

ENERGY TRANSITION PEAT AND BIOFUELS FUTURE

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PUBLIC



EU CLIMATE POLICY IN ACTION WITH RESULTS



Finland shows the way and gives an example



AGENDA

- 1 Neova and Vapo
- 2 Focus of the presentation
- 3 Peat and biofuels / wood, market and the rapid transition
- 4 Melting iceberg and company response: Case Neova
- 5 Q&A



Personnel

950



Turnover, MEUR

470



Owners

State of Finland 50.1%
Suomen Energiavarat Oy 49.9%



Energy

- local solid fuels with VAPO brand: wood, peat and wood pellets
- managing and optimizing the land property and real estate assets
- wind power projects
- operations in Finland, Estonia and Sweden

Grow&Care

- Europe's leading producer of growing media for professional segment and products for home gardeners and landscaping
- recycling, composting and bedding peat
- operations in Finland, Netherlands, Sweden and Estonia and export.

New Businesses

- product development based on refining peat and other natural materials into air and water purification products
- **Novactor** activated carbon. The first production facility started in May 2021.

NEOVA



FOCUS OF THE PRESENTATION

THE FUTURE OF ENERGY PEAT AND BIOFUELS (I.E., ENERGY WOOD)

FOR

SOLID FUELS FIRED POWER AND HEATING PLANTS IN FINLAND

NEOVA



PEAT – A LOCAL FUEL

- 1/3 of Finland's land area is peat land. 1% in peat production.
- Domestic fuel for power and heating plants
- Can be stored in piles for over 4 years. Good security of supply.
- Burning causes slightly more CO2 emissions per MWh than burning coal and especially natural gas
- Classified as a fossil fuel
- Burning in 2025 will be only 10-20% compared to 2018 and end before 2030



ENERGY WOOD – A LOCAL FUEL

- Domestic fuel & significant import
- Some wood classes can be stored over one year*. Questionable security of supply / not ready yet.
- Burning causes clearly most CO2 emissions per MWh when compared with peat, coal and natural gas
- Classified as a green and renewable fuel (growing trees use the CO2 from the air)
- Wood burning is a transition on the path to non burning energy



THE ENERGY SECTOR CHANGE DRIVERS

- Climate crisis, awakening and media influencing the public opinion → many company and local political decisions to end fossil burning
- Finnish government actions to achieve the goal of Climate Neutrality by 2035 (Coal banned from 5-2029, decrease peat burning by 50% by 2030)
- On the short term the € is the best consultant



THE CHANGE DRIVERS AND MARKET VOLATILITY

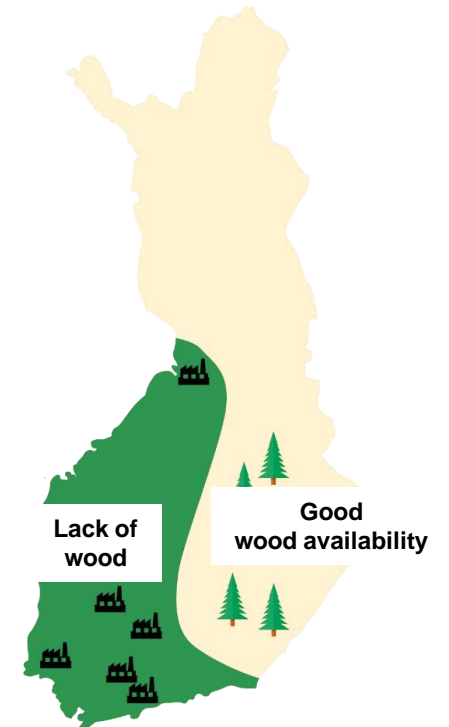
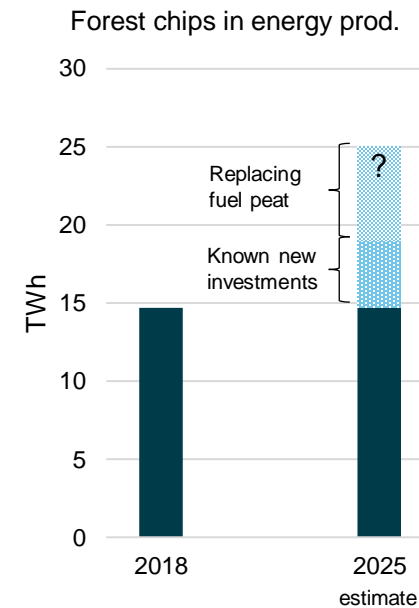
- € as the final and the best consultant
 - EU Emissions Trading System (EU ETS) has started to work, the ETS price is now around 60€/t, a year ago 20€/t
 - Coal prices steep rise since summer
 - Natural gas and LNG prices have skyrocketed since summer

€/MWh	Price	Tax	CO2	TOTAL	Comment
Wood	26			26,00	Price varies - Geography and class
Peat	14	5,7	23	42,70	Price varies - Geography
Coal	24,6	23,95	20	68,55	High Volatility 10/2021 30€/MWh, 1/2021 9€/MWh
Natural Gas	80	15,72	12	107,72	High Volatility 10/2021 100€/MWh, 1/2021 20€/MWh



INCREASE IN THE DEMAND OF WOOD IN POWER AND HEATING PLANTS BY 2025

- The energy wood demand increases due to the end of peat and coal
- The increase in Finland is estimated to be in the range of 6-8 or even 10TWh/a
- The increase in South Finland is around 5TWh/a
- 1TWh is around 8000 full size truck loads



THE EFFECTS AND THE FUTURE?

DISCLAIMER: MY POINT OF VIEW

- The calculated CO2 emissions from the energy sector and from industry will be significantly cut down and surprisingly fast.
- Finland shows the way and gives an example.
- Peat burning will be marginal after 2025. Wood burning will grow fast and continues for 10-20 years. Wood burning will be replaced with non burning energy production.
- There will be a tax on burning wood, especially “raw material wood”. There will be new “need more income” taxes as the energy taxes and ETS incomes are vanishing fast (also traffic fuel taxes).
- Energy companies will struggle to invest in double production capacity, maintain profitability, pay dividend to municipality owners and to not raise the district heating prices too much.



MELTING ICEBERG AND COMPANY RESPONSE: CASE NEOVA - NEW STRATEGY IN 2018 – 2019

From local energy peat company in Finland and Sweden with also growing media business and export

→

Our Purpose: Creating Green Growth

Our strategy: We fulfil basic needs

- We boost healthy local food production
- We are part of the solution to the world's freshwater problem
- We offer local energy solutions
- We provide new solutions to purify the polluted environment
- We create well-being

Kekkilä-BVB merger in 2019, Novactor in 2021 and name change in spring 2021 Vapo → Neova

NEOVA



MELTING ICEBERG AND COMPANY RESPONSE: CASE NEOVA – SCENARIO WORK

Executive summary

Five fuel peat demand scenarios were modelled, all indicating a severe negative impact on the financial performance of Vapo's fuel peat business

Market & scenarios

- The project team identified six main drivers impacting the fuel peat market in Finland
 - All drivers indicate a major decline in the market and Vapo's fuel peat business in 2020-2025
 - The drivers with the most negative impact include regulatory and policy actions (including taxation and emission rights prices) and EU, national, municipal and energy customer targets to become fossil free
- The project team modelled five scenarios for fuel peat demand
 - All scenarios indicate that expected market development will have a severe negative impact on the financial performance of Vapo's fuel peat business
 - The 'realistic' scenario, based on the government budget decision, indicate that Vapo's milled and sod peat demand (GWh) will drop by ~70% and ~50%, respectively, in 2020F-2025F
- With current emission rights prices (>8 €/MWh), peat taxes (3 €/MWh today, increasing to 5.7 €/MWh in 2021) and ash cost (1 €/MWh) added to producer prices, the total cost of burning peat is higher than that of all wood fuel varieties
 - Wood is the main replacement for fuel peat. Wood availability is a major concern, but there is currently a surplus of wood
- The current significant oversupply of fuel peat in Finland is causing fierce price competition and a decline in sales prices

Source: Vapo



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MELTING ICEBERG AND COMPANY RESPONSE: CASE NEOVA - OUTCOME

Neova maps out strategic options for its wood business

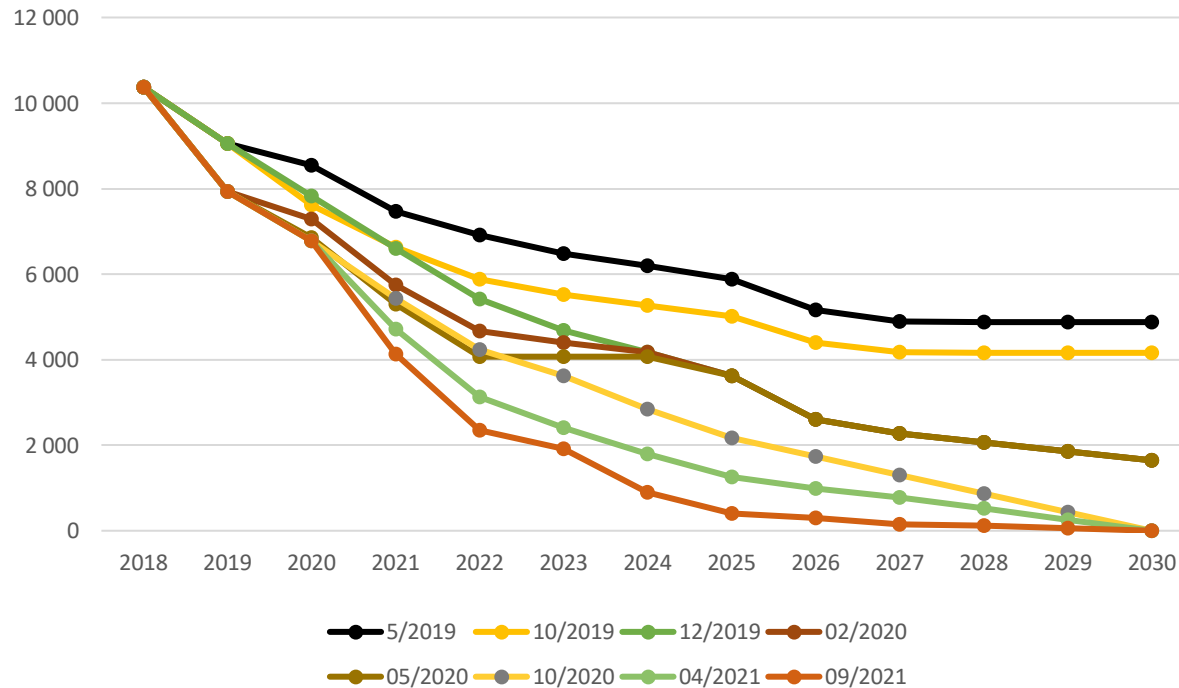
Investor news release News Press release, Oct 5, 2021

The Finnish energy sector is rapidly transitioning to renewable fuels, which has increased and will continue to increase the demand for energy wood. To ensure a more competitive wood sourcing and supply organisation, Neova Oy has decided to map out the strategic options for its wood business. The business area under review has a turnover of approximately 50 million euros and employs almost 50 employees in Neova Group.



Wood terminal in Mäntsälä

Neova milled fuel peat demand estimates GWh/a 2019-2021



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