Solutions for integrating solar PV in the European Power System over the long term

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SolarPower Europe

What is SolarPower Europe?

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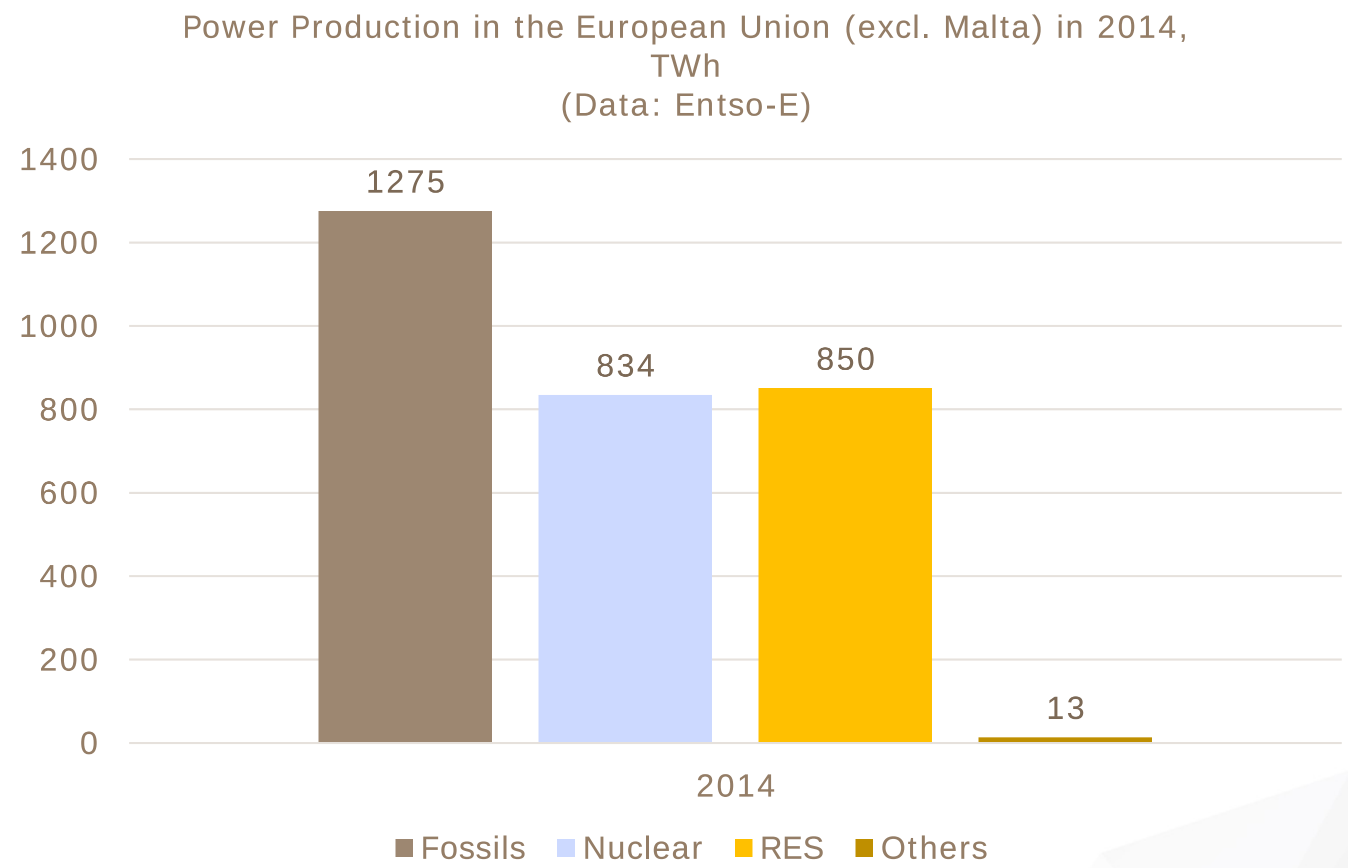
2014, a tipping point in the European power mix



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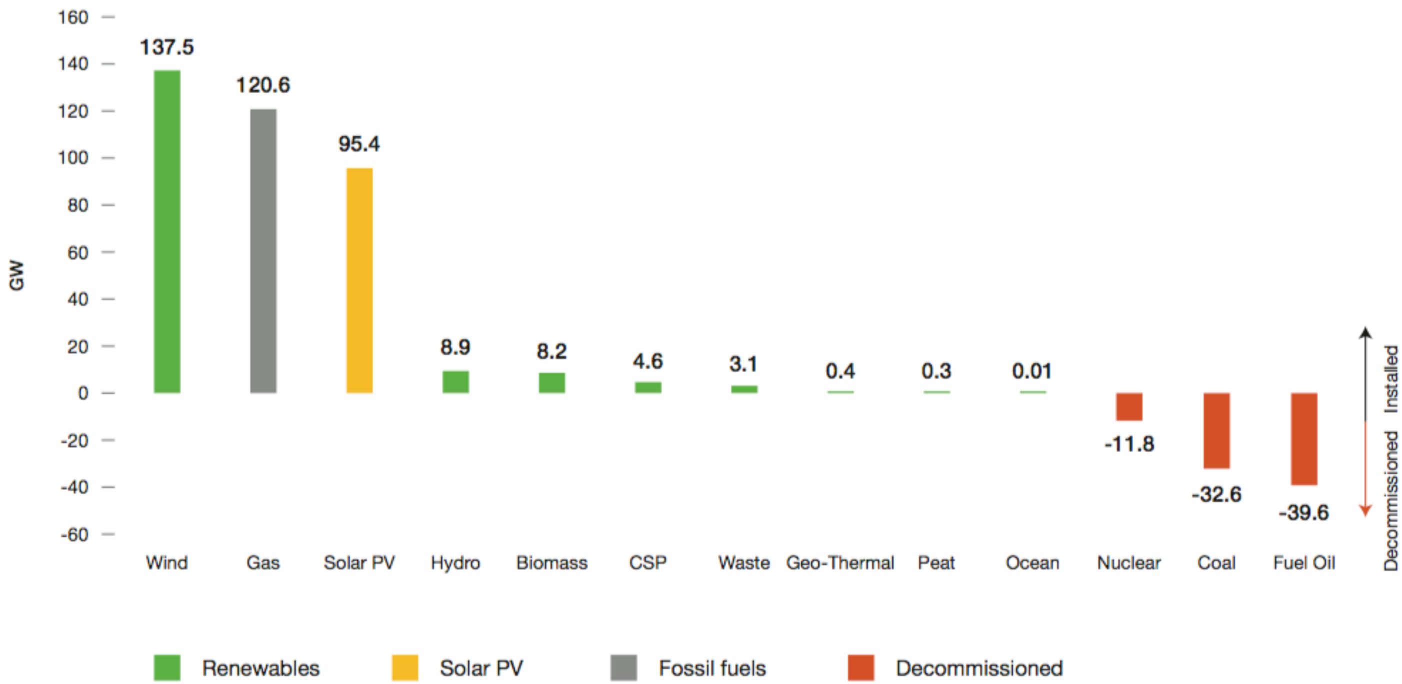
Investments in variable and flexible generation assets…

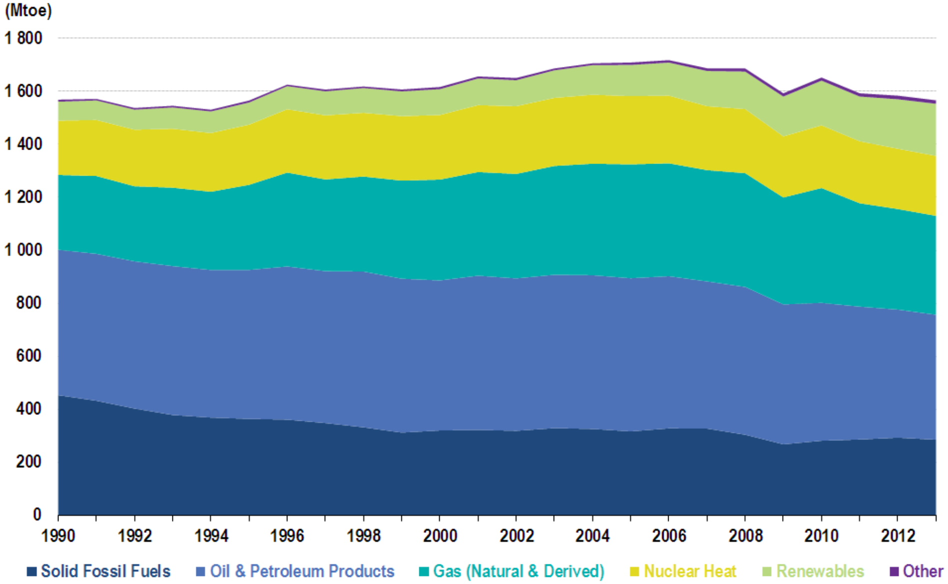
NET POWER GENERATION CAPACITIES ADDED IN EU FROM 2000 TO 2015



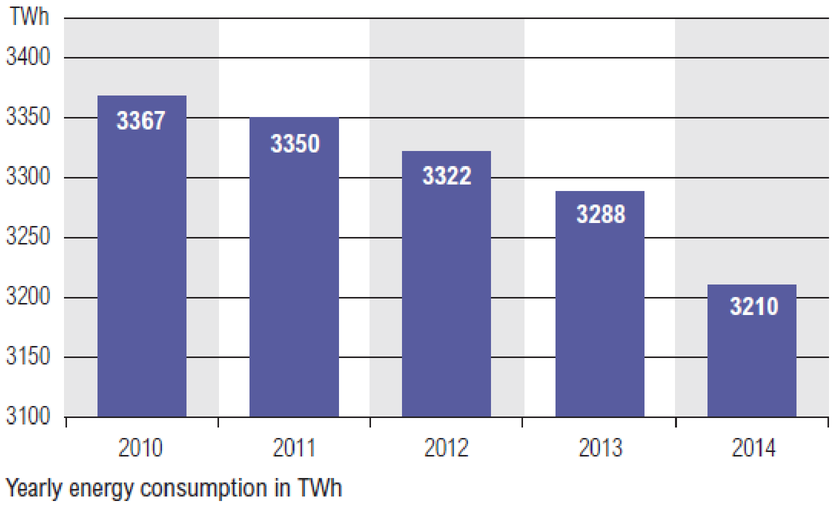
Source: SolarPower Europe, Wind Europe.

… in a context of stagnating energy demand

EU 28 Primary Energy consumption reach below 1990 levels
Source: Eurostat



Evolution of electricity consumption 2010-2014
in the ENTSO area (TWh)



- Business models based on continuous increasing demand are outdated
- Quality, not quantity: we need a clean and flexible energy system

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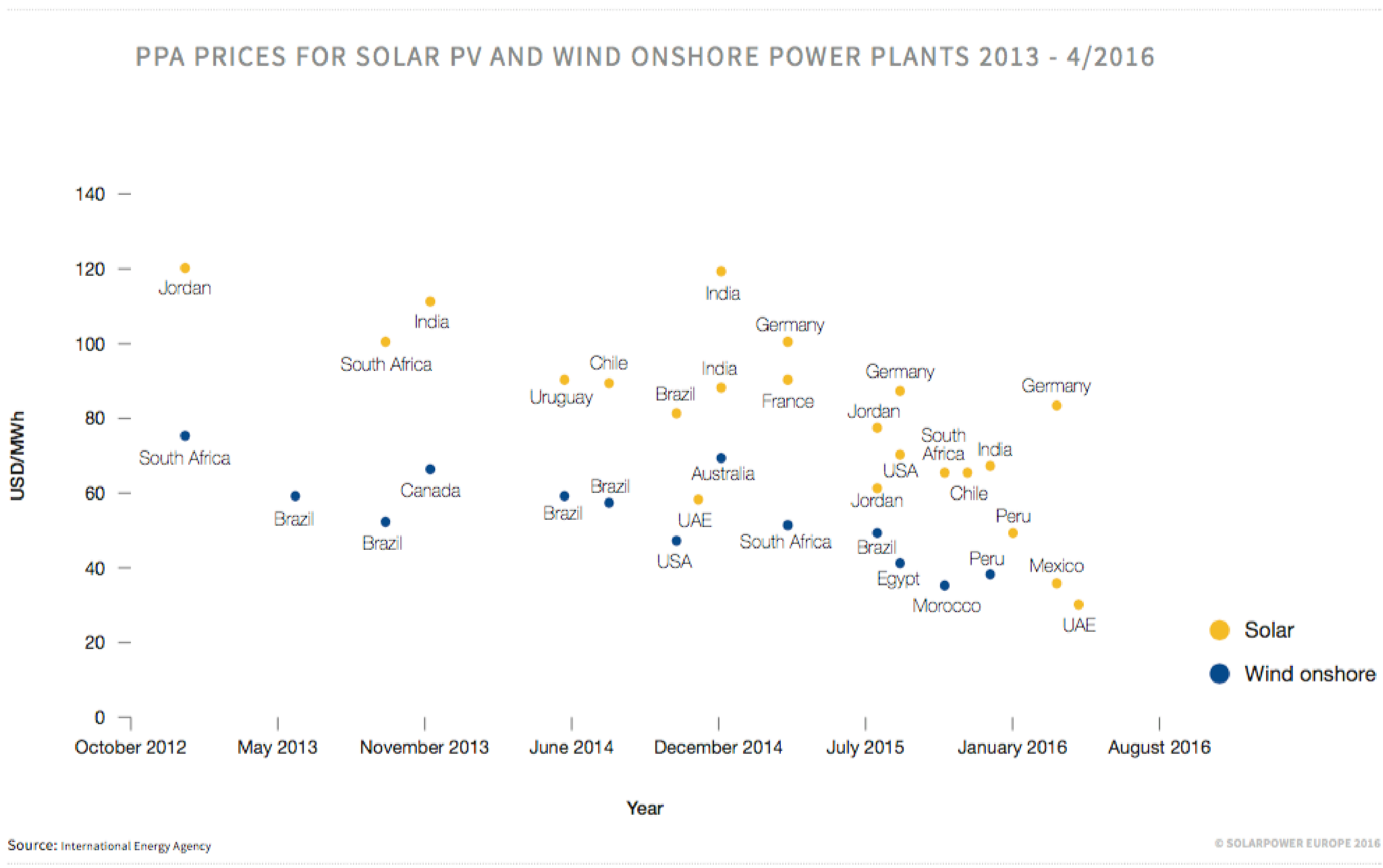
Solar becoming the cheapest power source



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Our vision: a cost-efficient energy system

Make the best use of energy when it is cheaply available

1. A holistic approach [power/heating-cooling/transport sectors]
2. Use RES sources first
3. Store excess of generation across sectors
4. Unlock potential of demand response
5. Enlarge balancing areas via better interconnections
6. Complement with flexible generation

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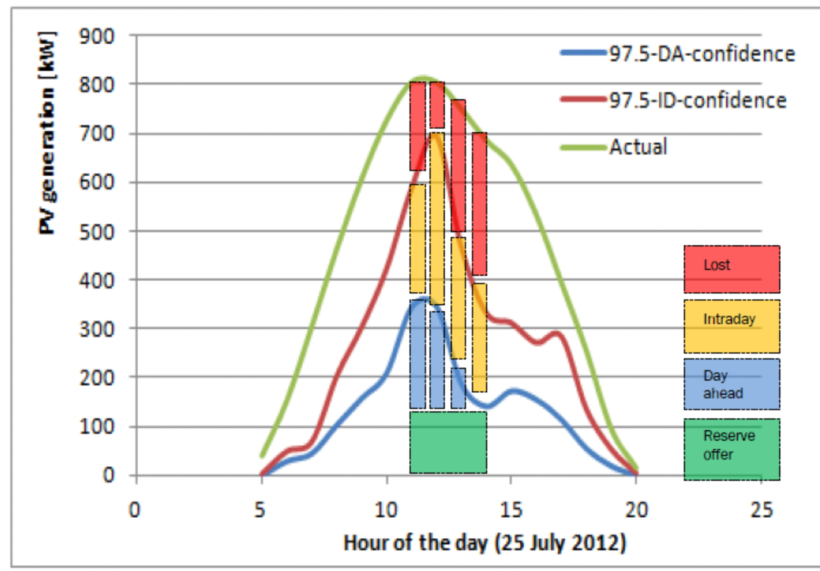
Different products for a different power mix

Being cost-competitive is not enough: we need a proper market design able to remunerate variable electricity and the complementary flexibility assets.

NOT

BUT



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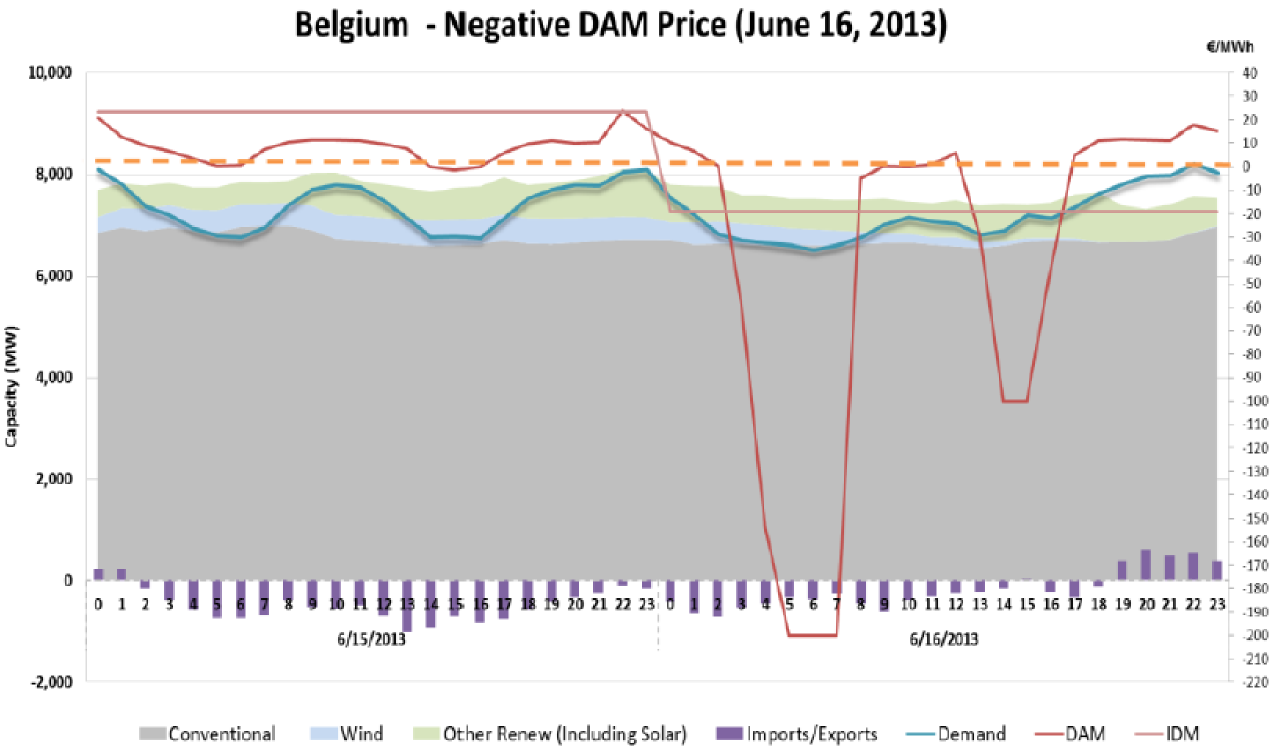
Challenge: inflexibilities in the system

Inflexible generation standing in the way of effective price signals



Source: 3E – Market4RES, 2015

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Challenge: ETS not delivering exit signals

Solutions to be implemented

Market design reform and RES Directive:

- More liquid market with higher granularity of products
- Restore the role of price signals (scarcity)
- Ensure access to the market for demand response (aggregated)
- Organise orderly retreat of coal
- Careful approach to CRMs: regional and thorough adequacy assessments, clear national reliability standards
- Long-term visibility on evolution of energy mix
- Strong retail competition

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JOIN THE ENERGY TRANSITION!

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