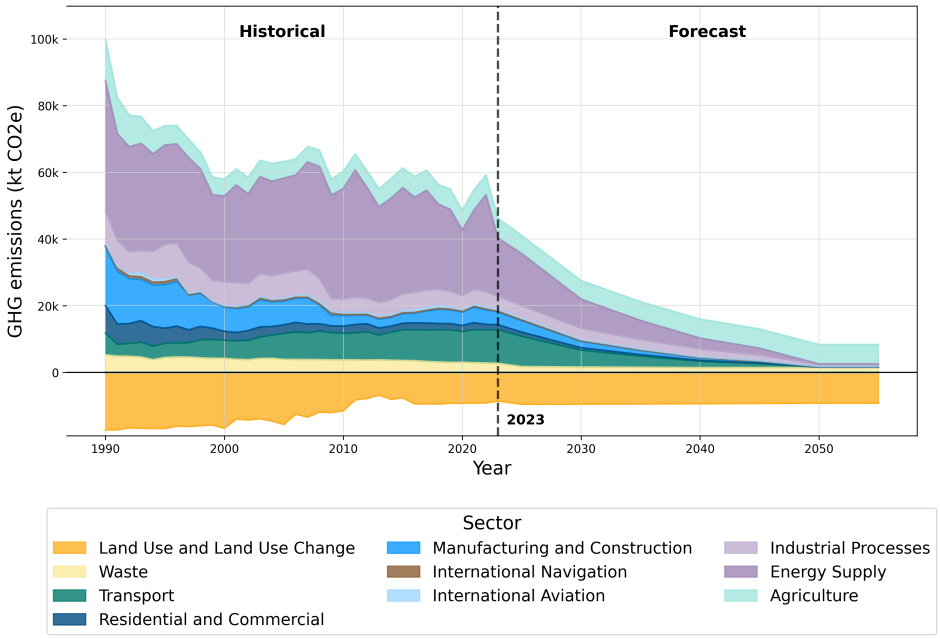
National system for policies and measures and greenhouse gas projections of Bulgaria

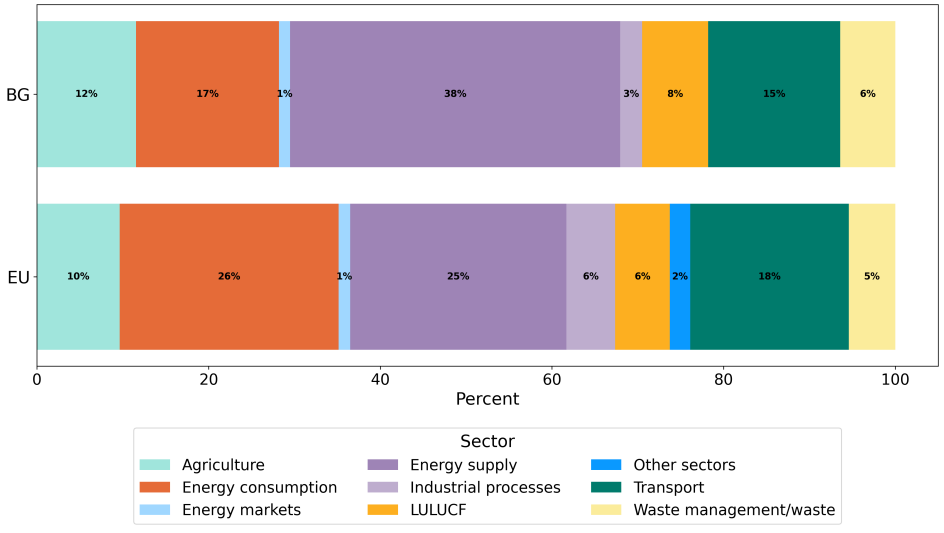
Information reported in 2025

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 Bulgaria in 2025, enabled by the national system, as laid out below.

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



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



Institutional and procedural robustness

Institutional arrangements

The main institutions that have a specific role and responsibilities in implementing measures related to the climate change and support the climate change activities of the MOEW, they are as follows:

- Ministry of Energy (ME);
- Sustainable Energy Development Agency (SEDA);
- Ministry of Agriculture, Food and Forestry (MAFF);
- Ministry of Finance (MF);
- Ministry of Regional Development and Public Works (MRDPW);
- Ministry of Transport, Information Technology and Communications (MTITC);
- Ministry of Education, Youth and Science (MES);
- Ministry of Internal Affairs (MFA), Road Control Department;
- National Statistical Institute (NSI);
- Executive Environment Agency (ExEA);
- Bulgarian Academy of Sciences etc.

The ExEA is responsible for the preparation of the GHG inventories. It carries out also the procedures on issuing GHG emission permits. ExEA is the National Administrator of the National Registry for issuance, possession, transfer and cancellation of the GHG emission allowances.

The Sustainable Energy Development Agency within ME organizes the implementation of projects and measures in accordance with the national long- and short-term energy efficiency programs; approves projects for energy efficiency and controls their implementation; participates in the preparation of legal regulations in the field of energy efficiency; proposes development and improvement of energy efficiency standards in order to achieve approximation to the EU norms and to encourage energy efficiency at the demand side.

Representatives of the public sector in the working groups are: Bulgarian Chamber of Commerce and branch organizations of the industrial branches that are covered by the ETS – Bulgarian Association of the Cement Industry, Bulgarian Branch Chamber of the Power Engineers, Branch Chamber of the Pulp and Paper Industry, Branch Chamber of the Glass Industry, Branch Chamber of the Iron and Steel Industry, Branch Chamber of the Chemical Industry, Bulgarian Union of the Ceramics.

The coordination and review of climate change activities is carried out within the Interinstitutional Commission on Climate Change set up by Order No 343/ 25.05.2017 on all issues and aspects of the management activities related to reducing greenhouse gas emissions across all sectors and the adaptation to climate change.

The commission is presided by the MOEW, while the Climate Change Policy Directorate at the Ministry act as a coordinating unit that keeps the whole information, monitors the performance of the commission and initiates actions in order to implement its functions. Depending on the requirements of the regulations governing the national policy on climate change and the corresponding needs of coordination between institutions and organizations, the commission may operate in different forms (sub-commissions), but remain a single body for interinstitutional coordination with a central executive unit – the Climate Change Policy Directorate at the MOEW. The mode of operation, the specifics of the structure and the regulations of this commission is defined in the Climate Change Mitigation Act. One of its functions is intended to be the coordination of the reporting on the implementation of the National Action Plan on Climate Change. The ICCC functions regarding the implementation of the Plan are defined by an Ordinance of the Minister of Environment and Water. Thus the efforts of all concerned Governmental Agencies, business and NGOs are united.

Bulgaria has established its relevant institutional, legal and procedural arrangements which are described below. The National System's structure is presented in Figure 1.

Procedural and administrative arrangements and timescales

Bulgaria's National System has established a series of procedural arrangements which ensure the timeliness, transparency, accuracy, consistency, comparability and completeness of information reported on projections. These include:

1. The establishment of basic data quality objectives by which data is prepared (by data suppliers and in compiling the projections).
2. A process (Interinstitutional Commission on Climate Change) to help co-ordinate the high level QA and prioritisation of improvements.
3. Clear timetable for preparation, review and delivery of projections.

The data quality objectives have been set by the MOEW with support from the ExEA and communicated to relevant data suppliers with a timetable for provision of QA/QC data.

- Transparency: All projection estimates are transparently described in such way, that an independent expert is able to recreate the estimates with a clear understanding of the data sources, assumptions and methods used;
- Accuracy: The data is as accurate as possible;
- Completeness: There are no sources or removals missing from the estimates;
- Consistency: Data is based on consistent data assumptions;
- Comparable: The reported data contains nomenclature that makes it comparable with other datasets by using the MMR reporting categories;
- Timeliness: Data should be provided within an adequate time period in order to enable checking and incorporation into the estimates.

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

The national experts involved in the National system for policies and measures and projections were taken part in the quality assessment (QA) process and give the final approval concerning the information in the reporting tools and final report to be submitted.

Description of the information collection process

The responsibility for overall collection and use of data are with the MOEW and the ExEA. The ExEA coordinates the agreements for data supply and data collection activities for the preparation of the GHG inventory. The sectoral experts (ExEA and other agencies) manage the collection of data, choice of methods, data checking and compilation of estimates that conform to the data quality objectives of the historical time-series. The ExEA ensures there are adequate resources for the collection and use of the data. The MOEW compiles the required outputs necessary for Bulgaria's projections reporting.

The institutional arrangements between MOEW and the main data providers for GHG inventory were signed in 2010:

- National Statistical Institute (RD №21-35/12.02.2010);
- Ministry of Agriculture and Food and its body Executive Forest Agency (№ 04-00-517/26.02.2010 and RD № 50-47/15.03.2010);
- Ministry of Economy, Energy and Tourism (14/06/2010);
- Ministry of Interior (MI) (08/06/2010).

The agreements ensure the support from these organisations regarding the choice of the activity

data, EFs and methods in the compilation of emission estimates and QA/QC for these estimates.
The information is collected on the annual basis by letters with request for provision of the necessary activity data to every of the information sources, including the response deadline.
All type of the necessary data, as well as the deadlines for submissions to ExEA is regulated by the above-mentioned official agreements as well as by the Regulation of the Council of Ministers 227/16.10.2017 (published in SG 84/2017) on the way and order of organization of the National Inventories of hazardous substances and greenhouse gases in the ambient air.
A monitoring and reporting mechanism requires the reporting on implementation every two years, and the drafting of regular and final reports. The first official report on the implementation of the Plan is scheduled for 2017 and the second one - for 2021. The regular and final reports on the plan are subject to review and adoption by an inter-ministerial working group set up for this purpose, with the official reports being submitted for approval to the Council of Ministers.
Method of reporting on the implementation of measures by sectors:

- The implementation of the measures by 2014/2016/2018/2020/2021 is to be reported by the responsible institutions by sectors/measures.
- By 1 February 2015/2017/2019/2021 MEW is to send letters to the responsible institutions under the Plan requesting information on the progress of implementation of the measures within their competence.
- The responsible institutions provide the required information by 31 March 2015/2017/2019/2021.
- By 30 April 2015/2017/2019/2021 MEW is to prepare a current report on the basis of the information received and to convene a meeting of the Interinstitutional Working Group where the respective report is to be approved or returned for revision.
- After adoption by the IWG the official reports in 2017 and 2021 are to be submitted to the Council of Ministers by 30 June for approval.
- In case the current reports need to be amended and/or supplemented they are processed within 15 calendar days.
- The IWG is to adopt the amendments/additions at an additional meeting or through email confirmation by the principal members of the Working group.
- The report intended for approval by the Council of Ministers should contain the following information:

- Brief information of NAPCC;
- Brief information about the procedure of reporting on the implementation of the measures;
- Brief assessment of the financial resources spent for implementation of the measures by sources;
- Brief analysis of the implementation of the measures themselves – whether there are problematic sectors where measures were not implemented or the performance is significantly below the expected level and the reasons for this, as well as whether there is overachievement of measures;
- Assessment whether changes in the process of reporting or update of the measures by sectors are needed with respect to various reports to the European Commission, new European requirements or expected new legislation;
- Brief information on the implementation of measures with indirect effect, including in the field of education and science and of administrative measures;
- Total quantity of emission reductions as a result of the implemented measures.

- The reports are prepared in a format predefined by the MEW which includes the following columns:

- Description of the measure;
- Responsible institution;
- Utilized financial resources by sources of funding;

- Indicator for implementation of the measure;
- Target value in 2014/2016/2018/2020;
- Reporting value in 2014/2016/2018/2020;
- Difference between target value and reporting value for each year.

The functions and the members of the existing Interministerial Working Group on the National Plan for Allocation of Greenhouse Gas Emission Allowances are to be extended in order to expand the existing coordination mechanism between the institutions concerned, including business organizations and NGOs, on issues related to the national climate change policy.

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

The methodologies and models used in the policy evaluation and in the projections are selected by the PAMs expert and the GHG projection experts. The methodologies and models used for the reporting in 2021 have not been used for reporting on Integral Energy and Climate Plan of Bulgaria to the EU.

The evaluation of the effects of policies and measures was performed on the basis of available data and information as follows:

Energy sector:

• National energy model derived from Bulgarian Energy System Tool - (B)EST prepared by 3EModelling;

Industrial processes:

• activity level of the sectors and sub-sectors – as sources of GHG emissions;
• products and/or materials used for the manufacturing process or from which GHG emissions result;
• share of the product/quantity of material used in the activity data of the sub-sector;
• growth or decrease factor of the activity data at the activity sub-sector level;
• GVA for industries.

Agriculture sector:

• Animal number data;
• Fertiliser input data;
• Crop area;
• GVA for agriculture.

LULUCF:

• National forest model derived from the inventory guidance;

Waste sector:

• 2006 IPCC Waste Guidelines;
• Recycled waste data;
• Waste generation data;
• Open burning and incineration of waste data;
• GDP growth rate data;
• Population data.

The methodology for GHG emission projections is based on historical data from the GHG inventories from 1988 to 2018 and on macroeconomic indicators.

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

The administrative and procedural arrangements for domestic implementation of the EU's

nationally determined contribution will be set when the new target of 55% will be implemented officially in the EU legislation.

Formality

Legal arrangements

The legal basis for the national system for the inventories is provided by the Regulation of the Council of Ministers 227/16.10.2017 (published in SG 84/2017) on the way and order of organization of the National Inventories of hazardous substances and greenhouse gases in the ambient air, which describes the roles and responsibilities of the relevant government agencies in this area. The Regulation ensures that enough capacity is available for reporting. The Regulation ensures the data collection of the reporting on projections as well.

The coordination and review of climate change policy and measures is carried out within the Interinstitutional Commission on Climate Change set up by Order No 343/ 25.05.2017 on all issues and aspects of the management activities related to reducing greenhouse gas emissions across all sectors and the adaptation to climate change.

The commission is presided by the MOEW, while the Climate Change Policy Directorate at the Ministry act as a coordinating unit that keeps the whole information, monitors the performance of the commission and initiates actions in order to implement its functions. Depending on the requirements of the regulations governing the national policy on climate change and the corresponding needs of coordination between institutions and organizations, the commission may operate in different forms (sub-commissions), but remain a single body for interinstitutional coordination with a central executive unit – the Climate Change Policy Directorate at the MOEW. The mode of operation, the specifics of the structure and the regulations of this commission is defined in the Climate Change Mitigation Act. One of its functions is intended to be the coordination of the reporting on the implementation of the National Action Plan on Climate Change. The ICCC functions regarding the implementation of the Plan are defined by an Ordinance of the Minister of Environment and Water. Thus the efforts of all concerned Governmental Agencies, business and NGOs are united.

Alignment with other reporting frameworks

GHG inventory reporting

The national inventory system ensures the data collection of the reporting on projections (please see the NIR 2021).

The ExEA is responsible for the preparation of the GHG inventories. The legal basis for the national system for the inventories is provided by the Regulation of the Council of Ministers 227/16.10.2017 (published in SG 84/2017) on the way and order of organization of the National Inventories of hazardous substances and greenhouse gases in the ambient air, which describes the roles and responsibilities of the relevant government agencies in this area.

When the national inventories of the historical GHG emissions have been prepared and reviewed, they are implemented in the projections model by different IPCC sectors and gases.

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

The GHG emission projections are taken from the projections in the integrated national energy and climate plan of Bulgaria. The (B)EST Model for projections for Bulgaria has been developed by E3-Modelling in the context of the project “NATIONAL ENERGY AND CLIMATE MODELLING AND

FORECASTING FOR BULGARIA" (SRSS/SC2019/023).
The (B)EST model, developed in the General Algebraic Modelling System (GAMS)1, is a fully-fledged energy demand and supply model, designed as a single-country tool for detailed energy system projections2, energy demand forecasting, power sector planning, as well as for impact assessment of national climate and energy policy decisions with a horizon up to 2050.
Methodologically, the model is actor- and market-oriented, in the sense that it represents individual actors' decisions in demand and supply of energy and the balancing of their decisions in simultaneous markets cleared by prices. As economic theory suggests, the simultaneous market clearing under perfect competition conditions leads to an overall optimum of economic welfare, which coincides with minimum cost of energy for the end-users. In this sense, the model explicitly projects energy forms' prices into the future as derived from cost minimization in the supply side and the price-elastic behaviors of demanders for energy, thus achieving market equilibrium.
The model includes key energy sector metrics at a detailed level: demand of energy by sector, various energy saving possibilities in terms of energy efficiency and heat recovery, energy and electricity use, technology capacities, power and steam generation, cogeneration, energy supply technology and energy form mix, fuel prices and system costs from an end-user perspective, investments by sector, CO2 emissions, as well as key energy and climate indicators.

Accountability and transparency

Quality control activities

QA/QC activities should be applied to the projections and projection parameters used in planning, preparing and reporting in order to provide clear assurances about the quality of the data being compiled, reported and used for analysis and policy decisions.
Bulgaria uses projections for national policy making, reporting to the Governance Regulation (EU) 1999/2018 as well as to underpin National Communications reporting to the UNFCCC
The MOEW implements quality assurance and quality control processes (QA/QC) throughout the phases of projection preparation. The QA/QC processes are designed such that the data quality objectives are met.
The MOEW includes QA/QC as a part of its plan to manage the production of projected estimates. The following steps are included:
• Data supplier QA/QC is monitored and evaluated by GHG inventory experts within the ExEA;
• Sectoral experts undertake QA/QC for their particular sector estimates prior to incorporation into the overall estimates.
• MOEW undertakes QA/QC of the final compilation.
• The MOEW facilitates a high-level review of the projections by the ICCC prior to submission.
The GHG inventory experts and PAMs experts at MOEW/ExEA work with data suppliers to assess and understand sensitivities in the data provided for the projections – the key input parameters on energy prices, population, GDP, GVA etc.

Public participation

Stakeholder engagement

The projections have been provided for the public consultation during the approval of the Integrated Energy and Climate Plan of Bulgaria. The report has been circulated at the official website for public consolations (www.strategy.bg).

Contact information for entities with overall responsibility for National

Systems

The Ministry of the Environment and Water (MOEW) is responsible for the climate change policy in Bulgaria, which is empowered to implement, coordinate, monitor and evaluate the policies and the measures in order to mitigate the environmental consequences of climate change at national level. The Climate Change Policy Directorate within the MOEW holds the functional competence for activities related to the development and the implementation of national policies and measures in the field of climate change prevention.

The Ministry of Environment and Water is designated as the national entity with the overall responsibility for the climate change policy evaluation and reporting on PaMs and projections of the anthropogenic GHG emissions under the European Commission and the UNFCCC.

In order to fulfil the reporting requirements, the MOEW has the following responsibilities:

• Ensuring official submission of the country reports on policies, measures and projections to the European Commission and the UNFCCC;

• Development and management of any institutional, legal and procedural arrangements for evaluating policy and for making projections of anthropogenic greenhouse gas emissions by sources and removals by sinks;

• Implementation of the quality assurance and quality control (QA/QC) activities and providing records and archiving;

• Compilation of the reporting tables and ensuring appropriate delivery of the projected estimates in a timely manner;

• Setting up data supply agreements with key data providers including handling of confidential data;

• Coordination and management of the Interinstitutional Commission on Climate Change (ICCC) on all issues and aspects of the management activities related to reducing greenhouse gas emissions across all sectors.

Apart from its active role in the whole process, the MOEW is also involved in QA/QC activities regarding submission of the National GHG Inventory for each year.

Contact information:.

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