



Japan Local Government Centre, London

Monthly Report March 2011 (Germany) – Local climate protection successes and new rules for federal grants for local climate protection measures announced

Achievements over the past two years

Since summer 2008, when the federal government first implemented the 'national climate initiative' as part of its 'Integrated energy and climate protection programme of the federal government' (IEKP) (ref. to Monthly Report Germany August 2008), close to a thousand projects all across Germany have received funding from this programme to reduce energy consumption and CO₂ emissions. Run by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, funds are generated through trading of emissions certificates and passed on to truly local initiatives. Eligible are local authorities, church organisations as well as other social and educational institutions, including universities. Such projects supported through federal funding enable many organisations to take steps in reducing their energy use, and make such efforts visible to citizens who in turn are motivated to engage with the issue.

The aim of the federal programme is to achieve a widespread and regionally balanced distribution of projects, however some regions have been more active in applying for and successful in attracting funding. The four *Länder* with the most projects are North Rhine-Westphalia, Lower Saxony, Baden-Württemberg and Bavaria – in more detail the distribution of projects is as follows:

Baden-Württemberg	153
Bayern	146
Berlin	12
Brandenburg	14
Bremen	3
Hessen	56
Mecklenburg-Vorpommern	16
Niedersachsen	179
Nordrhein-Westfalen	221
Rheinland-Pfalz	66
Saarland	23
Sachsen	8
Sachsen-Anhalt	9
Schleswig-Holstein	54
Thüringen	9

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Source: Map of projects by region, viewed on 22 March 2011 http://www.bmu-klimaschutzinitiative.de/de/karte_national

However, this does not mean that there is no or even less activity in the regions with less projects under this programme – because there are other means of funding as well, in particular at the *Land* level.

The programme has three core areas in which projects and funding are concentrated: the development of an overall climate protection strategy – for which external professionals with specialist knowledge are used - and following this, the employment of a ‘climate protection manager’ who will be responsible for implementing the measures outlined in the strategy; investment in climate protection technologies in energy-saving devices, which can include updating of street lighting as well as optimising heating and cooling devices. The last area is represented by small scale model projects in reducing energy use at public-facing institutions such as schools and kindergartens. So far, the majority (just over half) of all projects is concerned with the development of a climate protection strategy and in some cases, the employment of a climate manager. However the latter can only happen after a climate protection strategy has been completed: the first applications for the implementation of a finalised climate protection strategy were received early in 2010, and by September just over 30 newly designated local climate managers had received grant funding. This number is bound to increase in 2011.

Many local authorities were also interested in energy-saving technology. By directly investing in modern, efficient technology, over time high energy savings which also translate into cost savings can be achieved. Therefore this field has also proved highly popular, in particular the renewal of street lighting. About 200 projects were pursued in this area, while only around 80 concerned heating and cooling devices, and in some cases internal lighting of public halls.

The funding guidelines for local authorities are adjusted in reaction to the experiences of the previous project period, in cooperation with the project management office, which is separate from the Ministry and has first-hand knowledge of the situation in local authorities through the applications received. The first two years of the programme have shown that the conditions can differ enormously between local authorities, and it is a challenge to respond appropriately. A positive development is the increasing involvement of counties (Kreise) in the programme. If counties work out a climate protection strategy for their whole area, including the municipalities in it, smaller locations which do not have the capacity to implement autonomous projects can be included as well. So far, ca. 50 applications from counties and 15 from other regional groupings of organisations have been approved. In this way the programme is responding to the needs of local authorities, and has closed a gap that existed in the provision of funding for climate protection projects.

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Examples of projects

Investing in new street lighting in Aalen

About a third of street lights in German towns and cities are more than 20 years old. Using out of date technology leads to high energy use and unreliability, with high frequency of repairs, and thus resulting both in high CO₂ emissions as well as high cost. In order to remedy the situation, under the climate initiative a competition targeted at manufacturers of street lighting was held in summer 2008 in order to identify and widely publicise available energy-efficient products. After the competition was finalised and a list of the outstanding products published, another competition started at the end of 2008, calling for proposals from cities wanting to make their street lighting more efficient. In summer 2009, winners in six categories according to the size of the local authority were announced.

In the category 'cities between 50,000 and 100,000', the town of Aalen in Baden-Württemberg won. Aalen is a town of 66,000 people in the east of the region and the economic centre of the area. Its business sector is dominated by manufacturing, in particular metal processing. In the centre of the town, on the historical market place and surrounding streets, 96 old street lights were replaced with 68 floodlights (Flächenstrahler) based on metal-halide, which produce 35 watt. This represents a reduction from previously 8.4 kilowatt to 2.7 kilowatt, leading to an annual reduction of 23,056 kilowatt-hours. Furthermore, the project inspired business people with premises in the town to also install similar energy-efficient light, thus spreading the effect. Furthermore the quality of lighting itself was improved, as the light provided is now more consistent and user-friendly for pedestrians. Aalen will achieve a reduction in CO₂ emissions of 13.9 tons annually through reduced energy use.

Transport campaign - Leave your car at home for short distances

Transport is an important area in which to achieve CO₂ emission cuts. As part of the climate initiative, a 'zero-emission-mobility' campaign called 'Switch your brain on and the engine off' - *Kopf an: Motor aus*) was included, which aimed to influence people's choice of transport options over short distances, namely to walk or use the bicycle instead of the car. Through the deployment of posters, radio and cinema advertisements, interesting or funny slogans were used which aimed to make people think about their behaviour. 'Why not burn calories instead of petrol', 'Wouldn't it be better if you lost some weight rather than the glaciers? Use your bicycle', and 'Use the open-top – the environmentally friendly one with two wheels' were some of the phrases used.

In 2009, the four cities of Bamberg (Bavaria, pop. 70,000), Dortmund (North-Rhine Westphalia, 580,000), Halle an der Saale (Sachsen-Anhalt, pop. 230,000) and Karlsruhe (Baden-Württemberg, pop. 300,000) implemented the campaign. At the end of the running time, the polling institute 'forsa' conducted a poll of 1,200 people, the results of which were independently checked by the Wuppertal Institute for Climate, Environment and Energy and calculations made regarding the outcome. The results indicated that around 200,000 people did change their behaviour. The Wuppertal Institute calculated that around 950,000 people noticed the campaign

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and recalled it, and of this number, 83% were influenced. About 17% of people can be classified as 'persistent' car drivers who entirely depend on their car and would never take a bicycle and which were not the target of the campaign in the first place. It was more important to reach people who had a bicycle at home but were not using it very much, or those who could be motivated to walk more for health reasons. Among those who remembered the campaign, 36% think that they are walking or cycling already a great deal and feel encouraged in doing so. Short of 16% were intending to walk and cycle more in future, and 26% said that they actually had changed their behaviour because of the campaign, and for short distances under five kilometres walked and cycled now more than before. These figures indicate that the campaign was very successful, according to commercial marketing experts. The Wuppertal Institute was careful not to overstate the effects and corrected the figures downward by 20% in order to accommodate the 'social desirability' factor, which means that answers are given which are believed to correspond to the expectations of the questioner. Also, about 26% of respondents were not counted in the final tally, as they only made car journeys as passengers, and even if they switched to walking or cycling, this would have no effect on CO2 emissions. Allowing for all these deductions, there are still a total of 119,000 people in all four participating cities who are now walking short distances, and 85,000 people who are taking the bicycle instead of the car. In most cases, purposes were shopping and leisure pursuits, including cinema visits or visits to friends. In order to calculate the length of the distances travelled and arrive at the reduction in CO2 emissions achieved, the Wuppertal Institute used the results of the nationwide traffic study 'Mobility in Germany' from 2008. From the data in this study, it was possible to calculate the average distance of shopping trips in Dortmund, or the average length of trips to the cinema and theatre in Karlsruhe. The result of these calculations is that a switch from the car to walking over short distances replaced annually about 185 car-kilometres. And those who switched from the car to the bicycle will have replaced 417 car-kilometres. In total, the people in the participating cities who made changes to their behaviour reduced distances travelled by car by just under 23m kilometres by walking, and another 35 million car-kilometres by cycling.

As the aim was to reduce CO2 emissions from transport, it was important to calculate a figure for this: using a rather complicated formula based on the above-given considerations, the Wuppertal Institute arrived at a figure of 13,650 tons of CO2 saved as a result of the 'Switch your brain on and the engine off' - campaign: just over 5,370 tons by walking, and ca. 8280 tons by cycling.

This represents good value for money: the costs of the campaign in 2009 came to 1.9m Euro, which is one Euro per inhabitant of the four participating cities. One ton of CO2 emission reduction equates to 88 Euro. In comparison with other approaches to reduce transport emissions, this is a good ratio, according to a 2007 study by McKinsey & Company on this subject.

In 2010, the cities of Berlin, Braunschweig, Freiburg and Herzogenaurach have conducted the campaign – and Karlsruhe continued it with own funding.

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Regenerative energies – integrated climate protection strategy of Osnabrück County
Osnabrück County lies in the south-west of Lower-Saxony, bordering on North-Rhine Westphalia. It covers an area of 2,121 square kilometres and has a population of 357,000, who live in 38 municipalities, of which 18 are cities. The county began working on a comprehensive 'climate protection strategy' in June 2009 and received 225,000 Euro funding under the Federal Climate Initiative for this project.

The aim of the strategy is the permanent reduction of climate-affecting emissions in the county, and the development into a carbon-neutral region.

The first step undertaken was a large-scale analysis regarding current CO₂ emissions, which can now continuously be updated. Further data collection covered the current situation of energy efficiency and further potential in this area, and a study regarding the possibilities of regenerative energies was conducted. The results of these studies were published in December 2010. They show that over the past 10 years the proportion of regenerative energies in the region has increased: In 2008, 7% of heat and 23% of electricity were produced from regenerative sources – at a federal level, the comparative figures are 7% for heat and 14% for electricity. As a result, per head CO₂ emission is slightly lower in Osnabrück than the national median.

In Osnabrück, the business sector is responsible for 41% of emissions, 30% are transport-related, and 29% result from domestic consumption.

The analysis concludes that it is possible to completely switch to regenerative energy by 2050. In order to achieve this, a notable reduction in energy consumption is necessary, and regenerative energy generation must be pushed up regionally. The biggest potential in Osnabrück lies in the fields of wind energy and geothermic energy. According to the analysis, in 40 years 51% of energy for domestic and business consumption can be supplied from wind energy. By 2050, the necessary heat (as winters are cold in Germany) can be supplied mostly from geothermal energy sources and heat pumps powered by regenerative energy.

In order to achieve these goals, investment is needed which will unlock huge economic potential in the region which has been estimated as going into hundreds of million Euros, and the creation of more than 2000 jobs.

This kind of ambitious programme is only possible in co-operation with all stakeholders, including residents and businesses. The county has regularly run workshops and seminars, in which proposals and criticism from business and industry, agriculture and academe were taken on board.

On 20 December 2010, Osnabrück County Council has formally approved the integrated climate strategy and set the goal to achieve in the medium term a complete switch to regenerative energy, become more energy efficient and achieve

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sustainable use of the regionally available resources. Tangible goals were defined as follows:

- 1) By 2030 achieve 100% supply of electricity generated from regenerative sources to domestic and commercial users
- 2) By 2050 achieve 100% supply of heat generated from regenerative sources to all users

These goals will be pursued in close co-operation with the municipalities, and close contact with other regions (counties) in Germany with similar goals is also intended.

To translate these goals into action, a catalogue of 38 measures has been approved, among which a prioritisation for the next two years from 2011 to 2013 is now taking place. These are some of the measures that will be pursued immediately:

- Restructure regional planning to designate new priority areas for wind energy and the building of new wind parks
- Upgrade existing wind turbines in the designated priority areas (re-powering)
- Establish an independent energy consulting service for the building trade regarding photovoltaic roof and façade instalment and make efficient use of the already existing expertise in the region
- Increase the percentage of organic waste (slurry and other residual matter) used in already existing biogas facilities and develop a biogas strategy for the regional development of the biogas sector in a sustainable manner
- Strategic use of unused sites, including sites converted from military use, for solar power
- Increased use of biomass from agriculture and landscaping in already existing combined electricity and heating plants

Osnabrück County will hire a climate protection manager with the grant offered by the federal initiative on a three year contract, who will ensure that the prioritised measures are implemented. Naturally implementation will take place in close consultation and co-operation with regional stakeholders.

As part of the national climate initiative, the German Urban Institute (DifU) is acting as a coordination unit, where local authorities can receive information and advice on federal and regional funding programmes related to climate protection measures. It also includes case studies such as this.

New outline of grant programme for local authorities

In order to achieve the goal of reducing emissions by 80 to 95% in 2050, compared to 1990 as the baseline which was set by the federal government in the national energy strategy, the criteria for projects which are eligible for grant have been tightened in January 2011. It is important to invest in strategies which will yield the maximum in energy savings. Therefore the main focus of this year's grant programme will be the employment of a climate protection manager, the increased

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use of LED-lighting technology in exterior use with a decrease in emissions by 60%, and in particular on communities, which will aim to reduce their emissions by 95% in 2050 through a comprehensive master plan. Local authorities which are financially weak will be considered on a case-by-case basis for a higher grant proportion, although some own contribution is still necessary. In overview, the targets and the respective grant levels will be as follows:

Targeted project	Percentage of grant funding
Climate protection strategies	65%
Climate protection strategies (partial)	50%
Climate protection manager	65%
Implementation of a project/measure which yields 80% emission reduction (implemented by climate protection manager)	50%
LED lighting for street lighting and outside illumination with potential to reduce emissions by 60%	40%
Climate protection technologies in electricity use	25%
Model local authorities: 100% climate protection master plan	80%

The first application period was from January to end of March 2011, although applications for the '100% climate protection master plan' will be possible until 30 April 2011. Depending on the number of applications and the availability of funds later on, a second application period is considered for the summer.

As in previous years, a competition between local authorities for the best projects in three categories (Innovative technical or building solutions for climate protection in local authority buildings, Innovative strategies for implementing local climate protection measures in partnership, and Successful strategies to include residents in the implementation of climate protection strategies) will be conducted, and the winners announced in autumn of this year.

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