

## VISION – CHALLENGES - ROLES

## CREATING THE FUTURE

ESIG - 2019 Fall Technical Workshop October 28-30, Charlotte

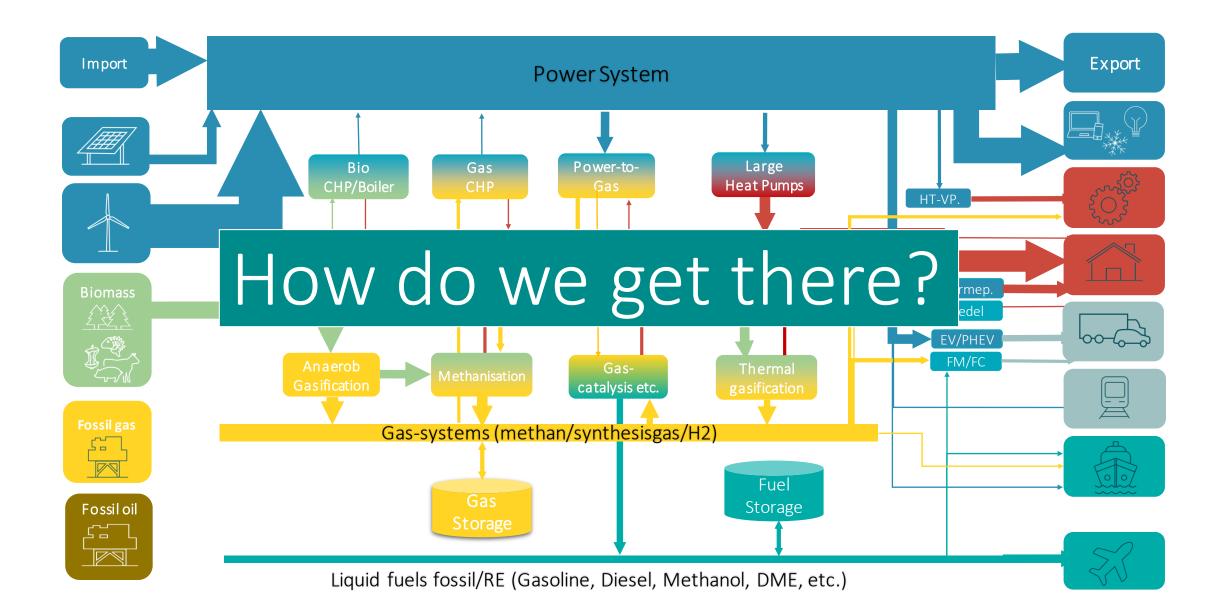
Peter Jørgensen, VP Energinet Associated Activities, Denmark

Offshore Wind Development October 2019





### GLOBAL CLIMATE ACTION 2050 - SIMULATED ANNUAL ENERGY FLOW





VRE share

Global energy sector perspective

Local TSO perspective

Optimal utilization of VRE across sectors

### Vertical integration

- Coupling of sectors
- Activation of demand side
- New market players
- Data based business models

50%

# Translate into local context

Efficient large scale VRE generation

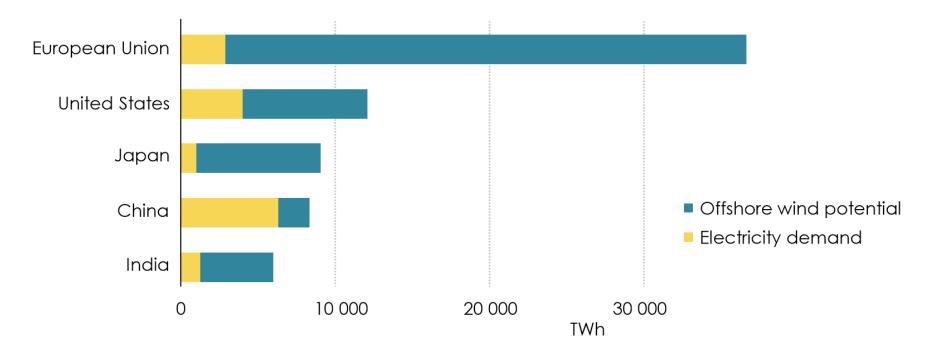
#### Horizontalintegration

- Strong, robust transmission grids and interconnectors
- International electricity markets wholesale
- Flexible and controllable generation system
- Proactive system balancing forecasting and planning



## Offshore wind has huge untapped potential

Offshore wind technical potential and electricity demand in 2018



Based on the latest satellite data on wind speed and new turbine designs, offshore wind has vast potential. It is capable of generating more than 18-times global electricity demand today.

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Towards a fossil free energy system



### HUGE NORTH SEA WIND POWER RESOURCES - LANDING ZONES FOR INTEGRATION



Wind Energy Denmark 2019 1. October 2019, Herning

## ENERGINET'S INTERNATIONAL KNOWLEDGE SHARING



Large and small projects since 2010

