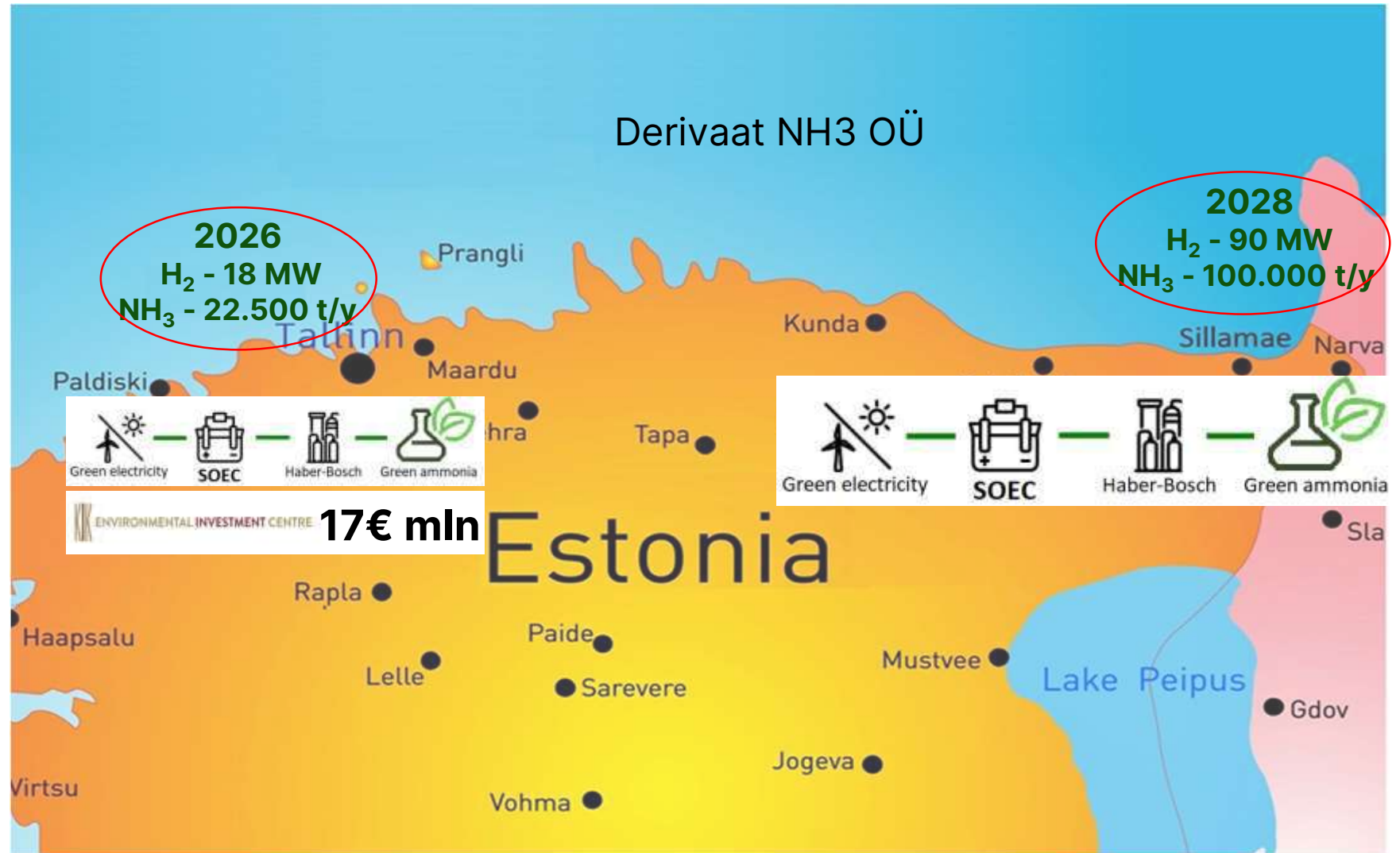


Green Ammonia plant in Paldiski

Erik Laidvee / 12.11.2024 / Pärnu

Green ammonia projects



Location of the green ammonia project in Paldiski



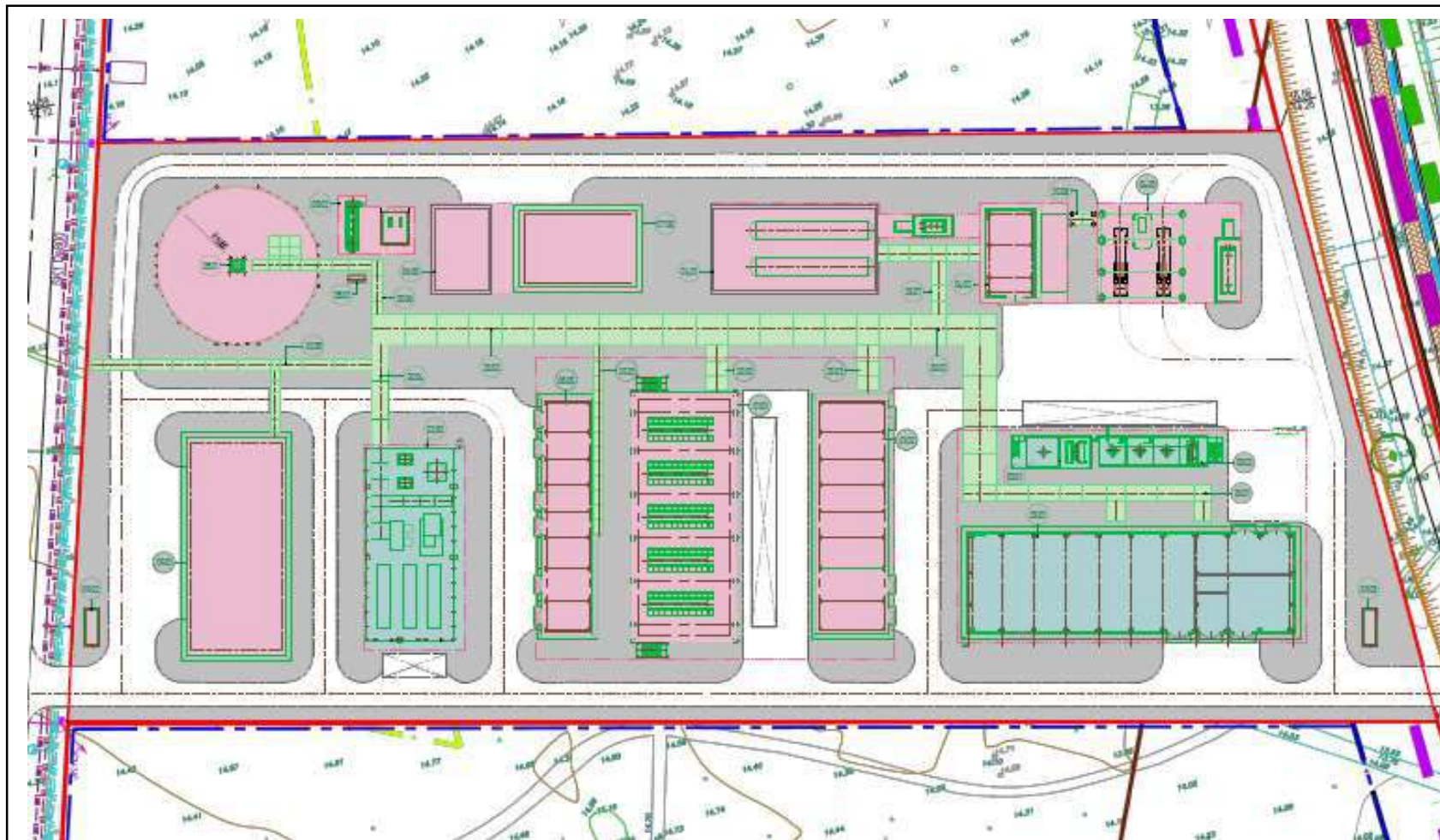
Green electricity availability in Paldiski

Wind park (63.4 MW) and solar park (development up to 40 MW)

youtube.com/watch?v=I2FXHJN7XPM



Layout



LEGEND:

SITE BOUNDARIES	SECTION BOUNDARY OF THE APPONIA SYNTHESIS UNIT
ACCESS WAYS, ACCESS ROADS	BOUNDARY OTHER PROCESS AND UTILITY UNITS (See Note)
FIRE BACK AREA	AREA OF THE APPONIA SYNTHESIS UNIT
COVERING PAVEMENT	AREA OF THE OTHER PROCESS AND UTILITY UNITS (See Note)

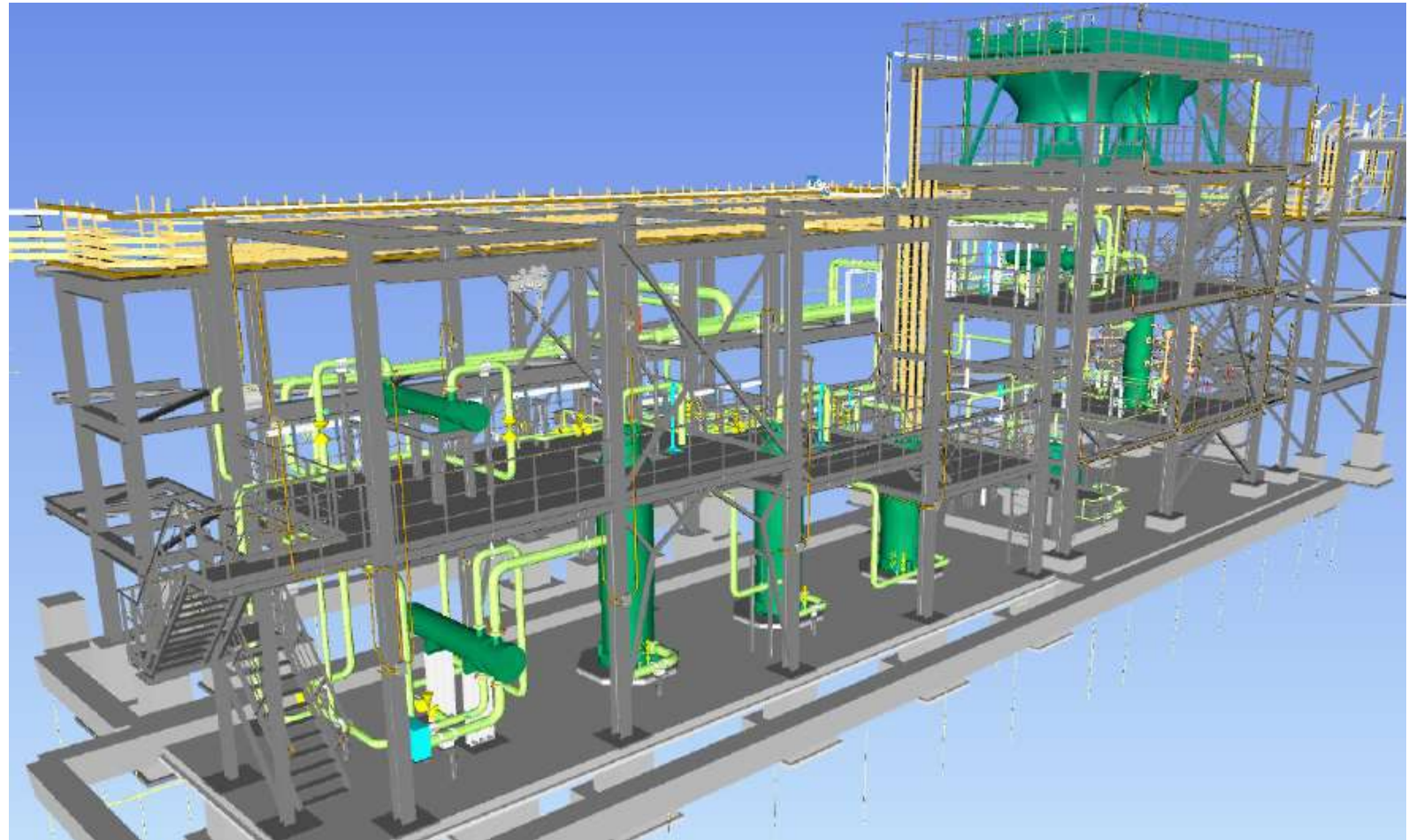
LIST OF BUILDINGS AND STRUCTURES		
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Project Name		Scale		Drawing No.	
Project No.		Date		Revision	
Project Name Project No. Scale Drawing No.					
Author		Date		Scale	
Checked		Date		Scale	
Approved		Date		Scale	
Project Manager		Date		Scale	
Client		Date		Scale	
Contract No.		Date		Scale	
Site No.		Date		Scale	
Drawing No.		Date		Scale	
Revision		Date		Scale	

3D scheme



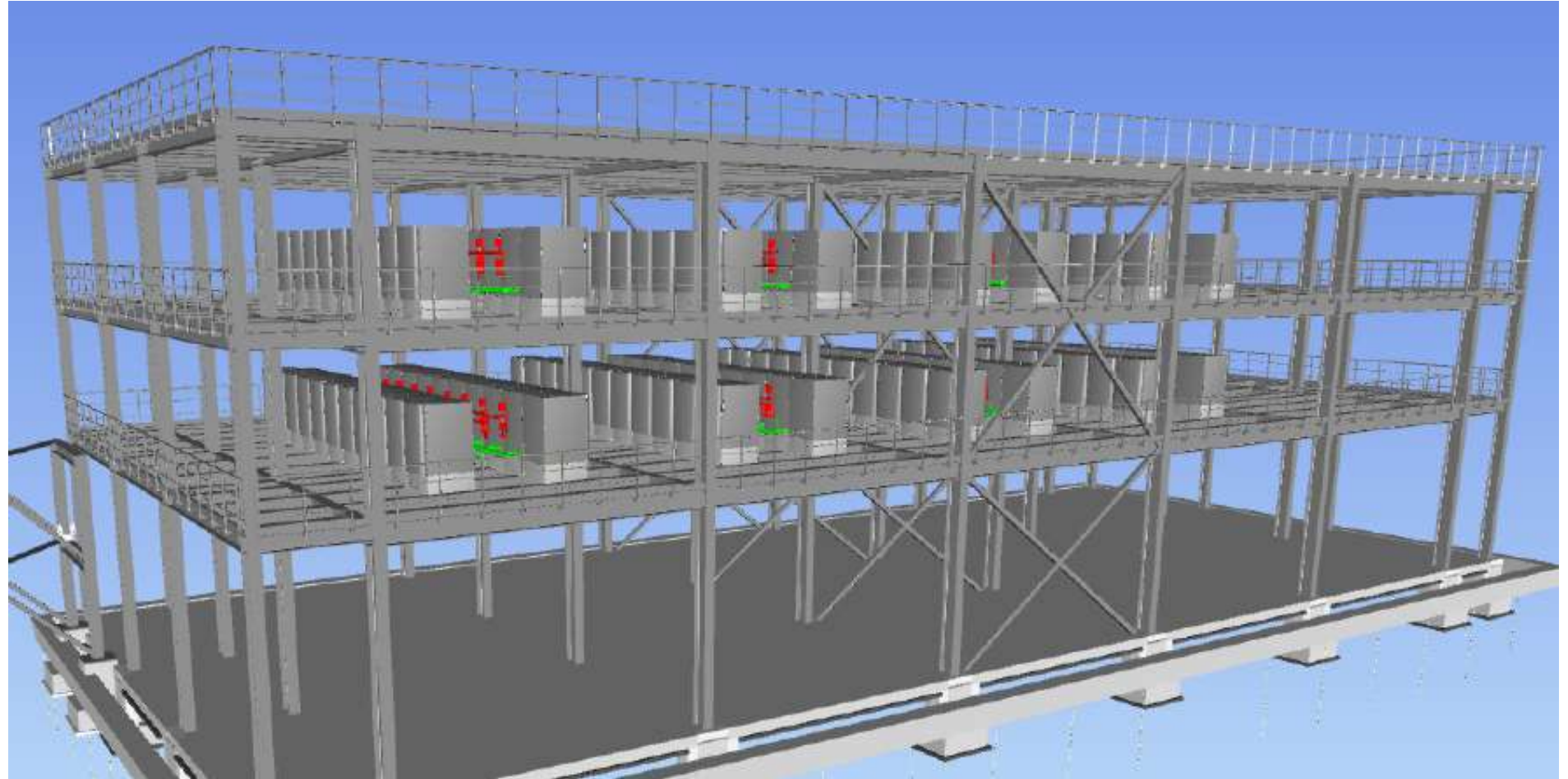
Ammonia Synthesis Unit



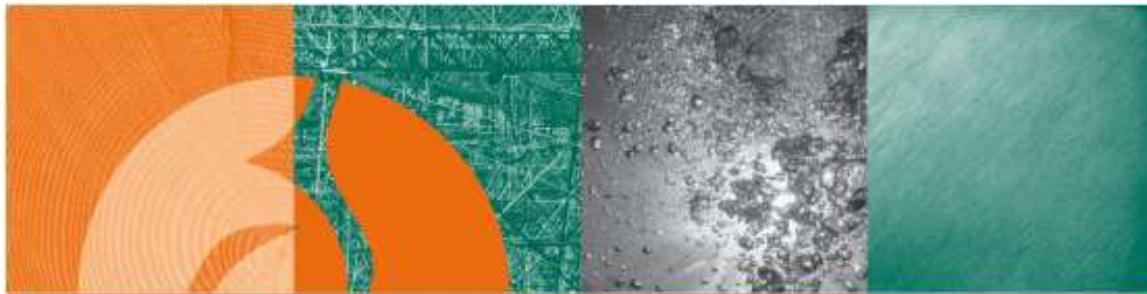
Compression Building



Hydrogen Production Unit



Environmental Impact Assessment (EIA)

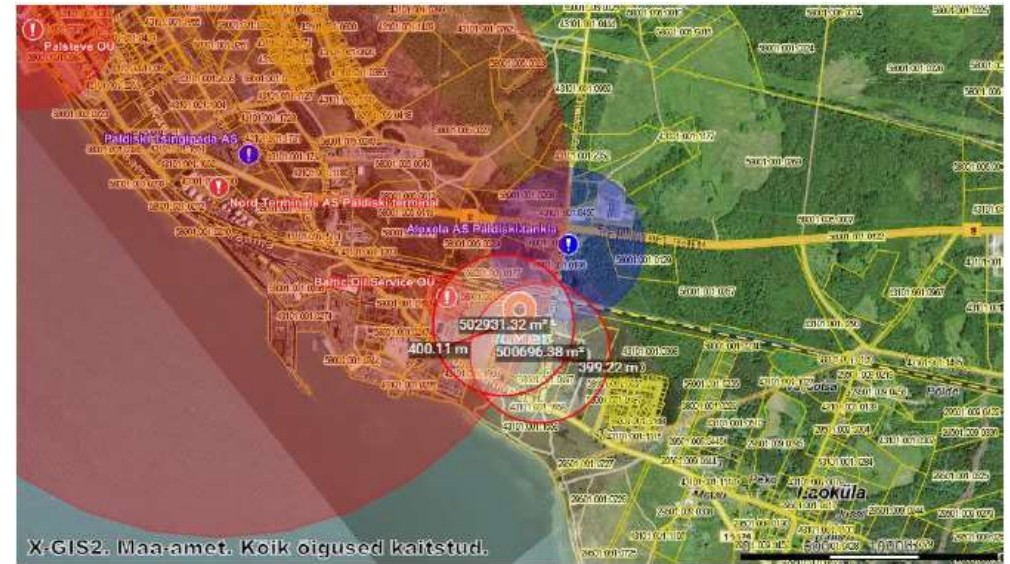


Paldiski Kasesaare tee 10 ammoniaagitehas

Keskkonnamõju hindamise programm otsustajale
kontrollimiseks ja avalikustamise korraldamiseks

Töö nr 23004744

Tartu 2023/2024



Joonis 6.1 Kavandatava tegevuse eeldatav mõjupiirkond ja teiste piirkonna ettevõtete mõjupiirkond kemikaaliriskide näitel (Aluskaart: Maa-ameti GIS portaali ohtlike ettevõtete kaardirakendus 2024).



Joonis 2.2 Ammoniaagitehase elektrikaabli trassi eeldatav asukoht (väljavõte eskiisprojektist).



LLC «CHEMICAL TECHNOLOGY COMPANY»

PJSC «CHEMPROJECT»



Customer – OÜ Derivaat NH3

Ammonia production

22 500 TPY

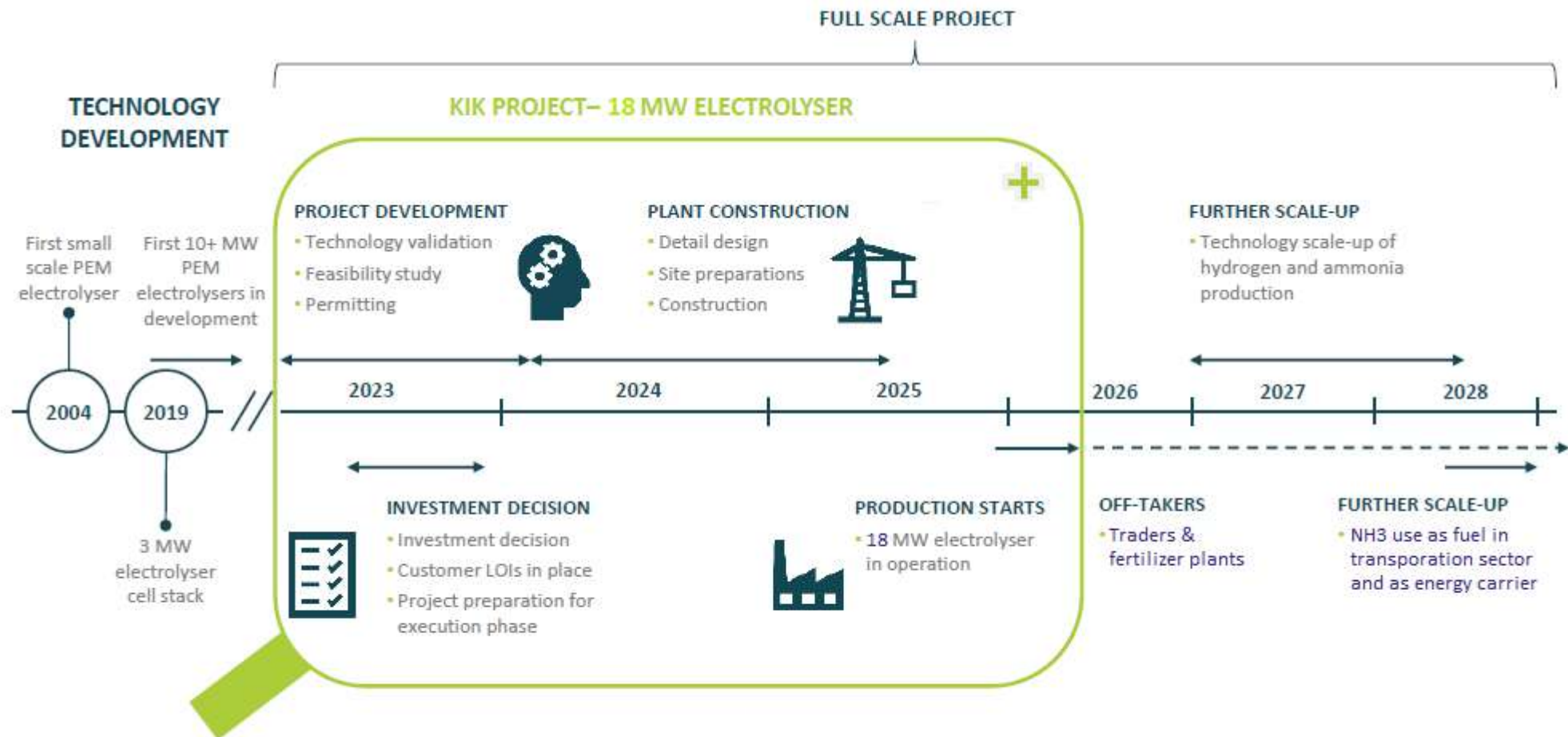
BASIC TECHNICAL SOLUTIONS

10616-1P-BTS-01

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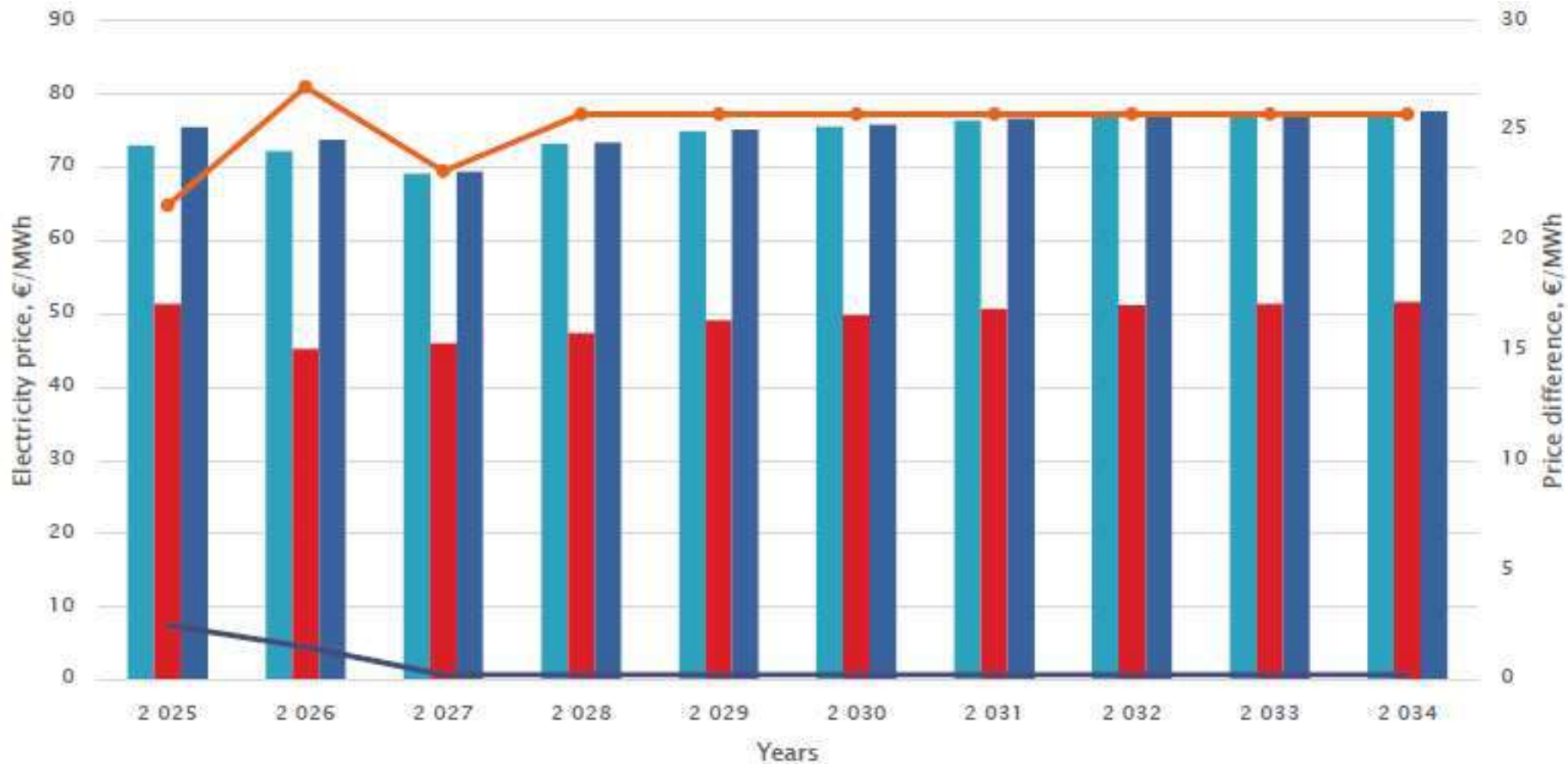
2024

Project Timeline



CIVITTA

Project name	Support recipient	Cost	Grant amount	Field	County	Financing source
Rohevesiniku väärtusahela roheammoniaagi tootmiseks Paldiskis	OÜ Derivaat NH3	37 700 000 €	16 965 000 €	Transport	Üleriiklikud/maakondade vahelised projektid	Taaste- ja vastupidavusrahastu (RRF)

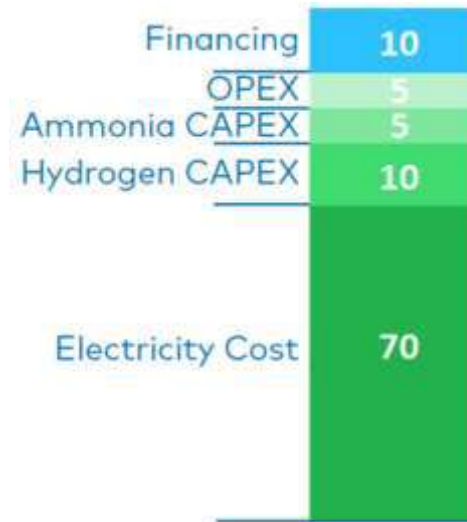


■ Average of EE price, €/MWh
 ■ Average of FI price, €/MWh
 ■ Average of LV price, €/MWh
—●— Average of FI-EE, €/MWh
 —●— Average of EE-LV, €/MWh

Allikas: Montel PriceIT



Green ammonia cost split



The main question of project feasibility – green electricity price

Electricity producer

Electricity price, €/MWh

OÜ Derivaat NH₃

Flying



> 50

Stop

STOP

Operating



40 - 50

Operating

Stop

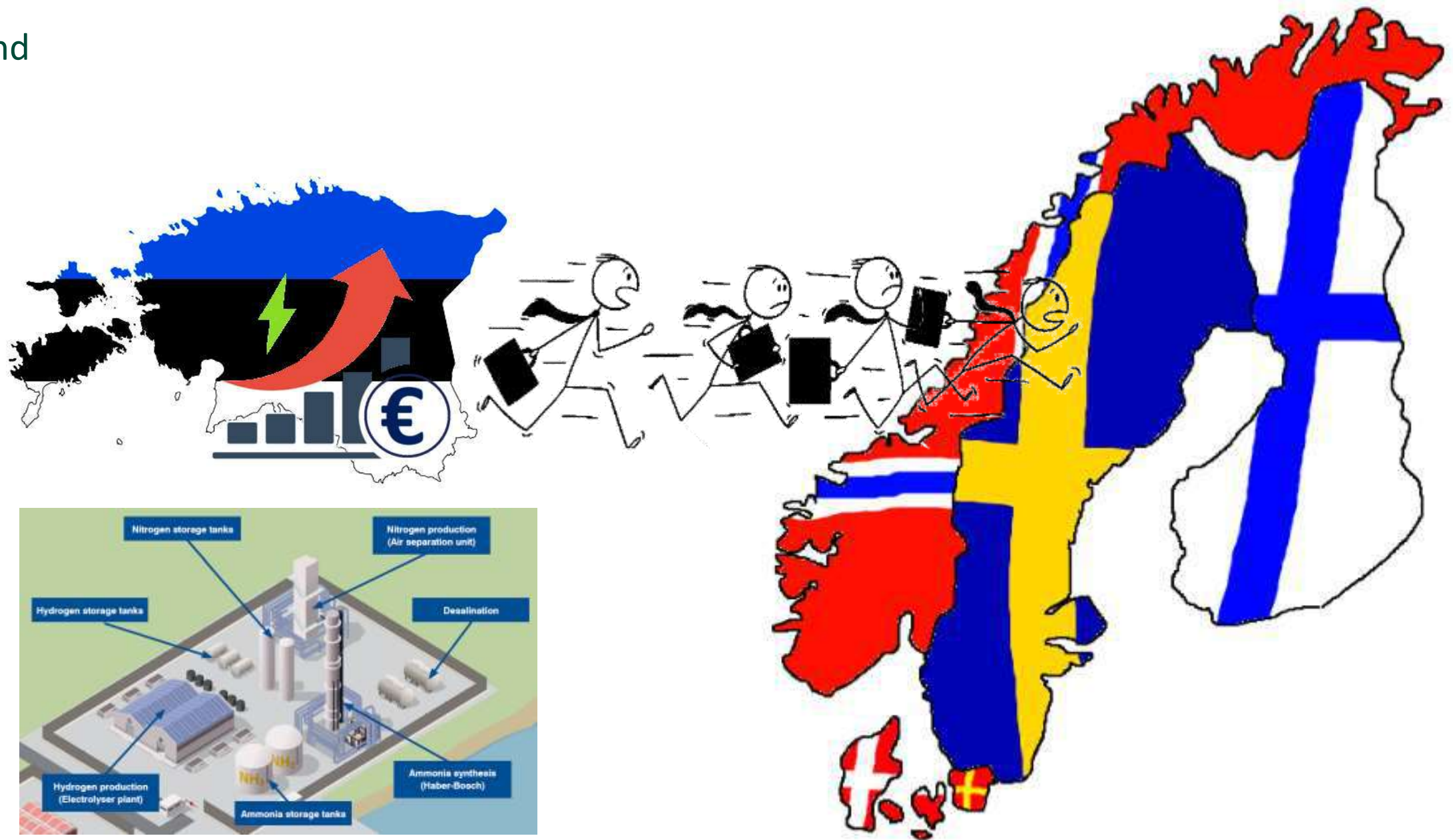
STOP



< 40

Flying

Trend



What to do to get Estonian electricity price and taxes competitive with our Northern neighbors (1)?

- Construction of Estlink 3 as soon as possible. This is the bottleneck for buying electricity from Finland and Northern price region.
 - NB! Obstacle: Widening or removing the bottleneck will increase the electricity prices in Finland.
- Solar and wind farms should be developed only against the market needs!
- There is no need for Estonian state (i.e. taxpayers) to guarantee the „price floor“ for off-shore and on-shore windfarms. The developers must conclude long term take or pay PPA's with off-takers - new industrial project developers.

NB! Off-takers will not conclude PPA's with the producers in case the electricity price is higher than price what allows them to sell their products at international markets.

NB! In case the government decides to guarantee the „price floor“ to developers of wind farms the renewable fee will increase from current level up to 2 times by 2035.

Problem: As the wind and solar electricity is random they cannot conclude baseload PPA's

What to do to get Estonian electricity price and taxes competitive with our Northern neighbors (2)?

- Construction of the nuclear power station
- No additional taxes (grid balancing fee, excise fee, etc.) and tax increases on electricity.
- Renewable fee tax reduction or exemption for big electricity consumers-plants starting from 80 GWh per year (> 1% of Estonian electricity consumption).

Thank you for your attention!

Contacts:

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Chairman of the Board
OÜ Derivaat NH3

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Mobile: + 372 50 44 826