



# THURINGIA

**POPULATION:** 2,143,145 (2018)

**GHG OBJECTIVES:** -60 TO -70% CO<sub>2</sub>E BY 2020;  
-80 TO -95% CO<sub>2</sub>E BY 2050

**SCOPES:** 1, 2

## A decision-making process backed by science

### Climate policy governance and integration

Thuringia's 2030 and 2050 greenhouse gas (GHG) emissions reduction goals are inscribed in the [ThürKlimaG](#), the Thuringian 2018 Law on Climate Protection and Adaptation to the Effects of Climate Change. This law is to be reviewed every 5 years based on indicators such as an evaluation of the state government's leadership, the number of municipalities with an energy and climate plan, and on the feasibility of objectives. The [Integrated Energy and Climate Protection Strategy](#) was also developed to help direct policies towards sectors with the greatest potential of GHG emissions reduction: energy supply, transport, and land use.

Keen on expert consultation, Thuringia created an [Advisory Council for Climate Protection and Climate Change Adaptation](#) which advises the Thuringian Ministry for the Environment, Energy and Nature Conservation. Legally inscribed in §14 of the ThürKlimaG, this council is composed of scientists – nominated for 5 years – from a wide array of specialised fields (hydrogeology, meteorology, biogeochemistry, bioenergy). The [Klima-Pavillon](#) is an exchange platform to discuss climate change-related issues (adaptation, nutrition, mobility, energy etc.) through the exhibitions, conferences and actions it hosts.

The state of Thuringia has also set up [Klima Invest](#) to subsidise climate measures in municipalities with starter packages up to €7,500 each, for the modernisation of street lighting, technical efficiency measures in water systems, energy management, renewable energies, and skills development.

### Climate policy tracking

Thuringia has consistently been reducing its emissions: in 2013, the state had reduced [its GHG emissions by 61%](#) (compared to 1990) and by 23% between 2000 and 2015 (fig. 1). These emission reductions are due, in great part, to two key sectors: residential and road transport, respectively [-1.21 and -1.27 MtCO<sub>2</sub>e/year from 2000 to 2015](#).

### Energy - 2nd highest share of renewable energy in gross power production in Germany

Although Thuringia only represents 1.4% of Germany's total power production, [56.9% of its total energy production](#) come from renewables (wind 22,4% and biomass 20%). As for primary energy consumption, renewable sources meet 24% of Thuringia's needs – the second highest share of all German states. Although [a third of electricity is imported](#), as Thuringia's energy generation is very limited because of its very few fossil fuel resources. But as a Under2 MoU signatory, Thuringia aims to [cover 100% of its energy demand](#) by its own renewable energy sources from 2040 onwards.

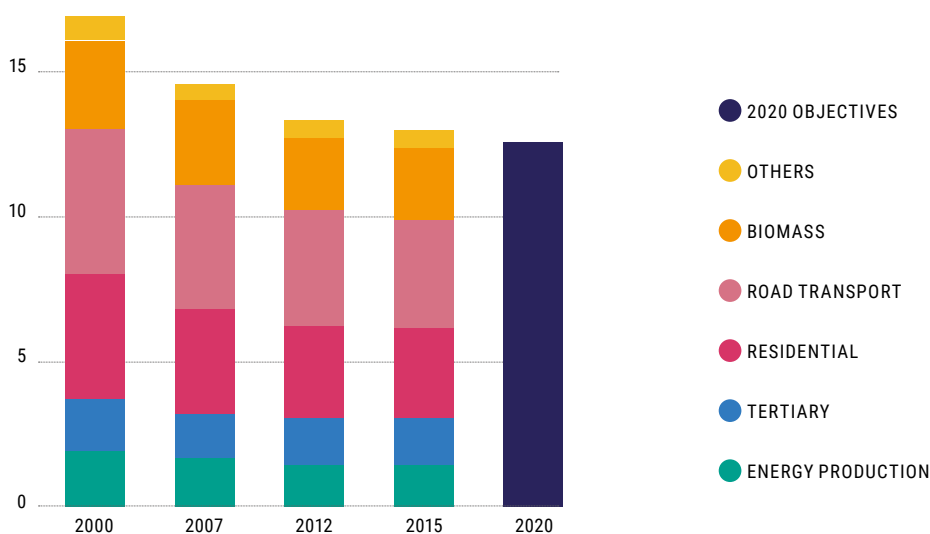
By Thuringian law, the region is granting [1% of its total surface area](#) to the use of wind energy. Over 30,000 households', companies' and municipalities' photovoltaic systems provide about [12% of the electricity generated in Thuringia](#). It is also the German state with the second largest number of energy cooperatives. The [Solar Energy Service Centre of ThEGA](#) (the state energy agency) provides independent advice on such installations, and gives access to its [Solar Calculator](#).

366 Thuringian energy companies have created 60,000 jobs, focusing their work on energy efficiency (26%), solar energy, and on bioenergy. ThEGA also grants yearly [Energy Efficiency Awards](#): in 2019, the top 3 winners of the categories "Climate Protection in Municipalities" and "Energy Efficiency in Companies" were collectively awarded €30,000. One of the state's priorities is to develop [a centre of excellence for solar power production technology](#).

Nonetheless, Thuringia has been the scene of state government [opposition](#) to the construction of the SuedLink power line, a major high-voltage transmission line, to bring wind power from the north based on the refusal to sacrifice natural and cultural landscapes. [Several right-leaning citizen initiatives](#) have also opposed the construction of new wind turbines, in a movement of opposition to the energy transition. As a response, the federal government assured that [grid expansion would be limited](#) to the "necessary level".

## THURINGIA - GHG EMISSIONS (MTCO<sub>2</sub>e/YEAR)

Source: [Thuringian GHG emissions \(2015\)](#)



### Mobility – Intermodality and electrification

Thuringia's climate law is accompanied by an [action plan](#) which defines seven measures to accomplish GHG emissions reduction targets in the transport sector. Prominent features of this plan include: transporting bikes on public transport to foster the intermodality of services; the electrification of the railway infrastructure through electric accumulators or hydrogen fuel cell; an optimisation of the frequency and coordination of public transport services; attractive and group-specific fares; [standardised access and billing systems for charging infrastructure](#); trial periods for electric bikes and cars by commuters.

Thuringia dedicates 20.2% of available ERDF funding from the 2017-2021 project "[Optimisation of Public Transport Policies for Green Mobility](#)" to the reduction of CO<sub>2</sub> emissions, which includes the promotion of low-carbon mobility. The project aims to address all mobility needs of residents and tourists through inter-modal mobility chains, by integrating rail travel and e-mobility (including car-sharing).

To reduce its reliance on extra-EU imports of vehicles' batteries, Thuringia recently signed an agreement with the Chinese company CATL (the world's largest producer of battery cells for e-cars) for the construction of a [new battery cell gigafactory](#) for European-made batteries.

### Land Use - Satellite monitoring for policy decisions

The [Thuringian Climate Agency](#) was founded in 2011 and provides regional climate information to a wide array of interested parties, ranging from administration offices to education specialists and policy makers. One of the projects led by the Agency is

[COKAP](#), making use of Copernicus and other satellite data for climate assessments used in the regional and urban planning of Thuringia. Satellite-based surface temperature measurements – made freely accessible by the Copernicus programme – provide 4 data sets that help aggregate indicators such as "heat load in cities" and "summer heat island effects". Another forthcoming indicator evaluating urban climate based on these same datasets will be made available for future urban planning throughout the region.

GIS data finds other environmental applications of remote sensing, as for instance in [afforestation monitoring](#) to evaluate Tree Cover Density and Forest Type so as to generate a map of land uses throughout Thuringia.

### ADAPTATION

[IMPAKT II](#) (follow-up of IMPAKT, launched in 2013) is an integrated programme detailing 47 actions in all fields affected by climate change that require adaptation measures. These [actions](#) focus on improving databases and models (by means of research and monitoring), elaborating activity-specific measures such as encouraging the agricultural use of adapted varieties, or developing indicators for monitoring.

ThEGA conducted between 2015 and 2018 the [KlimAdapTIT](#) project, entitled "Development of Climate Adaptation Strategies and Technologies in Thuringia" that helps municipalities to identify required measures, on the basis of a catalogue of measures is tailored for both urban and rural areas, and involve local and regional actors: workshops on health, conservation, construction and civil protection have led to the development of a number of these adaptation measures.