



Integrated national climate and energy policies and measures

Concept Name Description

A Data description (metadata)

Data description

Background, main characteristics of dataset

Integrated national climate and energy ‘policies and measures’ (PaMs) cover all actions which contribute to meeting the objectives of a country’s integrated national energy and climate plan (NECP). European countries are committed to adopting, implementing and planning policies, as well as taking the corresponding measures to achieve climate change mitigation and energy targets. These targets include reducing greenhouse gas (GHG) emissions, producing additional renewable energy, or reducing overall energy consumption.

European countries are obliged to report information on implemented, adopted or planned PaMs every 2 years under Article 17 of the [Governance of the Energy Union and Climate Action Regulation \(EU\) 2018/1999](#) (“Governance Regulation”) and its [Implementing Regulation \(EU\) 2022/2299](#).

For integrated greenhouse gas PaMs, European countries are also obliged to report under Article 18 of the Governance Regulation any substantial changes to the information reported under Article 17. Updates to the dataset can be made annually if there are significant updates to the reported policies or measures.

The dataset includes information on the characteristics of PaMs, ex-ante and ex-post impacts of PaMs (where available), and the costs and benefits of PaMs (where available).

Statistical population

Population about which information is to be sought

This dataset refers to the official nationally reported data and therefore applies to the entire statistical population of the national entity in relation to the specific information within the dataset (i.e., which national policies and measures are planned or implemented to meet climate and energy targets).

Reference period

Reference period (dataset): All PaMs reported are already planned, adopted, implemented, or expired by the time of the reporting deadline (March 15) of the reporting year.

The reference period for when PaMs were implemented is country specific. All PaMs in the dataset (whether implemented or expired) are reported as they still have an impact on achieving climate and energy targets or objectives.

Reference period (datapoints): Datapoints refer to PaMs implemented, adopted, planned, or expired in the reporting year.

Data on PaMs’ impacts and (projected) costs/benefits can be reported for past years (back to 1990 from reporting year), or up to 2040 (in intervals of 2025, 2030, 2035, 2040).

Frequency of dissemination

Once every two years, or annually

The dataset is mandatorily reported once every two years. However, each year the country shall update data related to greenhouse gas PaMs, if ‘substantial changes’ to the information exist. Therefore, some countries update data annually.

Geographical reference area

All EU Member States

Iceland, Switzerland, and Norway only report information related to climate change PaMs ([Implementing Regulation 2020/1208](#)).

Unit of measure

Number of policies; kt CO₂eq (for GHG impact data); ktoe (for RES impact data); ktoe/year of final energy consumption (for EE impact data); EUR or EUR/impact unit (costs and benefits).

GHG emissions reductions and removals are reported as positive values, whereas increases in GHG emissions or decreasing removals are reported as a negative value.

Costs are reported as a positive EUR value, whereas benefits are reported as a negative EUR value. EUR price years are reported in the relevant field(s) “price reference year”.

Basic statistical concepts and definitions

The main statistical variables are linked to the impact and costs data from this dataset. These include:

- GHG ex-ante and ex-post impacts (kt CO₂eq / year);
- GHG costs and benefits (EUR or EUR / kt CO₂eq);
- Renewable energy ex-ante and ex-post impacts (ktoe / year);
- Renewable energy costs and benefits (EUR or EUR / toe);
- Energy efficiency ex-ante and ex-post impacts (ktoe / year final energy);
- Energy efficiency costs and benefits (EUR or EUR / toe final energy).

For GHG impacts, reporting is split into three emission sectors:

- EU ETS (Emission Trading Scheme) – emissions covered only under activities within the scope of the EU ETS.
- ESR (Effort Sharing Regulation) – emissions covered only under activities within sectors covered under the ESR.
- LULUCF (Land Use, Land Use Change and Forestry) – emissions and removals covered only under activities within the sector of LULUCF.
- Total – the sum of all three emission sectors listed above. A positive value notes an emission reduction or removal. A negative value notes an increase in emissions or a decrease in removals.

For costs / benefits reporting, there are several distinct concepts:

- Costs – including administrative costs, implementation costs, investment costs etc.
- Benefits – including monetary benefits from reduced climate change effects, higher tax revenues etc.

- Net costs – costs after factoring in the benefits. A negative value indicates a net benefit, and a positive value indicates a net cost of the PaM.

Further details on the various categories, concepts and definitions can be found in the [reporting guidelines](#).

PaMs can be characterized across several defined categories which are outlined below.

PaM ID: The ID number associated to track and differentiate PaMs in the dataset.

Single / Group PaM: (Single) PaMs can be grouped to allow simplified reporting on quantitative information for PaMs which are only quantified as a grouped unit by the national entity. Grouped PaMs must constitute 2 or more single PaMs.

Relevant Energy Union dimension(s) affected: The European Commission has defined a set of dimensions to guide the Energy Union. The Member States report which specific Energy Union dimension the PaM is related to and affecting. This relates to which targets the PaM contributes towards. Each dimension has its own list of dimensional objectives, which can be found in the reporting guidelines. Energy Union dimensions include:

- Decarbonisation: GHG emissions and removals;
- Decarbonisation: Renewable energy;
- Energy efficiency;
- Energy security;
- Internal energy market;
- Research, innovation and competitiveness.

GHGs affected: if the PaM is related to reducing GHG emissions, the country shall report which GHGs are affected. These include:

Carbon dioxide (CO₂); Methane (CH₄); Nitrous oxide (N₂O); Hydrofluorocarbons (HFC); Perfluorocarbons (PFC) Sulphur hexafluoride (SF₆); and Nitrogen trifluoride (NF₃).

Projections scenarios which PaM contributes to: GHG PaMs shall be allocated to a projections scenario in which impact is taking place. The scenarios include:

- With existing measures (WEM) – encompasses currently implemented and adopted PaMs. In that case, the PaM's status must be implemented or adopted.
- With additional measures (WAM) – encompasses currently implemented and adopted PaMs, as well as planned PaMs. In that case, the PaM's status must be planned, and the implementation period must be in the future.
- Without measures scenario (WOM) – excludes all PaMs implemented, adopted or planned after the year chosen as the starting point for this projection. This is a voluntarily reported scenario, which contains only measures which have been implemented before the chosen reference year.
- Not included in a projection scenario – for some measures, it might not be possible to allocate them to a specific scenario, e.g. projections have already been finalised, and a specific policy has not been considered in the projections due to time constraints. If possible, the use of this option should be avoided. If it cannot be avoided, countries are encouraged to provide a reason for it.

Classifications used

Vectors affected: If PaMs are related to the dimension of energy security, countries must relate the PaM to a particular energy vector that the PaM affects. These include:

Whole system; Electricity; Gas; Petroleum products; Nuclear; Heat; Other fuels.

Supported Energy Union R&I priority: If PaMs are related to the dimension Research, Innovation and Competitiveness, countries must relate the PaM to the research priorities that the PaM affects. Each priority has its own list of technologies, which are listed in the [reporting guidelines](#). Research priorities include:

No.1 in renewables; Smart systems; Energy efficiency; Sustainable transport; CCUS; Nuclear.


Sectors affected: PaMs should specify which sector(s) the PaM relates to. One PaM may be related to multiple sectors. Each sector has a series of sector objectives which can further be selected for the PaM.

- Energy supply (comprising extraction, transmission, distribution and storage of fuels as well as the transformation of energy for heating, cooling and electricity production);
- Energy consumption (comprising consumption of fuels and electricity by end users such as households, public administration, services, industry and agriculture);
- Transport;
- Industrial processes (comprising industrial activities that chemically or physically transform materials leading to greenhouse gas emissions, use of greenhouse gases in products and non-energy uses of fossil fuel carbon);
- Agriculture;
- Land use, land-use change and forestry (LULUCF);
- Waste management/waste;
- Other sectors.

Type of policy instrument: PaMs should be related to a type of policy instrument. One PaM can be multiple types of policy instrument.

Economic; Fiscal; Voluntary/negotiated agreements; Regulatory; Information; Education; Research; Planning; Other.

Entities responsible for implementing the policy: For each PaM, one or more entities are responsible for the implementation and should be reported alongside the PaM.

	<p>National government; Regional entities; Local government; Companies/businesses/industrial associations; Research institutions; Others not listed.</p> <p>Further details on the various categories, concepts and definitions can be found in the reporting guidelines.</p>
Statistical Confidentiality	Data is required to be made publicly accessible, in accordance with the Governance Regulation 2018/1999 , Article 18 & 28.
B Data quality	
Relevance	<p>The dataset presents the official list of national PaMs intended to achieve national contributions to EU targets (climate and energy), as provided in the NECPs. Users wanting to understand the policy actions undertaken by their Member State can dig further into their information in one comprehensive dataset.</p> <p>The dataset can be considered relatively complete regarding the number and diversity of PaMs reported by countries. However, regarding quantifiable impacts and costs, the dataset lacks completeness. This reduces the relevancy and usability of the data.</p> <p>There is currently no user satisfaction conducted on the dataset. However, discussions with Member States are held regularly in Working Group Meetings of the Climate Change Committee. Additionally, the EEA regularly responds to enquiries on this dataset and related products.</p>
Timeliness <i>Length of time between data availability and the event or phenomenon they describe</i>	<p>T+1 year</p> <p>Data is reported on the 15 March in every odd year for integrated climate and energy PaMs (Article 18 Governance Regulation) with substantial updates to GHG-related PaMs being reported in even years (Article 18 Governance Regulation). Quality checking procedures are undertaken until summer and final datasets are prepared and made available in early autumn.</p>
Accuracy and reliability	<p>Source data – national administration: Data is officially reported by national administrations on their national policies. Reporting on quantified impacts and costs does not have standardised methods and may therefore differ in terms of method or scope.</p> <p>Data collection and methods used: Data is collected from national authorities via the EEA's survey tool Reportnet 3. Once reported, the EEA and its European Topic Centre¹ Climate change Mitigation (ETC-CM) quality check the data according to the UNFCCC quality criteria (TACCC). All updates to the data require the Member State to resubmit data in agreement with the EEA. Therefore, updates are not always achieved when data quality issues are detected.</p>
Accessibility and clarity	<p>Publications: Raw data is primarily available via Reportnet 3. The final published dataset is made available via the EEA's Datahub. In addition, the EEA prepares two major products to disseminate the data via an interactive database and via a data visualisation dashboard.</p> <p>Every second year, the ETC provides a report on the contents of the reported PaMs' data and the quality process undertaken on the data that is published on the ETC-CM product site. Ad hoc reports are published that explore particular aspects of the dataset, either by the ETC and/or the EEA.</p> <p>Quality documentation: Automatic quality assurance and quality control mechanisms are implemented in Reportnet 3. Details on the automatic quality control mechanisms are listed in the Excel document (sheet 'QC rules') available for download on the Reportnet 3 website. In Reportnet, navigate to the relevant year of the dataflow 'Integrated national policies and measures' and click on the button 'Download schema/s info', as seen on the picture.</p> 
Coherence and comparability	<p>Geographical: Data quality (completeness) differs greatly amongst Member States. Furthermore, the scope and definition for what constitutes a PaM differs. This means that some Member States report fewer PaMs (<20) than others (>200). The number of PaMs reported is not equitable to the ambition of a Member States actions. Furthermore, methods for evaluating quantifiable impacts may differ per Member State and could lead to comparability issues.</p> <p>Over time: Datasets are self-standing and represent the complete list of PaMs adopted, implemented or expired (and still having an impact) at the time of reporting. Therefore, historic datasets do not reflect a timeseries and are not directly comparable. The latest dataset should always be used, if the current state of a country's PaMs is the scope of analysis.</p>
C Contact and update	
Contact organisation	European Environment Agency (EEA)
Contact name	n/a

¹ An ETC is a consortium of organisations in EEA member countries with expertise in a specific environmental area. ETCs are contracted by the EEA to support the implementation of the EEA work programmes.

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