

SUSTAINABLE PROJECTS FRANKFURT RHEIN-MAIN

KLIMAtours takes you to
energy-efficient projects in the following areas:

LIVING
SKYWARDS SUPPLYING/
RECREATION WORKING DISPOSING
LIVING IN THE NEIGHBORHOOD ARRIVING AND DEPARTING
FROM THE REGION EXPERIENCING AND PROVIDING INFORMATION
PRESERVING AND MODERNIZING PRODUCING GETTING WELL/KEEPING WELL AND FIT
LEARNING AND ADMINISTRATING



KLIMAtours Frankfurt on the Main

Join us!



I cordially invite you to our **KLIMAtours (Climate Tours)**. Join us and see for yourself how inspiring sustainable building can be.

Manuela Rottmann
(Department for Environment, Health and Personal)

Frankfurt is the city of energy efficiency. The Main metropolis comes with the largest number of passive house apartments and the most energy-efficient office buildings in Germany.

Our **KLIMAtours** offer experts the opportunity to take a look behind the scenes of climate protection in Frankfurt. We open doors, basements and rooftops for you, demonstrating how a communal heating power station operates, how passive house ventilation works, or how you can cool offices and save energy.

Are you interested in a specific topic?

We'll be glad to arrange a climate tour tailored to your needs.

Don't hesitate to contact us.

Browse through the following pages and find a small selection of energy efficient residential buildings, schools and office buildings as well as newly planned districts and eco-friendly power plants. Other projects you can visit are listed under www.klimaschutzstadtplan-frankfurt.de.

KLIMAtours is a project of the Municipal Energy Agency (Energierreferat) of the City of Frankfurt, in collaboration with architectural platform AiD.

www.klimatours-frankfurt.de

www.frankfurt-greencity.de



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KLIMAtours Frankfurt on the Main

In collaboration with Architektur im Dialog (AiD), the Frankfurt Municipal Energy Agency (Energierreferat) organizes guided tours to sustainable buildings.

Innovative planning and building is one of the great challenges of our time, especially in the face of global warming and enormous social change. Buildings and cities of the future have to fulfill not only economic, but also social and ecological requirements.

As „passive house capital“ and founder of the „Green Building“ architecture award for innovative projects, the City of Frankfurt leads the way. The comprehensive goal is to become European Green Capital.

Our commitment arouses interest in experts all over the world. They form the target audience of our „KLIMAtours“. The basic idea is to initiate processes and to promote transfer of knowledge.

The „KLIMAtours“ are being organized by the Municipal Energy Agency (Energierreferat) of the City of Frankfurt, in collaboration with architectural platform Architektur im Dialog (AiD). In order to share our Frankfurt experiences with a professional audience, we open the doors to residential buildings, schools, power plants and office buildings – some of them still under construction.

Our „KLIMAtours“ catalogue shows some of the groundbreaking Frankfurt Rhine-Main building projects. Most of them can be explored in the course of a guided tour. For this purpose we are in permanent contact with architects, building owners and operators, municipal authorities, event industry suppliers, speakers, interpreters, and some media.

You are invited to put together your individual tour! If you need help, we adapt your tour to your individual requirements.



Example KLIMAtours: Group from Barcelona

09:00 a.m.: Start – Scheffelhof (residential building)
Stefanie und Hans-Dieter Rook, architects



10:30 a.m.: Construction site Diakonissenareal (deaconess area)
Thomas Haimann, B&V Braun Volleth Architects



12:00 (noon): Ziehenschule (public school)
Harald Heußner, Municipal Building Department, and Marcus Schmitt, architect



15:00 p.m.: Headquarters Unfallkasse Hessen (insurance company)
Manfred Theil, Gaspar-Theil-Ingenieure GmbH



16:15 p.m.: Building refurbishment Tevestraße 36-54
Werner Neumann, PhD, Energy Department



17:15 p.m.: Multifunctional building Rebstock
Harald Heußner, Municipal Building Department, and Rochus Gabriel, architect



Foto: Stefan Heßling



Scheffelhof

Ten urban houses on an extremely constricted site form a group of community orientated residential buildings. They exhibit a high creative and functional quality, proving the potential of inner-city redensification in densely built-up urban areas. Contrary to still popular opinion, this project clearly shows that the consistent implementation of passive house requirements doesn't necessarily lead to an inferior architectural quality.

Green Building Award 2009.

Architects: Rook Architects, Frankfurt

Building owner: Building owners association

Foto: Stefan Heßling



Minimum Impact House

The Minimum Impact House offers an innovative solution for the redensification of a remaining free area difficult to use. Remarkable is the high architectural quality, combined with high flexibility of use. Renewable resources, solar heat and utilization of rainwater make the wooden building with its green roof terrace a successful example of a holistically sustainable optimization. The complete ecobalance underlines the role model character of the project. Green Building Award 2009.

Architects: Drexler Guinand Jauslin Architekten GmbH

Building owner: private

Foto: faktor10



Residential complex Gremppstraße

The pilot project „Living around St. Jacob's“ led to the implementation of a residential complex with 19 apartments in the district of Bockenheim. It was the first Frankfurt apartment complex built to passive house standards. Moreover, it proved that you can build with respect to economical and ecological aspects and provide affordable housing for families at the same time. Selling price: € 2.000/sqm.

Architects: faktor10, Darmstadt

Building owner: Frankfurter Aufbau AG, AGB Holding

Certificate: Audited passive house (PHI)

Foto: Stefan Forster Architekten



Campo Bornheimer Depot

On the site of the former tram depot in the Frankfurt district of Bornheim 11 urban houses with about 140 apartments were built. By preserving the listed facade, the planners in charge kept the original historic character of the area. Every single building fulfills the passive house standard and is accessible for people with disabilities. Heating energy consumption: 15 kWh/sqm.

Architects: AS&P - Albert Speer und Partner, Stefan Forster Architekten, Scheffler & Partner Architekten BDA, Hoechstetter und Partner

Building owner: ABG Frankfurt Holding

Foto: Landes & Partner



Diakonissenareal (Deaconess area)

Within the framework of a reorganization, the site „Diakonissenareal“ was turned into a new residential complex. During the first phase of construction an ensemble of old and new buildings was developed. During the second phase of construction the municipal housing association FAAG implements 88 rented apartments and 16 owner-occupied flats as well as a day-care center. Energy standard: passive house.

Architects: B&V Braun Volleth Architekten, Frankfurt
Landes & Partner, Frankfurt

Building owner: FAAG Frankfurter Aufbau AG, Frankfurt

Foto: Stefan Forster Architekten



Idsteiner Straße

The new residential passive house represents the link between Hellerhof residential area and Mart Stam's area vis-à-vis. In terms of scale and proportion, the building reinterprets the „Gründerzeit“ character of the building stock („Gründerzeit“ is an established term for the early years/decades of the founding of the German Empire in 1871) and completes the residential area. All in all, 27 apartments were built to passive house standards.

Architects: Stefan Forster Architekten, Frankfurt
Building owner: ABG Frankfurt Holding

Foto: Stefan Forster Architekten



Living in Naxos

On the former property of the Naxos factory a new residential complex with 116 apartments is being built. Along Wingertstraße the elongated structure with its grand balconies establishes a relationship with the listed Naxos Hall in the court. Towards the road, crossbars divide the area into separate garden yards. Along Wittelsbacher Allee the city block finds its completion in a conventional way. Energy standard: passive house.

Architects: Stefan Forster Architekten, Frankfurt
Building owner: ABG Frankfurt Holding

Foto: FAAG TECHNIK GmbH



Sophienhof

A residential and office complex built to passive house standard. The Sophienhof project in Frankfurt-Bockenheim with 38 rented apartments, 111 owner-occupied flats and an underground garage was completed in 2006 and is the largest passive house in Germany at present. The high-quality construction was implemented on a former piece of urban waste land.

Architects: FAAG Technik GmbH, Frankfurt
Building owner: FAAG
Certificate: Audited passive house (PHI)



Foto: Stefan Heßling

Helvetia Building

The office building in downtown Frankfurt is an example of the successful conception and implementation of energy-efficient technology. The technology was continuously inspected during the construction phase and perpetually optimized during operation. The result: Even 10 years after completion of the building its energy consumption is still exemplary.

Architects: Lederer+Ragnarsdóttir+Oei, Stuttgart
Building owner: Helvetia Schweizerische Versicherungsges. AG
Green Building Award 2009



Foto: B&V Braun Volleth Architekten

Unfallkasse Hessen

With the construction of this 3-liter house a unique and ground-breaking energy saving concept for office buildings became reality. The building is remarkable for its exceptional energy-efficiency, made possible by a natural ventilation system with air boxes in its facade. Further components: use of environmental energy (geothermal heat exchanger, geothermal probes) and cooling through concrete core activation in the ceiling.

Architects: B&V Braun Volleth Architekten, Frankfurt
Building owner: Unfallkasse Hessen



Foto: B&V / Thomas Ott

Stiftung Waisenhaus (Orphanage Foundation)

The foundation's new residence is currently the „first certified office passive house in Frankfurt“ and among the award winners of the „Energy-Optimized Building 2009“ competition carried out by the Federal Ministry of Economics. Moreover, remnants of Frankfurt's medieval fortifications (40 meters long, 4 meters high) were incorporated into the new building. The building was put into operation in June 2011.

Architects: B&V Braun Volleth Architekten, Frankfurt
Building owner: Stiftung Waisenhaus, Frankfurt
Certificate: Audited passive house (PHI)



Foto: MOW Architekten

Süwag Energie AG

The new headquarters of the Süwag Energie AG with its curved triangular structure is situated at the river Main. The flowing contours of the building, which connects the urban structures in the surroundings, are being continued in the inner courtyard. The energetically compact shape was equipped according to the „Life Earth“ energy concept, which aims at high energy-efficiency and environmental compatibility.

Architects: MOW Architekten Olschok Westenberger + Partner BDA, Frankfurt
Building owner: Süwag Energie AG, Frankfurt

Foto: OFB



Straßenverkehrsamt (Road Traffic Licensing Department)

With the relocation of the Road Traffic Licensing Department to the Westhafen (West Harbor), the City of Frankfurt underlines its commitment to sustainability: The new building (size of the lot: 1600 sqm) is an innovative passive house in a clear cubic shape. Geothermal energy/air is the primary energy source, heat supply is carried out through heat pumps nurtured by geothermal energy.

Architects: msm Meyer Schmitz-Morkramer Architekten
 Building owner: OFB Projektentwicklung GmbH
 Certificate: DGNB Gold

Foto: Union Investment Real Estate GmbH



Europaallee 12-22

An above-average energy-efficiency is reached by a diversity of measures, for example by heat recovery of the exhaust air, by individual control of the room temperature or a sophisticated daylight system, which renders artificial light superfluous, even on cloudy days. The amenity values are further enhanced by a very efficient utilization of floor areas and rooms that can be used flexibly.

Architects: Schneider+Schumacher Architekturbüro mbH
 Building owner: CA Immo Nord 1 Projekt GmbH & Co. KG
 Certificate: DGNB Silber

Foto: Albert Speer & Partner GmbH / Fraport AG



Fraport Headquarters

The task was to replace the existing buildings with an up to date new building, including an underground garage, and to utilize the entire area in an optimal way. According to sustainability and efficiency requirements, the building is to generate low operation and utilization costs and offer a high user comfort at the same time.

Architects: AS&P - Albert Speer & Partner GmbH, Ffm
 Building owner: Fraport AG, Frankfurt
 Certificate: Pre-Certificate DGNB Gold

Foto: Albert Speer & Partner GmbH



Baseler Arkaden

Offices with low energy standard. The „Arcades“ put emphasis on a sustainable energy concept. Large windows reduce the need for artificial light. Box-type windows allow a natural, individual ventilation of the office rooms. The building uses thermal water for heating and cooling. Heat emission and cooling are carried out by thermoactive ceilings.

Architects: AS&P - Albert Speer & Partner GmbH, Ffm
 Building owner: FAAG Frankfurter Aufbau AG

3 Preserving and modernizing

Foto: Lengfeld & Wilisch Architekten BDA



„Klassikstadt“ – Conversion factory site

The castle-like brick house in the Frankfurt district of Fechenheim was built in 1910 and formerly served as a farm machine factory. The „Klassikstadt“ („Classical City“) project transformed the building into a center for vintage car aficionados. The architectural focal point of the complex is the atmospheric inner courtyard, in combination with a horizontal and vertical space of interaction inside the building.

Architects: Lengfeld & Wilisch Architekten BDA, DA
Building owner: Klassikstadt GmbH

Foto: Stefan Forster Architekten



Apartment tower Lyoner Straße

The Lyoner quarter in the Frankfurt district of Niederrad gets a new face. The rebuilding of an office tower into an apartment house and the addition of three floors mark the beginning of the Lyoner quarter's restructuring. Enlarged windows, new proportions and a „ribbon facade“ help the hitherto not very charming, but pragmatic cube to develop a fresh look.

Architects: Stefan Forster Architekten, Frankfurt
Building owner: Dreyer Vierte Verwaltungsgesellschaft mbH

Foto: Eibe Sonneck



WestendGate

WestendGate, also known as Marriott Hotel, received a comprehensive modernization. The building measures, among others, contained an architectural and energy-efficient redesign of the office floors, including the lobby and a conference floor for the hotel, as well as a redesign and modernization of the complete facade, the new installation of solar facade modules, the renewal of the building's air-conditioning, and the optimization of the lighting system. The new facade panels were equipped with additional insulation.

Moreover, the exteriors received a new design, including a new projecting roof.

After completion of work, energy consumption and carbon emissions have been reduced by about 36 per cent.

Architects: Existing building: Siegfried Hoyer, Richard Heil
Restructuring: Just/Burgeff Architekten, Ffm with a3lab, Frankfurt
Building owner: Aberdeen Immobilien KAG
Certificate: EU Green Building Certificate 2009

3 Preserving and modernizing

Foto: ABG FRANKFURT HOLDING



Tevesstraße

The 50s style residential buildings in Tevesstraße represent a groundbreaking renovation project: It was the first time that the passive house standard was implemented in social housing.

Architects: faktor10, Darmstadt
Building owner: ABG Frankfurt Holding, Frankfurt
Co-normative research: Passivehouse Institute, Darmstadt
Certificate: EnerPHit (Passive House Institute)

Foto: faktor10



Rotlintstraße

From upgrading the building stock's energy performance according to passive house standard with 15 kWh/sq m p.a. to „zero emissions house“ with „rent including heating“ scheme. 54 small flats with a total of 2.950 sqm living space are being transformed into 61 flats with about 60–90 sqm living space. For the first time a rapeseed-fired block heating station will be integrated, while the facade receives a modernization with precast wooden elements and cellulose.

Architects: faktor10, Darmstadt
Building owner: ABG Frankfurt Holding

Foto: AS&P



Heinrich-Lübke-Siedlung

The renovation concept of the Heinrich Lübke Housing Estate in Frankfurt Preungesheim attaches importance to strengthening the qualities of the existing housing estate. The planners in charge want to support the neighborhoods in the separate groups of houses through individually designed garden courtyards and a realignment of the infrastructure provision. In parts, the urban structure is rounded off with new buildings. The fronts of the existing buildings are being opened by an enlargement of the windows and receive heat insulation as well as a stone plinth. Formerly non-insulated loggias are being integrated into the flats and replaced with separate balcony constructions. The modernization is being completed by a holistic energy and building concept with energy standards that lie below ENEC 2009 and even reach passive house standard. The aim is to reduce housing estate's carbon emissions by more than 90 per cent. The complete renovation will take about 3 years, the construction work started in July 2010. Total area: 50.000 sqm.

Architects: AS&P - Albert Speer & Partner GmbH, Frankfurt
Jo. Franzke Architekten, Frankfurt
Building owner: ABG Frankfurt Holding

4 Learning and administrating



Foto: lumenphoto

Annex Ziehenschule

The new passive house architecturally develops from the surrounding green school campus. The construction's vegetated facade competes with the existing „Gründerzeit“ school building and distinctly improves heat insulation in summer. During operation the concept even achieves energy yield.

Architects: Marcus Schmitt Architekten BDA, Frankfurt
Project management and overall plan:
Frankfurt Municipal Works Service
Building owner: Frankfurt Education Authority



Foto: Haber Turri Architekten

Day-care center, Harheim-Nord

The project is accompanied by an intense collaboration with the Darmstadt Passive House Institute. This collaboration and the continuous exchange of information with specialized and licensed companies make sure that the annual demand of thermal heat will distinctively lie below 15 kWh/sqm and that the annual demand of primary energy will lie below 120/kWh/sqm.

Architects: Haber Turri Architekten, Ffm
In collaboration with: Project management of Frankfurt Municipal Works Service
Building owner: Frankfurt Education Authority



Foto: Michael Grzimek Schule

Michael Grzimek School

The planners in charge came up with an essential revitalization concept for the 50's school building. A masterplan outlined the most sustainable solution, with respect to functional and economical aspects (preservation or demolition). The restructured buildings as well as the new buildings were implemented according to low-energy standard EnEV -30 per cent. An optimal overall energetic balance was achieved.

Architects: Hein & Troy, Bregenz mit Kavan Architekten
Project management: Frankfurt Municipal Works Service
Building owner: Frankfurt Education Authority



Foto: 4a Architekten

Passive house school Riedberg

Elementary school with day-care center and gym. After extensive consultations, which had started in 2001, the City of Frankfurt in spring 2003 decided to build the new Riedberg elementary school and day-care center according to passive house standard. A school or day-care center is ideally suited for the passive house style.

Architects: 4a Architekten, Stuttgart
Project management: Frankfurt Municipal Works Service
Building owner: Frankfurt Education Authority
Certificate: Quality-tested passive house (PHI)

4 Learning and administrating

Foto: AS&P / Jens Braune, Frankfurt



Day-care center Goldstein

The day-care center Goldstein unites the demand for an up-to-date, energy-efficient and sustainable passive house standard with the need for bright, friendly and natural rooms where children can play, learn and grow up. The day-care center is divided into a single-story entrance and connection building and a two-story structure. The latter is orientated from north to south and fulfills the main functions.

Architects: AS&P - Albert Speer & Partner GmbH
Project management: Frankfurt Municipal Works Service
Building owner: Frankfurt Education Authority

Foto: lumenphoto



Day-care center Griesheim

The single-story kindergarten planned in the shape of a boomerang establishes an „island for kids“ amidst an area characterized by multi-story apartment buildings. Despite an disadvantageous surface/volume ratio, the target value for passive houses was reached not only without problems but also at low costs. The actual costs even were slightly below the initial cost calculations.

Architects: Leber Architekten, Darmstadt
Project management: Frankfurt Municipal Works Service
Building owner: Frankfurt Education Authority

Foto: lumenphoto



Wöhlerschule Gym and indoor swimming

The listed 50's school is being equipped with a gym and an indoor swimming pool that seamlessly integrate into the existing building. The challenge consists in building for the future and showing respect for the existing high-quality architecture at the same time. The energy balance of an indoor swimming pool is problematic by nature. Nonetheless, excellent consumption values were achieved.

Architects: Baufrösche, Kassel
Project management: Frankfurt Municipal Works Service
Building owner: Frankfurt Education Authority

Foto: Roland Halbe



Gym Bonifatiuschule

In 2007 the City of Frankfurt started the competition „Modular system gym built according to passive house standard at 26 schools in Frankfurt“. The results were implemented at 4 schools so far. In 2010 the modular wooden passive house constructions were honored with the Passive House Special Award of the Federal Ministry of Transport, Building and Urban Development.

Architects: D'Inka Scheible Hoffmann Architekten, Stuttg.
Project management: Frankfurt Municipal Works Service
Building owner: Frankfurt Education Authority

5 Experiencing and providing information

Sports and functional building Brühlwiese



Foto: Hochbauamt Frankfurt

The sports and functional building, which was equipped with a red glazed larch-wood shutter and a backlit entrance facade, is a strong architectural statement. In twilight hours passersby can recognize stylized soccer players on fiberglass boards. For energy-efficiency reasons the passive house does without dark inside corridors. The exceptionally large roof connects the building with the open spaces and the sports facility.

Architects: Rochus Gabriel, Architekt/ Municipal WS
Project management: Frankfurt Municipal Works Service
Building owner: Frankfurt Department for Sport

Skyline Plaza



Foto: ECE / CA Immo Deutschland GmbH

Due to a framework of various measures (including natural ventilation, utilization of rain water and 170 bicycle parking spaces) the scheduled shopping center receives a pre-certification in Gold. Certification already starts during the planning and construction process. The shopping center will be barrier-free and uses building materials that are low in emissions and eco-friendly.

Architects: ECE / facade design: Prof. Jourdan, Frankfurt
Building owner: CA Immo Deutschland GmbH/ECE, Frankfurt
Certificate: Pre-Certificate in Gold, DGNB

6 Getting well/Keeping well and fit

Clinical center Höchst



Foto: Wörner und Partner / Stein PM

With the first European clinical center built according to passive house standard the City of Frankfurt sets a milestone in energy-efficient building. We want to show that sustainable and climate friendly building is possible not only in the field of apartment houses and schools, but also in special constructions. The clinical center Höchst will be one of the most forward-looking and energy-efficient clinical centers in Europe.

Architects: Wörner und Partner, Frankfurt
Building owner: Klinikum Frankfurt Höchst GmbH

7 Supplying/Disposing

Foto: Mainova AG



Biomass power plant Fechenheim

The central facility, which is being operated in power-heat cogeneration, shows an exemplary environmental balance. For two main reasons: the short transfer distances for the timber delivery and the close proximity of the heat customers. Therefore, the biomass power plant was awarded the City of Frankfurt's „Climate Star 2004“.

Primary energy sources: timber and horticultural waste.

Foto: Mainova AG



Heating plant Niederrad

The heating plant Niederrad started in the 1960's as a mere heat supply station. Later on it was repeatedly rebuilt and extended. Due to power-heat cogeneration, the facility today produces electricity as well. Since 1998, another power-heat cogeneration facility has been supplying 140 MW thermal power. By now, the high-pressure boiler is running on natural gas. In 2002 Mainova AG settled for a comprehensive modernization of the heating plant. Since 2003 an efficient gas and steam turbine facility is in operation.

Foto: Sonneninitiative e.V.



CitizenSolarPowerPlant Exhibition Hall

If there was a National Solar League, the City of Frankfurt would be on its way to the top. In this success story the photovoltaic system on the roof of exhibition hall 10 plays its part. The owners are employees of Messe Frankfurt and citizens of Frankfurt. Public participation in photovoltaic systems is a model the municipal authorities want to apply even more intensively. Support comes from Mainova AG and Sonneninitiative e. V (Sun Initiative membership corporation).

Foto: Stadt Frankfurt am Main



Wastewater treatment facility Niederrad

A special highlight is the visit to the historic clarifier system at Wastewater treatment facility Niederrad. The system went on line in 1887 and was the first of its kind in the former German Reich. The four subterranean settling ponds, each 82 meters long, were allocated for about 140.000 residents. The facility, which had been extended between 1902 and 1904, was in operation until 1960. Today it is a protected historic monument.

8 Living in the neighborhood

Foto: CA Immo Deutschland GmbH, Aurelis Real Estate Management



Europaviertel

With the „Europaviertel“ district, which is currently under construction, a piece of the new Frankfurt takes shape. The sound mix of offices, apartments, international cuisine, perfect infrastructure, first-class hotels and social service organizations is creating an exemplary urban quarter.

Close to the city center

There are three essential elements of the „Europaviertel“ district: Tower 185 (adjacent to the banking district), the Skyline Plaza with its event and conference area, and the Europa-Allee („Europe Alley“) with its 11 building ensembles. The 60 meters wide Europa-Allee epitomizes a European boulevard – a place inviting to live, to work, to shop and to enjoy.

Project management: CA Immo Deutschland GmbH, Ffm

Europaviertel West

Europaviertel West quotes the architectural tradition of Europe’s major cities. Four quarters with a harmonic equilibrium of living and working are grouped around the Europagarten („Europe Garden“). It covers an area of 60.000 sqm and represents the quarter’s „green heart“. Europaviertel West offers housing for 3.000 people and about 10.000 work places.

Project management: Aurelis Real Estate Management, Ffm

Urban development at Riedberg

Foto: HA Stadtentwicklungsgesellschaft mbH



The new district is one of the biggest urban development projects in Germany. It covers an area of 266 hectare, one third of which is earmarked for parks and public green space. The sustainable urban development for 15.000 residents, 8.000 students and 3.000 work places is based on a „city of short distances“ concept. Everything necessary can be reached on foot, and many paths can be found to lead through nature. Two urban metro lines connect Riedberg perfectly with the inner city and with the surrounding districts. The new quarter offers various housing concepts, e. g. owner-occupied flats and rental flats, townhouses, student flats, housing for the elderly, projects for building owners associations, or villas close to a park. Housing construction at Riedberg implements different types of energy-efficient building, up to passive house standard (all schools, all day-care centers). A comprehensive system of rain water management ensures that as much rain water as possible remains in the natural water circulation. The new quarter is supplied with district heat by a waste-to-energy plant, which is being operated in energy-efficient power-heat cogeneration.

Project duration: 1997 - 2017

Project development and management: Trustees of the City of Frankfurt: HA Hessen Agentur GmbH (Hessen Agency), HA Stadtentwicklungsgesellschaft (HA Urban Development Corporation), by order of HA Hessen Agentur GmbH

Foto: Stefan Heßling

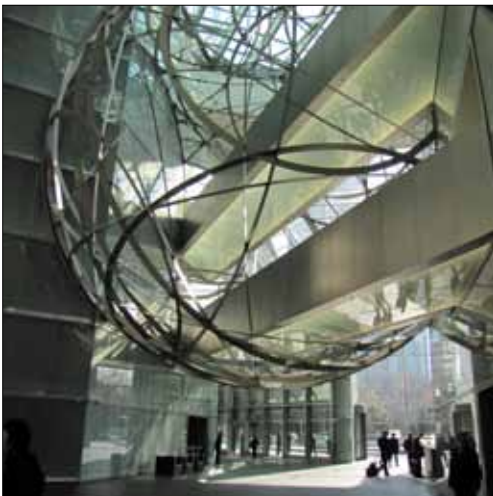


Commerzbank Tower

The Commerzbank skyscraper was awarded „Green Building Frankfurt“ in 2009. Already during its construction, the building initiated the trend reversal towards energy-efficient multi-story buildings – and not only in Frankfurt. Windows that can be opened even at a height of 200 meters, lighting control by daylight and utilization, or cooling through heat – back then, these technologies meant a small revolution. The Commerzbank Tower even steps up to current modernization projects and new buildings. And it is not the only sustainability project Commerzbank puts into practice. The company is also active in the field of wind energy and conducts „Climate Coachings“.

Architect: Sir Norman Foster, London
 Building owner: Commerzbank AG
 Green Building Award 2009

Foto: AID



Deutsche Bank Greentowers

Former Deutsche Bank towers „debit and credit“ became the „Greentowers“. The largest rebuilding project in Europe turned the head quarters into one of the most eco-friendly multi-story buildings in the world.

- 98 per cent recycling rate (30.500 tons of material recycled)
- 67 per cent less heating and cooling energy p. a.
- 55 per cent less power consumption
- 74 per cent water savings p. a.
- 89 per cent less carbon emissions p. a.

155 meters, 40 floors in the Western Tower, 38 floors in the Eastern Tower

Architects: Rebuilding design: Mario Bellini Architects, Mailand; rebuilding carried out by: gmp architekten, Hamburg
 Building owner: Deutsche Bank AG
 Certificates: DGNB Gold, LEED Platinum

Foto: Stefan Heßling



OpernTurm (Opera Tower)

OpernTurm was one of the first new high-rise office buildings to receive the LEED Gold Certificate. Ecological architecture, sustainable use of materials, a state of the art hybrid cooling/heating ceiling, utilization of district heat and a sophisticated building services engineering reduce the tower's energy demand and emissions. OpernTurm needs 23 per cent less energy than demanded by EnEV.

170 meters, 42 floors with a pre-located 7-story perimeter block development

Main tenant: UBS Deutschland AG, groundfloor: Manufactum
 Architects: Prof. Christoph Mäckler Architekten, Frankfurt
 Building owner: Tishman Speyer
 Certificate: LEED Gold



Foto: Thomas Wolf

Tower 185

With 50 floors and the curved elegance of its socle building, including natural stone cladding, the tower marks the entrance to the new „Europaviertel“ district. The construction is one of the first multi-story buildings in Europe aiming at a LEED Certificate in Gold.

Relevant measures:

- utilization of rain water (savings: 2.3 million liters p. a.)
- intelligent energy concepts
- 90 per cent of construction waste were recycled
- mainly regional construction materials were used
- The tower's 50 per cent aluminium glass facade protects the rooms against solar radiation, which saves energy and air conditioning costs

185 meters high (plus superstructures), 50 floors, socle building (6 floors)

Main tenant: PWC
 Architects: Prof. Christoph Mäckler Architekten, Frankfurt
 Building owner: CA Immo Deutschland GmbH, Frankfurt
 Certificate: pre-Certificate DGNB Silver



Foto: Commerzbank AG

Silvertower (Refurbishment)

It was 1987 when the first people moved into „Silvertower“. At the time of its completion the architectural unique copy was regarded as the highest and most modern building in Europe (166 meters). Presently, „Silvertower“ undergoes a comprehensive „rejuvenating cure“: It is being equipped with the latest technology, a modern internal construction and a new foyer. The refurbishment will be completed at the end of 2011, making the „Silvertower“ a state-of-the-art contributor to climate protection in Frankfurt.

Architects: 1978 von ABB Architekten, Frankfurt
 Refurbishment: schneider + schumacher, Bau- und Projektmanagement GmbH, Ffm
 Building owner: Commerzbank AG
 Tenant: Deutsche Bahn, starting in 2012
 Project management: Drees & Sommer, Stuttgart
 Certificate: Goal: DGNB Silber

10 Recreation

Regionalpark Rhein Main



Foto: Regionalpark Rhein Main

The countryside of the metropolitan area is being upvalued as recreation and discovery area. Right at the front door and within walking or biking distance, there emerges a well-signposted network of appealing paths, which make the manifold remaining and sometimes even forgotten landscapes of the region come alive. Agrarian cultivated landscapes, forests, Arcadian fields, monuments of industrial culture, gardens, parks or places of historical significance are waiting there to be discovered. To this day, about 350 kilometers of Regionalpark routes with 180 attractive excursion destinations have been established. In the end, the planned network of routes is supposed to have a total length of 1.250 kilometers.

11 From the region

Offenbach Harbor



Foto: Offenbach.de

„Living and working on the banks of the river Main“ – under this motto the City of Offenbach develops its former industrial harbor into an urban quarter. Currently, the disused area is the largest Rhine-Main development site near a river. As a pilot project, three eight-story buildings with 150 rental flats and 30 owner-occupied flats in passive house style are being implemented on the north-eastern river bank of the harbor area.
Architects: Forster Architekten, Frankfurt
Building owner: ABG Frankfurt Holding

Deutsche Börse



Foto: KSP Jürgen Engel Architekten GmbH

With a height of 87 meters the cubic new building, which offers more than 2.000 work places, clearly marks Deutsche Börse's new location. In order to minimize energy consumption, the „Green Building“ project has been provided with the latest technology, like power-heat cogeneration, solar thermal power and heat recovery. The technical systems are equipped for CO2-neutral operation with biogas.
Architects: KSP Jürgen Engel Architekten GmbH, Ffm
Building owner: Lang & Groß Projektentwicklung GmbH
Certificate: LEED Platinum

Green Building FrankfurtRheinMain 2009

Architectural award for pioneers of sustainable building

The City of Frankfurt's „Green Building Award“ honors pioneers of sustainable building who combine energy-efficiency with usability, thereby setting a good example for other projects. Eight buildings managed to convince the three-member jury in 2009. Among them are a refurbished residential house, a public school and an office tower.

What distinguishes the winners of the Frankfurt „Green Building Award“?

Scheffelhof – Newly built residential house

The „Scheffelhof“ association of building owners created ten urban houses built according to passive house standard. A rather constricted site to the east of St. Bernhard church displays a family-friendly, pleasant design.

Minimum Impact House – Newly built residential house

The Minimum Impact House is an example of inner-city redensification. Within a remaining area that could hardly be made usable arose a 5-story wooden building with a greened roof terrace. Renewable resources, solar heat and utilization of rainwater make the Minimum Impact House a prototype of a holistic sustainable optimization of buildings.

Energy-efficient retrofit Tevesstraße 36–54 – Refurbishment of a residential building

For the first time in Tevesstraße, apartments were successfully refurbished according to passive house standard. The new energy standard has a high signaling-effect with respect to the refurbishment of residential buildings – way beyond Frankfurt city limits.

Commerzbank Tower – Newly built office tower

In the early 1990s the Commerzbank Tower set an architectural and functional exclamation mark way beyond Frankfurt city limits. The special building envelope with incorporated gardens makes it possible to aerate workplaces naturally and to provide them with daylight.

Helvetia „Haus Weißadlergasse“ – Newly constructed office building

The new house was built on the basis of a holistic energy concept which included an – in terms of construction physics – high-quality building envelope and a building technology adjusted to that. Even today, more than 10 years after completion of the building, the primary energy consumption is exemplary.

Liesel-Oestereicher-School Preungesheim – Newly constructed functional building

The warm impression of the materials adobe and lark wood as well as the room layout provide the elementary school and day-care centre with a comprehensive feel-good atmosphere. Remarkable is how the people in charge managed to subsequently change an already existing planning according to the passive house standard.

KfW Ostarkade (KfW East Arcade) – Newly constructed functional building

KfW ist die Reconstruction Loan Corporation. The KfW new building at Palmengartenstraße comes up with a high quality interior and exterior appearance. Due to its outstanding energy and water concept, the KfW East Arcade is considered exemplary of new office buildings in Frankfurt.

KfW Main building – Refurbishment of a functional building

The refurbishment of KfW's main building is the successful architectural refreshing of a building ensemble, which considerably upvalues its complete surroundings. Especially commendable is the face of the building with its vertically adjustable sunscreen elements. They give the building an interesting, lively appearance.

KLIMAtours

is a collaboration between the City of Frankfurt and AiD.

Our services are addressed to architects, planners, experts and everyone who is interested in further education in the field of energy-efficient building. We are pleased to arrange a tour tailored to your individual requirements.

For more information see www.architekturimdialog.de.

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City of Frankfurt am Main
Energierreferat
Galvanistraße 28
60486 Frankfurt am Main
Phone: +49 (0)69 212 39193
energierreferat@stadt-frankfurt.de
www.energierreferat.stadt-frankfurt.de/

AiD Architektur im Dialog
Susanne Petry
Bäckergasse 24
60594 Frankfurt am Main
Phone: +49 (0)69 66 575 970
info@architekturimdialog.de
www.architekturimdialog.de



Concept and implementation

AiD Architektur im Dialog

Project team

Susanne Petry | Stefan Heßling | Michael Behrendt | Maren Erven | Anton Rohr



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Application form KLIMAtours

➤ Details on the group:

Name of the visitor group (+wherefrom): _____

Contact person: _____

E-mail: _____ Phone: _____

Number of participants: _____ Age structure of the group: _____

Composition of the group:

- Architects and planners
- Real estate developers-investors/Public administrations/Financial institutions/Real estate agents
- General contractor, construction company
- Private building owners, municipal/public authority
- Others: _____

➤ Organizational matters

Termin

Desired date: _____

Zeitfenster: ___ Tage 1 day ½ day 2-3 hours

Desired time (from ... to...) _____

Transportation during tour

- Bus
 - Private Bus
 - Booking needed
- Train/Tram, public transport
- Walk

Procedure/Meeting point

- Group needs to be picked up
- Group comes to a meeting point

Meeting point: _____

➤ Tour Subject

Information on special interests, expert knowledge, previous knowledge:

Tour Subject: _____

Participants' expectations and requests: _____

Participants' expectations and requests: Yes No

Are the participants familiar with Frankfurt: Yes No

Type of information:

- Inspection only
- Inspection with detailed information provided by planner/external speaker (extra charges)
- Including site inspection
- Lectures
 - on the subject of: _____
- Group needs an interpreter
 - Language: _____

Which objects/Which types of objects are to be visited (see catalogue)?

- Living
- Working
- Preserving and modernizing
- Learning and administrating
- Experiencing (shopping) and accomodation
- Getting well/Keeping well and fit
- Supplying
- Living in the neighborhood
- Skywards
- Recreation
- From the region
- ECOPROFIT Company

Further information, e.g. from the Frankfurt energy department, concerning:

- Frankfurt, Passive House Capital
- Climate Alliance, City of Energy-Efficiency / Climate Protection City Map
- Green Building Frankfurt
- Other topics: _____

➤ **Contact**

Architektur im Dialog
Susanne Petry
Phone: +49. (0)69 66575970
Mobile: +49. (0)173 4573220
info@architekturimdialog.de
www.architekturimdialog.de