APPENDIX

BADEN-WÜRTTEMBERG

The State of Baden-Württemberg, located in South West Germany, is one of the most prosperous regions in Europe. Baden-Württemberg is a pioneer in Germany and the EU. Though the state is embedded in the national German and the European climate policy, Baden-Württemberg undertakes its own contributions to achieve the political goal of acting as a pacemaker, particularly in Germany and the EU. For example, Baden-Württemberg, along with North Rhine-Westphalia, passed its own 'Climate Protection Act' as the first state in Germany. On this basis and with a broad public participation process an 'Integrated Energy and Climate Protection Action Plan (IEKK)' was developed. The IEKK includes over 100 measures to reduce greenhouse gas emissions in line with the German energy transition "Energiewende" and the decision to phase out nuclear energy production.

In the IEKK reduction targets are also defined for key sectors such as power generation, industry and the transport sector. The necessary basis was derived from an energy scenario for Baden-Württemberg; it shows possible paths to reach the GHG emission targets. The future energy needs were identified in different sectors and the level of potential coverage by renewable energy sources was identified. The greenhouse gas (GHG) emissions are split between three main sectors: electricity and heat production with around 23%, transport with slightly above 28% and energy consumers in household and small business with about 23%. About a third of the greenhouse gas emissions of Baden-Württemberg are covered by the EU emission trading system (ETS). The first ETS worldwide was installed in a pilot phase 2005–2007. In 2021 the fourth phase will start with an annual reduction of the emission-allowances in the EU climbing from 1,74% to 2,2%.

Baden-Württemberg aims to reduce greenhouse gas emissions by 2020 compared to 1990 by at least 25% and by 2050 by 90%. European heads of state have decided a greenhouse emissions reduction target for the year 2030 of 40% compared to 1990 to which a reasonable contribution of Baden-Württemberg is intended. Furthermore, the EU has decided to increase the share of renewable energy to 27% of primary energy in 2030 and to reduce energy consumption by 27%.

<u>The starting position:</u>

Population: 10.8 million (2013)

GDP: 37,472 EUR per capita (2013)

Country: Germany

GHG emissions (year): 76 million tons (2012)

<u>Specific Actions and Commitments:</u>

I. Greenhouse Gas Emissions

By 2020 Baden-Württemberg will reduce GHG emissions by 25% and by 2050 by 90% compared to 1990. The targets are laid down in the "Climate Protection Act Baden-Württemberg" which was enacted by the state parliament on 17th of July 2013. Against

this background an 'Integrated Energy and Climate Protection Action Plan (IEKK)' was developed. A periodical monitoring program will be established for the further development of the IEKK.

With regards to the EU 2030-targets of 40% THG reduction a reasonable contribution of Baden-Württemberg is intended.

II. Renewable Energy:

The amount of renewable energies in final energy consumption by 2020 will be increased up to 25%. The Baden-Württemberg objective for 2030 will be updated depending on the implementation of the EU 2030 target of 27%. Since 2011 Baden-Württemberg has improved the legal planning conditions for wind farms. In 2013 renewable energy covered about 23% of electric power production. In Germany the national Renewable Energy Law (EEG) promotes the generation of renewable energy.

At the national level there is a Statute on the Use of Renewable Heat Energy for new buildings. Additionally there are further funds in Baden-Württemberg for existing buildings. For example, in the case of a change of the radiator the owner must use regenerative heating energies or alternatively the energy efficiency of the house can be improved by better insulation of the roof or the front of the house.

III. Energy Efficiency:

By 2020 the final energy demand compared to 2010 will decrease by 16%. The EU 2030 target aims to increase the energy efficiency by 27%. Baden-Württemberg promotes energy efficiency through a wide range of measures, including a widespread network of regional energy agencies, which provide advice for households and businesses, campaigns for energetically retrofitting residential buildings, grant schemes on the latter for households, and grant schemes for energy efficiency in small and medium sized businesses. Baden-Württemberg emphasizes the combined generation of power and heat, ideally by use of renewable energies. Municipalities and electricity producers are encouraged to develop further local heat networks.

IV. Sustainable Mobility:

Baden-Württemberg has become a pioneering region for sustainable mobility. In the 'transport and mobility' sector Baden-Württemberg aims to reducing GHG emissions by 20 percent by 2020, compared to 1990. By 2050 the GHG emissions in this sector should be reduced by 70%. Therefore several actions are to be taken, like strengthening bicycle traffic, public transport and electro-mobility. To ensure constant progress towards these objectives numerous sub-goals have been agreed upon. For example, Baden-Württemberg intends to increase the share of bicycle traffic from 8% in 2008 to 16% by 2020 and increase the number of electric vehicles to 200.000 until 2020.

V. Role model of the state:

The state administration of Baden-Württemberg is pursuing the objective of near climate neutrally by 2040. Therefore Baden-Württemberg is pursuing a comprehensive retrofitting of its state-owned buildings in order to reduce its own energy consumption and is increasing the number of e-mobile vehicles in its car pools. Part of the scheme is to raise the share of renewable energies for state purposes.

VI. Emission Trading:

Baden-Württemberg industries are taking part in the EU emission trading system (ETS). Baden-Württemberg advocates for ensuring the ETS is an efficient instrument for reducing greenhouse gas emissions and climate protection.