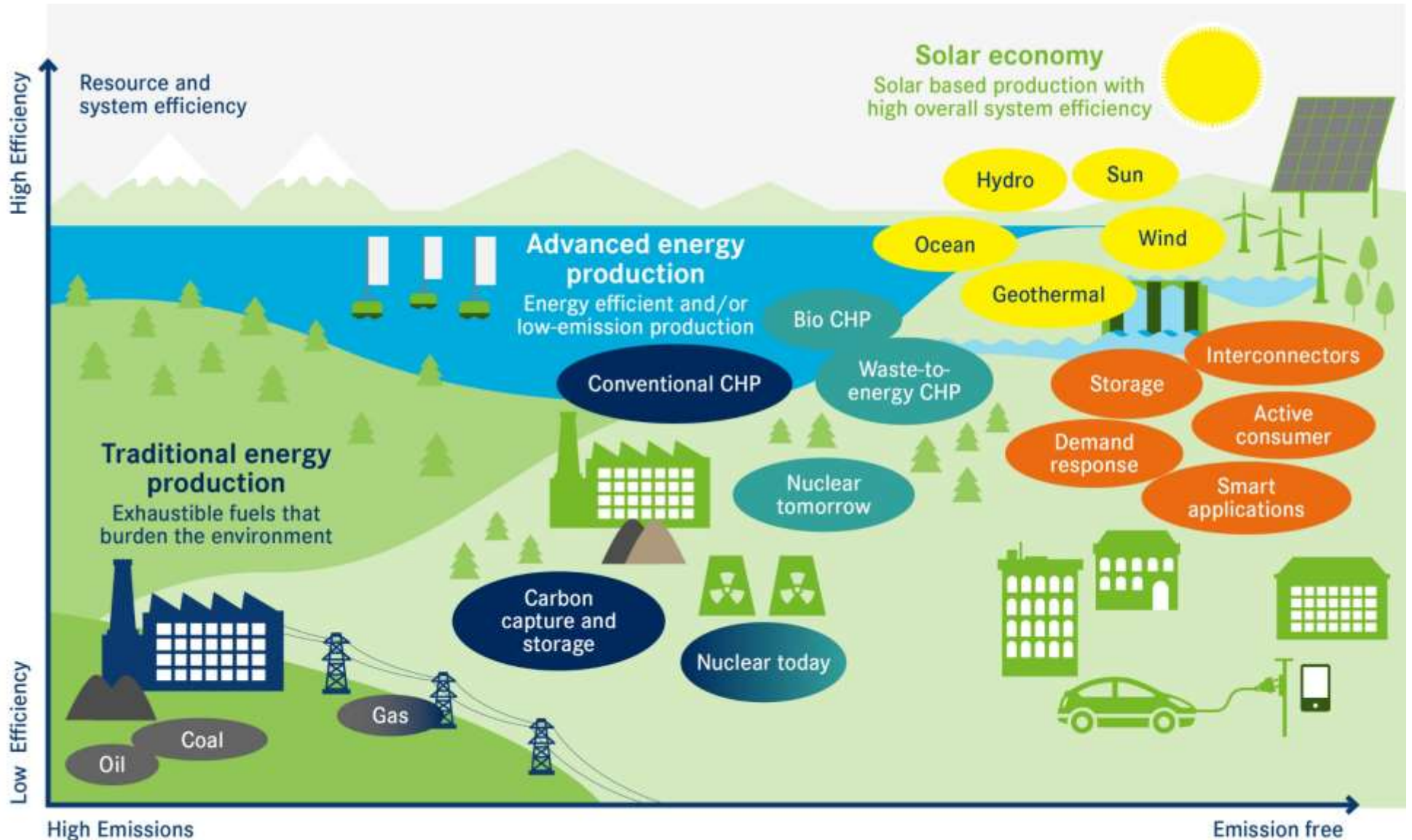


# Transition towards Solar Economy is ongoing

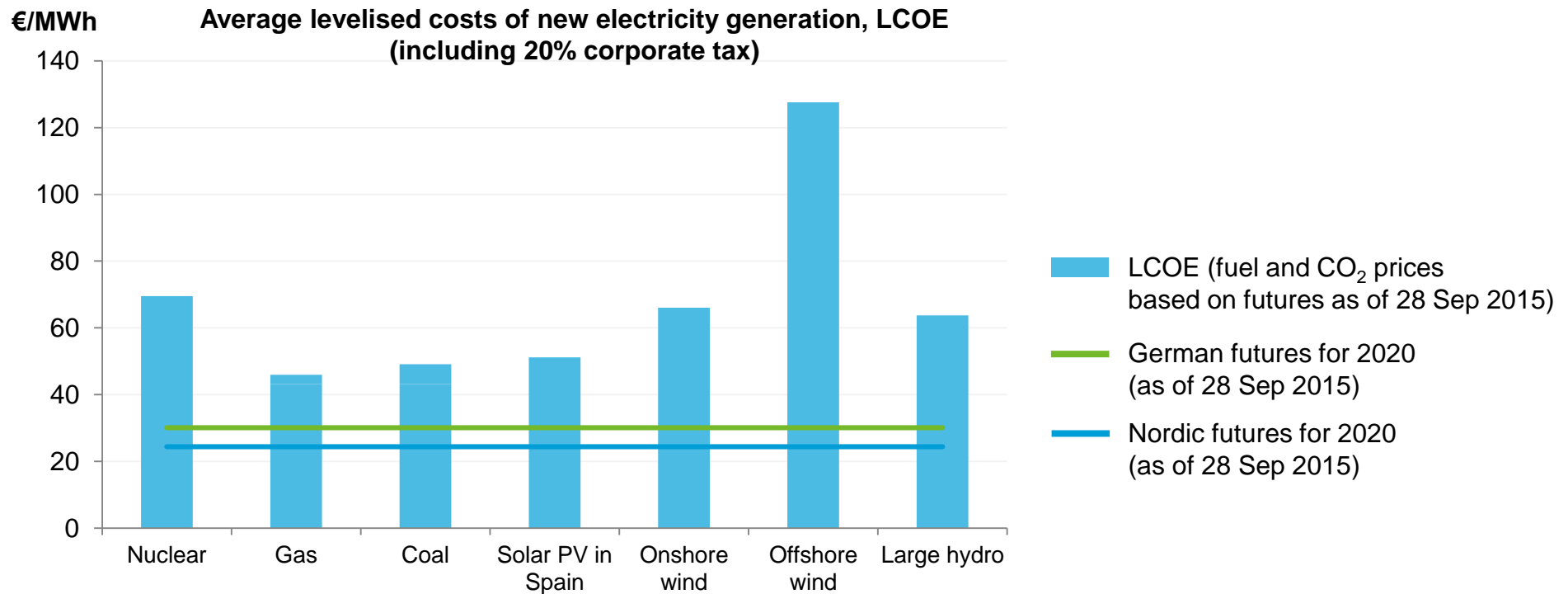


In 2030, even at elevated discount rates ( $10\%_{nom}$ ), solar PV will provide attractive economics all over the world



# Levelised cost of electricity in Europe

## Current market prices hardly justify any investments into new generation



The levelised cost shows the achieved electricity price required for an investment to break even over the lifetime of the project.

**Disclaimer: The presented figures do not represent Fortum's own view on the levelised costs of electricity.**

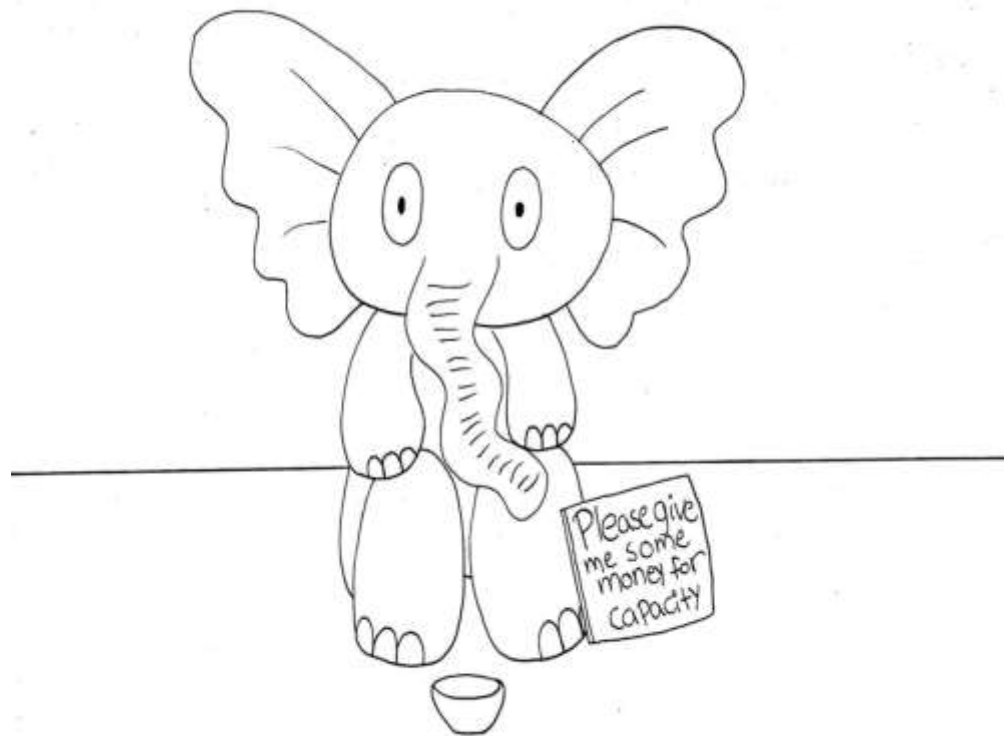
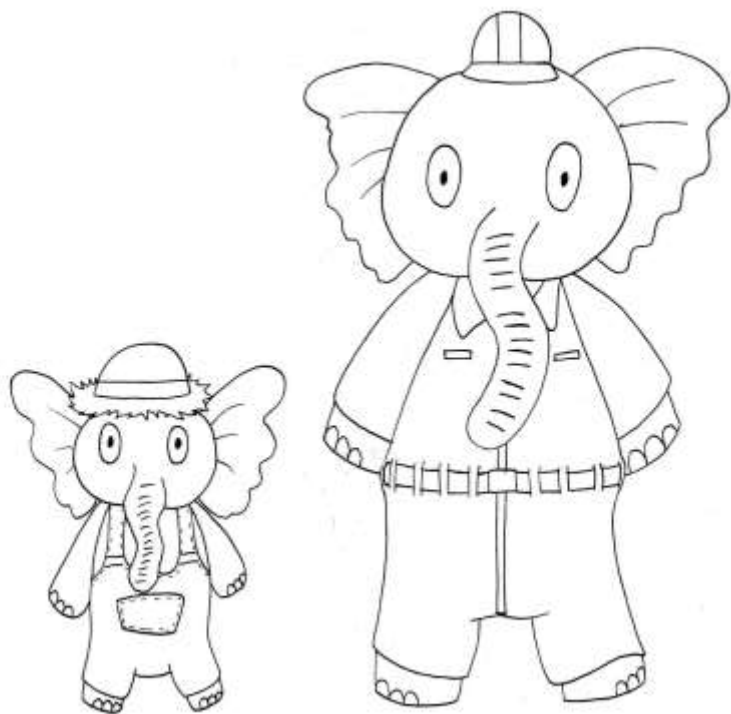
The figures are based on recent external publications. Key assumptions: real discount rate 5%, corporate tax 20%. Overnight costs, €/kW 5400 for nuclear, 747 for gas, 2304 for coal, 1269 for onshore wind, 3400 offshore wind, 2700 for hydro, 975 for ground mounted solar. Peak load factor for ground mounted solar 19%; for onshore wind 27%; for offshore wind 34%, for large hydro 40%, for nuclear, gas and coal 91%. Economical lifetime: 30 years for solar, 40 years for nuclear and hydro, 25 years for others. Fuel prices are the market forward prices as of August 2015 extended by applying inflation of 2%. Note, there are large variations in cost of hydro, wind and solar depending on location and conditions.

Sources:

1. World energy council 2013, Cost of energy technologies
2. European PV Tehcnology Platform Steering Committee, PV LCOE working Group: PV LCOE in Europe 2014-30, Final report
3. IRENA: Renewable power generation costs in 2014
4. Fraunhofer: Levelised cost of electricity, Edition November 2013
5. Lazard's Levelized Cost of Energy Analysis - Version 8.0. 2014

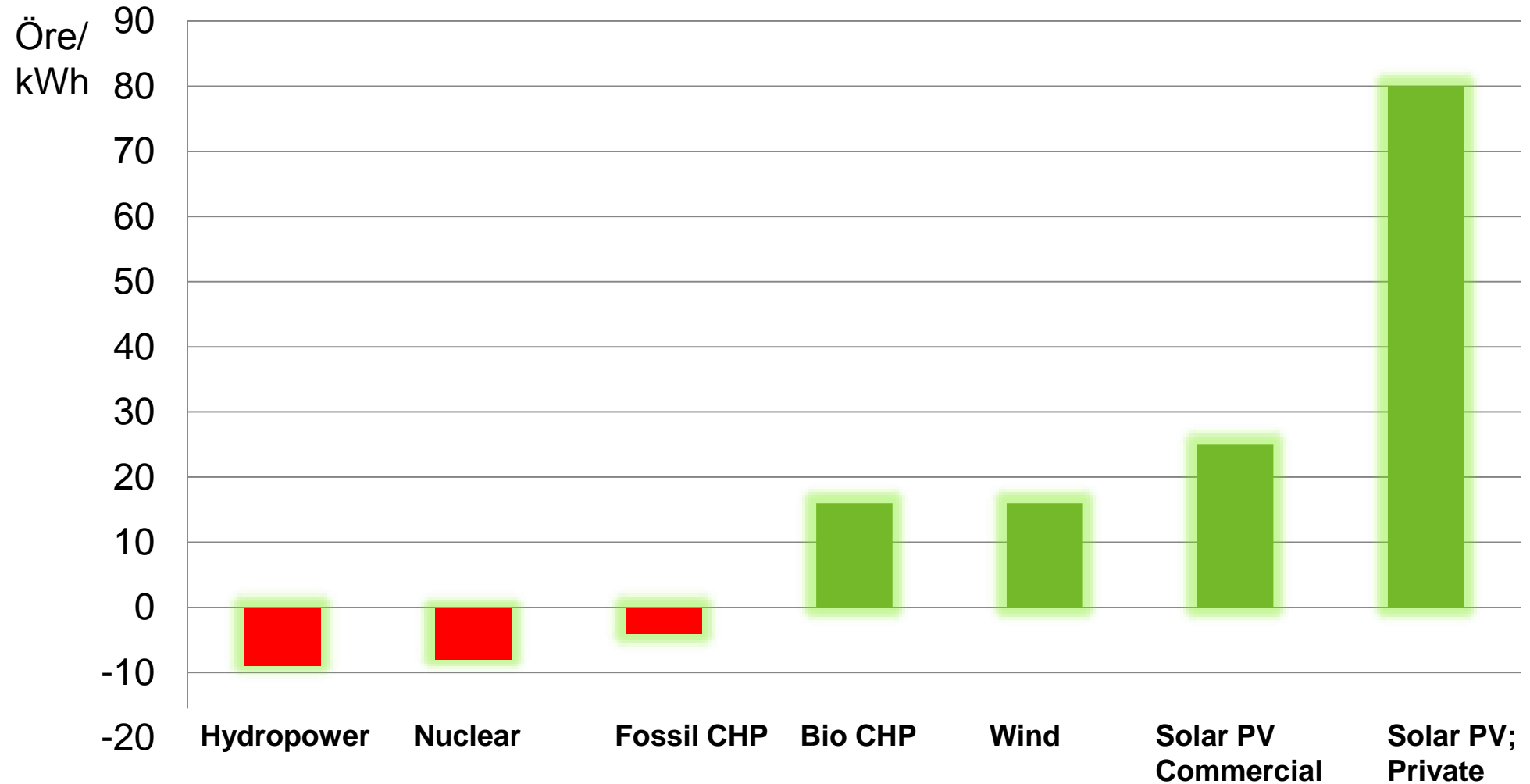
# Let's talk about the elephants in the room

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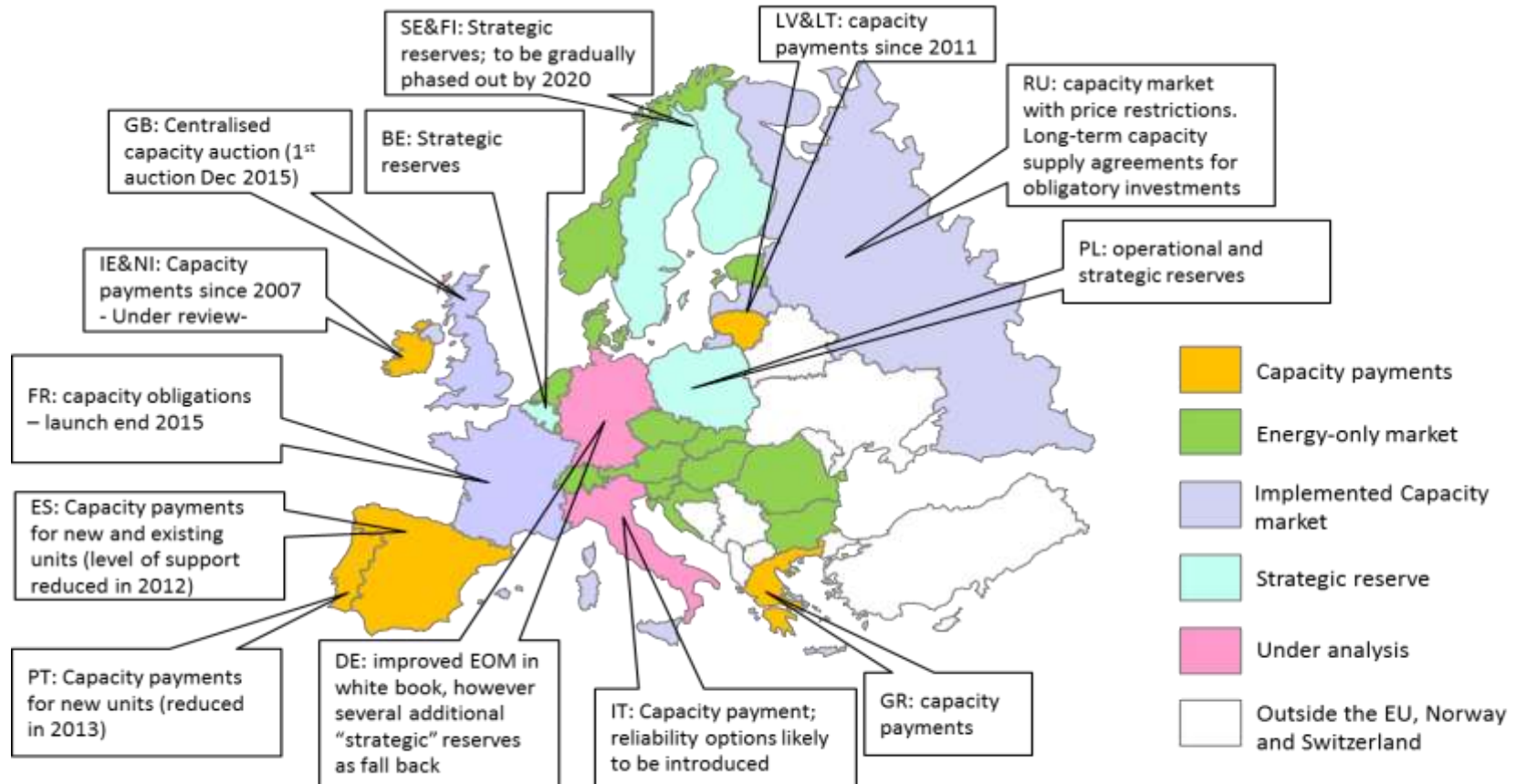


Artwork F. Kvarnström 2016

# Taxes and subsidies or a market based system?



# Variety of Capacity Mechanisms – National Politics



# The way forward

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- Level Playing Field
- ETS
- Energy Only