Energy-Efficient Urban Redevelopment

A Funding Programme for Climate Protection at the Neighbourhood Level
Contents

Energy-Efficient Urban Redevelopment in Germany ............................................. 2
  Federalism: Building Together .................................................................................. 3
  Funding Programmes .................................................................................................. 3

The KfW Programme 432 ‘Energy-Efficient Urban Redevelopment’ ............... 4
  Funding the neighbourhood-based approach .......................................................... 4
  Stakeholders play an important role .......................................................................... 5
  Supporting urban energy-efficient redevelopment ................................................. 6

Integrated Approach ................................................................................................. 7
  Important Programme Phases .................................................................................... 8
  Factors for Success .................................................................................................... 9
  Areas of Activity: Using all Opportunities, Integrating Operations ....................... 10
  Potsdam-Drewitz – Becoming a Climate-Neutral Neighbourhood .......................... 11
  Hildesheim-Drispenstedt – Climate-Friendly Heat-Supply Conversion ................. 11
  Chemnitz-Brühl – Consistently Renewing District Heating ................................. 12
  Stade-Hahle – Approachable Redevelopment ....................................................... 12
  Werra-Meißner-Kreis – Protecting the Climate Together ......................................... 13
  Schofflund – Heat Supply in the Hands of Citizens ................................................. 13
  Redevelopment Management ................................................................................. 14
  An Interview with Redevelopment Managers ......................................................... 15

Glossary ....................................................................................................................... 16

Footnote ....................................................................................................................... 17

Image Credits ............................................................................................................. 17
Energy-Efficient Urban Redevelopment in Germany

Increasing energy efficiency and reducing carbon dioxide emissions are key tasks if we want to confront climate change and master the energy transition. Buildings account for almost 35\%\(^1\) (2019) of Germany’s final energy consumption and about one third of CO\(_2\) emissions. By 2050, the building stock is to be almost climate-neutral.

The central objective of the ‘Energy-Efficient Urban Redevelopment’ funding programme (→ Glossary) is to initiate measures to increase the energy efficiency of buildings and infrastructure in neighbourhoods – both urban and rural.

The ‘Energy-Efficient Urban Redevelopment’ programme of the KfW Group (→ glossary) with the programme number 432, which was launched in 2011, allows requirements for energy-efficient building renovation, efficient energy supply systems and the expansion of renewable energies to be connected to demographic, economic, urban and housing issues. What distinguishes this is that it happens at the neighbourhood level. With the processes initiated on site in the neighbourhood, the professional requirements can be reconciled particularly well with the interests of the actors involved. The neighbourhood (→ glossary) is usually characterized by its manageable size. This lends itself especially well to connecting stakeholders, especially owners. Based on this, integrated energy-efficient solutions can be developed with relative ease.

A central issue of the EU Presidency Germany in 2020 is the revision of the ‘Leipzig Charter on Sustainable European Cities’ signed in 2007. It explicitly names issues highlighted in the KfW programme 432 ‘Energy-Efficient Urban Redevelopment’ such as integrated urban development, neighbourhood-level approaches and the reduction of CO\(_2\) emissions. Other issues important to the programme, such as demography and mobility, are also central objectives of the Charter 2.0.
Federalism: Building Together

German federalism is marked by the cooperation of the federal government, the states and the municipalities. Important frameworks like the Renewable Energy Sources Act (EEG) (→ glossary), the Energy Industry Act (EnWG) (→ glossary), the Combined Heat and Power Act (KWKG) (→ glossary) or the Building Energy Act (GEG) (→ glossary) are adopted at the federal level. As a rule, the implementation is the responsibility of the states through their individual legislation, goal setting and framework development as well as funding programmes. This can range from the design of individual climate-protection or heating laws, to the establishment of so-called Landesenergieagenturen [state energy agencies], to specific local projects.

Funding Programmes

In line with the principles of federalism, funding also follows hand in hand. The programme 432 ‘Energy-Efficient Urban Redevelopment’ is embedded in a wide range of opportunities and proposals to financially support energy efficiency and energy-saving measures.

A central pillar of the funding landscape is the KfW Group’s CO₂ building rehabilitation programme. The promotional bank offers various funding modules for energy-efficient construction and redevelopment for private homeowners as well as for housing companies, municipalities or non-profit organisations.

A sustainable success factor is the bundling of financing and funding from the federal government, the states and municipalities with private-sector capital compositions.

The municipal directive provides financial support for climate-protection projects in municipal settings. Funding will be provided, for example, for the establishment of municipal energy and environmental management, but also for the improvement of cycling infrastructure or climate-friendly waste and sanitation measures.

The state-level urban development programmes (→ glossary) are also vital. The funding programmes enshrined in the Federal Building Code (Baugesetzbuch) help municipalities with urban development and renewal in areas with urban deficiencies and offer a wide range of tie-ins for energy-efficient and climate-friendly urban restructuring.

The funding offered by the federal state is supplemented by a wide range of funding approaches at the municipal and state levels.
The KfW Programme 432
‘Energy-Efficient Urban Redevelopment’

Funding the neighbourhood-based approach

With the KfW program 432 ‘Energy-Efficient Urban Redevelopment’, the energy-efficient redevelopment process is extended from the individual buildings to the neighbourhood.

Compared to the funding of individual measures, this has the advantage that comprehensive, locally adapted and integrated packages of measures can be developed and implemented. Individual solutions can be developed for different quarters.

‘Neighbourhood concepts’ and ‘redevelopment management’ are the two building blocks of the 432 funding programme.

Integrated neighbourhood energy concepts (→ glossary) analyse the potentials for energy saving and identify goals and implementation strategies for the energy-efficient city. They contain statements concerning the cost, feasibility and cost-effectiveness of redevelopment measures and describe procedures for monitoring success. Last but not least, they establish a strategic basis for municipalities to coordinate and synchronize regulatory measures and funding possibilities.

The development of continuous process control procedures as well as implementation are the tasks of the redevelopment management. This can be funded for three years. It is possible to increase the funding period by two years, to up to five years.

Of the two building blocks neighbourhood concept and redevelopment management, 65 percent are subsidised with federal funds through KfW. The remaining 35 percent must be provided by the municipality. Parts of it can also be covered by third parties (e.g. energy suppliers, housing companies, private owners). Up to 20 percent of the eligible costs may also be financed with EU or state funding.
Stakeholders play an important role

Essentially, all stakeholders based in the neighbourhood are asked to carry the implementation process of urban energy-efficient redevelopment into the neighbourhood.

Central stakeholders, in addition to the municipalities, are housing and other property owners, as well as the energy industry.

Associations and interest groups, tenant associations, the Chamber of Commerce and the consumer advice centres act as multipliers, as do educational institutions, churches and social welfare agencies.

Collaboration by representatives of the municipality, the homeowners and the energy sector is of great importance for the success of a neighbourhood concept. Housing companies and energy suppliers are not only of relevance individually, their strategies are often interdependent.

Regarding communication, it is essential to get in touch with relevant stakeholders at an early stage, to organise meetings and to reach agreements with them.
Supporting urban energy-efficient redevelopment

The KfW programme 432 ‘Energy-Efficient Urban Redevelopment’ started in 2011. Since then, up to 50 million euros from the Energy and Climate Fund of the Federal Republic of Germany (→ glossary) have been allocated annually for the KfW program 432 ‘Energy-Efficient Urban Redevelopment’. By December 2019, 1,365 funding commitments (as of 12-31-2019) had been issued for the development of an integrated neighbourhood concept or redevelopment management. Among these, 1,009 neighbourhood concepts and 356 redevelopment management measures received a funding commitment (as of 12-31-2019).

Since the start of the programme, the federal states have developed various supporting funding options. Individual states subsidize the local authorities’ funding share with state funds or offer information and consulting services through state energy agencies.

The steady increase in funded neighbourhood concepts and redevelopment management measures shows that funding frameworks and possibilities of the programme are significant.

Thanks to the simple structure of the programme, not only can it be used in different neighbourhoods, but also in cities and municipalities of different sizes, from the big city to the small town, in urban and rural areas as well as in villages.

Overall, it takes effect in growing and shrinking regions in equal measure. The make-up of the neighbourhood for which an application for funding is submitted can be tailored by the actors on the ground. This results in a wide range of application and combination options.
Integrated Approach

The programme 432 ‘Energy-Efficient Urban Redevelopment’ combines requirements for energy-efficient building renovation, efficient energy supply systems and the expansion of renewable energies with urban planning, demographic economic and housing issues. The basis are integrated neighbourhood concepts.

The processes initiated on the ground aim to help to reconcile not only professional requirements but the interests of the actors involved, as well.

Redevelopment management can guide and accelerate implementation as a cooperative process.

An integrated approach is the basic idea and precept of the programme 432 ‘Energy-Efficient Urban Redevelopment’. This is typified by:

- an object-spanning neighbourhood perspective that takes urban, functional and infrastructural contexts into account,
- the integration of energy goals into further ongoing development processes in the neighbourhood,
- the merging of various topics, including energy, mobility, climate protection, real estate, age-appropriate conversions in the neighbourhood, building culture and social issues such as affordability of housing and construction, and
- a strong focus on stakeholder participation, communication processes and implementation strategies.

- Energy integration (→ glossary) between building – neighbourhood – open space and traffic is playing an increasing role.
Energy-efficient urban redevelopment is a long-term process. In order for it to succeed well, each step of the process should take both the starting point and the eventual goal into account.

The setting of important switches for a successful implementation later on begins with the selection of suitable neighbourhoods and extends to the interaction among stakeholders and to the involvement of neighbourhood residents.

The three- to five-year redevelopment-management period is a realistic time period to kick-start key projects and agree binding timetables for further implementation among stakeholders. However, continuation does not simply mean securing the further implementation in the respective neighbourhood. It also means purposefully using the experiences gained from the projects to initiate energy renewal in other neighbourhoods.
Factors for Success

Prior to and during the application phase

1. **Balance the development** of process and cooperation culture as well as detailed technical activity planning.

2. **Local cooperation partners** are important. They should become part of the process in the concept creation phase at the latest. Vital is the close cooperation of the three actors municipality, housing industry, energy provider.

3. **Cross-departmental** cooperation in local government is a prerequisite for utilizing opportunities for energy efficiency and climate protection at all levels.

Preparation neighbourhood concept

4. The integration of energy-efficient urban redevelopment into the ongoing development processes in the neighbourhood is an important motor for implementation.

5. **Initial projects** that show rapid success at the beginning make the project visible and lead to greater participation.

6. Process control is a core task for which capacities must be allocated in local government.

Establishment and implementation of redevelopment management

7. **Direct access** to municipal administrations increases the ability to act.

8. Clear, publicly articulated **political support** for the redevelopment management work is an essential basis for its implementation powers.

9. Management that is present in the neighbourhood and **actively approaches** residents and especially private owners is important in motivating them to participate.

10. Many redevelopment management tasks require continuity even beyond the maximum funding period of five years – the continuation of the process needs to be pursued.

Measure implementation

11. Depending on the situation in the municipality and the neighbourhood, even **low-threshold financing incentives** can help attract private owners to redevelopment.
Areas of Activity: Using all Opportunities, Integrating Operations

Linking different approaches to action opens up opportunities to advance further goals of integrated urban development through energy-efficient urban redevelopment. For example, measures for the energy-efficient renovation of the building stock can be combined with measures for climate-friendly mobility as well as green and open-space development.

Energy-efficient redevelopment of the building stock:
In 2019, heating accounted for 80% of final-energy-related residential-building energy consumption. The potential for savings here is great. However, the redevelopment of the building stock is important not only from the point of view of energy efficiency and climate protection, but also in view of rising energy prices, in order to enable a socially acceptable housing supply in the long term.

Energy-efficient heat supply:
Looking at the heat supply across buildings and at the neighbourhood level is an important feature of the programme 432 ‘Energy-Efficient Urban Redevelopment’. The neighbourhood energy concepts offer the opportunity to examine the technical feasibility and cost-effectiveness of different solutions, including new and complex ones, and to bring together the actors necessary for the implementation.

Energy-efficient electricity use:
In the neighbourhood helps reduce CO₂ emissions on the one hand and, on the other hand, reduces costs. Within the framework of neighbourhood concepts, it is mostly about savings opportunities for municipal buildings and/or infrastructure. In some projects, intelligent networks and concepts for the design of ‘smart homes’ or a ‘smart city’ are being tested.

Use of renewable energies:
In almost every neighbourhood, there are opportunities to generate or externally source renewable energies. The complete spectrum from solar energy, to bio- and wind energy, to geothermal energy is taken into consideration. The neighbourhood concepts are intended to demonstrate corresponding potentials in the neighbourhood.

Climate-friendly mobility:
With a share of around 19%, transport is one of the major emitters of energy-derived emissions in Germany. Therefore, the necessary change of mobility structures and behaviour towards climate-friendly mobility also begins at the neighbourhood level.

Promotion of climate-conscious consumer behaviour:
With climate-conscious consumer behaviour, ‘soft’ measures come into focus. It is about information, communication, motivation, coordination and service.
Potsdam-Drewitz – Becoming a Climate-Neutral Neighbourhood

The large-scale settlement of Drewitz, which was built at the end of the 1980s, is being completely redesigned under the motto ‘Gartenstadt’ [garden city]. The city, the owner and the municipal utilities developed a forward-looking concept for the renovation of the building stock and the conversion of the heat supply. In addition, measures for climate-friendly mobility and the adaptation of the residential environment to the consequences of climate change were addressed. Since many low-income households live in the neighbourhood, the socially acceptable implementation of energy redevelopment is of particular importance. In the meantime, a number of key projects have been implemented, providing visible momentum for the neighbourhood.

Hildesheim-Drispenstedt – Climate-Friendly Heat-Supply Conversion

The forward-looking conversion of the heating supply is the focus of energy-efficient urban redevelopment in the large estate of Drispenstedt. The reason for the extension of the local heating network was the expiry of the heat-supply contract with the municipal housing company. The energy provider did not want to lose a major heating customer. For this reason, cooperation on a forward-looking solution was launched that enables a socially acceptable heating price and, in the long term, an 87 percent reduction of CO₂ emissions.

The first step was to optimize the existing local heating network and convert it to a low-temperature system. The building society created the conditions for this in the buildings. From 2024, the necessary amount of heat will be largely covered from renewable energy sources. The main purpose is to generate solar heat via vacuum tube collectors on the roofs and store it seasonally in an earth probe storage system (insertion of heat exchangers into the soil and groundwater).

Settlement type: large city
Neighbourhood: Large settlement of prefabricated buildings from the 1980s
Residents: 5,839 (as of 2016)
Area: 37 ha

Settlement type: large city
Neighbourhood: Large settlement from the 1960s and 1970s
Residents: 3,600 (as of 2016)
Area: 50 ha

Operational focus: Comprehensive redevelopment of residential buildings, optimisation of district heating through the use of aquifer storage systems for the seasonal storage of heat (heat storage by groundwater)
Net rental price after redevelopment: 5.50 euros per square metre

New heat-storage volume: 300 m³
**Chenmitz-Brühl – Consistently Renewing District Heating**

In Chemnitz, the expansion of renewable energies close to neighbourhoods is being promoted consistently. A solar field with 2,100 square metres and a solar-heat storage system with a volume of about 1,000 cubic metres lie at the heart of this energy centre that powers the nearby Brühl neighbourhood. For this purpose, the district-heating network in Brühl has been gradually renewed as a low-temperature network. Integrated urban development and energy-efficient redevelopment play off each other: for example, the main library of the Technical University will move into an empty, listed building in the neighbourhood. As an early adopter of the new district-heating network, it is setting an example and as an anchor customer, it guarantees the base utilisation of the system. At the same time, a redevelopment offensive was launched, aimed at privately owned buildings. Each homeowner received an energy certificate with viable redevelopment options.

**Settlement type:** large city  
**Neighbourhood:** inner-city, fin-de-siècle quarter, supplemented with buildings in panel construction in the 1960s and 1970s  
**Residents:** 3,100 (as of 2018)  
**Area:** 22 ha  
**Operational focus:** Building redevelopment, modernisation of the district-heating network and increase of connection density, smart grids and consumption control  
**Area for solar energy production:** 2,100 square metres

**Stade-Hahle – Approachable Redevelopment**

Hahle is a typical housing estate built after the Second World War. The need for redevelopment is particularly high for single-family and terraced houses. A central goal of the energy-efficient neighbourhood concept is to significantly increase the redevelopment rate among buildings. Motivating private homeowners to act was the main task of redevelopment management. With the help of a ‘transparent construction site’ in the middle of the neighbourhood, the renovation process was presented to homeowners, but also to craftsmen, energy consultants and political actors, in an exemplary and clear manner. For this, the city of Stade acquired a typical terraced house for the neighbourhood. The model project was integrated into a comprehensive concept for public relations to give it the necessary visibility. A cost-effective range of advice and brochures adapted to their building type aimed to motivate as many homeowners as possible to undertake renovation measures.

**Settlement type:** medium-sized town  
**Neighbourhood:** Single-family and terraced houses, multi-storey row and individual buildings from the 1950s  
**Residents:** 3,100 (as of 2016)  
**Area:** 48 ha  
**Operational focus:** Activation of private owners for energy-efficient building renovation, promotion of climate-conscious behaviour  
**Great interest in ‘transparent construction site’:** e.g. film documentation
Werra-Meißner-Kreis – Protecting the Climate Together

‘We are stronger together’ is the maxim of the joint project in the Werra-Meißner district in north Hesse. Coordinated by the rural district, six municipalities have joined forces to jointly advance the energy-efficient modernization of neighbourhoods. A core team of four employees belonging to the district town of Eschwege and the Werra-Meißner district advises the building owners on questions regarding the modernisation of their properties. They are supported by an external service provider and personal contacts in the neighbourhoods. In addition, local initiatives, associations and the district’s craftsmen’s guild are involved. In addition to questions about energy redevelopment, heating technology, monument protection and subsidies, other focal points are senior-citizens’ housing as well as the use of biomass.

In the future, this biomass will be collected throughout the district and used for heat generation.

→ Settlement type: partnership of six rural municipalities
→ Neighbourhood: Rural settlements with historic timber-framed buildings in the town and village centres and mixed-use neighbourhoods of different building-age classes
→ Residents in the neighbourhoods: 400 to 2,300 residents per neighbourhood (as of January 2020)
→ Area: The six neighbourhoods have a total area of approx. 170 ha
→ Operational focus: Sustainable further development of the housing stock taking into account the local building culture, conversion of the heat supply using wooden biomass, cooperation with local initiatives and the crafts sector.

→ Working together: partnership of six municipalities

Schafflund – Heat Supply in the Hands of Citizens

An efficient, climate-friendly heating supply in rural areas – together with its citizens, the municipality of Schafflund is breaking new ground. With high expectations in terms of transparency and citizen participation, a neighbourhood energy concept was created. In a number of topical workshops, useful solutions were developed together with landowners and citizens, in combination with individual building-renovation measures and a communally organized regenerative heat supply. In addition to the possibility of participating actively, a communication platform was created on the Internet, where all important information was available.

→ Settlement type: rural municipality
→ Neighbourhood: Mixed-use neighbourhoods
→ Residents: 740 (as of 2016)
→ Area: 95 ha
→ Operational focus: Activation of private owners for the renovation of buildings, construction of a local heating supply based on renewable energies
→ Annual savings: 71.5 t CO₂
Energy-Efficient Urban Redevelopment

For many complex fields of action and long-term urban development projects, it has often been emphasized that a central, coordinating body is indispensable for the long-term advancement of the processes.

The KfW programme 432 ‘Energy-Efficient Urban Redevelopment’ recognizes these experiences and provides for the use of redevelopment management as a second program module in addition to the development of integrated neighbourhood concepts. Due to the complex qualification requirements, this often consists of an interdisciplinary competence team.

Redevelopment Management Task Profile

The specific tasks of redevelopment management are manifold and can vary greatly depending on the local context and the objectives of the integrated neighbourhood concept.

An important area of responsibility is the communication with and activation of actors. The redevelopment management sensitizes local actors to the concerns of energy-efficient urban redevelopment. It can appeal to private owners, provide targeted advice in order to attract them to redevelopment measures. A priority can also be addressing residents and their participation in the redevelopment process. Another area of activity is the networking of key actors. This includes coordinating steering meetings, but also acting as an intermediary in the event of conflicts of interest.

Another important responsibility is to flesh out measures based on the integrated neighbourhood concept. For example, management can draw up a roadmap for their implementation or support the acquisition of funding. At the same time, it can ensure that neighbourhood development is embedded in higher-level processes. To this end, it ensures a continuous exchange with all relevant departments in local government.

Redevelopment Management Expertise

In addition to the communicative skills, a minimum of technical know-how in the field of energy and building technology is required in order to gain the necessary acceptance from all partners and to be able to assess tasks independently. Knowledge of other processes of urban and neighbourhood development is also essential in order to be able to integrate energy redevelopment appropriately.
An Interview with Redevelopment Managers

In the Dülken neighbourhood of Viersen and in the Port Arthur/Transvaal neighbourhood in Emden, redevelopment managers have been active for some time. A variety of approaches is taken. While in Emden redevelopment management is used as a lead for other funding programmes, redevelopment management is linked to existing management structures in Viersen.

For the interview, the redevelopment manager Detlef Dunker was our partner in the city of Emden, and Dieter Schmitz-Steger for the city of Viersen.

What was the reason to set up redevelopment management?

**Detlef Dunker:** We are interested in the neighbourhood of Port Arthur/Transvaal. The architectural style of the houses is representative of the entire city area. It has long been clear that many buildings need to be renovated. This was an occasion to develop a neighbourhood concept. Its measures are now ready to be implemented. We see the energy-efficient renovation of numerous residential buildings as a beacon for the entire city. With redevelopment management, we can take steps in this direction.

**Dieter Schmitz-Steger:** In the historic centre of Dülken, many buildings are in a very poor condition. Nevertheless, it is not easy to win property owners over for an energy-efficient redevelopment. We have learned that targeted and individual consultation is a key to this. With redevelopment management, we can create a positive climate for investment overall. It is also important that everyone recognizes how this improves the image of the neighbourhood.

What are important steps in establishing a redevelopment management system?

**Detlef Dunker:** Simply get a foothold on site, first of all. Initially, the redevelopment management used the office of the community worker in the neighbourhood and space at the Sparkasse bank. Meanwhile, it has moved into one of the first houses of our lighthouse project on site. This is a house that was renovated as an exemplary ‘open construction site’. It helps many property owners get into even better conversations with us. At the same time, we can use the building to point out what to look for during a renovation and what works well. And, of course, it’s also easier to talk about costs.

**Dieter Schmitz-Steger:** At first it was important for us to find out what we need. It was clear that all the necessary expertise cannot be bundled in one person. That is why we not only decided to hire a redevelopment manager as an individual, but also a redevelopment management, i.e. an interdisciplinary, team.

What does redevelopment management connect to?

**Dieter Schmitz-Steger:** Real-estate management is already established in Dülken. The two managements will overlap for a time, so that knowledge, experience and networking structures are passed on. The redevelopment management is thus embedded in an overall strategy for upgrading the neighbourhood. This also increases the confidence of local owners.

**Detlef Dunker:** In Port Arthur/Transvaal, we are using the opposite path: We want to become part of the urban development support programme ‘Soziale Stadt’ [social city] and enhance the neighbourhood on many levels. Energy-efficient urban redevelopment paves the way for this and is linked with other topics.

What are the responsibilities of redevelopment management in such heterogeneous urban neighbourhoods?

**Dieter Schmitz-Steger:** In Dülken, it is incredibly important to be in contact with the people. Many defining buildings belong to private owners and retailers. Redevelopment managers must visit them, talk to them and advise them over a longer period of time. It also has the task of helping them understand new topics while also keeping an eye on what is actually feasible for the individual owner.

**Detlef Dunker:** At the beginning, we approached the topic of energy-efficient redevelopment very scientifically and, frankly, beat people to death with data. Then we noticed: they want to be met where they are and keep things firmly in hand. With newspaper articles and expert lectures, we have launched the campaign ‘Taten statt Warten’ [doing instead of waiting]. We have offered citizens a simple check for their buildings. And we kept raising the issue until people took notice. A good template for the redevelopment manager, who can then pick up at this point.
Glossary

Accompanying Research Energy-Efficient Urban Redevelopment
On behalf of the Federal Ministry of the Interior, Building and Community (BMI), the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) and the KfW Group, accompanying research has been working since 2013 to gain insights from the implementation of the KfW funding programme 432 ‘Energy-Efficient Urban Redevelopment’ for practice, science and politics.

Federal Ministry of the Interior, Building and Community – BMI
The Federal Ministry of the Interior, Building and Community (BMI) is a supreme federal authority in Germany. Its business areas include civil protection, integration facilitation, sports promotion, security issues as well as construction, city and housing.

Federal Institute for Research on Building, Urban Affairs and Spatial Development – BBSR
The Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) is a departmental research institution under the portfolio of the Federal Ministry of the Interior, Building and Community (BMI). The Federal Ministry requests both research and development services as well as science-based services. (Source: BBSR)

Renewable Energy Sources Act – EEG
The aim of the Renewable Energy Sources Act (EEG) is to increase the share of renewable energies in the electricity supply through regulated purchases and remuneration.

Energy and Climate Fund – EKF
In 2011, the Federal Government established the Energy and Climate Fund (ECF) with the aim of advancing the implementation of the energy transition. While the fund had a volume of 780 million euros in 2012, the Federal Government increased it to 3.3 billion euros in 2013 and even to 4.5 billion in 2019. (www.bundesregierung.de)

Energy Industry Act – EnWG
The Energy Industry Act (EnWG) contains basic provisions on the law of grid-bound energy. It is intended to provide the safest, most affordable, consumer-friendly, efficient and environmentally sound supply of electricity and gas, which is increasingly based on renewable energies.

Energy Act for Buildings – GEG
The Building Energy Act (GEG) unifies the Energy Saving Act, the Energy Saving Ordinance and the Renewable Energies Heat Act, thus forming a set of unified rules defining energy requirements for new buildings, existing buildings and the use of renewable energies for the heating and cooling supply of buildings.

Integrated Neighbourhood Energy Concepts
The neighbourhood concept is a program component of the KfW programme 432. In the framework of integrated concepts, potentials for energy saving, efficiency improvement through CO₂ reduction and targets are identified, implementation strategies are formulated and a focus is placed on stakeholder participation and communication processes.

KfW Group
The KfW Group (KfW) is the national promotional bank in Germany. Shareholders are the federal government with 80 percent and the federal states with 20 percent. The task of KfW is to carry out support measures on behalf of the state. Support in the areas of energy efficiency and renewable energy is provided, for example, through low-interest loans or subsidies for investments.

KfW Programme 432 ‘Energy-Efficient Urban Redevelopment’
The KfW programme ‘Energy-Efficient Urban Redevelopment’ promotes integrated neighbourhood energy concepts and redevelopment management with the programme part 432. The 201 and 202 programme parts provide investment support for buildings-spanning and infrastructural supply systems. The Federal Ministry of the Interior, Building and Community provides the funding for the energy-efficient renovation process from the individual building to the district from the Energy and Climate Fund.

Combined Heat and Power Act
The Combined Heat and Power Act promotes the increase of electricity generation from cogeneration by modernising and constructing combined heat and power plants, support for the market introduction of the fuel cell, and promotion of the construction and expansion of heating and cooling networks as well as the construction and expansion of heating and cooling storage systems.

Neighbourhood
For the use of this publication, a neighbourhood is defined as an area consisting of several interrelated private and/or public buildings, including public infrastructure. It corresponds to an area below the district size. As part of the funding programme 432, we defined neighbourhood to be at least two buildings on two plots.

Redevelopment Management
Redevelopment management is a programme component of the KfW funding programme 432. Its goal is to develop continuous process control, so that the measures formulated in the neighbourhood concept are actually implemented.

Energy Integration
The term energy integration describes the interaction between the different energy-industry sectors. The areas of electricity, heat and mobility are brought together in order to make optimum use of renewable energies.

Urban Development Funding
Since the beginning of the 1970’s, the Federal Government and Federal States have together been providing financial support for investments in the reformation and development of cities and communities in the framework of programmes for the urban development grants. This is to strengthen the function of the cities as economic and living locations in areas with a serious deficit in the field of urban planning. Regulations for carrying out urban development grants are defined in Constitutional Law, the Federal Building Code and the administrative agreements between the Federal Government and the Federal States. (Source: BBSR)
Footnote

1 https://www.dena.de/themen-projekte/energieeffizienz/gebaeude/ (20.01.2020)
2 KfW Group
3 KfW Group

Image Credits

Title: Georg Kronenberg
P. 2: Georg Kronenberg
P. 3: Milena Schlösser
P. 4: Accompanying Research Energy-Efficient Urban Redevelopment
P. 5: Accompanying Research Energy-Efficient Urban Redevelopment
P. 6: Accompanying Research Energy-Efficient Urban Redevelopment
P. 7: left Ulf Böttcher, right Adam Sevens
P. 8: Accompanying Research Energy-Efficient Urban Redevelopment
P. 9: 3KOMMA3 Medienproduktion
P. 10: STATTBAU Stadtentwicklungsgesellschaft mbH, Berlin
P. 11: top Urbanizers, bottom gbg-Hildesheim/Satow
P. 12: top Urbanizers, bottom Milena Schlösser
P. 13: top Diana Wetzstein FachwerkAgentur, bottom plan zwei
P. 14: Münchner Gesellschaft für Stadterneuerung mbH