





Biokraft Skogn – Biogas and Use of By-products

- Who is Biokraft
- By-products, baseline scenario
- COMPLETE



The Skogn biogas plant, 24.04.17





Biokraft Skogn

- Feedstock: Fish farming waste (K2) and fiber waste sludge from NSS
- 12,5 million Nm³ LBG a year
- 200 000 t. of digestate

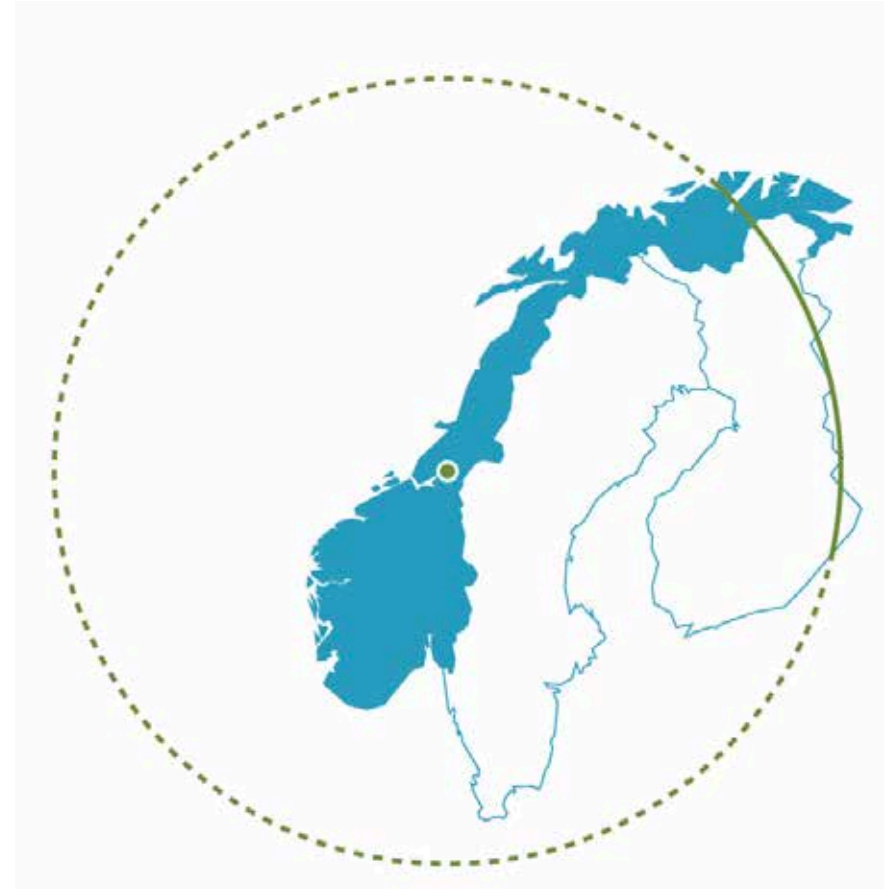


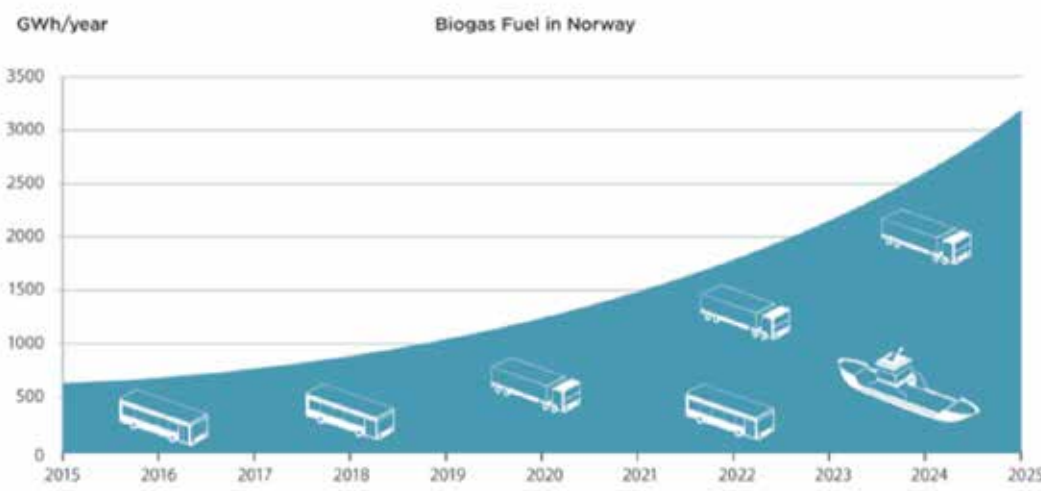
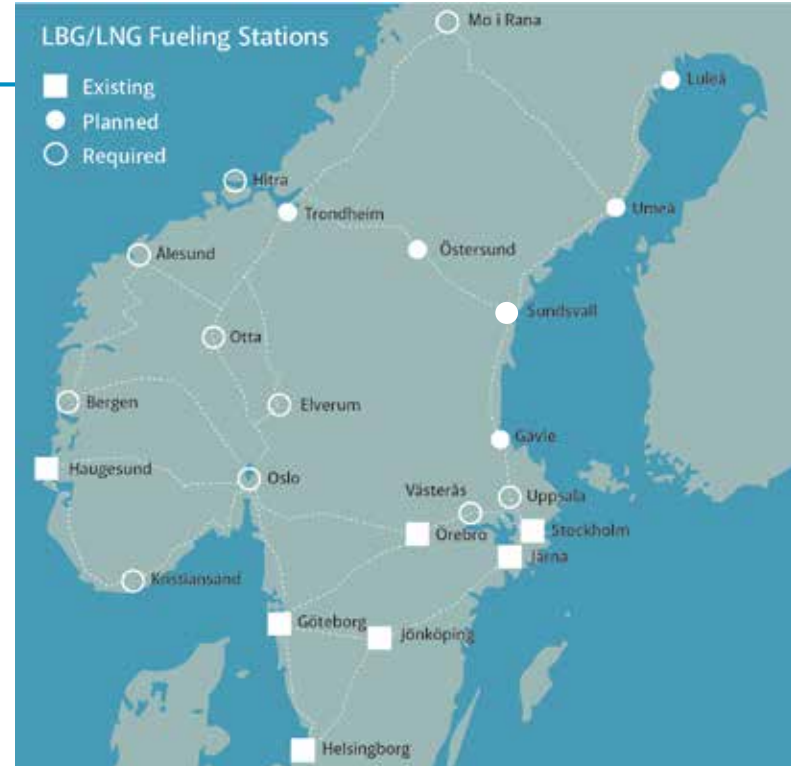


CBG



LBG







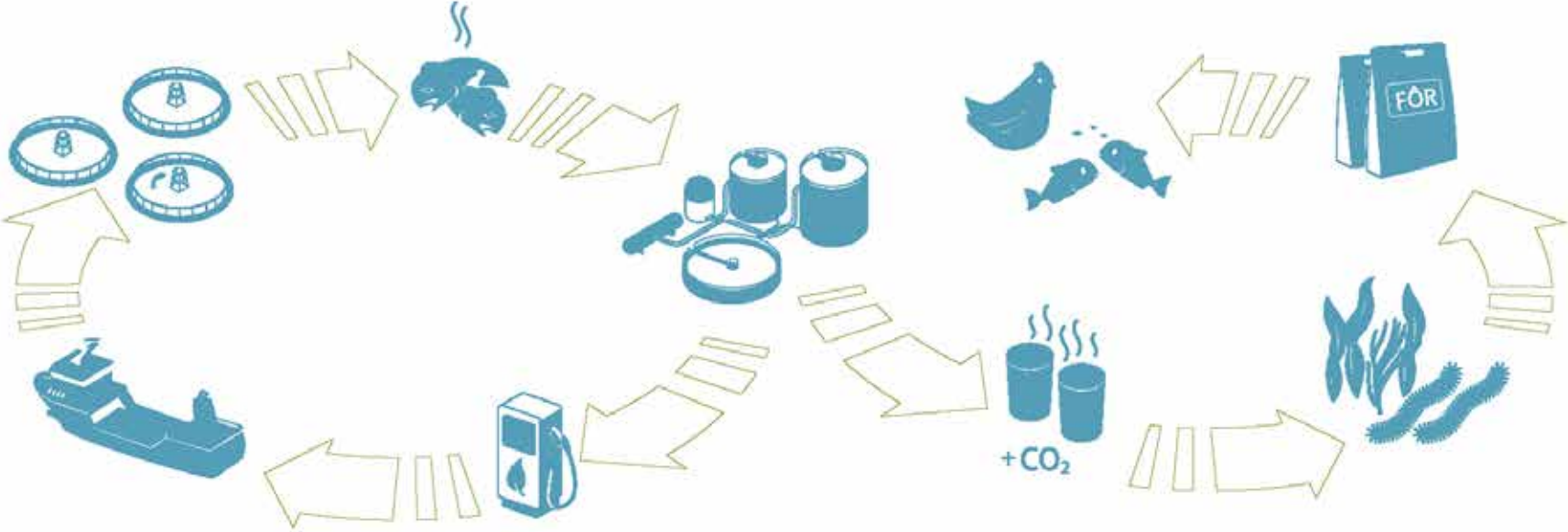




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**Energy efficient biogas production by
recirculation of nutrients and complete
utilisation of resources**

COMPLETE – closing the loop and increasing profitability



- How to increase profitability of Skogn biogas facility
 - Focus on digestate refining and use; liquid and solid fraction
- Increased biogas production in the future expansion of the plant – new substrates
 - Fish farm residues – settefisk slam
 - Brush worms (polychaetes).
 - Macroalgae
 - Microalgae.
 - On-site production of more substrate
 - Micro algae
 - WAS



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- Innovative facility improvements through increased utilization and refining of digestate
 - Use the digestate as an growth medium for production of brush worms (polychaetes).
 - Use the nitrogen rich liquid fraction as an growth medium for production of microalgae.
 - Use the nitrogen rich liquid fraction as an growth medium/nutrient supplement in the AST at the TMP-mill

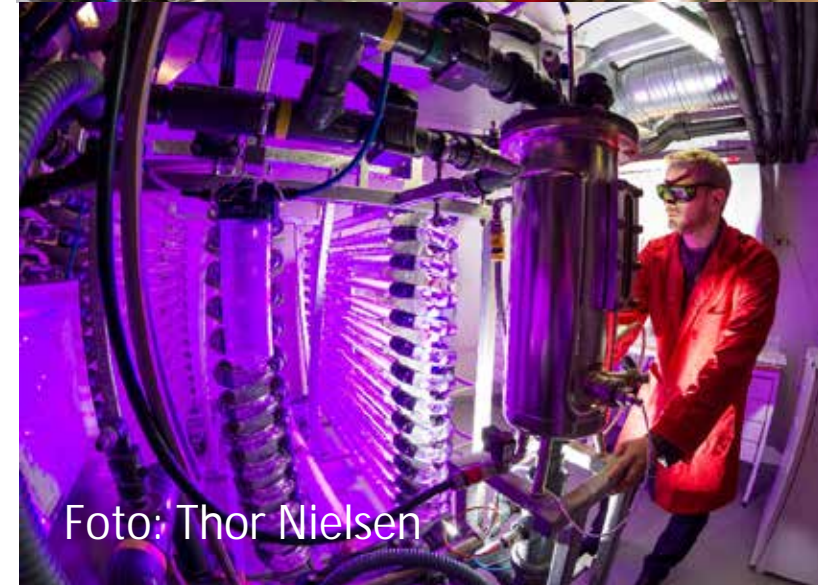


Foto: Thor Nielsen

- **Budget: 25 million NOK**
- **Funding: Norwegian Research Council (NRF) and Biokraft AS**
- **Duration: 2016-2019**
- **Industry partner: Scandinavian Biogas Fuels AB and Biokraft AS**
- **Research partners: SINTEF Fiskeri og havbruk, NTNU og NIBIO**

“The COMPLETE innovation project is central in Biokraft’s aim and strategy to develop a new standard for climate friendly and sustainable biogas production – A national flagship pilot that can serve as a Norwegian demonstration plant, and consistent with the drive manifested in the Norwegian Government’s on going work towards a new strategy for the Bioeconomy.”

**Håvard Wollan
CEO Biokraft AS**

