



Mein Strom. Mein Gas.  
Meine Entscheidung.

# Ecological Alternatives for NPP Projects in Eastern Europe

Our Motivation for Commissioning the  
Study / Political Conclusions and Demands

Brussels, June 6, 2018

# About Greenpeace Energy



Independent, but strictly committed to GP criteria

- We emerged from a **Greenpeace campaign** in 1999.
- Independent green energy supplier in the hands of **24,000 cooperative members**
- Start of customer supply by **Jan 1, 2000**
- **Today about 140.000** electricity and gas customers (of which are about 9.000 business customers)
- Business assets **EUR 18 million**
- **100** employees (Greenpeace Energy eG and Planet energy GmbH)
- Around **EUR 100 million** sales per year



Photos: Sabine Vielmo / Greenpeace Energy eG

## Our Motivation for the Study



# Our Motivation for the Study

## Germany: Phase-out of Nuclear Energy until 2022

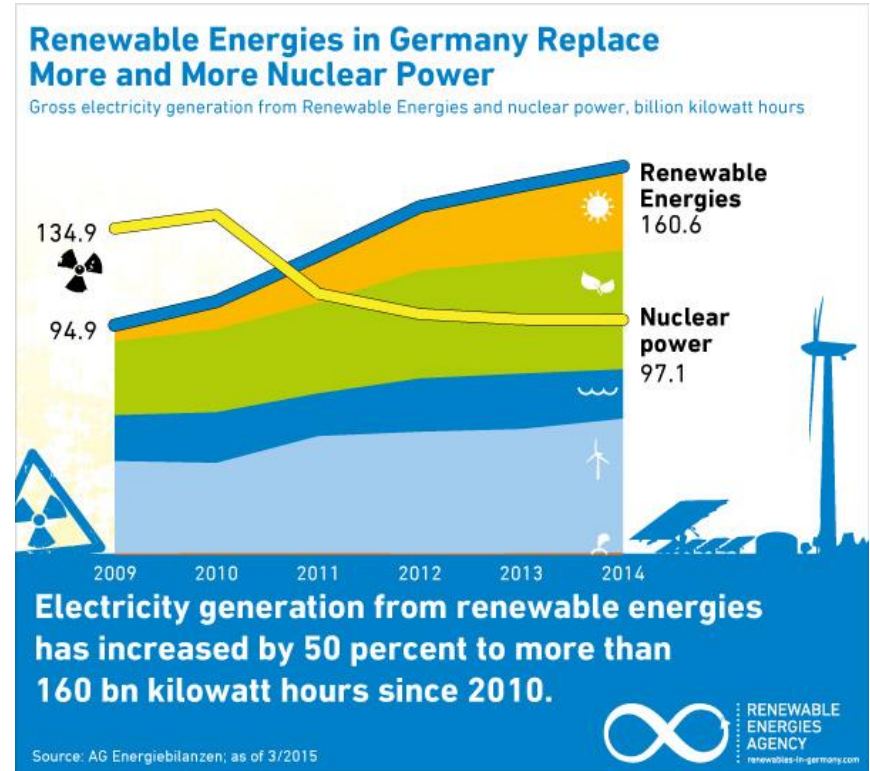
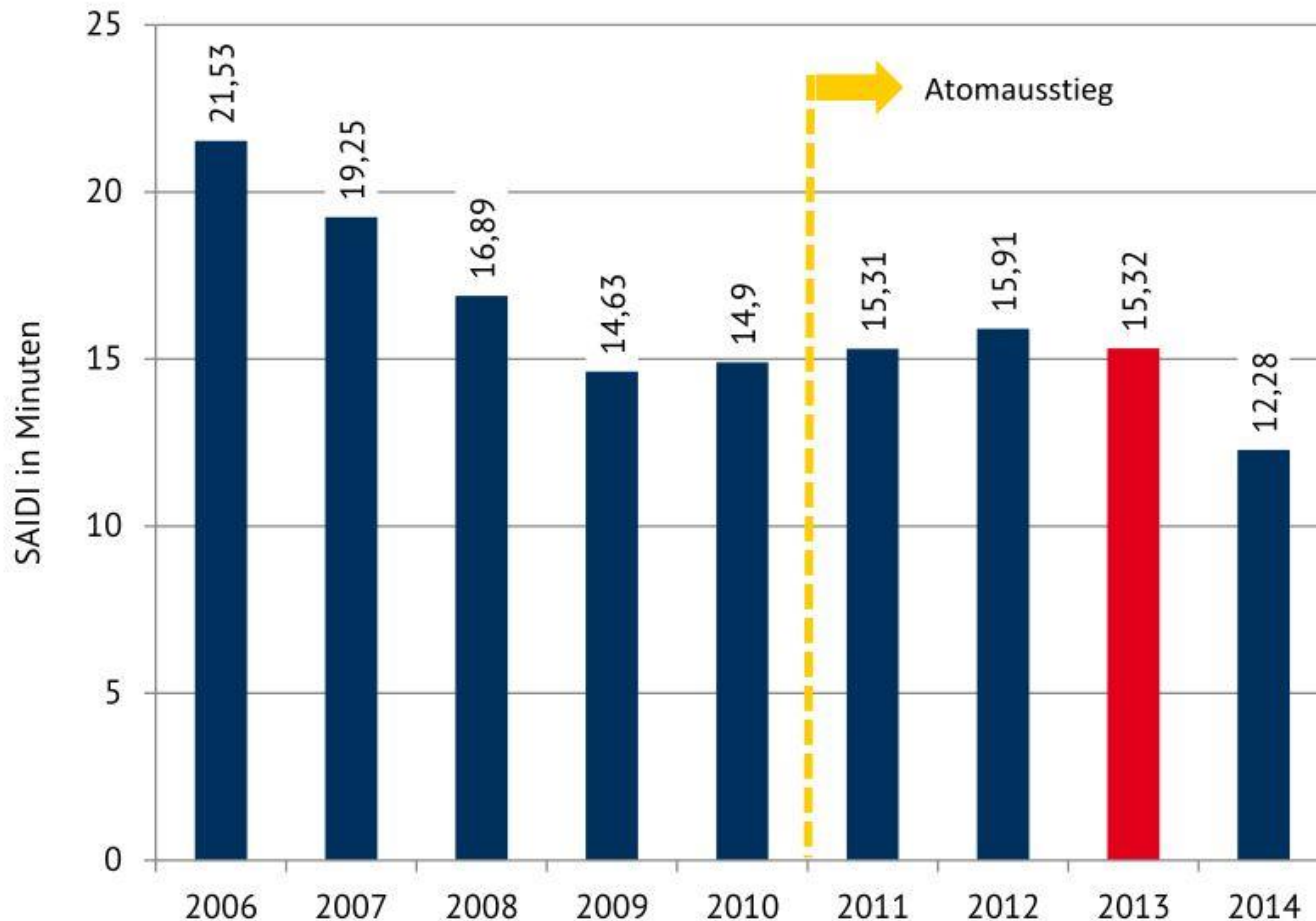


Foto: Sabine Vielmo / Greenpeace Energy eG, Grafik: Agentur für Erneuerbare Energien

# Our Motivation for the Study



## Nuclear Phase-Out: Average Power Failures in Germany



**SAIDI:** System Average Interruption Duration Index.

Values for Germany in annual comparison (data source: BNetzA 2015)



# Our Motivation for the Study



## Phasing out Nuclear Energy: Supply Security

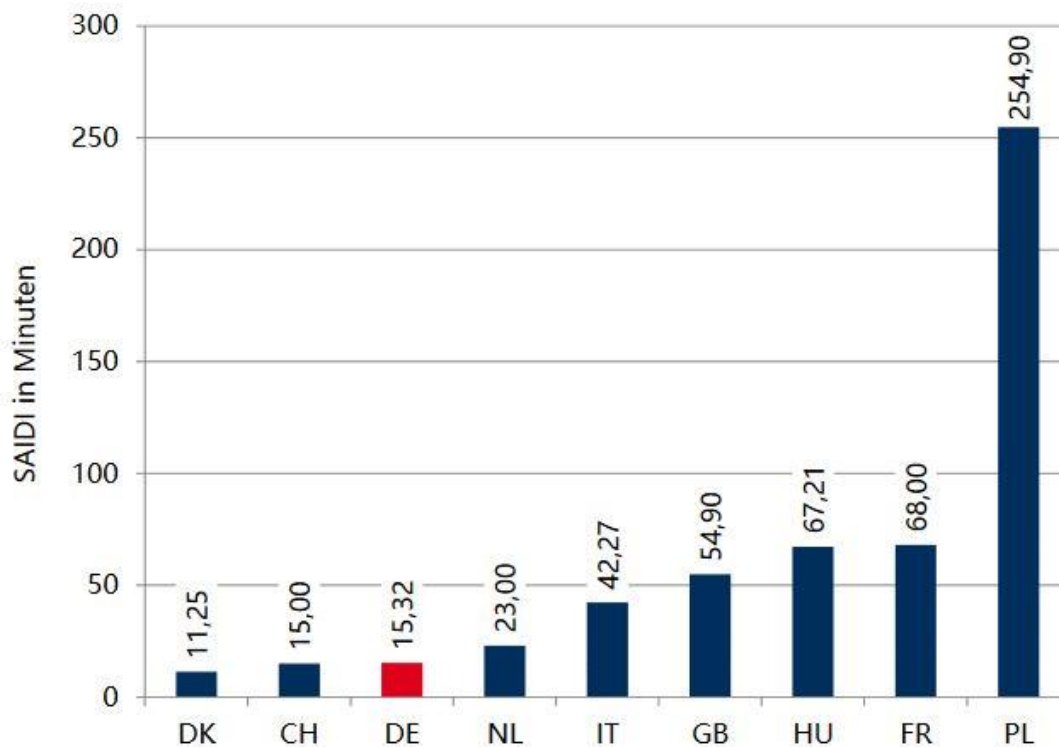


Abbildung 3: SAIDI Werte im europäischen Vergleich für das Jahr 2013 (Datenquelle: CEER 2015)

- Average duration of blackouts is on the decline – despite nuclear capacities being replaced by renewables (2016: 12,80 min). **The supply security is good...**
- ...especially compared to EU countries with a much higher percentage of fossil and nuclear energy in their supply mix.

# Our Motivation for the Study

## Europe: Promotion of Nuclear Energy

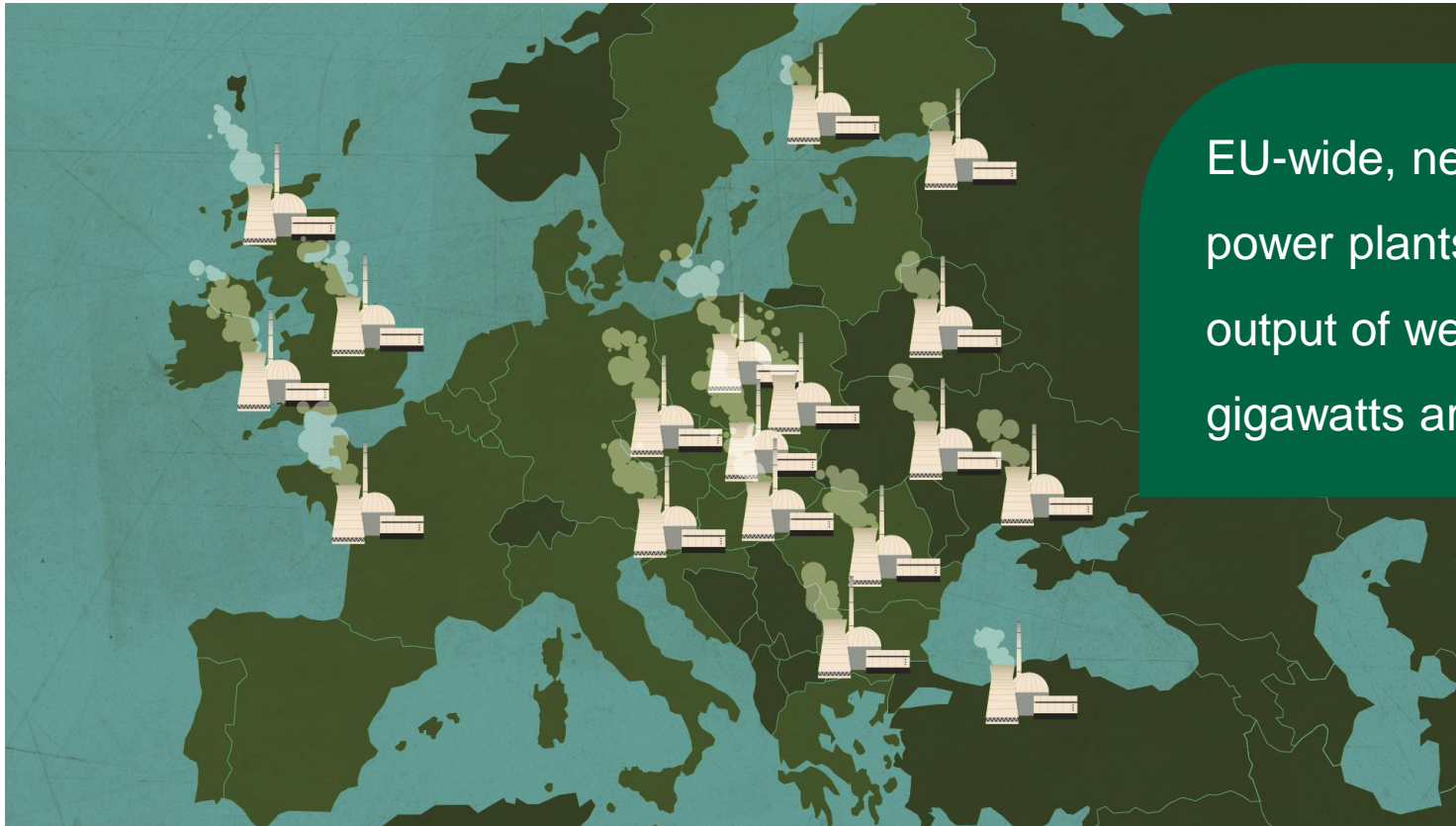
- Despite of that, the strategy of the European Commission: targeted **promotion of nuclear power within the European Union**.
- Et al does the Commission want to **strengthen research** - i.a. to drive the development of so-called "mini-reactors".
- In addition, **inter-state cooperation** in the nuclear sector should be intensified and better incentives for investment in nuclear power should be set.
- According to **EURATOM**, the subsidized promotion of new NPPs is not questioned by state aid guidelines.



# Our Motivation for the Study



## Europe: Planned Roll-Out of new NPP projects



EU-wide, new nuclear power plants with a total output of well over 30 gigawatts are planned.



# Our Motivation for the Study

## New Nuclear: Impact on German Energy Market

Hinkley Point C

Wirkung auf den  
deutschen Strommarkt



0,5% (20 Cent/MWh)



AKW-Ausbau EU\*



11,8%  
(5,70 Euro/MWh)



\*Berechnungsgrundlage: Weitere geplante AKW-Projekte in Großbritannien, Polen, Ungarn, der Slowakei, Slowenien und Tschechien.

Quelle: Energy Brainpool 2015

# Our Motivation for the Study



## New Nuclear: Impact on the Energy Market

- Due to the high subsidization, NPP can produce electricity **irrespective of demand**, as the state guarantee balances the difference to the market price.
- This leads to **dampening effects** on the national wholesale price for electricity.
- Because EU countries are interconnected by cross-border power lines, cheaper electricity flows **across borders** and pushes electricity prices in other EU countries.
- Renewable (German) energy plants whose funding period has expired are dependent on the **revenues that can be achieved on the electricity markets** for their economic operation.
- The reduction in the general market price level caused by Hinkley Point C **leads to lower revenues** for the renewable plants.



Photos: Sabine Vielmo / Greenpeace Energy eG

# Our Motivation for the Study



## Hinkley Point C as a „Blueprint“ for New Nuclear

- In July 2015, Greenpeace Energy, together with nine other companies, filed a **lawsuit** for annulment against the aid granted by the EU Commission, parallel to the complaint by Austria and Luxembourg.
- ***The Court of Justice of the European Union in Luxembourg has declared our action inadmissible – for formal reasons:***
- ***No "individual" impact of GPE, which makes us different from others. The Court says: "The aid affects all companies operating on the energy market equally."***



Photos: Jiri Rezac / Greenpeace, Christoph Eckelt / Greenpeace Energy eG

# Our Motivation for the Study



## Hinkley Point C as a „Blueprint“ for New Nuclear

- The EU Commission justifies its approval by saying that there is **an isolated market for nuclear energy in Europe and that there is a "market failure" on this market** which should be remedied by the aid granted.
- The European Court of Justice has **clearly rejected** this view in the Greenpeace Energy trial. Instead, the judges stated that conventional and renewable energy suppliers **operate on the same European electricity market**.
- However, the argument of the **market failure is also invalid** if there is no such partial market for nuclear energy.



Photos: Kate Davison / Greenpeace

# Our Motivation for the Study

## Hinkley Point C as a „Blueprint“ for New Nuclear

- The EU Commission argues that Hinkley Point C contributes to **security of supply**.
- The United Kingdom, which intervenes before court as a supporter of the Commission, also claims **that renewable energies "would not offer a realistic alternative to the basic load requirements"** that Hinkley Point C could meet.



Foto: fotolia



# Our Motivation for the Study



## Power-to-Gas: Core of a controllable RES



Photos: Christoph Rasch / Greenpeace Energy eG

# Our Motivation for the Study

## Power-to-Gas: Core of a controllable RES

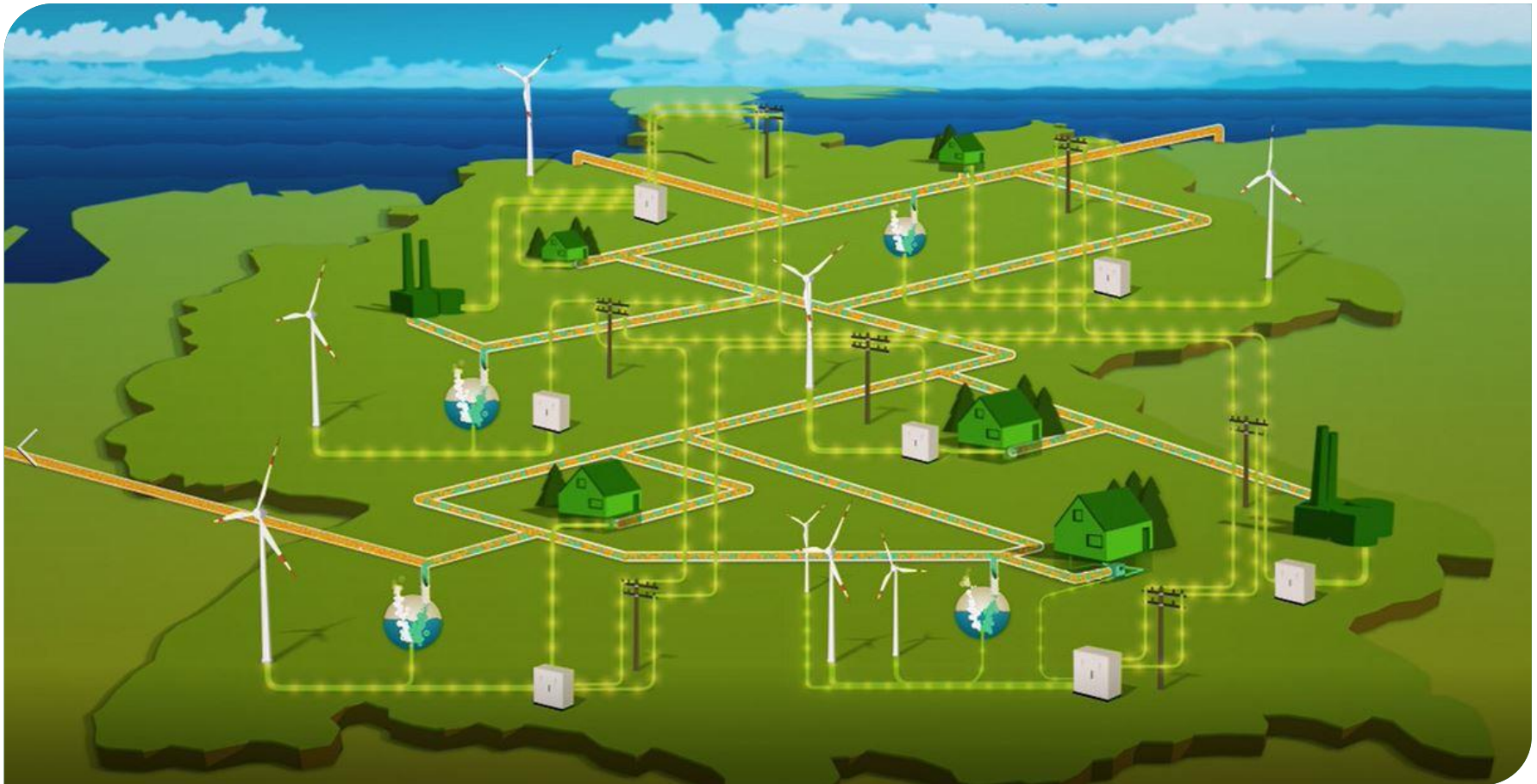
- **Power supply from new wind turbines, gas power plants and windgas facilities**, which convert surplus of wind energy into hydrogen and thus make it storable.
- **Study (2015): This system provides at least the same power (3,2 GW) and supply security as Hinkley Point C.**
- **PtG-System in UK would cost about seven billion euros less** than the subsidies planned for the nuclear power plant (which add up to 108 billion euros).



Photo: Florian Jaenicke / Greenpeace Energy eG

# Our Motivation for the Study

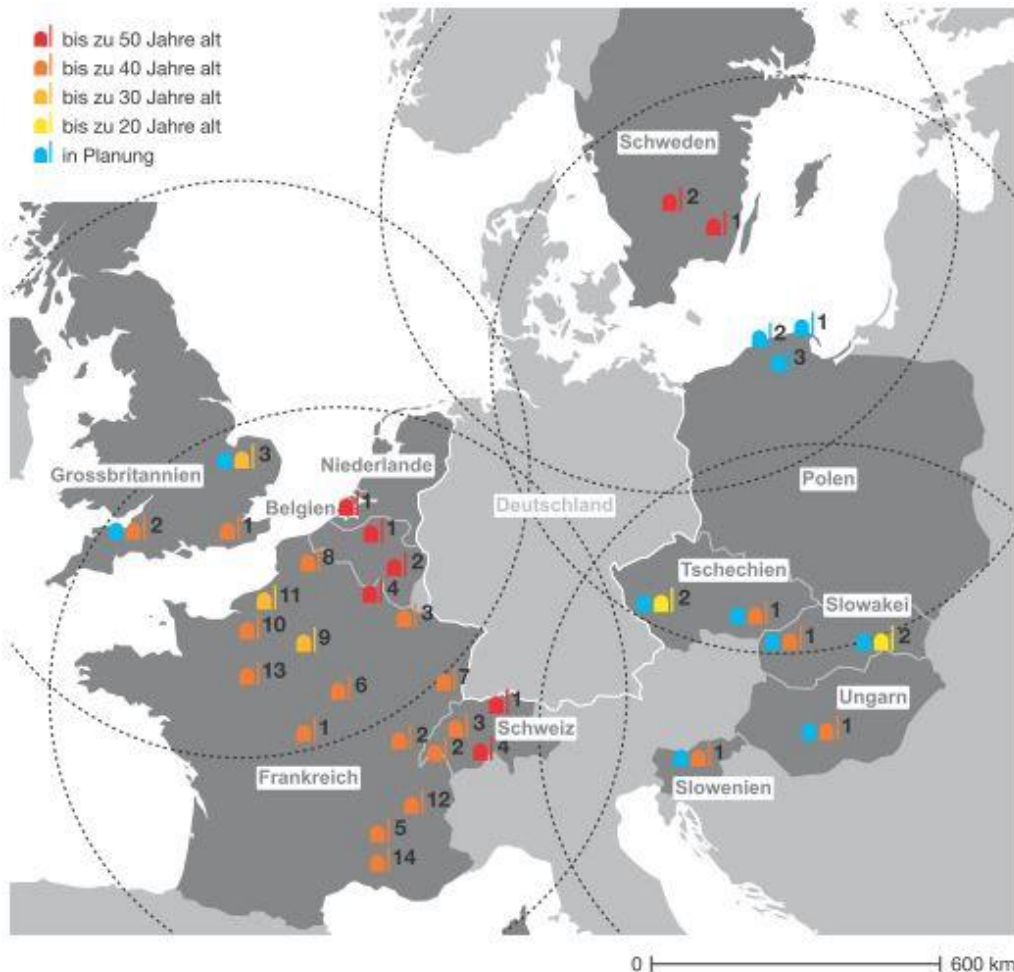
## Power-to-Gas: Core of a controllable RES





# Our Motivation for the Study

## New NPPs create new risks



- There are **34 nuclear power plants** in **German border proximity**
- Some of them are **over 40 years old**
- Some states are planning **nuclear new construction** projects
- Evacuations (and other protective measures) in case of nuclear accident may be necessary up to a distance of **600 kilometers**, depending on the weather.

# Our Motivation for the Study



## Financial risks by new NPPs are hardly covered

- Paks nuclear power plant in Hungary, in operation since 1982, four reactors, **two more under construction** (Russian technology)
- Liability limit and coverage of the operator in Hungary: **127 million €**
- Additional government coverage: **254 million €**
- Maximum liability sum: **381 million €**  
Estimated cost spread of **69-430 billion €**
- The cost of an accident would therefore be at least **180 times higher** than the liability

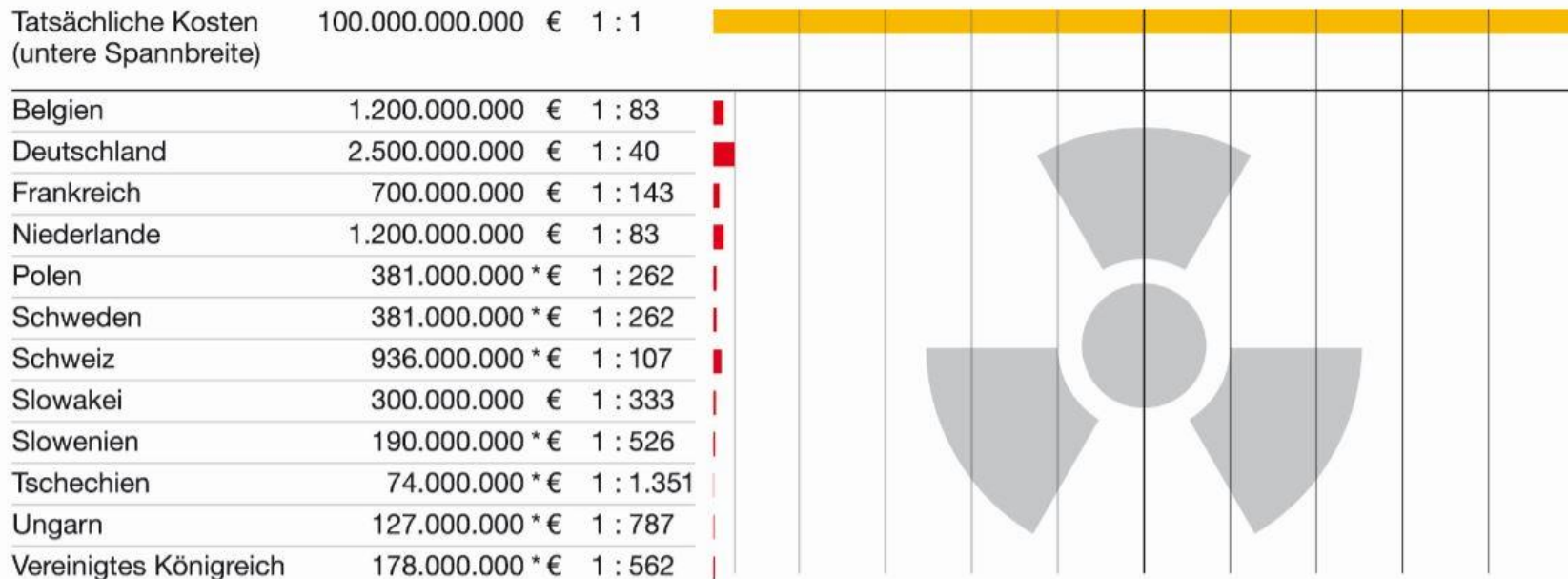


Photo: Bence Jardany / Greenpeace



# Our Motivation for the Study

## Financial risks by new NPPs are hardly covered



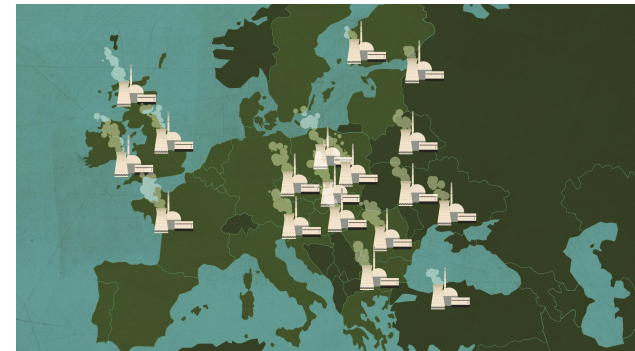
Only a small fraction of accident costs are insured by international treaties.

# Our Motivation for the Study



## Summary of Reasons

- As a company that follows the Greenpeace ideals, we are clearly against any new nuclear power plants in Europe, since this would mean **additional environmental risks**.
- Our aim is to promote a **EU-wide renewable energy transition and develop real alternatives** to conventional power generation – like Power to Gas/Windgas.
- We don't accept the argumentation that only nuclear provides decent **supply security**.
- As a market player and competitor, we have to fight against any **market distortions created by subsidies for nuclear** power plants and resulting setbacks for the ecological energy transition.



## Conclusions and Demands



## What we criticize

- **New accident risks.**
- Repository **costs and risks due to incidents** are not or only insufficiently taken into account.
- Assumed **planned costs do not correspond to reality.**
- **Added value occurs only in a few regions.**
- **Dependence** on nuclear fuel imports and the technical know-how of foreign nuclear power plant operators is high.
- **Geostrategic aspects** are not taken into account.
- Distortion of the energy market at the expense of renewables and, if necessary, impediments to the energy transition.

## What we want

- Our appeal to the governments of the states considered in the study:
- To do a **transparent and honest calculation**.
- Turning away from the **myth of "energy independence"** through nuclear power.
- Taking into account the **possibility of a controllable renewable generation** power station from fluctuating generation.
- Establish a **more intense energy cooperation** to significantly reduce the cost of such a power plant system. □
- **Rethink** the current nuclear power plant plans.



Photo: Christoph Rasch/ Greenpeace Energy eG



## Political action in Germany

**The coalition agreement of the new German government contains the following statements:**

- ...that the Federal government wants to engage, that new nuclear power plants in the future **neither receive “EU funds nor money from German state funds.”**
- ... Berlin also wants to adapt the controversial **EURATOM contract “to the challenges of the future”.**
- ...the coalitions also wants to officially **promote to development and roll-out of Power-to-X technologies, such as Windgas.**
- **Our demand to the German Federal Government – and the EU Commission:** Put **more effort on the promotion of renewable energy** solutions for Eastern European partners and make a **stronger stand against construction of obviously expensive and risky of the planned nuclear power plants.**

# Conclusions and Demands



## What we suggest

**A controllable power plant made of fluctuating renewable energies is a real energy policy alternative to the construction of new NPPs, because it...**

- produces the same, consistent supply security,
- causes comparable costs, (even much cheaper if states cooperate more strongly and balance electrolysis gas with each other as needed),
- guarantees high energy independence,
- has minimal climatic effects,
- does not include a risk of accident or repository risk,
- maintains the value added in the respective countries and supports the development of structurally weak regions.







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**Thank you very much for  
your attention!**

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Photo: Enver Hirsch / Greenpeace Energy eG