Masterplan - 100% climate protection for the Weserbergland region

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Masterplan concept

February 2018

1. Preliminary remarks on the Master Plan for 100% Climate Action

The three rural districts of Hameln-Pyrmont, Holzminden and Schaumburg are among the twenty-two model administrative entities across Germany selected during the first call for proposals in 2016, which now intend to develop and implement a so-called *Master Plan for 100% Climate Action*. Master plan entities commit to achieving the following targets by 2050:

- reduce greenhouse gas (GHG) emissions by 95% compared with 1990 levels
- reduce final energy consumption by 50%.

The guideline for supporting the master plan entities is an excellence initiative for municipal climate action that shows on an exemplary basis how the path to 100% climate action might look.

The joint proposal submitted by the districts in August 2015 was approved. Once the selection process was complete, the project was launched on 1 July 2016. The project *Master Plan for 100 % Climate Action in the Weserbergland Region* is scheduled to run for four year to 30 June 2020, and is divided into two phases: development of the master plan during the first year of support, and implementation during years two to four. A prerequisite for support during the implementation phase is approval of the master plan by the district councils. Pursuant to the guideline, funding will be provided for four master plan manager positions in the three districts, for expenditure on public awareness-raising work and for the involvement of civil society.

The phase of designing the master plan has been completed. To facilitate further discussion by the responsible bodies, the results are now being presented in this summary, a separate list of measures and a presentation of results.

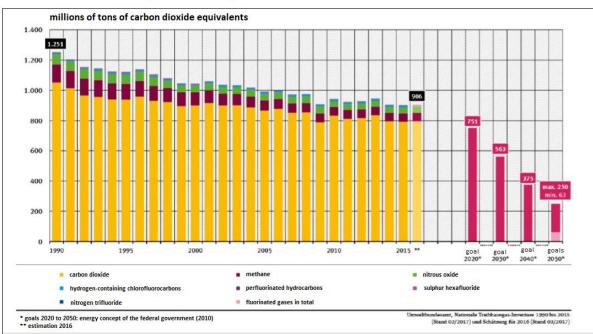
The Master Plan for 100% Climate Action in the Weserbergland Region builds on the existing climate action strategies of the three districts, and represents the further development and optimisation of these plans.

The present master plan is a strategy paper for implementing climate action activities over the next few years. All measures to be derived from it that require additional funding will be submitted to the relevant bodies separately for approval.

2. Energy policy frameworks

Germany defined its energy and climate action targets in October 2010 in its *Energy policy* for an environmentally sound, reliable and affordable energy supply. This policy describes the pathway into the 'Age of renewable energy'. Key elements are a reduction of greenhouse gas (GHG) emissions by 80 to 90 per cent by 2050, an increase in renewable energy use to 60 per cent of final energy consumption, and a reduction of primary energy use by 50 per cent. In November 2016 Germany's Federal Cabinet approved the *Climate Action Plan 2050*, which further elaborates these targets. Germany is thus meeting its international obligations arising from the Paris Agreement of December 2015 and the Climate & Energy Package agreed by the European Union in 2014.

The graphic below shows the development of THG-reduction since 1990 and the targets up to 2050.



GHG emissions in Germany since 1990 in gases

Source: Umweltbundesamt, 2017

Since 2008, Germany's National Climate Initiative (www.klimaschutz.de/en/) has been supporting districts and municipalities in developing and implementing climate action master plans. Under the so-called Master Plan Guideline, twenty-two model municipalities across Germany are receiving funding from 2016 to 2020. These municipalities will provide examples of strategies and implementation steps that can form a pathway to climate neutrality.

3. Climate action in the Weserbergland region

In the three districts the master plan process builds on existing, established climate-related activities and proven network structures. All three rural districts already possess integrated climate action strategies that involve their municipalities. The town of Hameln has also produced a strategy of its own.

Based on these strategies, together with the climate action agency *Klimaschutzagentur Weserbergland gGmbH* and the Climate Action Office in Schaumburg, implementation structures were established and dedicated work for climate action was supported in the districts.

The master plan will further develop and optimise the existing climate action strategies. This will involve reviewing and supplementing the lists of activities for climate action management, updating the energy and carbon footprints, and formulating joint climate action targets in accordance with the master plan guideline. It will also include establishing joint implementation structures in order to harness synergies and more effectively tackle the extensive range of climate action issues. The three districts will use the master plan process strategically for the following **objectives**

- Develop Weserbergland as a model region for climate action
- Further develop energy infrastructure and residential areas in towns and villages
- Foster the development of small and medium-size enterprises in the climate action sector
- Involve civil society and enable participation
- Promote investment in pilot climate action projects

4. Structure of the project and stakeholder participation

In August 2015 the three districts of Hameln-Pyrmont, Holzminden and Schaumburg responded to the call for proposals published as part of Germany's National Climate Initiative.

Having successfully passed through the two-stage selection procedure, the Weserbergland region is now one of the Germany-wide master plan entities. The project is scheduled to run for four years, from 1 July 2016 to 30 June 2020. During year one, the master plan was to be drawn up and submitted to the district councils for the passage of resolutions. Thereafter, funding will be provided for three further years for implementation of the first measures. The draft master plan, the list of measures, the final presentation and the executive summary were submitted to the administrations of the three districts at the end of June 2017 for further discussion and deliberation. The adoption of the resolutions by the district councils is scheduled for September 2017. A finalised master plan and resolutions are preconditions for continued funding of the implementation phase. The master plan was drawn up in accordance with the instructions contained in the guideline. The overview below shows the individual work packages.

development of a climate protection scenario for the master plan region determination and revision and further explanation of the potential development of the for GHG reduction catalogue of measures integration of and exchange preparation of the energy with relevant stakeholder and CO2 balance sheet Concept groups development of common structures for controlling exchange and cooperation and implementing the with scientific support project accompanying public relations work

Overview of work packages for creating the master plan concept

Source: Target GmbH, 2017

The process of drafting the master plan included participation by regional institutions and committed individuals from the three districts. The key elements of this process were as follows.

The establishment of a master plan advisory board chaired by the district chief executives. The members of the board were appointed to represent policy-makers, the municipalities, energy utilities, trades, the responsible administrators from the districts, as well as actors from the scientific and research community, and from the housing sector. The board supports institutionalisation of the master plan process and the development of its content. To date the board has met twice, in December 2016 and April 2017.

The **steering committee** comprises the responsible departments from the three districts, the climate action managers, the master plan coordinator and the contractors (the *Klimaschutzagentur* and *target GmbH*). The steering committee steered the process of drawing up the master plan during phase one. During the design phase the steering committee met eight times

Involving the municipalities is a key objective of the master plan. As well as representation on the advisory board, the master plan was also presented in all 26 municipalities of the three districts at so-called *talks with the mayor*, in order to include ideas and needs from the municipalities. Involving the municipalities will remain a key element of the master plan during the implementation phase.

The **themed workshops** provided a platform for discussing innovative activities to be developed in greater depth during the implementation phase. Workshops were held on the following topics: climate action and education, climate action in agriculture, low-carbon mobility, and model projects for climate-neutral energy supply.

A new form of participation is the so-called **tandem of generations.** A tandem comprises one person aged between 15 and 25, and one person over 65. The tandems of generations draw up visions for the future of the Weserbergland energy region, which are incorporated into the draft master plan. The tandems are not tied to any institutions or financial interests. They are able to tackle issues creatively and openly, inject vitality into the process and contribute fresh approaches and ways of thinking,

A **methodology workshop** on drawing up the climate action scenario was held together with the Institute for Energy and Environmental Research (IFEU) from Heidelberg. The IFEU is providing scientific support to the master plan municipalities. When preparing their master plan the municipalities were required to follow the instructions contained in the Manual *on preparing the master plan*. The workshop set out to discuss how to go about this.

To **network the master plan municipalities** and facilitate discussion with the Federal Environment Ministry (BMUB) and the funding body, a total of five cross-regional workshops were held. Participants discussed issues concerning all aspects of preparing the master plan, and funding under the National Climate Initiative. A further discussion also took place with the master plan municipalities of Osnabrück and Lippe districts.

The draft master plan will be presented to the relevant committees and decision-making bodies between June and October 2017. The dates will be determined by the districts themselves. Approval of the draft by the district councils is scheduled for September 2017. As well as stakeholder participation, public awareness-raising measures also took place during the design phase. To access the presentation on the master plan, click here www.masterplan-weserbergland.de. The press were also involved, and the master plan project was presented at numerous events and meetings.

5. Preparing the energy and carbon footprint

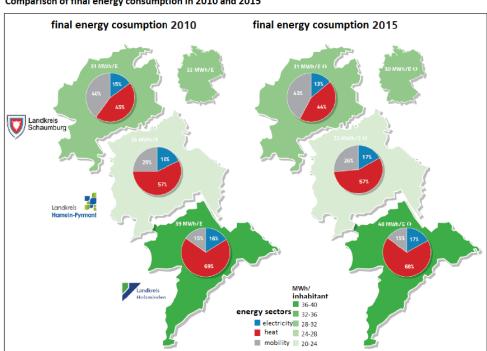
To serve as a basis for calculating the potential for mitigating GHG emissions and drawing up the climate action scenario for the master plan region, an energy and carbon footprint was prepared (see Annex 3). The footprint was prepared on the basis of the recommendations contained in the *Methodology for GHG footprinting for the energy and transport sectors in Germany* (IFEU Institute, Heidelberg, June 2016). The footprinting software ECOREGION was used. The data were obtained from the local grid operators, who supplied data on electricity and gas consumption as well as green electricity fed into the grid. Off-grid consumption and energy consumption in the mobility sector were extrapolated on the basis of local data and mean values for Germany as a whole.

The energy and carbon footprint was produced both on an aggregate basis for the master plan region as a whole, as well as for each of the three districts and each of the 26 municipalities that belong to them. This means that all these entities have a current energy and carbon footprint (see Annex 2).

5.1 Final energy consumption

Final energy consumption in the master plan region in 2015 was 11,193 GWh. This is equivalent to approximately 0.46 per cent of the final energy consumption in Germany and 4.6 per cent of consumption in Lower Saxony. Per head of population 30 MWh were consumed. Average consumption in Lower Saxony was 31 MWh, and the average figure for Germany was 30 MWh.

The graphic below shows the final energy consumption in relation to the figures from 2010 in all three districts, and the distribution of consumption across the electricity, heat and mobility sectors.



Comparison of final energy consumption in 2010 and 2015

Over 80 per cent of the energy requirement is covered using fossil fuels. Sixteen per cent is accounted for by electricity, 30 per cent by fuels, 33 per cent by gas and 12 per cent by heating oil. The remaining sources (wood, solar, coal and district heating) account for a combined total of 11 per cent.

electricity

natural gas

heating oil

conventional district and local heat
cole

biomass

solar and environmental heat
petrol

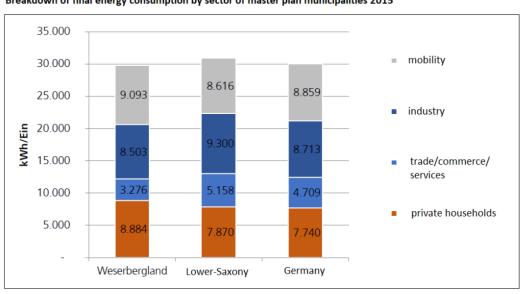
diesel

biofuels

Shares of energy sources in final energy consumption of the master plan municipalities 2015

Source target GmbH, 2017

The graphic below shows the specific energy requirement per head of population by sector. Compared to Lower Saxony and the German average, consumption in the industrial and tertiary sector is significantly lower, whereas private households and the mobility sector display above average figures, which is usually the case in rural areas.

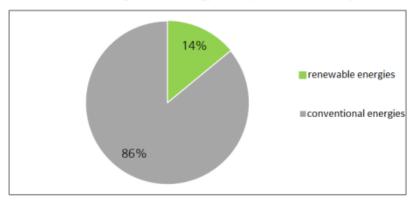


Breakdown of final energy consumption by sector of master plan municipalities 2015

5.2 Development status of renewables

The share of the total final energy consumption accounted for by renewables in the master plan region in 2015 was already 14 per cent (1,571 GWh); the average for Germany was 15 per cent (BMWi 2016). Per head of population in the region 4,176 kWh of renewable energy is used, the German average being 4,576 kWh per head.

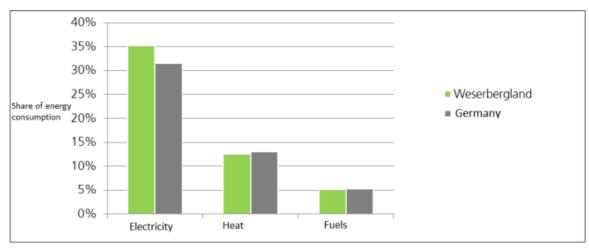
Share of renewable energies in final energy consumption and in electricity, heat and fuel



Source: target GmbH, 2017

Discrepancies exist with regard to the energy applications, as illustrated in the graphic below. The share of renewables in the mobility sector is not yet significant. However, given the expansion of electromobility a paradigm shift is likely to occur here.

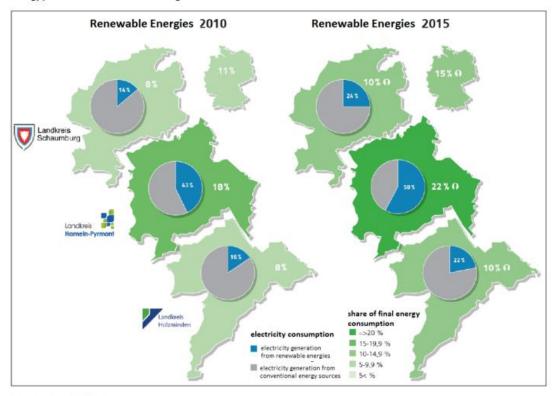
Share of renewables in electricity, heat and fuel consumption



Source: target GmbH, 2017

The graphic below shows the production of RE compared to figures for the year 2010 in the three districts, and the percentage of electricity consumed that was generated from renewable sources. The increase over the last five years is strikingly obvious, as are differences in the development status between the districts.

Energy production from renewable energies 2010 and 2015

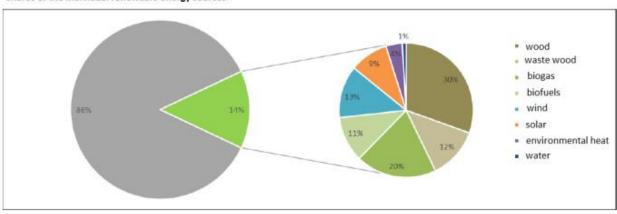


Source: target GmbH, 2017

Amongst the different types of RE biomass dominates with a figure of almost 75 per (62 per cent electricity and heat, and 11 per cent in the mobility sector), with wind energy far behind in second place at 13 per cent and solar at 9 per cent. At the same time, wind and solar power have grown continually over the last few years, while bioenergy use appears to be largely exhausted.

Hydropower and so-called environmental heat (geothermal and air source heat pumps) are currently of negligible significance. In the future, however, environmental heat is likely to play an increasingly important role in heating buildings.

Shares of the individual renewable energy sources

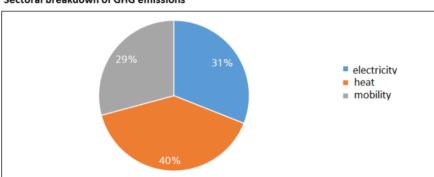


5.3 Greenhouse gas emissions

The energy and carbon footprint includes the energy-related GHG emissions caused by electricity and heat generation, as well as mobility. The GHG emissions from agriculture are not included in the footprint. In 2015, the energy-related CO₂ emissions in the master plan region were

3.6 m tons of CO₂-eq. Per head of population 9.6 tons of GHG emissions were produced. The average for the whole of Germany was 9.2 tons per head of population.

Forty per cent of the final energy consumption in 2015 was accounted for by heat supply, and 29 per cent by mobility. Electricity use accounts for 31 per cent of greenhouse gas emissions. The greater weight of electricity as a source of greenhouse gas emissions relative to its percentage share of energy consumption results from its higher emission factor compared to the fuels used for heat and mobility.

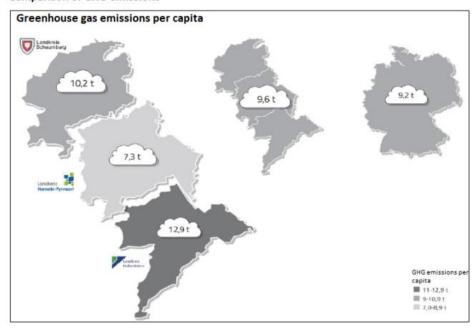


Sectoral breakdown of GHG emissions

Source: target GmbH, 2017

The graphic below shows the differences in per capita emissions between the three districts, as well as average values for Germany as a whole. Per capita final energy consumption in the district of Holzminden is by far the highest, due to its high proportion of industrial consumers.

Comparison of GHG emissions



6. Milestones in climate neutrality in the master plan region

The climate action targets for master plan municipalities are defined as follows:

- 95 % reduction in GHG emissions (compared to 1990), and
- 50 % reduction in final energy consumption by 2050 (The baseline year for this scenario is 2010, as data for this year are available for all three districts.)

Guided by the vision of a sustainable energy and climate action policy for Lower Saxony, the Weserbergland region is pursuing the goal of switching its energy supply to renewable sources almost completely by 2050.

To this end four steps have be taken. The results of these steps are shown below. See Annex 4 for further details on the methodology and rationale of the detailed analyses.

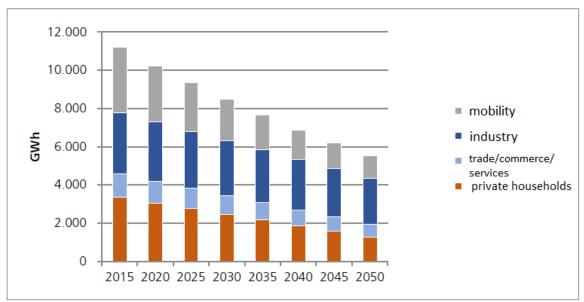
6.1 Step 1 – Assessing the potential for saving energy

The first pillar of the climate action strategy is the systematic harnessing of potential for energy efficiency and energy saving in the private households sector, industry, the tertiary sector and the mobility sector. Figures were recorded on current energy consumption in each sector in the energy footprint. For each individual sector, potential savings for the three districts were calculated on the basis of Germany-wide reference scenarios and the methodological guidelines for preparing the master plan. The rationale is explained in the long version of the master plan.

Within the industrial and tertiary sector, it is particularly striking that 43 percent of energy consumption is accounted for by 11 hot spots. These involve particularly energy-intensive operations (glass, plaster and fragrances), seven of which are located in the district of Holzminden alone.

The conclusion is that by 2050, the energy requirement can be reduced by 50 per cent through energy sufficiency and efficiency measures, as prescribed in the master plan targets. The greatest potential for energy-saving is in the private households (35 per cent) and mobility (40 per cent) sectors. Twenty-five per cent of the potential for saving energy is in the industrial and tertiary sector. The graphic below summarises the potential savings in the four sectors.

Energy efficiency and savings potential for final energy requirements by sector



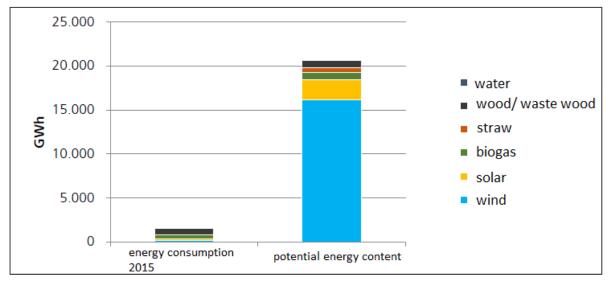
Source: target GmbH, 2017 In the household and economic sectors (industry and trade/commerce/services), the efficiency potential of heat supply (e. g. due to the use of heat pumps) is not shown in the figure.

6.2 Step 2 – Assessing the potential for developing renewables

As with the energy-saving potential, the potential for developing renewable energy (RE) was ascertained. The potential was calculated on the basis of the area data on the districts, supplied in the form of geodata. The districts also made use of the findings of the study *Scenarios for energy supply in Lower Saxony in 2050*, and the methodological guidance provided in the manual on basic methodology when preparing the master plan. A calculation was performed for each type of RE – wind power, solar power (electricity and heat), and the various bioenergy fuels. The potential for hydropower is considered to be exhausted. Similarly, deep geothermal energy was not included because this form of RE is still at the research phase.

The graphic below shows the theoretical potential for developing renewables in the master plan region, which amounts to fourteen times the potential being utilised today. Wind power has the greatest potential for development, followed by photovoltaics. Here we must add that the potential for wind is a maximum theoretical value, based on all the land in the Weserbergland region without restriction. The potential for bioenergy (excluding the potential for straw) is already largely exhausted today.

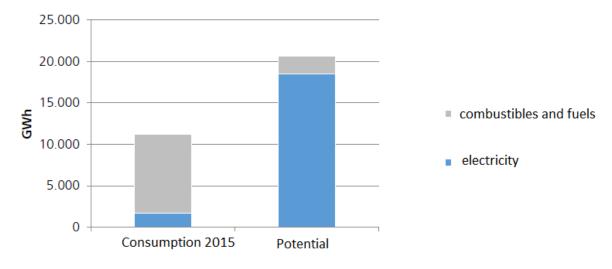
RE's theoretical expansion potential in the Master Plan region



Source: target GmbH, 2017

While there is a surplus of renewable energy for electricity, the potential for renewable energy from fuels is limited. This demonstrates the need to electrify energy supply in the heat and mobility sectors, without which the energy transition cannot be achieved.

Ratio of final energy consumption 2015 to the potential for expansion of renewables

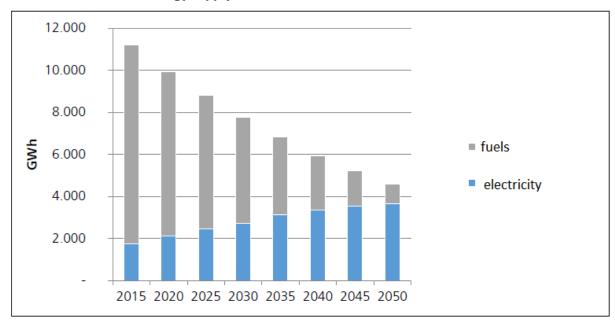


Source: target GmbH, 2017

6.3 Step 3 – Meeting the energy requirement by source

An energy supply obtained 100% from renewables is key to reducing GHG emissions by 95 per cent. This in turn can only be achieved by interlinking sectors. This means that green electricity must replace power obtained from fossil fuels in the heat generation and mobility sectors. The electrification of energy supply (using green electricity) will be increased by generating space heating and air conditioning using electric heat pumps, by switching to emobility and by covering part of the process heat requirement using electric applications. The remaining fuel requirement can then be met through bioenergy.

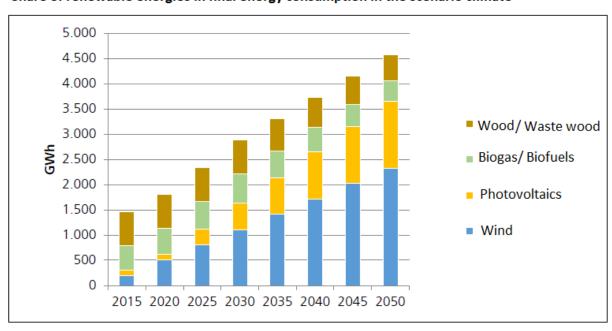
Electrification of the energy supply



Source: target GmbH, 2017

The graphic above shows the increase in electricity as a share of the energy requirement as energy-saving potential is fully utilised, which is a precondition for climate neutrality. The electricity requirement forecast for 2050 can be covered from renewable sources in the region. Wind power (approx. 65% of electricity consumption in 2050) and photovoltaic power (approx. 35% of electricity consumption in 2050) are the two pillars of electricity generation. The remaining fuel requirement could then be covered using biofuels.

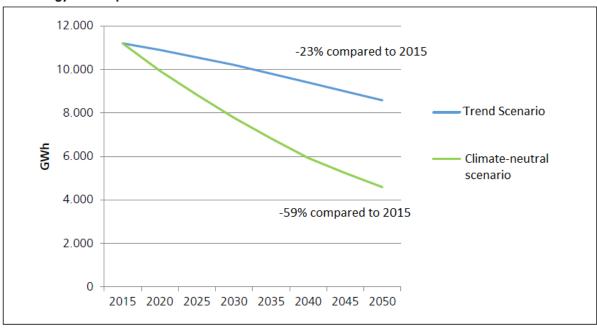
Share of renewable energies in final energy consumption in the scenario climate



6.4 Step 4 - Climate neutrality scenario for the master plan region

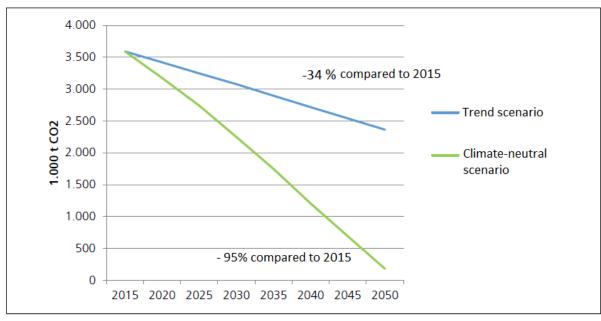
Based on these assessments the following scenario¹ can be drawn up for the trend in GHG emissions and the reduction of final energy consumption in the master plan region of Weserbergland. The climate neutrality scenario is contrasted with a scenario in which today's trends continue.

End Energy Consumption



Source: Target GmbH, 2017

Greenhouse Gas Emissions



Source: target GmbH, 2017

¹ A scenario is an analytical and forecasting tool that allows us to describe future targets and the trends that represent the pathway to achieving them.

7. List of measures to implement the master plan

The list of recommended measures is the key element of the master plan. It will remain the centrepiece throughout the entire implementation phase of the master plan, which runs from October 2017 to August 2020. After that, the project funding comes to an end. The list contains just under ninety measures that are assigned to the six thematic areas of activity of the master plan. A dedicated area of activity for organisational and implementation structures was also created in order to cluster measures for the continuous mainstreaming of climate action, and monitoring and control of the climate action activities. Each individual measure is described in detail in a fact sheet. All the measures included can

Each individual measure is described in detail in a fact sheet. All the measures included can be implemented using the means available to the municipalities.

The constellation of measures is based to a significant extent on the existing lists of measures that form part of the integrated climate action strategies of the three districts. The implementation status of these measures was recorded, and the results integrated into the master plan list. The fact sheets clearly identify the origin and implementation status of the measures.

Further activities were developed at the themed workshops, in the discussions of the steering committee, in the tandem of generations and by the master plan advisory board. Measures developed by the commissioned service providers, *Klimaschutzagentur Weserbergland* and *target GmbH*, were also included on the list.

The draft master plan was also supplemented by additional areas of activity that were not contained in the existing climate action strategies. All in all, the list updated the ongoing climate action measures, and extended and optimised the approaches pursued.

As already noted above, the list will remain the centrepiece throughout the implementation phase. However, this is not to say that all the measures need necessarily actually be implemented. The sheer scope of the measures means that it will be necessary to be selective. Moreover, numerous measures are subject to a funding proviso and will need to be presented to the relevant bodies on a case-by-case basis for funding approval. The list represents a pool of possible measures that the master plan managers, administrators and decision-makers will draw on.

The implementation phase of the master plan will begin with the measures whose funding has already been secured, and which are described in the master plan managers' portfolio. So-called key measures, the implementation or continuation of which is recommended, are identified as such in the fact sheets.

The areas of activity and recommended measures are shown below. Please refer to the list (Annex 1) for the short descriptions.



The area of activity **spatial planning and energy production** includes the regional and municipal planning tools for managing the development of renewables, and developing infrastructure and agriculture.

- 01 Umbrella campaign solar power for the Weserbergland region
- 02 Renewables in industry and the tertiary sector
- 03 The governance role of spatial planning in the development of renewables
- 04 Public information and image campaign for renewables that require space
- 05 Innovative financing models for renewable energy projects

- 06 Initiating and implementing a pilot project for energy storage
- 07 Series of special events sustainable energy systems
- 08 Information and advice on storing energy from renewable sources



The area of activity **technical energy efficiency** includes the measures to increase energy efficiency and energy-saving – corporate energy efficiency, energy efficient modernisation of the building stock, and energy efficiency in municipal properties

- 09 Municipal energy management
- 10 Climate action in municipalities advisory services for project development
- 11Proposing a model project for municipal climate action as part of the NCI
- 12 Energy efficiency contracting
- 13 Implementing the BAFA smart meter pilot project
- 14 Governance role of regional development planning for energy-efficient construction sites and industry parks
- 15 Optimising public water supply and sanitation infrastructure
- 16 Umbrella campaign 'energy-efficient modernisation of the Weserbergland region'
- 17 Checking electricity savings in private households
- 18 Strategy forum for multi-family house construction energy efficiency in multi-family houses
- 19 Building energy efficiency networks for businesses (BAFA, NBank)
- 20 Informative and motivational talks on energy efficiency for businesses
- 21 Campaign on 'energy advice for SMEs involved in manufacturing'
- 22 Campaign on 'advice for skilled trades on saving energy'
- 23 Implementing a climate action sub-master plan on 'integrated heat use in municipalities'
- 24 Various options for district heating
- 25 Best practice solutions for local heating and waste heat utilisation information for investors
- 26 Implementing a municipal model project as part of the NCI



The area of activity **education for sustainable development** was included in the master plan as a new addition, in order to emphasise the importance of the education sector for successfully managing the energy transition. Possible activities in this area are:

- 27 Energy-saving models in schools and children's day care centres
- 28 Climate action and ESD projects in schools
- 29 Climate action in associations and clubs
- 30 Climate action expertise in the Weserbergland region
- 31 Climate action knowledge for administrators
- 32 Expert conference on energies of the future
- 33 Pilot project for a bachelor's degree course in climate change mitigation and adaptation together with the University of Applied Sciences and Arts
- 34 Educational cooperation with the university and the adult education centre on climate action
- 35 Establishing a regional energy education centre



Sufficiency and sustainable lifestyles are to be mainstreamed in the master plan municipalities as guiding principles for action. *Climate action in everyday life* is the motto for the measures proposed here.

- 36 Series of events entitled 'climate action in everyday life'
- 37 Private climate alliances in the Weserbergland region (as part of the guideline on short pathways to climate action)
- 38 Climate savings account for the Weserbergland region
- 39 Measures for sustainable public procurement
- 40 Information campaign on regional products and services
- 41 Cooperation and networking across the region
- 42 Efficiency network for hotels and restaurants
- 43 E-bikes and solar-powered boats along the Weser cycle path
- 44 Energy efficiency in listed buildings information, advice and training
- 45 Designing a themed route on climate action in the Weserbergland region
- 46 Activities for a municipal sufficiency policy
- 47 Project proposal 'climate action in everyday life' as part of the NCI
- 48 Village shops initiative support and networking
- 49 Supporting the establishment of sufficiency initiatives



Low-carbon mobility is a key theme. This area of activity revolves around the development of low-carbon mobility strategies in rural areas, taking demographic change into account. It includes the following proposals:

- 50 Umbrella campaign on developing e-mobility in the Weserbergland region
- 51 Expanding the charging infrastructure in the master plan region
- 52 Low-carbon municipal vehicle fleets
- 53 Designing a bike traffic concept
- 54 Developing the cycling infrastructure
- 55 Participation in the Germany-wide 'cycling for the climate' competition
- 56 Incentivising biking
- 57 Boosting multimodal mobility dialogue with transport companies and the local authority
- 58 Sub-master plan on 'low-carbon mobility' as part of the National Climate Initiative
- 59 Initiating and implementing sharing projects
- 60 Advisory services on 'low-carbon mobility in companies'
- 61 Mobility advice in schools
- 62 Mobility advice in rural areas
- 63 Pilot project on delivery bicycles



Recycling and sustainable natural resource management is a further area of activity. It provides for the development of activities to close material loops and manage resources sustainably in all three districts. The following measures are proposed:

64 Conducting a climate check for agricultural enterprises.

- 65 Establishing and protecting carbon sinks
- 66 Information services on 'forest management for climate protection'
- 67 Sub-master plan for 'adaptation to climate change', to define activities
- 68 Campaign on 'building with wood'
- 69 Using bioenergy from residues and waste survey and activities
- 70 Expert forum potential for optimisation and potential for further use of biogas plants
- 71 Building materials exchange and pilot project on 'urban mining'



The institutionalisation of climate activities, the provision of resources and the establishment of structures are clustered in the activity area **organisational and implementation structures**. They include the following measures:

- 72 Creating joint implementation structures for the master plan
- 73 Continuing the master plan advisory board during the implementation phase
- 74 Presenting the climate activities in the responsible bodies of the three districts
- 75 Organising and implementing themed stakeholder forums
- 76 Conducting an annual climate action forum
- 77 Networking and cooperation across the region
- 78 Financial control concept for the implementation phase
- 79 Updating the energy and carbon footprint
- 80 Preparing an annual climate action report for the three districts
- 81 GIS-based mapping of renewables and relevant facts on climate action
- 82 Initiating a climate action fund for the master plan region
- 83 Citizen participation in renewable energy plants
- 84 Public information work continuation and expansion
- 85 Information portal on climate action and the master plan
- 86 Continuing the events and fairs
- Newsletter on the master plan