



Building a biocarbon and bioenergy industry

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Market update

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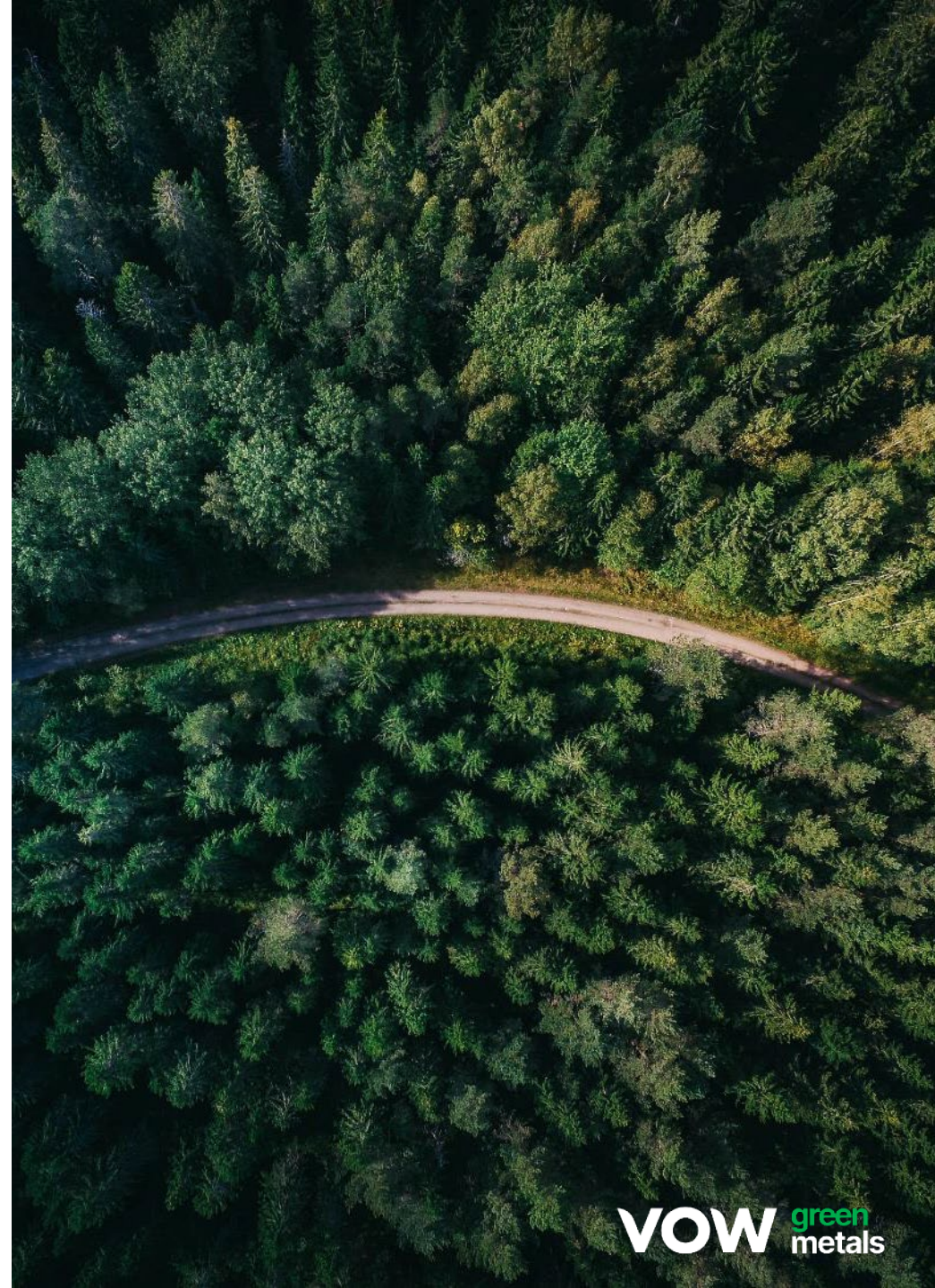
We **recycle** biomass waste streams into:

Biocarbon as a reduction agent for the metallurgical industry

Climate neutral gas to replace fossil energy sources

Q4 and 2022: Highlights

- Planning to start production of biocarbon at Follum as early as third quarter 2023
 - Encouraged by feedback from the market and ongoing feasibility studies
- Strong increase in demand
 - Project pipeline covering amounting to 600,000 tons of biocarbon in addition to Follum
- Follum plant progressing
 - Start of full-scale production scheduled for 2024
- Studies ongoing for expansion of Follum plant to 20,000 tons
 - Several other industrial players are inbound, creating increased demand for biocarbon and renewable energy
 - Would result in significant improvement of economies of scale
- Ongoing discussions for financing of the Follum plant and potential expansion
 - Several alternatives are being evaluated



Financials

Key figures

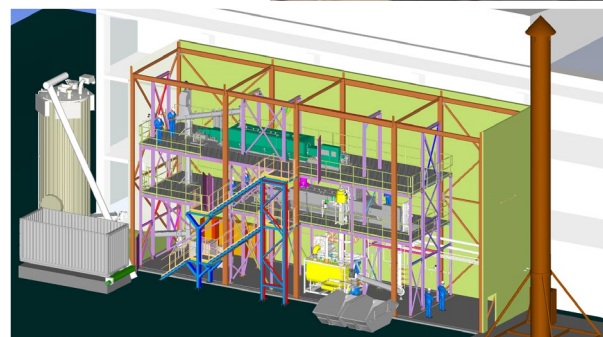
(Amounts in NOK)	Unaudited 2H 2022	Unaudited 2022	Audited 2021
<i>Statement of Income</i>			
EBITDA	(10,720,231)	(17,414,279)	(10,687,829)
EBIT	(10,858,418)	(17,684,336)	(10,724,145)
Profit for the period	(10,527,621)	(17,370,527)	(10,728,446)
<i>Balance sheet</i>			
Total non-current assets		87,440,582	74,856,917
Total current assets		43,531,364	69,441,115
Total assets		130,971,947	144,298,032
Total equity		125,889,623	141,163,570
Total non-current liabilities		178,486	92,980
Total current liabilities		4,903,838	3,041,483
Total equity and liabilities		130,971,947	144,298,032
<i>Cashflow statement</i>			
Result before income tax	(10,527,621)	(17,370,527)	(10,728,446)
Net cash flow from operating activities	4,065,037	4,277,366	3,042,562
Net cash flow from investing activities	(26,918,639)	(50,740,134)	(74,718,916)
Net cash flow from financing activities	(118,867)	38,238,610	150,507,577
Net change in cash and cash equivalents	(33,500,090)	(25,594,685)	68,102,777
Cash and cash equivalents at start of period	76,038,182	68,132,777	30,000
Cash and cash equivalents at end of period	42,538,092	42,538,092	68,132,777

Financial review 2nd half 2022

- EBITDA for 2nd half 2022 negative of 10.7 MNOK
 - Employee expenses
 - Other operating expenses
- Total non-current assets 87 MNOK
 - Process equipment for the Follum plant
 - IP-rights to the factory module
- Total current assets 44 MNOK, of which 43 MNOK cash
- Total equity of 126 MNOK, equity ratio 96%

Early production from mid-2023

- Potential customers and partners have signalled strong interest in having early access to and buying larger quantities of biocarbon for product qualification
- Responding to this, Vow Green Metals is in the process of acquiring a facility for early production of 2,500 tons of biocarbon from third quarter 2023
- Construction of the production plant is underway, presently funded by Vow Green Metals' main owner Vow ASA. Financing is under discussion
- Early production will accelerate qualification of biocarbon, and allow for speedier build up of production when full scale production starts in mid-2024



Location and details of the 2,500 tons biocarbon facility at Follum

Follum 10,000 tons

Status February 2023

- This first full-scale factory, the largest to date in Europe, will initially produce 10,000 tons annually of biocarbon, a renewable metallurgical reduction agent
- The framework approval and work permits have been confirmed
- The first shipment of pyrolysis reactors was delivered at Follum in January 2023

Activities going forward

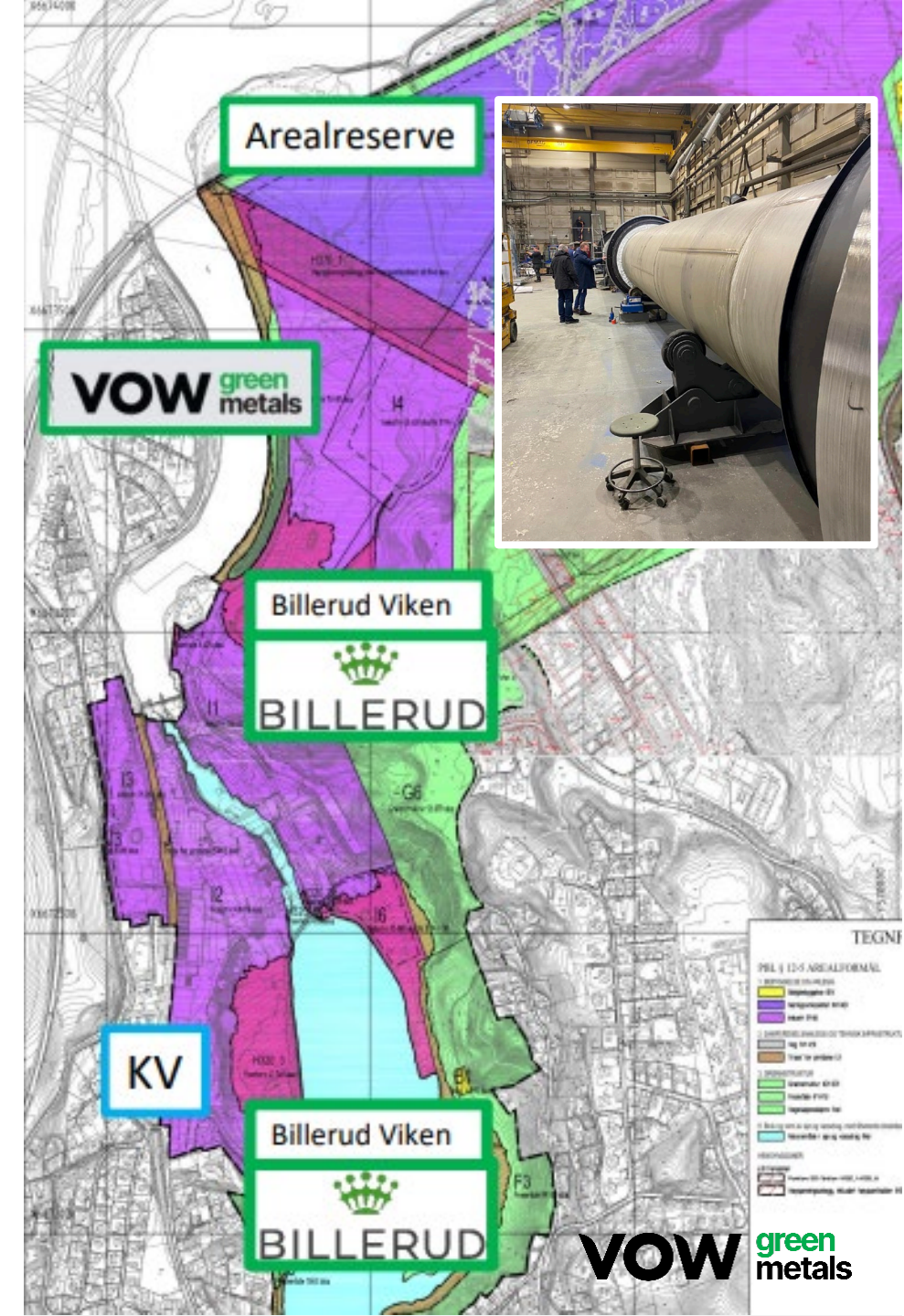
- The project is moving forward to the execution phase during 1st half 2023
- The plant will be operational producing biocarbon from mid-2024



Expansion to 20,000 tons

- The studies for the expansion to 20,000 tons is ongoing at the industrial park at Follum
- The reactor from C.H. Evensen, a subsidiary of Vow ASA, will be a central piece in the expansion
- The reactor has dual energy source and will therefor reduce the need for electricity from the grid
- Billerud and Viken Skog is planning to start production of fiber production for renewable packaging at the site and will use steam in their process making it a good fit with Vow Green Metals
- These synergies will make this a leading ecosystem for valorization of biomass

*C.H.Evensen reactor currently being assembled by Vow.
Map: Potential new industry development projects at Treklyngen*



International expansion with large scale factories

Recent, current and ongoing concept studies totalling 600,000 tons of biocarbon

Norway

Follum 2

- Potential: Additional **10,000 ton** biocarbon

Sawmill company

- Potential: **>20,000 ton** biocarbon
- Feasibility ongoing

Industrial park (NO 1)

- Potential: **30,000 ton**
- Feasibility start in Q1 2023

Industrial park (NO 2)

- Potential: **60,000 ton**
- Concept study in H1 2023

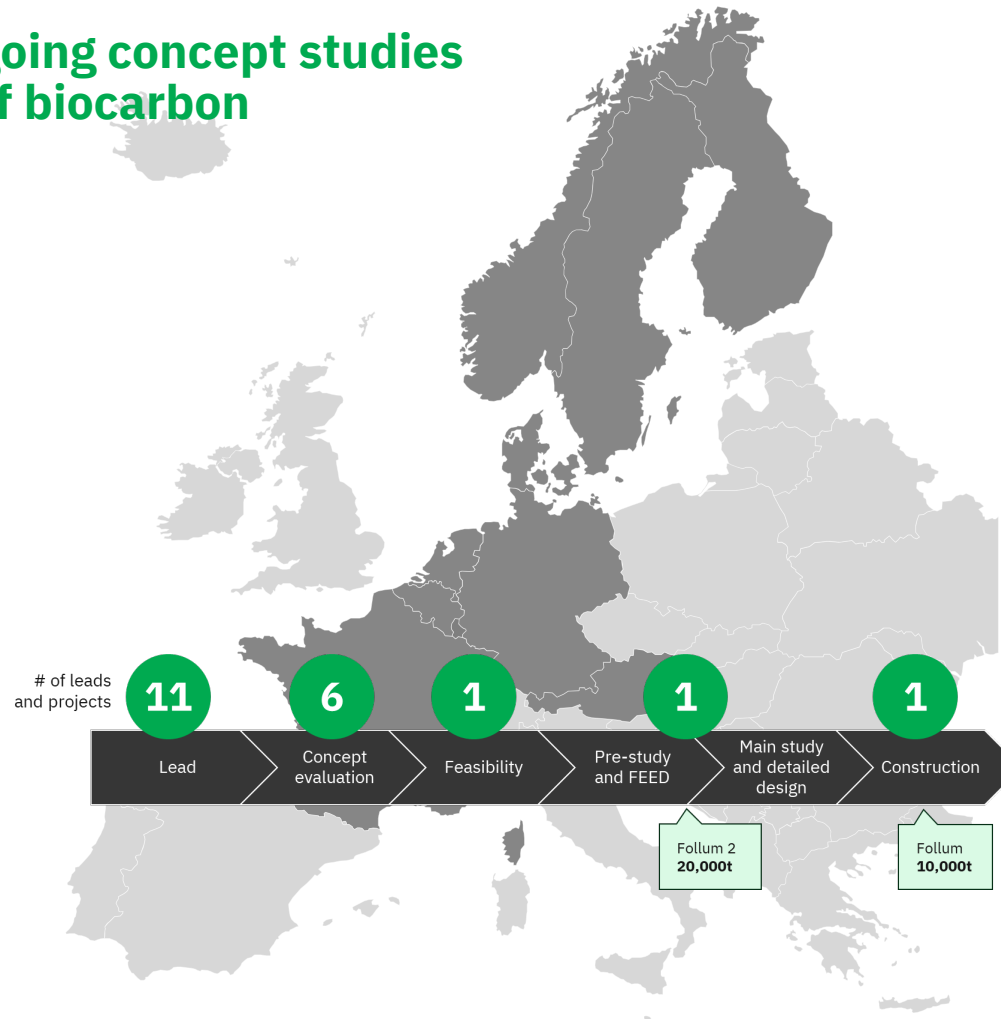
Chemical processing company

- Potential: **25,000 ton** biocarbon

North America

Bioenergy company

- Potential: **>20,000 ton** biocarbon



Nordics

Metallurgical company

- Potential: **50,000 ton** biocarbon
- Biocarbon offtaker

Metallurgical company

- Potential: **50,000 ton** biocarbon
- Pyrogas offtaker

District heating company (FI)

- Potential: **>30,000 ton** biocarbon

District heating company (SE)

- Potential: **20,000 ton** biocarbon

Central Europe

Paper company

- Potential: **>50,000 ton** biocarbon

Building materials company

- Potential: **30,000 ton** biocarbon

Sawmill company

- Potential: **30,000 ton** biocarbon

Metallurgical company

- Potential: **20,000 ton** biocarbon

Chemical and minerals company

- Potential: **50,000 ton** biocarbon

Biocarbon development

- Very promising results with regards to requirements by several Silicon / Ferro Silicon producers
- Compared to charcoal, mechanical durability after flash heating is significantly improved
- It is expected that tuning of the early production unit will further improve the product
- Additionally, we are developing products for other metallurgical verticals like steel, aluminium and manganese

Typical qualification process for reduction agents in metallurgical production processes

Lab tests
~10 kg



Pilot
1-5 tons



**Full scale
qualification**
500-1000 tons



**Industrial
production**



Building a new industry

- Vow Green Metals Follum will be Europe's largest biocarbon production facility, scheduled for start in mid-2024
- Early production from third quarter 2023 with a capacity of 2,500 tons
- Studies ongoing for expansion of Follum plant to 20,000 tons
- Biocarbon development and qualification ongoing and with encouraging results and feedback
- Business development ongoing, with a pipeline of projects covering 600,000 tons of biocarbon, in addition to Follum

VOW green metals

A high-angle, wide shot of a lush green mountain valley. A winding asphalt road curves through the dense forest, with a white semi-truck traveling along it. In the background, snow-capped mountain peaks rise above a layer of clouds. The overall tone is natural and serene, emphasizing the company's connection to nature.

VOW green metals

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