



IEA Bioenergy
Technology Collaboration Programme



Country report Sweden

IEA Bioenergy Task 33 - Gasification of Biogenic and Waste Feedstocks for a Sustainable Future

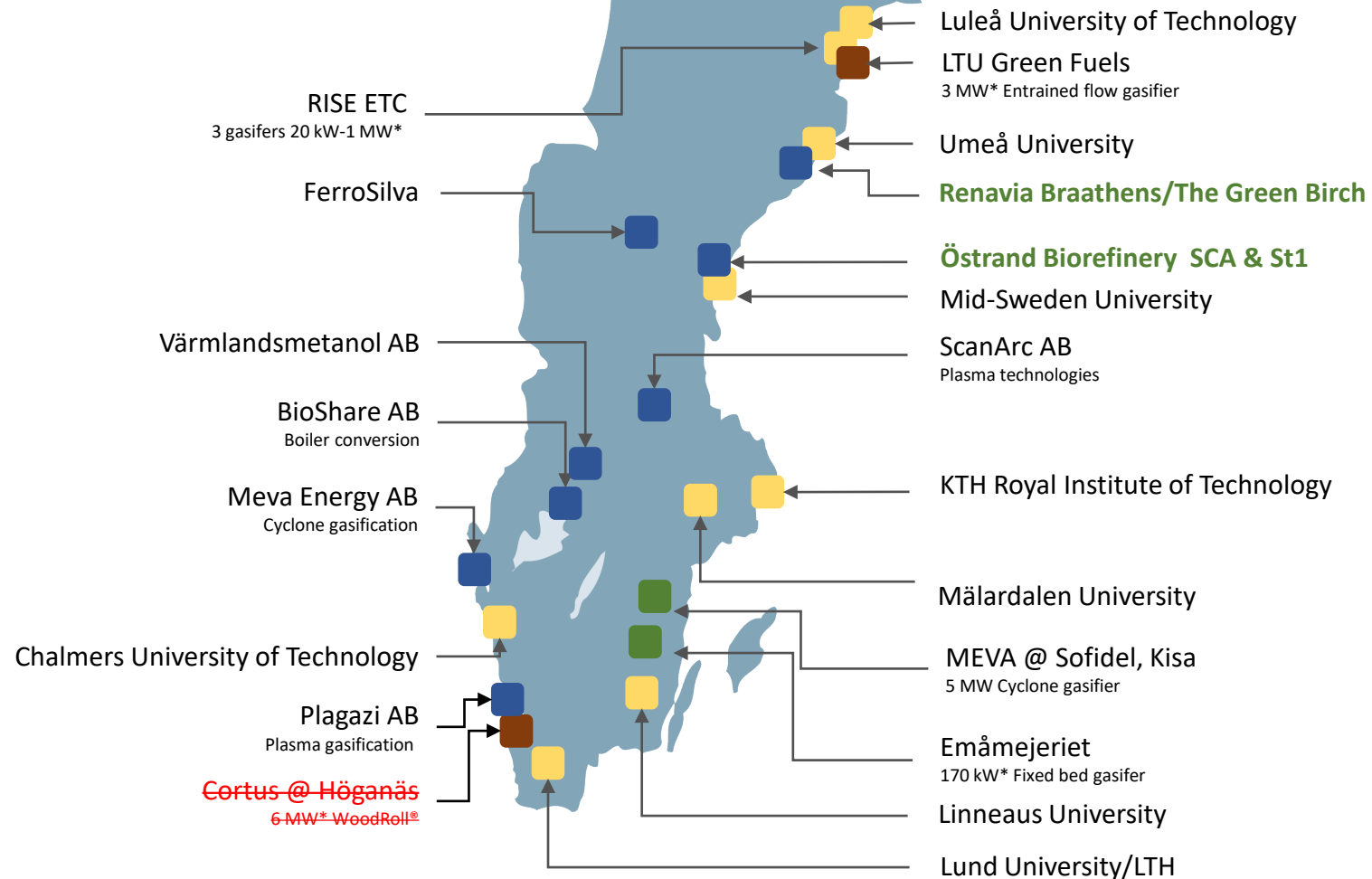
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Task meeting, Glasgow, May 11 2026

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- Commercial/Industrial scale plant *Thermal input
- Pilot/demonstration scale plant
- Academic research and development
- Project- & technology developer/Company R&D



Renavia Braathens - The Green Birch project

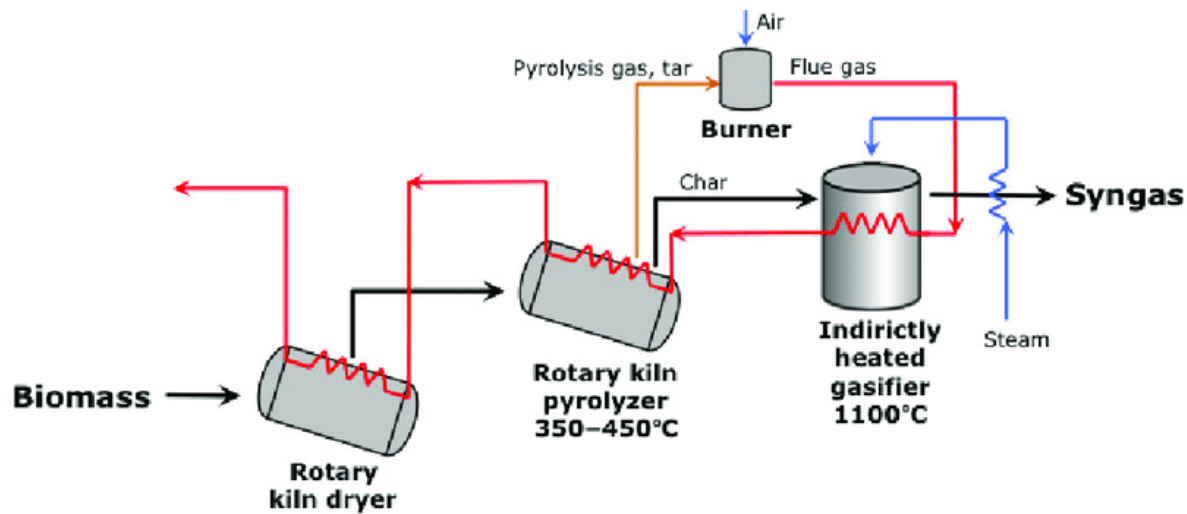
- Waste-to-jet facility to produce around 100,000 tonnes per year of sustainable aviation fuel (SAF) planned at Umeå Eco Industrial Park, just outside Umeå in northern Sweden.
- Waste gasification combined with electrolysis + methanol synthesis + methanol-to-jet.
- With production targeted in the early 2030s, the output would correspond to more than the total jet fuel consumption of all Swedish domestic flights today.



Renavia Braathens - The Green Birch project

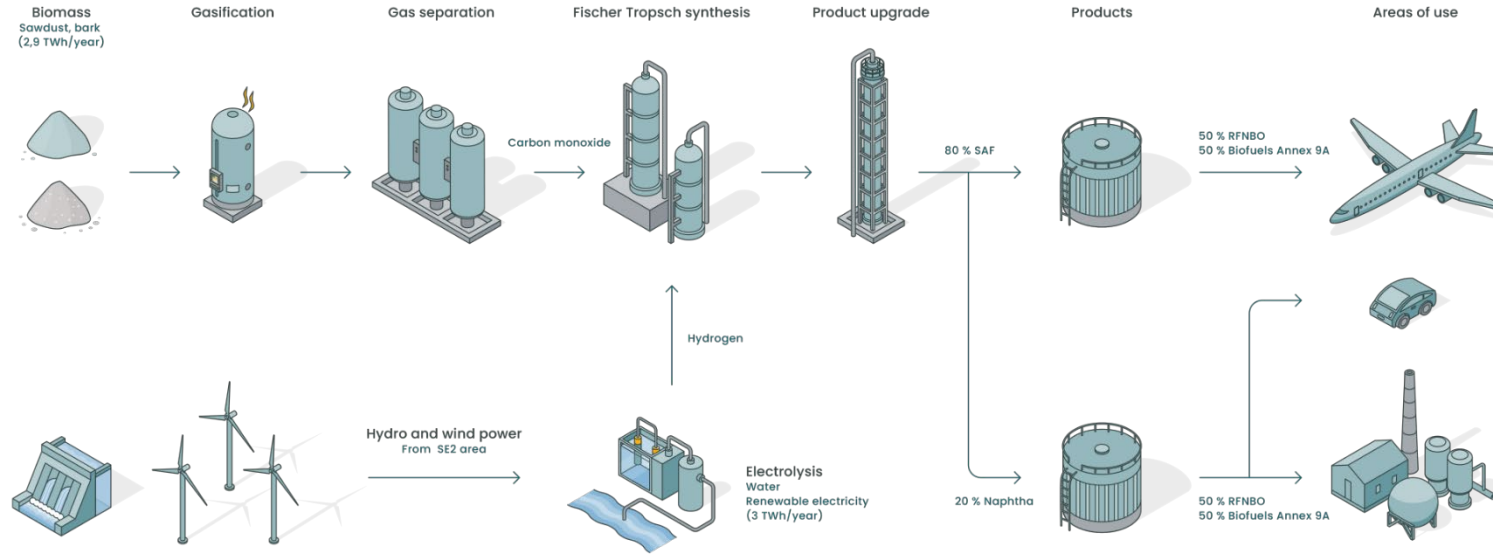


Cortus 6 MW WoodRoll® gasifier at the Höganäs steel plant



- On March 19, 2025, Cortus Energy filed for bankruptcy.
 - Delays in the commercialization of the Höganäs facility
 - Costs for industrial up-scaling higher than expected
 - Insufficient financing and liquidity problems
 - Lack of long-term customer contracts for a stable revenue stream
- Nordic Bio Power have taken over the plant and will start production of biochar and heat in Q3 2026.

Östrand Biorefinery



- Jointly owned company by SCA (forest) and St1 (refinery).
- Biorefinery Östrand will deploy solid biomass gasification and Fischer-Tropsch synthesis with an electrolyser.
- A significant development step was recently taken (10 April) when the Swedish Energy Markets Inspectorate allowed connection to the transmission grid.





- The Meva Energy gasifier at Sofidel tissue mill in Kisa produces 4.5 MW of producer gas from wood waste to replace industrial consumption of fossil gas.
- Approx. 4 MW = 1300 kg/h wood-pellets.
- Some technical issues currently limit the plant availability to 60%.
- Measures now taken - Expected plant availability 80% during the year.

Pictures from and more information at <http://mevaenergy.com>



MEVA Energy

- The European Investment Bank (EIB) is providing €40 million in venture debt financing.
- The EIB's investment will help Meva scale up beyond its current demonstration plant, enabling the company to enhance its technology and enter new markets.

More information at <http://mevaenergy.com>



MEVA Energy

- Meva Energy has entered into a 15-year agreement with Elcowire, a leading European copper wire manufacturer, to supply 9 MW of renewable biogas to Elcowire's Helsingborg facility in Sweden.
- Meva Energy and Swiss Steel have launched a joint feasibility study to assess how renewable producer gas can complement their use of natural gas in a walking beam furnace at Swiss Steel's plant in Emmenbrücke, Switzerland.

More information at <http://mevaenergy.com>



MEVA Energy - Feedstock tests

- Gasification of oat husks was tested at full scale in Meva Energy's Kisa plant —15 tonnes were processed continuously over 17 hours with stable operation
- Slightly lower efficiency and heating value of producer gas but remained suitable for industrial use.
- Reduced particle separation efficiency, likely due to lower-density oat husk char. Lower biochar yield, higher particle load in gas cleaning, increased tar formation
- Biochar quality was lower than from wood pellets. Reduced carbon content and calorific value, higher ash content etc.



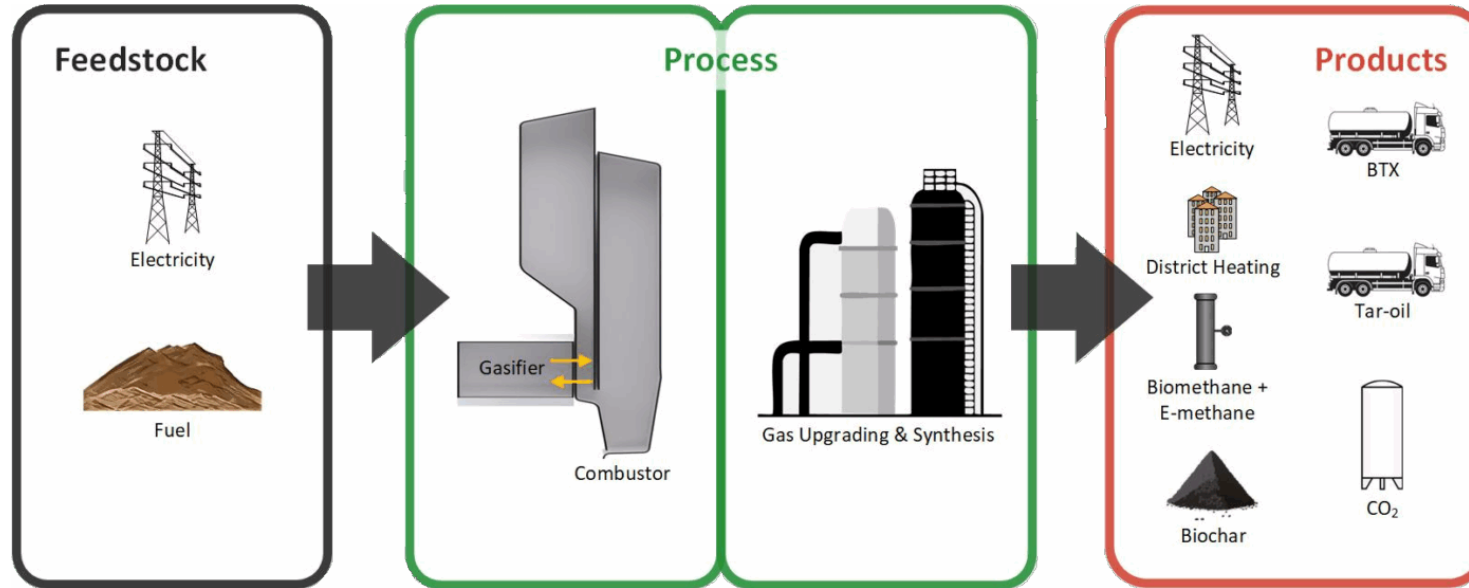
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- Low value residues from furniture manufacturing, board, MDF to renewable gas and power (2.4 MW) at IKEA Industry production unit in Zbaszynek, Poland
 - 2*1220 kg/h fuel (twin gas trains with shared auxiliary systems)
 - 1.2 + 1.2 = 2.4 MW of green electricity, possibly use of residual heat for heating Ikea's nearby buildings
- All permits are now in place and plant construction starts this summer.



- www.ieabioenergy.com

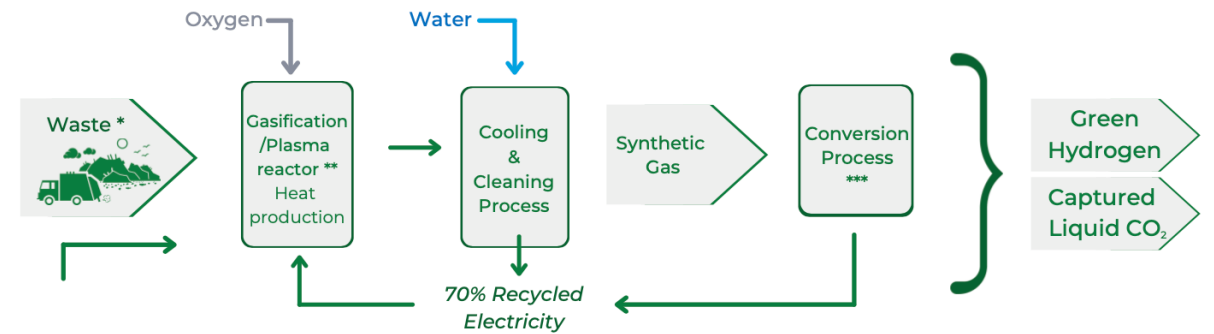
BioShare - Thermochemical co-production in a CHP plant



- BioShare's technology enables additional products in addition to heat and power.
- Their fluidized bed solutions can be applied utilizing separate bed material or share bed material with a boiler.
- Projected a methane pyrolysis unit in Finland

Plagazi AB

- In October 2024, Plagazi was selected to receive €29.5 million grant from EU Innovation Fund.
- The previous project in Köping has changed location to Gävle - Now titled Gävle Circular Park
- By using InEnTec plasma gasification technology, the project will convert 74 kton/a of non-recyclable waste into hydrogen (10.6 kton/a).
- Plagazi is however now under reconstruction (Nov 2025).



* Any type of waste: Auto Shredder Residue, Car Tires, Plastic, Household-, Industrial-, Hazardous- or Medical Waste.

** Exposed to Temperatures > 3000°C in a Plasma Reactor, where the waste is broken down to atomic level.

*** The Product is then rebuilt to form *Green Hydrogen and CO₂*, which the latter is captured directly.

Thanks!

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