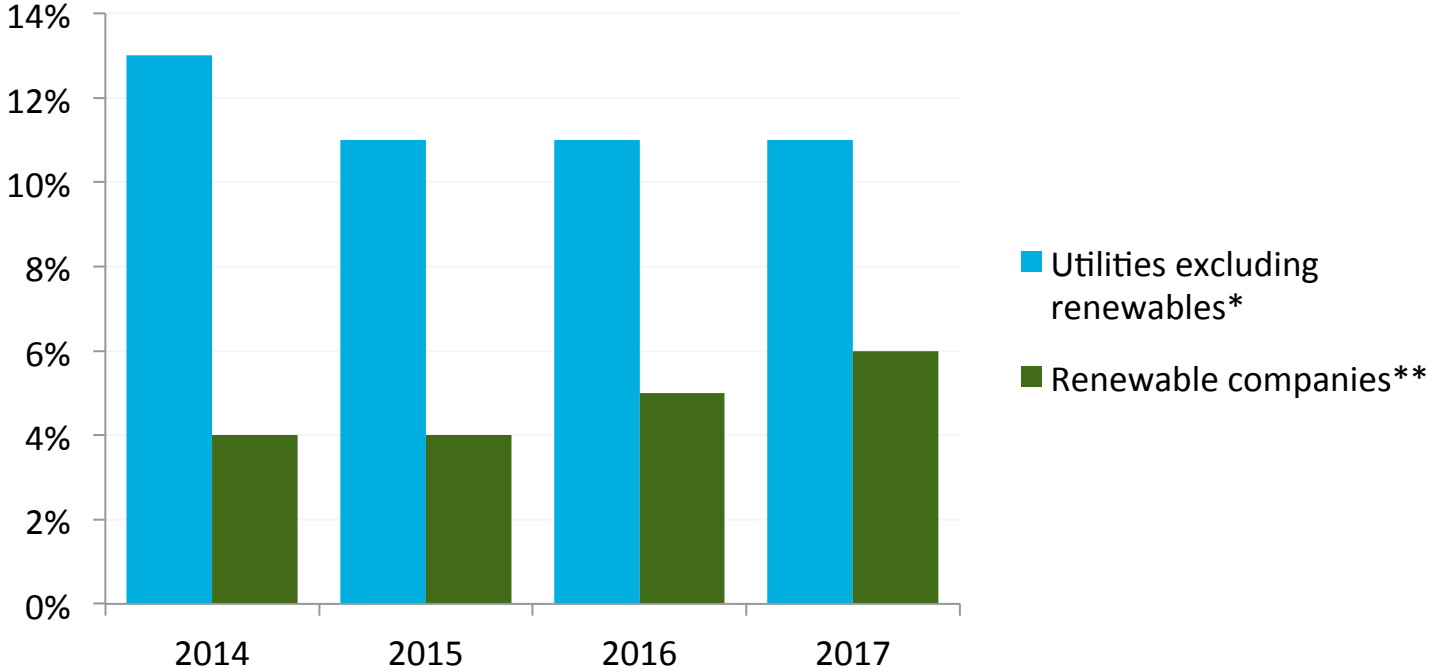


# RES support schemes are not attractive for an industrial investor. Creating conditions for the market based investments would be more efficient

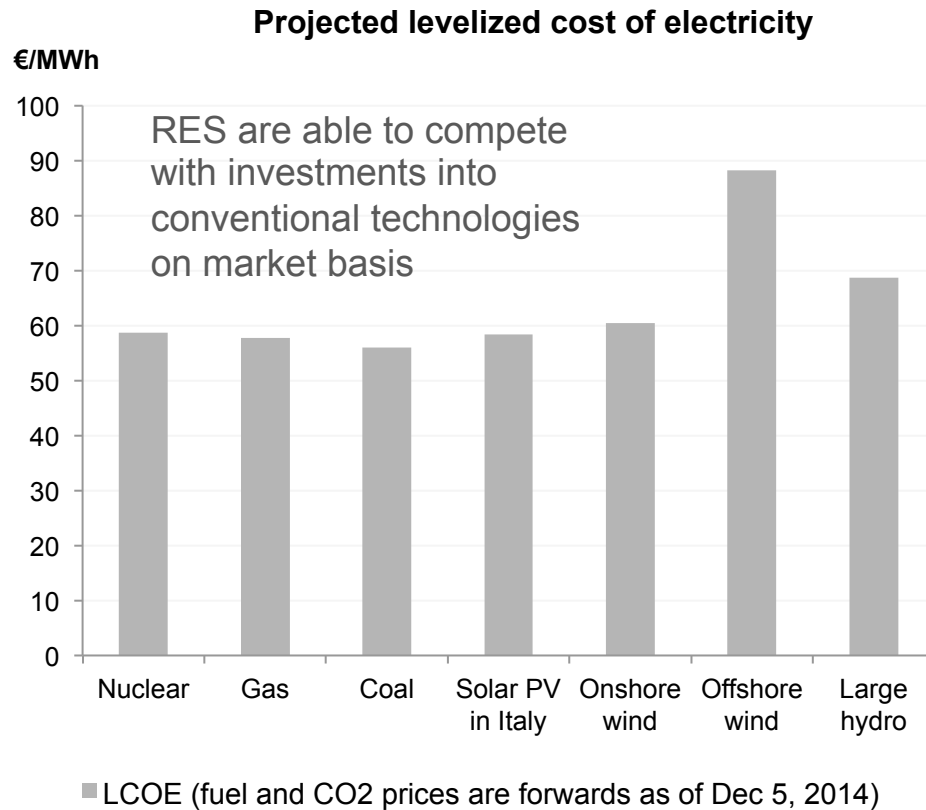
Weighted average return on equity, projections by UBS



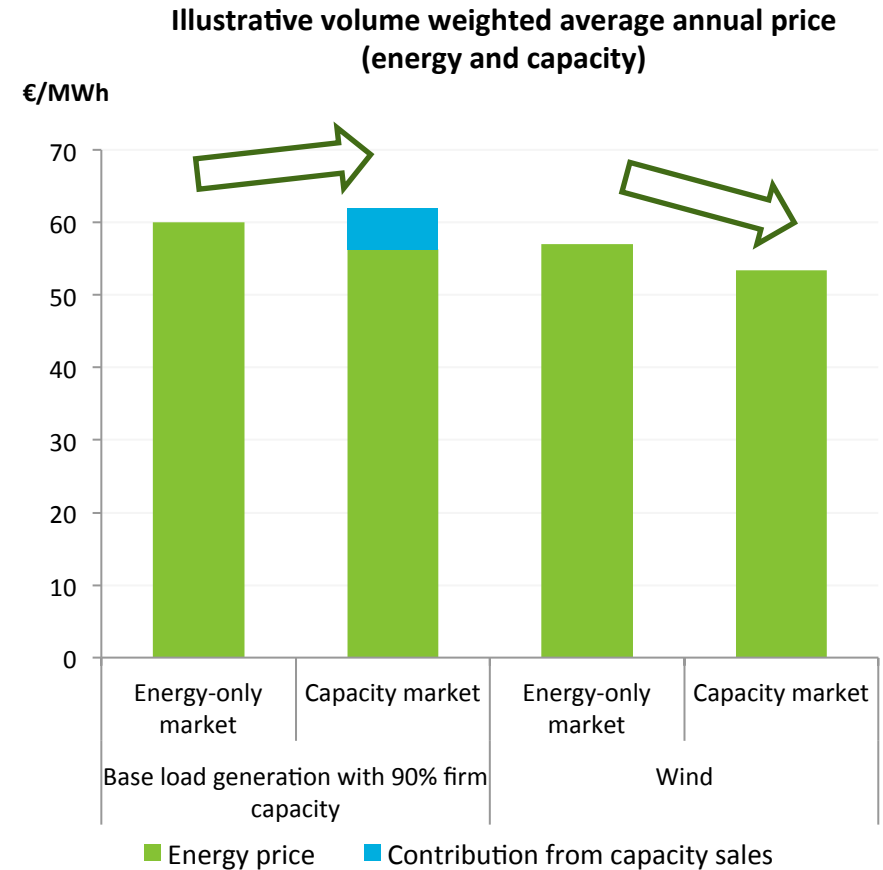
Source: UBS Utilities Comps, UBS Global Research, 9 December 2014

\* RWE, EON, EDF, Enel, EDP, CEZ, GDF Suez, PGE, Tauron, Energa, Gas Natural SDG, Iberdola, SSE, Centrica, BKW  
\*\* EDP Renovaveis, Enel Green Power

# Capacity markets place renewables into a less competitive position -> subsidies required again



The figures are based on recent external publications. Key assumptions: real discount rate 5%, corporate tax 20%. Overnight costs, €/kW 4420 for nuclear, 940 for gas, 1920 for coal, 1440 for onshore wind, 2340 offshore wind, 2580 for hydro, 1000 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 November 2014 extended by applying inflation of 2%. Note, there are large variations in cost of hydro, wind and solar depending on location and conditions.



Illustrative picture for the case of capacity market in the form of centralized capacity auctions with capacity price of €50/kW/a.

# How to enable transition to the carbon-free energy system in the cost efficient way

---

- **Carbon price as the main steering mechanism**
  - RES will become much more competitive than fossil generation and least expensive options will be realized
  - Early implementation of the Market Stability Reserve
- **Fixing created market distortions:**
  - Transition to a higher market integration of renewables: exposure to market prices and balancing responsibility
  - Promotion of renewables through support of R&D, not production subsidies
  - Scarcity pricing reflecting true marginal costs
- **Harmonized power market design, should support renewables**
  - Gate closure closer to the delivery in the spot market?
  - Dynamic pricing in the retail market
  - Adequate investments into cross-border interconnectors