

# The role of electricity on the way towards climate-neutrality

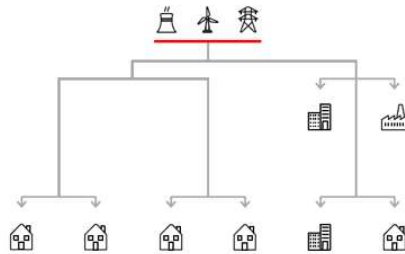
WEO week: The outlook for electricity – Jochen Kreusel

**POWERING GOOD FOR SUSTAINABLE ENERGY**  
2020-07-02

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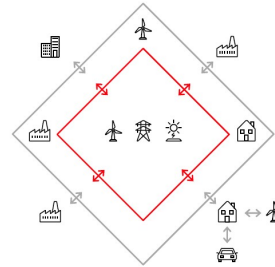
# Energy transition, phase 1 - re-inventing electricity

## A holistic challenge



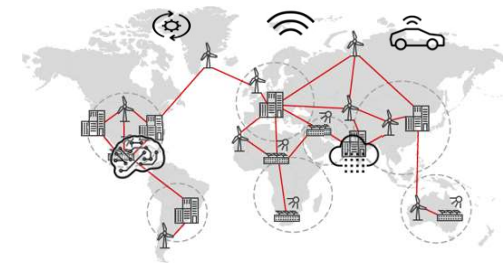
Re-inventing (at least) power system operation  
Many building blocks have been developed during the past years  
Coordinated deployment is the next step to be taken

## Decentralization and digitalization



Networks need to be prepared to deal with DER and increasing dynamic  
Digital connectivity, observability and controllability are required all over the networks  
Regulation needs to drive the change

## The ultimate task: Seasonal flexibility



Other sectors to be integrated  
Several building blocks discussed: network expansion, power-to-X, H2...  
Focus on systematic exploration and no-regret measures such as grid enforcement

**Innovation is the opportunity for mastering the energy transition!**

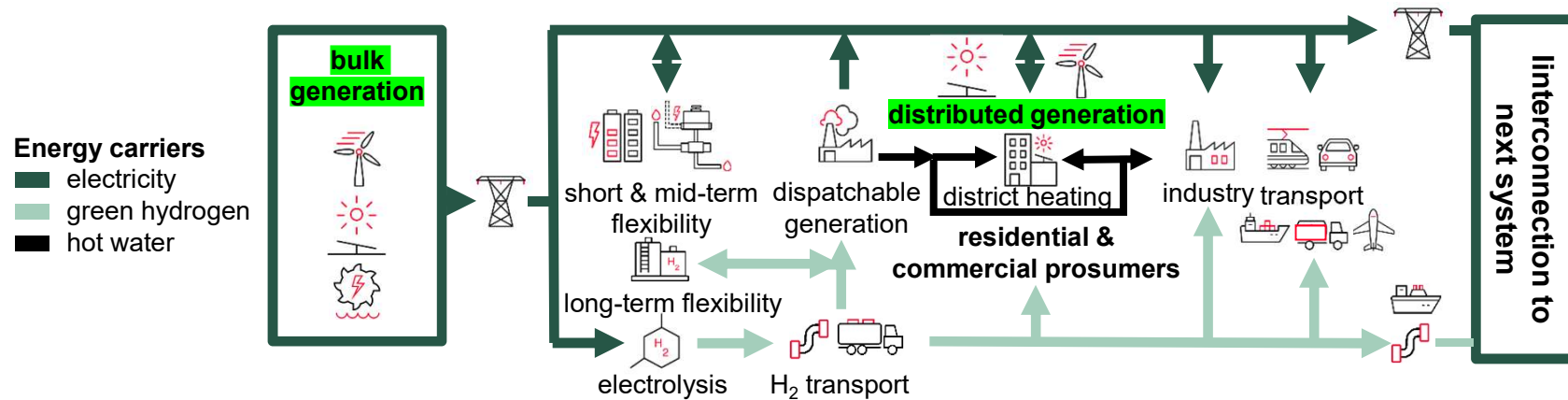
# Phase 2: Towards a carbon-neutral energy system

**“Electricity will be the backbone of the entire energy system”**

Power sector conversion towards bulk and distributed renewable generation

Grid connected electrification of additional sectors

Towards carbon neutrality beyond direct electrification



Integration of bulk and distributed variable renewable energy sources into the power system

Digital and energy platforms to manage the enormous energy transition challenges of complexity and additional capacity needs



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