ENHANCING SMR MARKET DEVELOPMENT IN EUROPE

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CEO, Co-Founder
Founders:
Kalev Kallemets, Ph.D.  CEO
Sandor Liive, M.A.  Chairman of the Board
Henri Ormus, M.Sc.  CNO
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Kaspar Kööp, Ph.D.  Head of Safety
Mait Müntel, Ph.D.  Board member
Merja Pukari, Ph.D.  Head of Fuel Cycle

Rainer Küngas, Ph.D.  hydrogen expert
Helen Cook  legal partner
Allan Vrager  heat and power systems engineer
Mihkel Loide  head of communications

Shareholders: 7 founders; 1300 investors
Raised: 2019-2022: 3,9 mln eur
Staff: 12 total

MOU partners:
EU carbon price to average EUR 39/t next year – analysts

(Montel) EU carbon prices will average around EUR 39/t next year, as the market reacts to a shrinkage in overall...

Read more
North-European Dispachable power change 2018/2026

-50 TWh

1400 MW
7 TWh

1400 MW
6 TWh

-5 TWh

700 MW
5 TWh
2025

-72 TWh

-25 TWh

700 MW
5 TWh
2025

-30 TWh

Oil rigs 7 TWh

-13 TWh

0 TWh

700 MW
5 TWh
2025
USA restoring leadership.
Canadian SMR Roadmap

1. Bipartisan support on funding, legislation, DFC financing.
2. J.Biden administration rejoining Paris agreement + support for SMRs
3. Clean US power by 2035
4. TVA Clinch River SMR.
5. OPG Darlington SMR FOAK by 2028
6. Saskatchewan/Alberta 3 units by 2037.

Source: Feasibility of Small Modular Reactor Development and Deployment in Canada, 2021
SMR opportunity for EU

1. EU carbon neutrality 2050 - **total phaseout of fossils in power** (CCS is unfeasible)

2. CO2 prices in 2021: 55€/t; 2030: 80-100€/t; (needed for CCS/green H2)

3. Lower unit cost ($1bn= lower risk=higher capital availability = lower interest cost).

4. To increase market, there is need for 10s of NEW COMPANIES/SITE PROJECTS in many EU nations.

5. SMR deployers **need** to focus on standardized design and **practically cooperate** on licensing, training, design completion, contracting, supply chain, financing to drive down cost, risks and increase acceptance and impact. Discussions ongoing.
Starting SMR deployment company

1. Founders with strong expertise on nuclear energy, energy economics, finance, law, politics.

2. Cooperation with strong partners (utilities & countries – US; Japan, UK)

3. Raising capital, capability step-by-step. You don’t need $1bn upfront. Costs before construction below 5% of CAPEX.

4. Active public engagement. Nuclear is interesting thus media can be easily engaged.

5. Full transparency, fully public, early engagement with regulator.

6. Justice – fair proposals to municipalities, the state, partners.

7. Innovative solutions with right balance (Deep Isolation, reactors, public outreach)
# 2020s SMR options for Fermi Energia

<table>
<thead>
<tr>
<th>Reactor</th>
<th>Capacity</th>
<th>FOAK</th>
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</thead>
<tbody>
<tr>
<td><strong>Ultrasafe Nuclear</strong></td>
<td>30*10 MWe</td>
<td><strong>2026</strong> Canada</td>
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<tr>
<td>helium cooled, graphite moderated, TRISO fuel</td>
<td></td>
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<tr>
<td><strong>GE Hitachi</strong></td>
<td>300 MWe</td>
<td><strong>2028</strong> Canada?/US?</td>
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<tr>
<td>BWRX-300</td>
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<tr>
<td><strong>Rolls Royce</strong></td>
<td>450 MWe</td>
<td><strong>2030</strong> UK</td>
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<tr>
<td>PWR</td>
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FE strategy is to learn and observe licensing, EPC contracting, supply chain, construction performance of each design to understand credibility of real CAPEX & LCOE.
Leading the Force
Jõudu juhtides

& FRIENDS
- Synthos
- e-Lise
- 18for0
- Vattenfall
- Fortum
- Tractebel
- CEZ
- Nuclearelectica
Studies done and in works

1. Power market in 2030
2. Site screening
3. Human resource
4. Economic impact
5. SMR licensing
6. SMR Construction
7. Fuel cycle (Deep Isolation)
8. Passive safety of SMRs
9. District heat and hydrogen potential
10. SMR grid services with no fossil plants.
11. Socioeconomic impact
12. International relations impact
13. Deeper look into licensing
14. Practical Human Resource development plan
15. Waste management strategy
16. Detailed site cooling solutions
17. USNC deep dive
18. Planning & EIA process
Procedure

1. Government nuclear energy working group 2021
2. Planning process initiation (2022)
3. Nuclear energy law bill (2024)
4. Nuclear energy regulator formation (2025)
5. Approval of national spatial plan by gov (2026)
6. Decision in Principle in Parliament (2026)
7. Vendor choice/ Construction license application (2029)
8. Final investment decision (2030?)

Energy & technology

- 2022 – first SMR license/closure of German NPPs
- 2023 – CO2 price 80€/t
- 2024 – FOAK SMR construction Canada, US
- 2025 – descyncronisation of Baltics from Russia (end of power imports)
- 2028 – FOAK SMR completion in Canada
- 2030 – completion of first 700MW Livonian off-shore wind park. W-EU coal closure. CO2-100€/t
TEEME ÄRA!
LET’S DO IT!

FERMI.