

Energy decarbonisation in the Baltic States



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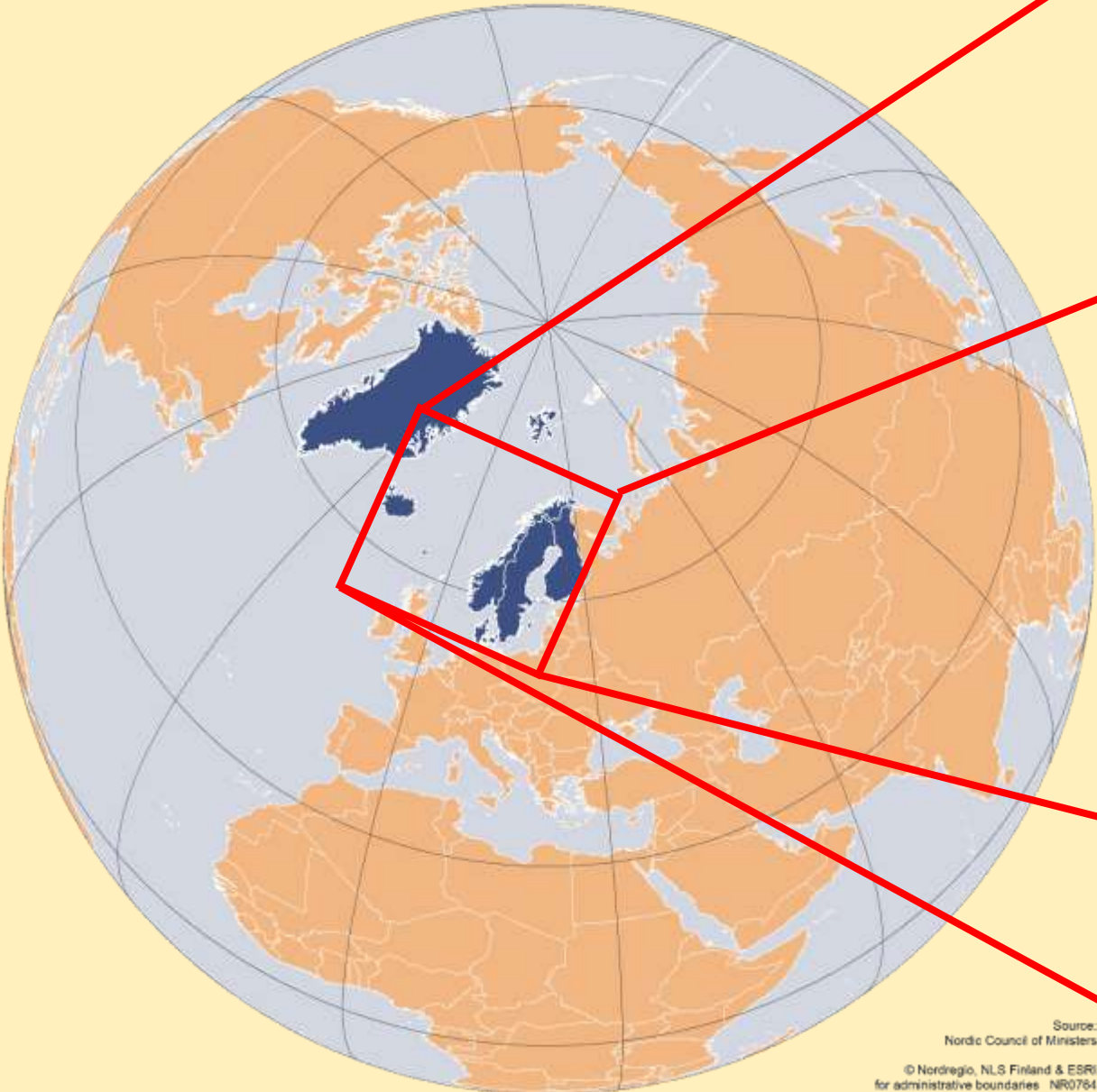
Kevin Johnsen
30 October 2017



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We analyse, evaluate and fund research on the Nordic
energy system





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Nordic Energy Technology Perspectives 2016

Cities, flexibility and pathways to carbon-neutrality

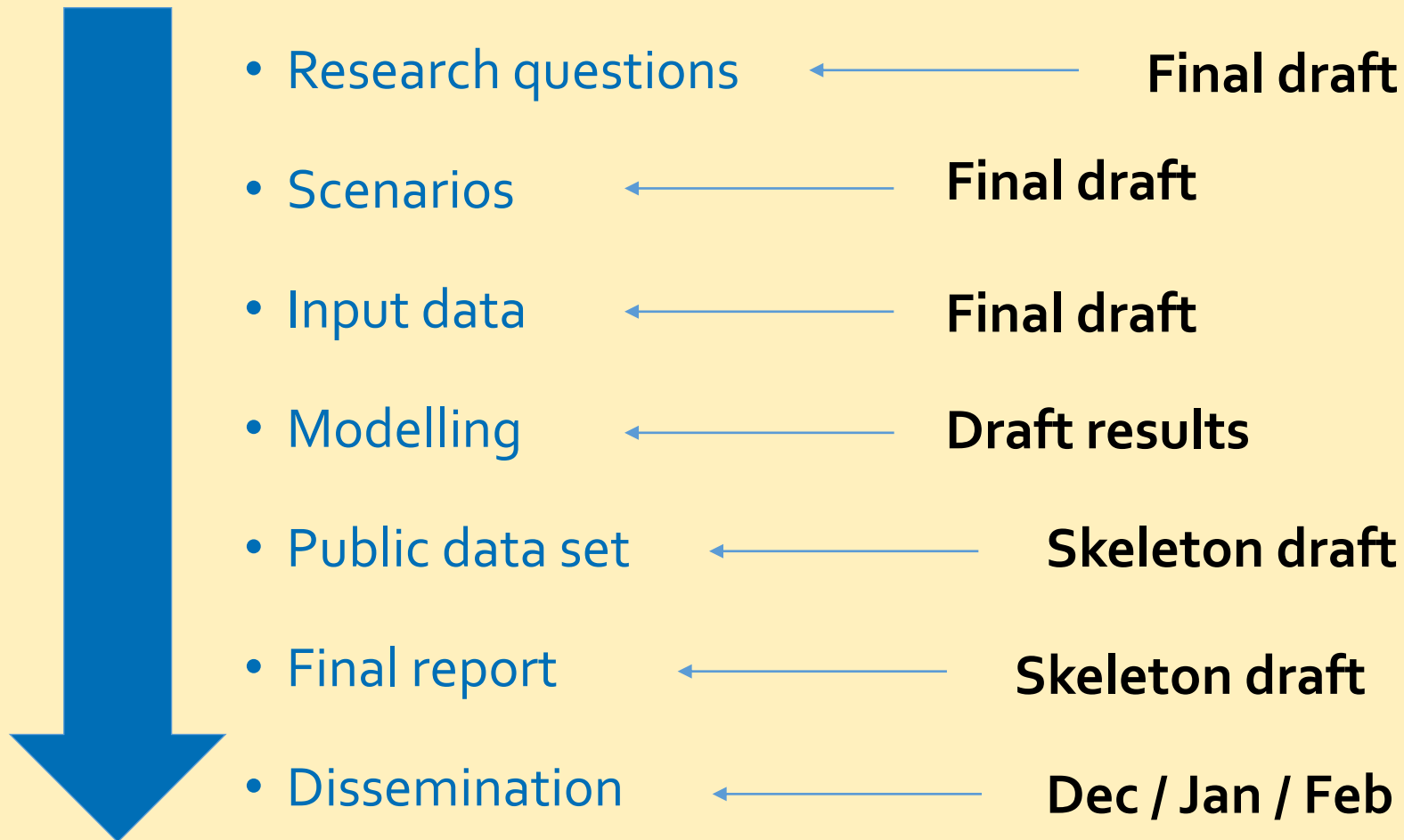
Baltic Energy Technology Scenarios



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Where in the process are the BENTE-project?



General framework

Models

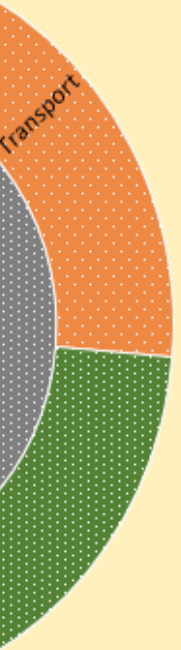
- **TIMES-VTT:** All energy consumption, Kyoto GHGs excl. LULUCF
- **Balmorel:** Power & heat production

Coverage compared to other studies:

GHG	BENTE	EU commission modelling	IEA ETPs
CO ₂ from energy (domestic)	X	X	X
CO ₂ from international transport	X	-	X
CH ₄ , N ₂ O, F-gases	X	X	-
LULUCF (Land use, land-use change and forestry)	-	X	-

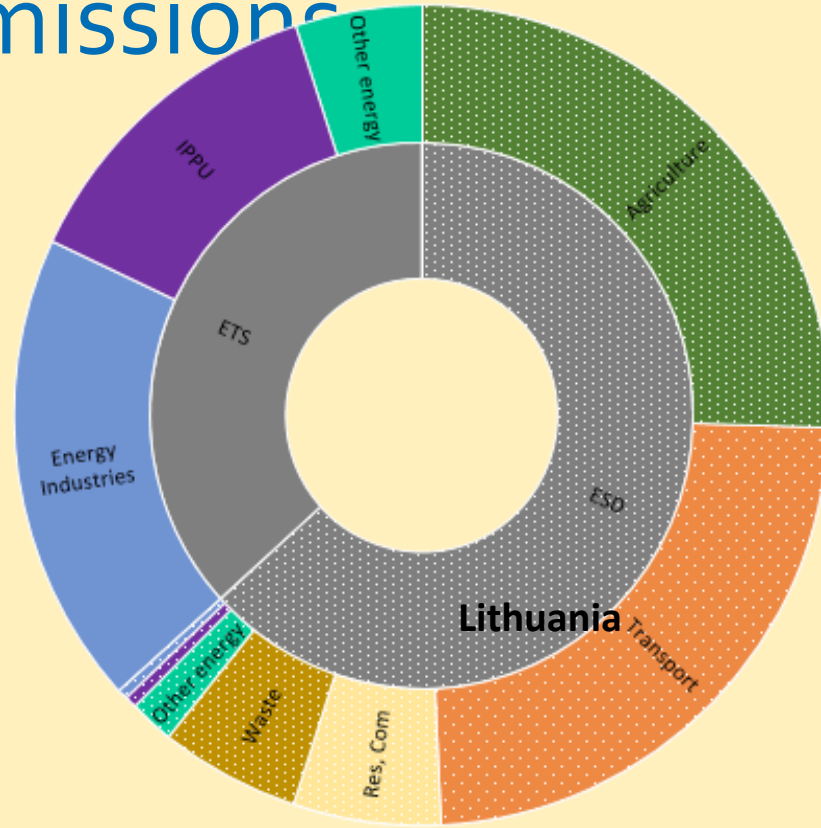


Baltic GHG emissions (2013-2015)

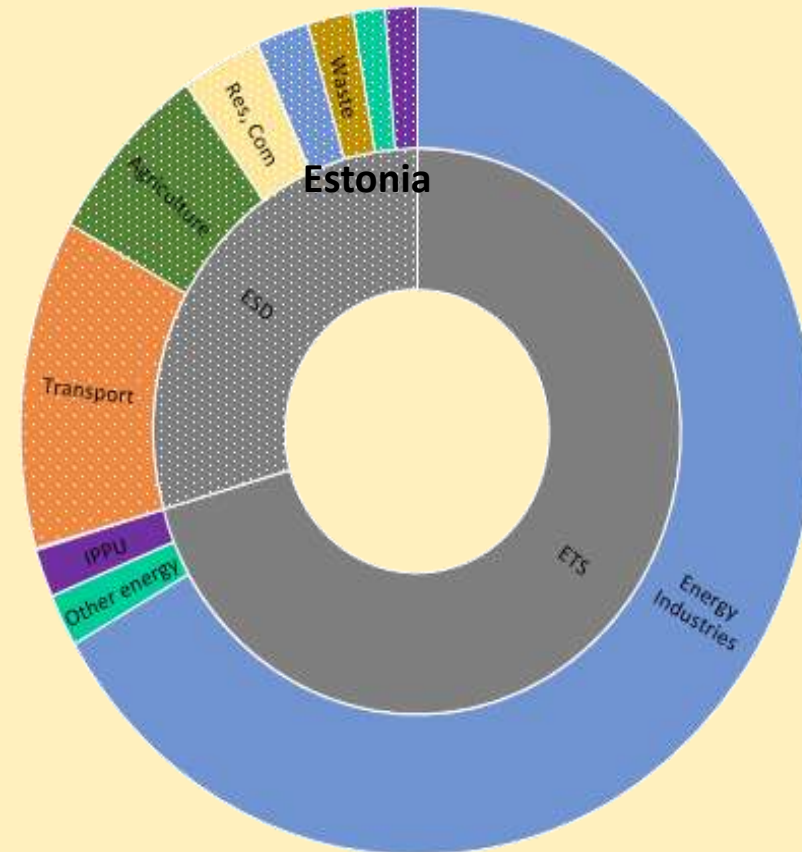


Latvia

Latvia



Lithuania



Estonia

* IPPU = Industrial Processes and Product Use

ESD-targets

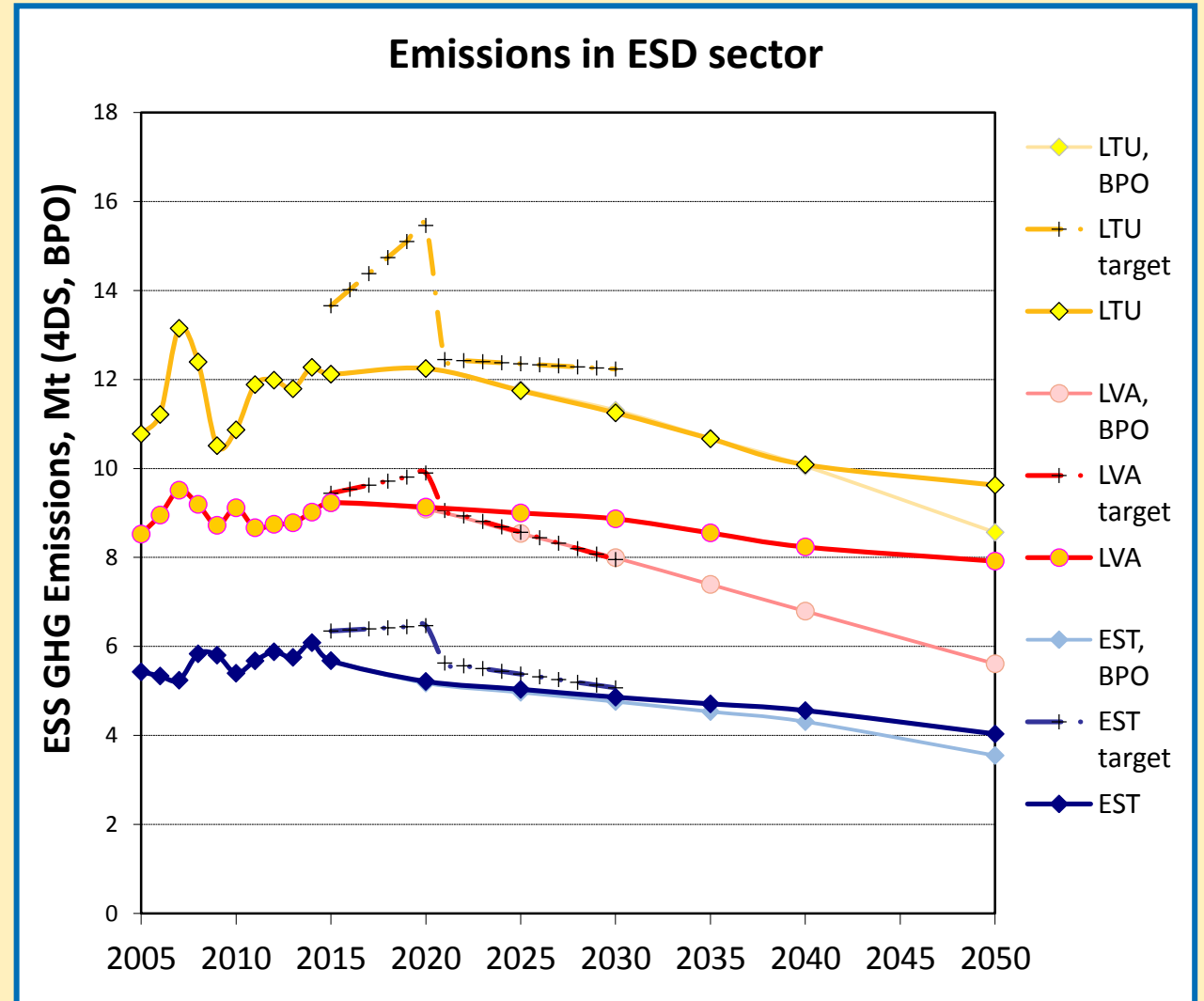


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EU ESD emissions in scenarios

- ESD target requires actions from Latvia
- Likely no additional measures needed in Estonia or Lithuania



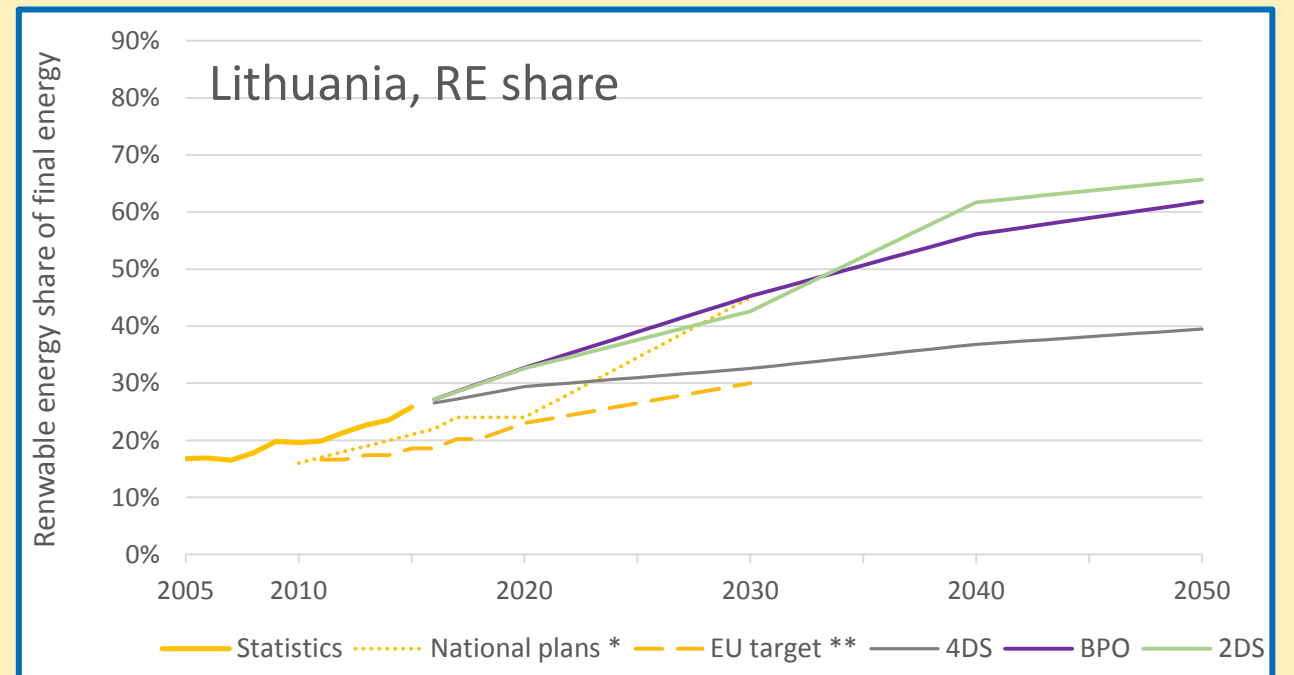
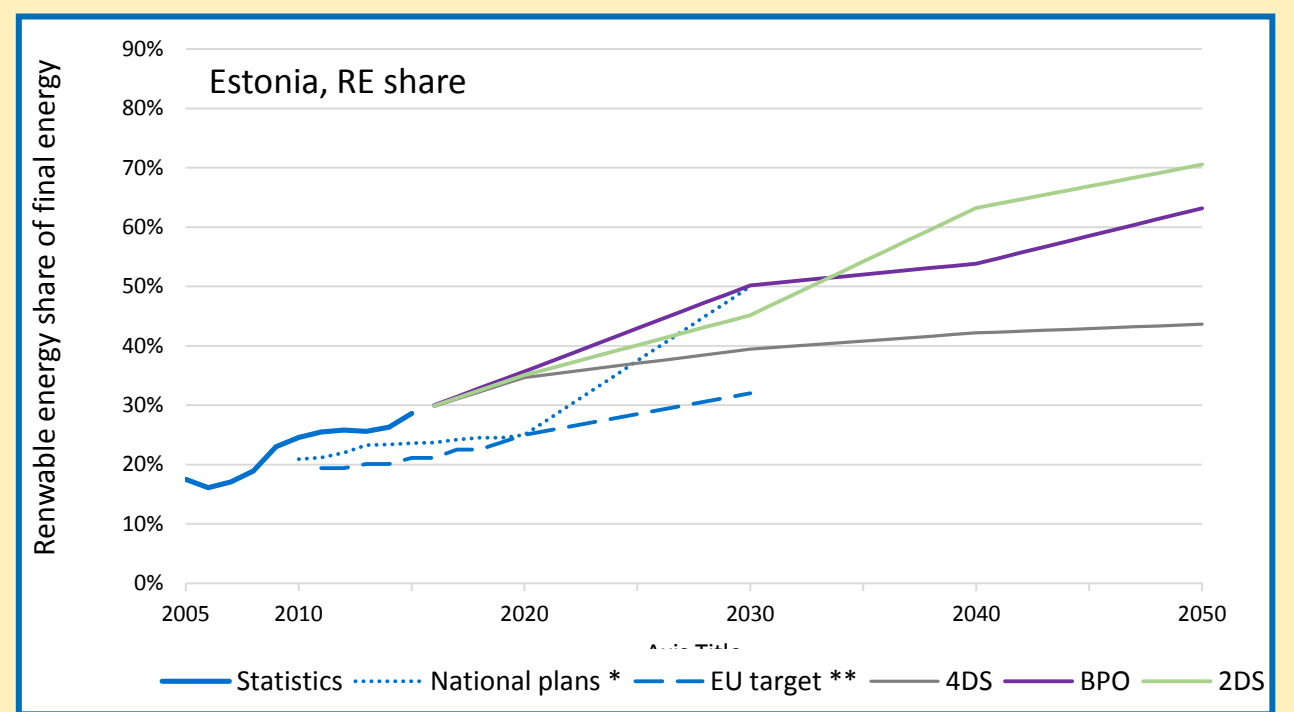
Actions to reduce ESD emissions



RE-targets

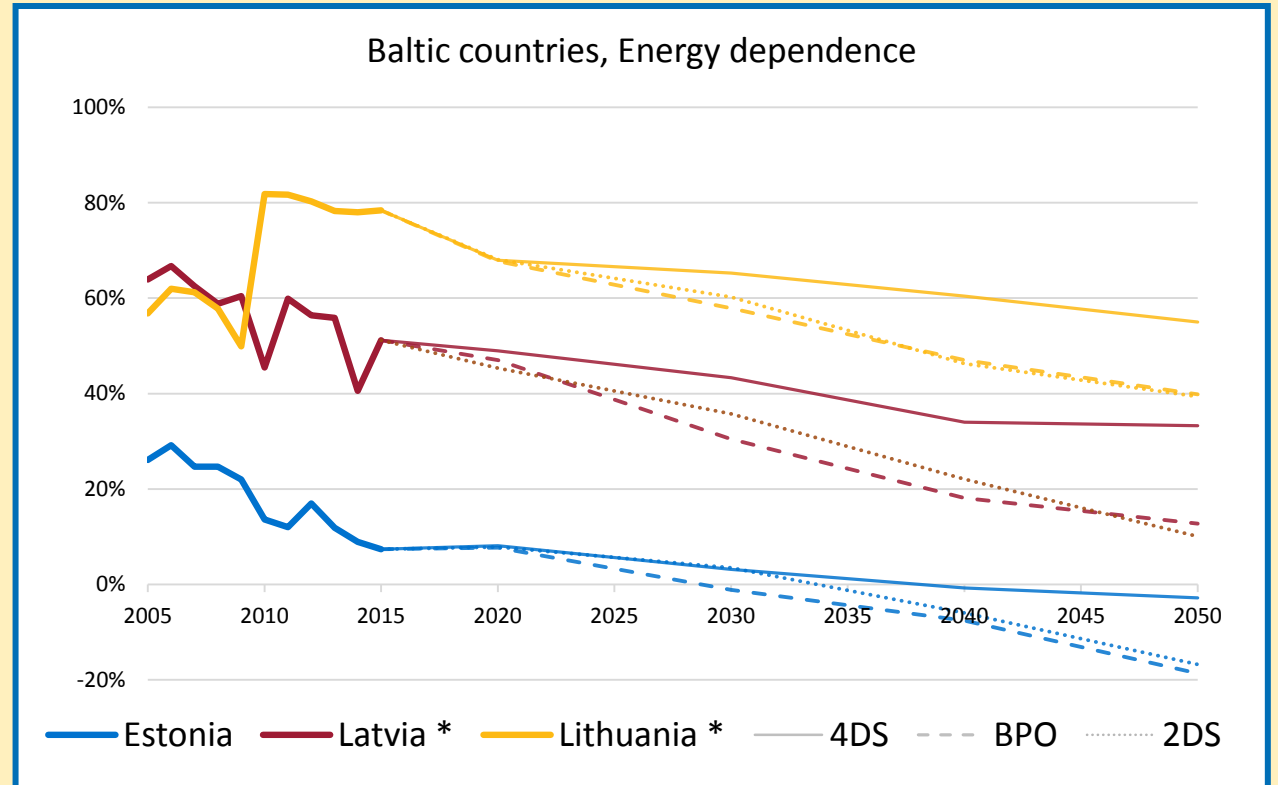
Renewable energy shares in scenarios

- Estonia and Lithuania estimated to need to increase the RE share at 2030
- This would take both countries on modelled 2 degree pathway from renewable energy perspective
- Still working on Latvian RE share



Improving energy dependency

- Most measures used to reduce emissions and increase RE share will improve also the energy dependency
 - Most notable exception is decreasing the use of shale oil
 - Lithuania's target of 75% domestic electricity production achieved only in BPO



Energy efficiency- targets



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Preliminary conclusions



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The Baltic States...

Are on a **feasible path** to
the 2030 EU targets –

But some policy needed



The Baltic States...

Are in need of **stronger**
policies on renewable
energy to reach the Baltic
RE 2030 targets



The Baltic States...

Needs to decarbonize
electricity supply and
electrify other sectors to stay
on a 2-degree pathway



Preliminary
Remember
any results

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See more at Nordicenergy.org

