

2nd half 2021

February 25, 2022 - Vow Green Metals

Revolutionising metallurgical industries by replacing fossil carbon with biocarbon made from forest and wood waste





Contents

Vow Green Metals AS ("VGM" or the "Company") will accelerate the green shift by producing advanced biocarbon for the metallurgic industry and CO₂-neutral gas for energy intensive industries.

1 Key Highlights 2021

Main milestones

2 Financial review

A first mover in decarbonizing industry

3 Vow Green Metals

Create shareholder value through renewable solutions

4 Operational review

The cost of CO₂ emissions is increasing

5 Financials 2nd half 2021

Fact and figures



1 - Key Highlights 2021

January	Registered as a legal entity
February	Signed Letter of Intent with Elkem
July	Demerger and listed on Euronext growth Company fully financed with equity raise of NOK 150 mill and ENOVA grant of NOK 80.7 mill.
October	Ordered process equipment from Vow ASA
October	Signing of Feedstock agreement with Lindum AS

Events **after** the period

February 2022	Potential 50,000 tonnes of biocarbon production Signed Letter of Intent with Global producer of Non-Ferrous Metals with a potential of 50,000 tonnes of biocarbon production by 2025.
Jan - Feb 2022	Further strengthening of the organisation Vow Green Metals further strengthens the organisation with several management and support positions. Together with the cooperation agreement with Vow, we have a world-class team to support the scale of our operations and roll-out of new facilities with further projects.

2 - Financial review

Vow Green Metals recorded an operating loss (EBITDA) for 2nd half 2021 of NOK 9,030,629. The Operating loss was due to employee expenses (Salary and Social security tax), expenses for the Euronext Growth Oslo stock exchange listing (Arrangers fees and Legal fees), and other operating expenses.

Net loss after Net financial items for 2nd half 2021 was NOK 9,071,247.

Total non-current assets as of 2021 was Nok 74,856,917 and consist mainly of the ordering of Process equipment for the Follum plant.

Total current assets were 69,441,115 with a cash position of NOK 68,132,777.

Total equity after retained earnings of NOK 141,163,570. Total equity and liabilities for 2021 was NOK 144,298,032.

The Company is fully financed on the Follum plant, financed with NOK 150 million in equity raise and in addition ENOVA grant up to NOK 80.7 million.

Key Figures

(Amounts in NOK)		2H-2021	FY 2021
Statement of Income	EBITDA	-9 030 629	-9 354 944
	EBIT	-9 066 946	-9 391 260
	Profit for the period	-9 071 247	-9 395 562
Balance sheet	Total non-current assets		74 856 917
	Total current assets		69 441 115
	Total assets		144 298 032
	Total equity		141 163 570
	Total non-current liabilities		152 763
	Total current liabilities		2 981 700
	Total equity and liabilities		144 298 032
Cashflow statement	Result before income tax	-9 071 247	-9 395 562
	Net cash flow from operating activities	386 059	1 673 362
	Net cash flow from investing activities	-73 750 057	-74 718 916
	Net cash flow from financing activities	573 893	150 543 893
	Net change in cash and cash equivalents	-81 861 352	68 102 777
	Cash and cash equivalents at start of period	149 994 129	30 000
	Cash and cash equivalents at end of period	68 132 777	68 132 777



3 - Vow Green Metals

Vow Green Metals AS will accelerate the green shift by producing advanced biocarbon for the metallurgical industry and CO₂ neutral gas for energy intensive industries.

The company was incorporated on 14.01.2021 and registered as a legal entity on 15.02.2021, demerged from Vow ASA on 09.07.2021 and subsequently listed on Euronext Growth on 12.07.2021.

What we do

In many metallurgic industries, when producing raw metals, carbon is consumed as a reactant to convert metal ores to metal. The purpose is thus to replace the use of fossil carbon, having a high climate footprint with use of biocarbon, having a neutral footprint. With an annual global need for carbon in such processes in the order of 56 mill tons of met coal in EU, use of biocarbon will make a difference.

In our industrial sized plants, we will use wood waste and other biomass waste streams as feedstock to create Biocarbon and CO₂-neutral gas through pyrolysis. Biocarbon is a material that can replace fossil coal as a reduction agent in the metallurgical industry. Our CO₂-neutral gas is a green alternative for industries currently relying on natural gas, either as an energy source or as a product in a chemical manufacturing process

Feedstock

A large share of wood waste is not recycled today but instead incinerated or sent to landfills. This is a big challenge as millions of tons of wood waste in Europe

is under-utilized and not contributing to the circular economy.

Our solution is to recycle wood waste and create advanced Biocarbon materials and CO₂-neutral gas which can replace fossil products used by the industry in Europe. For many types of wood waste, pyrolysis is the only feasible and commercially viable solution for recycling. Other recycling alternatives have strict requirements, meaning only a fraction of wood waste can be utilized by current recycling solutions. The high temperatures in a pyrolysis oven removes impurities like paint and lacquer. In addition, the fiber quality in some wood waste is not good enough for further recycling by other technologies but can still be used as feedstock to create Biocarbon.

Biocarbon

Fossil cooking coal is the primary source of carbon in the metallurgical industry today. Carbon is an essential part of the chemical process to make metals, see illustration. Many metals are found in nature as oxides, i.e. the metal element is bound to at least one oxygen atom. To produce pure metals, carbon is used as a reduction agent where it binds to the oxygen atoms and pure metal is produced.

The metallurgical industry needs carbon to be able to produce metals with their current production methods. The only source of carbon for this is today fossil carbon, which Vow Green Metals aim to replace. The metallurgical industry today accounts for almost 10%



3 - Vow Green Metals

of global CO₂ emissions. Hence, introducing Biocarbon as a reduction agent instead of fossil coal will be a critical step for the metallurgical industry to reach net zero emissions. Our Biocarbon can replace fossil coking coal, without any conversion cost.

In sum, Biocarbon is currently the only feasible solution for many metallurgical companies to reach net-zero emissions as they rely on a chemical process that cannot be electrified or switch to green hydrogen.

CO₂-neutral gas

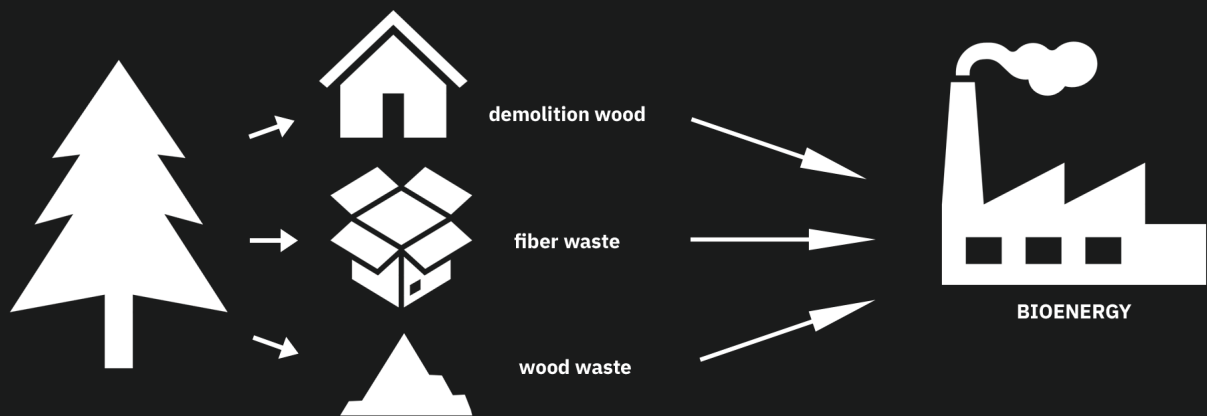
The industry in Europe is using more than 1.000 TWh natural gas annually. Some industries can electrify their energy consumption, but for most this will require significant investments in new equipment and increased capacity in the electrical grid.

In 2020, the total energy consumption in EU was more than 16,000 TWh, and only 15% of this was from renewable sources. In 'Fit for 55', the EU has set a target of 40% renewables in the overall energy mix by 2030. If all the green energy would come from renewable electricity, the renewable electricity generation would have to increase 4.4 times from 2020-levels to 2030 and the total electricity generation would have to increase 1.6 times. This means that electrification will not be a feasible solution for all industries to reach net zero emissions in the medium to long term. CO₂-neutral pyrolysis gas will be a better and quicker way for industries to phase out natural gas because it has shorter lead times, can use current infrastructure and is scalable.



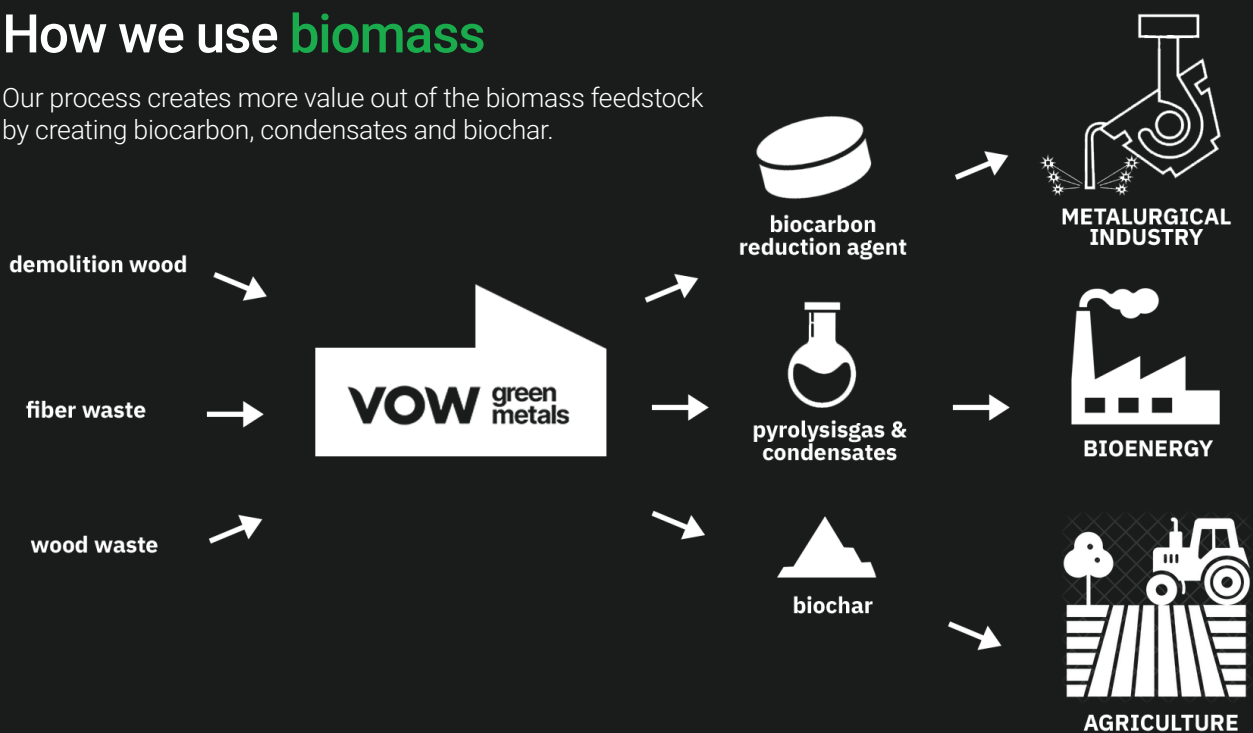
Traditional way of **biomass** usage

Biomass is burned in boilers to produce bio energy.



How we use **biomass**

Our process creates more value out of the biomass feedstock by creating biocarbon, condensates and biochar.



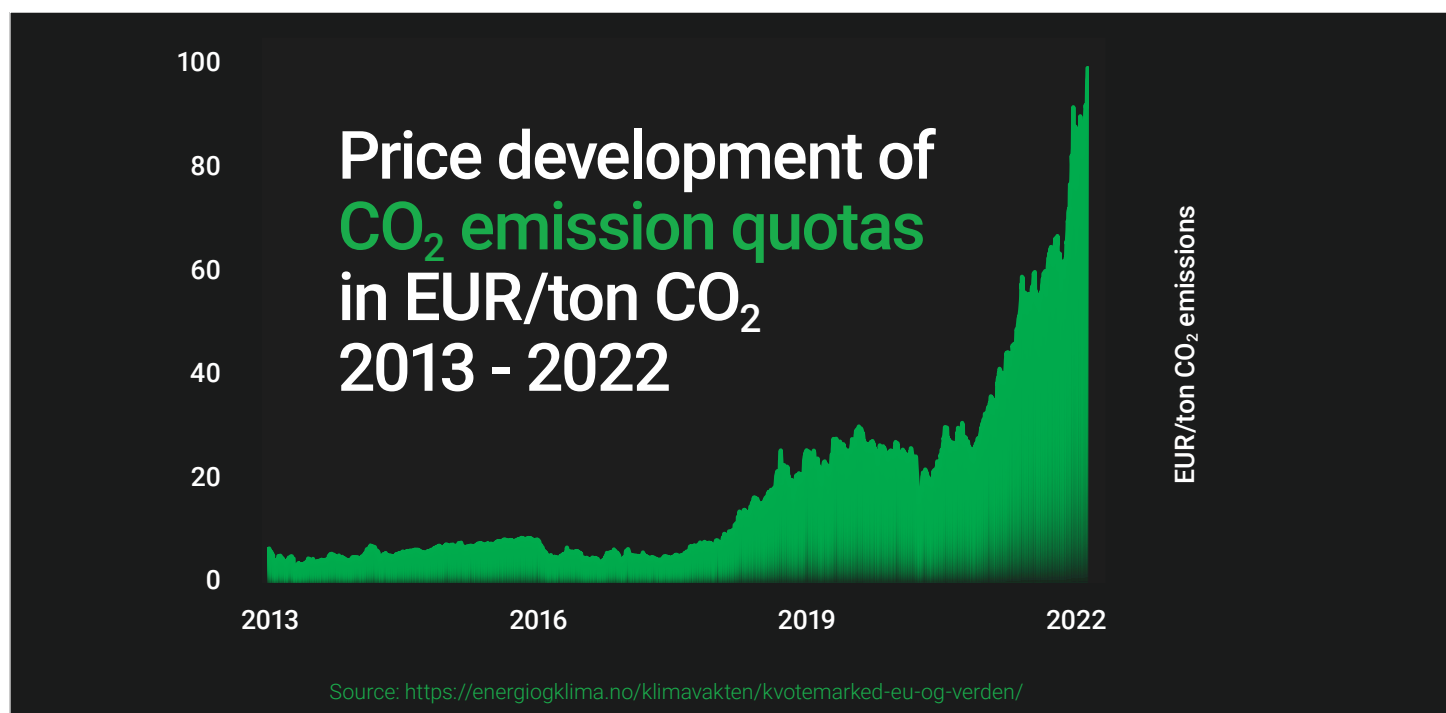


4 - Operational review

On 9 July 2021, Vow Green Metals AS was demerged from Vow ASA and shortly after listed on Euronext Growth Oslo.

The process equipment for our Follum project was ordered in October 2021 from Vow ASA. The contract is valued at NOK 215 million. Shortly following this, Vow Green Metals AS signed the agreement with Lindum AS for the supply of demolition wood feedstock for the Follum project. With the key components for production now in place, Vow Green Metals has throughout the period focused on project deliveries and timeline towards our first Biocarbon expected to reach the market by the summer of 2023.

One of the key market drivers for our products is the CO₂ emission costs. Analysts have increased their 2030-estimates year over year. In 2020, the expectation was that CO₂ prices would be below 90 EUR/ton, a price that was exceeded already in the following year. Latest estimates by Vertis Environmental Finance in January 2022 expect a CO₂ price in 2030 to be 113-169 EUR/ton.





4 - Operational review

As a key building block of the European Green Deal, Europe's agenda for sustainable growth, the European Commission adopted the new circular economy action plan (CEAP) in March 2020. This supports our roll-out of further projects as well as it lays out the EU's transition to a circular economy and is a prerequisite to achieve the EU's 2050 climate neutrality target and to halt biodiversity loss.

The objectives of the new circular economy action plan are to make sustainable products the norm in the EU, focusing on sectors where the potential for circularity is high, including packaging, construction, buildings and food. These are areas where Vow Green Metals AS can contribute, making Biocarbon and CO₂-neutral gas from biomass waste.

In addition, of recent events, we have in February signed a Letter of Intent with Global producer of Non-Ferrous Metals with a potential of 50,000 tonnes of biocarbon production. The parties will map feedstock supply chains and evaluate a business model for off-take of CO₂ neutral gas.

"For Vow Green Metals, which specialise in building, owning and operating facilities for production of biocarbon based on sustainable feedstock, this new partnership is a perfect match. We take great pride in supporting this company on its journey towards sustainable production, and we are impressed with its clear targets and its commitment to act now," said Cecilie Jonassen, CEO of Vow Green Metals.

During 2nd half 2021 (and until Feb 2022) we have not had any effects from Covid-19. However, if the pandemic in the time to come were to cause delays in the delivery of the equipment ordered and building for our Follum project this can postpone the project. Vow Green Metals has close cooperation with our suppliers and key functions to make sure that the necessary support functions are in place if this were to occur and prevent any unnecessary delays.

Environmental, Social, and Governance (ESG)

Vow Green Metals AS enables industry to undergo a significant green restructuring to achieve CO₂ neutrality by 2050. By replacing fossil carbon with biocarbon and CO₂ neutral gas made from forest and wood waste, Vow Green Metals is accelerating the green shift and combatting climate change.

While developing a profitable biocarbon process, Vow Green Metals shall conduct responsible business practices with respect to both the environment, people, and society. This means that the company will work systematically on issues as human and labour rights, EHS (environment, health and safety), non-discrimination, anti-corruption, responsible sourcing, and responsible marketing practices. Vow Green Metals shall respect fundamental human rights as described in international human rights conventions such as the UN Convention on Human Rights and the labour rights conventions of the International Labour Organization (ILO). VGMs operations with its new plant at Follum and further biocarbon business are committed to follow strict EHS standards. To promote responsible business practices, Vow Green Metals is facilitating good dialogue with its stakeholders.

The United Nations' Sustainable Developments Goals (SDGs) are a global call of action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. Vow Green Metals works to meet several of these goals and puts special emphasis on the following goals:



SDG 7 - Affordable and clean energy

We are enabling metallurgical industry to replace fossil fuels with high value biocarbon in their metal making processes. Our biocarbon and CO₂ neutral gas provide clean and CO₂ neutral energy for the industry.

SDG 9 - Industry, innovation and infrastructure

As a pioneer and an industrial processing company, we offer industrial production of biocarbon which plays a crucial role in the ongoing decarbonizing of metallurgical industry and the green transition.

SDG 12 - Responsible consumption and production

With our environmentally friendly production of biocarbon and CO₂ neutral gas, we add value to the biomass life cycle, and thus we are enhancing circular economy.

SDG 13 - Climate action

We decarbonize industry through production of biocarbon that can be used as a CO₂ neutral reduction agent in metallurgical industry. In addition, our CO₂ neutral gas can be used as energy and replace fossil fuels.



Outlook

Most companies in the metallurgical industry have committed to comprehensive decarbonising programs in response to new regulation and expectations from investors and customers. Vow Green Metals has a firm ambition to help the metallurgical industry reach their goals, replace fossil coal with Biocarbon, and supply energy intensive industries with CO₂ natural gas.

In order to meet the EU's ambitious goal to reduce its greenhouse emissions with 55% by 2030 and become carbon neutral by 2050, it is vital with industrial set-ups like Vow Green Metals. To achieve CO₂-neutrality, clear definitions of what is sustainable is needed. Therefore, the EU is currently creating a common classification system for sustainable economic activities called the EU taxonomy.

The transition to a circular economy is part of the EU Taxonomy. A circular economy implies that businesses ensure the retention of value after a product has been used, for example through refurbishing, remanufacture or recycling. To improve recycling rates, the recovery and valorization of biomass waste is critical.

Vow Green Metals has confirmed the agreement with Vow ASA for the delivery of engineering services, project management and process equipment to the factory at Follum. This work continues, and the equipment is currently being produced for delivery during the first half of 2022 according to the original plan.

The Follum plant is our first phase, however with increasing CO₂ emission cost that will incentivize metallurgical companies to chase net zero emissions. This trend will be even stronger as their customers require carbon neutral materials, both now and in the future. Metallurgical companies must take part in the green transition in order to be competitive in 2030 and beyond.

As an effect, the Vow Green Metals has initiated phase two and have signed a Letter of Intent with a Global producer of Non-Ferrous Metals with a potential of 50,000 tonnes of biocarbon production. Together with Vow ASA, the company will focus on the next phase and continue to scale our production of biocarbon production over the next years. We are working on standardizing our factory module further, contributing to a faster roll-out. In addition, we are working closely with Vow ASA to connect directly to the European Gas Grid and contributing to the EU goal of more 40% renewables in the overall energy mix by 2030.

Vow Green Metals is scaling our operations and aim to become the leading supplier of advanced biocarbon and producer of CO₂-neutral gas.





5 - Financials 2nd half 2021

Income statement

<i>(Amounts in NOK)</i>	<i>Note</i>	Unaudited 2H-2021	Unaudited FY 2021
Employee expenses	2	-2 135 145	-2 453 589
Other operating expenses	3	-6 895 484	-6 901 356
EBITDA		-9 030 629	-9 354 944
Depreciation		-36 316	-36 316
EBIT		-9 066 946	-9 391 260
Interest cost		-2 308	-2 308
Interest expenses - leasing		-1 993	-1 993
Net financial items		-4 301	-4 301
Profit before tax		-9 071 247	-9 395 562
Income tax expenses		0	0
Profit for the period		-9 071 247	-9 395 562

Balance sheet - Assets

<i>(Amounts in NOK)</i>	<i>Note</i>	Unaudited 6/30/2021	Unaudited FY2021
ASSETS			
Non-current assets			
Intangible assets	7	968 859	968 859
Assets under construction	8	-	73 750 057
Right-of-use assets		-	138 001
Total non-current assets		968 859	74 856 917
Current assets			
Other receivables		-	1 308 338
Cash and cash equivalents	4	149 994 129	68 132 777
Total current assets		149 994 129	69 441 115
Total assets		150 962 988	144 298 032

Balance sheet - Equity and Liabilities

<i>(Amounts in NOK)</i>	<i>Note</i>	Unaudited 6/30/2021	Unaudited FY2021
EQUITY AND LIABILITIES			
Equity			
Share capital	5	326 087	1 071 809
Share premium		149 673 913	149 487 322
Retained earnings		-324 315	-9 395 562
Total equity		149 675 685	141 163 570
Liabilities			
Non-current liabilities			
Non-current lease liabilities		-	152 763
Total non-current liabilities		-	152 763
Current liabilities			
Trade creditors		-	1 412 413
Payables to associates	6	1 287 302	968 859
Public duties payable		-	458 828
Current lease liabilities		-	-
Other current liabilities		-	141 600
Total current liabilities		1 287 302	2 981 700
Total liabilities		1 287 302	3 134 463
Total equity and liabilities		150 962 988	144 298 032



Balance sheet

Lysaker, 2022-02-25 – The board of directors – Vow Green Metals AS

Narve Reiten

Chairman Board member

Line Tønnessen

Board member

Elise Must

Board member

Carl Rembert Hartmann

Board member

Kari Stine Tærum

Board member

Cashflow statement

<i>(Amounts in NOK)</i>	<i>Note</i>	Unaudited 2H-2021	Unaudited FY2021
Cash flow from operating activities			
Result before income tax		(9,071,247)	(9,395,562)
Adjustments:			
Changes in other receivables		(1,308,338)	(1,308,338)
Change in current liabilities		1,694,398	2,981,700
Net cash flow from operating activities		(8,685,187)	(7,722,199)
Cash flow from investing activities			
Investments in tangible assets			(968,859)
Investments in assets under construction		(73,750,057)	(73,750,057)
Net cash flow from investing activities		(73,750,057)	(74,718,916)
Cash flow from financing activities			
Share capital reduction		-	(30,000)
Share capital increase		-	150,000,000
Proceeds from issuing stock		559,131	559,131
Leasing obligations		14,761	14,761
Net cash flow from financing activities		573,893	150,543,893
Net change in cash and cash equivalents		(81,861,352)	68,102,777
Cash and cash equivalents at start of period		149,994,129	30,000
Cash and cash equivalents at end of period		68,132,777	68,132,777

Statement of changes in Equity

12/31/2021

<i>(Amounts in NOK)</i>	Share capital	Share premium	Retained earnings	Total equity
Equity at 14.01.21	30,000	-	-	30,000
Profit for the period	-	-	-9,395,562	-9,395,562
Share capital reduction	-30,000	-	-	-30,000
Share capital increase	1,071,809	148,928,191	-	150,000,000
Stock options *	-	559,131	-	559,131
Equity at 31.12.2021	1,071,809	149,487,322	-9,395,562	141,163,570

* Stock options were made in October 2021 in connection with exercise of employee stock option program.



Note 1 – Accounting Principles

The financial statements have been prepared in accordance with the Norwegian Accounting law and regulations for simplified International Financial Reporting Standards (IFRS). This generally implies that recognition and measurement are aligned with international accounting principles (IFRS), while presentation and disclosures are in accordance with the Norwegian Accounting Act and good accounting practice.

The Company was demerged from the parent company Vow ASA on 09.07.2021 in a subsequent listing on Euronext Growth on 12.07.2021. The Board of VGM appointment Cecilie Jonassen and Lars Mårdalen, as Chief Executive Officer (CEO) and Chief Financial Officer (CFO) respectively of the new company. The appointments are important steps towards the demerger and separate listing of the company.

Revenues

Arising from sales of goods:

Sales of goods are recognised when the goods are delivered, and title has passed to the customer. Revenue is measured at the fair value of the consideration received or receivable.

Arising from delivery of services:

Revenue is recognized when the service is performed. Revenue is measured at the fair value of the consideration received or receivable.

Cash and cash equivalents

Cash and cash equivalents include cash, bank deposits and other monetary instruments with a maturity of less than three months at the date of purchase.

Cost of sales and other expenses

In principle, cost of sales and other expenses are recognized in the same period as the revenue to which they relate. In instances where there is no clear connection between the expense and revenue, the apportionment is estimated. Other exceptions to the matching criteria are disclosed where appropriate.

Income taxes

Tax expenses are matched with operating income before tax. Tax related to equity transactions e.g. group contribution, is recognized directly in equity. Tax expense consists of current income tax expense and change in net deferred tax. The tax expense is allocated to ordinary income and the effect of extraordinary items in accordance with the respective taxable income. Deferred tax liabilities and deferred tax assets are presented net in the balance sheet.



Valuation and classification of assets and liabilities

Assets intended for permanent ownership or use in the business are classified as non-current assets. Other assets are classified as current assets. Receivables due within one year are classified as current assets. The classification of current and non-current liabilities is based on the same criteria.

Current assets are valued at the lower of historical cost and fair value.

Fixed assets are carried at historical cost but are written down to their recoverable amount if this is lower than the carrying amount and the decline is expected to be permanent. Fixed assets with a limited economic life are depreciated in accordance with a reasonable depreciation schedule.

Shares in subsidiaries and associates

Subsidiaries and investments in associates are carried at cost in the parent company accounts. A write-down to fair value will be performed if the impairment is not considered to be temporary, and an impairment charge is deemed necessary according to generally accepted accounting principles. Dividends and group contributions are recognized as other financial income.

Intangible fixed assets

Expenses relating to the development of intangible assets are recognised in the income statement as incurred.

Intangible assets that are acquired separately, are recognised at historical cost. Intangible assets acquired in a business combination, are recognised at historical cost when the criteria for balance sheet recognition have been met.

Intangible assets with a limited economic life are amortised on a systematic basis. Intangible assets are written down to the recoverable amount if the expected economic benefits are not covering the carrying amount and any remaining development costs.

Note 2 – Employee expenses

<i>(Amounts in NOK)</i>	2H-21
Salaries	1,580,769
Social security tax	473,089
Total employee expenses	2,053,858

Note 3 – Other operating expenses

<i>(Amounts in NOK)</i>	2H-21
Legal	1,026,192
Audit Fees	109,700
IPO Fees	2,995,112
Other expenses	2,764,480
Total	6,895,484

Note 4 – Cash and Cash equivalents

<i>(Amounts in NOK)</i>	12/31/2021
Bank deposits	68,132,777
Total cash and cash equivalents	68,132,777

Of this, there is no restricted cash for withheld taxes from employees' salaries.

Note 5 – Share Capital and Shareholder information

<i>(Amounts in NOK)</i>	12/31/2021
Number of outstanding shares at 14 January	300
Share capital reduction	-300
Share capital increase	50,167,224
Share capital increase - demerger	114,259,870
Share capital increase - employee stock options	466,665
Number of outstanding shares at 31 December	164,893,759
Nominal value NOK per share at 31 December	0.0065
Share capital NOK at 31 December	1,071,809

Note 6 – Transactions with associates

<i>(Amounts in NOK)</i>	12/31/2021
Liabilities	
Vow ASA	Intangible assets 968,859
Total payables to group companies	968,859

Note 7 – Intangible assets

The company has acquired the value of the development cost for the new planned biocarbon plant at Follum. Depreciation will start once the Follum plant is starting production.

<i>(Amounts in NOK)</i>	R&D
Cost:	
At 14 January 2021	-
Additions	968,859
At 31 December 2021	968,859
Carrying amount at 31 December 2021	968,859
Useful life	10 years
Depreciation method	Linear


The technical and system solutions know-how developed in this R&D project was acquired from Vow ASA with effect from 1 April 2021.

The Company has the intellectual property rights to the full scale plant solution for production of biocarbon for the metallurgical industry (the "VGM Factory Module"). The value of the development cost for the VGM Factory Module is included as an intangible asset in the balance sheet. This Factory Module will be used at the planned biocarbon plant at Follum.

Note 8 – Assets under construction

The company formally signed the contract for the process equipment for the Follum project. According to which Vow ASA will deliver process equipment and engineering support to Vow Green Metals' biocarbon plant at Follum in Norway. The contract is valued at NOK 215 million.

<i>(Amounts in NOK)</i>	Assets under construction
Cost:	
At 14 January 2021	-
Additions	73,750,057
At 31 December 2021	73,750,057
Carrying amount at 31 December 2021	73,750,057



Revolutionising metallurgical industries by replacing fossil carbon
with biocarbon made from forest and wood waste.

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