

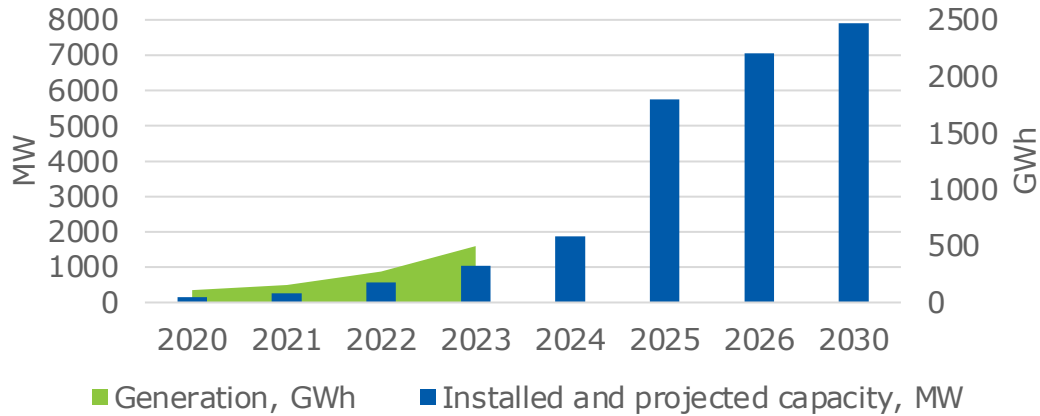


Lithuania Energy System **Transformation** to 2050

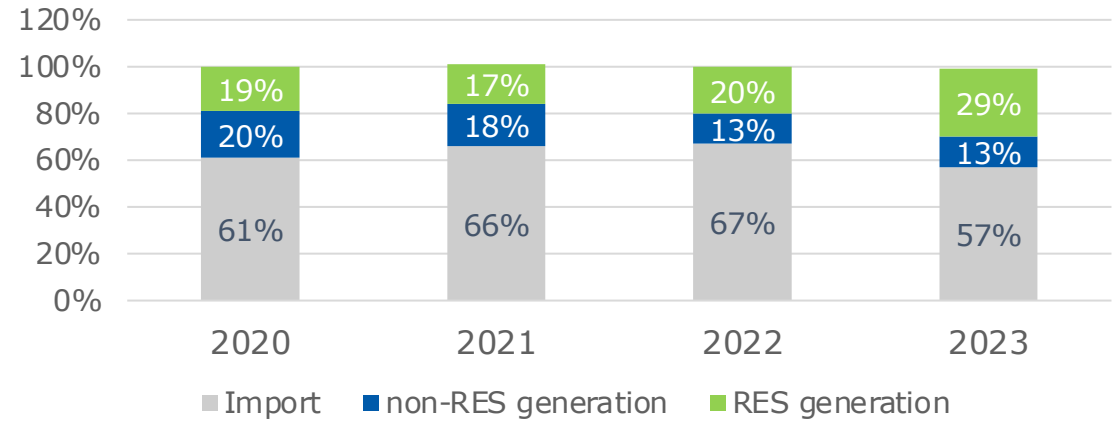
Liutauras Varanavičius
LITGRID

Change is already happening

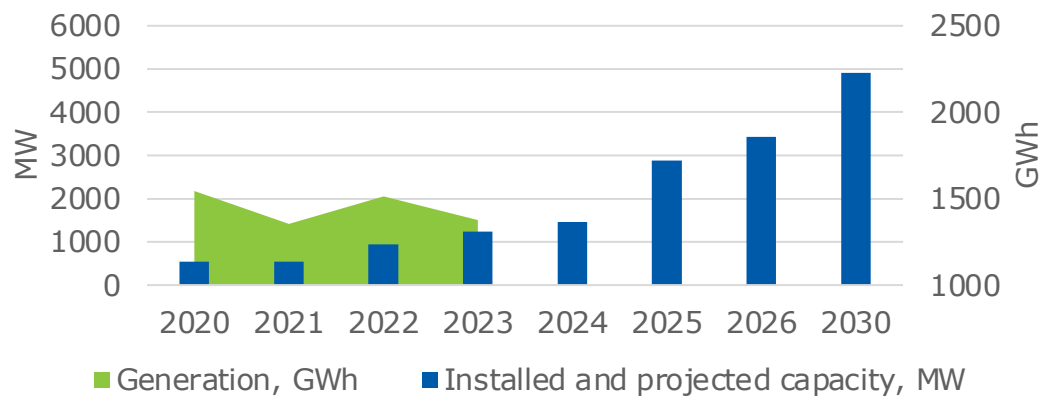
Solar capacity and generation growth



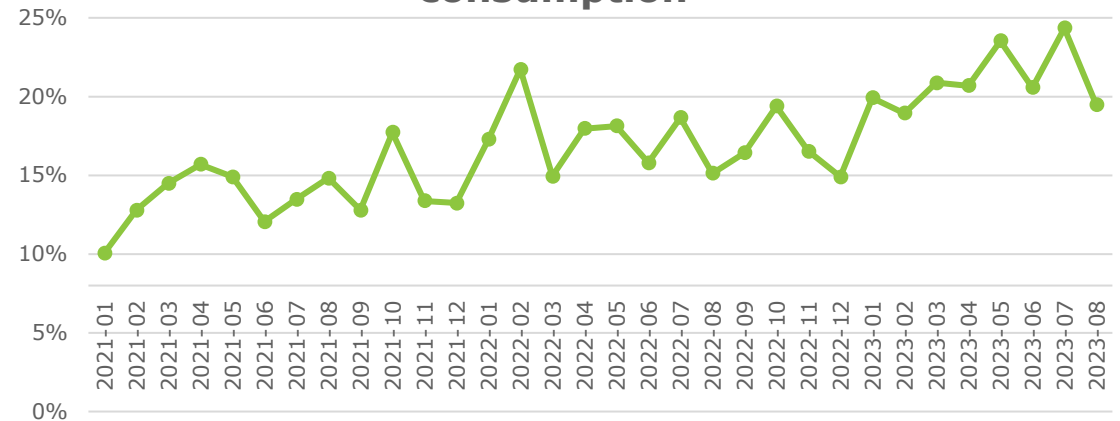
Lithuania's electricity demand coverage structure



Wind capacity and generation growth



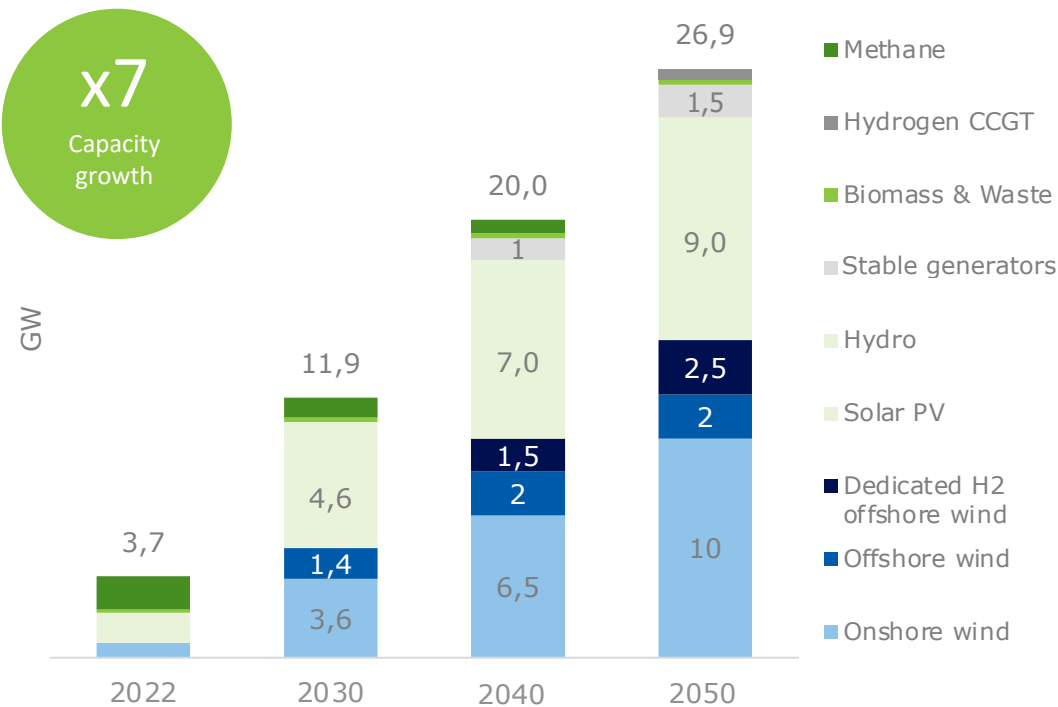
Average share of solar and wind generation in consumption



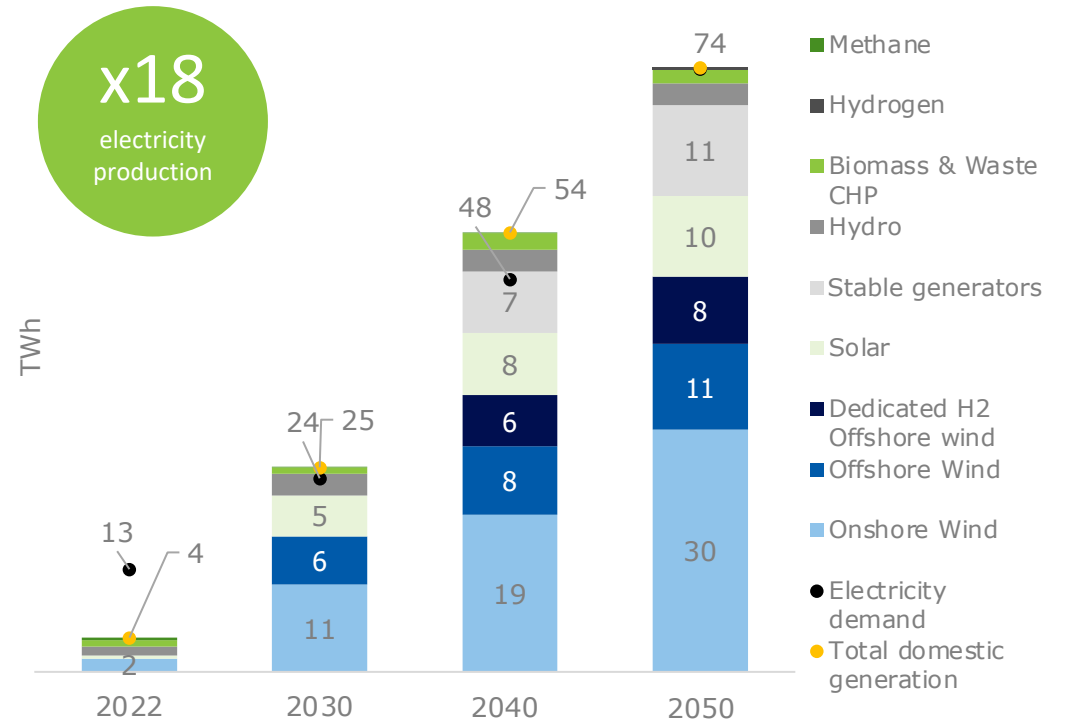
Electricity generation

Lithuania – electricity exporting country by 2030 and beyond

Electricity generation capacity



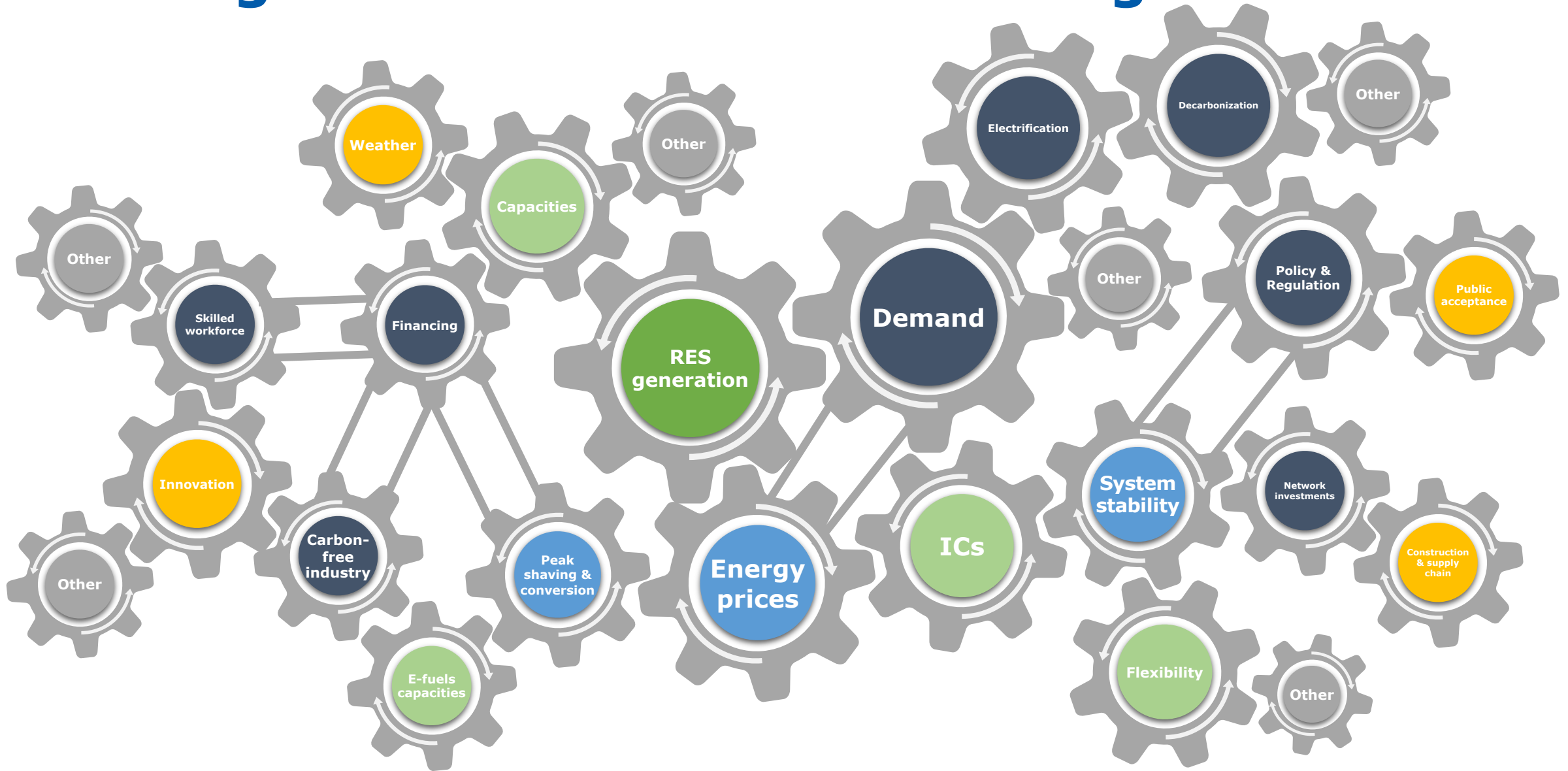
Electricity generation



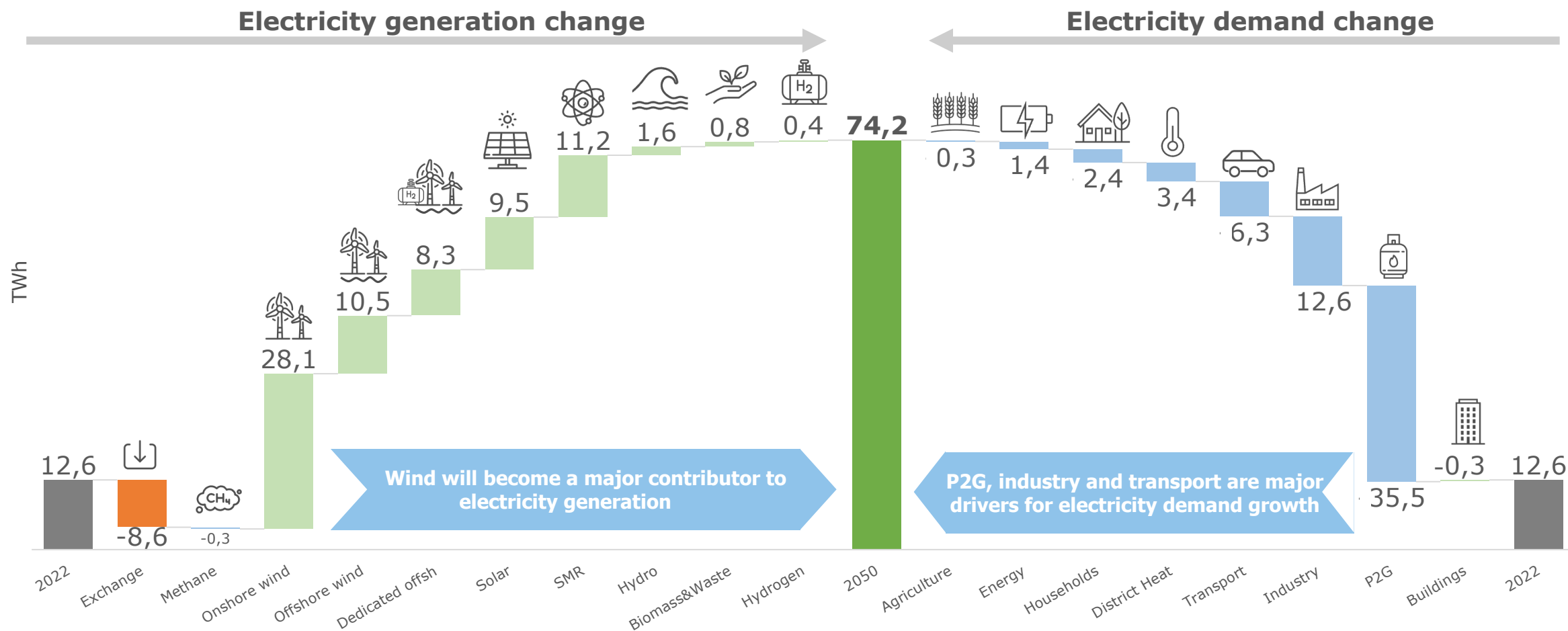
A 5-to-8-fold increase in installed capacity, driven by onshore & offshore wind and solar PV...

...is leading to a 10 to 20 higher electricity generation.

We know about most of the interdependencies driving the transformational change

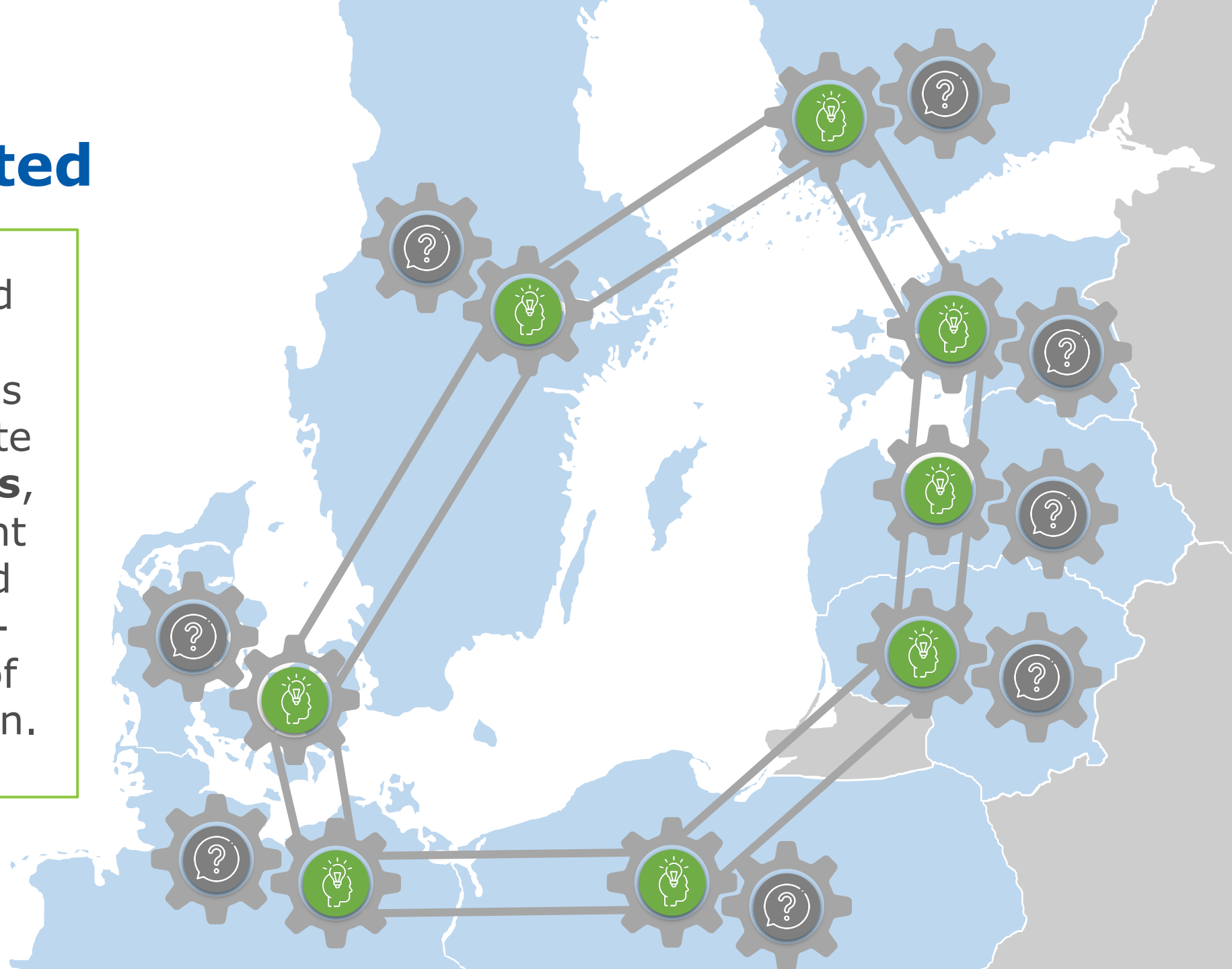


Electricity generation and demand change to 2050



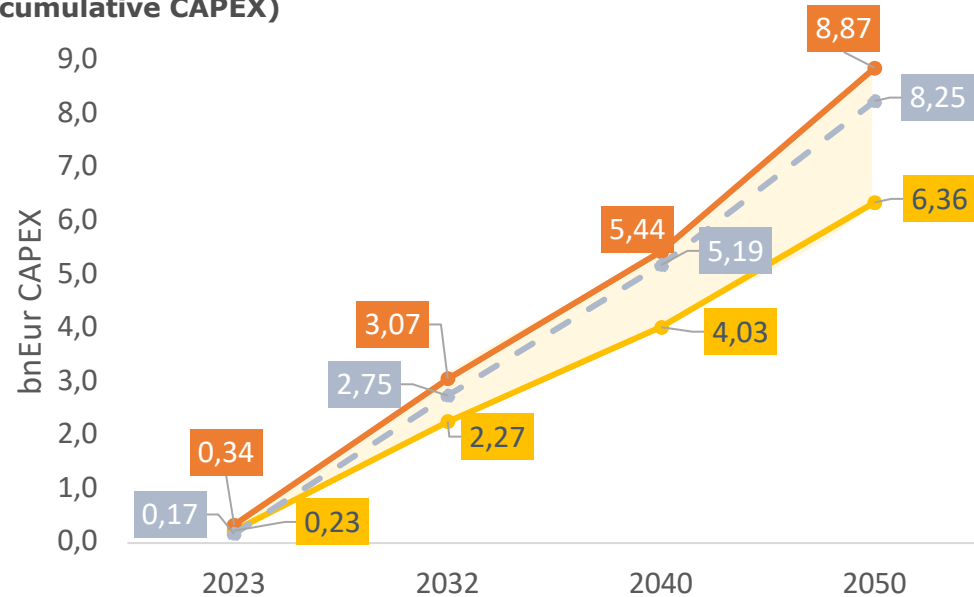
It's all interconnected

Progressing toward net-zero energy systems requires us to grasp the intricate **interdependencies**, explore the different **optionalities**, and adjust to the ever-**moving targets** of the energy transition.



Investments into Power Transmission Network to 2050

Lithuanian Power Transmission Network investment needs (Total cumulative CAPEX)



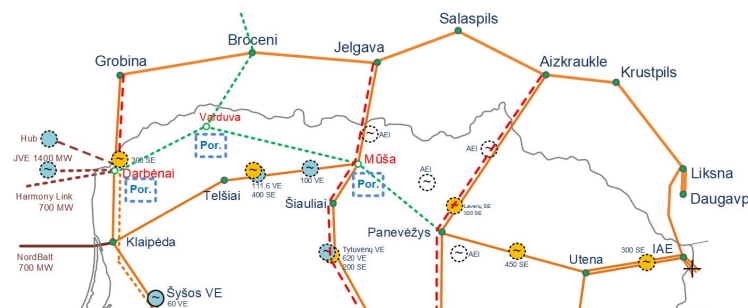
- Energy transformation 2050 study forecast (onshore grid)
- Energy transformation 2050 study forecast (onshore grid + offshore wind grid & interconnectors)
- Litgrid plan & projection (onshore grid, incl. synchronization programme), based on 2021 TYNDP

Lithuanian energy system transformation 2050 projects investments needs by 2050:

- Onshore power transmission network – 6.4 bnEur;
- Offshore wind network – 1.3 bnEur;
- Interconnectors – 1,2 bnEur;

In comparison, Litgrid's TYNDP provides for 2.75 bnEur for onshore network (upgrading existing onshore infrastructure and building new lines) up to 2032, which extrapolates to 8.25 bnEur by 2050.

As for the new interconnectors, Litgrid currently is developing: 1) a detailed analysis for new LT-LV interconnection needs; 2) feasibility concept for an energy island.





Thank You

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