

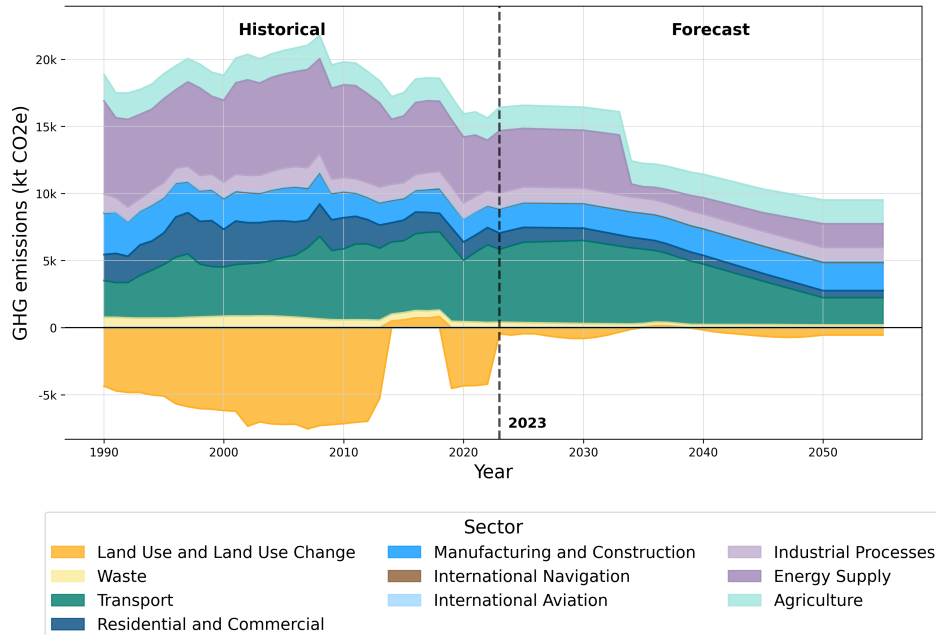


# National system for policies and measures and greenhouse gas projections of Slovenia

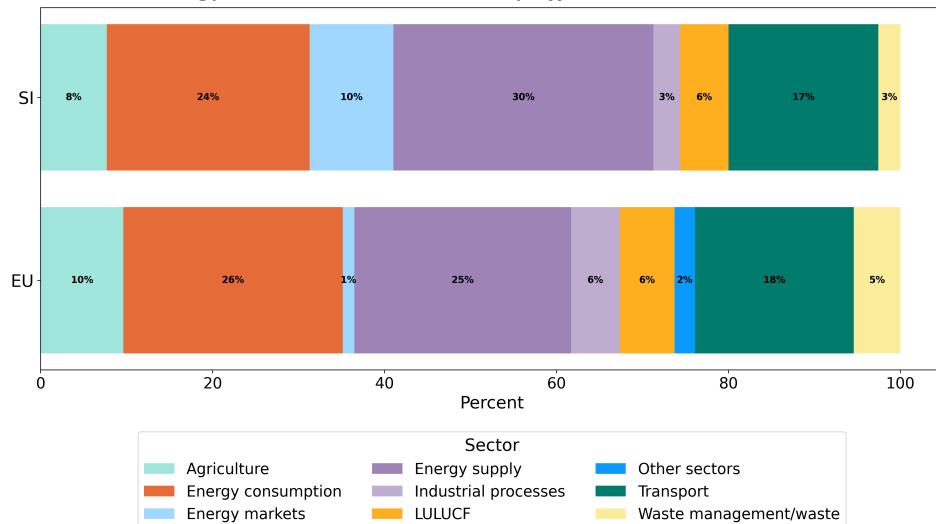
## Information reported in 2025

A robust and complete national system ensures the delivery of good-quality information on the projections of anthropogenic greenhouse gas emissions by sources and removals by sinks, as well as policies and measures in place to implement National Climate and Energy Plans. The two figures provide an overview of the information submitted by Slovenia in 2025, enabled by the national system, as laid out below.

Historical and projected greenhouse gas emission in Slovenia by sector in 2025.



Reported climate and energy Policies and Measures by affected sector in Slovenia.



## Institutional and procedural robustness

### *Institutional arrangements*

Slovenia's national system for reporting on policies, measures and projections has the same main elements as the National GHG Inventory System.

The Ministry of the Environment, Climate and Energy is designated as the national entity with the overall responsibility for the climate change policy evaluation and reporting on policies and measures and projections of the anthropogenic GHG emissions.

Slovenian Environment Agency (SEA), which is a body of the Ministry of the Environment, Climate and Energy is responsible for the compilation of the National GHG Inventory, managing the national part of the Union registry, and providing data to the other competent authorities and information to the public.

In making the inventories, SEA cooperates with numerous other institutions and administrative bodies, such as Slovenian Forestry Institute and Agricultural Institute, which relay the necessary activity data and other necessary data for the inventories.

Part of the legal and institutional arrangements that are in place as the basis for the national system concerns the data availability for the annual compilation of the GHG inventory. The main data source for the Slovenian inventory preparation is the Statistical Office of the Republic of Slovenia (SORS). The compilation of several statistics is regulated by European and Slovenian statistical legislation and partly complemented by contracts at the national level.

Other governmental ministries and agencies are separately and in different fields involved in the process of reporting of policies and measures and projections. Each entity has its own responsibility and an independent evaluative view. Each entity also through their appointed focal points ensures the data provision. All data from external institutions are submitted to SEA, where they are archived.

The entities participating in Slovenia's national system for reporting on policies and measures and projections are presented in the attached organogram.

### *Procedural and administrative arrangements and timescales*

The Ministry of the Environment, Climate and Energy is responsible for ensuring the timeliness of the reporting. The Energy Efficiency Centre, Institute "Jozef Stefan" collects all necessary data from relevant ministries and agencies and prepares a report of analysis of implementing measures for each non-ETS sector. The Ministry of the Environment, Climate and Energy complies with key substantial information from the report, which is publicly available.

The Energy Efficiency Centre consists of a team of experts that is well-established in Slovenia. They use publicly available data and commonly agreed on assumptions to as large an extent as possible, and most of the methods and models have been used before in national and international reporting. Projections they prepare follow the greenhouse gas source and sink categorization recommended by the European Commission (based on the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and revised UNFCCC CRF tables for inventory reporting).

To ensure transparency, the methodology, assumptions, data sources and results of the PaMs and projections analysis are documented and publicly available online. The core input data are traceable to national or international official sources, and major methodological steps are clearly described in reports.

To ensure accuracy, the Jožef Stefan Institute – Energy Efficiency Centre uses validated and quality-checked national statistics and information provided directly by ministries and agencies. Where possible, cross-referencing between data sources is performed. The methodologies used are based on internationally recognized models and follow guidelines from the IPCC and UNFCCC.

To ensure consistency, the same methodological framework and tools are applied across reporting years, unless updates are required (e.g. due to methodological improvements or new EU requirements). Any changes in methods or assumptions are documented and explained.

To ensure comparability, the categorization of greenhouse gas sources and sinks follows the 2006 IPCC Guidelines and CRF classification, and reporting templates and sectoral breakdowns align with European Commission and UNFCCC requirements.

To ensure completeness, the reporting includes all sectors and gases required under the Governance Regulation. A thorough review of all relevant measures is conducted in collaboration with line ministries, and any data gaps are identified and addressed through expert judgment or conservative estimations, in line with established practices.

### ***Procedures for the official consideration and approval of the Member States national system***

The Energy Efficiency Centre, Institute "Jozef Stefan" based on public tenders collects all necessary data from the relevant ministries and agencies and prepares several reports of analysis of implementing measures. The Energy Efficiency Centre consists of a team of experts that is well-established in Slovenia and are therefore trusted to give the final approval concerning the information in the reporting tools.

Different institutes (such as the Slovenian Forestry Institute, Jožef Stefan Institute, the Agricultural Institute of Slovenia) prepare scientific bases, expert background documents and analyses, on which different policies, strategies and plans are based. The Ministry of the Environment, Climate and Energy complement this content in accordance with the national and EU legislation. This is then coordinated with different ministries, and also presented to the general public, discussed with expert working groups etc. The content is later confirmed by the Government, and, depending on the document, also by the Parliament. Finally, the document is sent to the European Commission/UNFCCC, and, in case it is necessary, complemented considering the feedback received.

### ***Description of the information collection process***

For the preparation of projections, all relevant strategic documents (including GHG reduction measures) serve as a basis to develop the measures scenarios. A broad team of experts is involved both in evaluation/monitoring/reporting tasks and preparation of projections. The team consists of experts in the fields of energy, buildings, industry, energy/emission-related issues of transport (Institut "Jozef Stefan"), non-energy issues of transport (PNZ, d.o.o.), agriculture (Agricultural Institute of Slovenia), LULUCF (Slovenian Forestry Institute). For specific tasks related to the development of projections, additional experts are involved (power sector specialists, etc.) The same team is supporting ministries with developing and drafting several key national sectorial documents.

Energy Efficiency Action Plan, Long-term Strategy for Promoting Investments in the Energy Renovation of Buildings, National Renewable Energy Action Plan, National Energy and Climate Plan, Transport Development Strategy of the Republic of Slovenia, Strategy on alternative fuels. The same experts are preparing the expert groundwork for ministries at the development of specific instruments or supporting schemes (e.g. feed-in tariffs for generation of electricity from renewable energy sources), or provide inputs for such instruments, work on specific tasks like a consultation to citizens on energy renovation measures.... Before preparing projections, all the other adopted documents and documents in preparation are surveyed.

The data on the actual implementation of policies and measures is checked yearly. Since 2018, it

has been published in the form of the Report on Climate Change Mitigation, which is written in a way that is understandable to the general public. Also, the report on the implementation of the NECP is written as determined in the Regulation (EU) 2018/1999.

The above-mentioned team of experts yearly collects and evaluates the following data:

- Data for calculation of predefined indicators for monitoring progress in GHG measures impacts or implementation (from statistics and other sources):
- Annual GHG emissions according to Regulation (EU) 2018/842/EU, amended by the Regulation (EU) 2023/857 (total and by sector).
- General indicators – Annual GHG emissions according to Regulation 2018/842/EU, amended by the Regulation (EU) 2023/857 (total and by sector), Share of RES, Energy efficiency.
- Transport (CO<sub>2</sub> emissions of new personal vehicles and of all personal vehicles, Share of biofuels in transport, Public passenger-transport kilometers in passenger transport, Sustainable freight transport (share of rail transport in total transport volume).
- Buildings (Leverage of incentives in the public sector, CO<sub>2</sub> emissions reduction through measures in the public sector, Energy savings through measures in the public sector, Floor area of energy renovated buildings in the public sector, CO<sub>2</sub> intensity in the commercial and institutional sector, Improvement of energy efficiency in the residential sector – CO<sub>2</sub> emissions reduction, Improvement of energy efficiency in the residential sector – energy savings, Specific GHG emissions in the residential sector, Share of RES in the use of fuels for heating and cooling in the tertiary sector (residential, commercial and institutional)).
- Agriculture (Increasing efficiency of raising farm animals - GHG emissions per unit of milk production, Rational fertilization of agricultural plants with nitrogen - consumption of nitrogen from mineral fertilizers for the fertilization of agricultural plants, Improvement of the efficiency of the nitrogen cycle in agriculture - gross nitrogen budget, Improvement of the efficiency of the nitrogen cycle in agriculture - land area included in Organic farming measure, Improvement of the efficiency of the nitrogen cycle in agriculture - field and garden areas included in measures that require fertilization based on rapid soil or plant tests).
- Industry (Financial incentives for energy efficiency and renewable energy in the non-ETS industry, Share of RES in the use of fuels in the non-ETS industry).
- Industry, process emissions (GHG emissions due to leakage of F-gases from devices).
- Waste management (Quantity of deposited biodegradable waste).
- Green growth (Emission productivity, Implicit energy tax rate, Incentives that work against the goal of reducing GHG emissions, Green jobs, Supporting of eco-innovations for the transition to a low carbon society).
- Land use, land-use change, and forestry (LULUCF) (GHG net emissions, GHG emissions due to land-use change, Area of restored forests according to the type of regeneration, Ratio of forest development phases: share of young-growth and share of pole stands).
- Data of financial incentives for supporting GHG reduction measures (Eco fund, Climate Change Fund, Cohesion policy implementation units, etc.), are gained mostly from their databases.
- Data on implementation of measures from NECP and measures related to the GHG reduction in other programmes are gained from publicly available sources or specific inquiries. Consistency between P&M monitoring/developing and projections is ensured by:
  - Use of the same sets of data for evaluation of measures and projections.
  - Calibration of the base year of projections with monitoring data for several indicators (the above listed and others).
  - Cross-checking of several parameters of projections with the monitoring/evaluation values (e.g. building renovation rates are crosschecked with data on the effects of subsidies from Eco fund and data on the share of HH using Eco fund subsidies at renovating buildings).
  - Use of a simulation model for projections allows explicitly to consider several parameters,

relevant for the implementation of measures (e.g., barriers, availability of incentives...).

### ***Description of the process for selecting assumptions, methodologies and models for making projections of anthropogenic greenhouse gas emissions***

The core team for the preparation of the projection is selected on a project basis. The process of making projections is embedded in the decision-making process and follows the structured analysis procedure, including the following steps:

1. Setting the scope of the analysis and criteria for comparative assessment
2. Development of P&M scenarios and scenarios of external factors
3. Quantitative analysis, selection and update of models, modelling of scenarios and impacts (GHG, sectorial, other environmental, other general)
4. Comparison of scenarios
5. Development of recommendations for decision making.

Interaction between the analytical team and decision-makers/stakeholders is organized at steps 1, 2, 5, while steps 3 and 4 consist mainly of analytical work.

All sectors are covered by the process.

### ***Institutional administrative and procedural arrangements for domestic implementation of EU's NDC***

In Slovenia, the Ministry of Agriculture, Forestry and Food is responsible for the fields of agriculture, forest, forestry, and hunting. Tasks are, among other jurisdictions, to monitor the forest development, and to supervise the work of the public forestry service, entrusted to the Slovenian forestry institute ([www.gozdis.si](http://www.gozdis.si)) and Slovenia forest service ([www.zgs.si](http://www.zgs.si)).

Named institutions collect data on the condition and development of forests as an ecosystem (permanent sample plots and national forestry inventory); keep records as databases for their work and for statistical generalization (forest management planning); monitor the biotic balance in forests as well as the devaluation and damage of forests. The area of their work is clearly defined by the Forestry Act and the related statutory instruments for the area of forests and forestry. Article 1.a of the Forestry Act also lays down obligations towards the EU, which were associated by the EU Regulation 2018/841 or Regulation on the inclusion of greenhouse gas emissions and removals from land use, land use change, and forestry (Land Use Land Use Change and Forestry; LULUCF). LULUCF Regulation includes agricultural land, wetlands, and forests. Slovenian forestry institute measures and monitors not only forested land, but according to the internal agreement among ministers and institutions, also other land uses (cropland, grassland) from the LULUCF sector. Prepared data on sinks and emissions are currently collected by the Ministry of Agriculture, Forestry and Food and reported to the Eionet, under the EU obligations, Greenhouse gas Monitoring Mechanism Regulation (MMR); LULUCF Decision and Impl. Reg. Chapter IV (<http://cdr.eionet.europa.eu/si/eu/mmr/>).

## **Formality**

### ***Legal arrangements***

In 2024, the updated National Energy and Climate Plan (NECP) was adopted in accordance with the Regulation on the Governance of the Energy Union and Climate Action (2018/1999/EU), which requires comprehensive reporting on policies and measures and of projections every two years.

The Ministry of the Environment, Climate and Energy is currently in the process of drafting the

Climate law that would, amongst others, establish competent authority for preparation of reports on policies and measures and of projections and establish a yearly system, in which competent ministries will have to report data on policies and measures to the Ministry of the Environment, Climate and Energy. Furthermore, the draft Climate law determines yearly preparation of the Report on climate change mitigation, which looks at the emissions from sectors that are not included in the EU ETS (and are covered by the Regulation (EU) 2018/842, amended by Regulation (EU) 2023/857).

## Alignment with other reporting frameworks

### *GHG inventory reporting*

A process of inventory preparation is designed according to the PDCA cycle (Plan – Do – Check – Act). This is a generally accepted model for pursuing systematic quality work according to international standards, in order to ensure the maintenance and development of the quality system.

The inventory cycle is presented in the attached organogram.

This structure is described in decision 19/CMP.1 and in the 2006 IPCC Guidelines. The system consists of inventory planning, inventory preparation, inventory quality checking, and follow-up improvements which are integrated into the annual cycle and preparation as illustrated in the attachment.

Owing to the ever-increasing obligations of Slovenia with regards to reporting, the SEA has decided to implement a unified system of data collection for the purposes of making inventories, as well as secure reliable financing in accordance with the annual program of its work.

For submitting reports to different institutions, various report formats have been devised, since the same data are used to report to the UNFCCC, EEA, EC, and CLRTAP. All external reports of the SEA are prepared in accordance with ISO 9001 via the Agency's reporting service, which keeps inventories of reports. Parallel to this, emissions data are submitted to the SORS, which makes them available in its publications and submits them to EUROSTAT and the IEA.

Before the inventory is reported to the EU, EEA, or UNFCCC Secretariat, it goes through an approval process. The institution designated for approval is the Ministry of the Environment, Climate and Energy.

Projections and the model for preparing projections are calibrated in a base year with the national inventory data by gas, by sector, and subsector. The calibration consists of aligning emissions, GHG factors, and also most of the activities (energy use, etc.). Projection results are graphically and numerically presented together with inventory data. Experts preparing emission projections have great knowledge of emission inventory methodology as they are involved in the inventory preparation or are involved in QA/QC procedures for the inventory. The methodology for emission projections is mostly the same as in inventory or higher Tier is used where there is a need to estimate the effect of different measures.

### *Article 17 of the Governance Regulation (EU) 2018/1999 (NECPR)*

Both processes, e.g. the process used to collect data related to policies and measures and projections, and progress reporting under the NECP, are taking place simultaneously. To better coordinate both processes and to ensure the proper implementation of measures, an intersectoral working group (involving relevant ministries) was established at the initial phase of the reporting process. In addition, during the updating process of the NECP we were aiming to define or amend future policies and measures in a manner, which would enable smoother implementation, monitoring and adjustments in case of deviations. This will in turn lead to enhanced

implementation transparency and facilitate future progress reporting.

## Accountability and transparency

### *Quality control activities*

The background study for projections is publicly available and gives a lot of details on the assumptions used. Base year data are mostly based on official data sources (national emission inventory, energy statistics, register of motor vehicles, etc.) Any inconsistency found in those data is communicated to the responsible person.

Most of the projected values are published together with time series from 2005. Several detailed indicators related to projections (effects and assumptions of scenarios) are calculated and graphically presented, which is also a part of the error checking procedure. The energy and emission balances are prepared under the platform MESAP, which minimized the possibility of errors at the aggregation of balances.

Sensitivity analyses for projections are carried out for factors being especially significant in terms of greenhouse gas emissions, and they are described in detail in the report accompanying each round of the Reporting.

Transparency and completeness of the projections are reviewed by the UNFCCC expert review teams in the EU (EEA).

There is no QA report prepared.

## Public participation

### *Stakeholder engagement*

Expert support for Ministries is provided by the team of experts in the fields of energy, buildings, industry, energy/emission-related issues of transport (Institut "Jozef Stefan"), non-energy issues of transport (PNZ, d.o.o.), agriculture (Agricultural Institute of Slovenia), LULUCF (Slovenian Forestry Institute).

The Energy Efficiency Centre, Institute "Jozef Stefan" collects all necessary data from relevant ministries, institutes and agencies, analyses the data and prepares several reports.

The reports are available, some are also presented to the public.

For the National Energy and Climate Progress Reporting, several stakeholders were engaged in the process: Institute "Jozef Stefan", Institute for Economic Research, Slovenian Forestry Institute, School of Economics and Business of the University of Ljubljana, ELEK, d.o.o., ELES, d.o.o., and Plinovodi, d.o.o.

Moreover, among key stakeholders that were included in the process of preparation of the National Energy and Climate Plan were:

- the local authorities, in particular the Association of Municipalities of Slovenia (Združenje mestnih občin Slovenije),
- the business community, in particular the Chamber of Commerce and Industry of Slovenia (CCIS) as the largest independent, voluntary, non-profit association of companies in Slovenia,
- the youth; the ministry supported and participated in the Youth Energy Forum in November 2023, organised by the National Youth Council of Slovenia,
- civil society organisations, also by supporting and participating in their activities including European projects (e.g. LIFE UNIFY).

## Contact information for entities with overall responsibility for National Systems

The Ministry of the Environment, Climate and Energy is designated as the national entity with the overall responsibility for the climate change policy evaluation and reporting on policies and measures as well as projections of the anthropogenic GHG emissions.

The Ministry of the Environment, Climate and Energy holds the functional competence for activities related to the development and implementation of the national policies and measures in climate change mitigation in Slovenia. In addition to its active role in the entire process, the Ministry of the Environment, Climate and Energy is also involved in QA/QC activities regarding submission of the National GHG Inventory for each year and for submission of projections of the anthropogenic GHG emissions which are prepared by an external contractor.

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