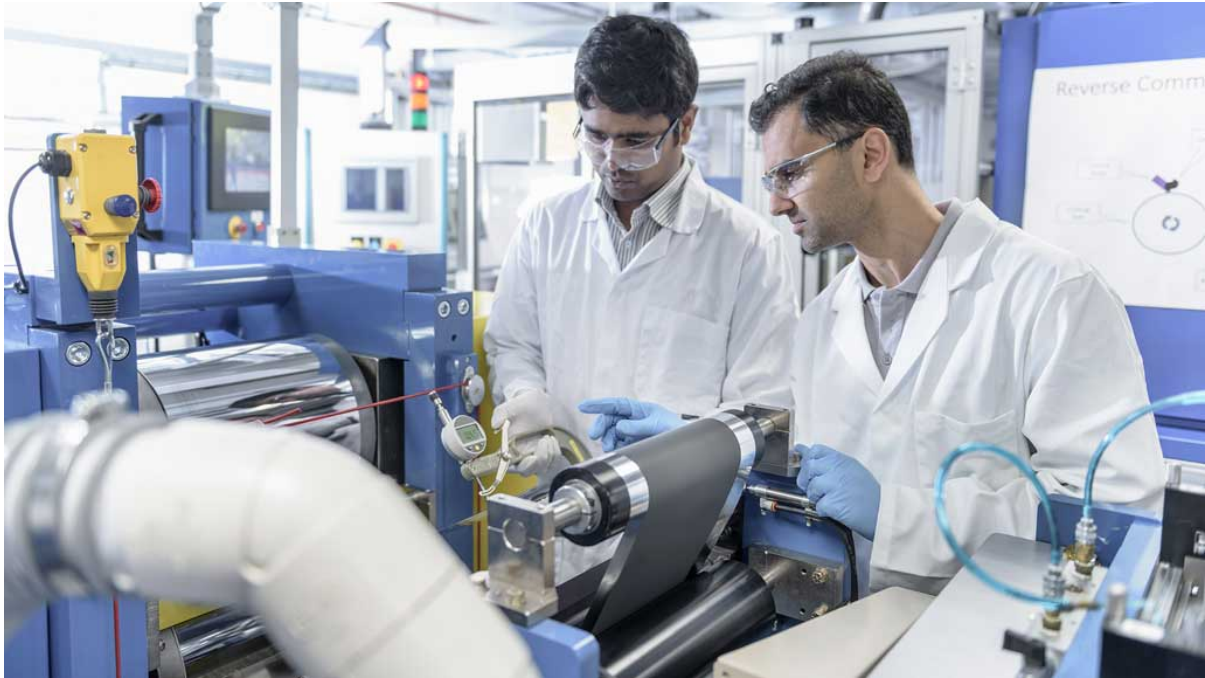


Latest news: Industrial energy efficiency in Germany



Scientists with lithium ion battery production line in battery research facility | © Monty Rakusen, Getty Images

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· [Back to industry page](#) ▶

May 2019: New Competitive Energy Efficiency Funding Program

May 2019

Germany's Federal Ministry for Economic Affairs and Energy (BMWi) has launched a new competitive energy efficiency funding program for businesses. In Germany, the industrial, commercial and trade sectors are responsible for over 40% of final energy consumption. There is considerable potential for savings. Many companies do not implement possible efficiency measures because the amortization periods can be long. The ministry's new "energy efficiency competition" aims to address this issue. The program is open to companies from all sectors

and of all sizes, utilities and energy service providers. The program is mainly meant for projects with relatively high energy-related investment costs that would not be economical without funding.

The first round runs from April 15th until June 30th. The key aspects of the competitive funding program are:

- Funding for energy-related optimization of industrial or commercial plants and processes, irrespective of technology or sector (for instance waste heat recovery, supply of process heat from renewable energy) based on a savings concept;
- Grant for up to 50% of the eligible costs;
- Energy-related amortization period (without funding) of at least 4 years;
- Maximum funding of EUR 5 million per project;
- Continuous application process with several deadlines per year.

The subsidy is allocated based on the financial efficiency of the project, i.e. the projects offering the greatest annual CO2 savings per euro of funding will win the grant.

NB: This information is provided as a courtesy only. No claim is made to completeness, accuracy, or timeliness. Further terms and conditions apply. Refer to the original funding conditions for official information.

Read more:

- [Federal Ministry for Economic Affairs and Energy - Press release](#) ▶ (in German)

May 2019: Franco-German Waste Heat Recovery Project Technically Feasible

May 2019

A feasibility study commissioned by the Ministry of the Environment, Climate Protection and the Energy Sector of the state of Baden-Württemberg has shown it would be possible to use waste heat from a steel mill in the city of Kehl (Germany) to supply 4500 households in the city of Strasbourg (France). 45 GWh per year could be transported by pipeline from Germany through the Rhine to France.

Officials met in February to discuss the implementation of the ambitious project and agreed that it should be pursued further. Further meetings were planned to discuss the financing, implementation and future operation of the cross-border heat network.

Read more:

- [German Energy Agency \(dena\) – Press release](#) ▶ (in German)
- [City of Kehl am Rhein – Press release](#) ▶ (in German)

April 2019: EUR 30,000 Energy Efficiency Award open for entries

April 2019

Every year the German Energy Agency dena recognises outstanding energy efficiency projects and concepts with its Energy Efficiency Award. The competition is open to private and public companies both in Germany and further afield. Entries to the 2019 competition can be submitted from the beginning of April until June 30th in one of the following four categories:

- Energy transition 2.0
- Energy efficiency: from clever to digital
- Energy services and energy management
- Energy efficiency concepts

The search is on for innovative approaches and concepts that enable real efficiency gains. The winners of the award will take home a share of a EUR 30,000 prize pot. Germany's KfW Development Bank and Danfoss are supporting the award as partners. A project website will be available soon. [In the meantime, questions can be sent to the Energy Efficiency Award Team.](#) ▶

If your company is interested in expanding to Germany's energy efficiency market, don't hesitate to **get in touch with our industry experts** who are here to support you.

Read more:

- German Energy Agency - [Announcement](#) ▶ (in German)

April 2019: Further Funding for Energy Saving Meter Pilot Programs

April 2019

The Federal Ministry for Economic Affairs and Energy (BMWi) has announced a second round of the "energy saving meter pilot programs" funding. The objective is to increase energy efficiency by helping customers to understand their exact energy consumption and load hours for each of their devices by digital means.

The second round runs from February 22nd, 2019 through December 31st, 2022. The funding is open to companies and company consortia.

The program supports companies that want to test, demonstrate or bring to market innovative pilot projects that save electricity, oil, gas, biomass, heat and/or cooling by employing IT solutions in various sectors and user groups.

Pilot projects must fulfil the following conditions:

- Measure and display energy consumption at the customer's site, at least for groups of devices or for individual devices,
- Based on these measurements, offer individualized energy saving tips,
- Motivate the customer to implement those tips,
- Show the effect of implemented energy-saving measures,
- Quantify the energy saving ("before and after" measurement)
- Visualize energy and costs savings on a display,
- Test innovative value-added services for energy efficiency,
- Log any rebound effects and if possible provide tips to reduce these.

NB: This information is provided as a courtesy only. No claim is made to completeness, accuracy, or timeliness. Further terms and conditions apply. Refer to the original funding conditions for official information.

If you are interested in this program or would like to find out more about how our funding and energy efficiency industry experts can support your company in expanding to Germany, don't hesitate to get in touch.

Read more:

- Federal Office for Economic Affairs and Export Control (BAFA) – [Funding announcement](#) ▶ (in German)

Feb 2019: Germany Restructures State Support for Energy Efficiency in Business

February 2019

Germany's Federal Ministry for Economic Affairs and Energy has restructured its funding programs to facilitate investments by businesses in energy efficient processes. A new and simpler funding model launched on January 1st, 2019 that bundles the numerous existing programs into a single program entitled "Energy efficiency and process heat from renewable energy in business – grant and loan".

The replaced programs funded highly-efficiency cross-sectional technologies, waste-heat reduction and recovery, climate-friendly production processes as well as energy management systems. Proven aspects of these programs have been carried forward into the new program.

The new program is open to companies in all branches and of all sizes, municipal utilities, and energy service providers. It is explicitly technology-open so that companies can implement the solution that best fits their needs. Any measures that increase electricity or heat efficiency considerably are eligible for funding, from highly-efficient standard components through to complex systemic solutions. The new program is run by the Federal Office for Economic Affairs and Export Control (BAFA) and Germany's KfW development bank.

The program has four modules:

- Module 1: cross-sectional technologies (pumps, motors, fans etc.) with a funding rate of up to 40% of the eligible investment costs

- Module 2: renewable energy for the supply of process heat with a funding rate of up to 55% of the eligible investment costs
- Module 3: measurement and control technologies and energy management software that supports digitization with a funding rate of up to 40% of the eligible investment costs
- Module 4: investments based on any technology that increase electricity or heat efficiency with a funding rate of up to 40% of the eligible investment costs

Funding is capped at EUR 10 million per applicant or per project.

The competitive electrical efficiency funding program "Step-up" will be replaced by a new program entitled "Energy efficiency and process heat from renewable energy for companies – competition" as of Spring 2019.

NB: This information is provided as a courtesy only. No claim is made to completeness, accuracy, or timeliness. Further terms and conditions apply. Refer to the original funding conditions for official information.

Read more:

- [Federal Office for Economic Affairs and Export Control \(BAFA\) – Press release \(in German\) ▶](#)
- [KfW development bank – Program description \(in German\) ▶](#)

November 2018: EUR 6 Billion for Energy Innovation

November 2018

Germany's Federal Government recently adopted its seventh energy research program, which defines energy research policy for the coming years. The budget for the period to 2022 totals a hefty EUR 6 billion. The funding announcement defines four focus areas for energy research:

- Energy use: buildings and neighborhoods, industry and commerce, energy transition in the transport sector and fuel cells
- Energy supply: wind, solar, bioenergy, geothermal, hydro- and marine energy as well as solar and conventional thermal plants
- System integration: power grids, power storage, sector coupling, hydrogen technologies
- System-wide energy transition research: e.g. CO2 circular economy, digitization, resource efficiency

If your business is interested in researching and developing the clean energy solutions of tomorrow here in Germany, don't hesitate to contact our team.

Read more:

- [Federal Ministry for Economic Affairs and Energy – Funding Announcement ▶](#) (in German)
- [Energy research funding ▶](#) (in German)

November 2018: German Energy Consumption Set to Fall Sharply in 2018

November 2018

The energy market research group AGEB expects Germany's energy consumption to decrease this year by around 5 percent to 12,900 petajoules based on preliminary data for the first three quarters, which saw a drop of around 5.3 percent.

Consumption of all fossil fuels fell across the first nine months while the consumption of renewable and nuclear energy sources increased. Consequently, AGEB is predicting a disproportionately large decrease in CO2 emissions (Q1-Q3: -7 percent).

The drivers behind the change include higher prices, mild weather and improved energy efficiency. On the other hand, the positive economic situation and population growth were factors that increased consumption, AGEB notes.

Energy consumption in Q1-Q3 2018 compared to Q1-Q3 2017:

- Oil -7.4% (decreased motor fuel consumption and considerably reduced fuel oil sales)
- Natural gas -7.2% (lower consumption due to mild weather, less gas used to generate power)
- Hard coal -12.8% (decrease in power and heat production)
- Lignite -1.9% (decrease in power production)
- Nuclear +4.9% (increased power production)
- Renewable energy +3.1% (wind +13%, solar +14%, hydro -10%, biomass no change)

Read more:

- [AG Energiebilanzen e.V. – Press release](#) ▶ (PDF in German)

November 2018: Perpetuum Energy Efficiency Award 2019 Open for Entries

November 2018

The German industry association for energy efficiency DENEFF is inviting companies, individuals or teams with innovative energy-efficient solutions to enter the Perpetuum 2019 Energy Efficiency Award.

Ten finalists will be invited to DENEFF's annual kick-off conference on April 9th, 2019 in Berlin, where they will present their solution – be it a technological improvement, an innovative business model or a new sales or financing approach – to the audience in a five-minute elevator pitch.

The innovations will be evaluated according to international potential, innovative character, broad impact and the pitch. A jury of seven representatives from business, politics and science will select the winners. There will also be an audience prize.

This year's awards will emphasize the international nature of the innovation.

Previous winners include interpanel (Germany), Fresh Energy (Germany), Aurelia Turbines (Finland / Germany) and Joulia (Switzerland).

Entries can be submitted until December 31st, 2018. Visit the link below for terms and conditions.

Read more:

- [Perpetuum Energy efficiency award](#) ▶
- [Website: interpanel](#) ▶
- [Website: fresh energy](#) ▶
- [Website: Aurelia Turbines](#) ▶
- [Website: joulia](#) ▶

October 2018: 200 Energy Efficiency Business Networks in Germany

October 2018

The German government and business organizations aim to set up 500 energy efficiency networks throughout the country by 2020. Each network consists of five to 15 companies and facilitates the exchange of ideas and experiences with the aim of permanently increasing energy efficiency and reducing energy costs.

September saw the inauguration of the 200th such network – this time between five car dealerships in Bavaria. The garage owners aim to optimize their energy-intensive compressed air processes and improve the energy consumption of their showrooms by reviewing the lighting and heating systems. "Energy is a considerable cost factor for the company. We want to use it more efficiently to secure our economic and ecological future," says Jürgen Koppenhöfer, managing director of AutohausEwald GmbH.

More than 1,800 companies and 22 industry organizations now participate in the Energy Efficiency Network Initiative (IEN).

"The companies have recognised that everyone benefits from energy efficiency," notes Peter Altmaier, federal minister for economic affairs and energy.

A study shows the networks have led to marked improvements, on average achieving 105% of their savings goals to date.

"The companies are achieving more together than they set out to," says Altmaier. "In doing so, they send an important signal and show that a voluntary instrument in the business sector can make a significant contribution to achieving the energy and climate goals of the federal government."

Svenja Schulze, federal minister for the environment, emphasizes the value of exchange between sectors and companies in networks. "In practice we see that companies that take part actively in energy efficiency networks can save on average 5,000 tons of CO2 per year. Setting specific targets and monitoring implemented

measures consistently are substantial success factors for a network. And then everyone benefits: the climate and the companies.”

Read more:

- [Energy Efficiency Networks Initiative – Press release \(in German\)](#) ▶

October 2018: German SMEs Investing More in Energy Efficiency

October 2018

A survey conducted by Germany’s KfW Development Bank shows that German SMEs invested more in energy efficiency between 2014 and 2016 than the previous three years. The survey, which was conducted in September 2017 among 2100 companies, found that 37% of German SMEs implemented measures to increase energy efficiency and reduce energy costs in the survey period. This corresponds to 1.4 million companies and an increase of 4% on the last survey. A further 7% were planning to undertake measures. The increase is mainly due to a stronger commitment among small companies with fewer than 10 full-time equivalent employees (+5%).

SMEs offering “other services” (e.g. health care and social services, education and training, gastronomy and hoteliers or culture and sport) were the most dynamic in terms of measures implemented with an increase of 12% on the last period.

The survey also reveals that companies were increasingly implementing capital-intensive measures, for instance in the energy efficiency of vehicles and logistics (+16%) and energy efficient production plants and equipment (+11%). Again, these developments were mainly driven by the smaller companies. Larger SMEs on the other hand increased noticeably their commitment to the introduction of energy management systems (+12%).

Dr. Jörg Zeuner, Chief Economist of the KfW, comments that efficient energy management is becoming increasingly important for small and medium-sized enterprises. “We see this as evidence of changing awareness among SMEs. Indeed, there is urgency in accelerating the pace in improving energy efficiency in the business sector, not just with a view to achieving the federal government’s energy targets, but also to secure the competitiveness of the enterprises themselves.”

Read more:

- [KfW Development Bank – Press release](#) ▶
- [KfW Research – Study \(pdf in German\)](#) ▶

October 2018: German Energy Agency Inaugurates First Heat Recovery Flagship Project

October 2018

The commercial vehicle manufacturer Krone has inaugurated a new surface treatment facility that incorporates waste heat recovery technology. The center is one of 13 flagship waste heat recovery projects being supported by the German Energy Agency.

Krone's new plant achieves fuel savings of almost 40% and reduces CO2 emissions by about 30%. The annual final energy consumption is expected to decrease by 12 GWh – the equivalent consumption of around 600 four-person households. The EUR 35 million investment is funded partly under Germany's KfW development bank's [waste heat energy efficiency program](#) ▶.

The German Energy Agency supported the technical assessment of the waste heat recovery concept and the eligibility for funding. A number of measures to reduce waste heat were implemented. Waste heat that cannot be avoided will to a large extent be recovered and reused in industrial processes within the company.

The agency notes that German companies could save up to 37 million tons of CO2 and around EUR 5 billion in energy costs annually by reducing and reusing waste heat. In 2017, the agency highlighted 13 particularly innovative or cost-effective industrial flagship projects for energy-efficient waste heat use. The flagships are role models for other businesses and together could save over 100,000 tons in CO2 emissions every year.

Read more:

- [German Energy Agency – Press release \(in German\)](#) ▶
- [Waste Heat Flagship Projects – Website \(in German\)](#) ▶
- [KfW Waste Heat Funding Program – GTAI Website](#) ▶
- [GTAI Energy Efficiency in Industry – GTAI Website](#) ▶

August 2018: Sixth Round for Competitive Electrical Efficiency Funding Program

August 2018

For the sixth time, companies in any sector can submit electrical efficiency projects to the "Step-up!" funding program, which is run by the Federal Ministry for Economic Affairs and Energy. Applicants can participate either in the "open call", in which any electrical efficiency measure can be funded irrespective of technology or sector, or in the "closed call" which is limited to a specific topic – this time projects combining electricity and heating. Funding is allocated in a competitive process to the projects offering the highest cost-benefit ratios (i.e. kWh of electricity saved per euro funded).

Successful applications receive a non-repayable investment grant that varies according to the type of call and the size of the project. In the open call, a small project that fulfils the requirements can receive EUR 20,000 to EUR 250,000, while large projects can receive EUR 250,000 to EUR 1,500,000.

Companies with a commercial unit or a branch office in Germany and municipalities can apply for funding. Applications can be submitted from September 1st to November 31st, 2018.

This will be the last round in the pilot phase of the program.

NB: This information is provided as a courtesy only. No claim is made to completeness, accuracy, or timeliness. Further terms and conditions apply. Refer to the original funding conditions for official information.

Read more:

- [STEP up! 6th call for tenders \(in German\) ▶](#)

July 2018: Record German Govt R&D Funding for Energy Efficiency in Industry

July 2018

In 2017, the Federal Ministry for Economy and Energy supported 434 ongoing R&D projects in the field of energy efficiency in industry, trade and services with nearly EUR 45 million. On top of that, 130 projects were granted new funding amounting to EUR 55 million.

According to the latest federal report on energy research, waste heat is by far the largest efficiency-related R&D topic for German industry. Several studies place Germany's waste heat potential at between 88 and 260 TWh per year. Digitization is also a key word in the industrial sector as it considerably increases transparency and enables process optimization.

The report also reveals that R&D funding was mainly granted to projects in the fields of manufacture of machinery and vehicles, electronics, fine mechanics, optics and EBM products (30%), chemicals, rubber and plastic products (14%) and heat pumps and cooling agents (10%).

Read more:

- [BMW Press release ▶](#)
- [Federal Report on Energy Research \(in German\) ▶](#)

July 2018: New waste heat atlas for Frankfurt

July 2018

The city of Frankfurt am Main has released the results of a study into sources of waste heat in a new waste heat atlas. It highlights a combined potential of 200 MW in waste heat from wastewater, industry and data centres.

If this heat were recovered, it could in theory deliver 470 GWh in space heating and hot water annually, representing 16% of current demand from residential customers in Frankfurt and almost 60% of the forecast demand for 2050.

Read more:

- [Municipal Energy Agency Frankfurt am Main ▶](#) (in German)

July 2018: R&D project on industrial waste heat storage launched

July 2018

The Enstor consortium of German companies and research institutions has launched the project “ModulHeatStore” to develop and test modular heat storage with smart thermal process control for industrial waste heat in the 1000°C range. The project is receiving EUR 660,000 in funding from the Central Innovation Program for Medium-Sized Businesses (ZIM).

Enstor aims to bridge the time gap between the availability of waste heat and demand for heat or electricity. The system features a range of storage materials that can store heat at different temperatures. The combination of materials should make it possible to store various waste heat flows at different temperatures in the corresponding storage modules, thus maintaining the highest possible temperatures for later delivery to industrial processes or electricity generation assets.

The project participants claim that the system will enable the efficient utilisation of industrial waste heat at very high temperature levels, that there are a range of possible applications and that it is comparatively cheap.

Read more:

- Enstor [Press release](#) ▶ (in German)
- [Central Innovation Program for Medium-Sized Businesses](#) ▶

July 2018: Successful first year for innovative heat networks funding program

July 2018

Germany's Federal Ministry for Economic Affairs and Energy launched a funding program for innovative heat networks in July 2017 and is now reporting a successful first year. The program supports the planning and construction of heat networks that deliver efficient, environmentally friendly and economic heating and cooling based on renewable energy and waste heat. To date funding has been available for feasibility studies (module I) and system realisation (module II).

BAFA, The Federal Office for Economic Affairs and Export Control, which manages the program, has released the following statistics:

- Module I: 62 applications submitted (39 accepted to date with grants amounting to EUR 3.7 million);
- Module II: 3 applications submitted;

Market players are showing strong interest in the funding program with a higher number of applications expected in the future.

The application process is now open for the final two modules:

- Module III: Publicity measures to achieve the necessary connection rates and profitability;
- Module IV: Support for academic cooperation.

Read more:

- BAFA [Press release](#) ▶ (in German)
- GTAI, August 2017: [Germany launches funding for innovative pilot heat networks](#) ▶
- BAFA: [Heat Networks 4.0](#) ▶ (in German)

June 2018: German retailers launch efficiency and climate protection initiative

June 2018

The German Retail Federation HDE has launched an initiative funded by the Federal Ministry for the Environment to increase energy efficiency and support climate protection measures in the retail sector.

"The potential for climate protection measures can be found in every retail company, no matter whether it's a chain of supermarkets, a butcher's, or a tailor's," said State Secretary at the Federal Ministry for the Environment Jochen Flasbarth. "Investments in energy saving and resource efficiency often make good business sense for retailers. This project will help a lot of retailers on their journey to more climate protection," he continued.

According to the association, the commercial sector consumes 35 TWh of electricity and 12 TWh of heat every year, emitting 20 million metric tons of CO2 equivalent in the process. The objective of the initiative is to save 300,000 tons of CO2 by 2020.

The project's website features check lists and guidelines to motivate small and medium-sized retailers to implement energy efficiency measures. A brochure highlights effective measures for each retail sector. For example, food retailers stand to save the most through refrigeration optimization, switching to efficient lighting, and efficient building technology.

If you are interested in entering the German energy efficiency market, our industry experts are on-hand with a wide range of free and confidential support services.

Read more:

- HDE: [Press release](#) ▶ (in German)
- Retail Climate Protection Initiative: [Project website](#) ▶ (in German)
- National Climate Initiative NKI: [Website](#) ▶

June 2018: German energy efficiency market expected to grow at average 9.1% p.a.

June 2018

The German energy efficiency market is expected to expand at an average 9.1 percent per annum from 2016 to reach a volume of EUR 182 billion in 2025, according to the German environment ministry's recently published "GreenTech Atlas".

The report's market definition includes energy-efficient production processes, buildings and appliances as well as cross-sector components such as pumps, electric drive systems and heat exchangers.

The authors expect the German market to outperform the global average:

"The global lead market for energy efficiency will reach a volume of EUR 1,365 billion in 2025. That is equivalent to average annual growth of 4.3 percent in the period from 2013 through 2025", they state.

An estimated 400,000 people worked in the German energy efficiency sector in 2016, according to the study.

German companies generate an average of 20 percent of sales in their home state, 36 percent in other German states, and 44 percent internationally, although there is strong variation according to whether they provide products or services, according to the survey.

Market volume development in Germany, 2016-2025 – Lead market for energy efficiency

Market segment	Market volume 2016 (in EUR billion)	Market volume 2025 (in EUR billion)	Average yearly growth 2016-2025
Energy-efficient production processes	Ca. 1	Ca. 1	+8.4%
Energy-efficient buildings	17	26	+5.2%
Energy-efficient appliances	21	50	+10.0%
Cross-sector components	44	104	+10.0%
Total	83	182	+9.1%

Source: Greentech made in Germany, 2018

Read more:

- [GreenTech made in Germany 2018](#) ▶
- [GreenTech made in Germany: Energy efficiency retains the biggest market volume](#) ▶

April 2018: Fifth round for competitive electrical efficiency program underway

April 2018

Companies from all sectors again have the opportunity to submit their electrical efficiency projects in the fifth round of the "Step-up!" program, which has now launched. As in previous rounds, projects can apply for funding from the Federal Ministry for Economic Affairs and Energy (BMWi) by participating either in the "open call", in which any electrical efficiency measure can be funded irrespective of technology or sector, or in the "closed call" which is limited to a specific topic – this time water- and wastewater technology. Funding is allocated in a competitive process to the projects offering the highest cost-benefit ratios (i.e. kWh of electricity saved per euro funded).

In addition to electrical efficiency, the closed call in this round will also consider projects that deliver heat savings. Measures increasing the efficiency of process water use can also be funded.

Successful applications receive a non-repayable investment grant that varies according to the type of call and the size of the project. In the open call, a small project that fulfills the requirements can receive EUR 20,000 to EUR 250,000, while large projects can receive EUR 250,000 to EUR 1,500,000.

Companies with a commercial unit or a branch office in Germany and municipalities can apply for funding. The final application date is May 31st, 2018.

NB: This information is provided as a courtesy only. No claim is made to completeness, accuracy, or timeliness. Further terms and conditions apply. Refer to the original funding conditions for official information.

Read more:

[STEP up! 5th call for tenders \(in German\)](#) ▶

April 2018: Strong impact of KfW funding program on energy efficiency in production

April 2018

Germany's KfW development bank has published an evaluation of its "Energy efficiency in production facilities and production processes" funding program. Since 2015 the standalone program has delivered funding in the form of interest-reduced loans for investments in production facilities, processes, cross-cutting technologies, heat recovery, waste heat utilization and CHP systems. The report states that loans amounting to EUR 2.75 billion were granted to over 700 projects in 2015 and 2016, leading to the following positive effects:

- Annual energy end-use savings of 1,110 GWh (thereof 130 GWh outside Germany)
- The enterprises financed benefit from energy cost savings worth EUR 131 million per year
- Yearly greenhouse gas reductions amounting to 475,000 tons of CO₂ equivalent (thereof 413,000 tons in Germany and 62,000 abroad)
- 19,000 jobs secured or newly created.

Read more:

[KfW – Press release ▶](#)

[KfW - Evaluation report \(in German\) ▶](#)

March 2018: German market for energy services estimated to have reached EUR 9 billion in 2016

March 2018

The Federal Agency for Energy Efficiency (BfEE) conducted an empirical study of the German market for energy consulting, energy contracting, and energy management services. The survey, conducted from June to September 2017, estimated the following market sizes:

- Energy consulting: approx. EUR 790 – 850 million
- Energy contracting: approx. EUR 7.7 billion
- Energy management services: approx. EUR 435 million

Market players are optimistic about the development of their respective segment for the next three years: 42 percent of the energy contracting and energy management players expect strong to very strong growth. Digitization and decentralization of energy production were identified as the main trends impacting the market.

Read more:

[Federal Agency for Energy Efficiency – Market study \(in German\) ▶](#)

March 2018: Framework scenario for grid expansion in Germany includes Power-to-X technologies

March 2018

Every two years the four German electricity transmission system operators (TSOs) develop framework scenarios to determine their grid expansion plans. The current framework describes four scenarios for the possible development of the German electricity sector. Considering the increasing importance of sector coupling, the scenarios include for the first time a detailed estimate of the potential for three Power-to-X technologies. All of the scenarios place the potential for Power-to-Heat at 3.3 GW. The potential for Power-to-Methane varies from

0.2 to 0.6 GW and for Power-to-Hydrogen from 0.8 to 2.4 GW. To determine this potential the German TSOs referred to a study on Power-to-X applications conducted by the Research Center for Energy Economics.

Read more:

[German Transmission System Operators – Press release \(in German\) ▶](#)

[Research Center for Energy Economics – Power-to-X study \[pdf\] \(in German\) ▶](#)

March 2018: District heating from waste incineration in Hanover

March 2018

The Hanover-based energy supplier enercity and the company EEW Energy from Waste signed a long-term supply contract in January 2018 for the delivery of heat from waste incineration and will invest several millions in the project. The heat produced in the waste incineration plant will be fed in to the district heating network starting in the heating period 19/20 and will replace heat produced in a coal-fired plant, thus saving an estimated 45,000 metric tonnes of CO₂ per year according to enercity.

Read more:

[enercity – Press release \(in German\) ▶ ▶](#)

Jan 18: Results of first call for tenders for cogeneration plants

January 2018

Under Germany's new CHP Act, surcharge payments for electricity from new or modernized CHP plants are determined on a competitive basis. 100 MW were offered in the first call for tenders that ended on December 1st, 2017. The BNetzA is satisfied with the results of the tender and highlights a "pleasingly high level of competition". Indeed, the call was oversubscribed with 20 bids for 225 MW. Seven bids were awarded for a capacity of 82 MW. The remaining capacity will be auctioned in the next round which is planned for June 2018. The bids ranged from 3.19 ct/kWh to 4.99 ct/kWh, with a volume-weighted average of 4.05 ct/kWh.

Read more:

- [BNetzA – Press release ▶](#)
- [BNetzA – Publication of bids ▶ \(in German\)](#)

Jan 18: Successful year for Thuringian industrial energy efficiency funding program

January 2018

The eastern federal state of Thuringia has been supporting investment in energy efficiency for Thuringian companies through its "GREEN Invest" program since 2015. There was strong demand for the financial incentives in 2017 with 279 applications for energy efficiency consulting in companies and the corresponding investments in efficient heat pumps, energy efficient LED systems in production buildings, and electricity production from renewable sources. Around EUR 11 million was invested in 2017 under the program.

The companies receiving funding were very diverse and included a bakery and a mechanical engineering company. The Thuringian Ministry for the Environment will deliver EUR 59 million to support energy efficiency projects in regional companies by 2020.

Read more:

- [Thuringian Ministry for the Environment, Energy and Nature Protection](#) ▶ (in German)
- [Thuringian Development Bank – GREEN Invest](#) ▶ (in German)

Dec 17: Construction starts on major waste heat utilization project in Hamburg

December, 2017

Work began in October on a 2.7-kilometer-long district heating line from a copper smelting plant in Hamburg to the nearby and newly constructed HafenCity district. The plant owner, Aurubis, will deliver waste heat from an exothermic chemical reaction in its copper production process to the edge of its facility. The energy company enercity will then transport it to the district heating grid.

Heat will at first only be supplied from one of the plant's three production lines — nevertheless enough to satisfy demand in the east of HafenCity even in the winter months.

Heat delivery is scheduled to begin in April 2018. As the construction of HafenCity continues, the project will be built out successively in the coming years. Once completed, the project will reportedly save 4500 tonnes of CO2 emissions annually.

The project is being funded in part by Germany's KfW development bank and the European Regional Development Fund.

District heating is just one of many potential uses for waste heat in Germany. If your company works in waste heat avoidance, storage, or utilization, get in touch with one of GTAI's industry experts today. We would be happy to advise you on the vast opportunities and potential for your company in Germany.

Read more:

- Welt.de: [News](#) ▶ (in German)

Nov 17: Energy storage in salt being piloted in Berlin power station

October 24th, 2017

The Swedish companies Vattenfall and SaltX Technology have partnered up to trial a novel take on power-to-heat energy storage in Germany. The pilot project, which is being carried out at the Reuter power station in north-west Berlin, will investigate how well excess wind and solar power can be stored as heat in salt.

SaltX's patented "EnerStore" technology stores heat in salt in a repeatable process that, according to the company, is cost-effective and can be installed almost anywhere. A Vattenfall representative said the system can hold energy without loss for weeks or months until it is needed.

The technology has proven its worth so far in laboratory tests. The next step is to examine the process on a larger scale. The pilot plant is set to supply energy to a local Berlin district heating grid.

The project manager at Vattenfall emphasized that a number of questions still need to be answered before a large-scale project can become reality. One such question is how large quantities of salt can be dried efficiently in a large container. The first phase of the Berlin project is scheduled to last for around 18 months.

Read more:

- Vattenfall: [Press release](#) ▶ (in German)

Nov 17: German network agency publishes first call for tenders for cogeneration plants

October 24th, 2017

Early October saw Germany's Federal Network Agency open the first call for tenders for cogeneration plants (CHP) with an electrical power rating in the one to 50 MW segment. The bidding period is open until December 1st, 2017. The move follows amendments to Germany's CHP Act (KWKG) and EU approval.

Under the revised act, surcharge payments for electricity from new or modernized CHP plants in this power segment are no longer prescribed by law, but determined on a competitive basis.

The maximum bid in the first round is seven euro cents per kilowatt-hour. The lowest bids will be successful until the volume of the tendering period is reached; in this first round that is an installed CHP capacity of 100 megawatts. The reverse auction process applies in principle to all CHP installations in the power segment.

Read more:

- BNetzA: [Call for tenders](#) ▶ (in German)
- BNetzA: [Press release](#) ▶ (in German)

Nov 17: Germany's "first Power-to-Heat / Power-to-Cool system" enters service

November, 2017

Renewables have priority in Germany's power grid. However, the growing share of renewable energy and the resulting frequency fluctuations mean grid operators are increasingly implementing so-called curtailment measures. This often involves requiring wind turbines to shut down temporarily. In 2016, 335 GWh of solar and wind power was curtailed in Brandenburg, the federal state surrounding Berlin. That would be enough to power Berlin for 10 days. Such measures are expensive and potential generation from clean sources goes unrealized. Sector coupling and demand-side management are two solutions, alongside energy storage and grid expansion.

One such technology, power-to-heat (P2H), is [increasingly common in Germany](#) ▶. However, a project carried out by GASAG Solution Plus has combined P2H with power-to-cool (P2C) technology and integrated it into the balancing energy market to offer a new storage solution. The system, which the company claims is the first of its kind in Germany, is based at Berlin's EUREF Campus and was opened on Friday October 13th by the Berlin Senator Ramona Pop.

The P2H/P2C system consists of two 22-cubic-meter storage tanks and a 550 kWel electric heater which uses excess power to heat water. This can then be fed into the EUREF campus' heating network as required. Two compression chillers provide local cooling according to the same principle, which enables excess electricity to be stored in summer when heating requirements are lower. A biomethane CHP unit is used to compensate should the mains frequency be too low. The system thus makes a valuable contribution to improving grid stability through the novel combination of existing technologies.

The P2H/P2C plant forms part of the emerging "energy workshop" project at the EUREF Campus within the WindNODE initiative, which in turn is part of the German Federal Ministry for Economic Affairs and Energy's SINTEG program.

Read more:

- GASAG: [Press release](#) ▶ (in German)

Oct 17: Even better funding for waste heat avoidance or utilization

October 2017

Germany's federal government has been investing in waste heat utilization through the KfW 294 funding program since 2016. Now the already extremely generous program has been given a further boost.

As before, companies investing in waste heat avoidance or utilization can still take advantage of a low-interest KfW development bank loan coupled with a repayment grant for up to 40 percent of the eligible additional investment costs. Alternatively, companies can now opt for a direct grant following the completion of their project. That means firms do not have to take out a loan from the state development bank in order to benefit from the funding.

The potential savings through waste heat avoidance and utilization are enormous. Around three quarters of the final energy consumption in German industry and trade is needed for process heat. However, most of this energy is lost in the form of waste heat to the tune of around 200 TWh every year — more than the entire annual energy consumption of Denmark.

To combat this, the government launched a "waste heat offensive" last year to assist companies investing in the prevention or use of waste heat. Since the program's launch, around EUR 150 million have been invested with annual CO2 savings of more than 100,000 tonnes.

If your company works in waste heat avoidance, storage, or utilization, get in touch with GTAI's industry experts who would be happy to advise you on the opportunities in Germany.

Read more:

- BMWi: [Press release](#) ▶ (in German)

Aug 17: Federal fuel cell incentive program expanded to include commercial buildings

August 2017

Germany's generous federal funding for fuel-cell heating systems was expanded at the start of July to enable small and medium-sized enterprises, contractors, and municipalities to apply for support for applications in non-residential buildings.

Funding for the installation of fuel-cell heating systems in private residential buildings was launched in August 2016. The changes will provide a boost to the government's technology-launch programme for fuel-cell heating systems.

State Secretary Baake said: "The new rules for the commercial sector will play an important role in making this highly efficient and forward-looking technology widely available on the market."

At the time of writing, grants of between EUR 7,050 and EUR 28,200 were being awarded for fuel cell systems with an output of between 0.25 and 5.0 kW according to performance and the total eligible costs. The part of the grant awarded according to performance is made up of a fixed sum of EUR 5,700 with an additional EUR 450 for every additional started 100 W of electrical output. A 1.0 kW system thus receives a grant of EUR 10,200 while a 5.0 kW system receives EUR 28,200.

The total eligible costs include installation, set costs for the first 10 years of a full-service contract, and the costs for an energy efficiency expert. 40 percent of these costs are awarded as a grant up to the maximum grant level for the performance class.

This information is provided here as an indication. The full conditions can be found on the KfW website.

If you would like more information about the opportunities for your business in Germany's stationary fuel cell and HVAC market, [get in touch](#) ▶ with Germany Trade & Invest's industry experts, who would be glad to support you. Our incentives team can let you know how your investment project can benefit from public funding.

Read more:

- GTAI: [Incentive programs](#) ▶
- BMWi: [Press release](#) ▶
- KfW Development Bank: [Funding program information](#) ▶ (in German)

Aug 17: Germany launches funding for innovative pilot heat networks

August 2017

The start of July saw a new funding program launched in Germany that will support the planning and construction of highly innovative multivalent heat networks. The program aims to incentivize larger pilot projects that form a bridge between energy research and real-world practice, and thus pave the way for wider market entry. The aim is to provide environmentally friendly heat from a large share of renewable sources and waste heat through district networks as cheaply as conventional fossil-based systems.

Heat networks that operate at temperatures of 20 to 95 °C have a number of advantages over conventional systems. These typically include utilizing high shares of heat from renewable sources and waste heat, providing large-scale seasonal heat storage, improving flexibility in the electricity grid, and delivering efficient district-scale solutions for heating and cooling.

At the same time, such systems can deliver heat at competitive prices by employing waste heat sources that were previously unusable, for example at the edge of towns or on neighbouring properties. By connecting cheap industrial waste heat to consumers in industrial-scale pilot projects, the program aims to accelerate the learning curve and generate scale effects in the branch.

Furthermore, the program will support sector coupling by enabling the heating grid to provide flexibility to the electrical grid by combining large-scale heat pumps with large-scale seasonal heat storage, or even other power-to-x solutions.

State Secretary Baake said: "By launching funding for 4th generation heating networks, we are promoting systems that correspond to what we want the future heating infrastructure to look like in the context of the energy transition. In view of the very long investment cycles in this area, this is particularly important when it comes to reaching our 2050 energy-policy targets."

Funding will be provided in two steps: first, for feasibility studies (up to 60 percent / max. EUR 600,000), and second, for the realisation of the system (up to 50 percent of the eligible project costs / max. EUR 15 million). Applications can be submitted to the Federal Office for Economic Affairs and Export Control (BAFA). Additional information can be found on the BAFA website ([link below](#)).

If you would like more information about the opportunities for your business in Germany's [district heating market](#) ▶, get in touch with Germany Trade & Invest's industry experts, who would be glad to support you. [Our incentives team](#) ▶ can let you know how your investment project can benefit from public funding.

Read more:

- GTAI: [Incentive programs](#) ▶
- BMWi: [Press release](#) ▶
- BAFA: [Heat Networks 4.0 \(in German\)](#) ▶

July 2017: Vattenfall announces Germany's largest power-to-heat system

July 2017

The energy company Vattenfall has announced its intention to build Germany's largest power-to-heat system in Berlin, replacing one block of a hard-coal-fired power plant.

The 100-million euro investment comprises three hot water generators with a total capacity of 120 MWth, gas-fired peaker units, and investments in hydraulic and electrical infrastructure.

The system is expected to supply hot water to the Spandau district heat network following the 2019/2020 winter heating season, at which point it is planned that block C of the Reuter West power plant will be taken offline.

Vattenfall aims to exit coal-fired power and heat generation in Germany's capital by 2030. In May of this year, the company switched the fuel source at the Klingenberg cogeneration plant, located in Berlin's Lichtenberg district, from lignite to natural gas.

The power-to-heat project is taking place within the [SINTEG program](#) ▶ which aims to develop intelligent energy-supply solutions with a rising share of renewable power in the grid. The program is funded by the Federal Ministry for Economic Affairs and Energy.

Read more:

- Vattenfall: Press release - [Power-to-heat investment](#) ▶ (in German)
- Vattenfall: Press release - [Klingenberg power station](#) ▶ (in German)

July 17: Germany's energy efficiency branch growing despite lower energy costs

July 2017

German businesses providing energy efficiency solutions turned over 143 billion euro in 2016, a study published by the German energy efficiency industry association DENEFF and PricewaterhouseCoopers (PwC) has found. The extrapolated figure represents growth of nearly 6 percent on 2015. According to the paper, the branch now employs 600,000 people.

The report attributes these positive developments primarily to the political framework - despite the current low energy prices.

DENEFF notes that the branch is seeing a growing number of new market entries, many of which are startups, and cites trends such as digitalization and innovative business models.

Read more:

- DENEFF: [Press release and report](#) ▶ (in German)

June 17: New funding strategy for energy efficiency and renewable heating published

June 2017

Germany's Federal Ministry for Economic Affairs and Energy has published a [new strategy](#) ▶ for federal funding and incentives for energy efficiency and renewable heating. The document lays down a number of modifications such as the bundling of major programs and a new user-focussed approach. The various programs will be reformed by 2020.

Hybrid heating systems that use renewable energy sources will continue to be funded to support the transition to renewables in the heating sector. However, support for systems based solely on fossil fuels will be phased out by 2019.

The strategy also defines a number of core areas, namely energy consulting, energy efficiency in buildings, energy efficiency in industry and trades, and heating infrastructure. All of the programs will be provided as combinable modules in each of the four areas. As a consequence, a number of existing programs will be merged. For example, the two large programs in the building sector (KfW energy efficient construction and renovation and the MAP renewable heating program) are to be fused under "energy efficient building", according to the document.

Read more:

- Federal Ministry for Economic Affairs and Energy (BMWi): [Press release](#) ▶ (in German)
- BMWi: [Funding strategy for energy efficiency and heating with renewable energy](#) ▶ (in German)

May 17: Ministry publishes draft CHP auction legislation

May 2017

The Federal Ministry for Economic Affairs and Energy (BMWi) has published the [draft version](#) ▶ of its combined heat and power auction legislation (KWKAusV). Under the draft, operators of combined heat and power (CHP)

plants rated over one megawatt would no longer automatically receive CHP funding, but would participate in an auction process.

The legislation introduces an auction model for “innovative” CHP plants and systems in the 1–50 MW segment. Support will continue to be provided as a set additional payment in cents per kWh, however the level of support will be set via an auction process. The competitive tendering process provides an opportunity to reach the build-out targets cost-efficiently and improve cost transparency, the ministry writes. The auctions are set to begin on December 1st, 2017 and then be held every 6 months for an annual installed CHP capacity of 100 MW.

They will be open to a limited extent to other European countries, in particular in order to strengthen cooperation with Germany’s “electrical neighbours”, the ministry’s website states.

Read more:

[BMW: CHP auction legislative process \(in German\) ▶](#)

April 17: Competitive electrical efficiency program enters third round

April 2017

Germany’s innovative “STEP up!” electrical efficiency funding program entered its third round at the start of March, this time with separate funds on offer for increased electrical efficiency in data centers.

The program, which is run by the Federal Ministry for Economic Affairs and Energy (BMW), funds measures to improve electrical efficiency through competitive tendering rounds. The program is in principle open to all technologies and actors, including energy service providers and municipal utilities. Interested parties submit project proposals in rounds and funding decisions are made by considering the cost-benefit ratio, i.e. euro funded per kWh of electricity saved. The better the ratio, the better the chances of receiving funding.

Any project that promises improved electrical efficiency can be submitted under the “open” calls. EUR 300 million is available for the pilot phase, which runs until the end of 2018. As in the previous rounds, funding is also being offered with particularly attractive competitive conditions in a “closed” call aimed at measures in a specific field or target group. Previous closed calls have focused on energy contracting and the renovation of Germany’s 680,000 elevators.

Electrical efficiency in data centers is the topic of this round. Data centers are one of the biggest users of electricity in the IT field. With the economy becoming increasingly digitized, this consumption is set to grow. Despite improvements in the energetic performance of IT components, investment in infrastructure such as cooling and ventilation systems has lagged, the Federal Ministry for Economic Affairs and Energy notes in the [funding announcement](#). ▶

Read more:

[STEP up! website \(in German\) ▶](#)

March 17: Record KfW energy efficiency funding in 2016

March 2017

Much of the financial support and incentives for energy efficiency in buildings and industry in Germany is issued by the KfW development bank. Demand for the promotion of energy efficiency in the home and in businesses was particularly high in 2016, the bank [reports](#) ▶.

Growth was particularly strong in the bank's housing priority, where commitments reached a volume of EUR 20.8 billion (2015: EUR 16.5 billion), with more than EUR 11 billion disbursed in the energy-efficient construction programme alone (2015: EUR 7.0 billion). The strength of the new construction sector and low interest rates have provided a strong and lasting boost to demand. The bank reports that the tighter KfW efficiency house standards have been very well received. 290,000 existing housing units underwent energy efficient refurbishment in 2016 with KfW funding.

The overall increase in funding issued to businesses under the bank's environment and energy priority was largely due to the energy efficiency program, which was restructured and significantly improved in 2015 and through which a total of EUR 5.2 billion (2015: EUR 3.8 billion) was issued. The expansion of the energy efficiency program has leveraged energy-saving potential in companies, for example through the promotion of systems aimed at avoiding or using exhaust heat, which was launched in May 2016.

Read more:

- [GTAI: Press release - "Germany's Energy Efficiency Drive Accelerates"](#) ▶



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