups and their progress in them, even if national objectives in the same area have not been set. If no target(s)/objectives(s) were stated in the latest

[7] SET Plan documents (europa.eu)

NECP, but have been subsequently introduced, they should be included in this Table.

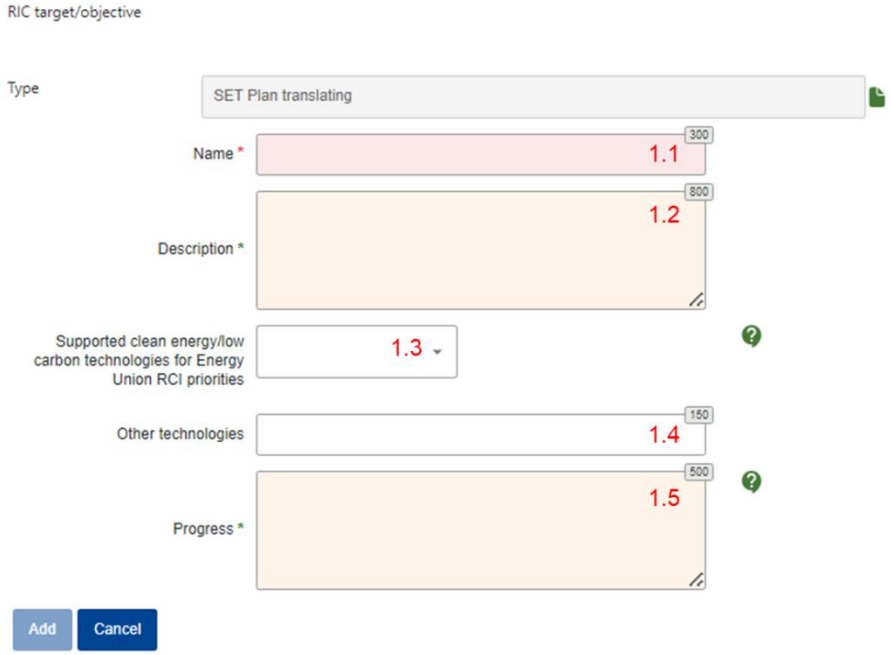


Figure 3: webform for Annex VII - table 1

3.1.1. FIELD 1.1: Name of national target/ objective

Purpose

The purpose of this field is for the Member State to provide the name of the national target/objective, specifying where relevant the target year for the target/objective (e.g. 2030, 2040, 2050).

Guidance, including format of the data

- Each national target/objective must have a unique name.
- The name has to allow a clear and precise understanding on what the target/objective aims to achieve.
- The name must be comprehensible for interested members of the public and ideally should only consist of a few words.
- If a target/objective has been embedded into a legal act (e.g. law, decree, regulation), it is good practice to report the exact name of the legal act, preferably in English.
- Where Member States have more than one target/objective, and even when more than one target/objective are related to the same SET Plan objective and policy, each target/objective will have to be added into a separate row i.e. each row in the template represents a separate target/objective.
- If no target(s)/objectives(s) were stated in the latest NECP, but have been consequently introduced, then the new target(s)/objective(s) should be stated.

Data format: text, length 300.

Level of obligation

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

3.1.2. FIELD 1.2: Description

Purpose

The description has to allow a clear and precise understanding on what the target/objective aims to achieve and it must be comprehensible for interested members of the public. The purpose of this field is for the Member State to provide;

- Concise and precise description of the national target/objective.
- Information on how the national target/objective aims at supporting the implementation of the SET Plan objectives and policies.
- Information on how the national target/objective translates the SET Plan objectives and policies to the national context.

Guidance, including format of the data

More specifically, the following questions should be considered:

- What does the target/objective aim to achieve?
- What is the timeframe to achieve the target/objective? What is the objective to achieve by the target year? What is the baseline year and the corresponding value? What is the expected improvement between the baseline and the target value (e.g. in absolute value, in percentage terms).
- How is it the target/objective implemented?
- What are the milestones and deliverables set to achieve the national target/objective?
- How is the target/objective related to the SET Plan objectives and policies defined in the Implementation Plans dedicated to the SET Plan technologies[8]?
- How does the target/objective translate the SET Plan objectives and policies to the national context?
- What are the policies and actions in place/ to be set to support the achievement of the target/objective?

To ensure conciseness and clarity, Member States are recommended to make appropriate use of the references/links to documents and websites with a more detailed description of the national target/objective. Member States are incentivised to provide this information in the Field 7: General Comments.

Data format: text, length 800.

Level of obligation

[8] SET Plan documents (europa.eu)

Mandatory, if applicable (i.e. Member States are required to provide the information if the relevant national objectives and targets have been set), and if the FIELD 1.1 has been filled.

3.1.3. FIELD 1.3: Supported Energy Union R&I priority & technologies

Purpose

The purpose of this field is for the Member State to indicate:

- which Energy Union R&I priority(ies) - as defined in the Energy Union package[9] - is supported by the national target/objectiveas named and described in Field 1.1 and Field 1.2.
- which clean and low carbon energy technology(ies) is supported by the national target/objective listed in the Field 1.1 and described in the Field 1.2.

Guidance, including format of the data

Member States have to select one or more options from the following table:

Table 1: Energy Union R&I priorities and clean and low-carbon energy technologies

• No.1 in renewables
○ Photovoltaics
○ Geothermal heat & power
○ Wind (onshore and offshore)
○ Ocean energy
○ Concentrated solar power & heat {}solar thermal electricity{-}
○ Hydropower and pumped hydro-storage
○ Renewable fuels of non-biological origin (other than hydrogen)
○ Bioenergy
○ Sustainable biofuels
○ (No.1 in renewables) Advanced biofuels
○ Direct Solar fuels
○ Other - No 1 in renewables
• Smart systems
○ Advanced metering infrastructure (including smart meters)
○ Building/home energy management systems
○ Grid-scale energy storage

[9] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0080

○ Direct current (DC) technologies
○ EV charging infrastructure
○ Efficient (smart) electrical power transmission
○ Efficient (smart) electrical power distribution
○ Other - Smart systems
• Energy efficiency
○ Integration of renewables in buildings
○ Thermal performance of building
○ Appliances & lighting
○ Heat pumps
○ Other HVAC (not heat pumps)
○ Energy efficiency in industry
○ Industrial and district heat & cold management
○ Other - Energy efficiency
• Sustainable transport
○ Batteries
○ Electric vehicles
○ Road transport (non-EV)
○ Rail transport
○ Shipping
○ Aviation
○ (Sustainable transport) Advanced biofuels
○ Solar fuels (direct)
○ Renewable hydrogen
○ Renewable fuels of non-biological origin (other)
○ Other - Sustainable transport
• CCUS
○ CCS
○ CCU
○ Other - CCUS
• Nuclear
○ Nuclear fusion
○ Small modular reactors

o Decommissioning of nuclear installations
o Nuclear fission (focus on safety, security, radiation protection)
o Other - Nuclear

Data format: text (drop-down); other technologies: text, length 150

Level of obligation

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

3.1.4. FIELD 1.4: Progress towards target/ objective

Purpose

The purpose of this field is for Members States to provide quantitative and qualitative information on the progress towards the achievement of national target(s)/objective(s).

Guidance, including format of the data

In Field 1.4, Member States have to provide concise and precise updated information on the progress towards the achievement of the national target/objective listed in Field 1.1, and based on the description provided in Field 1.2, including:

- Information on progress made on the milestones and deliverables to achieve the target/objective
- Information on the impact of policies and actions aims at supporting the achievement of the target/objective.
- Information on whether the progress made is on track compared to the planned timeframe, including compared to the value in the base year.
- Information on barriers hindering the achievements of the target/objective and solutions to overcome them.

Details on the progress made towards the national target/objective included in this Field have to also be presented in the next fields through the reporting on specific progress indicators as identified by the Member States as relevant to the national target/objective.

Data format: text, length 500.

Level of obligation

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

3.1.5. FIELD 1.6: Progress indicator(s) (Name of indicator to monitor progress, Value of indicator, Reference year, Unit)

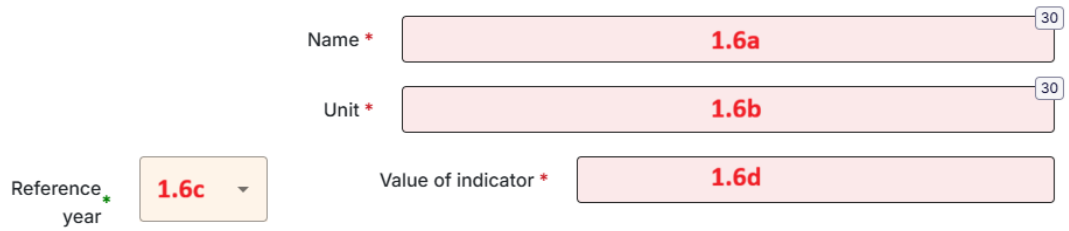


Figure 4: webform for Annex VII table 1 (progress indicators)

Purpose

The purpose of this field is for the Member State to provide information on

- the indicators – if any - that Member States have set to monitor progress towards achieving the national target/objective as described in Field 2 and Field 5, and
- the progress achieved towards these indicators, including whether the progress made is on track to achieve the target/objective.

Guidance, including format of the data

The indicator(s) listed in the Field 6 have to be used by Member States each year against the set national target(s)/objective(s), so that yearly progress can be measured.

Where Member States have set more than one indicator used for monitoring progress to achieve the same target/objective over time, they will need to assess progress achieved against all these indicators.

In Field 6 Members States have to include:

a) The 'Name of indicator to monitor progress'. This sub-field requires to provide the name of the indicator – if any – set to monitor progress towards achieving the national target/objective over time.

b) The "Unit". This sub-field requires to specify the indicator unit (e.g. GW, TWh, EUR, % as share of , Number of..) Level of obligation

c) The 'Reference year'. This sub-field requires to provide the year corresponding to the quantitative value indicated in the "Value of indicator" field. Member States have to report on the most updated data available.

d) The 'Value of indicator'. This sub-field requires to provide a quantitative value against the indicator in the year specified in the field 'Reference year'.

Level of obligation

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

3.2. Annex VII, Table 2: Progress towards quantifiable national objectives for total public and, where available, private spending in research and innovation relating to clean energy technologies as well as for technology cost and performance development

Purpose of the table

The purpose of this table is for Member States to provide quantitative information on:

- Latest data available on total yearly public and private R&I expenditures in
    1. The Energy Union R&I priorities - at aggregated level.
    2. The Energy Union R&I priorities – disaggregated by R&I priority.
    3. Specific clean and low-carbon energy technologies and solutions.
- Future (e.g. 2030, 2040, 2050) target(s)/objective(s) on public and private R&I expenditure in:
    1. The Energy Union R&I priorities - at aggregated level.
    2. The Energy Union R&I priorities – disaggregated by R&I priority.
    3. Specific clean and low-carbon energy technologies and solutions.

Note that the expenditure have to not be reported as cumulative values, but rather as a contribution to the specific year.

If no target(s)/objectives(s) were stated in the latest NECP, but have been consequently introduced, then the new target(s)/objective(s) should be stated.

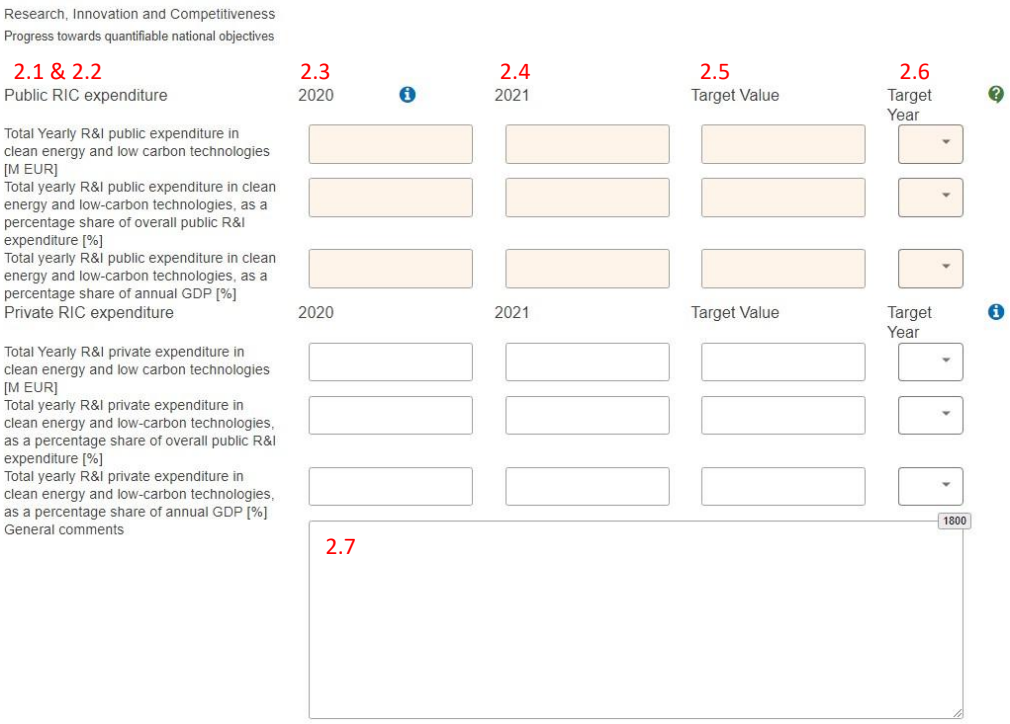


Figure 5: Webform for Annex VII table 2 (predefined objectives)

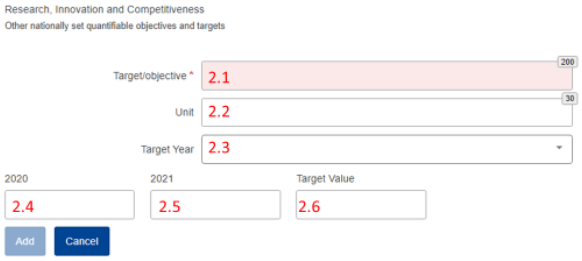


Figure 6: Webform for Annex VII table 2 (other objectives)

3.2.1. FIELD 2.1: Name of national target/ objective

Guidance

Field 2.1 is structured for Member States to report on a number of predefined elements of public and private R&I related to the Energy Union R&I priorities at aggregated level and includes the following:

i) Public national R&I expenditure: Total Yearly R&I public expenditure in clean and low carbon energy technologies:

- in absolute value.
- as a percentage share of overall public R&I expenditure.
- as a percentage share of annual GDP.

ii) Private R&I expenditure: Total Yearly R&I private expenditure in clean energy and low carbon technologies

- in absolute value.
- as a percentage share of overall private R&I expenditure.
- as a percentage share of annual GDP.

In addition, Member States should fill in the "Other nationally set objectives and targets" to report on:

- Public and Private R&I expenditure on specific Energy Union Priority, as relevant for Member States to highlight.
- Public and Private R&I expenditure on specific clean and low-carbon energy technologies and solutions, as relevant for Member States to highlight.

In this case Member States are highly incentivised to follow the same structure as (i) and (ii), and to include in the following information:

- Specify the Energy Union Priority and/or the clean and low-carbon energy technologies and solutions (see Tables 1 and 2) to which the reported figures in the subsequent fields refer to.
- Specify whether the reported figures in the subsequent fields come from public or private sources.
- Specify whether the figures will be reported in e.g. absolute term and/or as a percentage of overall public/private R&I spending and/or as a percentage share of the annual GDP.

Non-quantifiable national target(s)/ objective(s) have to be reported in Table 3.

Level of obligation

Public R&I expenditure and Other nationally set objectives and targets are mandatory reporting requirements, if applicable (i.e. Member States are required to provide the information if the relevant national objectives and targets have been set).

Private R&I expenditure is a voluntary reporting requirement.

3.2.2. FIELD 2.2: Unit

Purpose

Predetermined to guide Member States in filling the next fields, except for "Other nationally set objectives and targets"

In this latter, the purpose of this field is for the Member State to specify the unit against the "other nationally set objectives and targets".

Guidance

Field 2.2 corresponding to i) "Public R&I expenditure", and ii) "Private R&I expenditure" and sub-fields is pre-determined to guide Member States in reporting quantitative figures, and includes:

Public R&I expenditure

- Million EUR
- % (as share of overall Public R&I)
- % (as share of annual GDP)

Private R&I expenditure:

- Million EUR
- %(as share of overall Private R&I)
- % (as share of annual GDP)

Field 2.2 corresponding to iii) "Other nationally set objectives and targets" is not pre-determined. In this case, Member States have to specify the unit corresponding to the figures to include in the next fields. Member States have to provide – where available and possible – a quantitative value (e.g. in absolute value and/ or as percentage).

Good examples for units include:

- Million Euro
- % share of e.g. overall public R&I expenditure, clean and low carbon energy technology R&I expenditure, GDP.

Level of obligation

"Public R&I expenditure" and "Other nationally set objectives and targets" are Mandatory, if applicable (i.e. Member States are required to provide the information if the relevant national objectives and targets have been set).

"Private R&I" expenditure is a voluntary reporting requirement.

3.2.3. FIELD 2.3 & 2.4: Year (X-3, X-2)

Purpose

The purpose of this field is for the Member State to report a value against the year for progress towards the national target/objective.

Guidance, including format of the data

Member States have to report a value corresponding to the unit and specification requirements for each national target/objective.

Level of obligation

"Public R&I expenditure" and "Other nationally set objectives and targets" are Mandatory, if applicable (i.e. Member States are required to provide the information if the relevant national objectives and targets have been set).

"Private R&I" expenditure is a voluntary reporting requirement.

3.2.4. FIELD 2.5 & 2.6: Target value/year

Purpose

The purpose of this field is for the Member State to provide quantitative values for national targets set for expenditure in R&I for a corresponding target year.

Guidance

In this field Member States have to include:

- quantitative values corresponding to the national target/objective set for R&I expenditure for a future target year (e.g. 2030, 2040, 2050),
- the target year.

Level of obligation

"Public R&I expenditure" and "Other nationally set objectives and targets" are Mandatory, if applicable (i.e. Member States are required to provide the information if the relevant national objectives and targets have been set).

"Private R&I" expenditure is a voluntary reporting requirement.

3.2.5. FIELD 2.7: General Comments

Purpose

The purpose of this field is for the Member State to provide any remarks, comments, explanations to increase the transparency and comprehensiveness of the reported progress towards the quantifiable national target/objective, or any additional relevant information, which was not possible to provide in the other sections of the reporting template.

Guidance

Here the following could be mentioned:

- Reference to the accompanying reports providing further information on general national target/objective situation or information on specific policies and actions relating to the national target/objective.
- Any background information relevant for the national target/objective.
- Any amendments made to e.g. the allocated budget or timeframe.
- Any information on how the national target/objective supports EU collaboration in the field, including whether it is part of a larger initiative/research plan.

Any information on whether the progress made on the indicator is on track to achieve the target/objective as planned by Member States. If not on track the comment should include the reasons why.

Format: text, length 1800.

Level of obligation

Voluntary

3.3. Annex VII, Table 3: Progress towards non-quantifiable national objectives for total public and, where available, private spending in research and innovation

relating to clean energy technologies as well as for technology cost and performance development

Purpose of the Table

The purpose of this table is for Member States to provide information on:

- The national non-quantifiable target(s)/objective(s) that aims at supporting and strengthening the clean and low-carbon energy R&I ecosystem, including:
    - Non-quantifiable target(s)/objective(s) that foster R&I in the field of clean and low-carbon energy technologies and solutions.
    - Non-quantifiable R&I target(s)/objective(s) that specifically target technology cost and performance development.
- How the non-quantifiable national target(s)/objective(s) support the implementation of the Energy Union R&I priorities.
- Progress towards the achievement of the non-quantifiable target(s)/objective(s).
- The expected impact of the non-quantifiable target(s)/objective(s) on the clean and low-carbon energy innovation ecosystem, including the expected contribution to the climate and energy 2030 and 2050 targets.

The national non-quantifiable target(s)/objective(s) could be related, for example to:

- Improve access to finance for start-ups and scale-ups supporting innovative clean energy solutions.
- Set up regulatory sandboxes to allow innovators to experiment new ideas and solutions.
- Enhance an ecosystem able to strengthen and better connect innovation players within the MS and in collaboration with other MS.
- Increase support for women innovators and reduce the gender imbalance in the field of clean energy.
- Improve the regulatory framework and the financial mechanisms to exploit the full potential of the innovation ecosystem.

If no target(s)/objectives(s) were stated in the latest NECP, but have been subsequently introduced, they should be included in this Table.

NOTE: Quantifiable national target(s)/ objectives(s) have to be reported in Table 2.

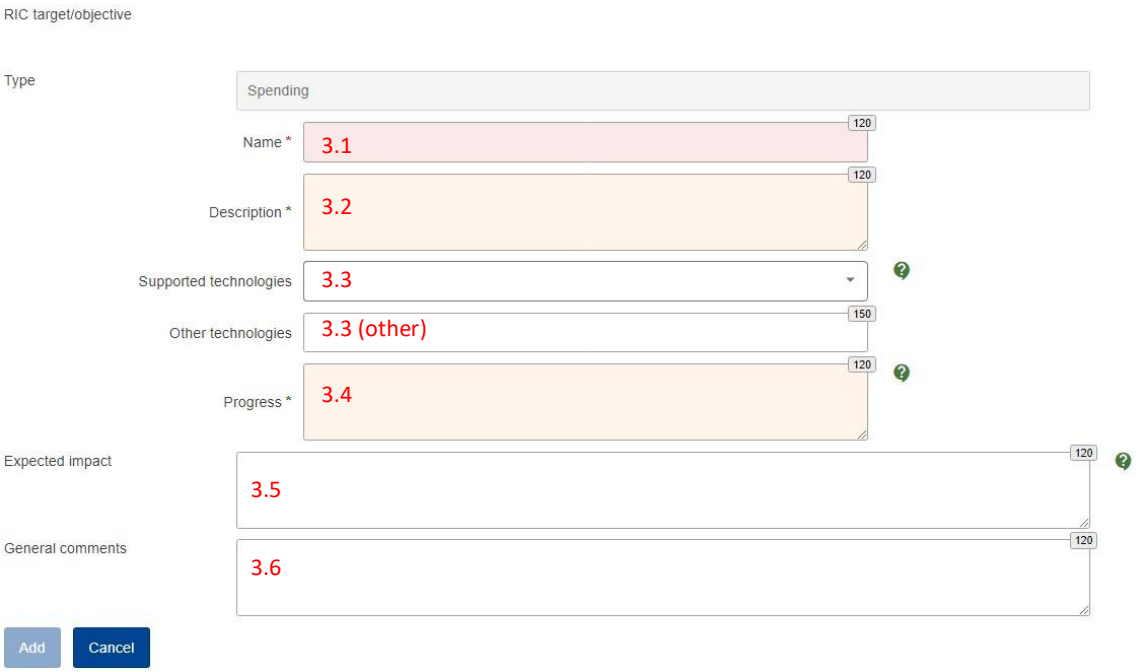


Figure 7: webform Annex VII table 3

3.3.1. FIELD 3.1: Name of national target/ objective

Purpose

The purpose of this field is for the Member State to name the non-quantifiable national target(s)/objective(s).

Guidance

In this field Member States have to include the name of the national target/objective, specifying where relevant the target year for the target/objective (e.g. 2030, 2040, 2050).

And, more specifically:

- Each national target/objective must have a unique name.
- The name has to allow a clear and precise understanding on what the target/objective aims to achieve.
- The name must be comprehensible for interested members of the public and ideally should only consist of a few words.
- If a target/objective has been embedded into a legal act (e.g. law, decree, regulation), it is good practice to report its exact name, preferably in English.
- Where Member States have more than one target/objective, and even when more than one target/objective are related to the same SET Plan objective and policy, each target/objective will have to be added into a separate row i.e. each row in the template represents a separate target/objective.

- If no target(s)/objectives(s) were stated in the latest NECP, but have been consequently introduced, then the new target(s)/objective(s) should be stated.

Level of obligation

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

3.3.2. FIELD 3.2: Description

Purpose

The purpose of this field is for the Member State to give context and provide further detail of the non-quantifiable national target(s)/objective(s).

Guidance

In this field Member States have to include:

- Concise and precise description of the national target/objective.
- Information on how the national target/objective aims at strengthening the clean energy innovation ecosystem, and fostering research and innovation in the field of clean and low-carbon energy.
- Information on how the national target/objective aims at reducing technology cost and increasing performance development in the field of clean and low-carbon energy.

More specifically, the following questions should be answered:

- What does the target/objective aim to achieve?
- What is the timeframe to achieve the target/objective? What is the objective to achieve by the target year? What is the baseline year and the corresponding value? What is the expected improvement between the baseline and the target value (e.g. in absolute value, in percentage terms).
- Which problem and challenges is the target/objective addressing?
- How is the target/objective implemented?
- What are the milestones and deliverables set to achieve the national target/objective?
- What are the policies and actions in place/ to be set to support the achievement of the target/objective?
- Who are the actors involved?
- How does the target/objective aim at supporting the Energy Union R&I priorities and/or specific clean and low-carbon energy technologies and solutions?
- How does the target/objective aim at supporting the achievement of the 2030 and 2050 climate and energy objectives?

The description has to allow a clear and precise understanding on what the target/objective aims to achieve, and it must be comprehensible for interested members of the public.

To ensure conciseness and clarity, Member States are recommended to make appropriate use of the references/links to documents and websites with a more detailed description of the national target/objective.

Level of obligation

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

3.3.3. FIELD 3.3: Supported Energy Union R&I priority & technologies

Purpose

The purpose of this field is for the Member State to indicate:

- which Energy Union R&I priority(ies) - as defined in the Energy Union package[10] - is supported by the national target/objectiveas named and described in Field 3.1 and Field 3.2.
- which clean and low carbon energy technology(ies) is supported by the national target/objective listed in the Field 3.1 and described in the Field 3.2.

Guidance, including format of the data

Member States have to select one or more options from Table 1: Energy Union R&I priorities and clean and low-carbon energy technologies

Data format: text (drop-down)

Level of obligation

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

3.3.4. FIELD 3.4: Progress towards target/ objective

Purpose

The purpose of this field is for Members States to provide quantitative and qualitative information on the progress towards the achievement of national target(s)/objective(s).

Guidance, including format of the data

In this field Member States have to provide concise and precise updated information on the progress towards the achievement of the national target/objective listed in Field 3.1, and based on the description provided in Field 3.2, including:

- Information on progress made on the milestones and deliverables to achieve the target/objective
- Information on the impact of policies and actions aims at supporting the achievement of the target/objective.

[10] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0080

- Information on whether the progress made is on track compared to the planned timeframe.
- Information on barriers hindering the achievements of the target/objective and solutions to overcome them.

Details on the progress made towards the national target/objective included in this Field have to also be presented in the next fields through the reporting on specific progress indicators as identified by the Member States as relevant to the national target/objective.

Data format: text.

Level of obligation

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

3.3.5. FIELD 3.5: Expected impacts of the set objective

Purpose

The purpose of this field for Member States to provide a broader view of impacts created by the set national target/objective.

Guidance, including format of the data

In this field Member States have to include information on the expected impacts of the non-quantifiable national target/objective within a specific timeframe on, for example:

- the socio-economic aspects of the clean energy sector/ the whole economy.
- the clean energy innovation ecosystem as whole.
- the development, scale-up, deployment, and market uptake of specific clean and low-carbon energy technologies and solutions.
- the achievement of the 2030 and 2050 climate and energy targets.
- where relevant, on other dimensions of the NECPs, as well as on any other sector and domain on which an impact is expected.
- The expected impacts should be as precise as possible, include quantitative impacts if any, and must be comprehensible for interested members of the public.

Level of obligation

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

3.4. Annex VII, Table 4: Progress towards national objectives, including long-term targets for 2050 for the deployment of technologies for decarbonising energy- and carbon-intensive industrial sectors and, where applicable, for related carbon transport, use, and storage infrastructure

Purpose of the Table

The purpose of this table is for Member States to provide quantitative and qualitative information on:

- National 2050 objectives related to the promotion of clean energy technologies and solutions;
- National objectives, including long-term targets for 2050 for the deployment of technologies for decarbonising energy- and carbon-intensive industrial sectors and, where applicable, for related carbon transport, use, and storage infrastructure.
- Progress towards the achievement of the target(s)/objective(s), based on progress indicator(s) when applicable.

Elements such as energy efficiency, carbon capture and storage, electrification as well as technologies that will contribute towards decarbonisation should be included.

The national target(s)/objective(s) reported in this Table should align with the national 2050 long-term national and climate strategy developed by Member States.

If no target(s)/objectives(s) were stated in the latest NECP, but have been subsequently introduced, they should be included in this Table.

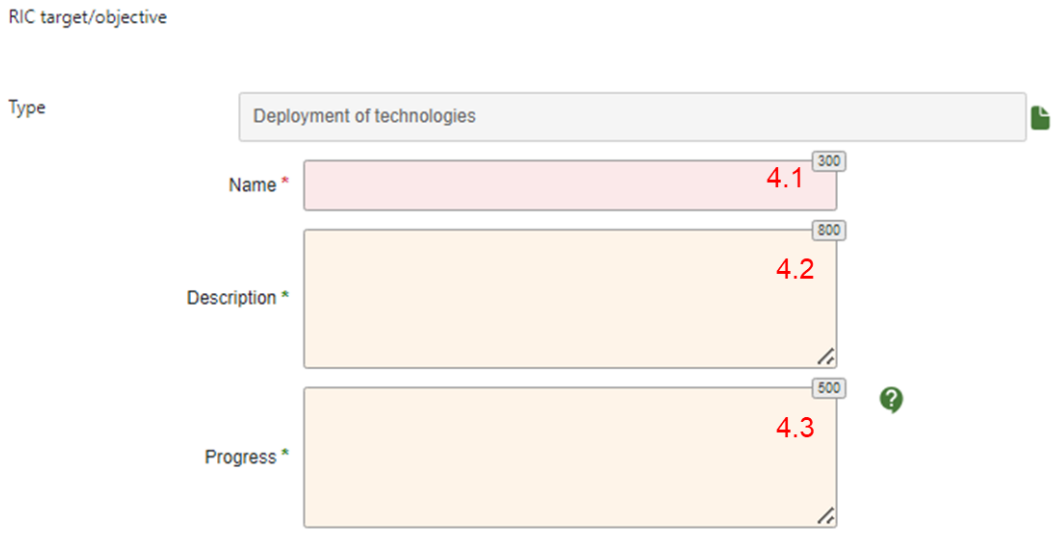


Figure 8: webform Annex VII, table 4

3.4.1. FIELD 4.1: Name of national target / objective

Purpose

The purpose of this field is for the Member State to provide the name of a national long-term target/objective.

Guidance, including format of the data

In the Field 1 Member States have to include the name of the national target/objective, specifying where relevant the target year for the target/objective (e.g. 2030, 2040, 2050) and :

- Each national target/objective must have a unique name.
- The name has to allow a clear and precise understanding on what the target/objective aims to achieve.
- The name must be comprehensible for interested members of the public and ideally should only consist of a few words.
- If a target/objective has been embedded into a legal act (e.g. law, decree, regulation), it is good practice to report its the exact name of the legal act, preferably in English.
- Where Member States have more than one target/objective, each target/objective will have to be added into a separate row i.e. each row in the template represents a separate target/objective.
- If no target(s)/objectives(s) were stated in the latest NECP, but have been consequently introduced, then the new target(s)/objective(s) should be stated.

Format: text, length 300

Level of obligation

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

3.4.2. FIELD 4.2: Description

Purpose

The purpose of this field is for the Member State to give context and provide further detail of the national target/objective.

Guidance, including format of the data

In this field Member States have to include:

- Concise and precise description of the national target/objective.
- Information on how the national target/objective aims at promoting the development, scale-up, deployment and market uptake of clean energy technologies and solutions;
- Information on how the national target/objective aims at supporting the deployment of technologies for decarbonising energy- and carbon-intensive industrial sectors and, where applicable, for related carbon transport, use, and storage infrastructure.
- Information on how the national target/objective aims at supporting the 2050 national long-term energy and climate strategy.

More specifically, the following questions should be answered:

- What does the target/objective aim to achieve? How is the target/objective related to 2050 long-term national energy and climate strategy?
- Which technologies are targeted?
- Which sectors are targeted?
- What is the timeframe to achieve the target/objective? What is the objective to achieve by the target year? What is the baseline year and the corresponding value? What is the expected improvement between the baseline and the target value (e.g. in absolute value, in percentage terms).
- How is it the target/objective implemented?
- What are the milestones and deliverables set to achieve the national target/objective?
- What are the policies and actions in place/ to be set to support the achievement of the target/objective?
- Who are the actors involved?

The description has to allow a clear and precise understanding on what the target/objective aims to achieve, and it must be comprehensible for interested members of the public.

To ensure conciseness and clarity, Member States are recommended to make appropriate use of the references/links to documents and websites with a more detailed description of the national target/objective. Member States are incentivised to provide this information in the Field General Comments.

Format: text, length 800

Level of obligation

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

3.4.3. FIELD 4.3: Progress towards target/ objective

Purpose

The purpose of this field is for the Member State to capture information on the progress achieved towards the national target/objective.

Guidance, including format of the data

In this field, Member States have to provide concise and precise updated information on the progress towards the achievement of the national target/objective listed in Field 4.1, and based on the description provided in Field 4.2, including:

- Information on progress made on the milestones and deliverables to achieve the target/objective

- Information on the impact of policies and actions aims at supporting the achievement of the target/objective.
- Information on whether the progress made is on track compared to the planned timeframe, including compared to the value in the base year.
- Information on barriers hindering the achievements of the target/objective and solutions to overcome them.

Details on the progress made towards the national target/objective included in this Field have to also be presented in the next fields through the reporting on specific progress indicators as identified by the Member States as relevant to the national target/objective.

Format: text, length 500

Level of obligation

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

3.4.4. FIELD 4.5: Progress indicator(s) (Name of indicator to monitor progress, Value of indicator, Reference year, Unit)

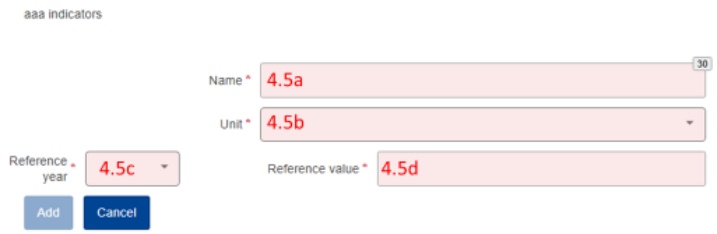


Figure 9: webform Annex VII table 4 (progress indicators)

Purpose

The purpose of this field is for the Member State to provide information on:

- the indicators – if any - that Member States have set to monitor progress towards achieving the national target/objective as described in Field 2 and Field 5.
- the progress achieved towards these indicators, including whether the progress made is on track to achieve the target/objective.

Guidance

In this field, Member States have to provide detailed information on the indicator(s) – if any - used to monitor progress to achieve the national target/objective over time, also based on the information provided in the Field 4.2 and Field 4.3.

The indicator(s) listed in this field have to be used by Member States each year against the set national target(s)/objective(s), so that yearly progress can be measured.

Where Member States have set more than one indicator used for monitoring progress to achieve the same target/objective over time, they will need to assess progress achieved against all these indicators.

In the Field 4 Members States have to include:

a) The 'Name of indicator to monitor progress'. This sub-field requires to provide the name of the indicator(s) – if any – set to monitor progress towards achieving the national target/objective over time.

b) The "Unit". This sub-field requires to specify the indicator unit (e.g. GW, TWh, EUR, % as share of , Number of..)

c) The 'Reference year'. This sub-field requires to provide the year corresponding to the quantitative value indicated in the "Value of indicator" field. Member States have to report on the most updated data available.

d) The 'Value of indicator'. This sub-field requires to provide a quantitative value against the indicator in the year specified in the field 'Reference year'.

Level of obligation

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

3.5. Annex VII, Table 5: Progress towards national objectives with regard to competitiveness

Purpose of the Table

The purpose of this table is for Member States to provide information on:

- The national target(s)/objective(s) that aim at strengthening the competiveness of the clean energy sector as whole and of specific clean and low-carbon energy technologies.
- Progress towards the achievement of the target(s)/objective(s), based on progress indicator(s) when applicable.

The national target(s)/objective(s) in the area of competitiveness in the field of clean energy could be related for example to:

- Policy and regulatory framework supporting the scale-up and market up-take of clean and low-carbon energy technologies crucial to deliver on the twin green and digital transition, as well as policy and regulatory framework supporting the acceleration of the energy system transformation and integration.
- Human Capital and Skills (Employment, up-skilling and re-skilling, gender balance, labour productivity, energy poverty).
- Innovation ecosystem (Patenting activities, research publications, international collaborations, private sector participation, financial solutions).
- Presence and leadership in strategic clean and low-carbon energy value chain segment, including EU and Global market share.
- Turnover, Gross Value Added growth in clean and low-carbon energy technologies as well as in specific value chain segments.
- Environmental and Socio-economic sustainability.
- Resource efficiency and (in)dependence.
- Trade balance (import, exports) related to specific clean and low-carbon energy technologies and/or specific materials and components.

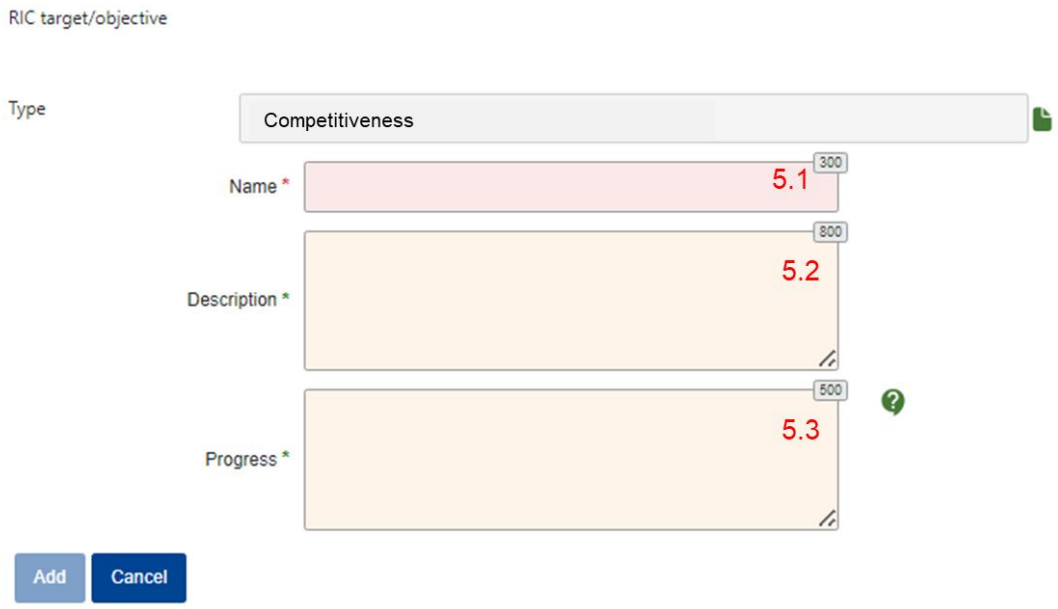


Figure 10: webform for Annex VII table 5

3.5.1. FIELD 5.1: Name of national target / objective

Purpose

The purpose of this field is to name and make clear to the reader the national target/objective aiming at enhancing the competitiveness of the clean energy sector.

Guidance

In this field Member States have to include the name of the national target/objective, specifying where relevant the target year for the target/objective (e.g. 2030, 2040, 2050) and :

- Each national target/objective must have a unique name.
- The name has to allow a clear and precise understanding on what the target/objective aims to achieve.
- The name must be comprehensible for interested members of the public and ideally should only consist of a few words.
- If a target/objective has been embedded into a legal act (e.g. law, decree, regulation), it is good practice to report its the exact name of the legal act, preferably in English.
- Where Member States have more than one target/objective, each target/objective will have to be added into a separate row i.e. each row in the template represents a separate target/objective.
- If no target(s)/objectives(s) were stated in the latest NECP, but have been consequently introduced, then the new target(s)/objective(s) should be stated.

Format: text, length 300

Level of obligation

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

3.5.2. FIELD 5.2: Description

Purpose

The purpose of this field is to give context and provide further detail of the national target/objective with regard to competitiveness.

Guidance

In this field Member States have to include:

- Concise and precise description of the national target/objective.
- Information on how the national target/objective aims at enhancing the competitiveness of the clean energy sector and of specific clean and low-carbon clean energy technologies and solutions.

More specifically, the following questions should be answered:

- What does the target/objective aim to achieve?
- Which technologies are targeted?
- Which sectors are targeted?
- What is the timeframe to achieve the target/objective? What is the objective to achieve by the target year? What is the baseline year and the corresponding value? What is the expected improvement between the baseline and the target value (e.g. in absolute value, in percentage terms).
- Which problem and challenges is the target/objective addressing?
- How is it the target/objective implemented?
- What are the milestones and deliverables set to achieve the national target/objective?
- What are the policies and actions in place/ to be set to support the achievement of the target/objective?

Where relevant, Member States are also invited to include information on how the national target/objective can support the other dimensions of the NECPs.

The description has to allow a clear and precise understanding on what the target/objective aims to achieve and it must be comprehensible for interested members of the public.

To ensure conciseness and clarity, Member States are recommended to make appropriate use of the references/links to documents and websites with a more detailed description of the national target/objective. Member States are incentivised to provide this information in the Field General Comments.

Format: text, length 800

Level of obligation

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

3.5.3. FIELD 5.3: Progress towards target/ objective

Purpose

The purpose of this field is for the Member State to give a qualitative description of the progress made up to the current situation towards the national target/objective with regard to competitiveness.

Guidance, including format of the data

In this field Member States have to provide concise and precise updated information available on the progress towards the achievement of the national target/objective listed in Field 5.1, also based on the description provided in Field 5.2, including:

- Information on progress made on the milestones and deliverables to achieve the target/objective
- Information on the impact of policies and actions aims at supporting the achievement of the target/objective.
- Information on whether the progress made is on track compared to the planned timeframe, including compared to the value in the base year.
- Information on barriers hindering the achievements of the target/objective and solutions to overcome them.

Details on the progress made towards the national target/objective included in this Field have to also be presented in quantitative terms the next fields through the reporting on specific progress indicators as identified by the Member States as relevant to the national target/objective.

Format: text, length 500

Level of obligation

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

3.5.4. FIELD 5.5: Progress indicator(s) (Name of indicator to monitor progress, Value of indicator, Reference year, Unit)

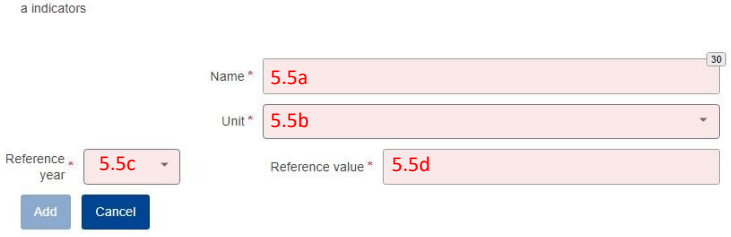


Figure 11: webform for Annex VII table 5 (progress indicators)

Purpose

The purpose of this field is for the Member State to provide the quantitative indicators, if any, that Member States have defined to monitor the progress towards achieving the national target(s)/objective(s) in the area of competitiveness, and the progress achieved towards these indicators.

Guidance

In this field Member States have to provide detailed information on the indicator(s) – if any - used to monitor progress to achieve the national target/objective over time specifically to monitor and assess competitiveness, also based on the information provided in the Field 5.2 and Field 5.3.

Progress indicators could include for example:

- Number of patents, scientific publications, international collaboration in scientific publications in clean and low-carbon energy technologies
- Employment rate in the clean energy sector, compared to e.g. a baseline reference and/or to other sectors, and/or as percentage share of the whole economy.
- Number of (leading) companies active in clean and low-carbon energy technologies and/or specific value chain segments.
- Number of start-ups in innovative solutions.
- Trade balance (EUR) in clean and low-carbon energy technologies (Export – Import).
- Positioning in the EU and Global market in terms of e.g. market share.

The indicator(s) listed in the Field 4 have to be used by Member States each year against the set national target(s)/objective(s), so that yearly progress can be measured.

Where Member States have set more than one indicator used for monitoring progress to achieve the same target/objective over time, they will need to assess progress achieved against all these indicators.

In this field Members States have to include:

a) The 'Name of indicator to monitor progress'. This sub-field requires to provide the name of the indicator(s) – if any – set to monitor progress towards achieving the national target/objective over time.

b) The "Unit". This sub-field requires to specify the indicator unit (e.g. gross value added growth, turnover, leading players, market share in the EU/global market, jobs created, employment)

c) The 'Reference year'. This sub-field requires to provide the year corresponding to the quantitative value indicated in the "Value of indicator" field. Member States have to report on the most updated data available.

d) The 'Value of indicator'. This sub-field requires to provide a quantitative value against the indicator in the year specified in the field 'Reference year'.

Level of obligation

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

4. FINALIZING REPORTING

4.1. Validating your submission

When filling in and saving the data, the Policy Reporting Platform performs a number of checks on the dataflow. In case of issues with the reported information, depending on the severity of the issue, you will either receive a warning message, or saving is blocked until the issue is resolved (for more details see section 2 above).

Once the dataflow is fully filled in, both lead reporters and supporting reporters can "freeze" the dataflow, indicating that it is ready for validation by the lead reporters.

NOTE: a "frozen" report is not considered submitted and cannot be accessed yet by Commission reviewers. A formal submission can only be made by lead reporters.

Only lead reporters are then able to submit the "frozen" dataflows to the Commission. Please align with the other lead reporter(s) prior to submitting your data. Once submitted, an e-mail notification will be sent to all workflow participants, with a timestamped proof of submission.

4.2. Resubmitting data

In case of need, lead reporters can request to reopen a certain dataflow, to revert it back to "not submitted" state.



In addition, the Commission can reopen a dataflow following a request for clarification.

Data can be submitted multiple times. On each occasion the data will be saved. However please note that for assessment **the Commission will always take the latest version** of the submitted data.

4.3. Help during the reporting

If you need support, please contact:

- For general questions about NECPR reporting: EC-NECP-REPORTING@ec.europa.eu
- For questions on substance on dataflows reported in:
  - ReportNet 3: govreg@eea.europa.eu
  - Policy Reporting Platform: EC-NECP-REPORTING@ec.europa.eu
- For technical support for
  - ReportNet 3: helpdesk@reportnet.europa.eu
  - Policy Reporting Platform: EC-E-PLATFORM-IT-SUPPORT@ec.europa.eu
- For technical support on EU Login: Help (europa.eu)

5. QUALITY ASSURANCE AND QUALITY CONTROL

5.1. Quality assurance and quality control structure

Member States are strongly encouraged to adhere as much as possible to the reporting guidelines and to conduct a quality control of the information on the data reported before submission.

To ensure timeliness, completeness, consistency, comparability, coherence, transparency and accuracy of the reported information, specific quality checks on behalf of the Commission and the EEA are performed on the submissions of Member States.

The results of the quality checks are communicated to the lead reporters through e-mail in the form of a checklist. The (lead) reporters can then (a) make adjustments to the reported data in the e-platform or (b) provide responses in the checklist on the reasons why changes are not considered necessary. After quality control, the data is stored in the database, made publicly available and used in the European Commission's assessment of the NECPRs and in certain EEA products. The figure below presents an overview of the process done on the reported information.

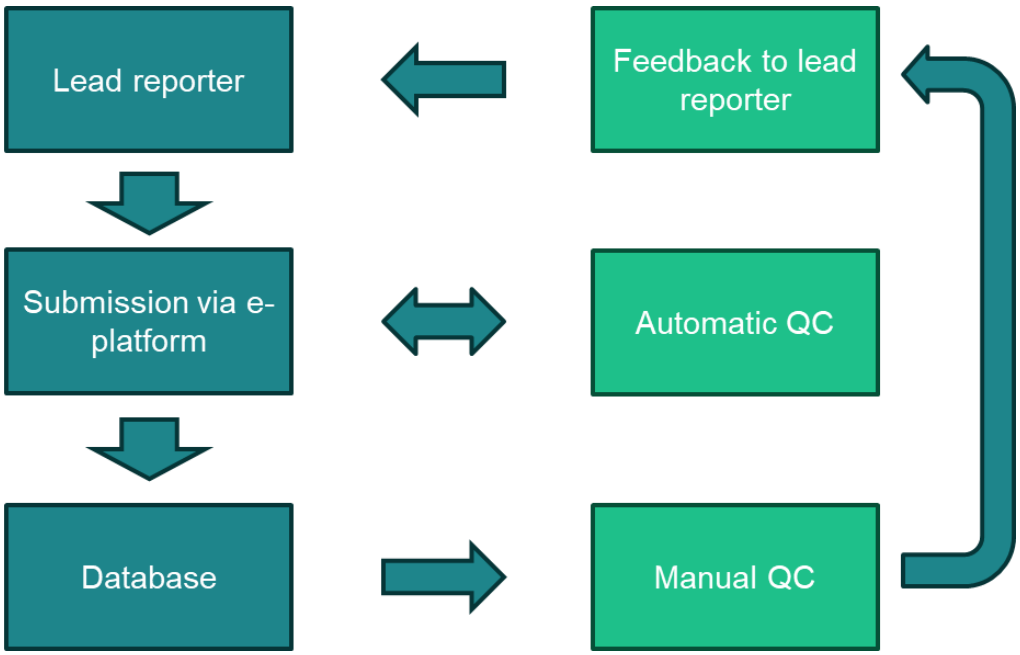


Figure 12 - Overview of the quality control process

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

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

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

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

Criteria	Objective
Timeliness	To assess if data and report was submitted on time and identify as early as possible any gaps or inconsistencies to inform Member States about the need for a resubmission.

Transparency	To ensure the data is identifiable and underlying methods are clearly referenced.
Completeness	To ensure that all relevant data and information is included.
Consistency	Ensure that the reporting is consistent and in line with good practices and guidelines. Checks ensure both internal consistency and consistency across years.
Coherence and Comparability	To assess whether the reported data is coherent with other possibly relevant reporting obligations and data provided and to ensure reporting across Member States is comparable.
Accuracy	To assess whether the data provided are credible.

5.2. Timeline & communication

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

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

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

Quality feedback reports

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

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

reporting system. The Member States are responsible for making the necessary changes to the dataflow on the Reporting platform.

Table 2 – Indicative timeline and the description of the action required by the organisations involved

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

5.3. Assessment of Member States submissions

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

- List of checks done;
- Overview of findings;

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

ANNEXE 1: REPORTING ROLES

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

Member state roles

- Lead reporter (2 per dataflow)
- Reporter

Function	Lead reporter
Overall aim of the function	The lead reporter is responsible for ensuring the complete and timely reporting of (a) data flow(s)

Role/ responsibilities	• Responsible for validating and submitting completed data flows.
	• Coordinate the reporting exercise from a substantive perspective, following up overall completion and assigning the necessary reporters.
	  o Acts as distribution point of relevant developments/information related to reporting to the necessary reporters.
	  o Responsible for all reporters in their dataflow(s): that they are coordinated and updated on timelines, key meetings, processes (etc.).
	• Key contact for Commission/EEA regarding substantive issues of reporting.

Competencies	• Expertise of thematic area of relevant dataflow(s)
	• Knowledge/coordination of supporting reporters and relevant supporting ministry/ministries
	  o To be able to disseminate information related to the relevant dataflow(s)
	• Understanding of the reporting system (ReportNet and/or Policy Reporting Platform) for relevant dataflow(s) following guidance and training:
	  o Ability to assign reporters
	  o Ability to validate and release/submit data when completed

Interfaces to	• Data stewards, regarding thematic reporting queries • Data custodians, regarding technical reporting queries • Other lead reporters, for coordination and to ensure the overall reporting obligations of the Member State is accomplished • Reporters, where assigned by lead reporter
Note	Lead reporters + back-ups for each data flow are nominated initially by mail through the Permanent Representation (November 2022). A lead reporter should be assigned for each individual data flow, however a lead reporter can be responsible for multiple or even all data flows for the NECPR. Changes can only be requested by e-mail by the relevant lead reporter(s) or Permanent Representation to the relevant data steward. The data steward must inform the Assessment Coordinator and relevant reporting system coordinator (Reportnet or Policy Reporting Platform). Contact for changes: (for dataflows in ReportNet) govreg@eea.europa.eu

	(for dataflows in Policy Reporting Platform) EC-E-PLATFORM-IT-SUPPORT@ec.europa.eu

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

Commission/EEA roles

- Assessment coordinator
- ReportNet coordinator
- Policy Reporting Platform coordinator
- Data steward

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

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

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

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

Function	**Data Steward**
Overall aim of the function	Data Stewards are overall responsible for a data collection or dataflow, ensuring compliance with legislation and/or institutional regulations, interfaces to

	reporters, relevant coordinator, and data users, ensures quality procedures are in place.
Role/ **responsibilities**	**Dataflow management** • Establishes and manages the business processes to ensure their dataflow is operational for data collection, data processing/validation and data dissemination. • Ensures a project plan for their relevant dataflow and permanent quality improvement - the what, when, who, how and resources. • Translate requirements to different expert groups (data custodian, analyst, communication). • Coordinates with data custodian on technology improvements impacting data flow. • Coordinate with main data users. • Where necessary ensures that data collected is made visible/accessible. **Stakeholder relations** • Works with relevant coordinator to maintain institutional stakeholder relationships (EC, EEA, Eurostat, JRC …). • Directly maintains stakeholder relationships with data providers/reporters at national level. • Manages the assignment of reporters' rights to the relevant dataflow, after (re)-nomination. • Monitoring reporting status (and initial follow up if there are reporting delays/issues)

Competencies	• Has in-depth thematic knowledge of the data collection
	  o Understands the data from a content point of view.
	  o Understands the data collection methodology.
	  o Understands how this data can be used and not used.
	• General understanding of ICT relevant for monitoring, data handling and reporting practices e.g. quality control, data formats (spatial, textual, tabular), and data sharing.

Interfaces to	• Core group institutional stakeholders (Commission, EEA, Eurostat, JRC …) with/via relevant coordinator. • Implementation group thematic colleagues internally or externally (Commission, EEA, Eurostat, JRC …) directly. • Relevant data custodian(s) • Reporters/data providers • Other final users of the data