



Biozin Holding AS

Industrial partners creating the way from forest to advanced biofuel

Clean energy from Norwegian forest

Zero Conference 07.11.19

Industrial partners creating the way from forest to advanced biofuel

- Biozin Holding AS' progressing to establish the first large scale production of advanced biofuel based on forest residues and by-products in Norway
- IH2[®] technology developed by Shell Catalysts & Technologies
- Concrete plans to establish several biozin[®] production plants in Norway
 - Åmli is first in line
- Biozin Holding AS currently owned by Bergene Holm AS and Preem AB



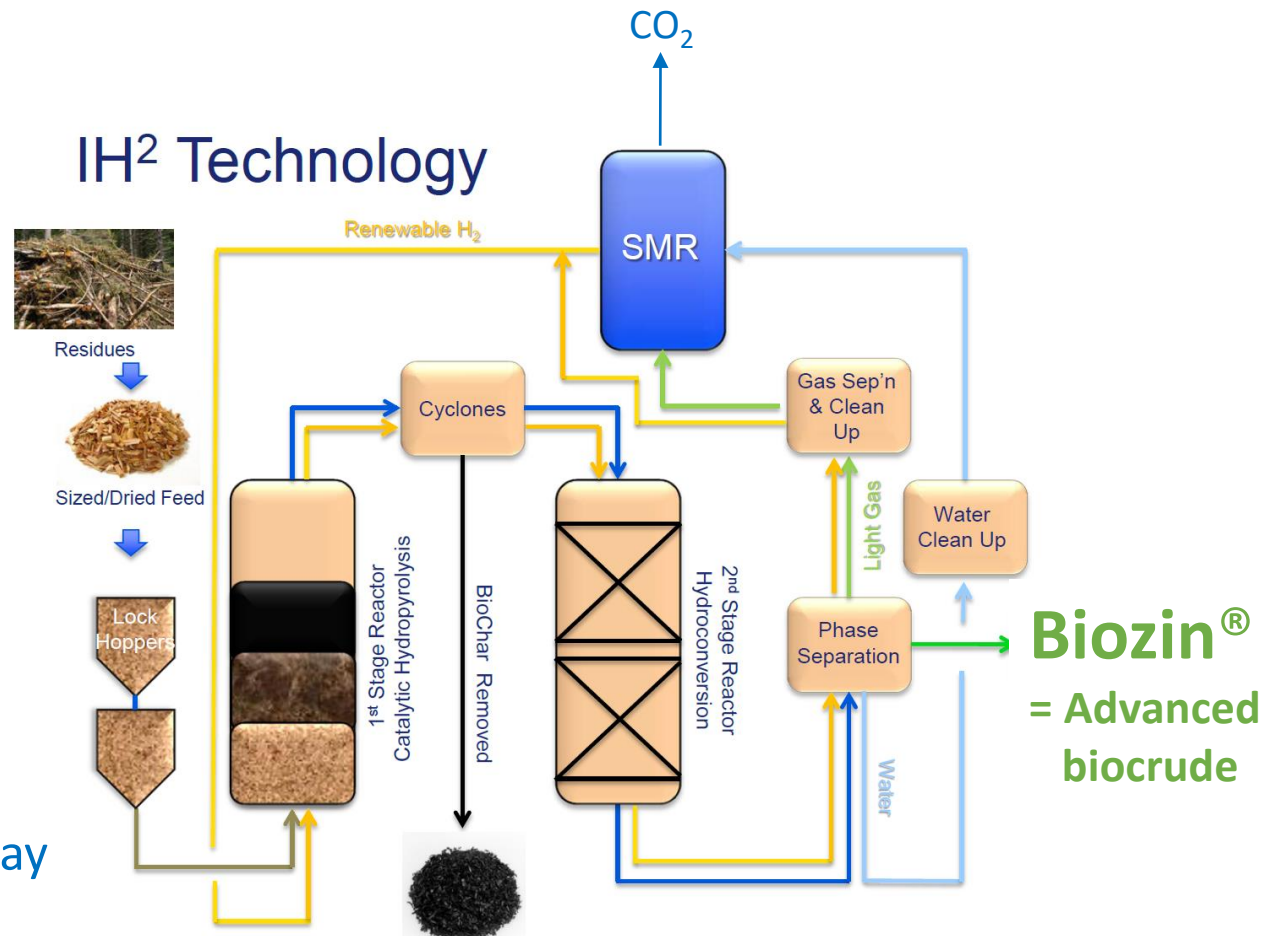
Biozin® - Advanced biocrude

- Light advanced biocrude
- Will replace fossil crude oil – similar refinery processes
- Meet standard product specifications
- Biozin® contains Gasoline, Jet Fuel and Diesel
- no heavy fractions
- Feedstocks will be qualified for production of advanced biofuels as listed in EU Annex IX, RED II

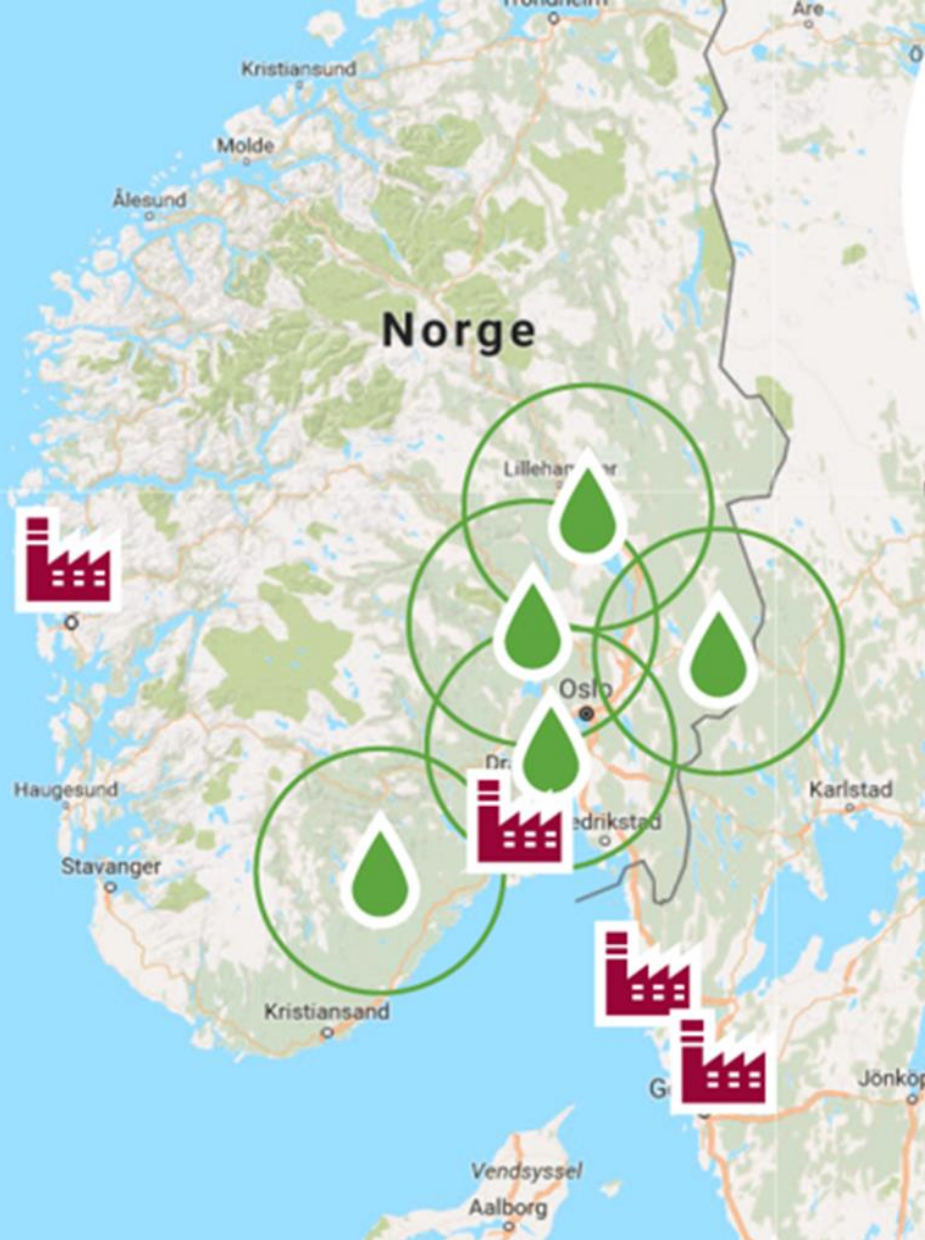


Åmli biozin® project basis

- Reducing GHG emissions in a sustainable way while supplying liquid hydrocarbons
- Utilize excellent feedstock availability from Norwegian sawmill and forest industry - No deforestation!!
- Partners with significant industrial experience
- Produce biocrude – not finished products
- Planning future biozin® plants roll-out in Norway



Ref: Pat Leung, presentation at ARTC, Kuala Lumpur 2016



Key data Åmli biozin® plant

- Feedstock processing capacity: 700.000 m³/Y
- Will not use sawlogs
- Biozin® production capacity: 120.000 m³/Y
- Direct employees: Appr. 70 (6 shifts)
- Investment: Appr. 3.550 MNOK (440 MUS\$)

Important political conditions:

1. Firm and stable long term policy
2. Demonstrate commitment to advanced biofuel escalation plan
3. Continue double counting system for advanced biofuels
4. Active use of «Governmental instruments»: Innovasjon Norge, ENOVA og Nysnø
5. Moderate Norwegian forest protection

Back-up

Åmli biozin® project – Updated Timeline

