

**ARTICLE** Energy Transition in the Building Sector

## Efficient buildings

Buildings account for almost 35% of Germany's final energy consumption. Most of this energy is used for heating and hot water. As a basic rule, wherever consumption is high, there is a lot of potential for saving energy. The same applies to cases with no or only limited repair work. Energy efficient buildings can be switched faster to renewable energies.

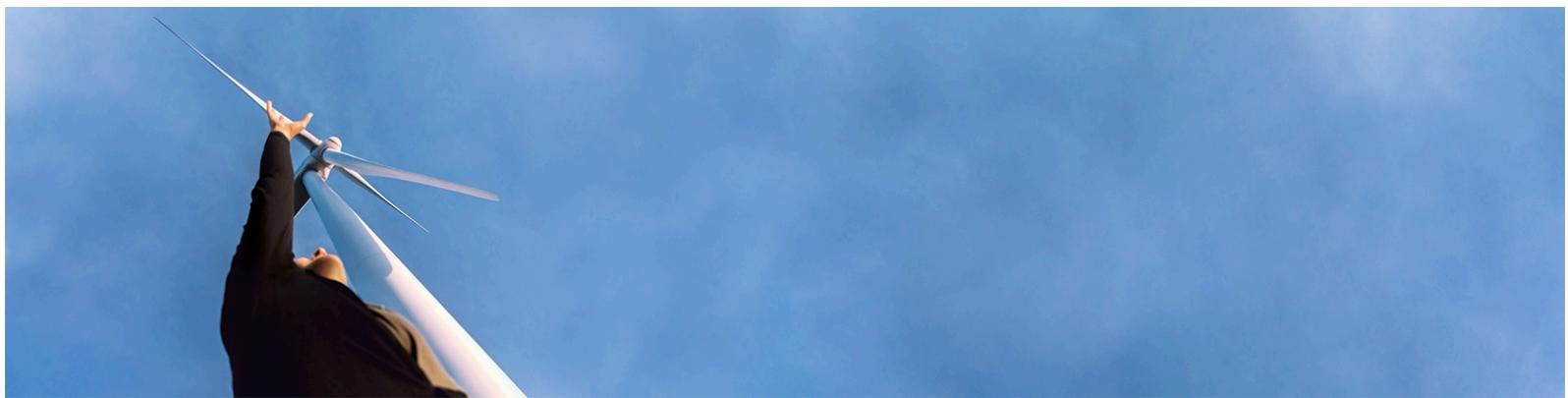


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There are many benefits of improving energy efficiency and using renewable energy to power the home. These include lower energy costs, greater comfort, a higher property value and the valuable contribution that is made mitigating climate change. Why not start your personal energy transition now! The Federal Ministry for Economic Affairs and Climate Action (BMWK) provides attractive funding programmes to support you.

### “Energiewchsel” (energy switch) information portal

Energy efficiency pays off: the cleanest and cheapest energy is energy that we don't use in the first place. In order to make our energy transition a success, we are seeking to become even more efficient in the way we use power and heat. Whether it's the installation of a new heating system to replace the old one or of energy-efficient windows, the Federal Government is providing funding to help private households, companies and municipalities implement energy-efficiency measures. This is good for the environment, makes homes more comfortable to live in, and helps you save money. Further information can be found at: [<https://www.energiewchsel.de/KAENEF/Navigation/DE/Home/home.html>](http://www.energiewchsel.de).



## *Informationsportal "80 Millionen gemeinsam für Energiewechsel"*

Zur Webseite →

### HEATING FROM RENEWABLE ENERGY

#### Heat transition in the Building Sector

The Federal Government wants to accelerate the transition to renewable energies and thus advance climate action and Germany's energy independence. It has therefore reviewed the Buildings Energy Act (GEG). In the future, at least 65% of the energy used in newly installed heating systems will be required to be renewable energy.

The rules governing the transition to renewable energy sources applies to all heating systems that are to be newly installed in newly built and existing buildings, in residential and non-residential structures. Different deadlines and transitional provisions apply. Existing gas and oil heating systems functioning properly can continue to be used and be repaired, if necessary.

Further information on energy transition in the building sector, on funding options and transitional periods is available (in German) at [www.energiewechsel.de](http://www.energiewechsel.de) <<https://www.energiewechsel.de/KAENEF/Navigation/DE/Home/home.html>> and  
→ [www.gebaeudeforum.de](http://www.gebaeudeforum.de) <<https://www.gebaeudeforum.de/>> .



Newsletter "Energiewende direkt"  
Startschuss für klimafreundliches  
Heizen (Ausgabe 08/2023)

#### Further information on the Buildings Energy Act.

##### Erneuerbares Heizen

- Pflichtinformation vor dem Einbau einer neuen Gas-, Öl- oder Biomasse-Heizung nach §71 Abs. 11 GEG

EXTERNAL SITES

##### Erneuerbares Heizen

- Häufig gestellte Fragen zum Gebäudeenergiegesetz (GEG) auf Energiewechsel.de

EXTERNAL SITES

##### Energy Transition in the Building Sector

- ✉ Startschuss für klimafreundliches Heizen: Bundestag beschließt Novelle des Gebäudeenergiegesetzes

08/09/2023 PRESS RELEASE

##### Energy Transition in the Building Sector

- ✉ Begleitanalyse zur Heizen-mit-Erneuerbaren-Regelung (inkl. Wirtschaftlichkeitsberechnungen)

21/04/2023 ARTICLE

### HEAT PUMPS

#### Efficient use of ambient heat

Heat pumps can make an important contribution for us to become more independent from fossil energy imports and reach climate neutrality by 2045. They draw most of the energy they need for heating from their surroundings and the electricity they require is also becoming increasingly climate-friendly.



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30/04/2024 DOWNLOAD

**Faktenblatt**[↓ Fakten zum Einsatz von](#)[Wärmepumpen](#)

Datei ist barrierefrei

PDF, 365 KB

**Of use not only for newly built houses but also for existing buildings.**

Heat pumps have become the standard heating system for new buildings but are a good solution for existing stock, too. There are different types of pumps, like air-heating pumps, brine-water heat pumps, ground water heat pumps and also hybrid systems which are a combination of different heat generators.

A heat pump draws warmth from its surroundings and directs it inside the house. The principle is the same as that of a refrigerator - just the other way round.

**The Federal Government's heat pump campaign**

Around 356,000 heat pumps were newly installed in 2023, 1.8 million heat pumps are already operational today. However, in spite of rising numbers of installations, heat pumps only accounted for 27% of the nearly 1.3 million newly installed heating systems in 2023. It is clear that much remains to be done - especially in the sector of existing buildings.

The Federal Ministry for Economic Affairs and Climate Action and the Federal Ministry for Housing, Urban Development and Building met with representatives of skilled crafts, industry, grid operators and social partners on the occasion of a heat pump summit in June 2022 and formulated the following goals: the aim is to be able to install at least 500,000 heat pumps a year from 2024. In a joint declaration, the participants of the Alliance flag up specific fields of action where improvements are needed in order to succeed the ramp-up of heat pumps.

You can find the (German) text of the joint declaration [hier \(PDF, 121 KB\)](#)  
[https://www.bundeswirtschaftsministerium.de/Redaktion/DE/Downloads/A/absichtserklaerung-waermepumpen.pdf?\\_\\_blob=publicationFile&v=1](https://www.bundeswirtschaftsministerium.de/Redaktion/DE/Downloads/A/absichtserklaerung-waermepumpen.pdf?__blob=publicationFile&v=1).

Building on this, in early 2023, the Alliance published a [roadmap](#)  
<https://www.bundeswirtschaftsministerium.de/Redaktion/DE/Downloads/F/20230215-fahrplan-wp-hochlauf-2023.html> for a dynamic roll-out of heat pumps. Climate action, industrial value creation, skilled crafts - in all these areas, the transition from fossil to renewable energy means new opportunities for the building sector. These opportunities must be used. A first [roadmap update](#)  
<https://www.bundeswirtschaftsministerium.de/Redaktion/DE/Downloads/F/20230919-update-fahrplan-wp-hochlauf-2023.html> from summer 2023 shows that a large number of intended measures have already been launched.

The Federal Funding Programme for the Heat Pump Expansion Programme, which started on 1 April 2023, responds precisely to the specific needs to provide training for existing skilled workers. Applications are accepted from skilled craft enterprises (plumbing, heating, air-con, electrical, refrigeration, chimneysweeps), energy advisors and planning offices for building technology. They receive grants for the further training of their employees in order to prepare them for the planning and installation of heat pump heating systems.

You can find out more about the functioning and funding of heat pumps by visiting the website of the Energiewechsel-campaign [here](#) <<https://www.energiewechsel.de/KAENEF/Navigation/DE/Service/FAQ/Waermepumpe/faq-waermepumpe.html>> and on the information portal of the German Consumer Organisations [here](#) <<https://www.verbraucherzentrale.de/wissen/energie/heizen-und-warmwasser/waermepumpe-alles-was-sie-wissen-muessen-im-ueberblick-5439>>. Information, pointers to events and more on climate-friendly buildings can be found at [here](#) <<https://www.gebaeudeforum.de/>>.

## Heat pump ramp-up



19/09/2023 DOWNLOAD

[Update zum Fahrplan Wärmepumpen-Hochlauf](#)  
Wärmepumpenoffensive der Bundesregierung



15/02/2023 DOWNLOAD

[Fahrplan Wärmepumpen-Hochlauf](#)  
Wärmepumpenoffensive der Bundesregierung

## FEDERAL FUNDING FOR ENERGY-EFFICIENT BUILDINGS (BEG)

### A billion-euro programme for climate action in buildings

The Federal Ministry for Economic Affairs and Climate Action is promoting better energy efficiency and renewable energies in the building sector.

The Federal funding for energy-efficient buildings (BEG) programme consists of four sub-programmes:

- BEG WG (complete renovation of residential buildings to energy-efficient houses),
- BEG NWG (complete renovation of non-residential buildings to energy-efficient buildings) and
- BEG EM (renovation with individual measures for residential and non-residential buildings).
- BEG BfN (climate-friendly new buildings - responsibility of the Federal Ministry for Housing, Urban Development and Building [BMWSB])

The [KfW](#) <[Institut de crédit pour la reconstruction](https://www.kfw.de/inlandsfoerderung/Privatpersonen/Bestehende-Immobilie/Energieeffizient-sanieren/)> <<https://www.kfw.de/inlandsfoerderung/Privatpersonen/Bestehende-Immobilie/Energieeffizient-sanieren/>> and the [Federal Office for Economic Affairs and Export Control \(BAFA\)](#) <[https://www.bafa.de/DE/Energie/Effiziente\\_Gebaeude/effiziente\\_gebaeude\\_node.html;jsessionid=8E4C5B279A97C2E6AB758B462](https://www.bafa.de/DE/Energie/Effiziente_Gebaeude/effiziente_gebaeude_node.html;jsessionid=8E4C5B279A97C2E6AB758B462)> are responsible for implementing the BEG. The funding is provided either in the form of a non-repayable grant for individual measures or in the form of a low-interest loan in conjunction with a repayment grant from Federal funds (credit) for complete renovations.

All those who invest in measures eligible for funding can apply.

Applications for funding must be submitted before the beginning of the project.

For details on the BEG and current information, please go to: [www.energiewechsel.de/beg](#) <<https://www.energiewechsel.de/beg>>



Newsletter "Energiewende direkt"

Neue Förderung für klimafreundliches Heizen (Ausgabe 01/2024)



12/12/2022 PUBLICATION

*Energy Transition in the Building Sector*

- Einsparpotenziale aus der Optimierung von Heizungsanlagen in Wohngebäuden Studie (PDF ist barrierefrei)



22/08/2024 PUBLICATION

*Energy Transition in the Building Sector*

- Gut beraten, besser saniert Die Energieberatung für Wohngebäude (PDF ist barrierefrei)



28/08/2020 PUBLICATION

*The Energy Transition*

- Langfristige Renovierungsstrategie der Bundesregierung

## FAQs on tax incentives for the energy retrofitting of buildings ( in German)

**Welche Maßnahmen zur energetischen Gebäudesanierung werden gefördert?**

[SEE ANSWER](#)

**Wer profitiert von der steuerlichen Förderung?**

[SEE ANSWER](#)

**Wie hoch ist die steuerliche Förderung?**

[SEE ANSWER](#)

## ADVICE AND INFORMATION

### Good advice for the right modernisation

First energy advice, then retrofitting because: reliable information and expertise are vital to be able to take a wise decision on energy-efficient renovation.

Personalised information and advice are available throughout the whole process, from gaining an initial overview right through to securing a detailed analysis.

#### The initial overview: advisory services provided by consumer centres

If you're looking to gain an initial overview and some tips on how to conserve energy, the [consumers centres <https://verbraucherzentrale-energieberatung.de/beratung/>](#) are a good place to start. They offer a wide range of information services on their websites, over the phone, and can even come to your home.

#### On-site advisory services provided by consumer centres

The on-site appointments of the consumer advice centres are of great interest to homeowners. It involves a two-hour appointment with an energy advisor from the consumer centre who will visit you at your home to take a closer look at your energy consumption and provide initial recommendations as to how you can best save energy, improve your energy efficiency and general recommendations on heating. Your costs total a mere €30, because all of the energy advice provided and organised by the consumer centres is cofinanced by the Federal



EXTERNAL SITES

[Internetportal](#)[Verbraucherzentrale Energieberatung](#)

Ministry for Economic Affairs and Climate Action under the „[Federal funding for energy advice from the consumer centres <https://www.verbraucherzentrale-energieberatung.de>](#)“ programme. Advisory services are free for low-income households. For further information, please call the freephone consumer-centre hotline on 0800 - 809 802 400.

### A practical online tool: The renovation calculator

The renovation calculator of the Federal Ministry for Economic Affairs and Climate Action and the KfW Bank is an online tool that you can use to easily start bringing your house up to date and save on energy costs. First, you need to enter data about the current state of the building by answering questions, such as: When was the building built? How big is it? What kind of heating is installed? How old is the heating system? You can then choose between different modernisation options: Do you want to insulate the outer walls? Do you want to install new windows? Or are you looking to replace the heating system? You provide the information about your building and in just a few mouse clicks, the online tool will help you assess what modernisation measures will truly pay off for you: [sanierungsrechner.kfw.de <https://sanierungsrechner.kfw.de>](#).



SUBJECT-SPECIFIC WEBSITES

► [KfW-Sanierungskonfigurator](#)

### An on-site visit by the consumer advice centre

Booking a one-on-one on-site consultation by a certified energy efficiency expert will help you identify your specific modernisation needs and put together a coherent overall modernisation strategy for the building. To make sure that everyone can afford this advisory service, the Federal Ministry for Economic Affairs and Climate Action is providing part-funding for the costs as part of the „[Energy advice for residential buildings <https://www.energiewchsel.de/KAENEF/Redaktion/DE/Foerderprogramme/energieberatung-wohngbaeude.html>](#)“ (EBW). The energy advisor makes specific proposals on which modernisation measures suit the needs of your particular house and create an individual modernisation plan (iSFP) for you.

Qualified energy consultation for small and medium-sized enterprises (SMEs), non-SMEs with a total energy consumption of up to 500,000 kWh per year, as well as for municipalities and non-profit organisations, is also supported by the Federal funding „[Energy advice for non-residential buildings, facilities and systems <https://www.energiewchsel.de/KAENEF/Redaktion/DE/Foerderprogramme/energieberatung-nichtwohngbaeude-ebn.html>](#)“ (EBN). Visit our website to learn more about the campaign [„80 Millionen gemeinsam für Energiewchsel“ <https://www.energiewchsel.de>](#).

### Tailored modernisation roadmap

A tailored modernisation roadmap (in German: iSFP) is financially supported by a grant as part of the energy advisory services for residential buildings programme (EBW) and creates eligibility for preferential conditions for Federal funding for energy-efficient buildings (BEG). The iSFP is the result of an energy advice for residential buildings and shows how the gradual energy modernisation of a building or the retrofitting of a building can be carried out in one go. The building energy advisor uses the iSFP to create an understandable overview of the refurbishment work to be carried out in a building and summarises these into sensible sets of measures tailored to the needs of the client and the building. It points to possibilities for energy conservation and the use of renewables, and also gives an estimate of the relevant investment costs and potential funding possibilities and the savings that could be achieved in terms of heating costs and carbon emissions. Visit our website to learn more about the campaign [„80 Millionen gemeinsam für Energiewchsel <https://www.energiewchsel.de/KAENEF/Redaktion/DE/Standardartikel/sanierungsfahrplan-energieeffizient-sanieren-dank-energieberatung.html>“](#).

### SERIAL RETROFITTING OF BUILDINGS

## Federal funding for serial retrofitting measures

Serial retrofitting is an innovative approach to renovating buildings: prefabricated elements for roofs and façades and prefabricated building technology will make it possible to undertake rapid high-quality upgrades to the energy performance of buildings. Federal Funding for Serial Retrofitting will foster the development, testing and manufacture of novel procedures and components for serial retrofitting and sets new incentives for the energy transition in the building sector as part of the Climate Action Programme 2030. Serial retrofitting also benefits from funding with a 15 percentage point bonus under the Federal funding for energy-efficient buildings (BEG WG/NWG).



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#### Ergebnisbericht

#### Marktstudie und Handlungsoptionen zur seriellen Sanierung

Studie erstellt im Auftrag des Bundesministeriums für Wirtschaft und Klimaschutz



Berlin, 13. October 2022

24/03/2023 PUBLICATION

[↓ Marktstudie und Handlungsoptionen zur seriellen Sanierung barrierefrei](#)

PDF, 2 MB

Retrofitting buildings is also a great challenge for real-estate companies that have to deal with high investment costs, time-consuming planning procedures and low acceptance for the measures to be introduced in existing buildings. Oftentimes, companies in the skilled crafts sector lack capacities to implement the necessary measures, and building companies complain about capacity bottlenecks due to a growing lack of skilled workers. All of this results in growing building costs, delays and a suboptimal quality of energy provision. In total, the retrofitting quota is stagnating at a level that is insufficient compared to the climate action goals we have set in the building sector.

This is where serial retrofitting comes in. Serial retrofittings use technical options for industrial prefabrication of construction parts and therefore pave the way for a faster energy retrofitting of existing buildings by making prefabricated facade or roof elements and related fittings off-site. The prefabricated construction elements need significantly less work on-site compared to conventional refurbishment.

More information on the funding programme is available [here](#) <https://www.energiewchsel.de/KAENEF/Redaktion/DE/Foerderprogramme/bundesfoerderung-serielle-sanierung.html>.

All the information about the funding conditions and application forms can be obtained from the Federal Office for Economic Affairs and Export Control at [www.bafa.de/serielles-sanieren](#) [https://www.bafa.de/DE/Energie/Energieeffizienz/Serielles\\_Sanieren/serielles\\_sanieren\\_node.html](https://www.bafa.de/DE/Energie/Energieeffizienz/Serielles_Sanieren/serielles_sanieren_node.html) or by email to [serielles.sanieren@bafa.bund.de](mailto:serielles.sanieren@bafa.bund.de).

#### TO SAVE ON TAXES

#### Tax breaks for the retrofitting of buildings to improve energy efficiency

It is possible to save on taxes when retrofitting buildings to improve energy efficiency. Apart from general provisions that are in place, section 35c of the Income Tax Act includes a special rule specifically for improving energy efficiency in existing buildings that are used for residential purposes. Funded measures include replacing the heating system, fitting new windows, or insulating roofs and external walls.

It is not possible to cumulate tax benefits for the same energy retrofitting measure together with other Federal funding programmes. Fitting new windows, for example, cannot be funded both through tax breaks and via the Federal funding for energy-efficient buildings. However, it is possible to combine different funding programmes for several different retrofitting measures.

You can find out more on the framework conditions of tax breaks for energy retrofitting measures in buildings on the website of the [Federal Ministry of Finance](#) <https://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Schlaglichter/Klimaschutz/2020-02-07-steuerliche-foerderung-energetischer-gebaeudesanierungen.html>.

## FAQs about thermal insulation of buildings (in German)

**Lohnt sich Wärmedämmung für Haus- und Wohnungsbesitzer wirklich?**

[SEE ANSWER](#)

**Verursacht die Herstellung der Dämmmaterialien mehr Energieaufwand als die Dämmung selbst letztendlich einspart?**

[SEE ANSWER](#)

**Warum ist die energetische Gebäudesanierung wichtig für den Erfolg der Energiewende?**

[SEE ANSWER](#)

**Treibt die Wärmedämmung die Mietpreise in die Höhe?**

[SEE ANSWER](#)

### RELEVANT RULES: BUILDINGS ENERGY ACT (GEG)

## Buildings Energy Act: Guidelines for the efficient use of energy in the building sector

Germany's energy conservation law aims to strengthen energy conservation in buildings and to foster the use of renewable sources of energy. This will reduce our dependency on fossil fuels and on imports of such fuels, strengthen security of supply and mitigate climate change.

The Buildings Energy Act regulates the requirements for the quality of energy systems in new buildings. In addition to thermal insulation, these requirements are set above all for the share of renewable energy used for the heating and cooling of a building. Apart from that, they also include rules for the retrofitting of existing buildings and other rules for the maintenance and inspection of technical building systems (in particular heating and air conditioning systems).

The Buildings Energy Act entered into force on 1 November 2020. In a first amendment from July 2022 statutory standards governing new buildings were tightened and more ambitious climate action measures were introduced. The permissible primary energy consumption of buildings to be constructed is limited to 55% of the primary energy consumption of a reference building. This promotes the installation of climate-friendly heating systems in new buildings, as these have a significantly lower primary energy consumption than fossil-fuelled heating systems.

A second amendment to the law of 8 September 2023 made the use of renewable energies binding when new heating systems are installed. This will accelerate the switch to climate-friendly heating, especially in existing buildings. Information on the entry into force and on transition periods as well as answers to many questions about the law can be found at → [<https://www.energiewchsel.de/geg>](https://www.energiewchsel.de/geg).



Newsletter "Energiewende direkt"

Was steht wo? Das  
Gebäudeenergiegesetz in drei Minuten  
(Ausgabe 02/2024)



*Our energy transition for an energy supply that is secure, clean, and affordable* [Go to Article](#) →

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## Press releases

19/09/2023 PRESS RELEASE

*Energy Transition in the Building Sector*

■ Dritter Wärmepumpengipfel: Breites Akteursbündnis bekräftigt Zusammenarbeit beim Wärmepumpenhochlauf

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08/09/2023 PRESS RELEASE

*Energy Transition in the Building Sector*

■ Startschuss für klimafreundliches Heizen: Bundestag beschließt Novelle des Gebäudeenergiegesetzes

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03/04/2023 JOINT PRESS RELEASE

*Energy Transition in the Building Sector*

■ Bundesregierung startet Länder- und Verbändeanhörung zur Novelle des Gebäudeenergiegesetzes – Kabinettsbefassung noch im April

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16/11/2022 PRESS RELEASE

*Energy Transition in the Building Sector*

■ Broad stakeholder alliance agrees on key principles to speed up the roll-out of heat pumps

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26/07/2022 PRESS RELEASE

*Energy Transition in the Building Sector*

■ Bundeswirtschaftsministerium legt Reform der Gebäudeförderung vor - Fokus auf Sanierung und Vereinfachung der Antragstellung durch klarere Zuständigkeiten

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## The “Energiewende direkt” newsletter

EXTERNAL SITES

► Wärmeplanungsgesetz: Schwung für die Wärmewende vor Ort (Ausgabe 11/2023)

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## Related topics

[Energy Efficiency](#) [The Energy Transition](#) [Energy prices and transparency for consumers](#) [Energy Consulting and Funding](#) [Renewable Energy](#) [National Action Plan on Energy Efficiency](#)  
[Energy Research](#) [Conventional Energy Sources](#) [Coal](#) [Petroleum and Motor Fuels](#) [Gas](#) [Nuclear Energy](#)

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