Half year presentation

25 August 2021



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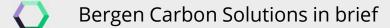
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## **Agenda**







Technology update

Strategy

Key developments

Outlook and summary

**Q**&A







## Strong momentum in busy half year

#### Financial results and financing (Mnok)

- Revenue 0.1
- Operating profit –11.8
- Cash balance 100.5
- Number of shareholders >3.000
- Market cap 1.3 BNOK

#### **Operations**

- Listing on Euronext Growth 19 April 2021
- LOI Antwerp Port Authority 27 April 2021
- LOI Japanese company 29 April 2021
- LOI Japanese company 14 May 2021
- LOI Chinese company 8 June 2021
- LOI Yara 23 June 2021
- LOI Jackon 30 June 2021

### **Subsequent events**

Option agreement with Vefsn municipality, Norway, 17
August 2021

## **Financial highlights**

Key figures	First half year		Full year
Amounts in NOK thousands	2021	2020	2020
Total revenue and other income	147	0	1
Total operating expenses	11 948	1 652	4 616
Operating profit (loss)	(11 801)	(1 652)	(4 615)
Net profit (loss) for the period	(11 820)	(1 652)	(4 654)
Net change in cash and cash equivalents	59 970	(3 204)	(32 994)
Cash and cash equivalents, end of period	100 467	4 299	40 497
Equity	108 767	8 556	43 491
Total assets	112 684	10 757	48 544







WE USE CO<sub>2</sub> TO CREATE

## **Carbon Nanofiber**



## A pioneer within CO<sub>2</sub> value creation

Enabling sustainable value creation from CO2 utilization...

...through **modular production** units with proven and superior cost-efficient technology...

...producing material with extreme high strength-to-weight ratio and exceptional thermal and electrical conductivity...

... with a **broad range of** application areas



Carbon nanotubes



Electronics Automotive Aerospace & defence







Uses captured or pure CO<sub>2</sub> as main input in CNF production

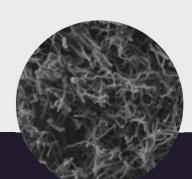
A production module consisting of two 40ft containers is expected to produce 6.5 tonnes CNF a year out of 30 tonnes CO<sub>2</sub>

Market price for CNF range from NOK 5 000 to NOK 27 000 per kg, depending on quality

New applications are continuously being developed

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## Bergen Carbon Solutions at a glance



# GREEN CARBON NANOFIBER TECHNOLOGY PROVIDER

#### **KEY FACTS**



Founded in 2016



Located in Bergen, Norway



Competent team of engineers and PhDs



Unique and patented technology



Commercial production site secured



Listed on Euronext Growth Oslo (Ticker: BCS)

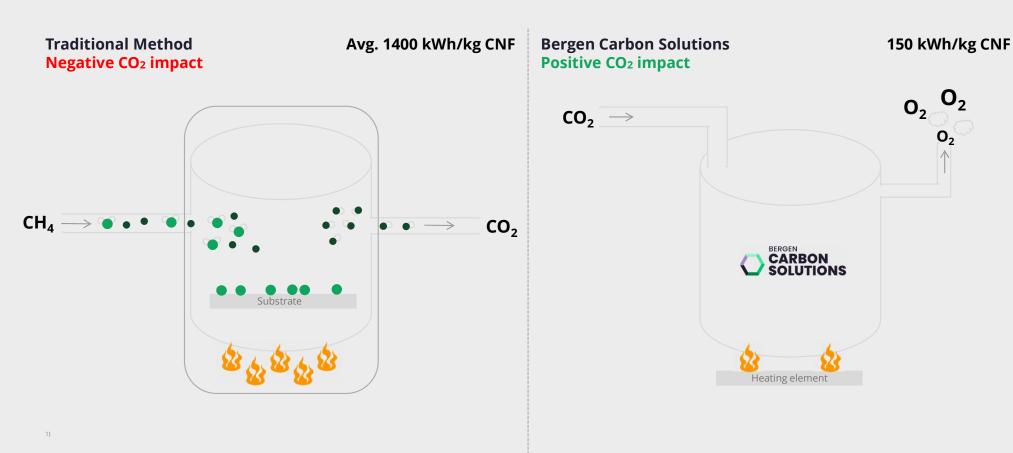








# Our technology uses significantly less energy than conventional methods



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## Zero emission product enabling a low carbon footprint

We've developed an **energy efficient**, **carbon negative** method to produce CNF out of CO<sub>2</sub>, using **renewable energy**, with O<sub>2</sub> as the only bi-product

Our product **ECO-C** is also known as **green carbon nanofiber** 













Converting CO<sub>2</sub> into CNF will positively contribute to UN's Sustainable Development Goals.

Our environmental efforts will help our customers:

- Reduce their carbon footprint
- Market their products as carbon positive
- Apply for grants designed for environmental purposes





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## One material, two products

#### **OUR PRODUCT SEGMENTS**

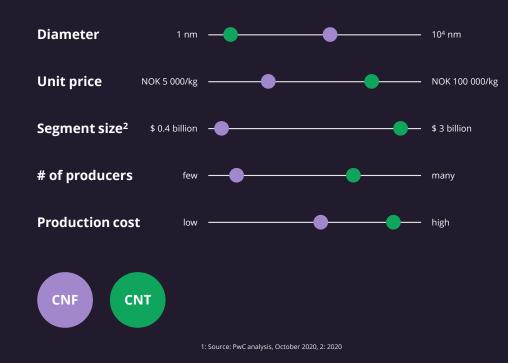
Our technology can produce both **carbon nanofiber (CNF)** and **carbon nanotubes (CNT)** 

**CNT** are smaller in diameter, tubular in form and more difficult to produce than CNF, and thus **have** a **higher product price** 

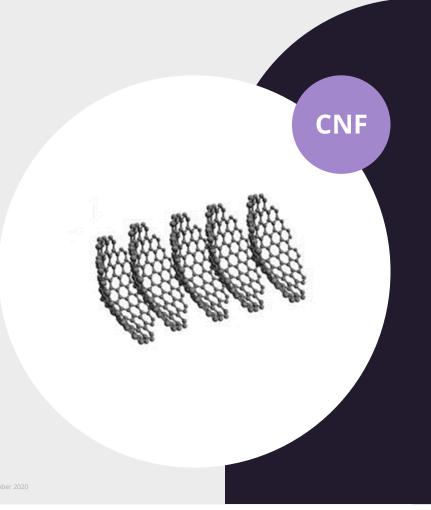
Most of the **production volume in the pilot** module has been **CNF** 

Short-term GTM **focus is on CNF**, before expanding into CNT

#### **HOW THEY COMPARE**<sup>1</sup>



## **Carbon nanofiber (CNF)**



Lighter than plastic, stronger than steel, with exceptional thermal and electrical conductivity, properties that can be transferred when combined with other materials

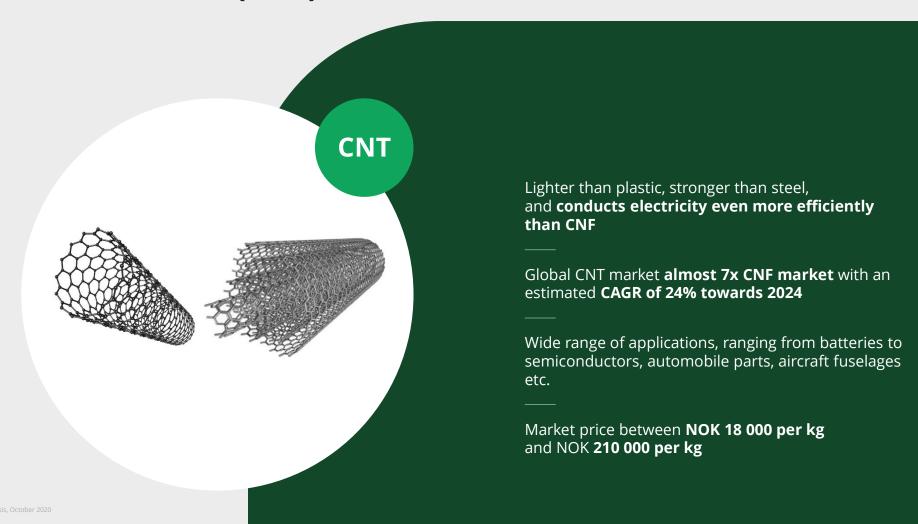
**Estimated CAGR of 27% towards 2024**, covering a wide range of industrial and technological applications

Market price between **NOK 5 000 per kg** and **NOK 27 000 per kg** depending on quality

Our products cover the whole range of qualities, meeting different customer needs

Source: PwC analysis, October 202

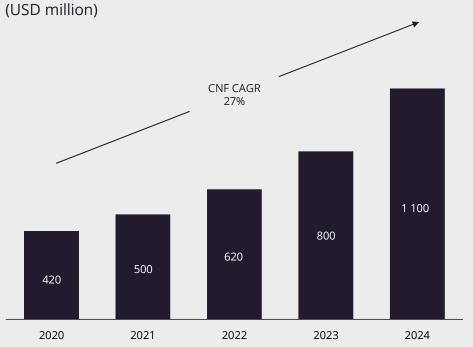
## **Carbon nanotubes (CNT)**



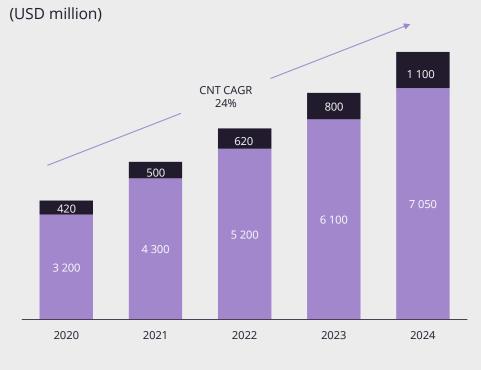


# Total market in 2024 estimated to be NOK 70 billion (USD 8 bn)

### CNF MARKET EXPECTED TO MORE THAN DOUBLE BY 2024



#### **CNT INCREASES FUTURE MARKET POTENTIAL 7X**



■ CNT ■ CNF



## Market potential and product segments



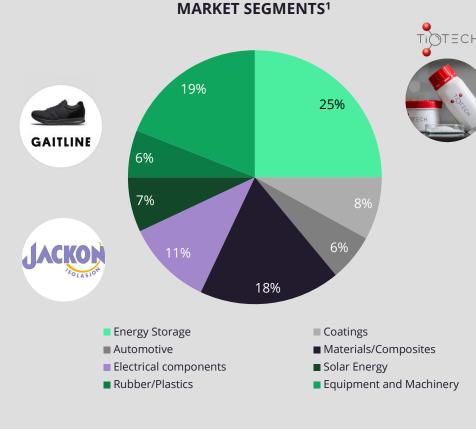
400+ potential customers – offtake agreements actively discussed with several companies



Interest from potential customers in >30 countries



New applications areas continuously being developed through R&D with existing and potential new customers

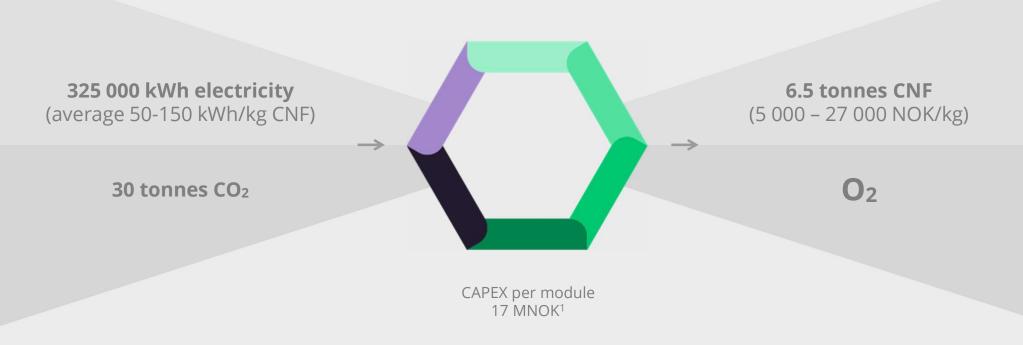


1: Based on current customer pipelin

#### **ECONOMICS**



# Attractive and profitable growth opportunity Example: one production module







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## Green carbon nanofiber technology provider

## - a pioneer within CO<sub>2</sub> value creation

Enabling sustainable value creation from **CO**<sub>2</sub> **utilization**...

Uses captured or pure CO<sub>2</sub> as main input in CNF production

...through modular production units with proven and superior cost-efficient technology...



A production module consisting of two 40ft containers is expected to produce 6.5 tonnes CNF a year out of 30 tonnes CO<sub>2</sub> ...producing material with extreme high strength-to-weight ratio and exceptional thermal and electrical conductivity...



Carbon nanotubes



Market price for CNF range from NOK 5 000 to NOK 27 000 per kg, depending on quality

... with a **broad range of application** areas







Electronics Automotive

Aerospace & defence

Construction







New applications are continuously being developed

Description

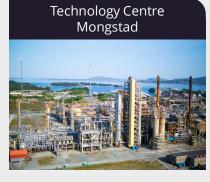
## **Industrial scale roll-out**







BIR is the regional waste management company in the Bergen area, with an WtE plant located in Rådalen



One of the world's largest and most flexible plants for testing and improving CO<sub>2</sub> capture technologies



Among the largest aluminum smelter sites in Europe

		WtE plant located in Rådalen	improving CO <sub>2</sub> capture technologies				
Site CO <sub>2</sub> emissions/yea	ır	~200 000 tonnes	~100 000 tonnes	~400 000 tonnes			
CNF potential with BCS	5	~40 000 tonnes	~20 000 tonnes	~40 000 tonnes			
Planned BCS production							
Conditagle	Class CO.	CO. from fluo gas	Cantural CO.	Class CO-with law impurities			

Feedstock	Clean CO <sub>2</sub>	CO <sub>2</sub> from flue gas	Captured CO <sub>2</sub>	Clean CO <sub>2</sub> with low impurities
# BCS modules	1 module	1 module	1 – 5 modules	1 – 5 modules
Exp. CNF volume	3.25 tonnes	3.25 tonnes	6.5 – 32.5 tonnes	6.5 – 32.5 tonnes
Status	Prod. start exp. Q1 2022	Prod. start exp. Q1 2022	Prod. start exp. Q1 2022*	Prod. start exp. Q2 2022
			*Pending signed agreement	





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## **Euronext Growth Listing**



Euronext Growth Listing on 19 April 2021 (ticker: BCS)

Raised capital: 120 MNOK

Cornerstone investors: Saga Pure, Nordea and Awilco

Number of shareholders: >3000

Market cap as of 24 August 2021: 1.3 BNOK

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## **Antwerp Port Authority**



LOI entered on 27 April 2021 with Antwerp Port Authority – home to the largest integrated energy and chemical cluster in Europe

The ideal location to set up new collaboration and find innovative ways of cutting CO2 emissions

Air Liquide, BASF, Borealis, ExxonMobil, INEOS, Fluxys, Port of Antwerp and Total joined forces at the end of 2019 to set up the Antwerp@C project which will investigate the technical and economic feasibility of building CO2 infrastructure to support future CCUS (Carbon Capture Utilization & Storage) applications

CO2 capture and utilization technology, as presented by Bergen Carbon Solutions AS, may play an important role to reach climate-neutrality in the coming decades

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## Japanese company I

LOI entered on 29 April 2021 with an undisclosed Japanese company

BCS is one of the main suppliers of carbon-nanofibers (EcoNano) for production of the company's composite materials

The first EcoNano shipments were made on 9 May 2021 and technical tests were commenced during July and August 2021

Plan to enter a EcoNano supply agreement following the product verification and the potential completion of the commercial terms

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## Japanese company II

Second LOI entered on 14 May 2021 with another undisclosed Japanese company for a business development and research cooperation for the expansion of green carbon-nanofibers applications

The LOI partner is a global integrated business enterprise that develops and operates businesses all over the globe

Under the LOI, BCS will conduct a joint feasibility story providing additional data for the expansion of green carbon-nanofibers to new applications, in addition to providing decarbonizing opportunities for the Japanese manufacturing industry

The feasibility study will provide important data and business development roadmaps for green CNF into new areas and will also be applicable to other markets and industries in Asia

## Chinese company



LOI entered on 8 June 2021 with an undisclosed Chinese company for supplier- and business development cooperation for green carbon-nanofibers (CNF) applications in Asia

The Chinese company produces chemical fertilizers, calcium chloride, potassium sulfate and other related fine chemical products, based on high-quality development, technological innovation, product quality and circular economy

BCS' first initiative in China, highlighting the strong interest for Bergen Carbon Solutions' green carbon-nanofiber technology and the company's opportunity to rapidly expand its commercial footprint in Asia

Under the LOI, BCS aim to enter into an agreement to ship a CNF module/bigger modular factory unit to their facility in parallel with developing joint opportunities



### Yara



LOI with a Yara on 23 June 2021 – one of the leading industrial companies in the world – for the joint development of carbon capture and utilization (CCU) opportunities

The LOI highlights a strong national interest for Bergen Carbon Solutions' green carbon-nanofiber technology

Under the LOI BCS aim to enter into an agreement to jointly develop CCU opportunities

The parties has started a feasibility study at Yara's industrial site at Herøya in Norway and target to enter into a final agreement during the autumn of 2021 – first initial meeting on 24 August 2021



## **Jackon**



LOI announced with Jackon on 30 June 2021 – one of Norway's leading industrial companies for a potential EcoNano supply agreement, including joint development and various R&D activities

The LOI highlights a strong interest for Bergen Carbon Solutions' green carbon-nanofiber product across industries

Under the LOI BCS and Jackon will jointly test our EcoNano product in their materials

Feasibility study to be conducted at Jackon's industrial site at Fredrikstad in Norway and target to enter into a final agreement during the autumn of 2021 – first product sent







## **Priorities for 2021**



Finishing the Crusible 2.0 (David)

24/7 production at test factory in Bergen

Finishing the contract for purchasing the plot in Mosjøen

Several contracts for selling products to customers

Entering into firm contracts

Further establish key partnerships



## **Summary and investment highlights**

Enabling sustainable value creation from **CO**<sub>2</sub> **utilization**...

units with proven and superior cost-efficient technology...

...producing material with extreme high strength-to-weight ratio and exceptional thermal and electrical conductivity...

... with a **broad range of application** areas



...through **modular production** 

Carbon nanotubes



Aerospace & defence

Construction



Electronics Automotive



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Q&A

