



Green hydrogen in Lithuania

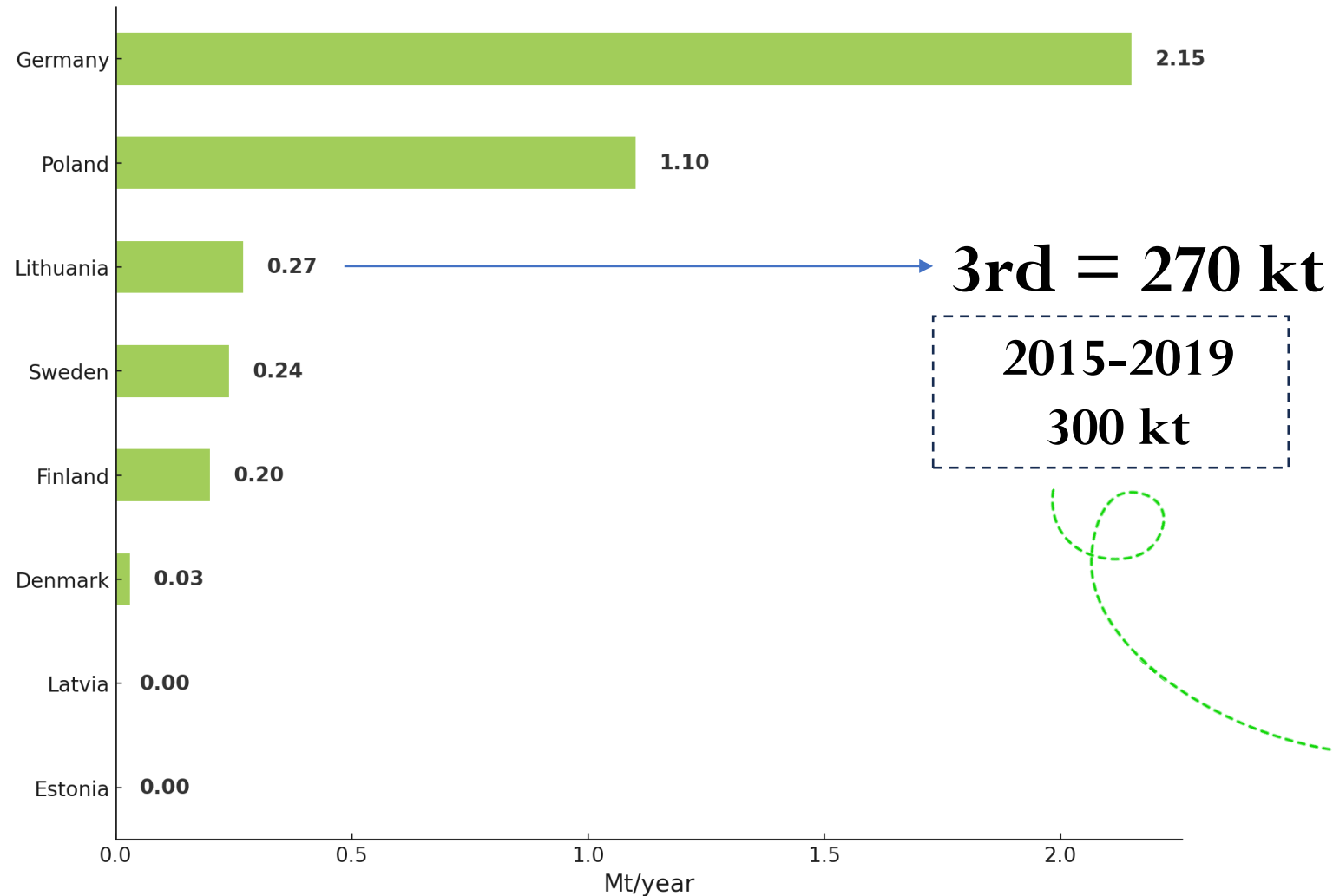
Plans and challenges

2024-09-18
dr. Indre Gecaite



HYDROGEN PRODUCTION IN LITHUANIA

Hydrogen production capacity by selected countries in 2022



100 kg H₂ per capita

75-80% fertilizer production
25-20% oil refinery

EUROPEAN DIRECTIVE AND LITHUANIAN GREEN HYDROGEN GUIDELINES

REDIII directive for 2030:



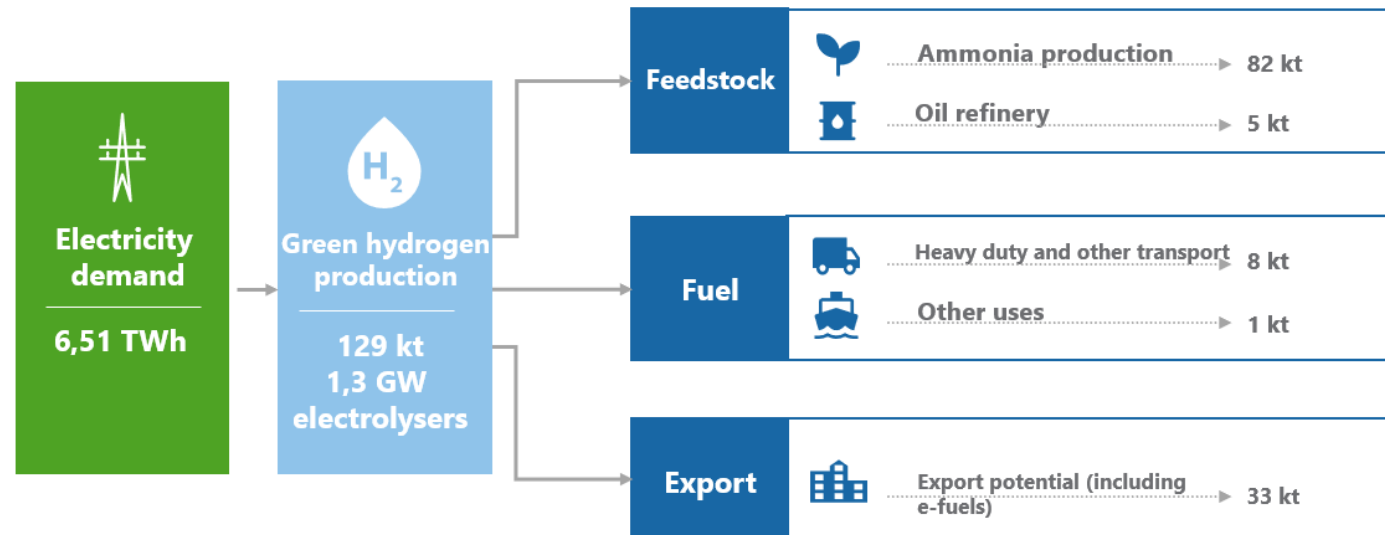
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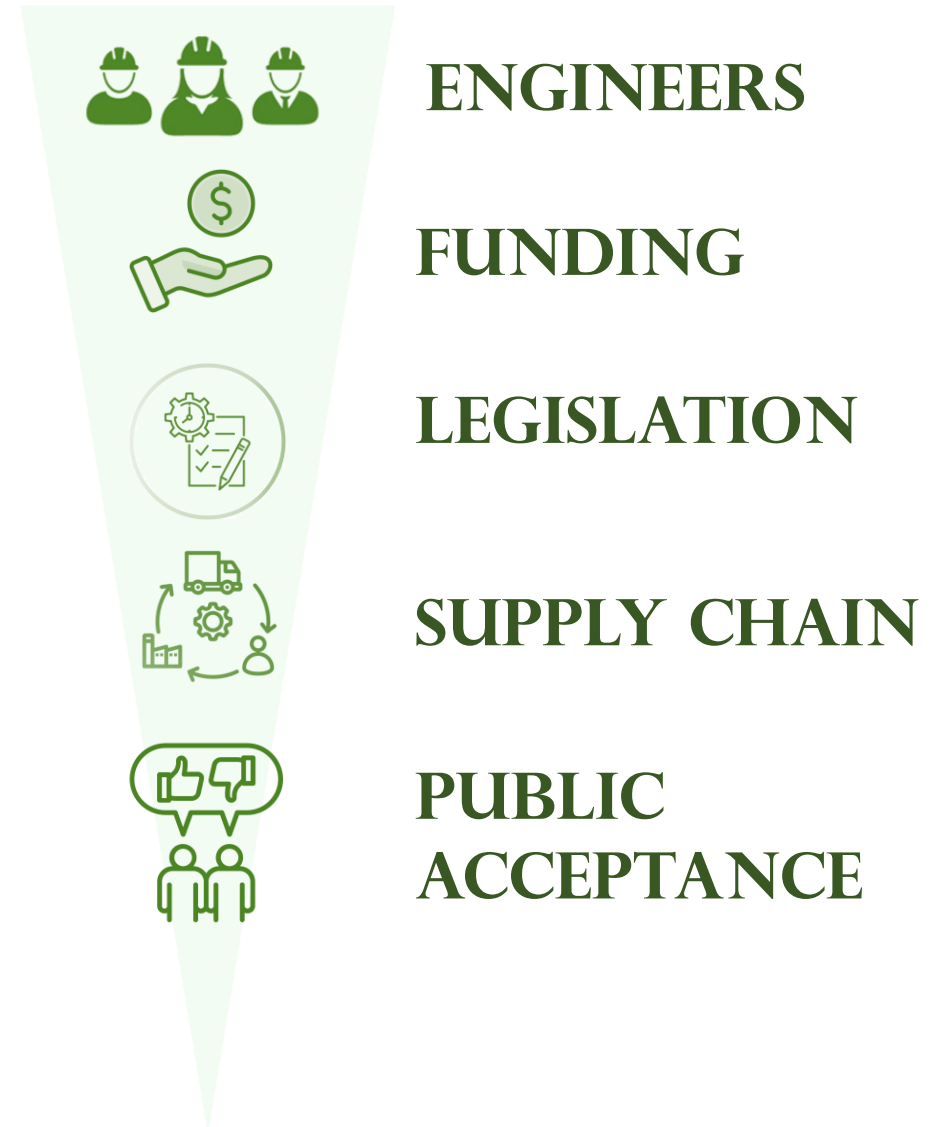
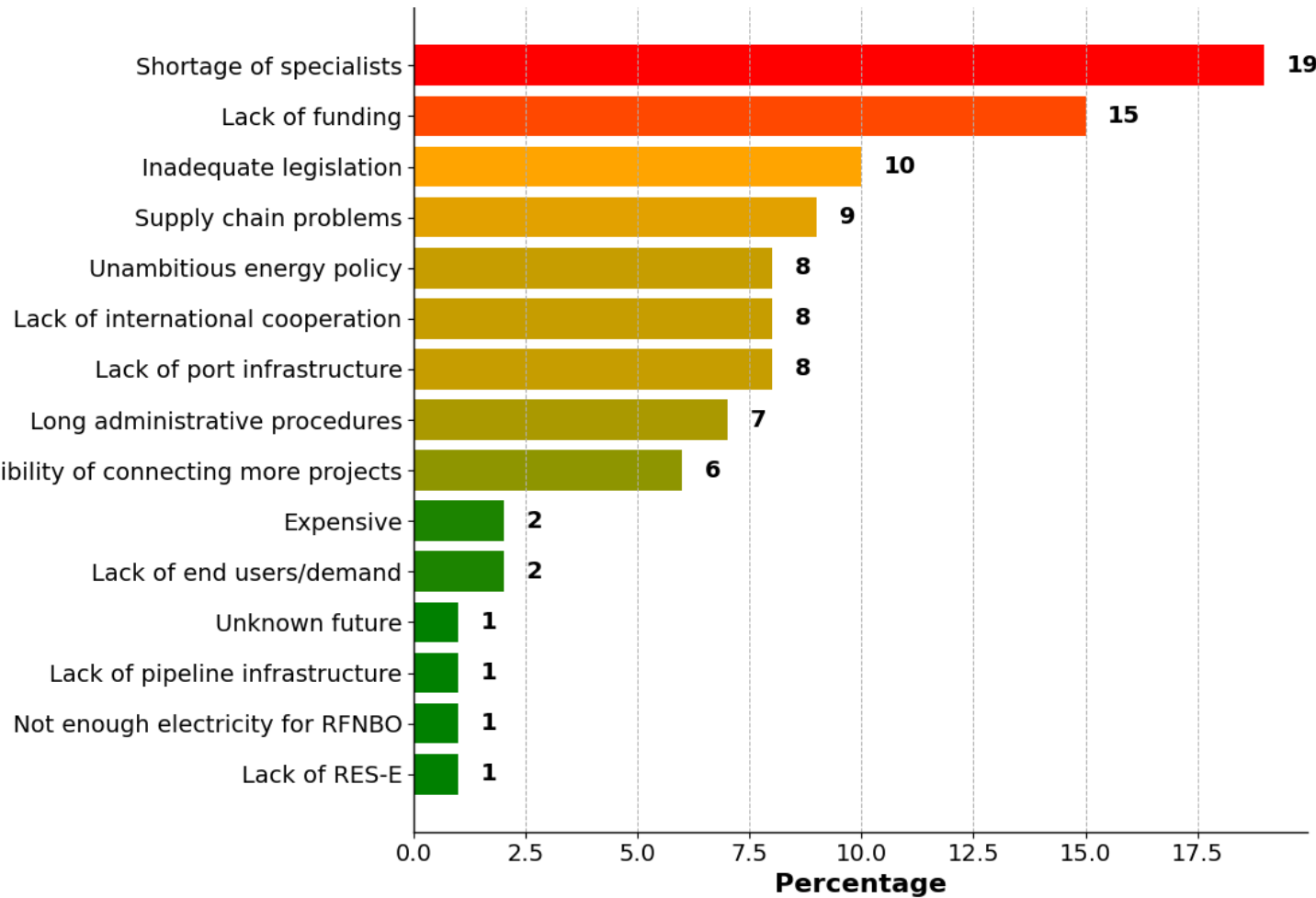


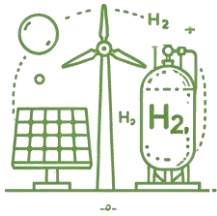
Lithuanian green H2 guidelines for 2030:



OBSTACLES

to green hydrogen project development





Off-grid
tank storage

HIGH



Grid connected
tank storage

MEDIUM



Grid connected
cavern storage

LOW

“The ICCT’s central estimates of 2030 hydrogen production costs of €3.7 per kg in the United States and €5.6 per kg in the European Union fall within the range in the literature.”

Lower LCOH* is possible

1. At least **90% renewable electricity** grid and grid development
2. **Salt cavern storage** (pipeline development)
3. **Subsidies** for other fees (grid connection fee ~ €0.50 per kg LCOH)
4. **Supply chain** development

WHAT HAS BEEN DONE SO FAR?



**Scholarships and
early career**



Legal framework



Funding



Infrastructure

LITHUANIAN HYDROGEN POTENTIAL 2050



Offshore wind target – 4.5GW



Onshore wind target – 10 GW



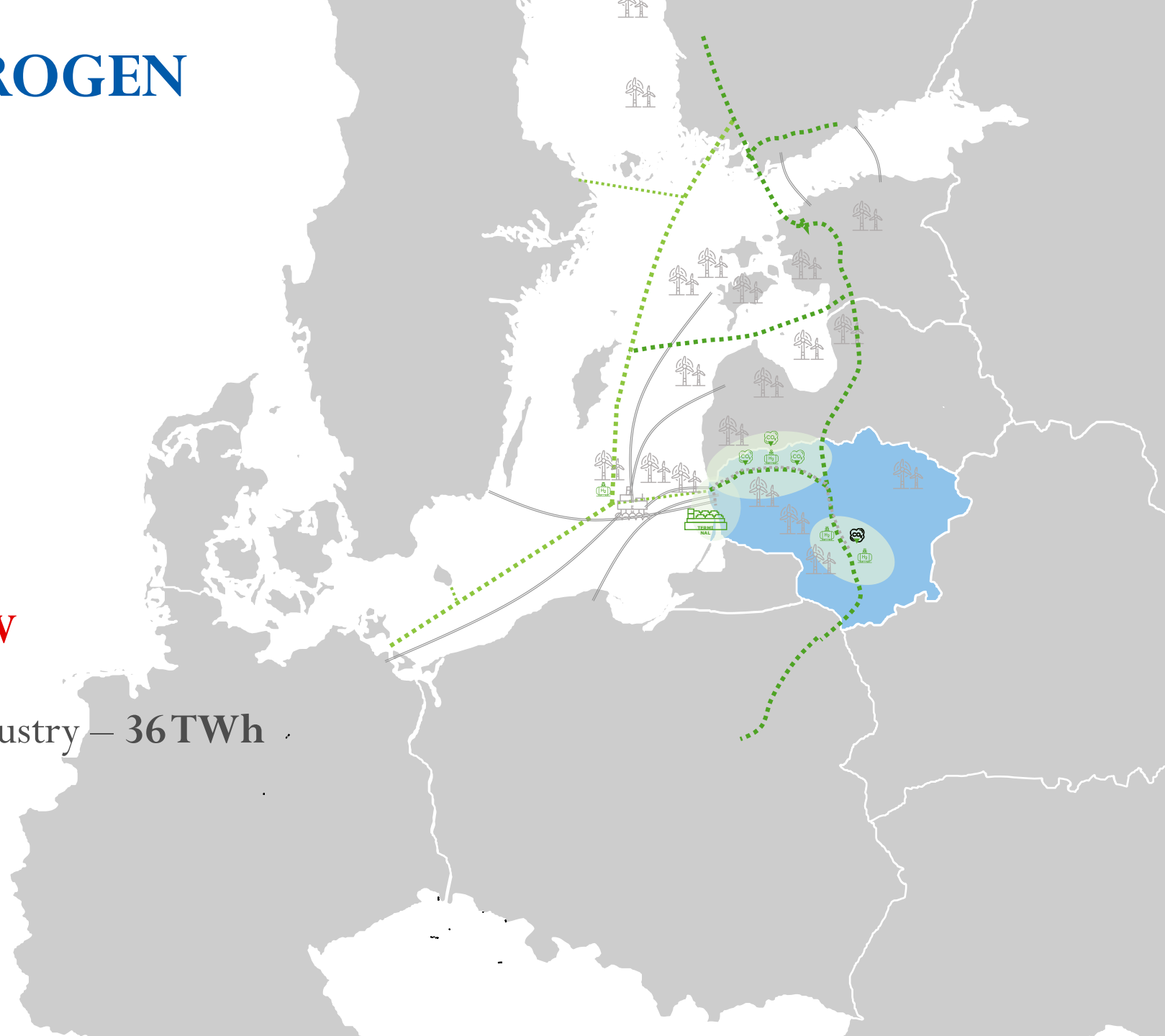
Solar energy target – 9 GW



Hydrogen production – 8.5 GW



Electricity demand for P2G industry – 36 TWh



“It does not matter how slowly you go so long as you do not stop” ~ Confucius.

