



Ministerial Conference
& the Eighth International Forum on Energy for Sustainable Development

MEETING THE CHALLENGE OF SUSTAINABLE ENERGY

11-14 June 2017, Astana, Kazakhstan



TRENDS IN THE ENERGY SECTOR

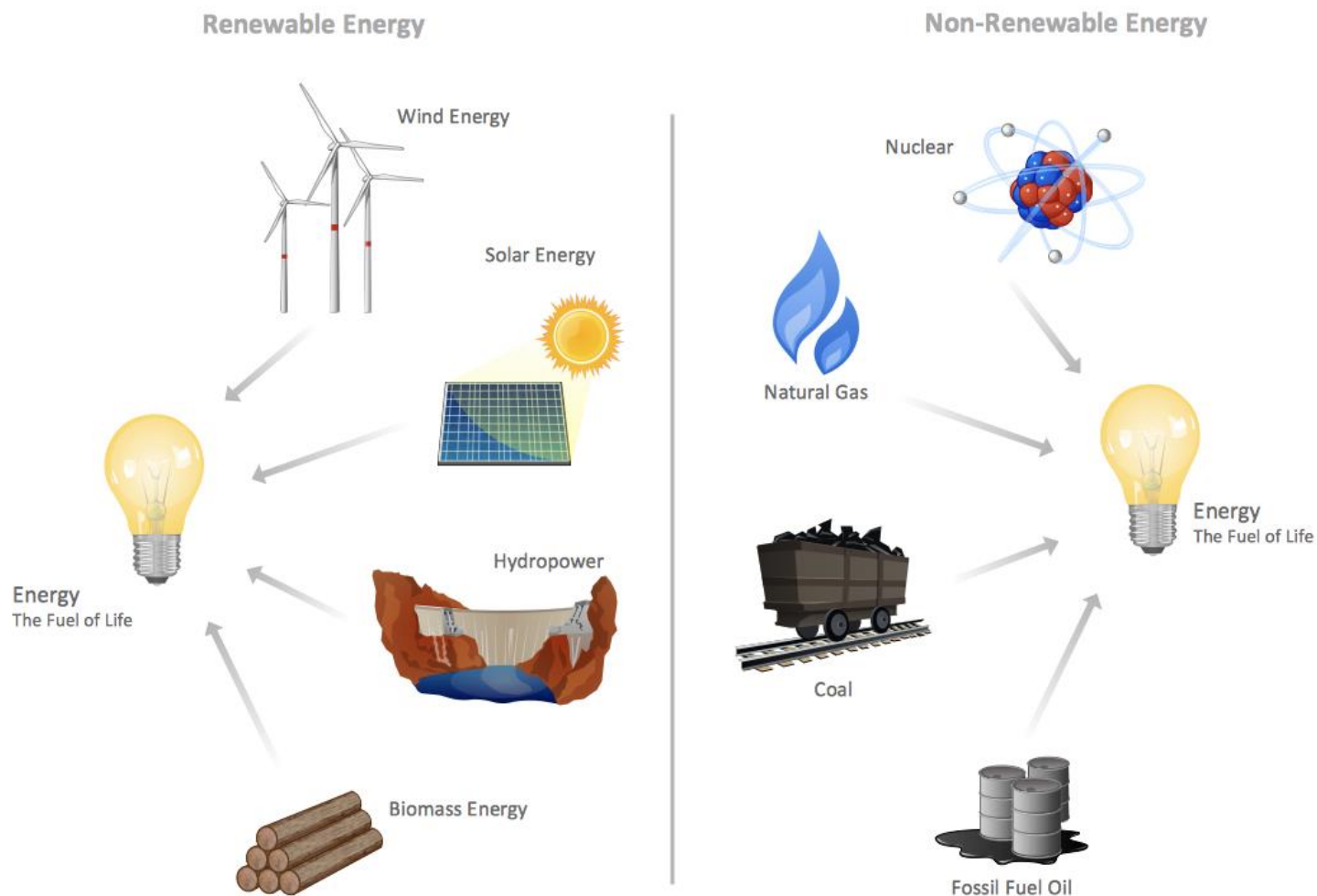
Aleksandar Dukovski
Stefan Peter

Definition of „Energy Sector“

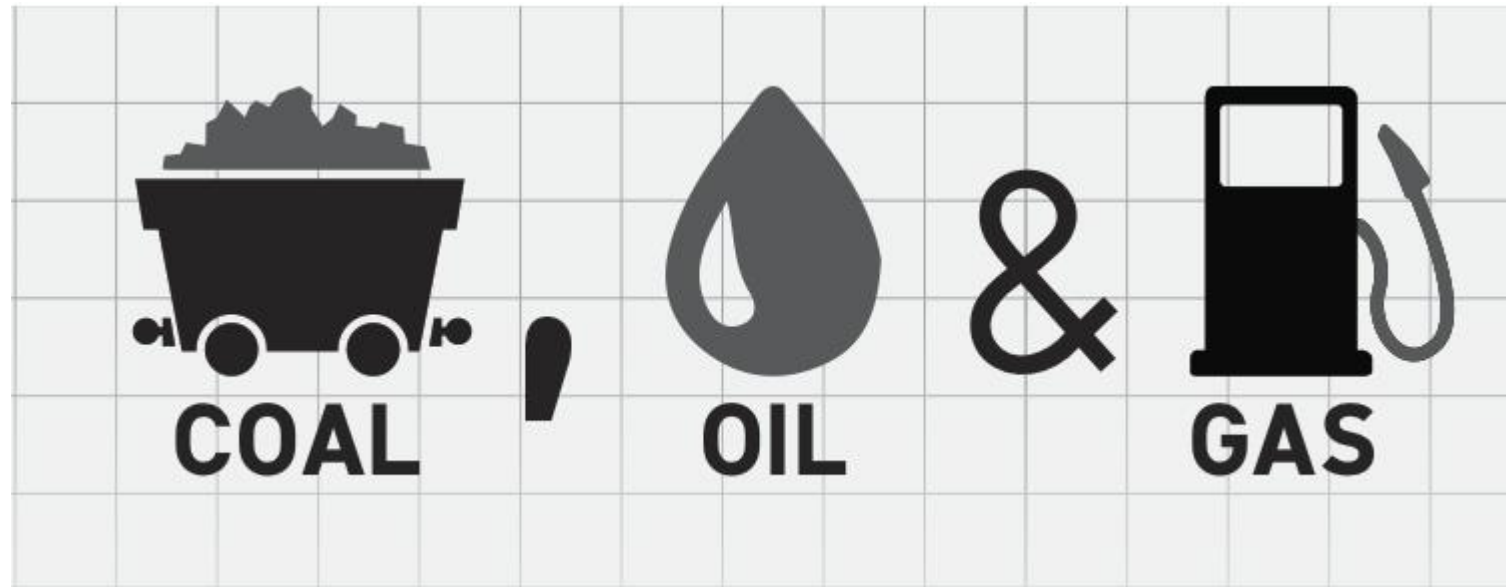


The industry producing, transporting and supplying energy in its different forms which can be oil, gas, coal, renewable sources and electricity.

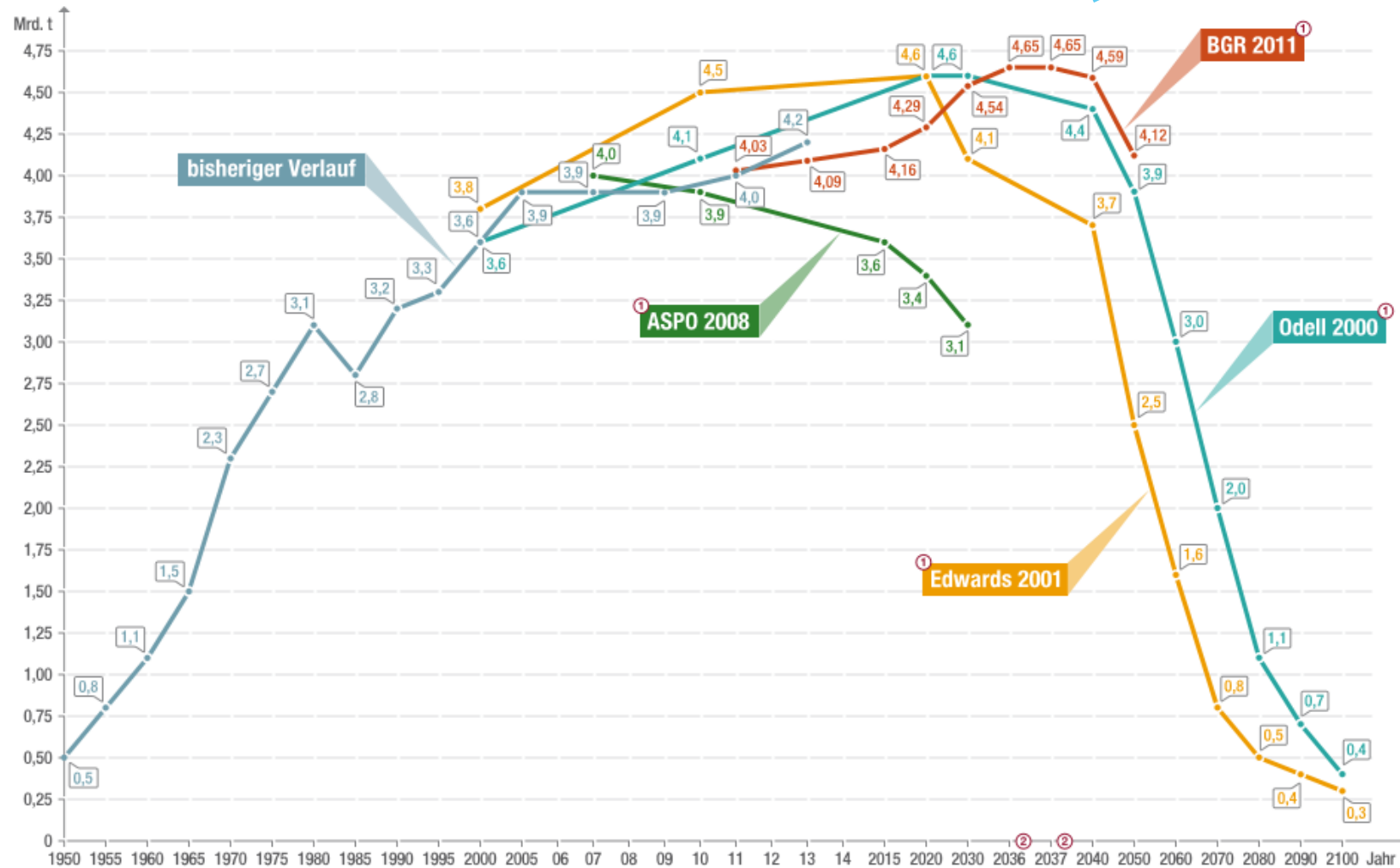
Renewables vs. conventional. Head to Head?



1st trend: Oil, gas and coal are not dead yet!



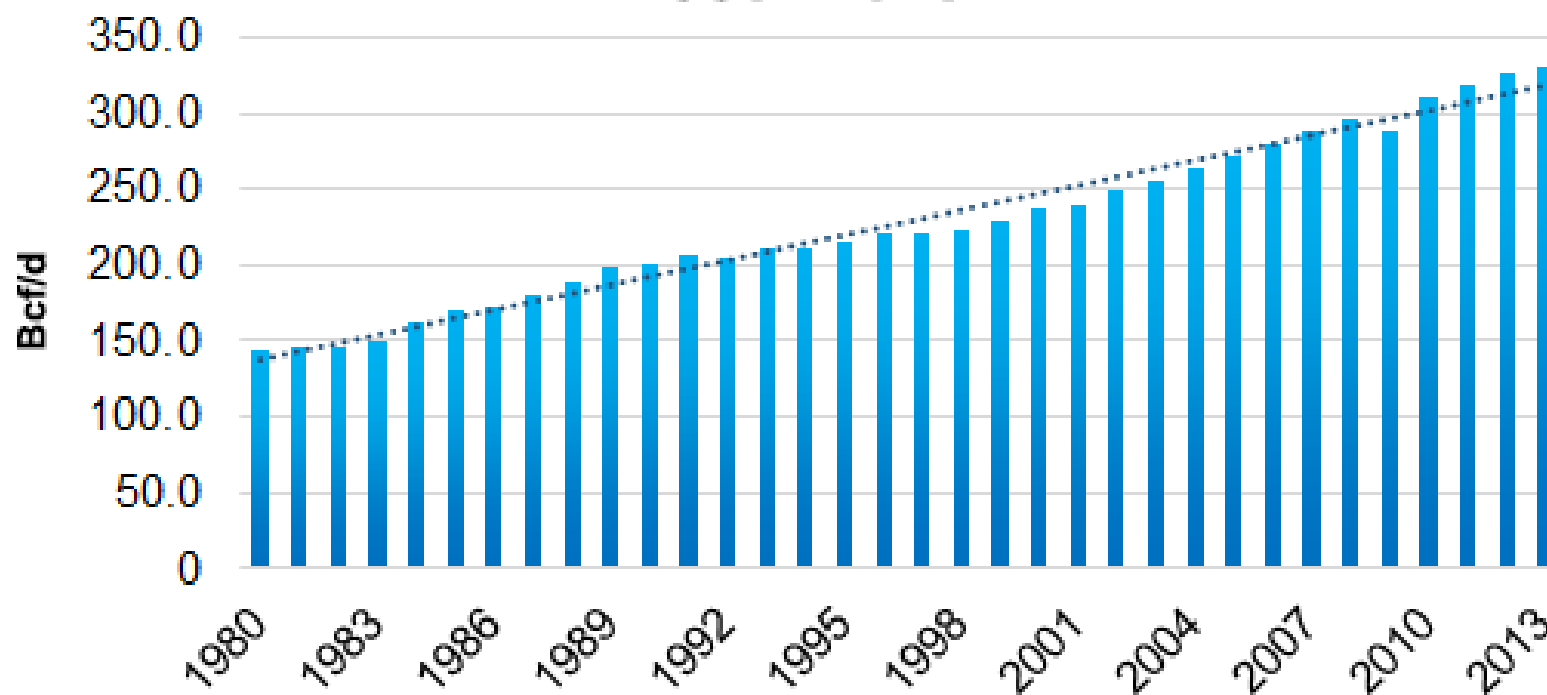
Peak oil point is moving to 2040



Source: BGR

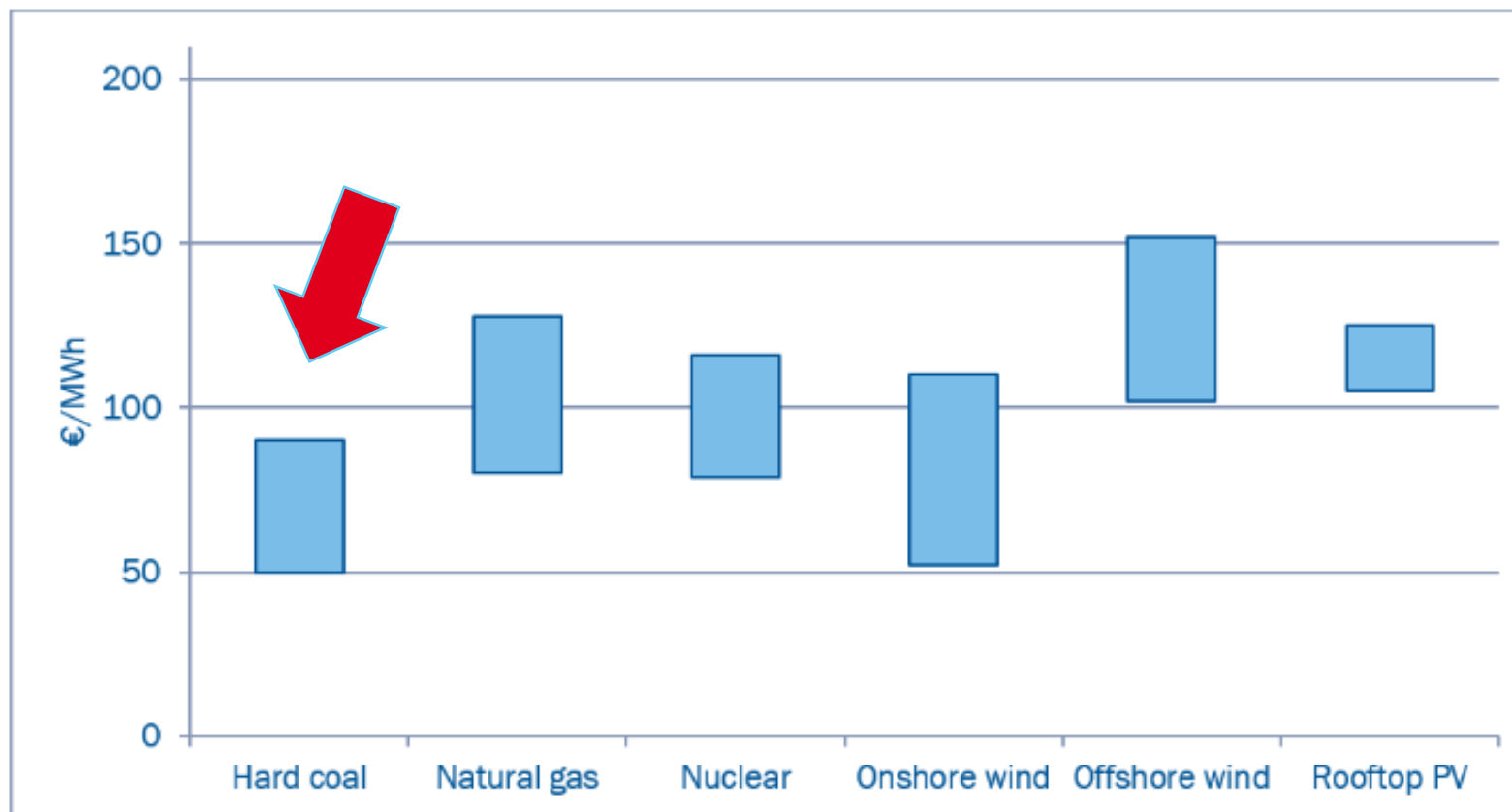
Gas consumption doubled up in 30 years

Annual Worldwide Natural Gas Consumption 1980 - 2013



Coal still cheapest source for electricity

LEVELISED COST OF ELECTRICITY (LCOE) OF MAJOR POWER GENERATION TECHNOLOGIES IN EUROPE



Guess what's on that map?

EVN

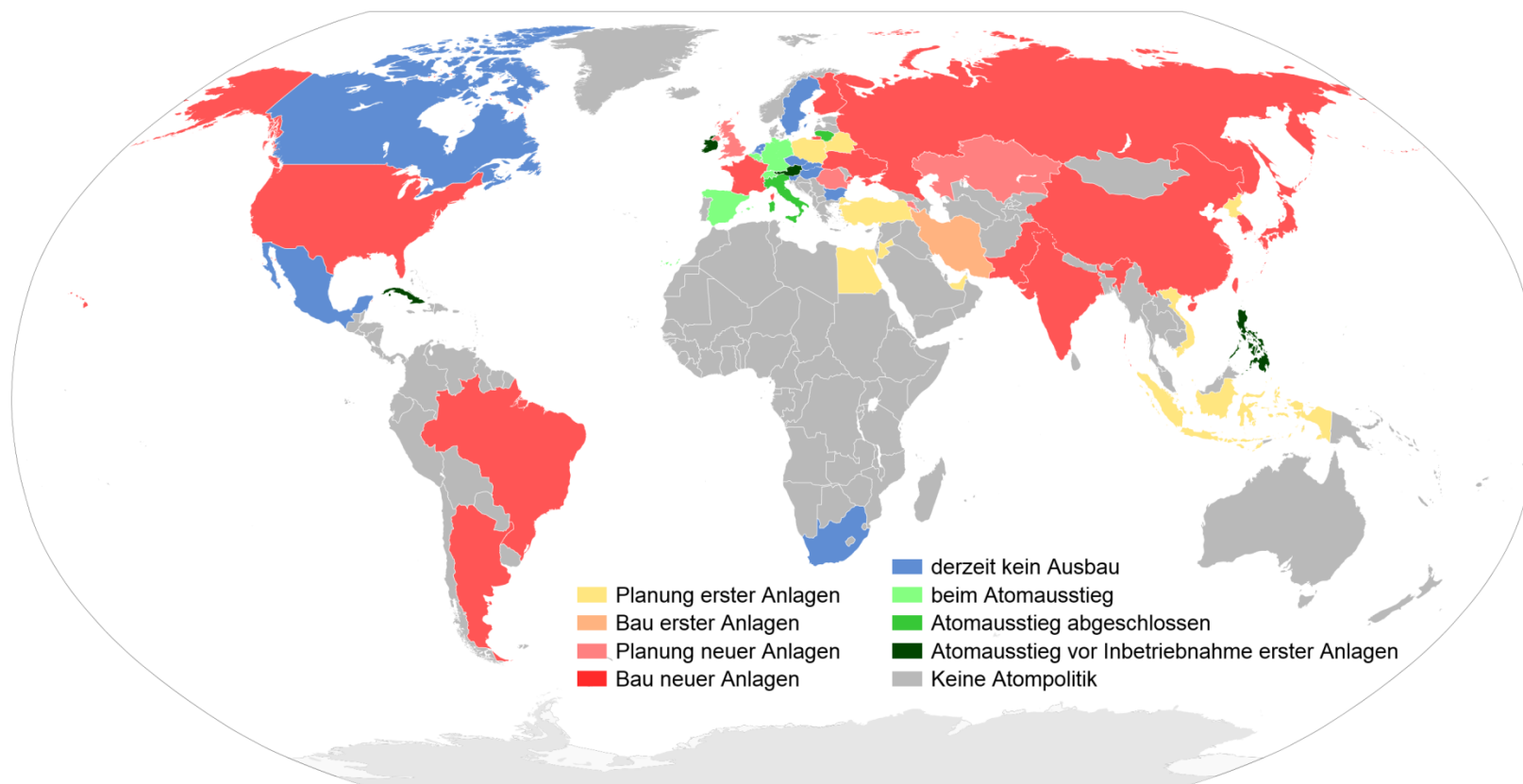


Source: Guardian

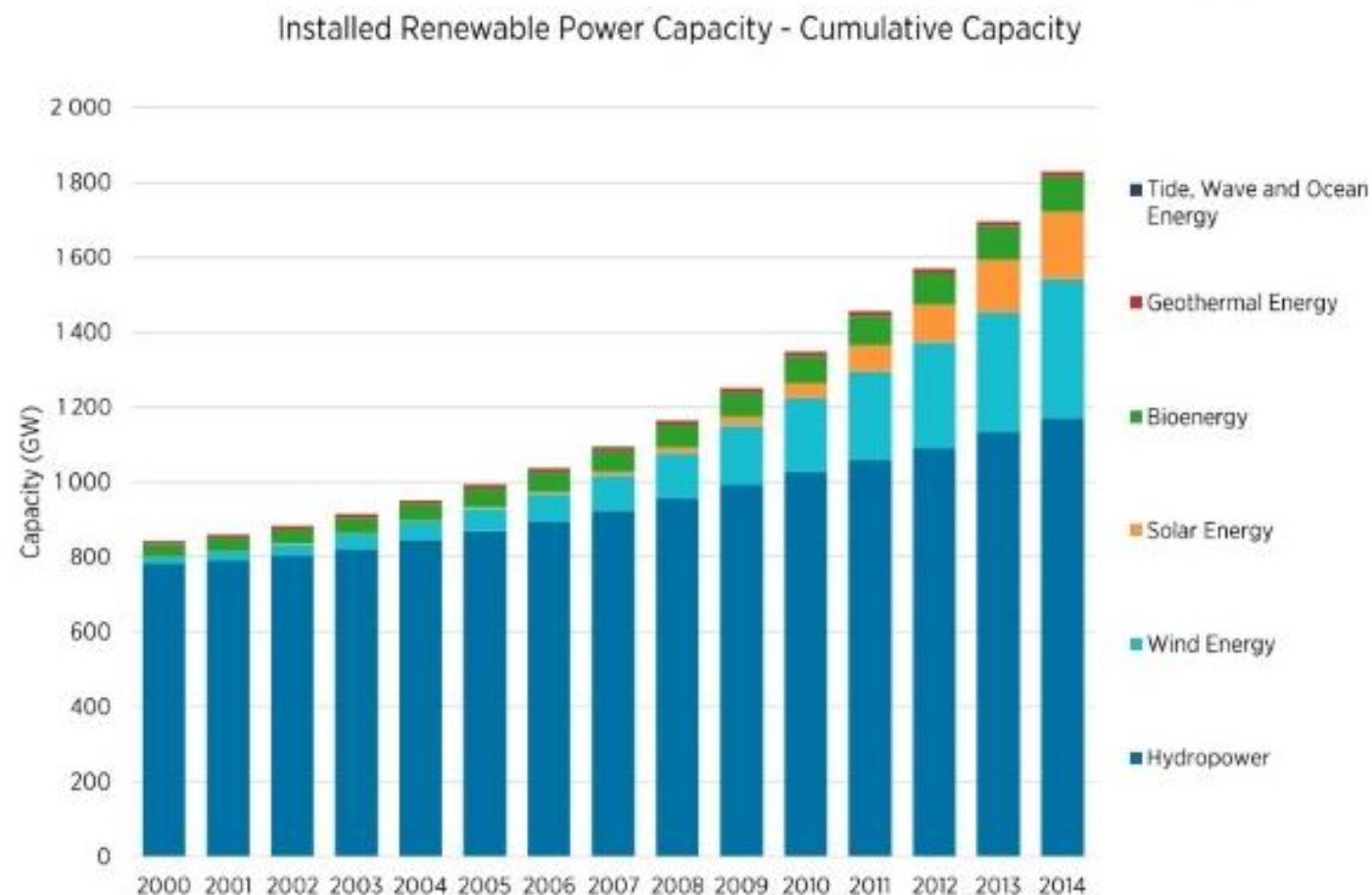
Nuclear power plants around the world



2nd trend: Nuclear energy shifts east

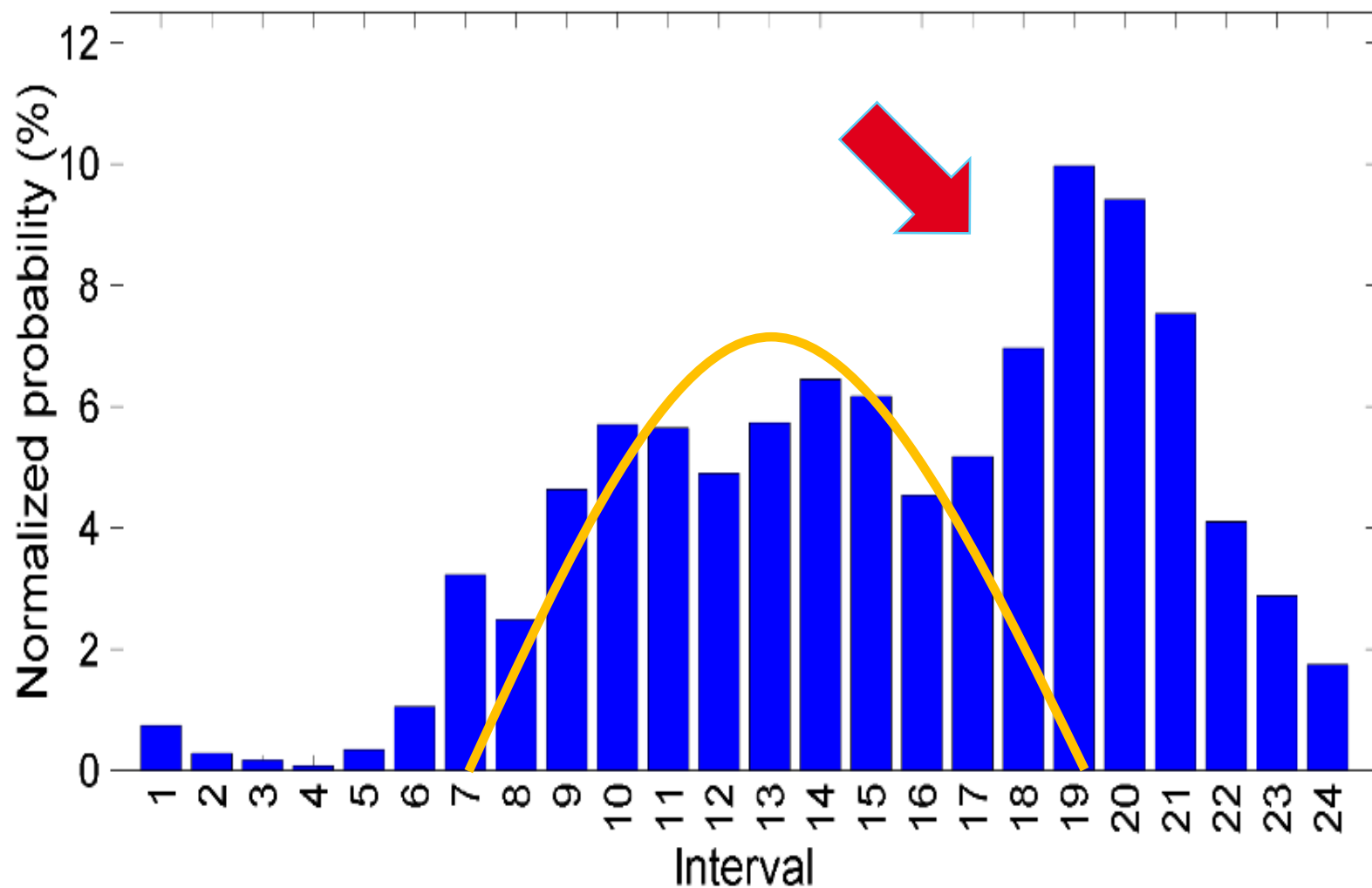


3rd trend: Renewables on the rise

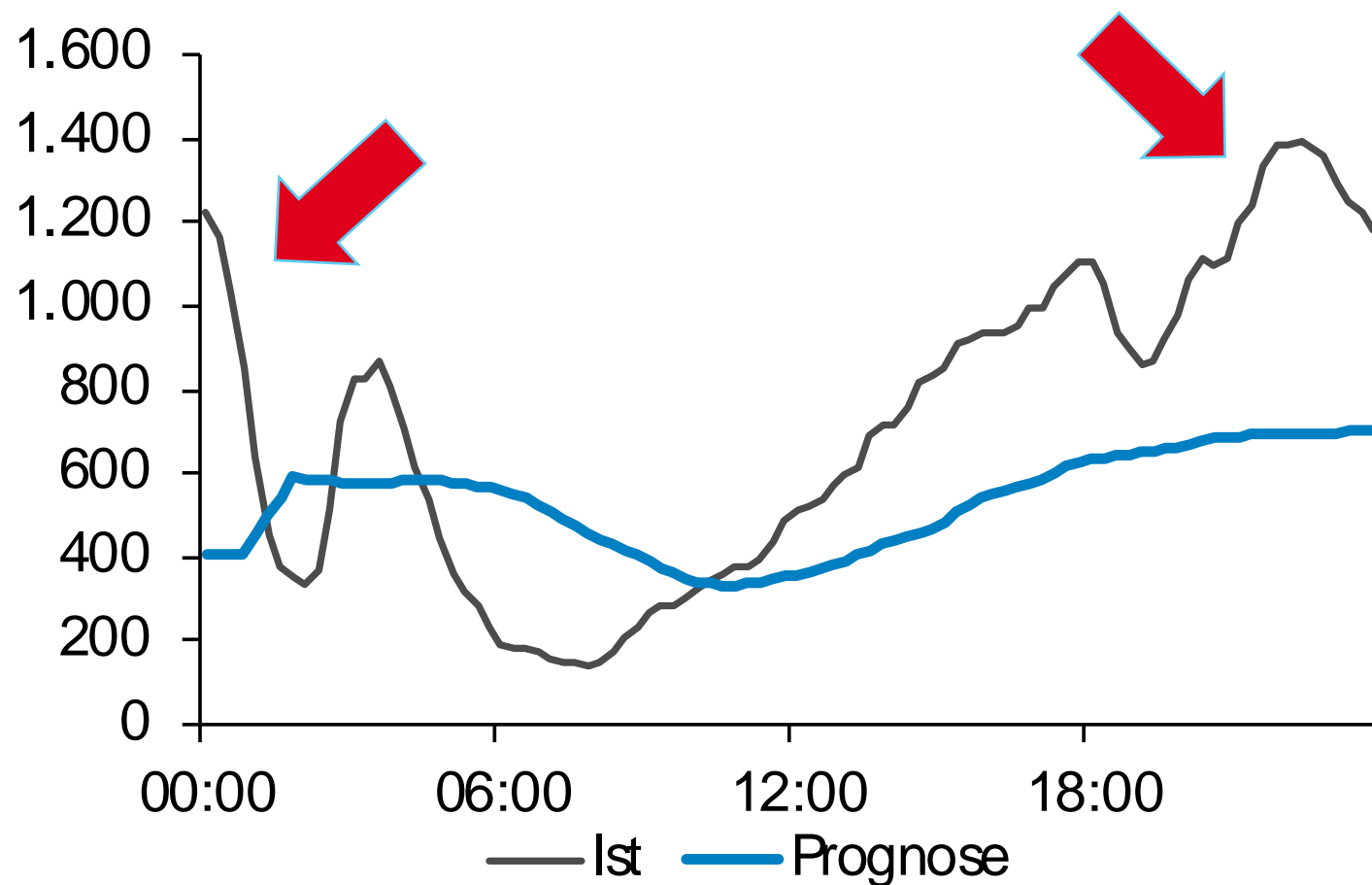


Source: IRENA

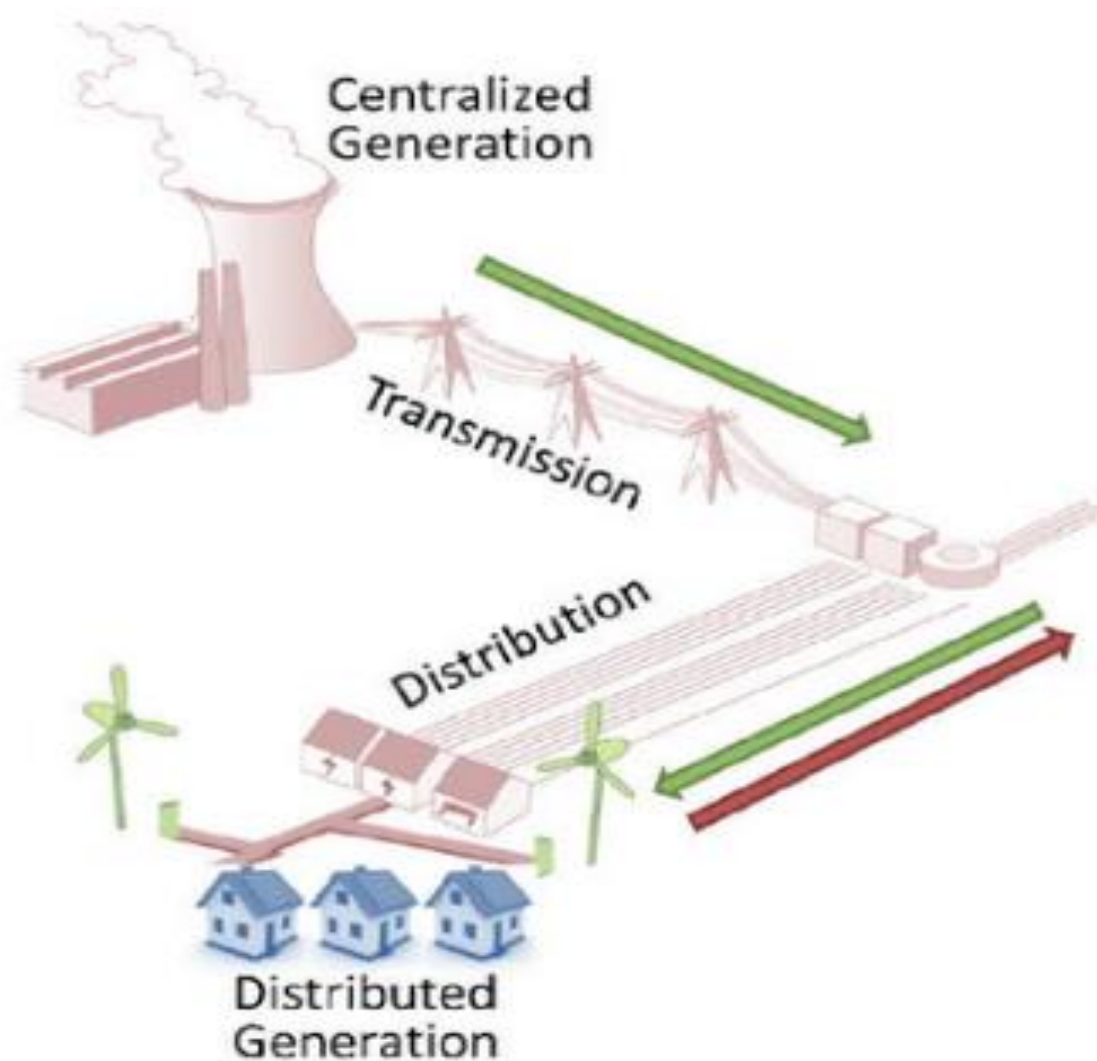
Daily load curve vs. solar production



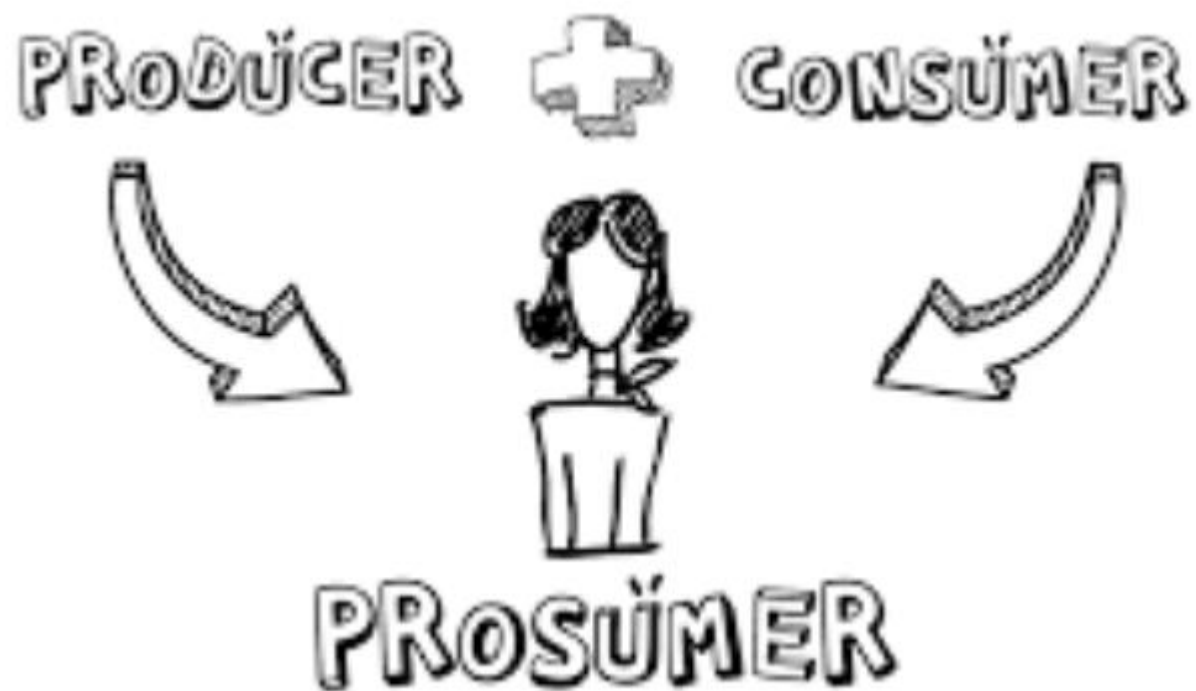
Daily forecast vs. reality in wind production



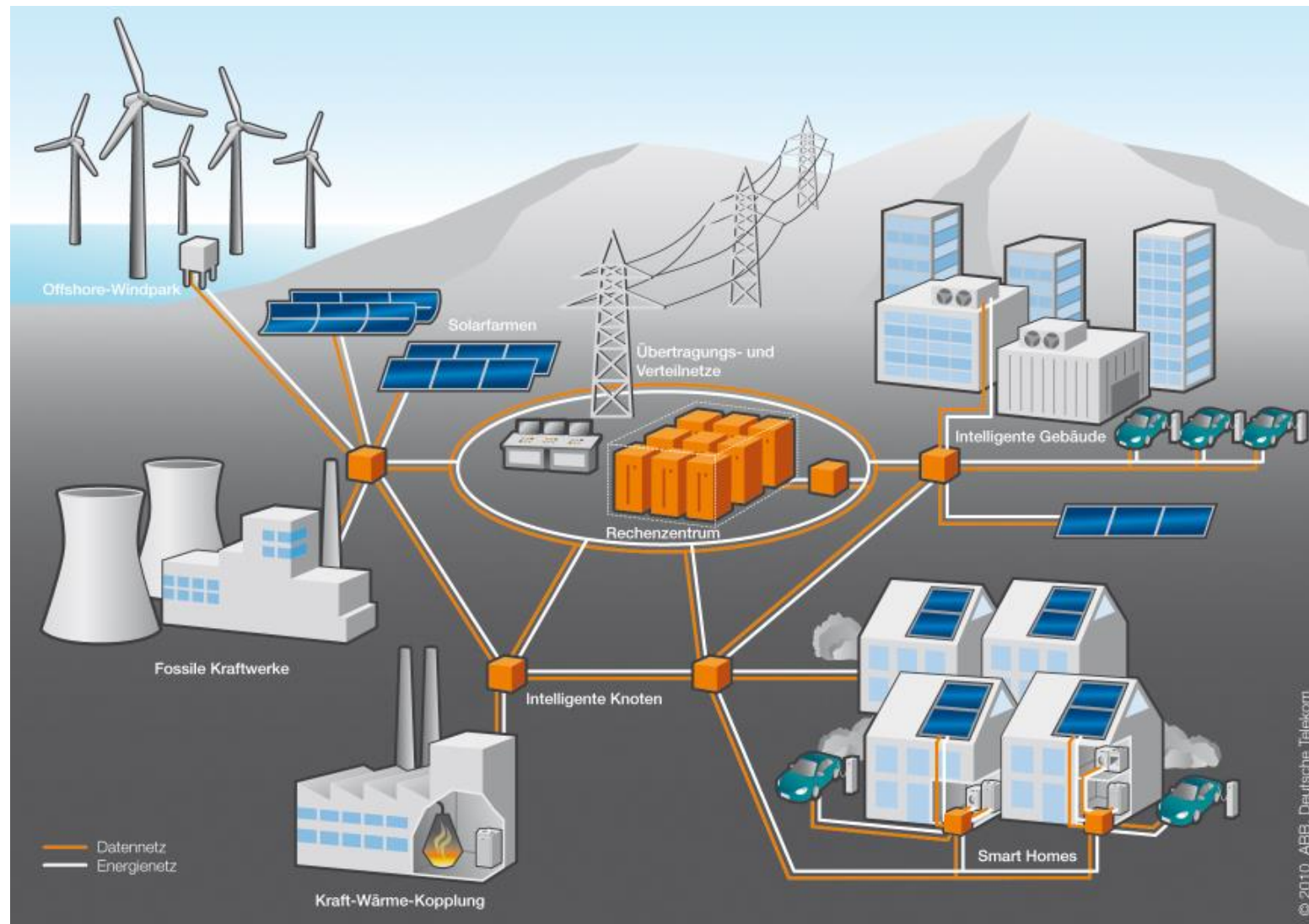
4th trend: Distributed generation



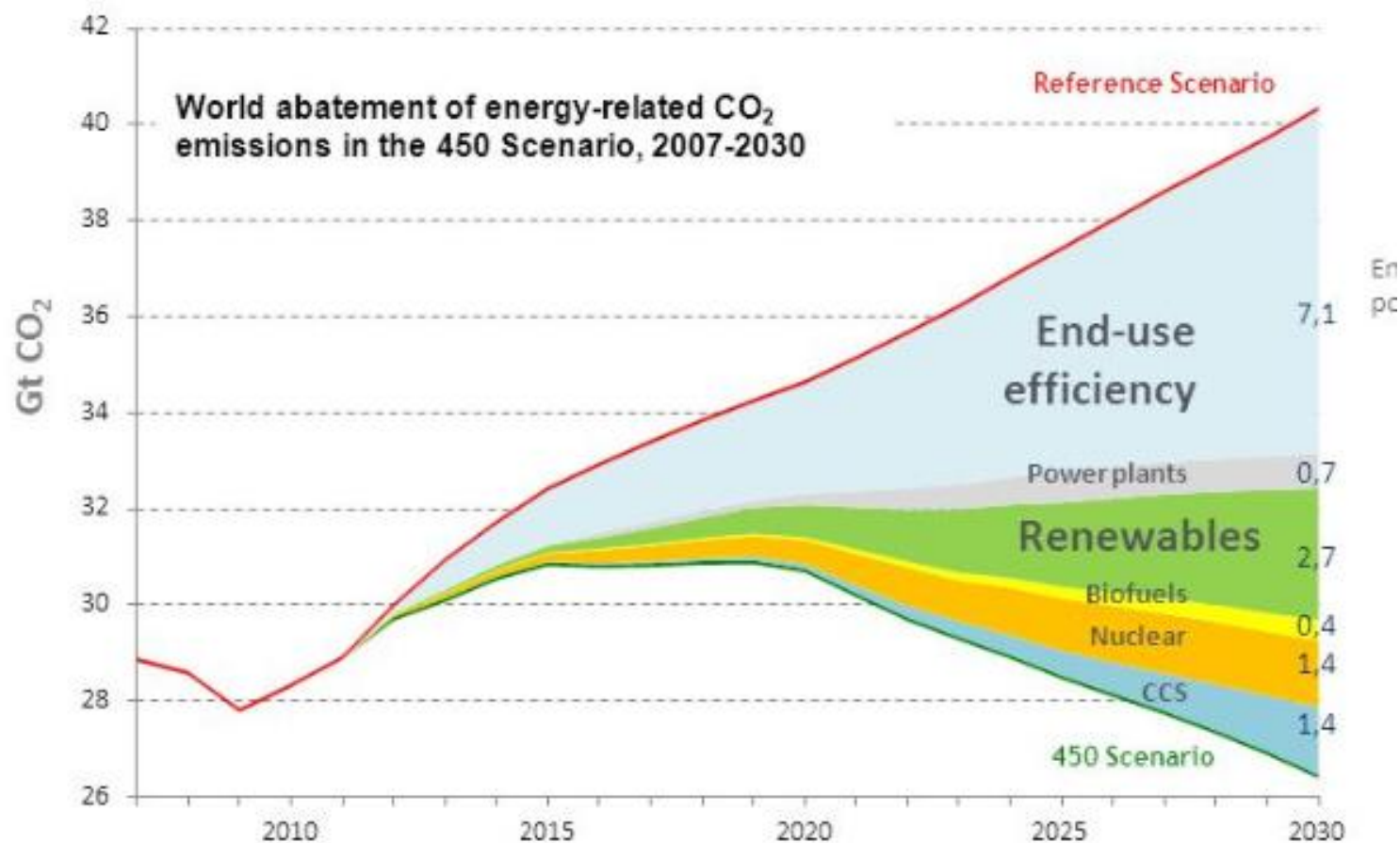
New challenge: Prosumers!



5th trend: Need for smart grid

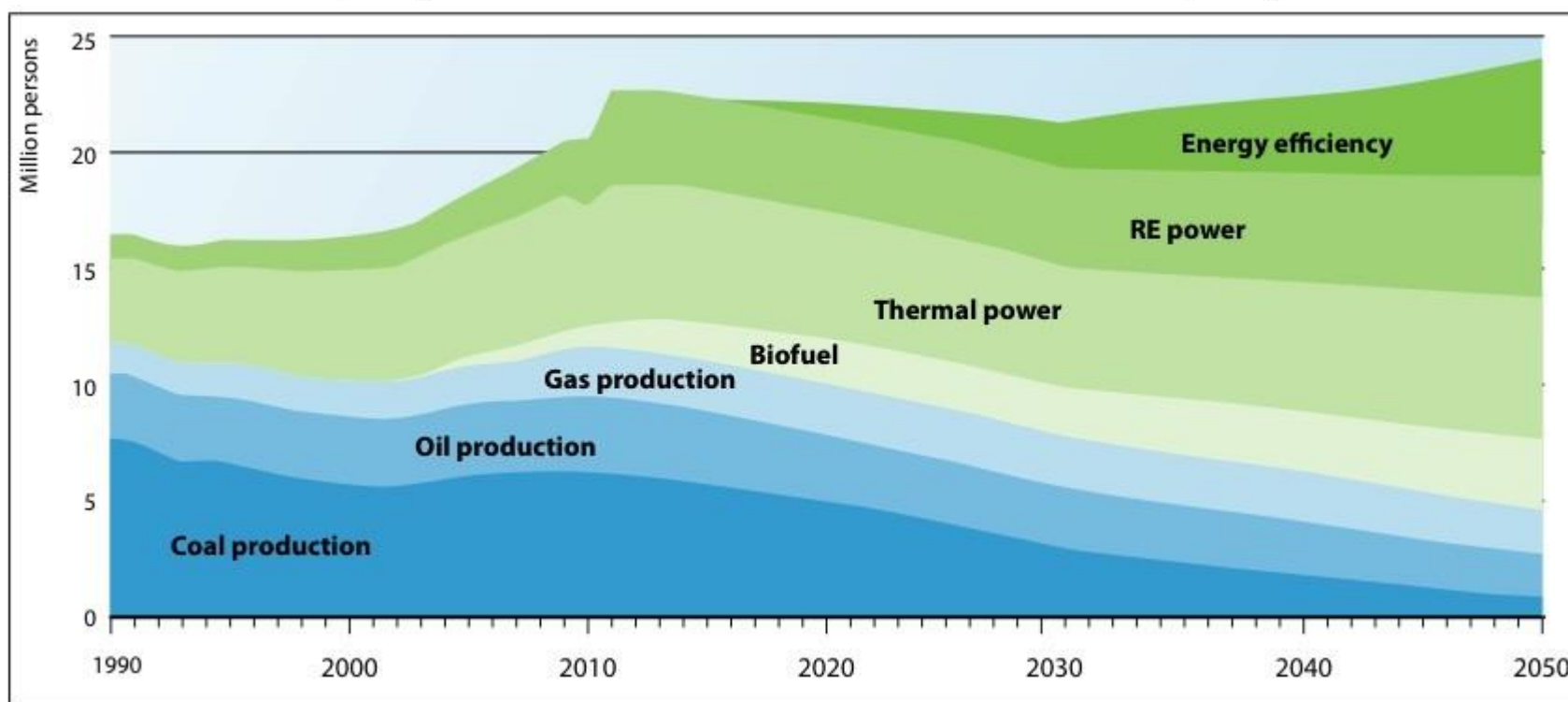


6th trend: Energy efficiency



Source: OECD

Key trends influence Human Resources sector





**TRUMP
DIGS
COAL**

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**MAKE
AMERICA
GREAT AGAIN**

**TRUMP
PENCE**

**MAKE
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