



# ENERGY FORWARD

Our path to energy of the future

LEAG's Program for Energy Transition  
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LEAG 

# Agenda

- + **Changing energy:** Focus on transformation
- + **Charging future:** LEAG's BigBatteries
- + **Ready for hydrogen:** Our new generation of power plants

# We

**Top-5**  
producer of  
electricity  
GER

share of electricity  
supply in Germany

about **10%**

**10**  
main  
locations

in Brandenburg & Saxony  
(Lusatian & Leipzig mining  
districts)

**7,200**  
employees

largest employer & vocational  
trainer in the region

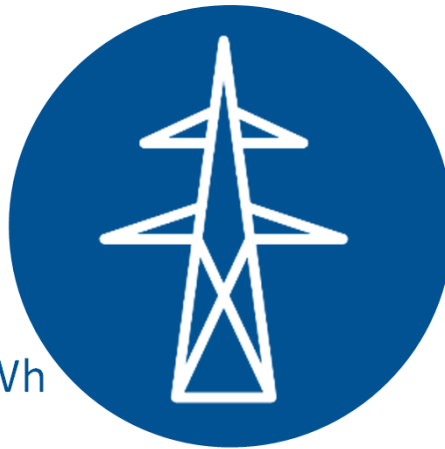


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# Facts & figures 2022

**45.8** billion kWh  
electricity

**3.6** billion kWh  
heat



**759** kt briquettes

**1,227** kt  
pulverised lignite



about **1.2** billion Euro  
in salaries and for suppliers



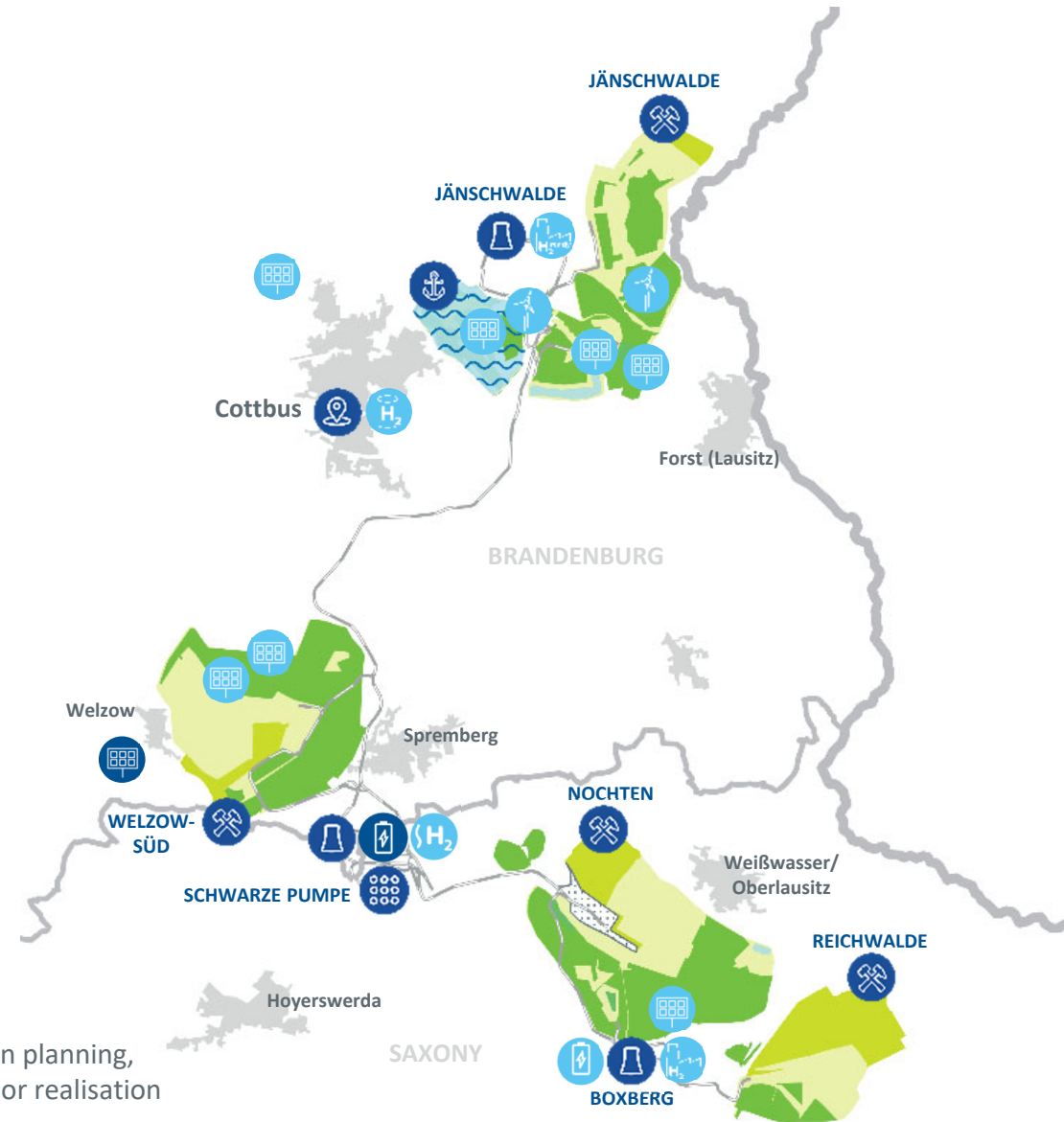
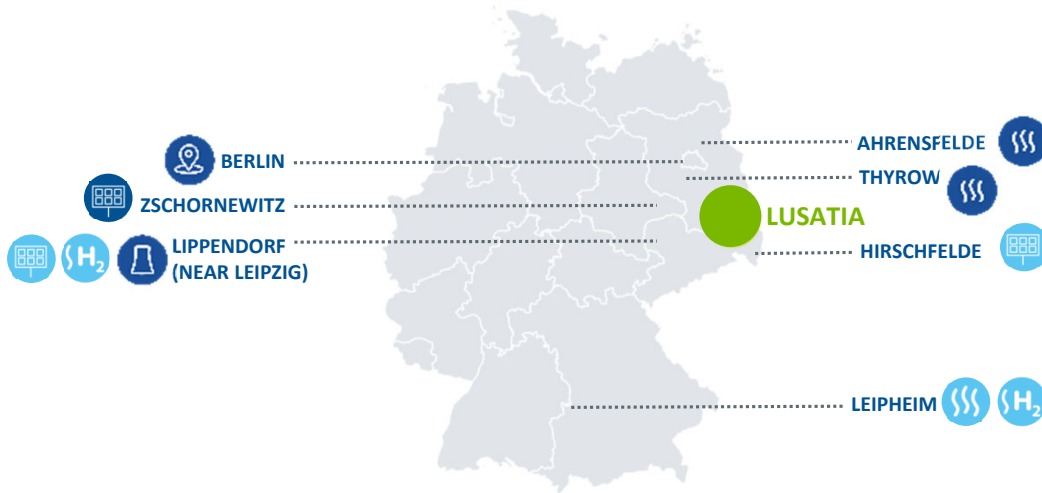
**48.5** million t  
lignite extracted






**7,200** employees including  
approx. 380 apprentices



# Sites full of energy



-  lignite opencast mine
-  lignite-fired power plant
-  refining plant
-  gas-fired power plant
-  administration
-  Cottbuser Ostsee (currently being filled)
-  H<sub>2</sub>-ready gas power plant
-  innovative power plants
-  H<sub>2</sub>-mobility
-  battery storage site
-  wind farm
-  solar park

# Conventional power plants



+ **lignite-fired power plants** in the Lusatian region and near Leipzig (approx. 7,000 MW + 1,000 MW supply reserve)



+ **gas-fired power plants in capacity reserve** (Thyrow: 150 MW, Ahrensfelde: 120 MW)



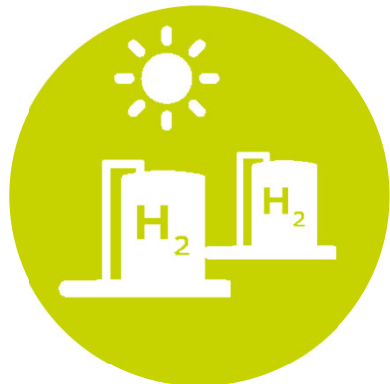
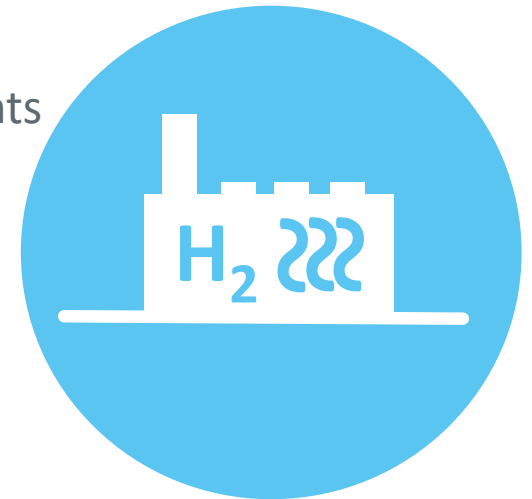
+ **Leipheim gas-fired power plant** as a special grid-related resource (300 MW, from 08/2023)

# Roadmap 2030/2040

**2 - 3 GWh**  
storage capacity



**3 - 4.5 GW**  
flexible power plants



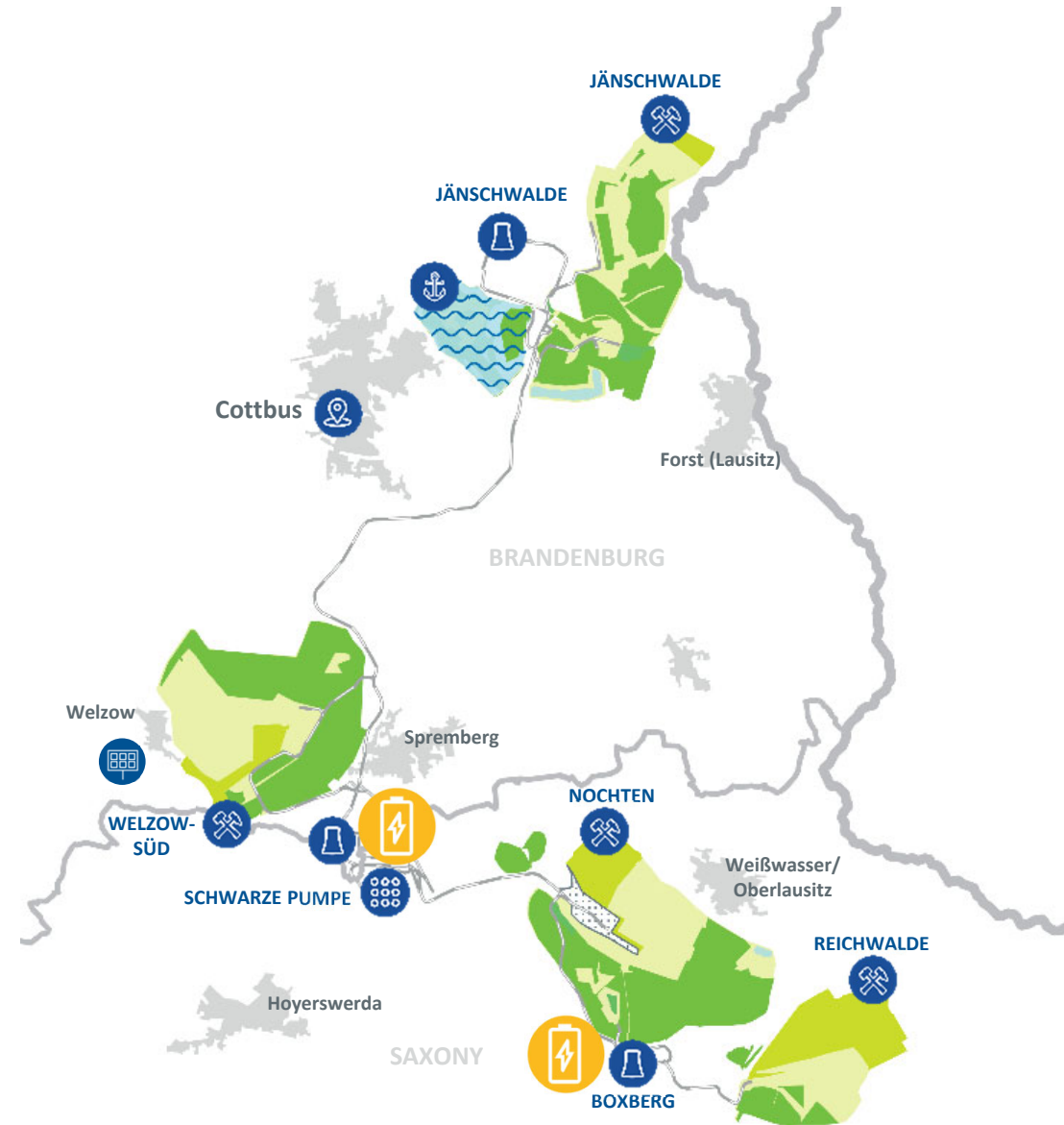
**0.5 - 2 GW**  
green hydrogen



**7 - 14 GW**  
renewable energies

# Short-term storage as a safety buffer

- + lithium (Li) ion batteries
- + **BigBattery Lausitz**
  - + **53 MWh** storage capacity
  - + operating since December 2020
- + **BigBattery Oberlausitz**
  - + **137 MWh** planned storage capacity
  - + commissioning planned as of 2024





# BigBattery Lausitz

- + 13 containers with **8,840 battery modules**
- + **intermediate storage of electricity** from the Schwarze Pumpe power plant and the power grid
- + charging and discharging according to grid situation
- + contribution to grid security:  
**frequency holding and control**
- + targets:
  - + **fast reaction to power grid fluctuations**
  - + **gather experience** in storage management and developing new use cases



# BigBattery Oberlausitz

## targets:

- + expansion of LEAG's battery portfolio
- + creation of the **largest battery park** in Germany
- + lithium-ion batteries (137 MWh), **commissioning planned as of 2024**
- + further lithium-ion battery capacities (up to 500 MWh) or other electrical storage technologies (e.g., redox-flow batteries, up to 600 MWh) planned by 2026

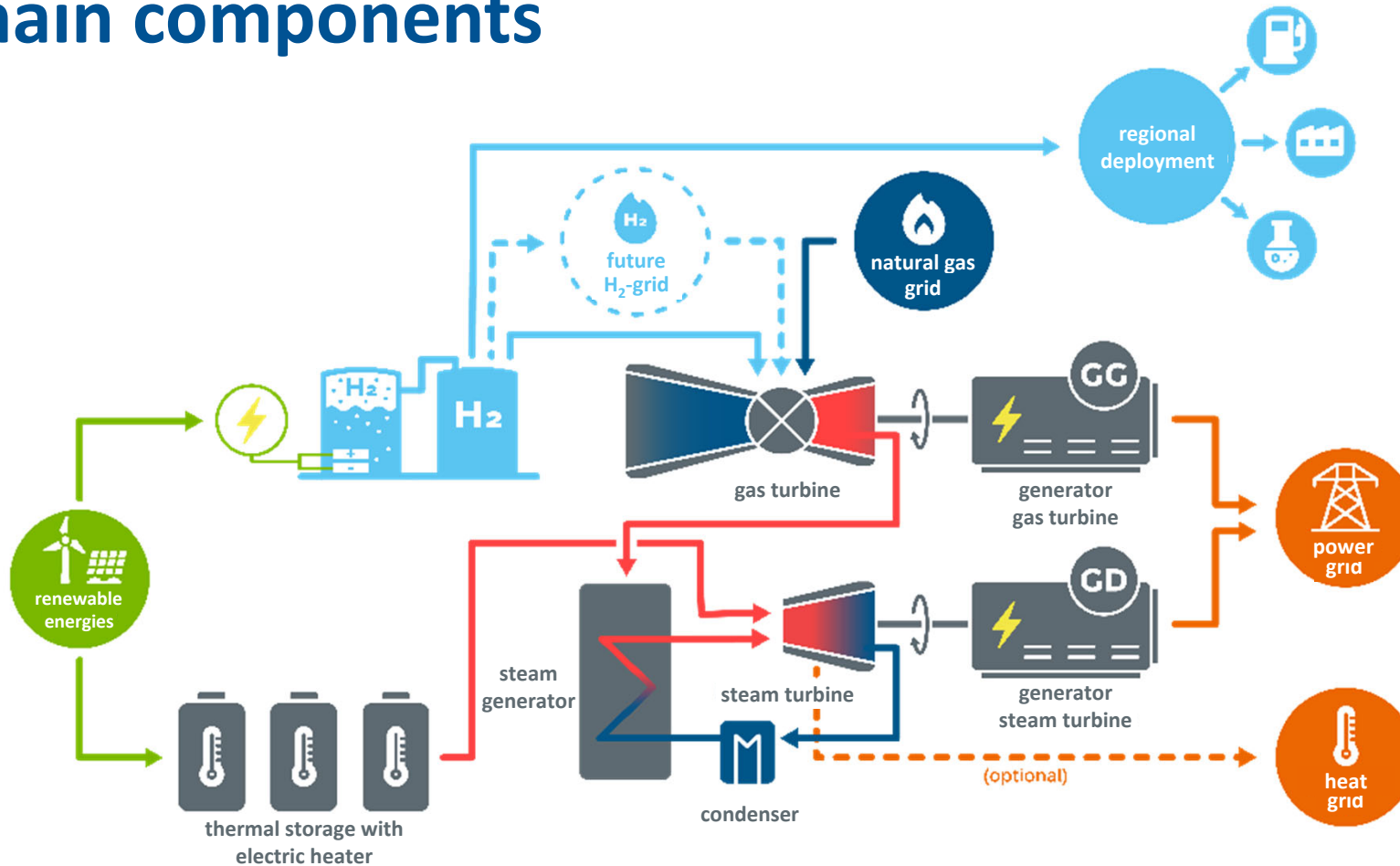


# Gas power plants H<sub>2</sub>-ready

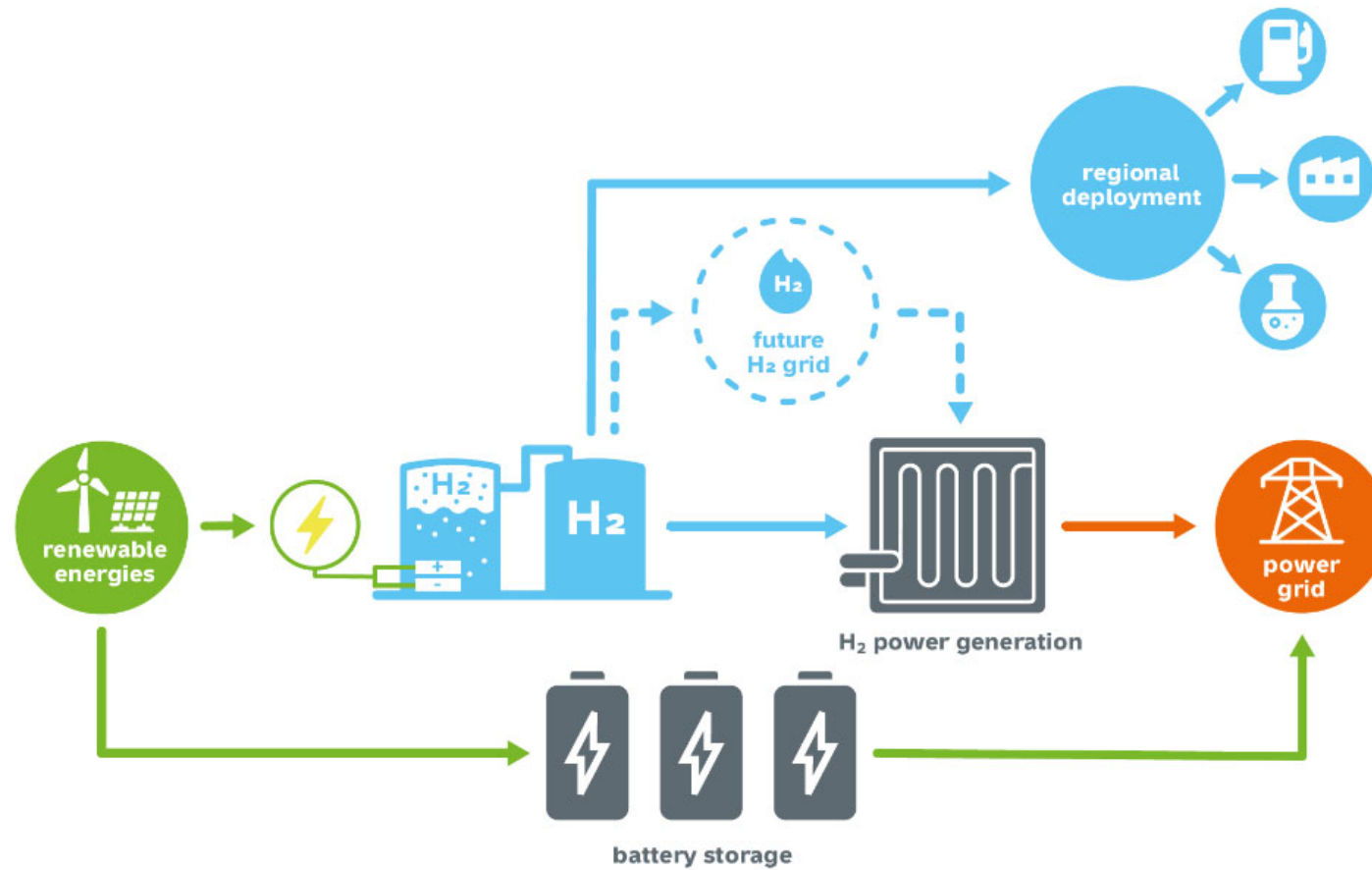
- + at the power plant sites in **Brandenburg, Saxony and Bavaria**; planned or in approval process
  - + Schwarze Pumpe: H<sub>2</sub>-ready gas-fired power plant (600 - 900 MW)
  - + Lippendorf: H<sub>2</sub>-ready gas-fired power plant (600 - 900 MW)
  - + Leipheim: H<sub>2</sub>-ready gas-fired power plant (350 - 550 MW)
  - + innovative storage power plant at Jänschwalde as a technology combination with thermal storage and H<sub>2</sub> production, storage and use
- + **operation** possible from 2nd half of 2020s
- + **requirements:**
  - + development/expansion of gas/H<sub>2</sub> grid
  - + market and investment incentives
  - + funding opportunities



# Innovative storage power plant Jämschwalde – main components



# Flexibility power plant / H<sub>2</sub>UB Boxberg – main components



# Thank you for your attention!

Time for your questions.

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