Will the 2020 renewable targets be reached in the CSEE region and what are the market implications?

ETCSEE Conference

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ICIS – who is actually standing in front of you?

ICIS is a world leading price reporting agency for commodity markets

- Chemicals
- Energy
- Fertilizers

Company facts

- Part of Reed Business Information (RBI) and RELX
- Roughly 600 employees globally

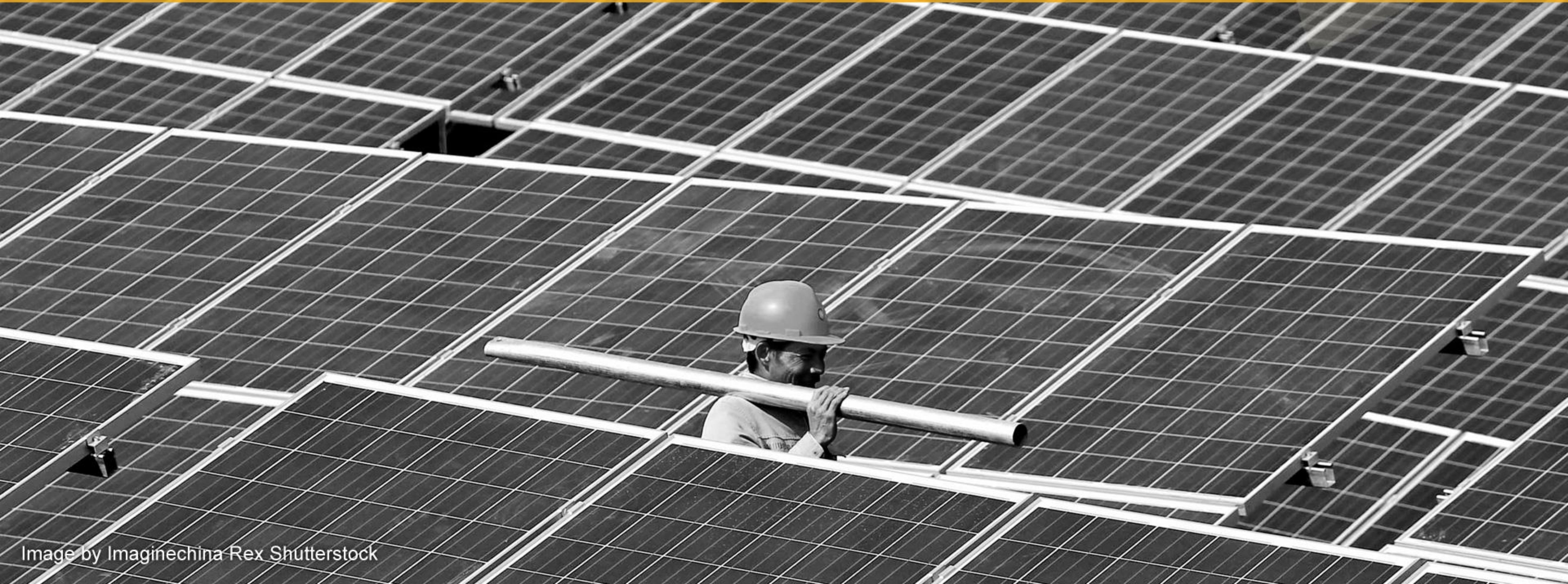
Energy Analytics

- Global leader in carbon analytics (EU, RGGI, WCI, China) with qualitative and quantitative analysis
- EU power analytics focused on regulatory impacts on markets incl. mid- to long-term price forecasting
- Advanced short-term power forecast in DE and UK based on ensemble models
- Real-time LNG trading analytics with advanced LNG supply forecasting

Agenda

1) The EU context
   - Targets and status quo
2) Focus on CEE region
   - Current status
   - Necessary capacity extensions
   - Statistical transfers
3) Example: Poland
4) Conclusion

The EU context



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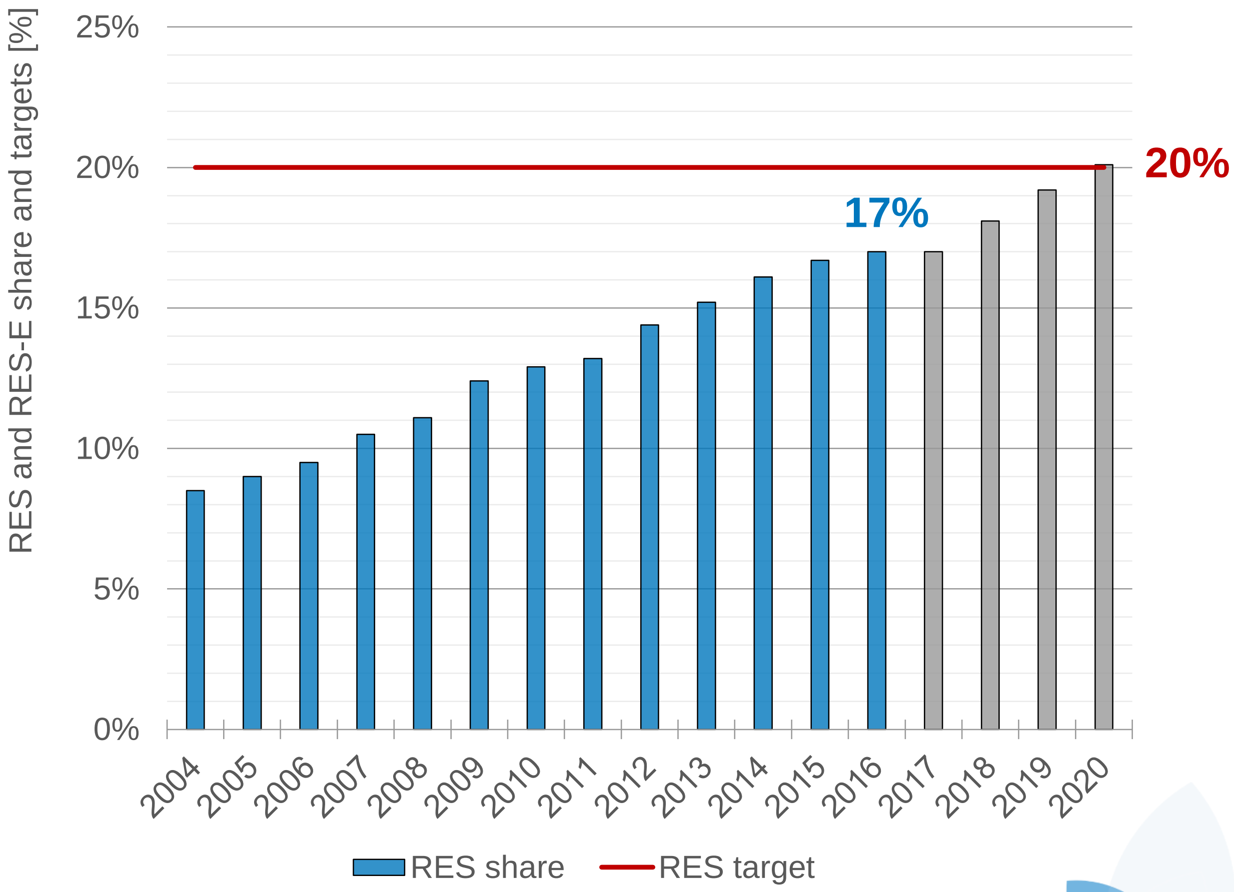
Renewable targets for 2020 – EU

- **EU level**
  - Binding target of 20% RES in final energy consumption in 2020 – comprised of Electricity (RES-E), Heating & Cooling and Transport
  - No binding target for RES-E, only indicative
  - Overall RES target reached 17% in 2016 and is on course for 2020
- **Member State level**
  - Each country has a binding target for RES in final energy consumption
  - 11 member states already exceeded this target in 2016, most of the 17 other countries are on course to meet 2020 target



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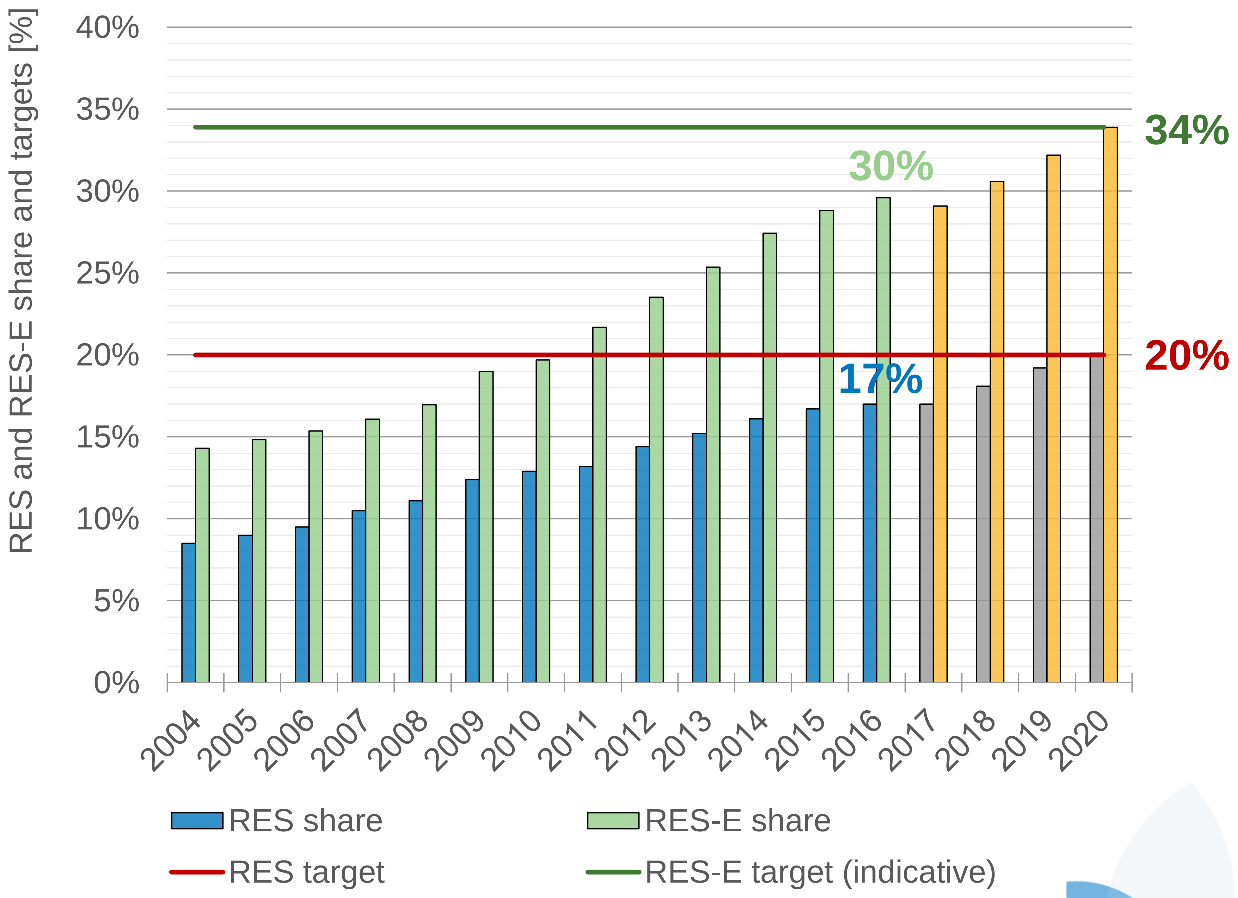
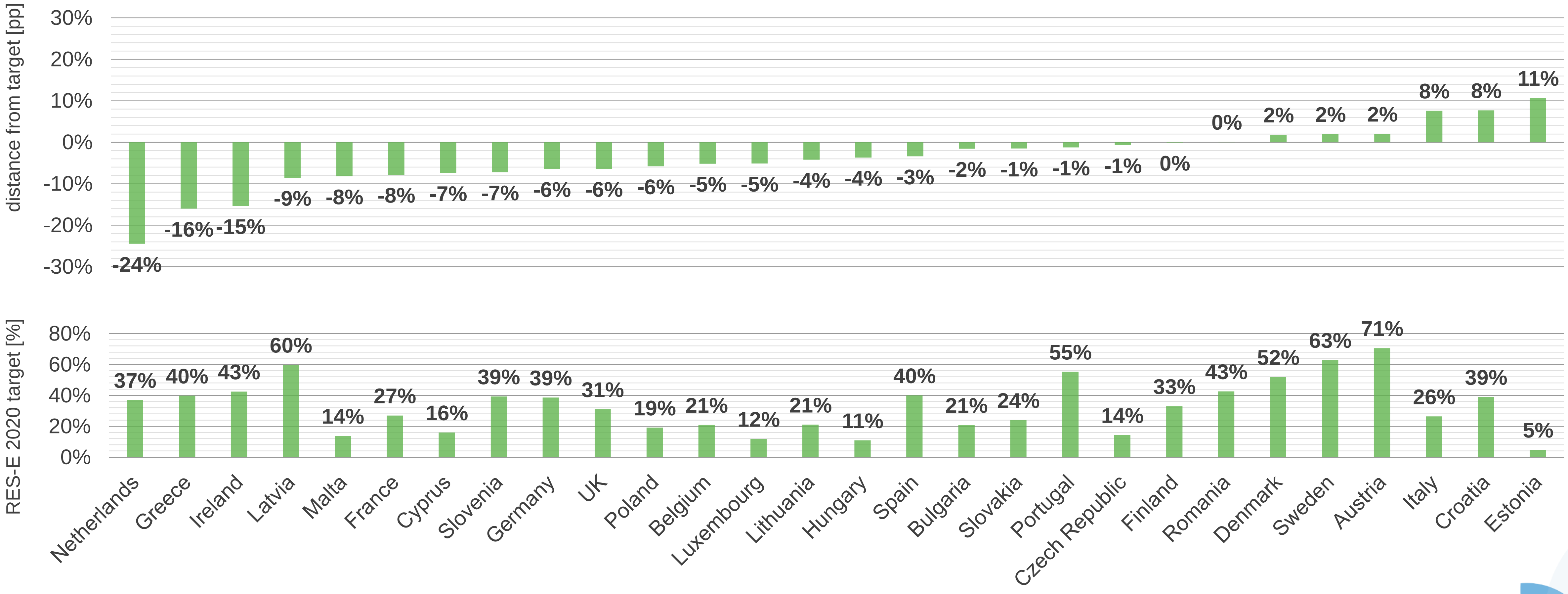


Percentage point distance (2016) to indicative 2020 RES-E targets



Distance (2016) to indicative 2020 RES-E and binding general RES targets

	NL	EL	IE	LV	MT	FR	CY	SI	DE	UK	PL	BE	LU	LT	HU	ES	BG	SK	PT	CZ	FI	RO	DK	SE	AT	IT	HR	EE
RES-E	-24%	-16%	-15%	-9%	-8%	-8%	-7%	-7%	-6%	-6%	-6%	-5%	-5%	-4%	-4%	-3%	-2%	-1%	-1%	-1%	0%	0%	2%	2%	2%	8%	8%	11%
RES-All	-8%	-3%	-7%	-3%	-4%	-7%	-4%	-4%	-3%	-6%	-4%	-4%	-6%	3%	1%	-3%	3%	-2%	-3%	2%	1%	1%	2%	5%	-1%	0%	8%	4%

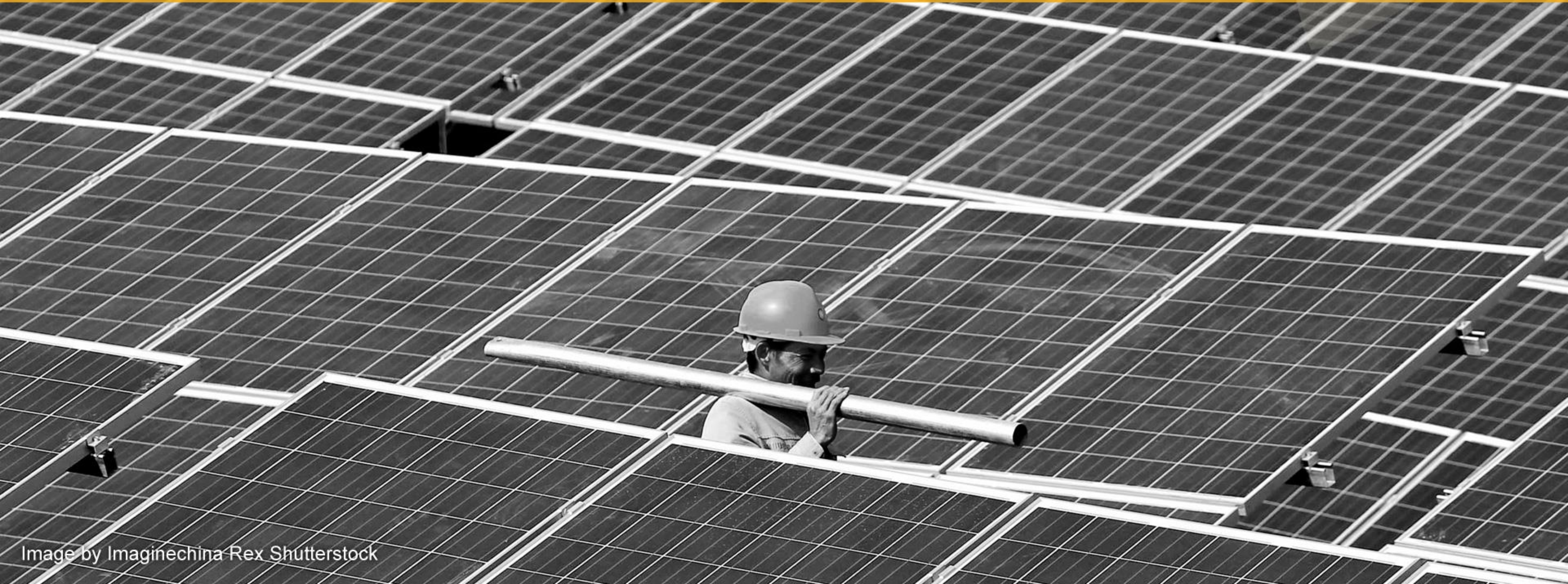
RES-E RES-All

Implications of non-compliance and MS strategies

- 2020 can be reached by:
  - Physical investments (both national or joint)
  - Administrative measures: statistical transfers
- Consequences of non compliance
  - No penalty mechanism in Directive itself
  - “Regular” infringement proceedings

- Ramp-up
- Statistical transfers
- Wait and see

Focus on CEE region



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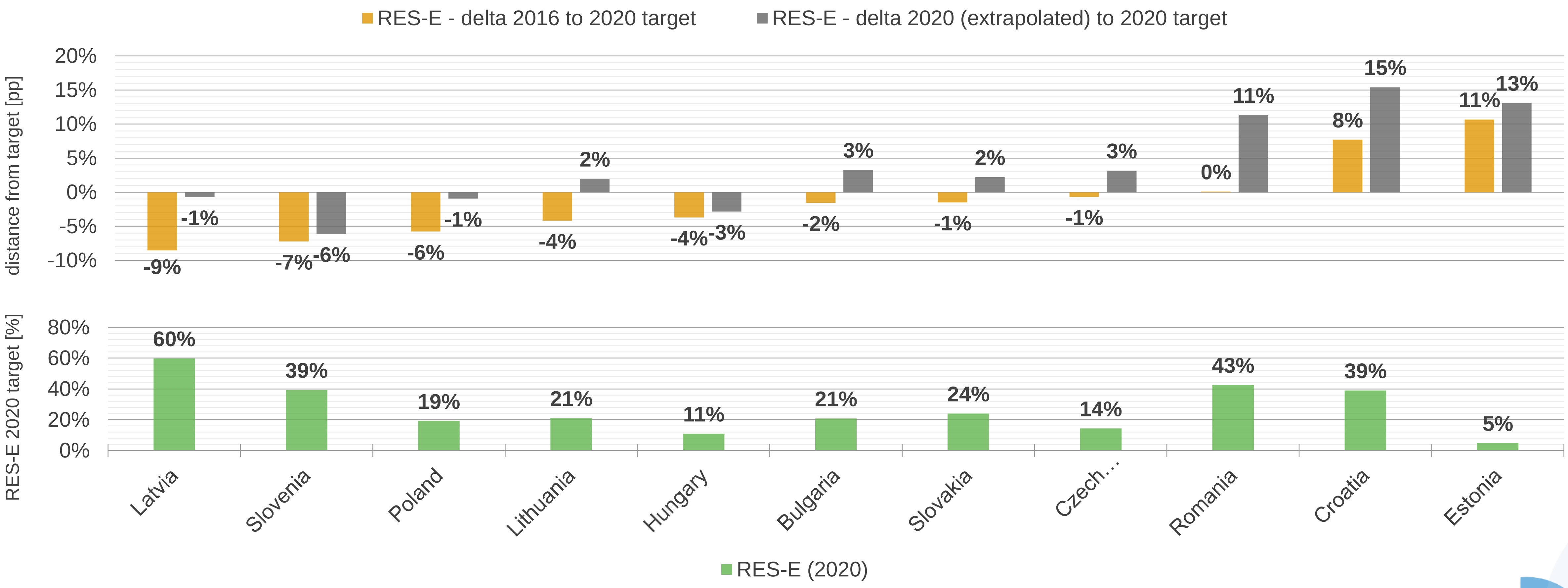
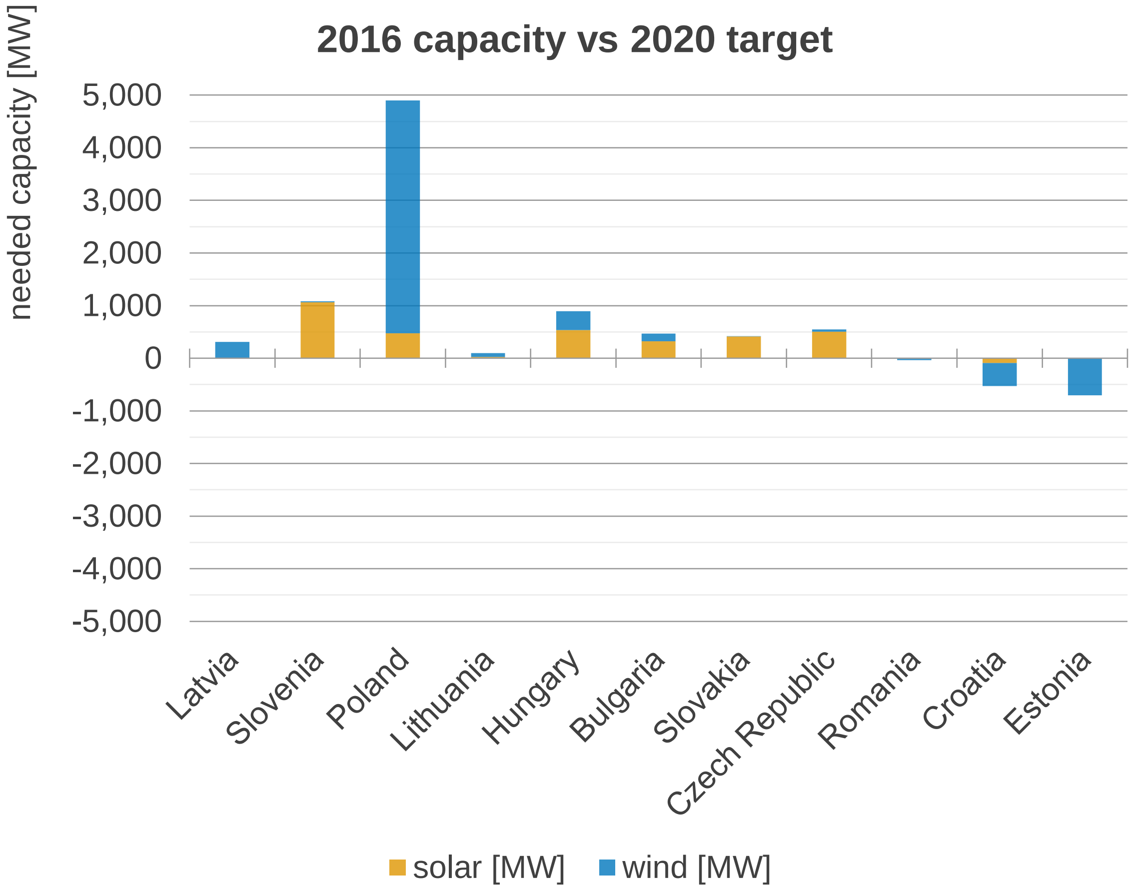
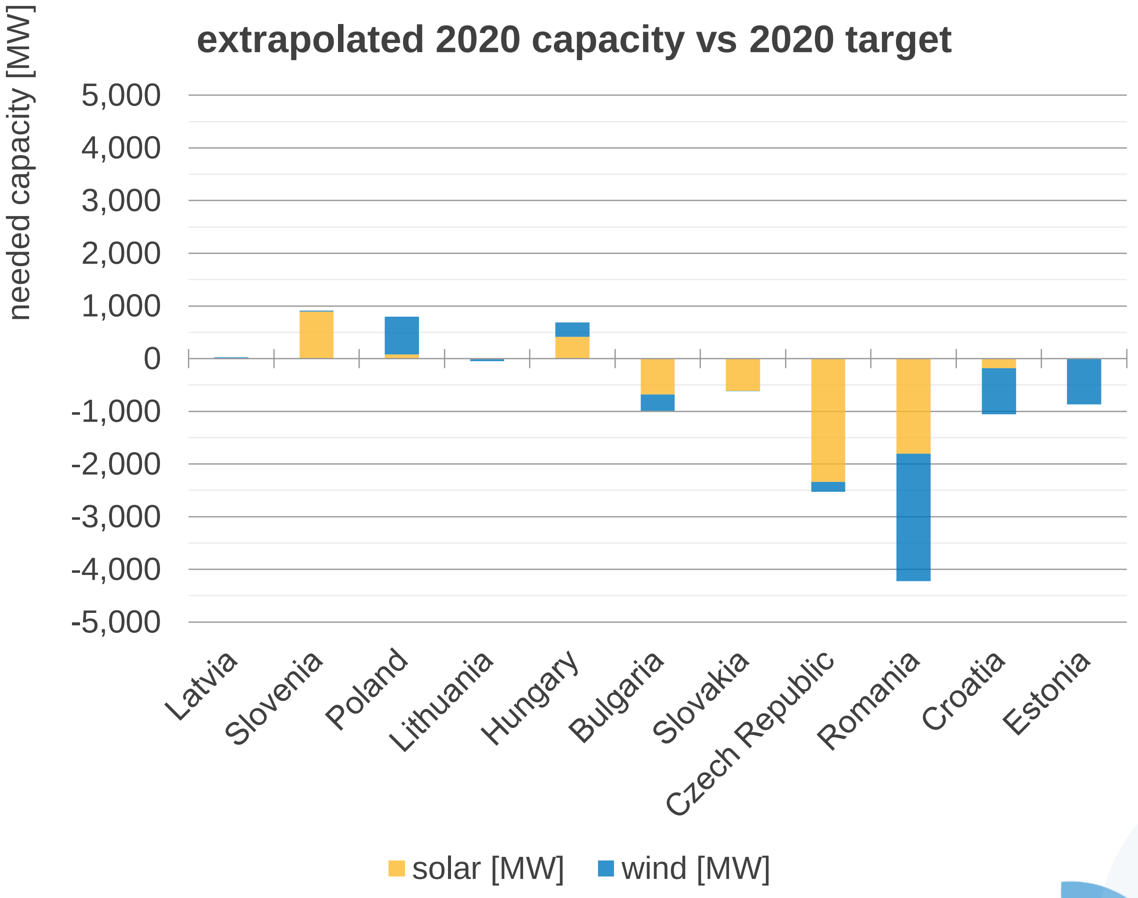
Delta to 2020 RES-E target: 2016 reality and extrapolated to 2020 RES-E growth versus 2020 target



What needs to happen towards 2020 in order to reach the 2020 RES-E targets





extrapolation excl. legislative changes in support schemes, but simply extrapolates historic developments

What if countries over-achieve? Statistical transfers: first deals made in late 2017, increase expected especially towards 2020

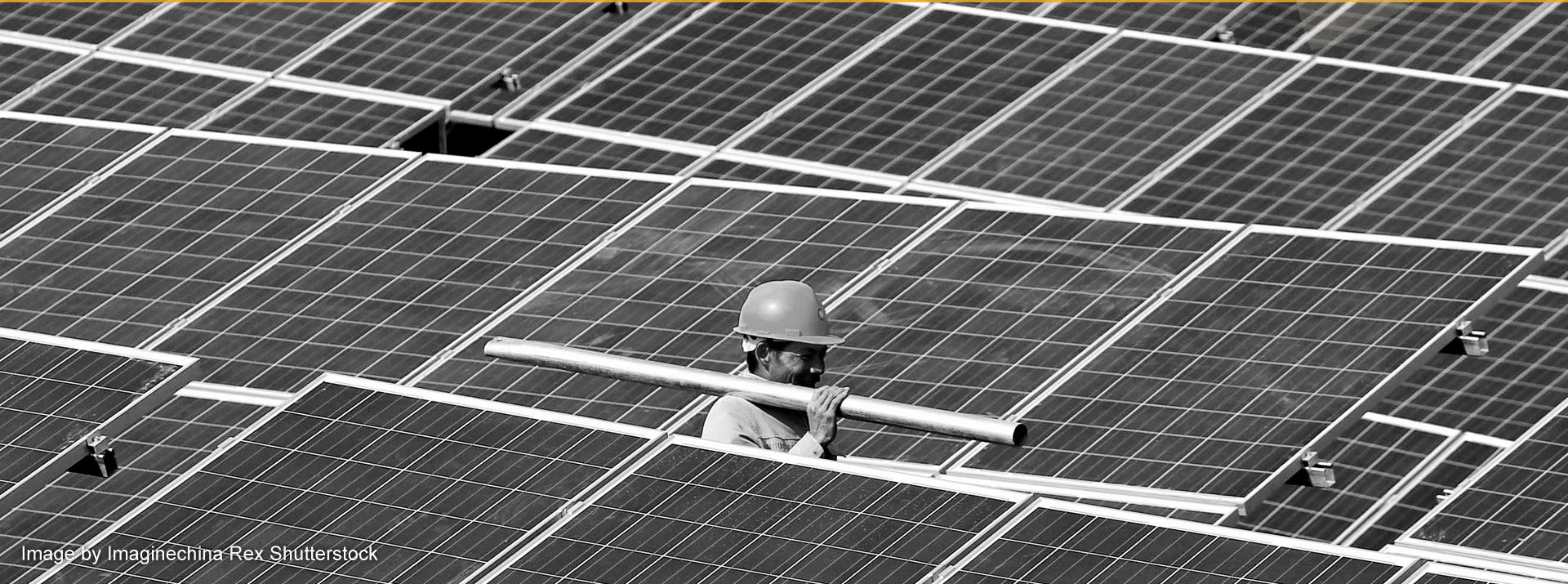
Luxembourg – Estonia

- Length: 2018-2020
- Volume: 700MWh
- Cost: €10.5m
- Cost per unit: €15/MWh

Luxembourg – Lithuania

- Length: 2018-2020
- Volume: Unknown
- Cost: “At least €10m”
- Cost per unit: around €15/MWh

Example: Poland



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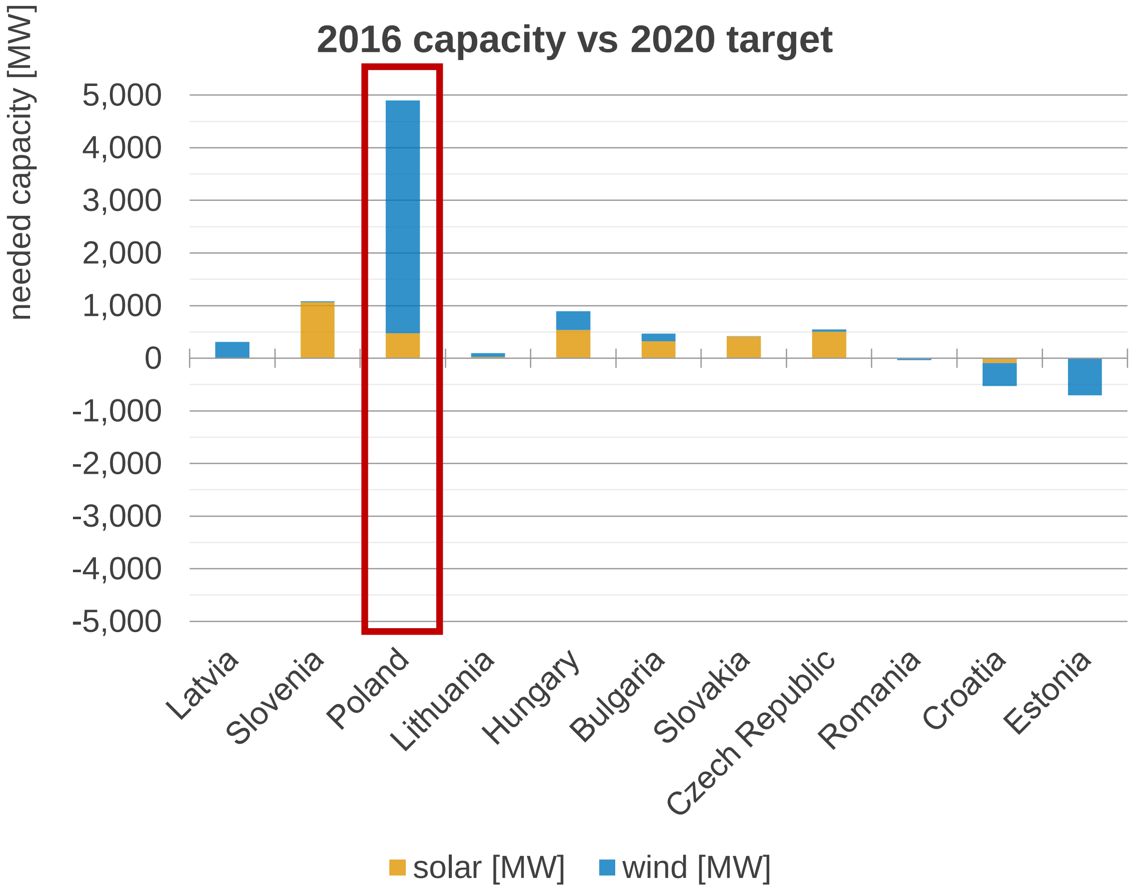
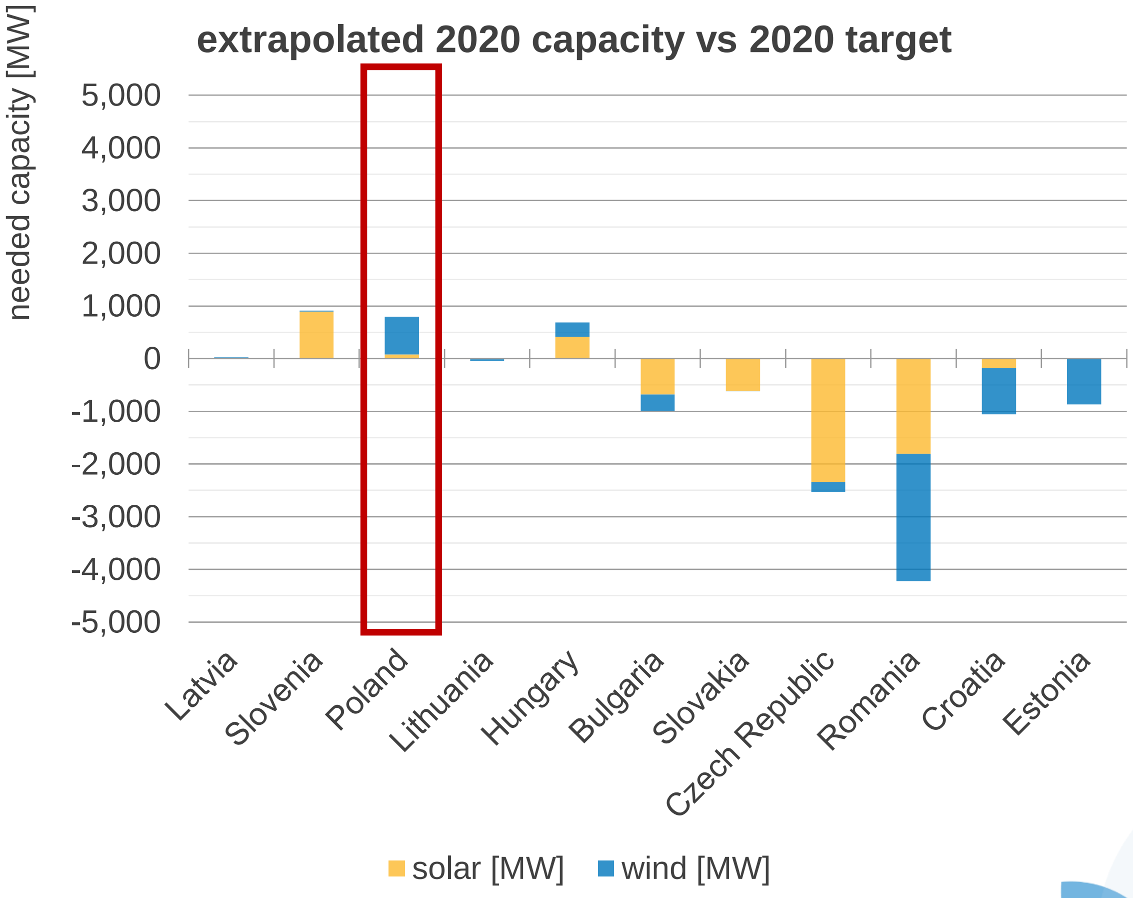
Focus on Poland: What is going on since 2016 and where is the country steering towards?

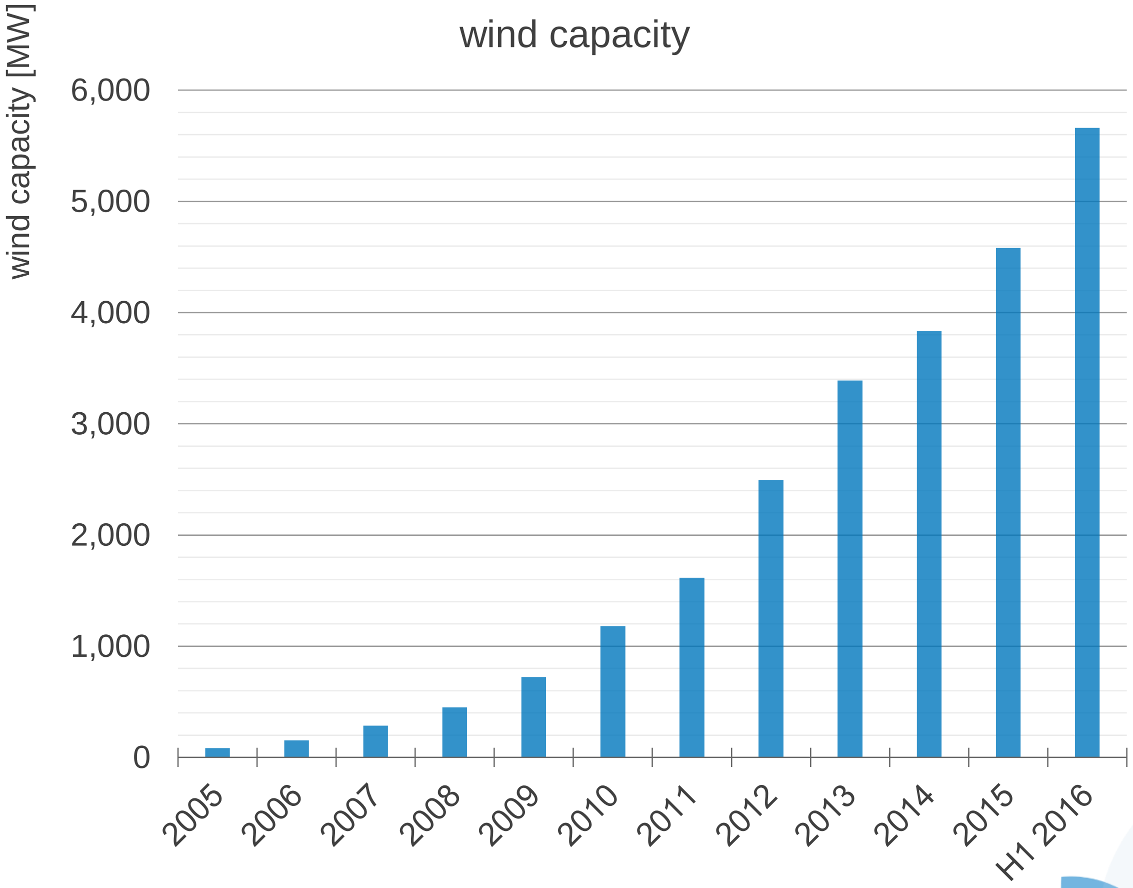




extrapolation excl. legislative changes in support schemes, but simply extrapolates historic developments

Poland – new legislation affected RES deployment negatively since the PiS government came into power

- 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
  - New Distance Act increased necessary distance between onshore wind farms and residential buildings significantly
  - Demand for green certificates was reduced drastically



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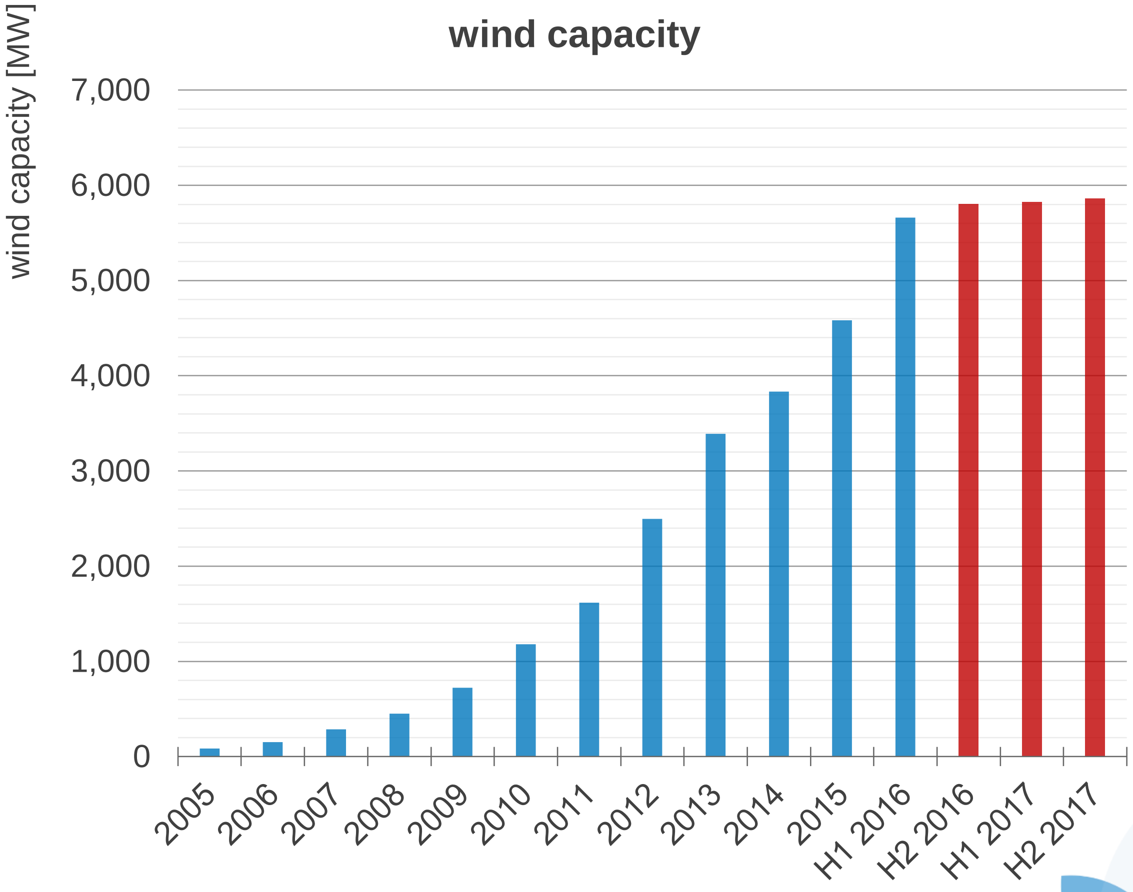
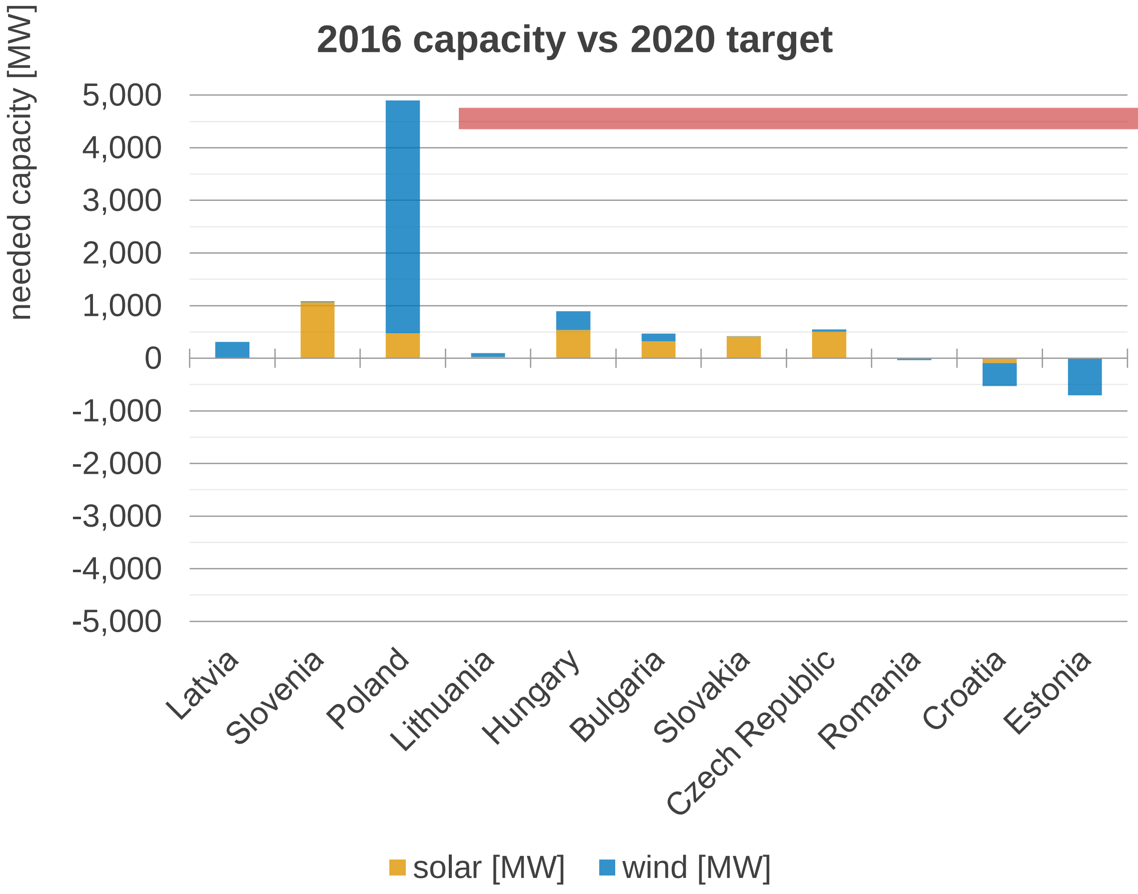
  - New Distance Act increased necessary distance between onshore wind farms and residential buildings significantly
  - Demand for green certificates was reduced drastically
- Green certificate prices plummeted due to the reforms

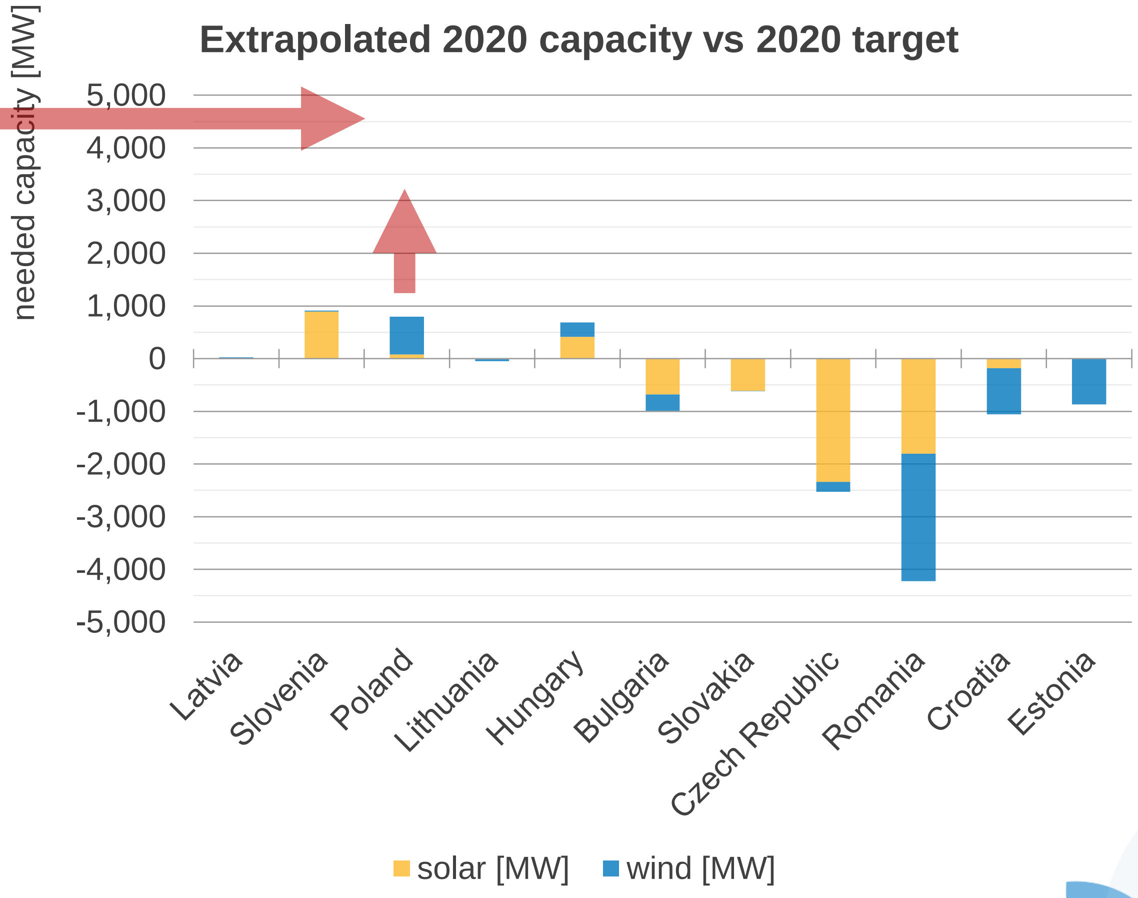
Poland – wind deployment suffered significantly from the new regulation and the cancellation of auctions

- 3 auctions in 2016, 2 auctions in 2017 concluded
- So far, no larger onshore wind could enter the auctions
- Only two of the concluded auctions allowed for new wind installations (basket with solar and hydro), but capacity limit of 1MW
- There were 11 more auctions planned in 2017, but all were cancelled



Poland – the plateau in capacity deployment, throws Poland back in its so far spot on development towards the 2020 targets





Poland – however, the second U-turn is in the making…

Latest proposals

- Extend the period of validity of the old building permits until mid-July 2021, instead of 2019
- Restore retroactively the old rules of taxing wind turbines with property tax
- Organise new RES auctions in 2018 with maximum 2.7GW of RES capacity receive support (incl. large wind onshore/offshore)

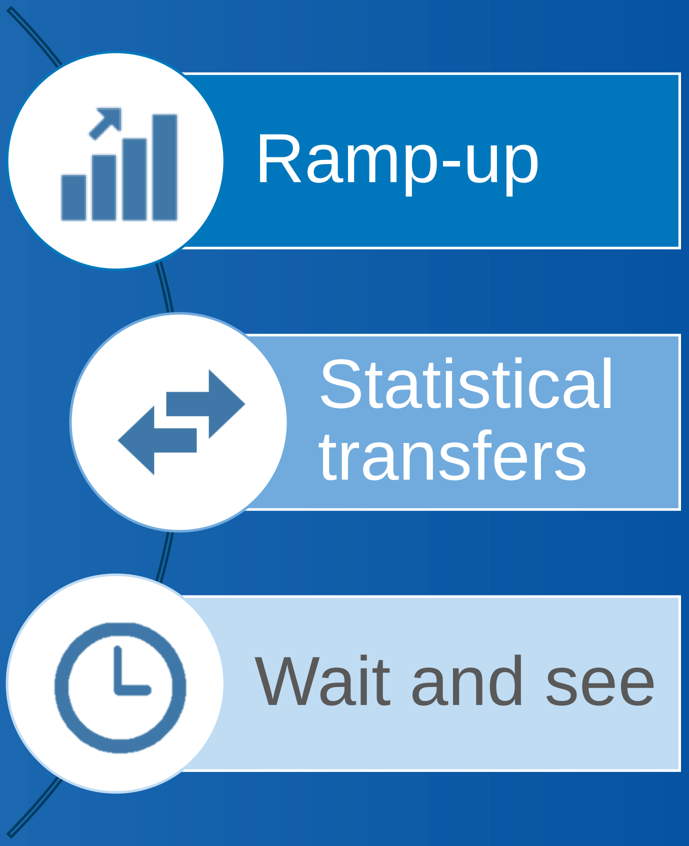
So what? Where are the positives?

- Gives project developers more time to bid into auctions with existing building permits (under old distance law)
- The impact assessment of Polish Energy Ministry, expects that up to 1.12GW (roughly 40% of total auction volume) of new onshore wind capacity could be supported in 2018 by auctions

Conclusions

- 2020 Targets
  - Nearly all CEE/SEE member states are on a good track to reach 2020 RES-E targets
  - However, the dynamics need to be kept alive – otherwise MS can fall back, see Poland

- Market context and implications
  - Some member states in Western Europe are significantly increasing investments, NL and FR
  - However, there is room for statistical transfers as targets will be missed in Western Europe
  - Poland also seems to turn around on renewable subsidies with organising new auctions and changing other legislation



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