



Regional developments: Integrating renewables into the energy mix

A comparison of Poland and the Netherlands

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ETCSSE, Energy Trading – Central & South Eastern Europe

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About ICIS

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We cover carbon markets in **Europe**, **California/Quebec**, **RGGI**, and **China**. Next to carbon, we cover power market development in **Europe**.

Our products and analysis includes:

- ▶ Carbon price forecasting: short-, mid-, und long-term horizon
- ▶ Forecasting of fundamental data, e.g. emissions
- ▶ Qualitative analysis, with a focus on policy developments
- ▶ Market relevant news from journalists



The current status



The overview: both countries are obliged to reach their over 2020 RES target, the sub targets are only indicative



		2015	2020
Overall	RES	11.8%	15.5%
Electricity	RES-E	13.4%	19.1%
Heating & Cooling	RES-H&C	6.4%	6.4%
Transport	RES-T	14.4%	14.4%



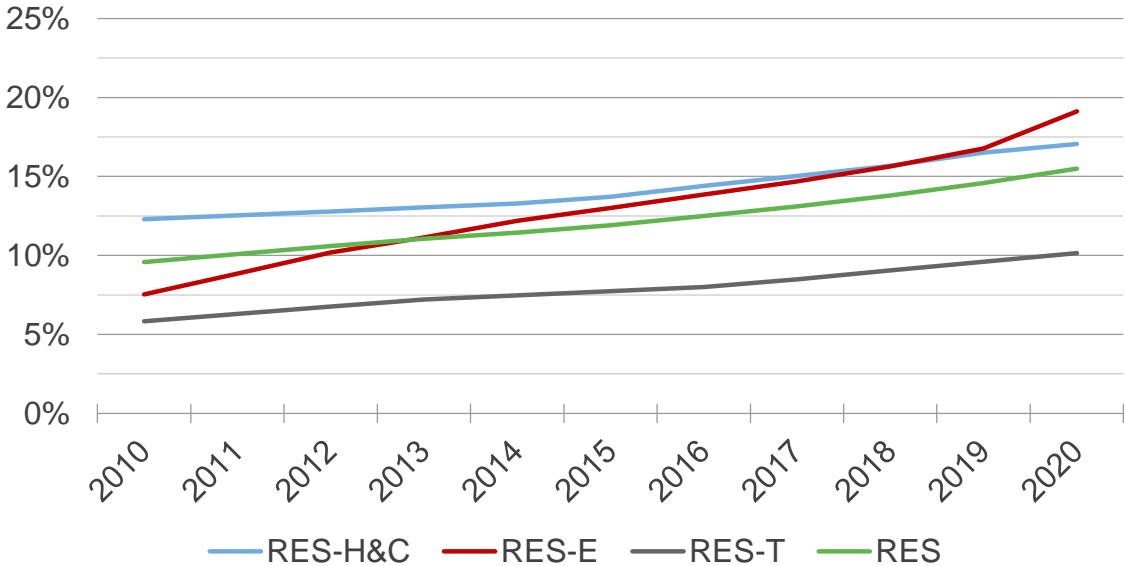
		2015	2020
Overall	RES	5.8%	14.5%
Electricity	RES-E	11.1%	13.0%
Heating & Cooling	RES-H&C	5.5%	8.7%
Transport	RES-T	5.3%	10.3%



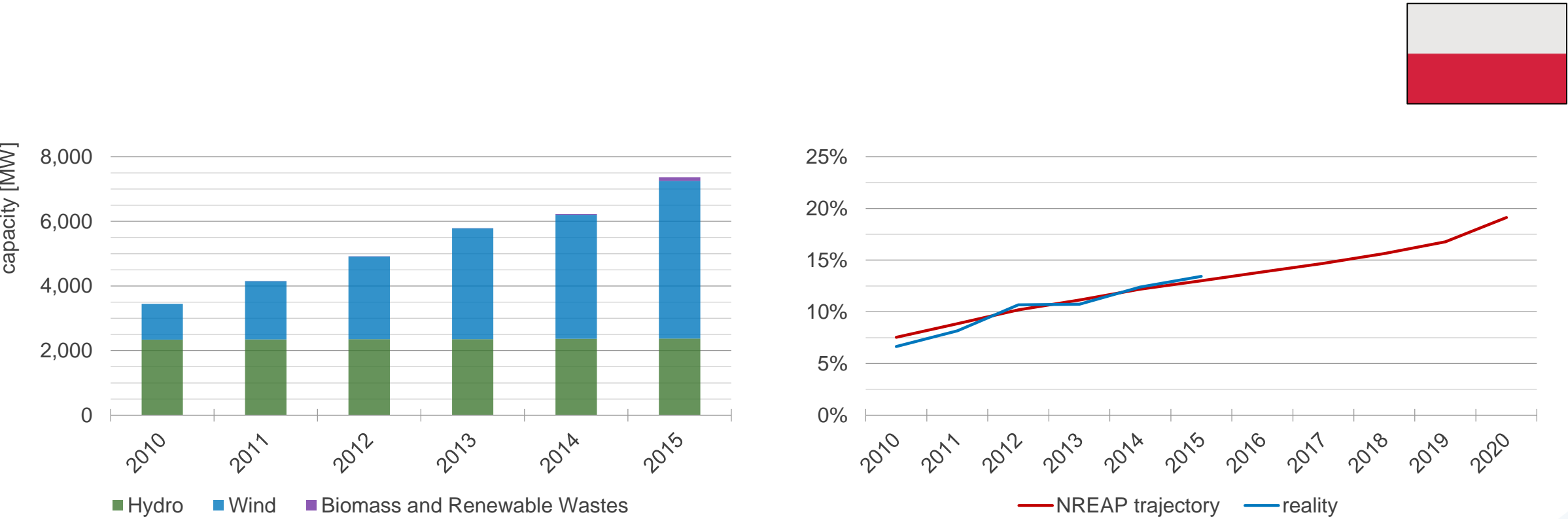
Poland: the indicative NREAP trajectories for Poland imply a rather linear increase of the overall RES share and the sub shares – the increase is the largest for electricity production from RES



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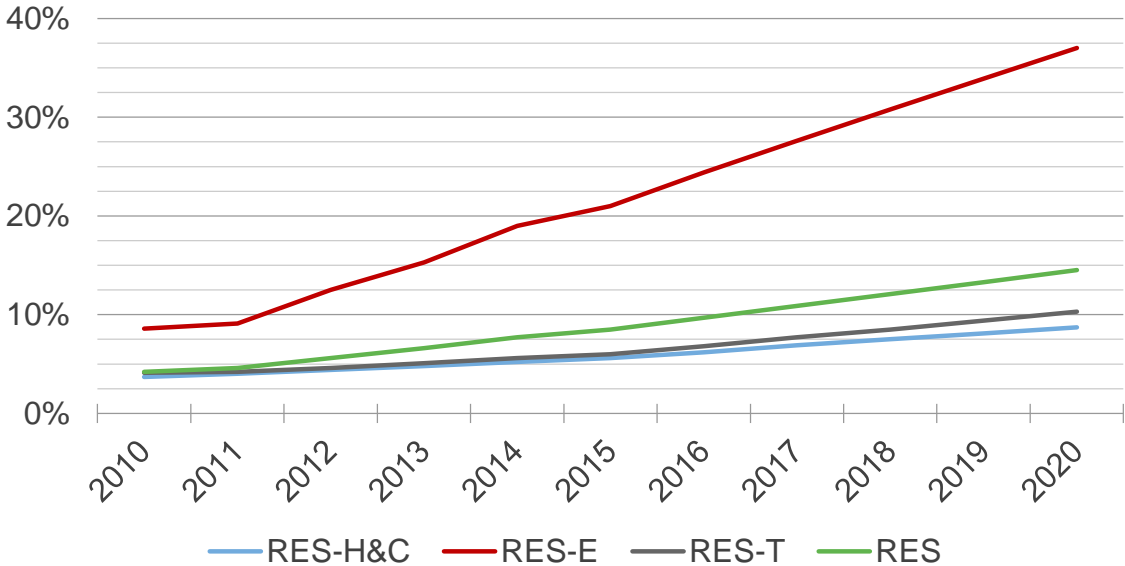
Poland: when focusing on the **RES-E** share it gets clear that Poland is – since 2010 and until 2015 – on track to reach its 2020 RES-E target



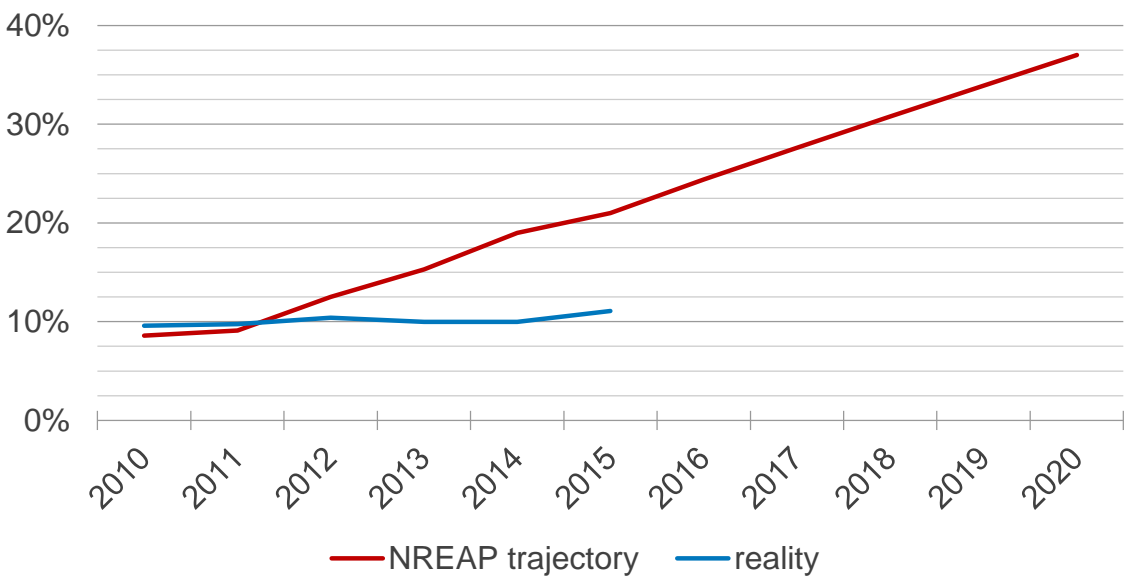
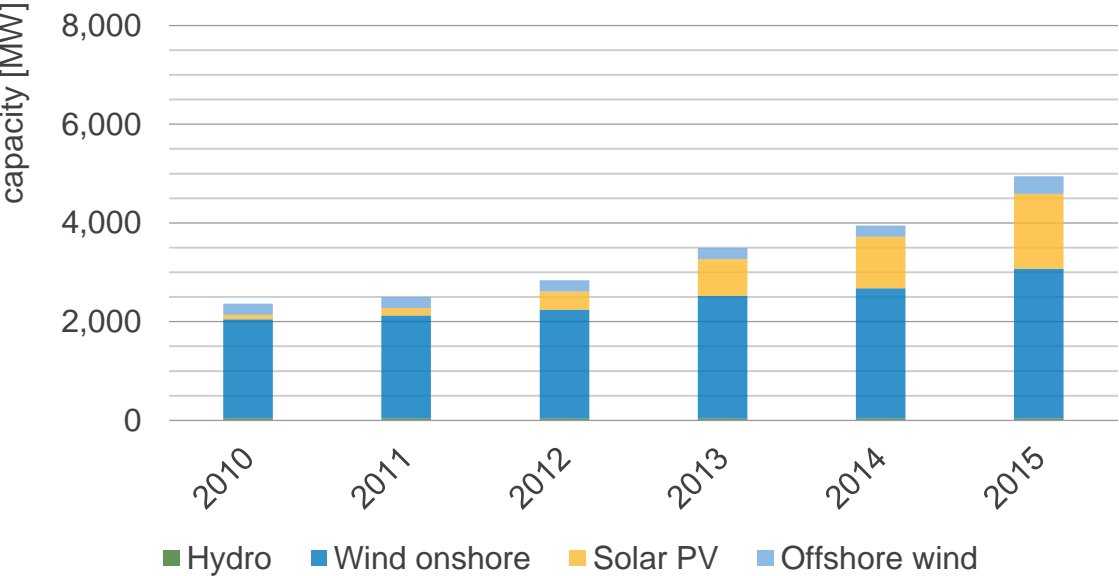
Netherlands: the indicative NREAP trajectories for the Netherlands are also rather linear – however, the RES-E share increases much more significant compares to the other sub shares



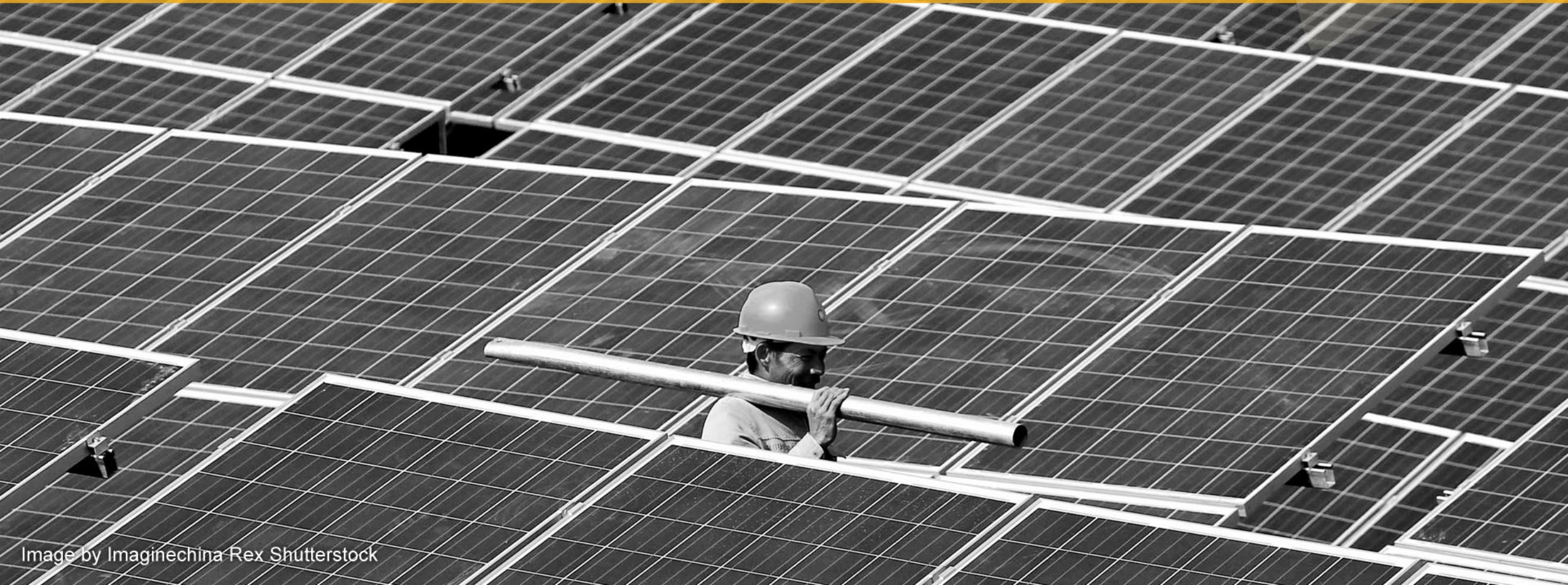
		2015	2020
Overall	RES	5.8%	14.5%
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Netherlands: while the Netherlands roughly doubled their renewable capacity in 2015 compared to 2010, they are departing significantly from their indicative NREAP trajectory



The current trends and the future

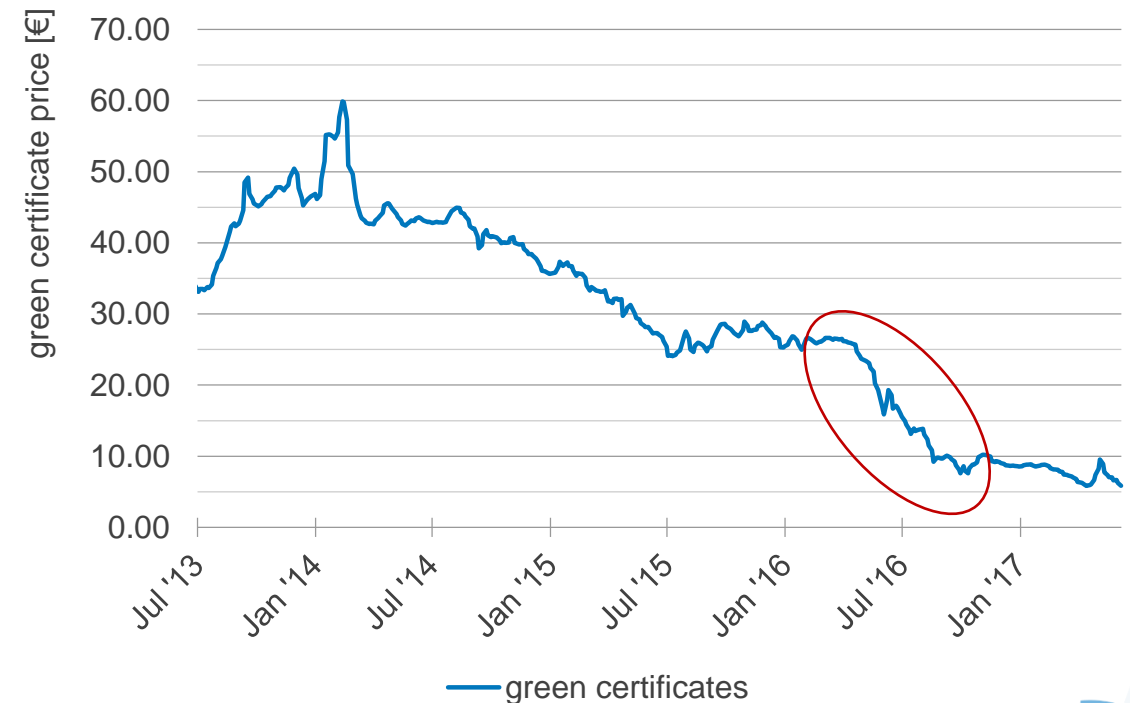


Poland: the adopted reforms put pressure on RES-E producers and disincentives additional capacity



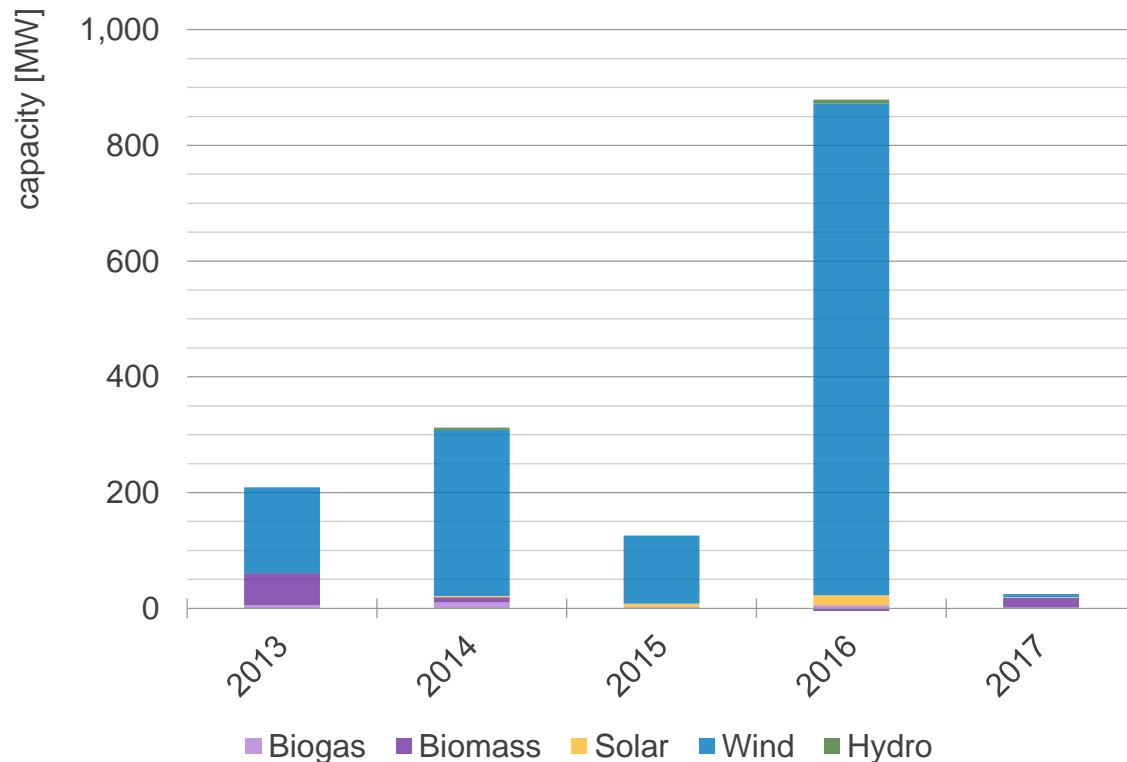
- ▶ PiS took government in 2015
- ▶ July 2016: reform of RES support mechanism
 - ▶ No new installations can apply for the green certificate system
 - ▶ Instead an auction scheme was established
- ▶ After the reform the prices for green certificates plummeted from €25 to €6

green certificate price



Poland: Q1 2017 numbers show very low added RES capacity and especially very low values for wind additions

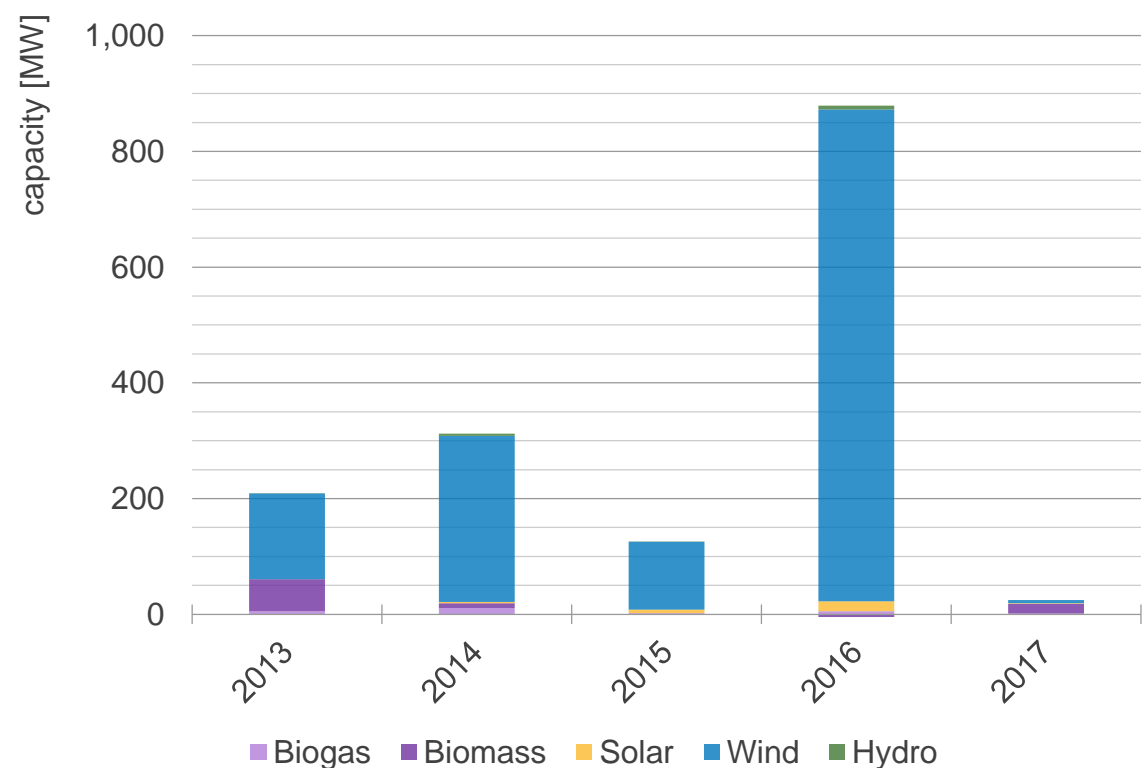
capacity additions Q1



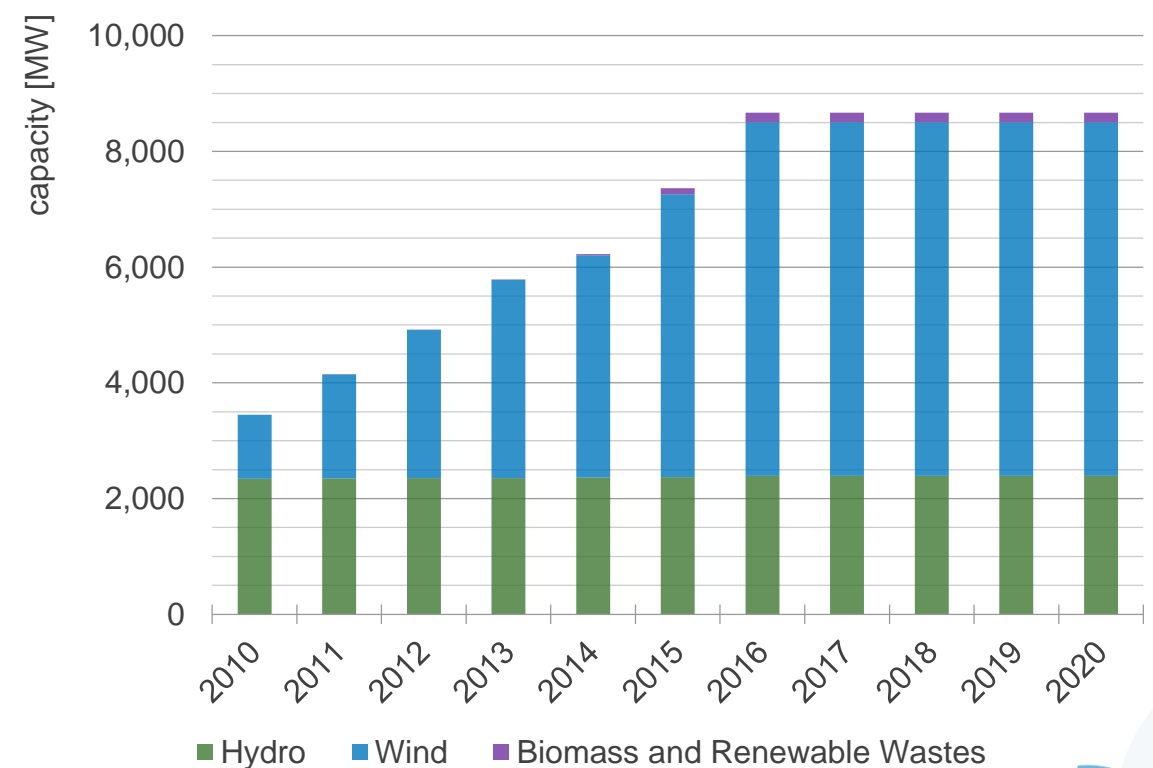
- Especially wind capacity is suffering from the new laws
- Biomass experienced a slight increase of capacity
- Solar plays anyway a minor role in Poland

Poland: when extrapolating Q1 2017 and the most likely impact of the RES reform on additional capacity building, not much additional capacity will be build until 2020

capacity additions Q1



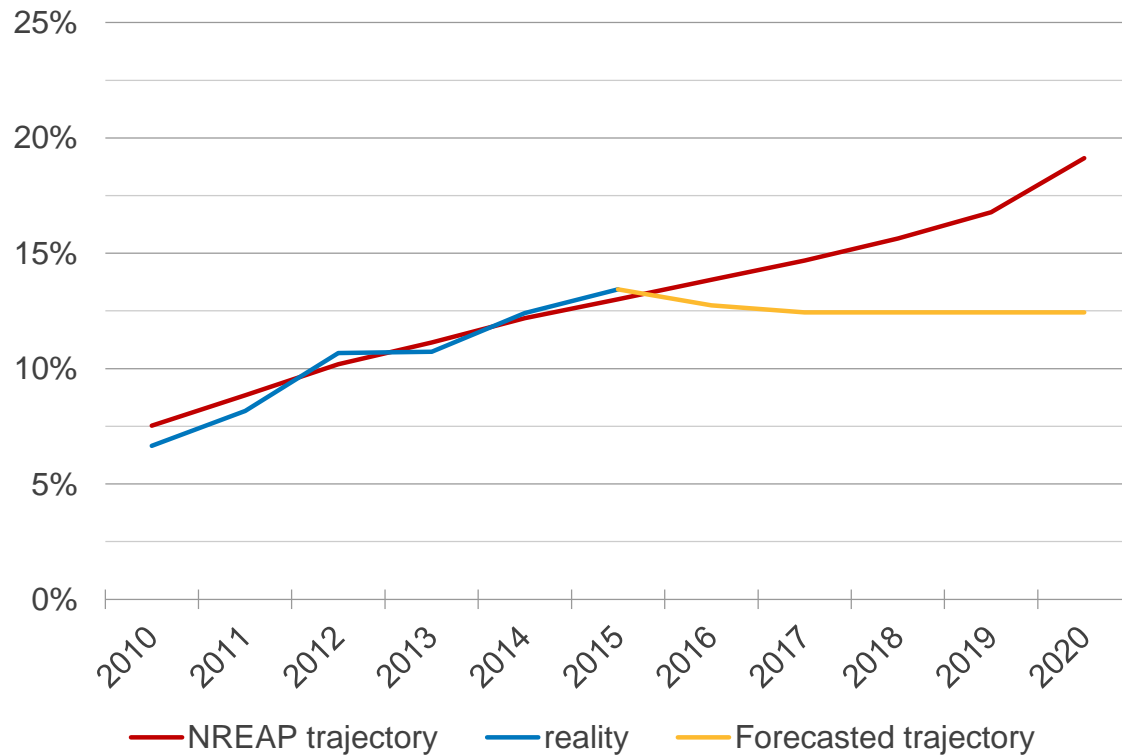
total capacity
extrapolated until 2020



Poland: when assuming this flat capacity development, Poland will not reach its 2020 RES-E target



RES-E Poland

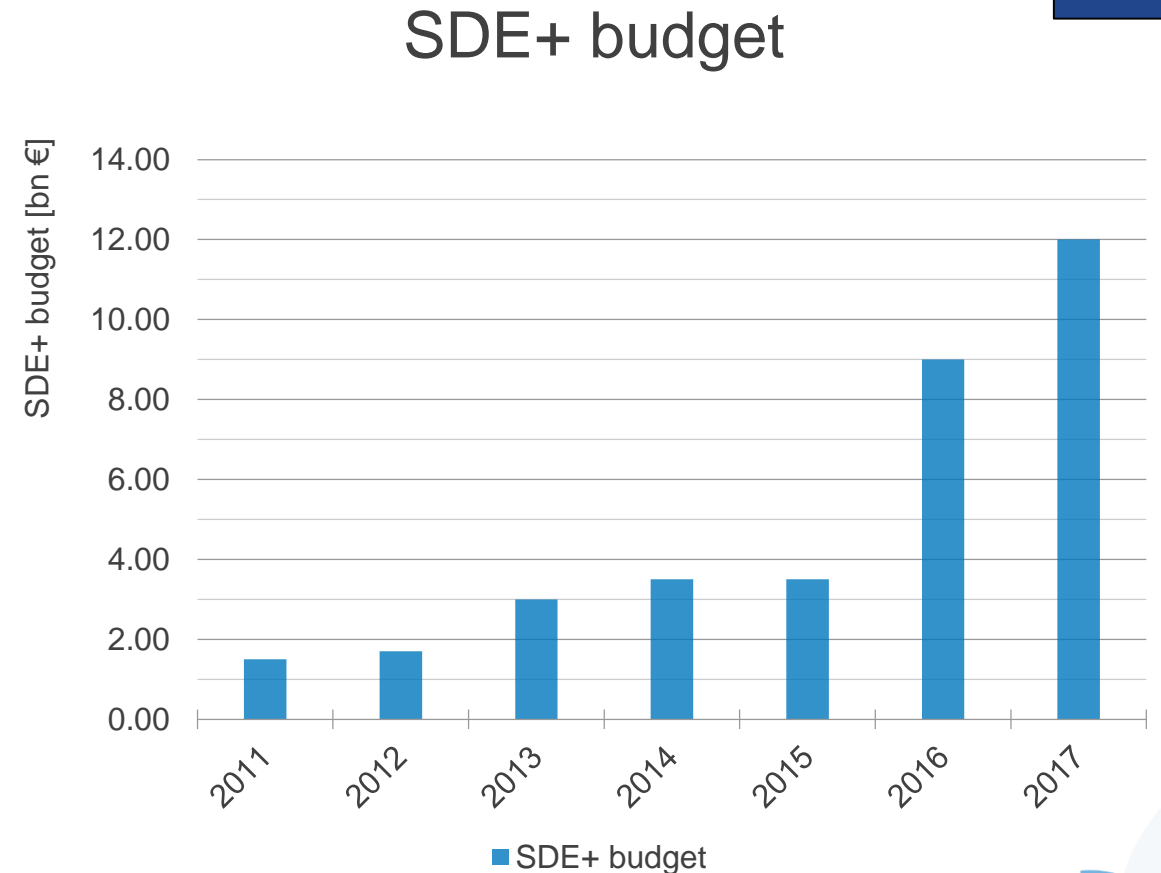


- It is likely that Poland will not be able to significantly increase RES-E capacity until 2020
- Poland will likely end up in the range of 12-13% RES-E share in 2020
- The indicative NREAP plan envisaged to achieve 19.1%

Netherlands: the cross-party compromise on renewable support reduces uncertainty even in times without a fixed government



- ▶ The Netherlands had general elections in March 2017 – currently no coalition could be formed
- ▶ The old government increased the support for RES-E capacity, via the SDE+ scheme, in 2016
 - ▶ SDE+ is a tender based premium tariff system
 - ▶ Budget increase from €7bn to €9bn in 2016
 - ▶ Increase to roughly €12bn in 2017

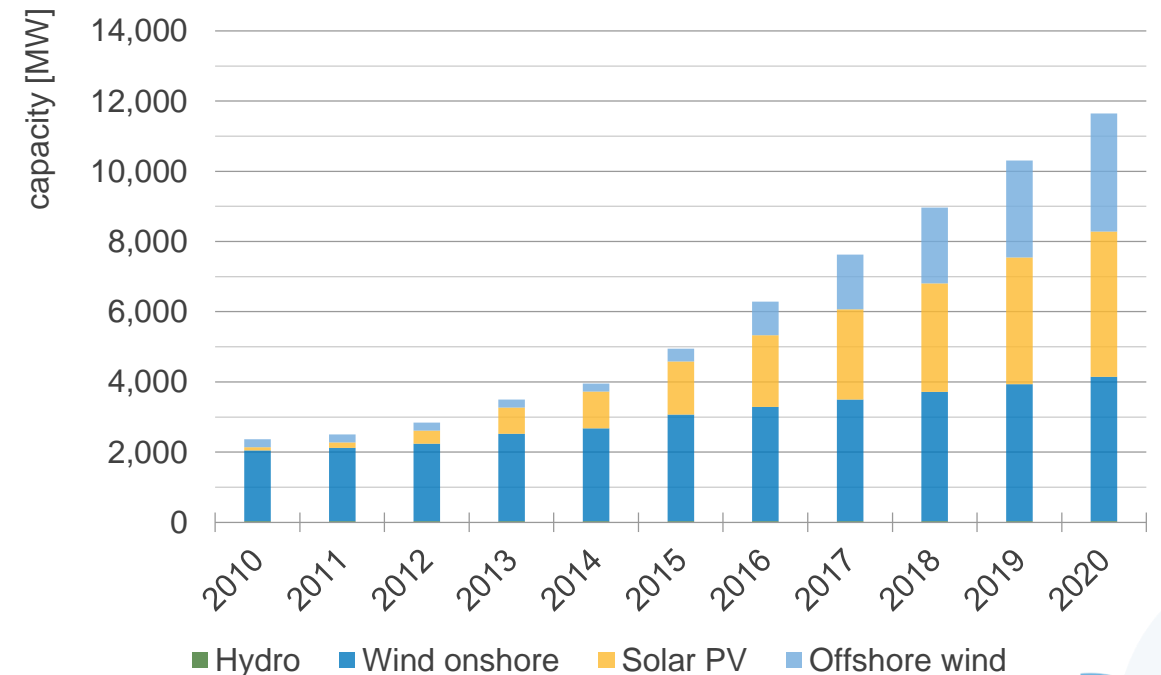


Netherlands: the SDE+ system is technology neutral, although offshore wind is supported by additional tender system



- ▶ All technologies are eligible for the SDE+ system, except offshore wind
- ▶ Offshore wind capacity is supported by additional tenders – 3.5GW in total until 2019
 - ▶ 2 tenders worth 1.4GW in 2016
 - ▶ 1 planned for 2017 worth 0.7GW
 - ▶ Projects to come online between 2019-2023
- ▶ Coal phase-out under discussion

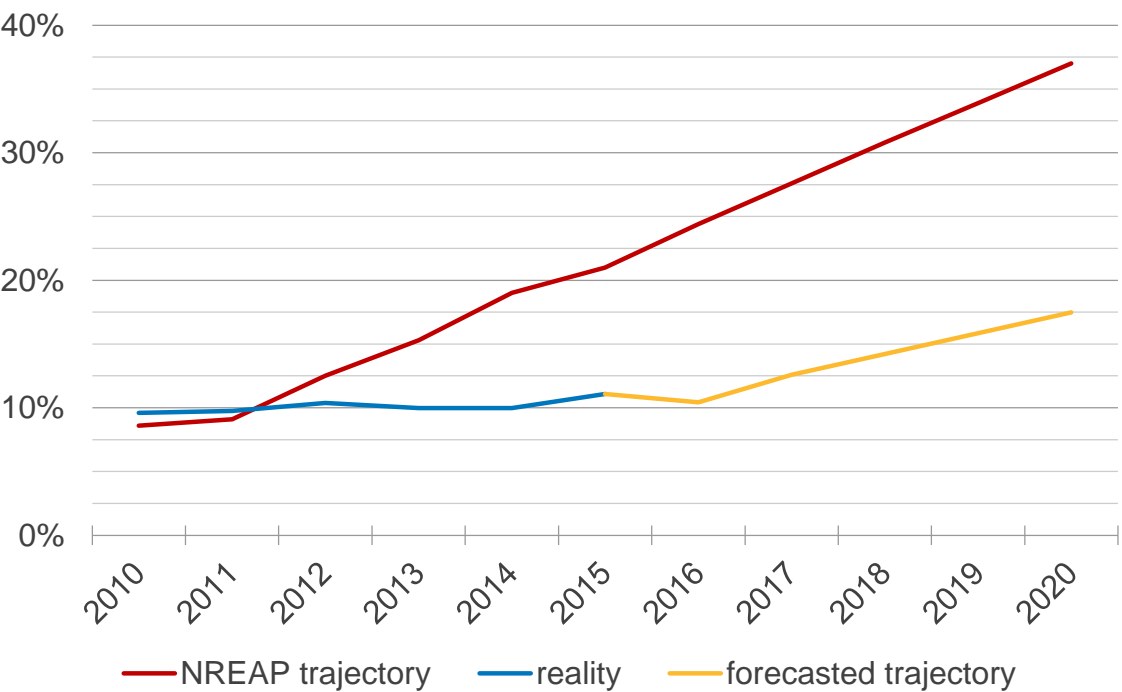
capacity developments
(linear extrapolated)



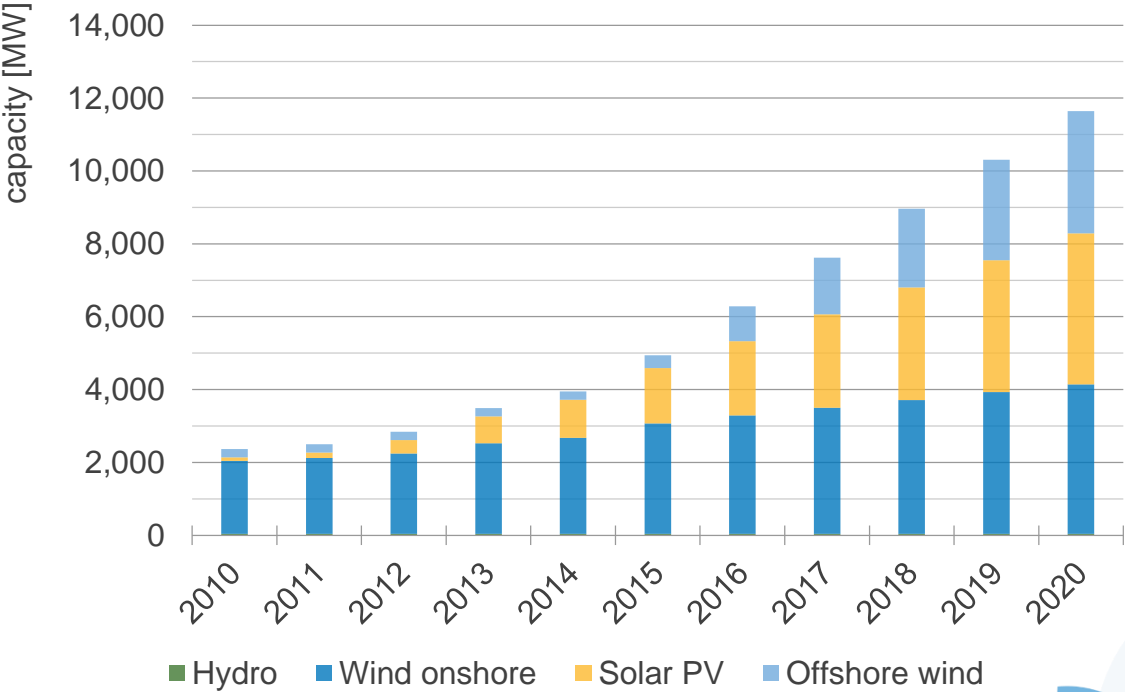
Netherlands: although capacity is increasing, the Netherlands would not reach its 2020 RES-E target



RES-E Netherland
(linear extrapolated)



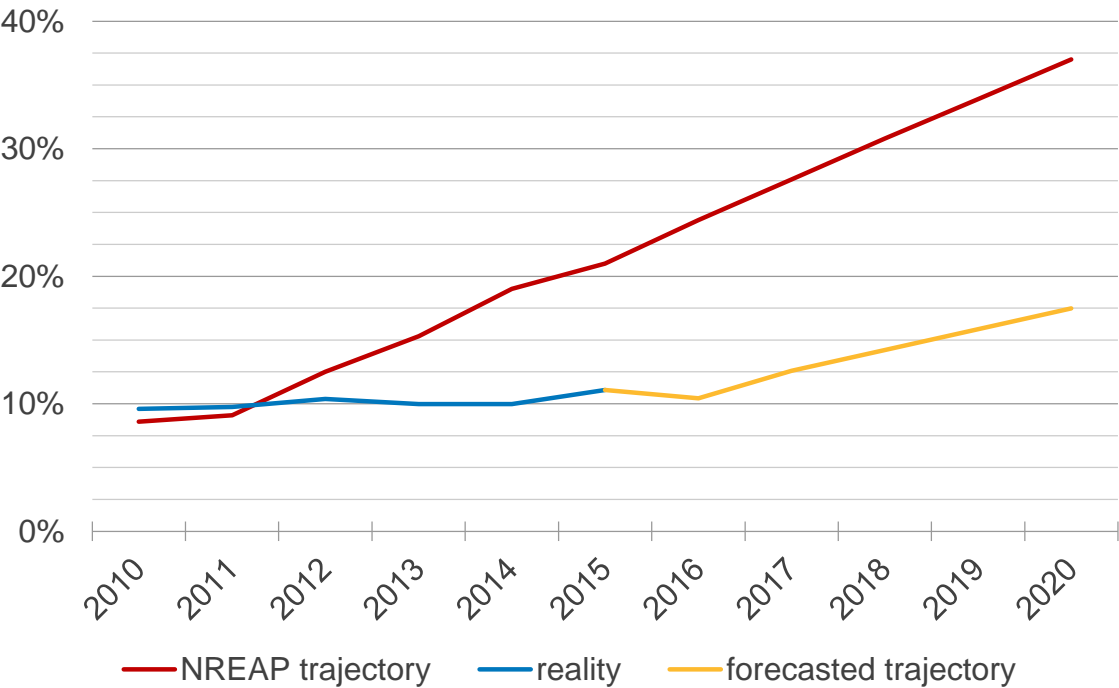
capacity developments
(linear extrapolated)



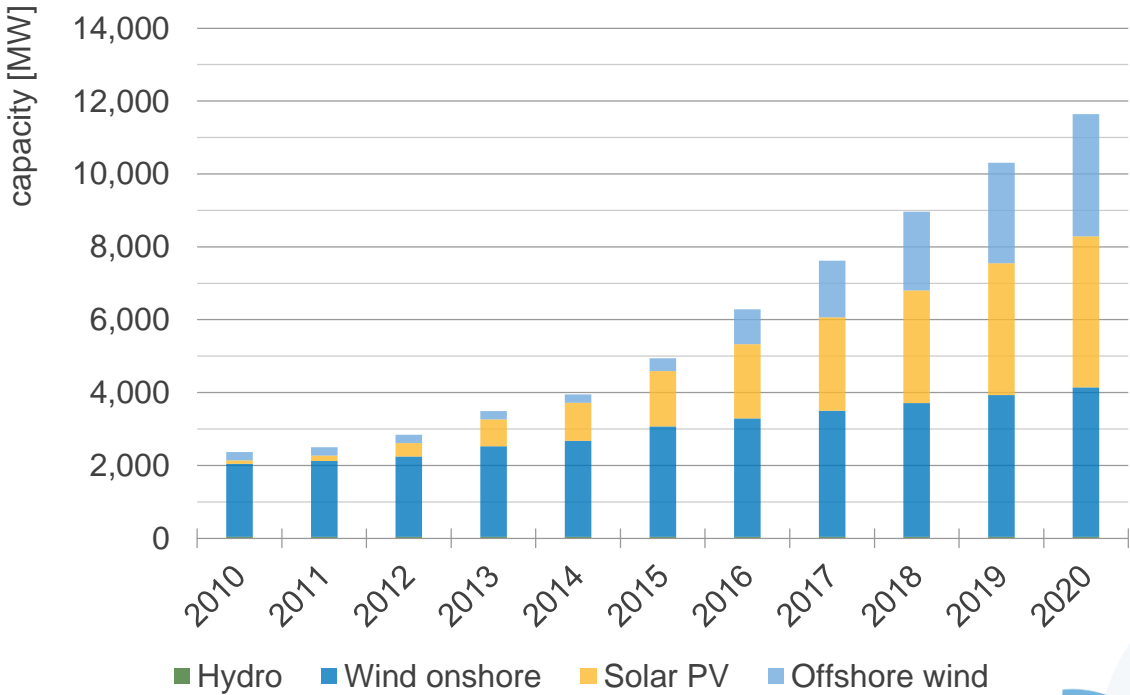
Netherlands: however, the big unknown are a coal phase-out and additional biomass co-firing as well as further increases of the SDE+ budget



RES-E Netherland
(linear extrapolated)



capacity developments
(linear extrapolated)



Conclusions

- ➔ Most likely not all countries will reach its indicative 2020 RES-E targets
- ➔ The key influencing factor of further renewable capacity building is political will
- ➔ Even with sinking technology costs, renewables still need support mechanisms to be economically viable
- ➔ Even if countries seem to be on track, a new political direction can endanger the target achievement and the revenues of existing projects
- ➔ The increase of ambition in some member states might come too late to push a country over the finish line



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