

## Schleswig-Holstein's Climate Protection Priorities 2017-2022

Appendix to the Under2 MOU

Kiel, November 2017

Schleswig-Holstein (SH) is the northernmost *Land* (state) of the Federal Republic of Germany. Some 2.8 million people live in this region between the North Sea and the Baltic Sea. With an area of 15,799 square kilometers and a population density of 178 residents per square kilometer, the state is comparatively small and not very densely populated. In 2014 the gross domestic product per inhabitant was around 28 thousand EUR. Per capita greenhouse gas emissions in Schleswig-Holstein were 8.8 t in 2013.

Because of its geographic situation and the steadily expanding use of renewable energy sources, SH is increasingly becoming an “energy turntable” between Germany and the Scandinavian countries and an important hub of the energy transition. But this special role also presents a challenge which the Land government has resolved to meet, for Schleswig-Holstein is already benefiting in many ways from the increased use of renewable energy sources. After all, they constitute the basis for ensuring a resource-conserving and cost-effective contribution to the energy supply of the future.

Within the government of Schleswig-Holstein the Ministry of Energy, Agriculture, the Environment, Nature and Digitalisation (MELUND) is responsible for energy, climate and nuclear policy.

### **The land has ambitious targets of climate and energy policy:**

- Continuing the objectives formulated in earlier reports and programs of the Land government, the basic line of the Land government's policy is to achieve the European and national targets for GHG reduction in Schleswig-Holstein too. This implies a reduction of Greenhouse gases by at least 40% compared to 1990 levels and by 80-95% compared to 1990 levels. The Land government is aiming for the top edge of this range, i.e. a 95 % reduction in greenhouse gas emissions by 2050.
- Expansion of electricity generation from renewable energies to at least 37 TWh until 2025. Schleswig-Holstein will then produce more than two times as much electricity from renewable energies by 2025 as it consumes.
- Share of heat from renewable energy sources at final energy consumption heat of 22%

- The targets became more binding by the Energiewende and Climate Change Act, that came into force in march 2017.

### **Main fields of action and measures:**

To achieve these aims, a broad package of measures is and will be implemented to reduce energy consumption, to increase energy efficiency, for the expansion of renewable energies and for climate protection in the agriculture and forestry sectors.

- The development of **renewable energy** forms is the key to a successful energy transition and therefore a very crucial instrument for protection of the climate. SH will take advantage of its location economies for the energy transition and hence especially develop wind energy.

By the end of 2016, 2,900 wind onshore turbines with a rated output of 6,015 megawatts had been installed in Schleswig-Holstein. The wind power industry is the main locomotive of the energy transition in the region and offers considerable further opportunities for the future. Installed capacity wind offshore with grid connection in Schleswig-Holstein is 1,700 megawatts.

Electricity from renewables covered 122% of Schleswig-Holstein's gross electricity consumption by 2016.

The government aims at 10,000 gigawatts installed capacity of wind energy onshore in Schleswig-Holstein until 2025 und supports, that national targets for installed capacity of wind energy offshore are increased to at least 25 GW in 2030. Solar energy and biomass for flexibility options and local heating plant will also be developed.

- Development of **electricity grids** (Schleswig-Holstein, Germany, international). Additional transmission lines are being planned and realised by net operators to contribute to feed electricity generated by renewables in Schleswig-Holstein into the grid. Also a seecable is under construction and is planned to start operation by the year 2020. NordLink will connect Norwegian and German electricity markets, supports European „Energiewende“ and connects pump storage in Norway and wind onshore electricity in the North of Germany
- Innovations in **sector coupling** (“Power to X”) flexibility and storage options will also be supported. The aim is the flexible and efficient use of renewable energy in the heating, mobility and industrial sector). One major project is [“Norddeutsche Energiewende 4.0”](#). This major cross-regional project is intended to show how the entire region of Hamburg und Schleswig-Holstein, with 4.5 million inhabitants, can be supplied with 100% reliable, renewable energy by the end of 2035.
- For supporting energy transition in the **heating sector** networking eg for district heating projects and other measures for municipalities are enlarged.

The main target is to achieve a largely carbon-free heat supply by the year 2050. One important component of this is the development of line-supplied heating in conjunction

with large, seasonal heat storage facilities in order to permit a cost-efficient increase in the proportion of renewable energy in the heating sector. The neighborhood approach, meaning the interplay of energy-focused building renovation and an efficient heat supply, is directed towards achieving the most cost-effective method of carbon reduction. A start has been made with the **Climate Pact**, a voluntary agreement between various organizations on better climate protection in the housing sector.

The Energy and Climate Protection Initiative was instituted by the government of Schleswig-Holstein and will support implementation of the energy transition on the municipal level, especially in respect of energy conservation, energy efficiency and utilization of renewable energy sources. The Initiative started in November 2014. The consultancy initiative focuses on climate protection schemes and municipal heating planning and offers local authorities assistance of many kinds, for instance free initial advice and brochures on the energy transition in the heating sector.

- Measures and R&D for **energy saving and energy efficiency** are supported, e.g. through the providence of information and consultancy for energy consumers and programs in the educational sector.
- The **transport sector** will contribute to a reduction of GHG-emissions by extending electric mobility

The Land government has adopted a regional strategy for electric mobility. This is directed first and foremost towards promoting innovative technologies and supporting concrete demonstration plans and pilot projects.

The government's objective is to speed up the electrification of transport and also to utilize existing potential to involve companies, universities and other institutions in the region more closely in the value added chains connected with electric mobility. In this way it is hoped to safeguard jobs and create new ones, and to help make transport more environment-friendly and less damaging to the climate. The Land government is concentrating on the following strategic approaches:

- Promotion of innovative technical projects for new electric mobility applications in the context of the Land government's technology-oriented funding programs;
- Support for demonstration plans and innovative pilot projects in the field of electric mobility, e.g. with money from the European Agricultural and Rural Development Fund (EAFRD), in order to implement the integrated development strategies of the "LAG AktivRegionen" program.
- Networking of regional players and harmonization of activities with neighboring states and the "National Electric Mobility Platform" by continuing the coordination office for electric mobility at the Business Development and Technology Transfer Corporation of Schleswig-Holstein – WTSH.

For commercial road transport the demonstration project "E-Highway" will be realized.

- The power and heat supply of **land-owned buildings is targeted to be CO<sub>2</sub>-neutral** until 2050 through systematic planning and implementation of (energetic) restoration and new construction.
- The government aims at a share of circa 40% budget resources for climate protection and energy in european structural funds (ELER, EFRE)
- Schleswig-Holstein will continue phasing out of nuclear energy by deconstructing existing nuclear power plants.
- The land strictly rejects fracking and CCS.

The government publishes a report on targets and indicators for climate change and energy policy every year and a larger edition including also strategies and measures two times per legislative period (Energiewende- und Klimaschutzberichte 2013, 2016, again planned für 2018)

**More Information (only available in German language):**

Climate Policy: <http://www.schleswig-holstein.de/DE/Themen/K/klimaschutz.html>

Energiewende- und Klimaschutzgesetz

<http://www.schleswig-holstein.de/DE/Fachinhalte/K/klimaschutz/energiewendeKlimaschutzgesetz.html>

Energy policy: <http://www.energiewende.schleswig-holstein.de>

Renewable energies <http://www.schleswig-holstein.de/DE/Themen/E/erneuerbareenergien.html>

Wind energy: <http://www.schleswig-holstein.de/DE/Themen/W/windenergie.html>

Electricity grid expansion: <http://www.schleswig-holstein.de/DE/Themen/N/netzausbau.html>

Electric mobility:

[http://www.schleswig-holstein.de/Energie/DE/Mobilitaet/alternatieve\\_Antriebe\\_node.html](http://www.schleswig-holstein.de/Energie/DE/Mobilitaet/alternatieve_Antriebe_node.html)

Energy transition in the heating sector: [http://www.schleswig-holstein.de/DE/Schwerpunkte/Energiewende/Waerme/waerme\\_node.html](http://www.schleswig-holstein.de/DE/Schwerpunkte/Energiewende/Waerme/waerme_node.html)