Biozin Holding AS
Industrial partners creating the way from forest to advanced biofuel
Clean energy from Norwegian forest
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 MUSD)
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

1. Preparation and development of design basis
2. Engineering study

10/17  6/18  1Q19  3Q21  4Q21  2Q22  2Q24