

VGI SUMMIT @DTU RISØ

NOVEMBER 22TH 2018

Developing power system and markets to fit the future generation mix

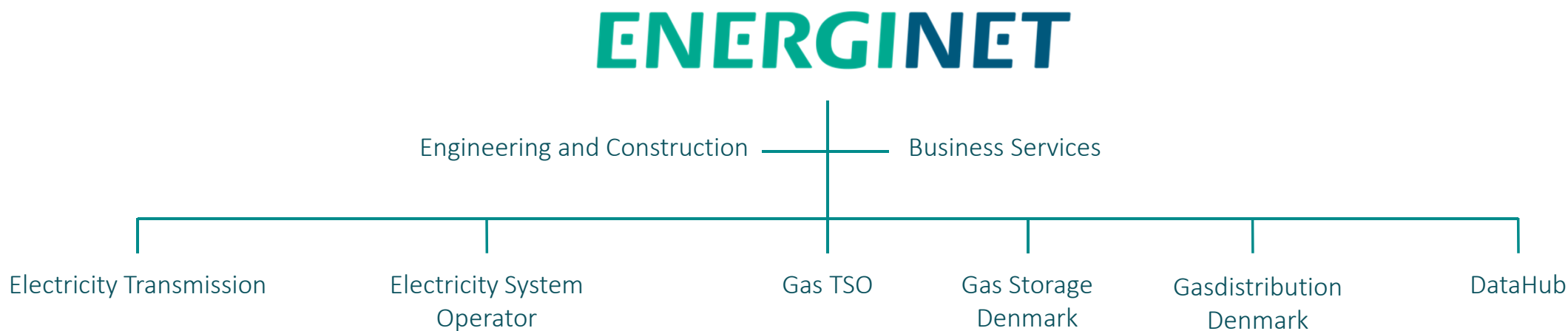
*Søren Dupont Kristensen,
CEO, Energinet Electricity System Operator*

ENERGINET

We own and operate the overall electricity and natural gas transmission system in Denmark. Our tasks are to integrate renewable energy and ensure security of supply in Denmark



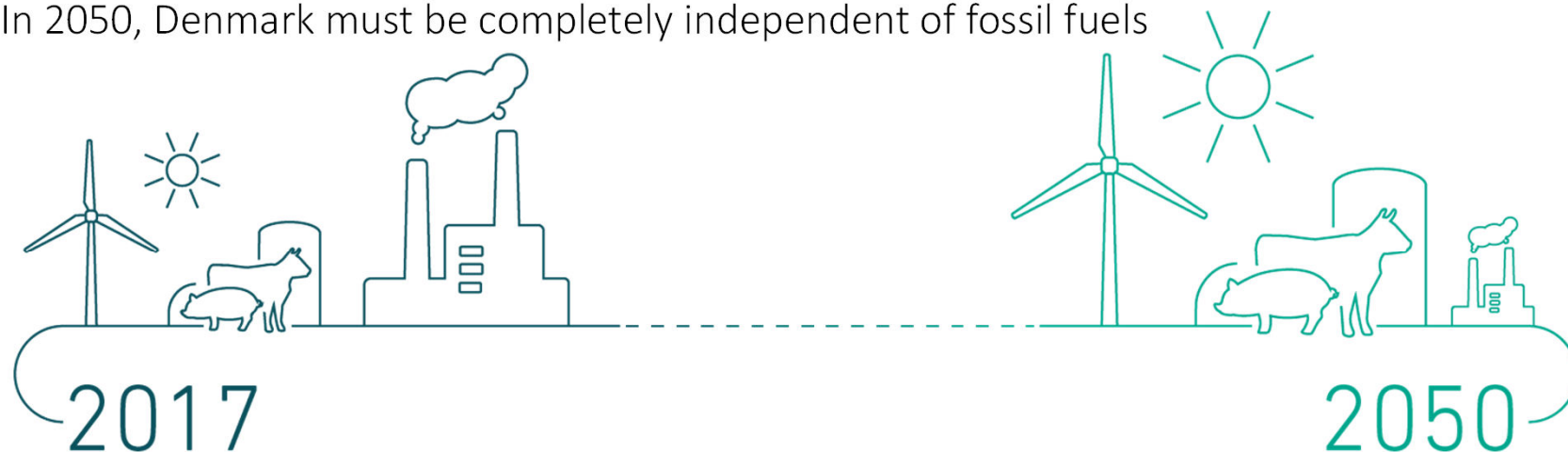
ORGANISATION CHART



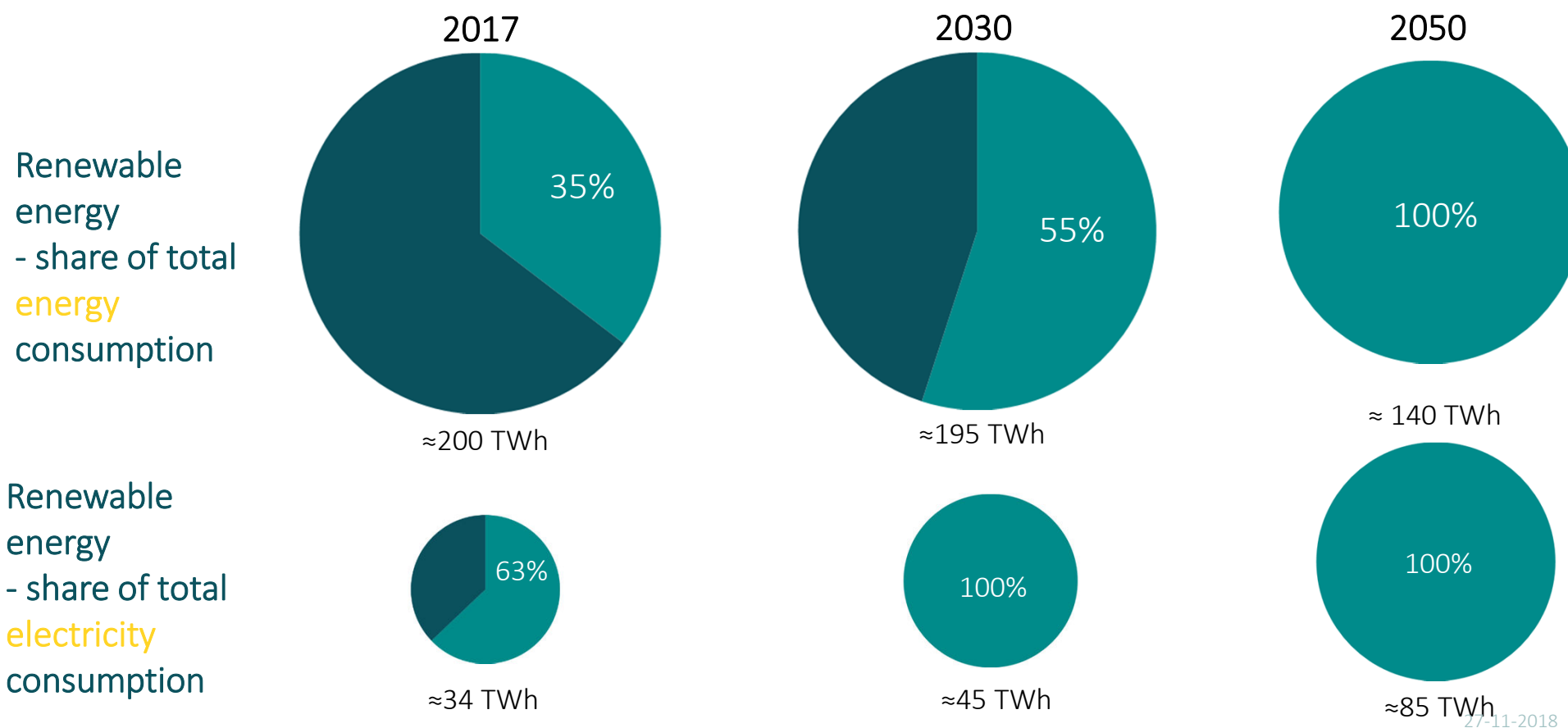
THE ENERGY SYSTEM IS CHANGING

Europe is in the middle of a historic transition of the energy system – Denmark has a leading position

- In 2017 renewables constituted 63% of electricity consumption
- In 2030 power sector must be 100% renewable based
- In 2050, Denmark must be completely independent of fossil fuels

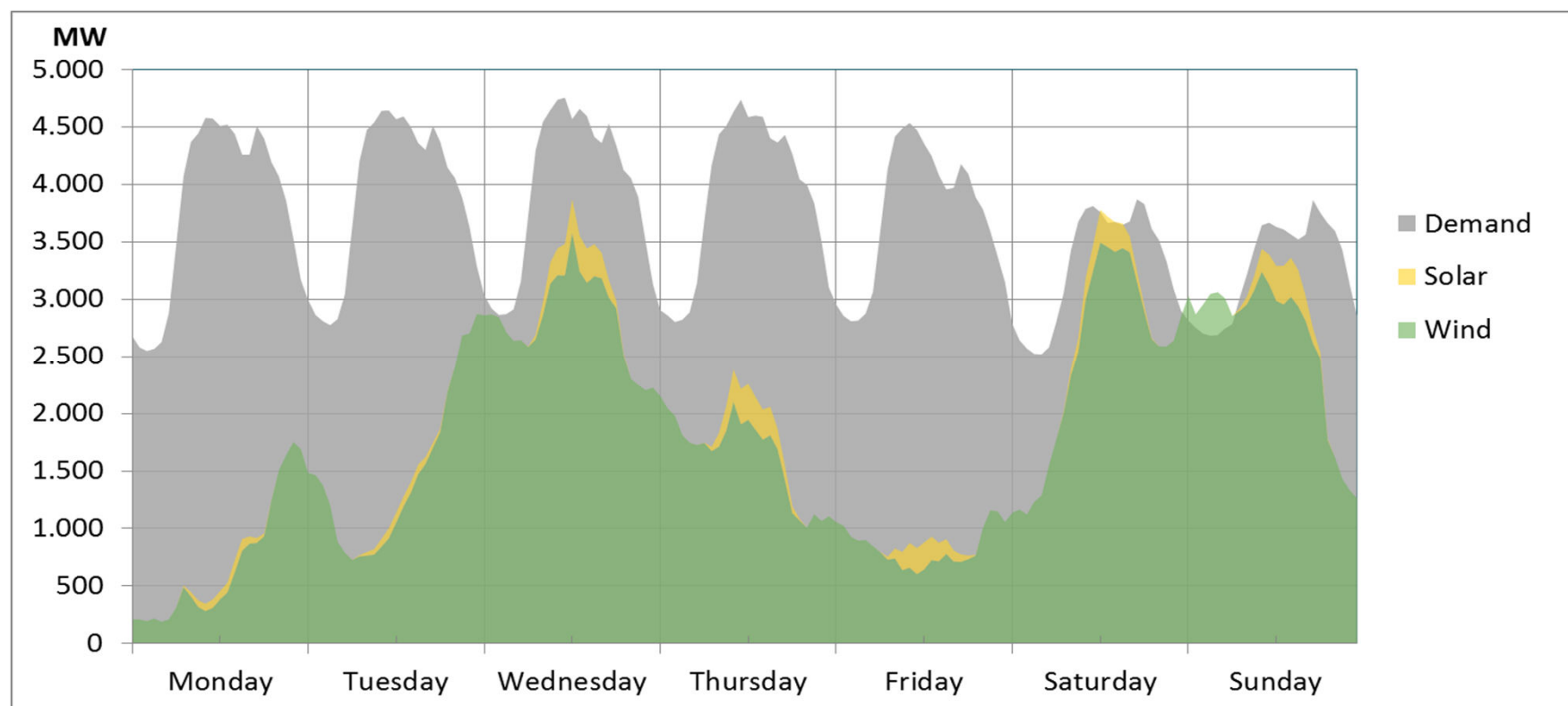


ELECTRIFICATIONS MEANS MORE RENEWABLES TO BE FITTED IN POWER SYSTEM AND - MARKET



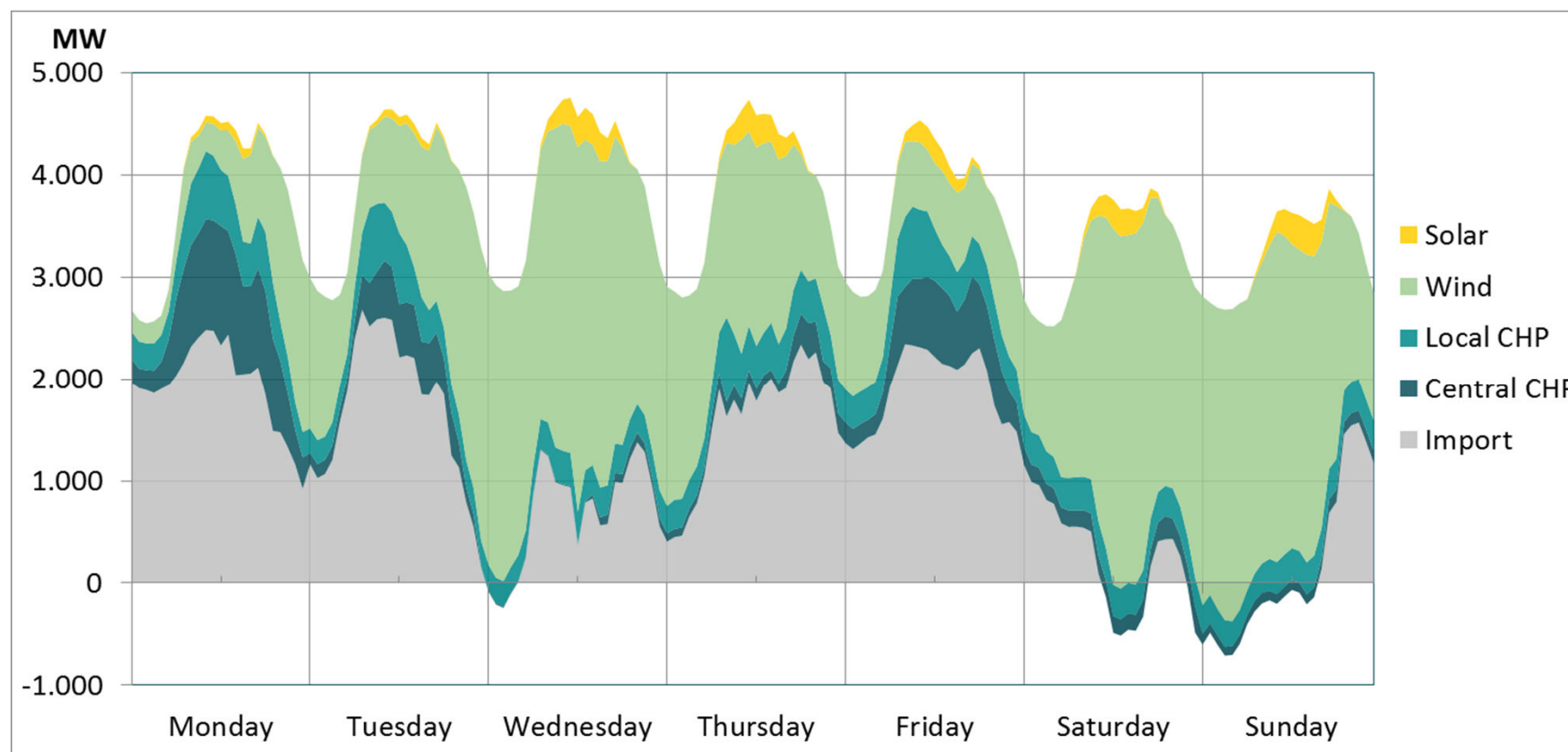
A WEEK IN SEPTEMBER

- 51% WIND AND SOLAR

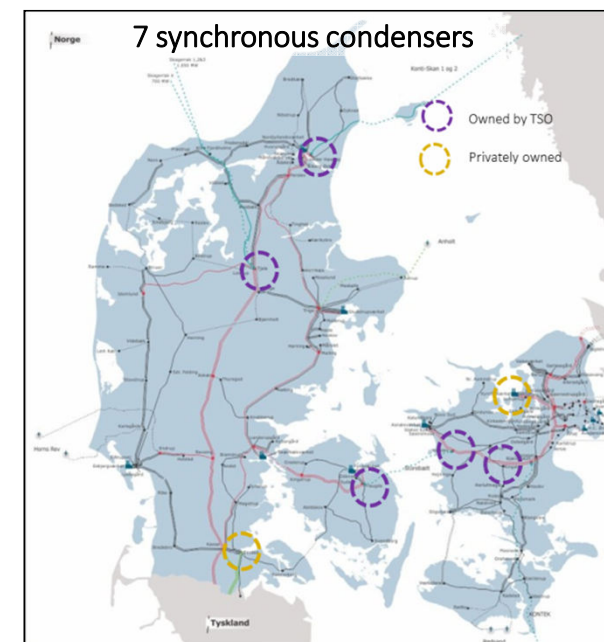
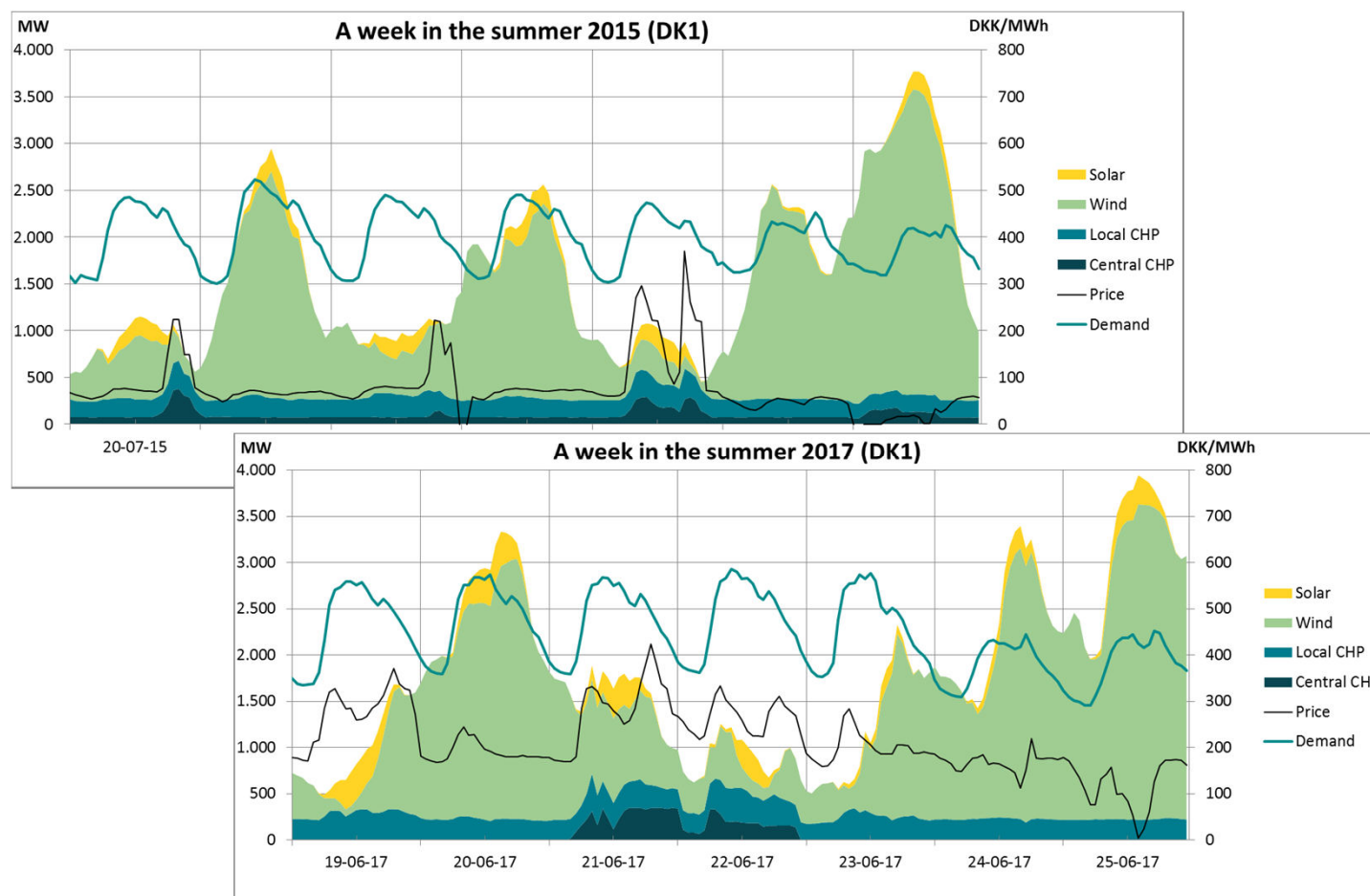


FLEXIBILITY GAINED THROUGH THE INTERNATIONAL POWER MARKET

- HOURLY DISPATCH

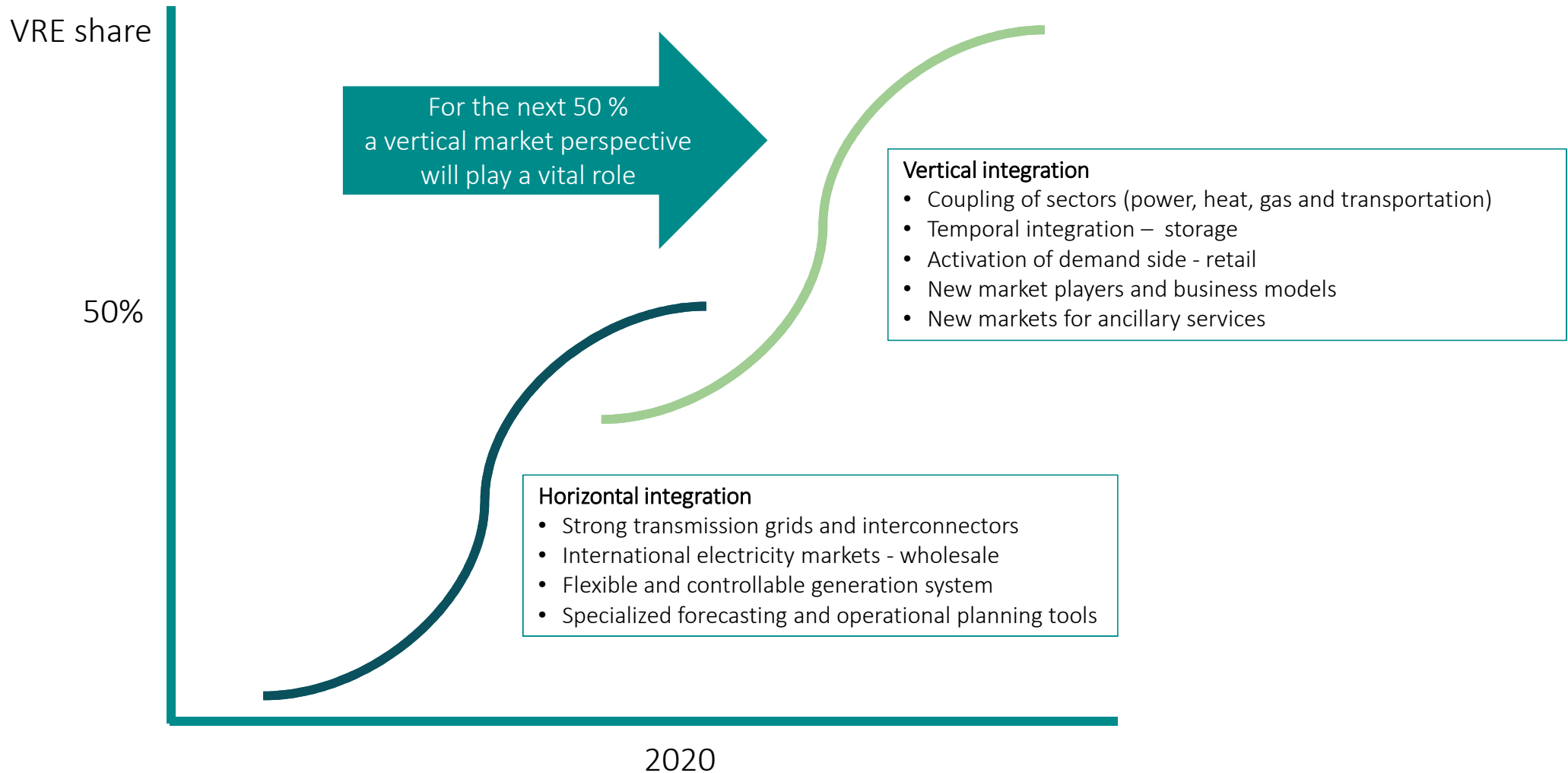


OPERATION WITHOUT CENTRAL POWER PLANTS



INTEGRATION OF VRE

- POST 50% INTERMITTENT RENEWABLE ELECTRICITY NEW CHALLENGES AND OPTIONS ARISE



ELECTRICITY MARKETS: WHAT HAVE WE DONE?

4 FOCUS AREAS TO ENABLE THE FUTURE VERTICAL MARKET DEVELOPMENT

DSO-TSO COOPERATION

NEW COOPERATION
FRAMEWORK

COMMON PROJECTS:

- TARIFF DESIGN
- LOCAL FLEXIBILITY



ALLOW FOR NEW TECHNOLOGIES

PILOTING mFRR and
FCR: EV BATTERIES,
HEATPUMPS ETC.

PILOTING AGGREGATOR



SET DATA FREE

3. PARTY ACCESS TO
CONSUMER DATA IN
DATAHUB

ENERGY DATA ON OPEN
DATA PLATFORM



DIGITAL MARKET FRAMEWORK

DATAHUB PROCESSES

NEW MARKET ENTRANTS

OPEN DOOR LAB



NEW APPROACHES TO GAIN INSIGHT AND OUTLOOK

NEW PARTNERSHIPS & METHODS TO CHANGE MINDSET AND ADAPT TO NEW VALUE CHAIN

PARTNERSHIPS



AGILE DEVELOPMENT



QUESTIONS?

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