

# energie wenden



GERMAN  
DESIGN  
AWARD  
WINNER  
2018



## Energy Transitions – Opportunities and Challenges of Our Time

An interactive exhibition

Deutsches Museum





# Turning energy around!

Providing the world with sustainable energy is one of the greatest challenges of our time. Yet this goal is within our reach – if more and more people are involved in the process of energy transition.

The Deutsches Museum has developed an exhibition theme which attempts to explain this massive undertaking and to encourage public participation: **energie.uəpuəm** (*literally meaning “turning energy around”*).

It sheds light on background information and explains basic facts and necessities. But it also shows what has already been achieved in various parts of the world and illustrates a number of exciting – and occasionally surprising – international projects.

An integrated game deeply engages the visitors with the exhibition: they take on the role of a politician and are invited to shape their own personal energy transition!

## **energie.uəpuəm**

Project of the Deutsches Museum

Exhibition Design: Space 4 Stuttgart | teamstratenwerth Basel

## Imprint:

Deutsches Museum, AdöR – 6.2017

Text: Deutsches Museum

Pictures: Deutsches Museum & Space 4/Daniel Stauch

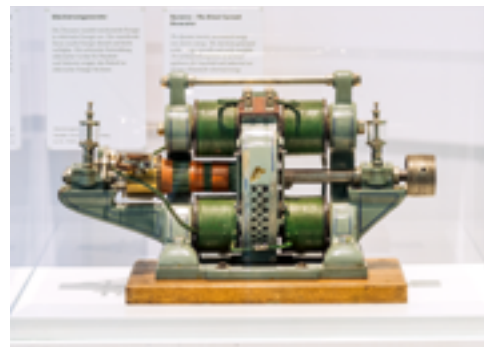
## Prologue

Over the course of human history, humanity has constantly found new energy sources to exploit as a consequence of technological progress. As new energy sources supplemented or replaced existing sources, there were constant changes as to which resources we relied on most. Today, many countries are engaging for the first time in discussions about a deliberate and fundamental transformation of energy.

The two main goals are to reduce CO<sub>2</sub> emissions and to reduce dependence on foreign energy sources from other parts of the world. These goals are to be accomplished through decarbonisation of the economy and, ultimately, the active transition to renewable energies.

A prologue introduces the visitors to the subject by presenting historic milestones of energy supply from the past to the present day. They learn about previous energy transitions and the goals of the current one.

*Constant growth in energy use and world population has resulted in growing emissions and the consumption of more and more resources – it is time to change!*



The history of energy transitions is displayed as a visual chronology. Stretching along the whole extent of the wall from the past to the future.

Emblematic objects symbolize big energy transitions of the past: From wood to coal, from coal to oil and the electrification of the world.

The stakeholders talk to you whether you like it or not –  
what are you going to do?

Make political decisions – what do your voters say?



Confirm your decisions – pull the lever!



# The Game



10 topics  
Choose your own area of interest

Enter the knowledge repositories and find out more

# The Game



## Elements of the game

### Playing Cards

- pre-printed cardboard
  - language coded
  - up to three languages

### Stakeholders

- videos with actors
  - activated by proximity sensors

### Decision Stations

- media stations
  - haptic use via buttons
  - digital feedback
  - robust, mechanical punch

### Evaluation

- optical readout
  - simple printer





Visitors can take on the role of policy makers and explore the complex interdependencies at play: Confronted with facts and questions regarding renewable energy systems as well as with opinionated stakeholders, they are enabled to choose between different political measures and to conduct their own personal energy transition.

With this approach we hope to inspire especially students and young adults – the future decision makers – to actively participate in the energy transition process.

The visitors receive a personalised playing card with which they can activate ten individual decision stations.

Presented on large screens, stakeholders directly address the visitors and invite them to respond to specific problems. At each of these stations the visitors can choose one of three political measures focused on a specific aspect of energy transition and responding to the stakeholders problem.



Converting our current energy landscape into a sustainable one requires an understanding of the various elements of energy supply and their interaction.

The topics include energy generation from a variety of sources, storage and distribution of energy, and final energy consumption. These different aspects are presented in the exhibition as nine thematic rooms.

These thematic rooms serve as a knowledge repository for visitors, providing them with iconic exhibits, fascinating demonstrations, and informative media stations and graphics.

*Unique original objects show new technologies and old treasures.  
Include your own exhibits, too!*



*Map the World!*

*Infographics provide you with a quick overview of diverse topics.*



## Thematic Rooms



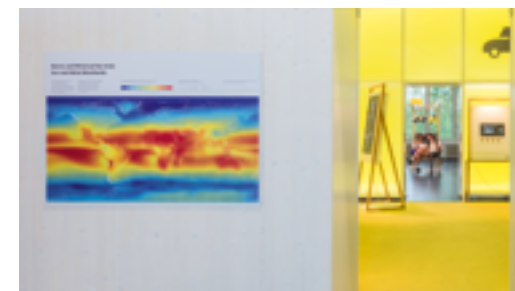
*Interested in more details?  
Rotate these little barrels and learn more about  
new technologies and strategies!*



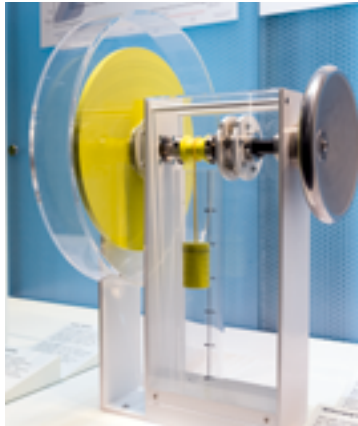
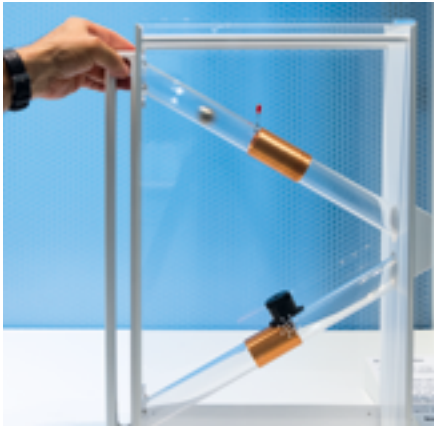
*Spotlights on the World*



*The bigger picture:  
Find out about inspiring international projects  
and positions worldwide.*



# Thematic Rooms





*Interactives – handcraft & expertise  
of the Deutsches Museum*

The thematic rooms are also contain a wide variety of interactives, all of which rely on the vast experience of the Deutsches Museum in the development of interactive exhibits.

The visitors are thus encouraged to participate, to understand and to get involved.



## Key issues

Why such changes are difficult to implement is illustrated in  
"the crux" – the key issue

See the main challenges of each topic



## Accessibility



*See, hear and feel – experience the exhibition with all your senses*

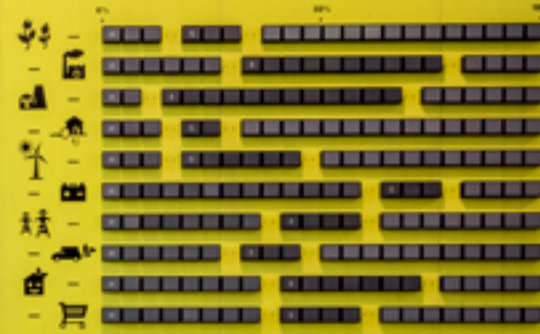
The exhibition should be enjoyable for all ages and levels of expertise, and contains different approaches to include a wide variety of visitors.

The basis of all our exhibitions is an optimized readability, insight heights and supplementary mediastations. The exhibition also includes hands-on models and interactive stations following a multi-sensory concept.



Was verrät deine Spielkarte über dich?  
What does your card reveal about you?

Die Entscheidungen  
der Besucherinnen  
und Besucher  
The Decisions of the Visitors



Four wooden frames, each containing a digital display showing a game board or instructions. Below each frame is a small white console with two numbered buttons (1 and 2).

**Gestalte deine Energiewende!**  
Create your energy transition!

- 1 Nimm dir eine Spielkarte  
Take a card
- 2 Gehe zu den Spielstationen  
Go to one of the game console stations
- 3 Triff Entscheidungen  
Make decisions
- 4 Lass deine Spielkarte auswerten  
Have your card evaluated

## What does your card reveal about you?



And find out how all other visitors decided!

[energie.uerpue.m](http://energie.uerpue.m)

The visitors confirm their choices by pulling the handles of the decision terminals. Their decisions are then physically punched into their playing card.

At the end of the visit the pattern of the punched holes is evaluated and the visitors can review their own personal position regarding the energy transition.



Compare your outcome with your friends.



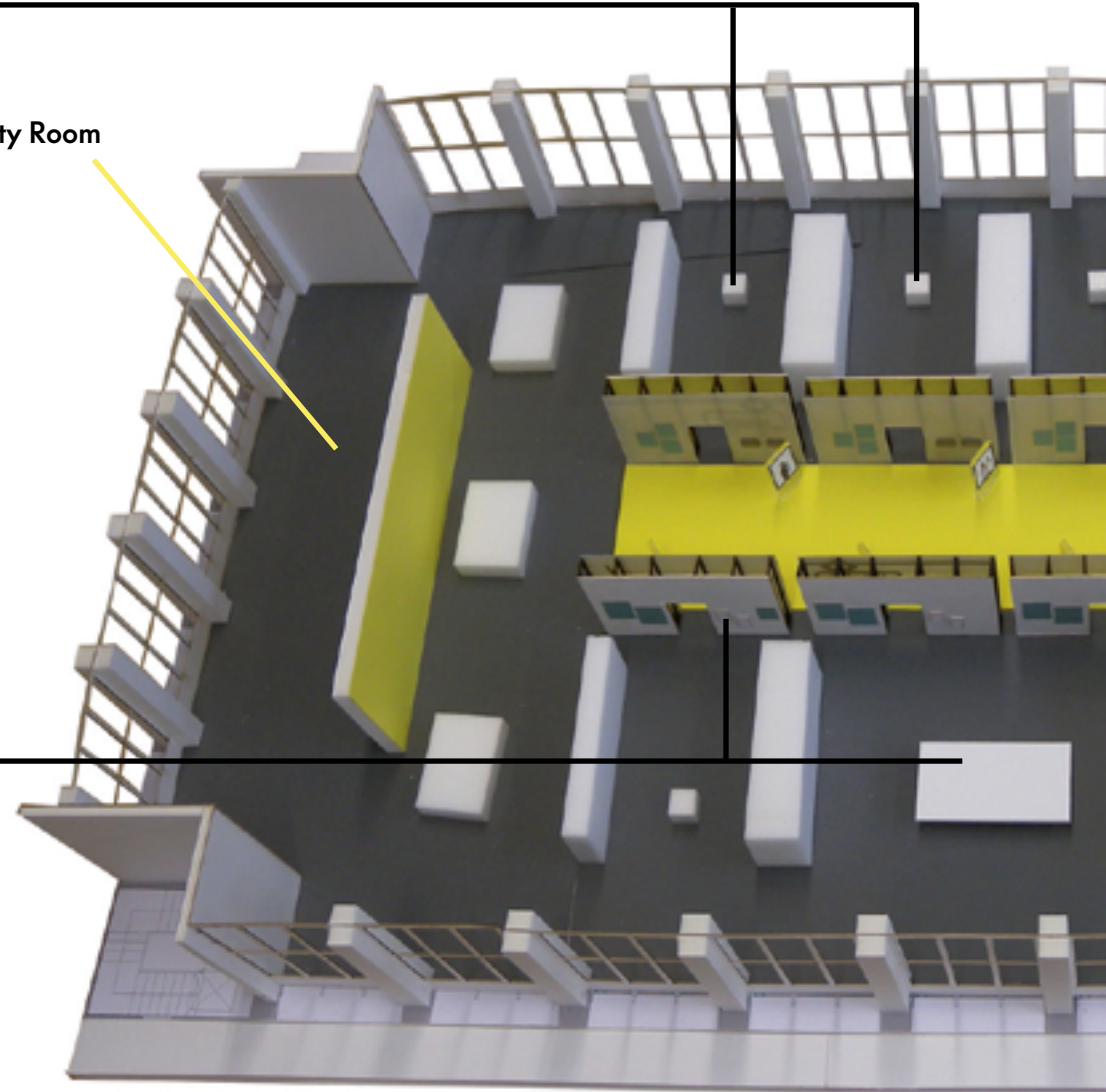


### Hands on

Not only the GAME is interactive, every thematic room includes also at least two interactive stations.



### Activity Room



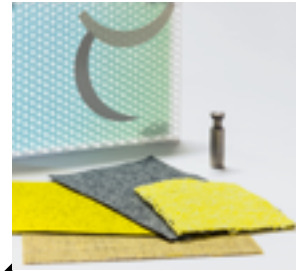
### Media stations

Films, sounds and stories – the exhibition presents content in various ways and for different senses.



**Smaller than life**

Many objects related to the topic of energy are often too large to exhibit. These are modelled in small scales.



**Materials and sustainability**

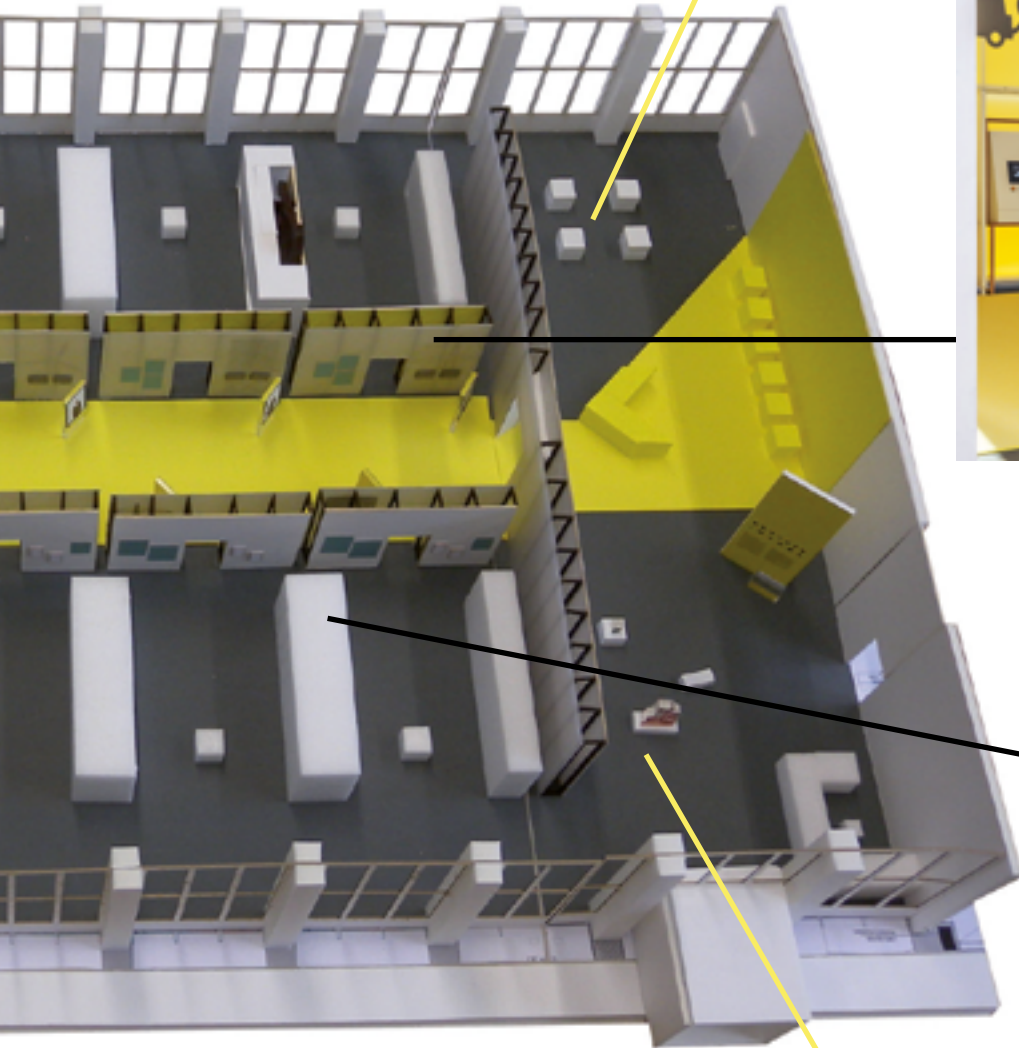
Cloth-covered walls reduce the background sound from the political stakeholders.

After the end of the exhibition, bags will be made from the cloth.



**Exhibition construction**

The modular frameworks can be adapted to your requirements, enabling flexibility in layout design.



Epilogue

Prologue



**Rear panels**

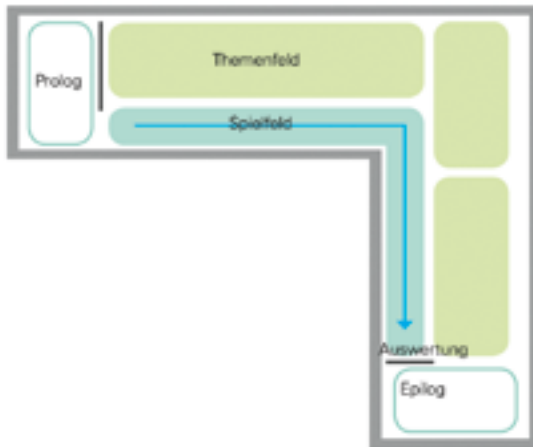
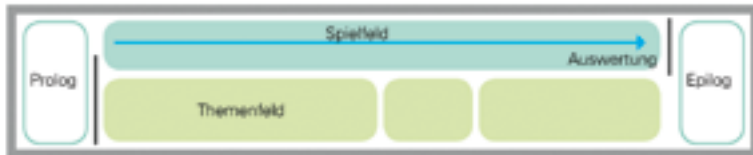
Rear panels are lit in a variety of colours – visitor orientation and technical solution all in one.

## Travelling exhibition

The exhibition energie.wenden will be available for travelling from September 2018 onwards.

In total, the exhibition requires an area of approximately 800 square metres.

The framework construction facilitates clear and concise storytelling, thus simplifying the orientation of the visitors. Due to the foreground mounting of the texts (to be translated) and images, these can be simply customised to meet your individual requirements.



The exhibition can be adapted to various layouts as well as to different light situations due to its incorporated lighting system.

The framework construction not only enables a number of different exhibition path designs, but also permits a modification in size to fit different rooms by simply altering the distances between the individual frames.

Please contact us for more details!

## Facts and figures

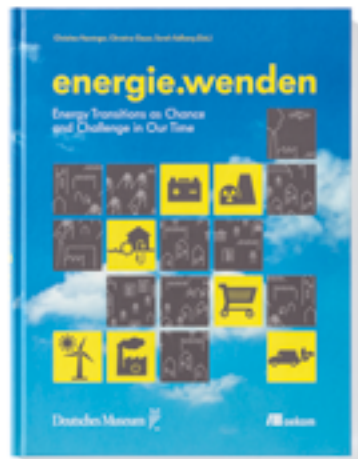
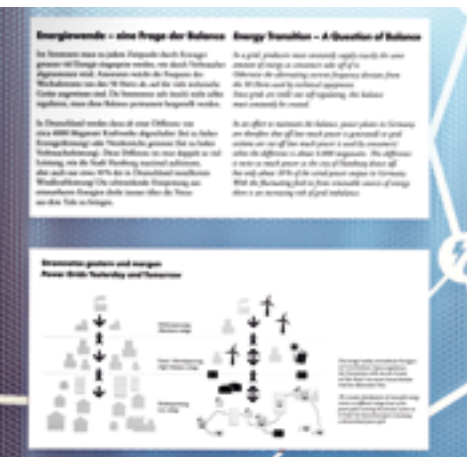
The exhibition energie.уәруәм encompasses over 150 original objects, interactives, hands-on activities and models.

All media stations and graphics, images and texts are in German and English, videos with sound are subtitled in both languages. Language adaptation to other countries is possible.

The exhibition is made of hard-wearing recyclable materials and is designed for quick assembly and disassembly.

With its unique original objects, highly-detailed models, insightful interactives and innovative media stations, the travelling exhibition energie.уәруәм will also engage your visitorship with the global challenge of a sustainable energy supply!

A catalogue of the exhibition is also available in English and German.



## Fact Sheet

### Exhibition energie.уәруәм

Open at Deutsches Museum 15.2.2017–19.8.2018

- o Visitors in the first year – over 500.000
- o 800 square meters, versatile floor plan
- o Thematic rooms
  - Organic Resources – The renewables
  - Fossil Fuels – What are the limits?
  - Nuclear Energy – The great divider
  - Water and Geothermal Energy – Constant current
  - Sun and Wind – No consistency
  - Storage – The great equaliser!
  - Grids – Connecting everything!
  - Mobility – In a rut?
  - Living Space – Conservation on all levels?
  - Trade – Market place of possibilities?
- o 150 exhibits
  - 92 original objects
  - 15 interactive stations
  - 25 models
  - 18 media film and sound stations



Deutsches Museum 

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