







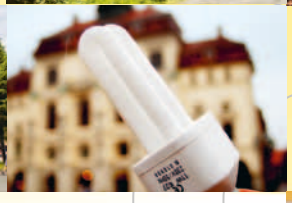


Making the Energiewende a success story thanks to strong local authorities

Drafted by the following Lord Mayors as part of the "Sustainable City" dialogue

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Content

German Energiewende

The German Energiewende aims at the transition towards the safe supply of energy and renewable energies. In the wake of the nuclear meltdown of the power plant in Fukushima, the German Government decided to immediately decommission eight German nuclear power plants and to phase out all nuclear power plants in the country by 2022. The German Government enacted a package of legislation in summer 2011 in order to implement the transition. In Germany, the Energiewende is embedded in a long-term societal debate about how to cope with the challenges of climate change and to build up a sustainable energy supply that would render nuclear and fossil energies obsolete.

Germany is committed to reducing greenhouse gas emissions by 80 % (compared to 1990) and primary energy use by 50 % (compared to 2008) by 2050 as well as to increasing the percentage of the energy generated by renewables to at least 80 % of the energy consumed and 60 % of the gross final energy consumed by 2050 (for further information please go to http://www.bmu.de/en/topics/climate-energy/transformation-of-the-energy-system/faq/general-issues/#c1).

Public opinion is backing the ambitious objectives of the Energiewende and has made it a key term for a sustainable energy supply and the opportunities for a green economy. Along with the creation of new jobs, the transition promotes new technology and innovation, in particular in terms of renewable energies, energy efficiency, grid technology, and product innovation. It also triggers political and social discussions with a focus on the electricity market.

At the same time, the Energiewende is highly complex, and there are risks that it might impact on the economy and social coherence. Its implementation raises all kinds of conflicts of interests. Furthermore, its implementation challenges the various forms of governance at all levels of administration, including local municipalities.

1. About this paper

With the Energiewende, the energy turnaround, Germany has the chance to write history. The process involves replacing all nuclear power plants by 2022 and achieving largely climate-neutral energy production by 2050. In addition to power plants and the power supply, it also concerns energy for mobility and for the heating and cooling supply. The reorientation towards sustainability affects the production of energy in centralized and decentralized power plants (which increasingly include buildings), the storage of energy to harmonize supply and demand, a significant increase in energy efficiency, and a reduction in the demand of power and heat – from the sectors of industry, households, and transport right through to agriculture.

The decisions made by the Federal Government and the Bundestag in June 2011 must urgently be followed by more far-reaching decisions. Technology and technical progress are just as important as new lines in the transmission network and locally in distribution networks as well as affordable prices. Ultimately, the Energiewende will, however, be decided with our understanding of how and the culture with which we use, share, and save energy. As an important communal effort in Germany, the Energiewende will demand of us all a high degree of responsibility and determination to get things done.

We, the Lord Mayors of Augsburg, Bonn, Düsseldorf, Erfurt, Essen, Freiburg, Friedrichshafen, Hanover, Heidelberg, Cologne, Constance, Leipzig, Lörrach, Ludwigsburg, Lüneburg, Munich, Münster, Norderstedt, Nuremberg, Ravensburg, Rheine, Suhl, Tübingen, Ulm, and Wernigerode are all aiming to achieve the sustainable supply and use of energy in our local authorities. We are making use of our opportunity to shape policy and are carefully and fairly weighing up environmental points of view as well as social and economic issues with a view to uniting them. At the same time, we view the Energiewende in our cities as part of higher-level and sustainable urban development under the guiding principle of the compact and resource-efficient city.

In the following, we shall present selected approaches as to how the Energiewende is being successfully advanced with the active support of local authorities. These examples are intended to serve as a stimulus for other local authorities to examine and exploit their potentials.

In our view, however, there is also an urgent need on the part of the legislature to lead the German Energiewende to success. This concerns both the economic and legal framework as well as the funding opportunities of the Länder, the Federal Government, and the European Union (EU).

In our local authorities, the realities and challenges vary greatly – the same applies to the approaches by which we are advancing the Energiewende. Since there is no one right way but a diversity of right ways for a local authority energy policy, we need to learn from others better than ever before and have a federal policy that ensures that local authorities receive more support with regard to their Energiewende.

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2. Where we see a need for action

In brief

- The local authorities want to overcome the challenges of the Energiewende with a vibrant and strong provision of local authority services of public interest, because this would also successfully safeguard the public provision of light, heat, and electricity.

- The local government supports the most innovative solution that can be applied to daily life as well as regional and decentralized solutions to the Energiewende. However, the policy in the Federal Government and Länder must ensure that it regularly and consistently strengthens the local authorities with regard to all their prevailing economic and political circumstances.

- We regard the Energiewende as a communal effort – in our local authorities and in Germany. That is why we are in favour of strengthening the vertical networking of the EU, the Federal Government, the Länder, local authorities, and the regions.

- The conservation and efficient use of energy as well as a still outstanding Energiewende in mobility and in the heat supply must be as intensively incorporated into the energy transition policy as the current production and use of power. Our local authorities offer numerous examples of this broad approach. The Federal Government and the Länder are also called on to take up this and make it a general requirement for the policy.

- What we expect of future energy market design is a harmonious relationship between generating capacity and the expansion and modification of the networks, system stability, supply security, increased cost efficiency, and compliance with climate change targets.

- Clear and reliable political objectives are prerequisites for investment in the Energiewende. They concern the development of renewable energies as well as investment in networks and storage capacity. The Federal Government should ensure that, in particular, rapidly adjustable gas and steam power plants, which can compensate for the fluctuating feed-in of renewable energies, are economical.

- The full participation of citizens and the business community is an essential condition for the success of the Energiewende. Local authorities can make a significant contribution to this. The Federal Government should involve local authorities much more in requirement planning and in the expansion of transmission networks. New forms of participation should enable people everywhere to systematically get involved in the funding of the network expansion.

We believe that the Energiewende decided on by the Federal Government can be combined with decentralized decisions, with particular opportunities for the sustainability of local authorities, and for the involvement of the general public. For this purpose, we must succeed in solving the challenges posed by network expansion, electricity prices, the energy markets, the improvement of energy efficiency, and transport policy. At present, however, too many opportunities remain unexploited, necessary decisions are being delayed and frictional losses are high.

We therefore deem it necessary to greatly improve the coordination of energy policies at federal, state, and local authority level. We are in favour of the drawing up of an action plan to implement the Energiewende, a plan which the Federal Government should develop with input from the Länder, local authorities, and industry and whose realization involves the responsible participation of all stakeholders.

The single most important point is the future design of the energy market which ensures system stability and security of supply, increases cost efficiency, takes into consideration overall economic costs and value creation, and, in particular, ensures compliance with climate protection targets. To make the Energiewende economically successful, politicians must reorganize the energy market. In particular, the generating capacity should be harmonized with the planned reconstruction and expansion of the networks and the general economic conditions for investment in high efficiency – renewable and transitional fossil – new power plants and storage systems should be created. New high-efficiency fossil fuel power plants must not be turned off in favour of old plants with high carbon dioxide (CO_2) emissions, but must be able to work economically, whereby gas-fired plants are preferable to coal-fired power plants. The feed-in of renewable energy into the electricity supply system will be expanded and thereby adapted flexibly to suit demand. With the new concepts that are currently under discussion, such as auctions for electricity capacity and intelligent networks, local authorities must be granted rights to participate.

With regard to the transition to a sustainable energy supply, public utilities and local energy providers are ascribed a special role as forerunners. The practice of energetic urban renewal, the strengthening of ecomobility (including car-sharing), low-threshold offers for energy-related advisory services, climate-friendly procurement, energy efficiency in industry and trade – we will continue to spur all this on with our local utility companies and other partners such as transport networks, the citizenry, companies, and organizations. In order to do so, however, we need better and, above all, stable legal and economic frameworks.

2.1 Managing the Energiewende

To manage the Energiewende at the local authority level, we are setting ourselves clear goals, entering into voluntary commitments, developing energy and climate change concepts and making use of local authority climate protection management systems, such as the European Energy Award, or joining the Covenant of Mayors in order to help us to achieve our goals. We are defining clear responsibilities for the coordination of activities relating to the Energiewende. The Federal Environment Ministry (BMU) programmes for the development of local climate protection concepts and building climate management systems are helpful tools.

Wernigerode: not leaving energy consumption to chance

The town of Wernigerode is intending to promote the local authority Energiewende by means of district heating from the CHP plant of its own public utility company. In addition, district heating routes are being renewed and expanded and new, decentralized cogeneration plants are being established. Due to the town's already very strict district heating statutes for a very broad area under statute when constructing new residential buildings, builders have to decide between providing their properties with either district heating or a 100 % renewable energy supply. Industrial consumers such as outdoor and indoor swimming pools, schools (regardless of who is funding them), sports halls, kindergartens, and urban administrative buildings will likewise be connected to the district heating system.

On the part of the Federal Government, general conditions must be established that will enable economic investment in new efficient power plants with very good control modes. These are above all gas-and-steam (CCGT) power plants, but also engine-powered cogeneration and fuel-cell power plants that provide optimal heat and power (CHP). Given the fluctuating feed-in of electricity from renewable sources, this quickly and flexibly adjustable type of power plant is (still) essential for the system because it provides the necessary reserve power. Besides positive effects, the feed-in of renewable energies also results, among other things, in many CCGT plants not being economical to operate, as they are predominantly underutilized as "standby options". This type of usage is only worthwhile with plants that have already been amortized. New and more efficient plants, however, are often barely able to be refinanced.

Since the power resource of gas will continue to make a significant contribution to the energy supply, gas must be used as efficiently as possible. CHP plays an important role with regard to this. While its use in large centralized power plants is of more significance in larger cities and metropolitan areas in general because of the requisite pipework, decentralized systems in the form of combined heat and power (CHP), operating with, for example, biomethane, are increasingly being used, even for residential estates, individual residential buildings, industrial plants, or hospitals. At the same time, CHP can also be used in the future to balance out fluctuations in the use of renewable energies and to allow surpluses from renewable energy generation – after being converted into methane, for example – to be made available again in times of peak demand. The general conditions of the energy industry must be such

Lörrach: awarded gold

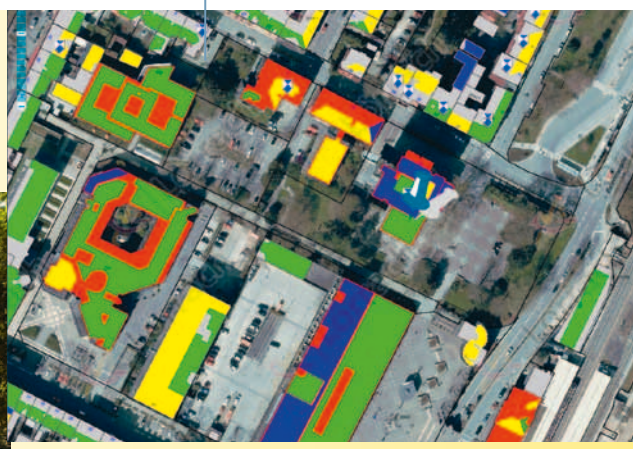
The town of Lörrach is consistently pursuing its goal of a sustainable energy policy. In 2002, the town became the first German local authority to be given the Swiss "Energiestadt®" ("Energy City") award. In 2007, it was the first local authority in Baden-Württemberg to receive the European Energy Award® (eea) and, in 2010, Lörrach made a giant leap forward and received the European Energy Award® Gold. The eea is an energy and climate management system that the town of Lörrach is using to gradually become more climate friendly and energy efficient. A gold award represents above-average commitment to greater energy efficiency and climate protection and shows that a local authority has already put many projects into action. The town of Lörrach made a decision to become a carbon neutral community by 2050.

that site selection and plant sizing is in line with the potential local and regional use of heat. The federal government should continue to support and promote the development of CHP.

With regard to existing district heating systems, one must ensure that, in times of acute heat requirement, the cogeneration plants can be operated – even at the expense of renewables. The competition with regard to the feed-in of electricity from renewables and the electricity generated in CHP plants must be overcome.

Any remaining conflicts of interest between improving thermal insulation and the increased use of district heating must be tackled in a positive way by setting regional or district-related priorities.

Lörrach



Wernigerode

Münster

Leipzig

Storage systems have to fulfil a crucial role in the future power supply system in order to compensate for the fluctuations of energy from renewable energy sources. Measures for load management on the side of the consumer, often discussed under the aspect of “smart metering”, represent another essential tool to bring the renewable energy supply and the demand structure in line with each other. Both fields require that the Federal and State Governments have clear frameworks and funding priorities.

We are convinced that the European CO_2 emissions trading system, which has been deprived of its effectiveness by the collapse in prices, is a very important instrument of energy and climate policy. Besides the loss of the incentive to invest in energy efficiency in the indus-

Münster: nuclear-free in 2020 – with political legitimization and funding

To address the issue of the Energiewende, the City of Münster is backing political legitimization and the provision of financial resources. In 2008, the town council decided to reduce CO_2 emissions by 40 % by 2020 and to meet 20 % of energy consumption from renewables. In 2011, it also decided that the power supply had to be nuclear-free in the future. To undertake the necessary work, Stadtwerke Münster are investing more than 330 m euros. The majority of this (about 225 m euros) will be spent on the expansion of wind energy and photovoltaics. Further potential for efficiency is to be realized by increasingly integrating CHP into the urban energy system.

trial sector, the loss of the financial basis for the Energy and Climate Fund and the National Climate Initiative is thus also linked to this. To make emissions trading effective again and to enable the market to take on a steering effect, a progressive reduction in tradable emission certificates is essential.

With regard to the reporting of CO_2 emissions at local authority level, we need uniform procedures and easy-to-apply standards. At present, the surveys of the local authorities are based on different concepts, suffer from a lack of available data and are sometimes associated with high costs. Important key data in the monitoring of climate protection and the way the Energiewende is being carried out are often lacking.

We are in favour of a system that offers a standardized data base and valuation basis from the local authority right through to the Länder and the Federal Government, which allows the voluntary harmonization of standards in the context of local government.

Insofar as Energiewende measures can be assigned to the sphere of voluntary local authority self-government, they cannot be realized in many federal states by local authorities with budget constraints or under budget proviso, even if they would lead to financial savings and thus to the structural relief of the budget. This means that these local authorities are missing out on sensible options for action and the Energiewende is falling short of its potentials. The Federal Government and the Länder are called on to ensure redress by means of financial support in this case.

Leipzig: rethinking the supply of heat

Since 1992, the City of Leipzig has been known nationwide for its forceful expansion of district heating. In the process, entire neighbourhoods that are, as a rule, supplied with gas heating are being connected to the system, and there is a parallel offensive to dismantle gas networks. This has succeeded in lowering the average per capita CO_2 emissions to below the national average and in achieving a cut in CO_2 of more than 50 % since 1990. The transformation of the heat supply is intended to realize further potential for savings on the basis of a new energy and climate concept.

2.2 Developing and distributing renewable energy

The change from atomic and, in the medium term, from fossil fuels to renewable energy sources is a necessity and is gaining more and more importance both for climate protection as well as in view of the finite nature of fossil fuels and the associated risk of price and supply crises with far-reaching economic and social consequences.

Munich: campaigning to expand renewables

Munich's Town Council has obliged the Stadtwerke München public utility company – wholly owned by Munich – to make a quantum leap: as early as 2015, all 800,000 households, including the tram and metro system, must be supplied with green electricity from city-owned facilities. By 2025, then, the entire electricity needs of Munich (about 7.5 billion kilowatt hours per year) are to be met by renewable energy sources. In its campaign of expansion, the Stadtwerke public utility company is investing around 500 m euros a year (total volume of 9 bn euros) in power generated from water, wind, geothermal, biomass, and solar sources of energy in Munich, Germany, and Europe.

The requirement planning for the supply system currently agreed on between the Federal Government and the Länder is indeed important, but is not enough to derive meaningful paths of expansion for renewables and, above all, for the distribution networks. The involvement of local authorities is not sufficient. We are calling for new forms of participation at all levels. People everywhere should be systematically given the opportunity to participate locally in the financing of the network expansion. Local authorities should be politically and legally involved in network development planning and with the auction process as well as with regard to the concept of energy-related urban redevelopment, the modification of our mobility systems, and – of particular importance – with new legal requirements for the compensation of any intervention in nature and the landscape as enshrined in nature conservation law.

Düsseldorf: an efficient energy package for the town

Stadtwerke Düsseldorf, a public utility company, is building a new highly efficient combined-cycle power plant in the port of Düsseldorf, which, in 2016, will provide Düsseldorf with heat and electricity with an overall efficiency of over 85 %. The new power plant unit will have an electrical efficiency of more than 61 % – a world record. In addition, 300 MW of district heating will be extracted and the district heating network in the town will be extended. Less than 330 g of CO_2 per kilowatt hour of energy will be generated. This means that up to 700,000 tons of CO_2 can be saved annually. Thus, the combined-cycle power plant can be seen as the ideal bridging technology on the path to achieving a climate-neutral town by 2050.

Norderstedt

Munich

Norderstedt: intelligent networking

The town of Norderstedt, in collaboration with the Stadtwerke Norderstedt public utility company, is focussing on taking a systemic approach to developing a sustainable energy system that is part of the “Intelligente Netze” (“Intelligent Networks”) project. Part of a pilot project examines what a decentralized and flexible energy supply system of the future – one in which the price of electricity is based on the supply and load situation – might look like. Having households control the power consumed for cooling or heating, for example, is intended to help bring production and consumption in line with each other. An improvement in power system stability is achieved by activating the potentials of load displacement and load avoidance. In a study to check acceptance conducted with households in Norderstedt, methods and approaches will be evaluated and a significant contribution to the further development of smart meter technology will be ensured.

Network operators must be able to make the necessary investments to bring about a successful Energiewende. Account must be taken of this necessity when approving network tariffs. Especially at the distribution level, huge investments for the integration of decentralized generation plants and new large-scale consumers (e.g. electric cars) have to be able to be refinanced.

On the new energy market, special significance is ascribed to local authorities, with or without public utilities. New partnerships are worthwhile: due to the different local conditions for the use of renewables, some projects can only be carried out via regional policies and with the aid of cooperation between local authorities. That is why local authorities and their utility companies are increasingly uniting to form regional or supra-regional networks in the interests of a future-oriented, environmentally friendly generation of power. This is already common practice in many places. But the following must also apply in the political and economic requirements for the energy market of the future: the energy markets of the future must be accompanied by transparent local access.

Heidelberg: living and working in the new environmental zero emission district

Bahnstadt ("Railway City") is one of the largest urban development projects in Germany. Covering a total area of 116 hectares, the new district is larger than all of Heidelberg's Altstadt (old part of town) and offers a vibrant mix of residential space, science, industry, campus, and culture. The energy concept paves the way for the responsible use of environmental resources: the development of the whole district to passive house standards and the energy-saving concept promise low power consumption. In combination with district heating and combined heat and power generation in a biomass co-generation plant, a pioneering zero-emission district is emerging there.

2.3 Promoting energy-efficient refurbishment

The mere replacement of energy carriers without a concomitant increase in efficiency and the exploitation of all energy-saving potentials can be no meaningful and viable long-term strategy for a sustainable energy policy.

We see a huge potential in the building sector – particularly in the construction of new buildings and the energy-efficient refurbishment of existing ones.

The application of new energy-efficient technologies and the energy-efficient refurbishment of buildings are urgently required and could be driven by commitments to measures applied to the existing stock that are regionally appropriate and open to all kinds of technology. Many of these measures are already economical from a life cycle point of view.

We show our commitment to this in various ways:

- by applying or imposing special local authority funding and modernization programmes taking energy-related and demographic factors into consideration [1];
- by working closely together with our local authority housing companies [2];
- by paying attention to rigorous criteria for local authority buildings in the field new buildings [3];
- by setting energy standards within the framework of urban development contracts or with regard to the sale or lease of local authority plots of land [4];
- by planning entire residential estates to passive house standards [5] or opening up completely new development areas through innovative district heating networks [6].

1 Bonn, Düsseldorf, Essen, Freiburg, Friedrichshafen, Hanover, Heidelberg, Cologne, Lörrach, Lüneburg, Munich, Münster, and Norderstedt

2 Augsburg, Düsseldorf, Erfurt, Freiburg, Friedrichshafen, Hanover, Leipzig, Lörrach, Ludwigsburg, Lüneburg, Munich, Münster, Nuremberg, Tübingen, and Wernigerode

3 Decisions to build passive houses in Friedrichshafen, Hanover, Heidelberg, Leipzig, Lörrach, Nuremberg, and Tübingen; decision to become a CO_2-neutral Town Council in Suhl

4 Augsburg, Bonn, Erfurt, Freiburg, Hanover, Heidelberg, Cologne, Lörrach, Ludwigsburg, Lüneburg, Münster, Ravensburg, and Tübingen

5 Freiburg, Hanover, Heidelberg, and Lörrach

6 Ludwigsburg, Lüneburg, and Ravensburg

The speed of the energy-efficient upgrading of buildings in Germany is not enough by far and misses the target set by the Federal Government to have retrofitted almost 90% of the housing stock to be more energy efficient by 2050. A "business as usual" approach would mean that the energy-efficient refurbishment of the building stock would take about 100 years, which, in view of rising energy prices and ongoing climate change, would be neither economical nor environmentally responsible.

Nuremberg: building recycling for energy efficiency – an innovative approach to the passive house standard and refurbishment

Unique in Europe, "südpunk" is a multifunctional community centre in the City of Nuremberg, which combines education, culture, and an intercultural district meeting place with diverse opportunities to meet up in a complex of buildings that complies with the passive house standard. New and old buildings merge in an architecturally pleasing and energy-saving manner. The new four-storey building was built to the passive house standard and frames the old building. The listed building dating from 1899 is part of a former housing development and was refurbished in line with the standards for new buildings as laid out in the Energy Saving Ordinance ("Energieeinsparverordnung (EnEV)"). A holistic energy concept, created at the beginning of the planning phase, has ensured the implementation of ambitious energy goals. The concept was funded by the Bavarian State Ministry for Economic Affairs, Infrastructure, Transport, and Technology.

Heidelberg

Nuremberg

Suhl: from small to sustainable – the first ecological and energy-efficient day-care centre in Thuringia

The “Kinderland” (“Children’s Land”) kindergarten is the first local authority building in Suhl which has been built almost entirely of wood in line with climate-friendly construction. Its energy-efficient execution is unique. Bioenergy is used to supply heat using a biomass boiler and, supplementary to this, an air-conditioning system with heat recovery has been installed. The very low energy demand is met through climate-friendly wood pellet heating. Consequently, the natural material of wood has been used to build the kindergarten as well as to provide it with a renewable source of energy.

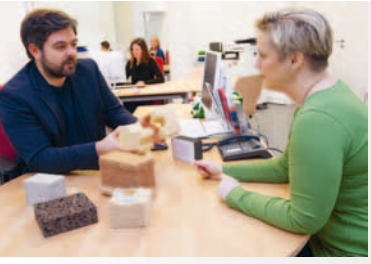
Important tools include the funding programmes for the energy-efficient refurbishment of buildings, for example, by the Kreditanstalt für Wiederaufbau (KfW), the federal development bank. The Federal Government should expand and, above all, stabilize them and combine them with programmes for refurbishing housing in a way suitable for all generations. Whenever the State invests one euro in refurbishment, this triggers eight euros of investment; it is, therefore, a highly effective way of promoting business. We consider the possibility of the offsetting the cost of energy-efficient refurbishment against tax to be another important and effective tool.

The energy efficiency of existing buildings and new ones needs to be increased, despite very different conditions on the property markets. In doing so, the tenant or landlord and investors must not be overburdened. That is why regionally adapted obligations and funding instruments which relate to the various regions are required. We are calling on the Federal Government to adapt the urban development promotion programme to the requirements called for by the Energiewende, climate protection, and climate change risks more than ever before. The EU is placing more emphasis on energy policy in its new funding period. We

Suhl

Freiburg

are calling on the Federal Government to join the EU and to impose appropriate funding programmes. At the same time, the focus should not be reduced merely to building characteristics. Furthermore, the consequences of urban development with regard to traffic and settlement structure and thus also as regards energy and climate must be considered in the planning and promotion.



Bonn: well advised regarding the Energiewende

The Bonn Energy Agency was established by the City and became an association in 2012. In its advice centre, the Agency provides a free and neutral initial consultation by architects and engineers on all issues relating to energy-efficient construction and renovation as well as the use of renewable energies. In cooperation with the Kreishandwerkerschaft Bonn / Rhein-Sieg (Bonn / Rhine-Sieg Guild of Craftsmen), the agency founded the Energy Efficiency Partner System early in 2013. Its aim is to recommend skilled artisans and to promote networking and the exchange of experiences of all those involved in a construction project.

Neighbourhood-related redevelopment measures deserve special attention, as they often offer efficiency advantages over building-related solutions. With regard to this, the Federal Building Code (BauGB) should also contain regulations that support energy-efficient refurbishment, similar to the urban redevelopment measures found in Section 136 of the Federal Building Code.

The Federal Government and the Länder should configure funding programmes for improving the energy efficiency of local authority property in such a way that they can also be used by cash-strapped local authorities. Guidelines from the EU, such as the Energy Performance of Buildings Directive, should be incorporated into national law with a consistent road map and a clear time schedule and technical requirements. This process must be socially equitable.

Freiburg: the world's first old high-rise to become an energy-efficient passive house

Freiburger Stadtbau GmbH is the first local authority housing company in Germany to renovate the high-rise called "Buggi 50", dating back to 1968, and to transform it to the standard of a passive house, thus arousing new energy in the field of social housing. Energy consumption (heating and hot water) can be reduced by 78 % annually and 57 tons of CO_2 emissions can be saved. Moreover, the optimization of the floor plans has resulted in 49 new apartments, increasing the living space in the 16-storey high-rise to 7,800 m^2. Under the motto of "Wohnverwandschaften – Generationenwohnen im Hochhaus" ("Neighbourly relations – multi-generational living in a high-rise"), three social institutions – the Arbeiterwohlfahrt Freiburg ("Workers Welfare of Freiburg"), the Nachbarschaftstreff Bonhoeffergemeinde ("Neighbourhood Get-Together of the Bonhoeffer Community") and neighbourhood work of the Forum Weingarten – have developed a concept by pooling their services and resources.

Ludwigsburg

Lüneburg

2.4 Using procurement for the benefit of the Energiewende

When it comes to procuring goods and services, we take into account only the direct and indirect costs caused by environmental pollution or social ills and which have to be borne by the economy as a whole. We make targeted use of our market power to promote sustainable tenders, either in the procurement of energy-efficient office equipment or services for the administration and vehicles for the local public transport company (LPT). When evaluating products, we take into account their entire life cycle – from their manufacture to disposal via use – and thus make a contribution to reducing energy and resource consumption.

Lüneburg: transforming town and country into a 100 % renewable energy region

The regional energy demand in the Administrative District and in the Hanseatic Town of Lüneburg can be fully met by renewables in both the power and the heat sector: This is the finding of the pilot study "100 Prozent Erneuerbare-Energie-Region Landkreis und Hansestadt Lüneburg" ("100 % Renewable Energy Region of the Administrative District and Hanseatic City of Lüneburg"), which sustainability researchers at the University of Lüneburg have drawn up. Already, renewable energy covers 48 % of the overall power consumption of the Administrative District – and there is still further potential. The study shows by what measures energy consumption can be reduced and how energy can be supplied by regional renewable sources. In addition, the Administration of the Hanseatic City of Lüneburg is also setting an example with regard to saving energy and is working on climate change concepts for its own properties.

We regard Section 97 paragraph 4 sentence 2 of the Economic Competition Act as an important basis for more options for action with regard to sustainable and climate-friendly procurement. The Act states: “Additional requirements may apply to contractors with regard to the execution of orders, in particular those relating to social, environmental or innovative aspects if they have direct bearing to the subject of the contract.” The setting of minimum efficiency standards within the scope of the EU Ecodesign Directive is also a step in the right direction. However, the current standards are not ambitious enough. They may also be not sufficiently well-known to increase the competition to find the most efficient solution. The uncertainty regarding the application of standards in a legally compliant way that prevails in many places should be eliminated. Within the EU, Germany should advocate more strongly the continuation of the Ecodesign Directive EU and that maximum efficiency standards become a benchmark for the next generation of products in each case.

Moreover, we also call on the Federal Government to extend and improve the labelling of products in the interests of climate protection. These include reforming the fuel mix disclosure and regulating the terms “green power”, “electricity from renewables”, and “Green Electricity”, for example, in the Energy Act. With regard to appliances that are subject to energy labelling, the Federal Government should provide for cost transparency and introduce a mandatory, standardized specification of life-cycle costs. Overall, improvement in the clarity and consistency of energy efficiency labelling is urgently needed. Guidelines that are lacking or unclear run the risk of losing the confidence of consumers and consumers and reducing the willingness of people to make a contribution towards the Energiewende by means of their consumption decisions.

Ludwigsburg: reducing CO_2 emissions to two tonnes per capita per year

The town of Ludwigsburg has set itself the ambitious target of reducing annual per capita emissions of CO_2 to two tons by 2050. To achieve this, a significant part of this goal must be completed by 2030; four tons has been set as an interim goal. The approaches that Ludwigsburg is taking to achieve this include, above all, achieving high energy standards in local authority property, reaching a housing stock refurbishment rate of at least 2 % per year, increasing the proportion of renewables to cover the significantly reduced energy consumption to around 40 % and decreasing the proportion of motorized private transport to 25 %, with a considerable reduction in noise and emissions thanks to the use of alternative drive systems.

2.5 Courage and creativity for new avenues relating to mobility

Traffic noise, air pollution, traffic safety, rising mobility, and fuel costs are problems that affect our society almost everywhere. To counteract this, we are developing mobility concepts and investing, with a lot of courage and creativity, in a variety of measures to reduce traffic and to boost ecomobility. Examples which may be mentioned here are the reconfiguration of roads in favour of pedestrians and bicycles and to the detriment of individual transportation and park space management; urban development with the aim of "city of short distances"; the expansion of public transport and cycling infrastructure; projects for e-mobility, advisory services for occupational mobility management; the promotion of intermodality and multimodality and campaigns for ecomobility or parts of it, such as cycling campaigns.

Erfurt: local authority mobility management

The Capital of the State of Thuringia, together with a number of partners, is currently developing its local authority mobility management system. One component of this is the "Betriebliche Mobilitätsmanagement" ("Corporate Mobility Management") project, a pilot project that the town is trialling in cooperation with four major companies. Several mobility service providers, the Town Council, and a mobility consultant are jointly striving to reduce the cost of mobility and CO_2 emissions caused by the mobility of employees. Aligning routes and travel times with the companies has led to significantly higher utilization of public transport. A company that recently moved to Erfurt has achieved a job ticket rate of 21%. The mobility advice given to staff is being continued by the company itself to the benefit of all involved.

However, in order to be able to effectively pursue new avenues of mobility, improved conditions need to be created at the federal level and counterproductive regulations be abolished. There is an urgent need to safeguard and extend the support framework for eco-

Ulm: focus on implementation – cooperation with the trades

When it comes to climate protection, everyone must lend a hand – especially those who implement such measures, such as the numerous artisans who are making small and large changes in the interests of climate protection every day. In Ulm, an alliance between the chambers of handicrafts, the public utility companies of Ulm/Neu-Ulm and the town is furthering the Energiewende in a very practical way with its "Pakt zum Klimaschutz" ("Pact for climate protection"). The focus is on improving the energy efficiency of existing buildings. In order to integrate the interactions brought about by refurbishments and to make the processes more uniform, artisans belonging to different trades can now acquire a basic qualification to make them an "Ulmer Energiefachbetrieb" ("Ulm-based energy specialist").

Ravensburg

Erfurt

mobility as currently exists under the Local Authority Traffic Financing Act beyond 2019. In addition, both the funding of the BMU Climate Initiative and the funding for public transport should be strengthened, expanded, and consolidated with regard to ecomobility. Cooperation between the local authorities of a region should also be regulated in a more binding way so that the issue of mobility can make an effective contribution to the Energiewende. Furthermore, companies and organizations should be reminded of their duty to deal with the traffic they generate in an environmentally and socially responsible way as far as it is possible to do so.

Ravensburg: CO_2-neutral mobility in Upper Swabia

As the higher-order centre of the Lake Constance-Upper Swabia region, the town of Ravensburg has been striving for years to achieve development that is sustainable, economical, socially just, and ecologically compatible. As part of its energy management, the town has made great leaps towards sustainable development in the field of energy saving and environmental protection. In February 2013, the City was awarded the European Energy Award Gold® (eea). As part of the eea, a series of local authority and private projects have been carried out. In the process, the world's first art museum was built to the passive house standard in Ravensburg, and the town, along with other actors, is planning a completely CO_2-neutral local public transport system. For example, urban buses here are to be run on bio-methane.

Hanover

Rheine

2.6 Involving people in the Energiewende

The more people have the chance to participate, the more successful and credible the Energiewende will be. Every individual must be a participant, not just a spectator. This is possible in many ways, for example by people influencing the production of electricity via their electricity contracts by using energy carefully and sparingly and employing energy-efficient appliances and so making a contribution to reducing their energy demand. They could also become micro-cogeneration units themselves or participate in energy cooperatives, for example within the framework of community energy systems. One way to give many people the opportunity to invest in the Energiewende is to provide free local authority roofs for private photovoltaic systems [7].

The fact that the people in our communities are participating in a sustainable energy system considerably strengthens their identification with the local authority. We can thus

Rheine: shaping the future together – a district competition

"Gemeinsam Zukunft gestalten" ("Shaping the future together") was the motto of the district competition held by the office of civil commitment of the town of Rheine, which honoured co-operative projects that take active responsibility for sustainable living in their neighbourhood. No limits were placed on the creative ideas: sustainable energy and climate protection play a central role in many projects. One school, together with an advertising firm, designed a public awareness campaign on environmental issues. In another project, market stall operators and restaurateurs carried out a week-long campaign of "healthy food" and "seasonal shopping". Of the 30 project ideas submitted, half were selected for implementation and were financed by Stadtwerke Rheine, the town's public utility company. The competition has not only contributed to the strengthening of civic engagement, but also means that clubs, institutions, companies and management now work together in new ways.

7 practised by Augsburg, Bonn, Düsseldorf, Erfurt, Essen, Freiburg, Friedrichshafen, Hanover, Köln, Constance, Ludwigsburg, Lüneburg, Munich, Münster, Nuremberg, Tübingen und Wernigerode

Hanover: car-free Sunday – a climate festival

The City of Hanover is freeing up the streets in the city centre in the interests of a colourful life and climate protection. Taking a delight in exercise, enjoying a relaxed stroll, and healthy pleasure are guaranteed when the car-free Sundays, which have been going on for five years now, drive more than 100,000 people into the streets and get them interested in the issue of climate change. About 200 suppliers, associations, and companies present ideas for a city that is pleasant to live in and for a sustainable lifestyle. Fun sports, circus arts, wellness, information, and energy-saving ideas, more environmentally friendly mobility, and renewable sources of energy are getting the issue of climate protection across to citizens and making the subject come alive.

seize the Energiewende as an opportunity to fundamentally discuss the future of our local authorities and to develop interdepartmental visions for tomorrow.

New and decentralized energy systems require new forms of cooperative decision-making, which often go beyond the legal requirements for public participation. That is why it is helpful that, within the funding programme of the ZukunftsWerkStadt project, the Federal Ministry of Education and Research (BMBF) has enabled some local authorities to test new dialogue processes with scientific support. The BMBF should edit the results in a suitable form, intensively ensure their dissemination, and expand its commitment to participatory urban development. The same applies to the competition of the BMBF, in cooperation with the Council for Sustainable Development, for the funding of education and training networks for sustainable development, which would advance the networking of people and the development of innovative projects – many of them for a sustainable energy supply and use.

Constance: creative solar energy – shared ideas for an innovative future

Well-known companies and research institutes in and around the town of Constance (in German: Konstanz) have got together in the solar energy network “SolarLake Konstanz” to support solar power as a reliable energy supply of tomorrow. Within the framework of ZukunftsWerkStadt (funded by the BMBF), interested citizens – together with representatives of the University of Konstanz, local research and business enterprises, the public utilities, and municipal authorities – were invited to develop concepts for the innovative use of solar technology. In a three-month workshop phase, committed participants developed 20 innovative projects that are already giving an insight into the future of solar energy in the city. A jury awarded the three best projects a prize. The next step will be to examine which of the projects can be implemented.

2.7 Searching for the equitable distribution of the burden

The conflicts of aims that already exist with regard to the Energiewende under the present conditions – climate and environmental protection, prices, security of supply – cannot be overlooked. And the issue of the fair distribution of costs is certainly not an easy one to answer.

Essen: Energy Saving Service – a local personal Energiewende

Essen's EnergieSparService ("Energy Saving Service") means that the City of Essen and the Diakonie, the social service arm of the Evangelical Church in Germany, has managed to combine local labour market and social policies with climate change objectives locally. People on low incomes or in receipt of transfer benefits are given free help and advice in their own home. During a visit, the energy-saving helpers advise participants on how they can save money and measure water and energy consumption; they also provide direct support by, for example, installing timers or water-saving regulators. The EnergieSparService not only helps people to save energy and money, but shows them how they can make their contribution to climate protection.

To alleviate the burden on those who have the least, we regard special measures to reduce energy costs for low-income households as sensible. The following have proven to be of value:

- professional energy-saving advisory services, for example, from energy agencies or other information centres [9],
- the distribution of free energy-saving articles [10],
- the establishment of a social fund by a local authority or public utility company [11],
- the training of residents to become energy advisors and the training of the long-term unemployed to gain a qualification as energy-saving assistants and helpers [12].

The Federal Government should give more financial support to energy-related advisory services and promote their expansion. Towns and their environs should also seek to find a balanced distribution of costs.

8 From the group of local authorities taking part in the dialogue on "Sustainable City", Bonn, Freiburg, Constance, Leipzig, Ludwigsburg, Lüneburg, Münster, and Norderstedt were part of the "ZukunftsWerkStadt" programme funded by the BMBF.

9 Augsburg, Bonn, Düsseldorf, Essen, Freiburg, Hanover, Heidelberg, Constance, Cologne, Leipzig, Lörrach, Lüneburg, Munich, Munster, Nuremberg, Ravensburg, Rheine, Suhl, Tübingen, and Wernigerode

10 Bonn, Lüneburg, Munich, and Tübingen

11 Friedrichshafen and Tübingen

12 Freiburg and Lüneburg

Tübingen: blue skies

Since 2008, the "Tübingen macht blau" campaign has been giving various target groups specific tips and incentives as to how each and every individual can personally contribute to ensuring "blue skies" over Tübingen and can also save money as well as CO_2. Public transportation, bicycles, the teilAuto car-sharing scheme, green energy, nutrition, consumption, heat pumps, the energy-efficient refurbishment of schools and homes – all players, from the town council to citizens via local businesses, will be addressed and motivated to behave in a climate-friendly manner. Local authority public utility companies and housing associations are actively participating in the process and are investing in renewable energy and energy efficiency measures. The Lord Mayor is setting a good example for others to follow: he has got rid of his official car and now cycles to work on a pedelec.

At the federal level, the issue of the equitable distribution of costs is being discussed in depth with regard to the Act on Granting Priority to Renewable Energy Sources (RES). We consider the plans of the Government and the Opposition to do away with the EEG levy exemption rules for those companies that do not face international competition to be right. The previous exemption of rail transport from the apportionment under the Renewable Energy Sources Act must, however, be retained, because any further increase in price and thus, in turn, an increase in CO_2 emissions from the private transport is not something be desired under any circumstances.

2.8 Advancing the communal effort of the Energiewende through cooperation

New forms of energy supply and use require new forms of cooperation. In our local authorities, a series of new networks and fruitful cooperation projects has emerged, for example with universities that, as research partners, are advancing the local authority Energiewende; with companies and schools who want to save energy; with craftsmen who are expanding their range of services related to renewable energy and energy-efficient renovation; with churches and associations; and, of course, with the people who live in our local authorities. We attach particular importance to the growing cooperation with the surrounding area. The development of renewable energies, the construction of storage facilities, the adaptation of transmission lines, and the expansion of distribution networks is mainly extensive. The solutions of many mobility problems also lie in the relationship between the town and its environs. Sensible solutions do not conform to the borders of regional authorities. That is why we believe it is essential that cities, towns, rural communities, and administrative districts work together – for the good of the region and taking into account the possibilities for action in each case. Federal and State Governments should use special funding programmes to support cooperation between the town and its surrounding countryside in the interests of the Energiewende even more.

Setting a date for the phasing out of nuclear energy use has changed the view regarding the future viability of investments and business practices in a positive way. Innovative pioneering companies in our local authorities – both public and private – have long been shaping these changes and taking advantage of them for themselves.

We are helping our local authority companies to align their actions with the goals of the Energiewende. Our housing associations are important partners in the energy-efficient modernization of the building stock. Many of our public utilities are currently investing heavily in the development of renewable energies, the use of cogeneration (CHP) and the acquisition or upgrading of distribution networks, and the development of energy efficiency services. In this context, a number of very successful regional cooperation initiatives have emerged. Some public utilities are also involved in the development and testing of innovative smart grid applications.

Augsburg: Regional Climate Action Plan for the entire economic area

The Regional Authorities of Augsburg, the District of Augsburg and the Administrative District of Aichach-Friedberg are closely intertwined as a common economic area. The idea of creating a common regional climate protection concept came into being in 2008. First, the experiences of the participating local authorities in the field of climate protection were evaluated, climate-relevant data collected and successful projects developed. In order to do so, not only the authorities and companies in the region, but also educational institutions, environmental organizations, and initiatives were involved in doing so. The jointly developed concept now forms the basis for systematic and regional climate protection work and contributes to the fact that the idea of climate protection is finding support in all stakeholder groups. In order to implement this, the next step will strive towards common goals and the implementation of pilot projects..

In our local authorities, we are also supporting local private companies with regard to sustainable management and are working closely with them to achieve our Energiewende goals. Due to their range of products, many companies are contributing directly to the Energiewende by, for example, producing or providing products or services in the field of renewable energy, energy conservation, or the energy-efficient refurbishment of buildings. Others are beginning to base their business strategies on the goals of the Energiewende and sustainability. Both of them offer opportunities for new areas of business that will have a noticeable impact on the labour market in our local authorities and will ultimately be reflected in the tax revenue.

To support these positive effects, local authority promotion of trade can make a valuable contribution by, for example, allocating funds, giving preference to companies that apply higher environmental standards to their production or have innovative ideas for good environmental products. To help companies reduce their energy and resource consumption, we have also introduced the local authority initiative Ecoprofit [13].

13 Augsburg, Bonn, Düsseldorf, Erfurt, Essen, Freiburg, Hanover, Cologne, Lüneburg, Munich, Münster, and Rheine

Friedrichshafen: learning from each other globally

The town of Friedrichshafen is not only committed to more sustainability locally and in the region of Lake Constance – it is also active in this field internationally. Within the framework of the Covenant of Mayors – an EU initiative to implement energy and climate change goals – and the EU Project SURE (Sustainable Urban Energy in the ENPI Region) Friedrichshafen is supporting towns in other parts of the world with the implementation of local climate and energy targets. In conjunction with Salé in Morocco and Polotsk in Belarus, stakeholders from Friedrichshafen Town Council have drawn up a sustainable energy action plan and have assisted with the planning and execution of their own action plans. Within the context of international cooperation, Friedrichshafen is one of the most prominent Energy Cities in the region today.

We support the Energiewende also in the context of international cooperation, for example as part of international networks of cities, such as the Climate Alliance, Energy Cities, and the ICLEI – Local Governments for Sustainability. Moreover, many of us have enjoyed relationships with twin cities in Europe or elsewhere in the world for decades. We are making use of these fruitful contacts to jointly promote the sustainable supply and use of energy by means of concrete steps.

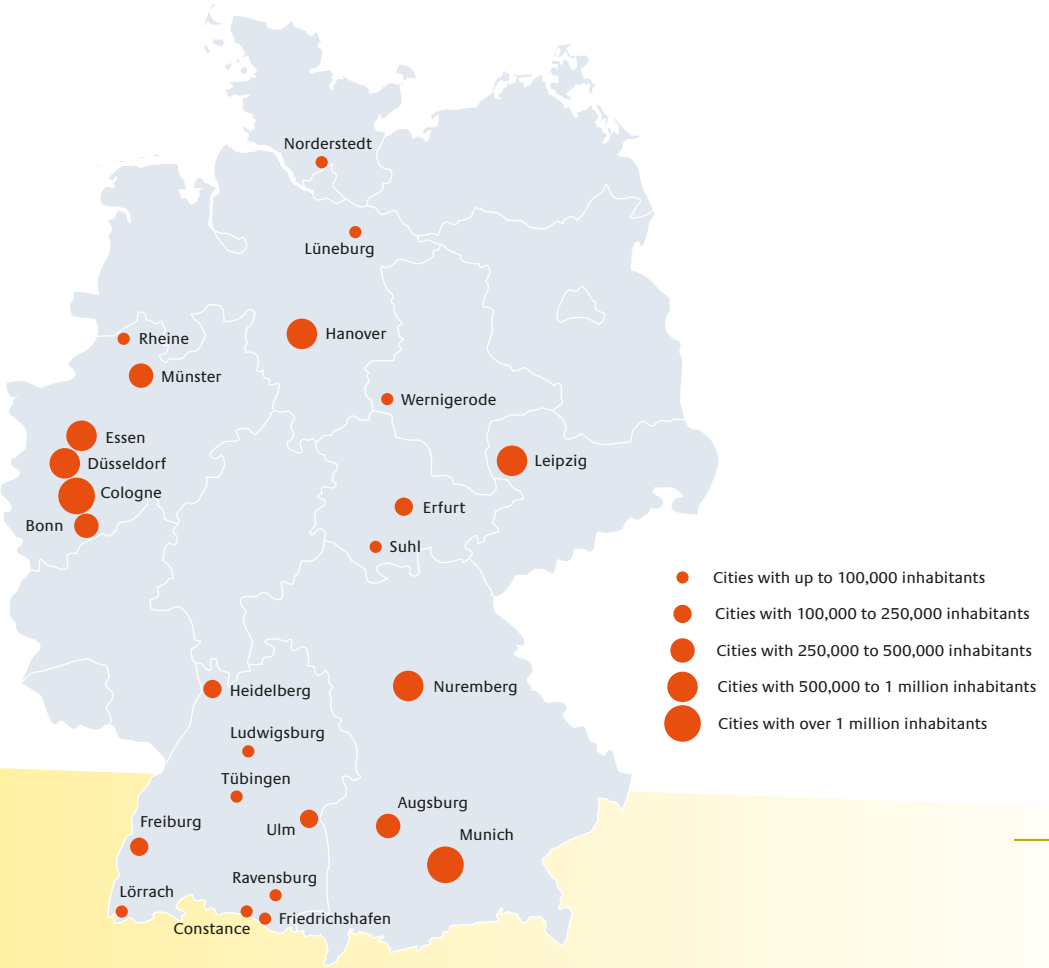
Friedrichshafen

Augsburg

3. Background and participating towns

Since the beginning of 2010, the Lord Mayors of more than 20 German towns dedicated to the idea of sustainability in a special and pioneering way have been meeting up at the invitation of the Council for Sustainable Development (RNE). As part of the “Sustainable City” dialogue, they discuss strategic issues relating to the idea of the “Sustainable City”, exchange news and views on their own approaches as political leaders, and look into the issue of how the sustainability policy of local authorities can achieve a higher profile and greater weight in German politics. Previous results of their work are “Strategic Cornerstones for Sustainable Development in Municipalities”, which was published in October 2010, and “Cities for a Sustainable Germany – Working Together with Federal and State Governments for Sustainable Development”, jointly developed with the German Institute of Urban Affairs (Difu) and published in June 2011. The contents are based solely on the discussions of the mayors. The RNE supports and facilitates the dialogue process.

The Council consists of 15 public persons, who are appointed by the Chancellor for a 3-year term of office. The tasks of the Council include developing contributions to the national sustainable development strategy, specifying concrete fields of action and projects as well as helping to make sustainability a major public concern. The Council has free rein in its choice of topics and forms of action.



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