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VOW | RENEWABLES

VOW (BUY, TP NOK50) – The tide will turn in 2022

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The tide will turn in 2022

We reiterate our Buy recommendation and target price of NOK50/share. VOW delivered Q4 results in line with our expectations and is still all set for growth in 2022 - as was our H2 preview heading. Although the momentum in the renewables space has been very strong over the last few weeks, the relative performance of VOW has been moderate. In our view, we believe the timing of purchasing VOW now is good. Why? 1) VOW will continue to deliver increased revenues and margins throughout 2022. The company has already “secured” revenues of around NOK750m, implying at least 65% revenue growth. We also view the 100% Y-o-Y guidance as highly possible, 2) The land-based segment will finally contribute with a positive result in 2022. If we extract the Q4 land-based result from VOWs H2 report, we find that the segment already delivered 13% EBITDA-margin with only NOK50m in turnover. The current land-based backlog stands at NOK280m, 3) Cruise activity is continuing to increase, implying that aftersales gradually will return throughout the year, and 4) The sales pressure related to taking VOW out of the OSEBX is no longer present.

Assuming no orders beyond firm, VOW is currently priced at 18.9x 2022e EV/EBITDA. We regard it as unlikely that no additional orders materialize during 2022. Additional orders are likely to come as cruise retrofits or within the land-based segment, as both have shorter lead times. During Q1. VOW has delivered its first ever MAP pyrolysis system to a cruise vessel and we would not be surprised to see more of these to come (as all permits and paperwork for the system now are in place). Using our 2022 estimates, which include some additional orders, VOW is currently priced at 16.4x 2022e EV/EBITDA**.** Although this at first sight does not seem as a bargain, this is in our view too low as it does not incorporate the fact that 1) VOW has a proven delivery model with 25% EBITDA-margins on its cruise projects, 2) has proven its ability to become a market leader with 67% of the current cruise systems order backlog, 3) On our estimates will have a “rule of 40” above 50% for at least the next 4 years, and 4) the enormous growth potential within its land-based operations, which most likely will lead to significant growth way beyond 2025.

To put this enormous potential into context, note that the current biocarbon production in Europe is close to nothing. VOW is currently working together with VGM and an undisclosed non-ferrous metals producer on a 50,000 tonnes biocarbon project. If realized it will translate to NOK850-1,000m in contract value to VOW. Elkem has a target of 500,000 tonnes of biocarbon by 2030, implying 10x the mentioned project, and translating to NOK8.5-10bn in potential contract value for VOW (an illustration of scale and should not be interpreted as actual contract value). If the EU was to substitute 40% of 2021 coking coal demand with biocarbon it would imply 22.5 million tonnes… Or a pyrolysis equipment value of around ~NOK385-450bn.

VOW currently looks unattractive with little growth since 2019 and weaker margins. However, there is a quite simple explanation for why this is the case. Revenues are flat because VOW lost a large contribution from aftersales during the pandemic, cruise projects were delayed (not cancelled), and the company has currently had no significant contribution from land-based contracts. Margins have not been improving on a group level (cruise project margins are increasing) because of the negative contribution from aftersales (from positive NOK20m in 2019) and the significant ramp-up of the land-based organization. This will not be the case in 1 year's time – the tide will turn in 2022.

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Q4 results were broadly in line with expectations

On the positive side, land-based operations delivered first ever positive EBITDA

Q4 21 reported vs. SB1M and consensus

VOW	**1Q20**	**2Q20**	**3Q 20**	**4Q 20**	**1Q 21**	**2Q 21**	**3Q 21**	**4Q 21**	**4Q 21e**	**Diff.**		**4Q 21e**	**Diff.**	
NOKm	**Rep.**	**Rep.**	**Rep.**	**Rep.**	**Rep.**	**Rep.**	**Rep.**	**Rep**	**SB1M**	**Abs.**	**Rel.**	**Cons.**	**Abs.**	**Rel.**
Revenue	116	132	98	114	93	108	98	155	145	10	7%	147	8	5%
EBITDA before non-rec.	14	11	11	11	10	10	8	15	15	(0)	-2%	18	(3)	-16%
EBITDA-margin	*12.1%*	*8.0%*	*10.9%*	*10.0%*	*10.8%*	*9.5%*	*8.3%*	*9.8%*	10.7%			12.2%		

Segments	**1Q20**	**2Q20**	**3Q 20**	**4Q 20**	**1Q 21**	**2Q 21**	**3Q21**	**4Q 21**	**4Q 21e**	**Diff.**		**4Q 21e**	**Diff.**	
NOKm	**Rep.**	**Rep.**	**Rep.**	**Rep.**	**Rep.**	**Rep.**	**Rep.**	**Rep.**	**SB1M**	**Abs.**	**Rel.**	**Cons.**	**Abs.**	**Rel.**
Project														
Revenue	60	100	70	79	69	81	62	83	80	3	3%	85	(2)	-3%
EBITDA before non-rec.	15	20	19	17	18	20	17	14	18	(4)	-20%	19	(5)	-25%
EBITDA-margin	*24.3%*	*20.4%*	*27.8%*	*20.8%*	*26.3%*	*25.1%*	*27.1%*	*17.3%*	22.4%			22.6%		
Aftersales														
Revenue	32	8	5	9	7	11	14	20	21	(1)	-5%	19	1	3%
EBITDA before non-rec.	7	(2)	(4)	(1)	0	(1)	-	1	2	(1)	-45%	1	-	0%
EBITDA-margin	22.2%	-29.9%	-80.8%	-9.2%	4.1%	-8.2%	0.0%	5.1%	8.6%			5.2%		
Land-based														
Revenue	24	24	23	26	17	17	22	52	44	8	19%	43	9	22%
EBITDA before non-rec.	(4)	(3)	(2)	(1)	(4)	(5)	(5)	7	0	6	4789%	2	5	313%
EBITDA-margin	-18.3%	-11.3%	-9.2%	-3.8%	-26.2%	-27.6%	-20.6%	12.7%	0.3%			3.7%		
Admin & Other										-				
EBITDA before non-rec.	-3	-5	-2	-3	-4	-4	-4	-7	-5	(2)	-35%	-3	(4)	-57%

Source: VOW, SpareBank 1 Markets

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In 1Q22, we expect slight Y-o-Y growth in both revenues and EBITDA

We expect a continued uptick in both aftersales and land-based segments

Quarterly estimates with segment break-down

VOW *NOKm*	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22e
Revenue	89	110	116	132	98	114	93	108	98	155	178
EBITDA before non-rec.	12	11	14	11	11	11	10	10	8	15	29
EBITDA-margin	*13.5%*	*10.0%*	*12.1%*	*8.0%*	*10.9%*	*10.0%*	*10.8%*	*9.5%*	*8.3%*	*9.8%*	*16.0%*

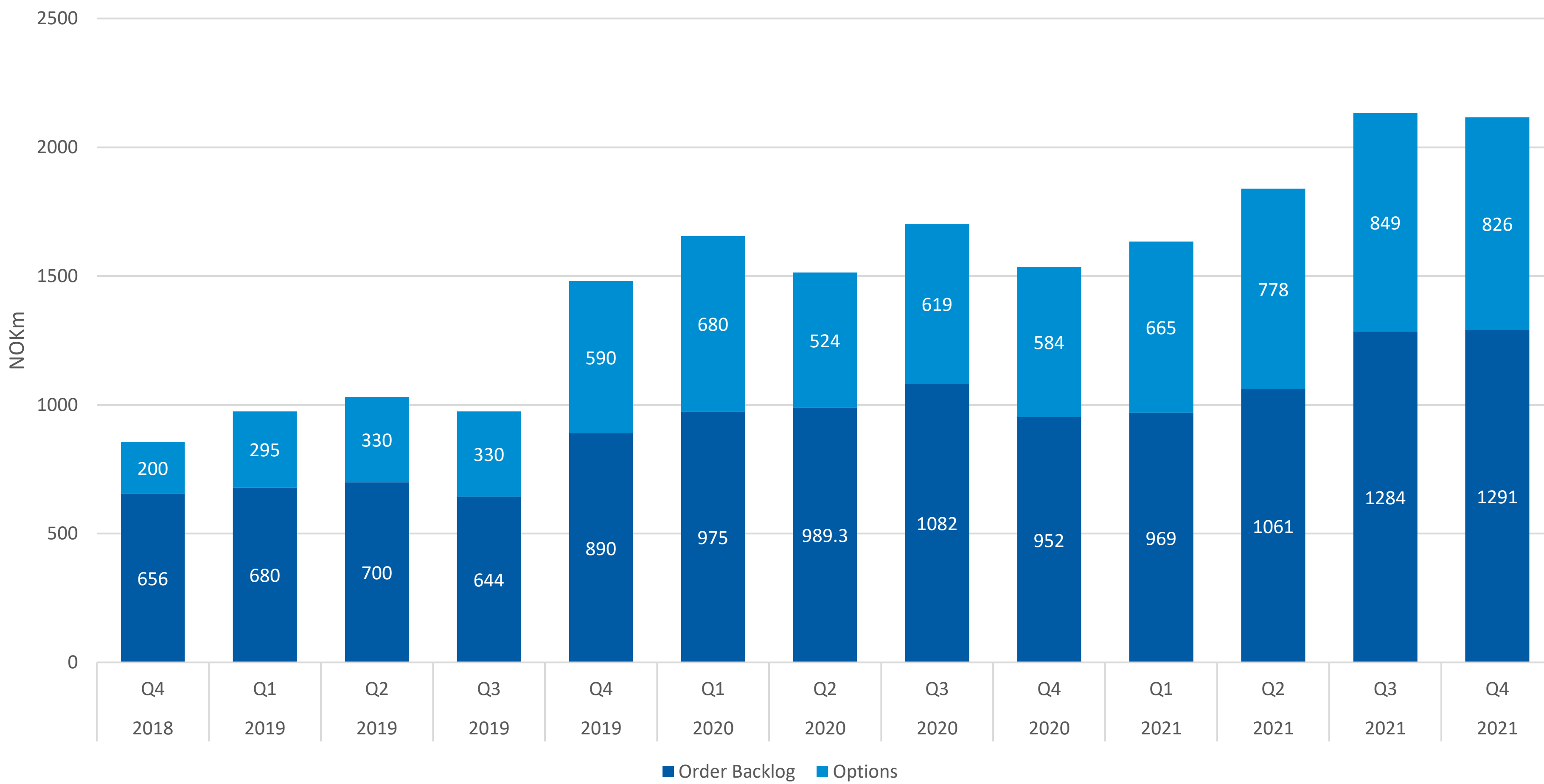
Segments *NOKm*	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22e
Project											
Revenue	56	59	60	100	70	79	69	81	62	83	85
EBITDA before non-rec.	9	12	15	20	19	17	18	20	17	14	21
EBITDA adj. Margin	*16.1%*	*20.1%*	*24.3%*	*20.4%*	*27.8%*	*20.8%*	*26.3%*	*25.1%*	*27.1%*	*17.3%*	*24.6%*
Aftersales											
Revenue	33	33	32	8	5	9	7	11	14	20	22
EBITDA before non-rec.	7	3	7	(2)	(4)	(1)	0	(1)	-	1	3
EBITDA adj. Margin	*21.6%*	*10.0%*	*22.2%*	*-29.9%*	*-80.8%*	*-9.2%*	*4.1%*	*-8.2%*	*0.0%*	*5.1%*	*15.2%*
Land-based											
Revenue	0	19	24	24	23	26	17	17	22	52	72
EBITDA before non-rec.	0	-2	-4	-3	-2	-1	-4	-5	-5	7	10
EBITDA adj. Margin		*-7.9%*	*-18.3%*	*-11.3%*	*-9.2%*	*-3.8%*	*-26.2%*	*-27.6%*	*-20.6%*	*12.9%*	*14.0%*
Admin & Other											
Revenue	0	-1	0	0	0	0	0	0	0	0	0
EBITDA before non-rec.	-4	-3	-3	-5	-2	-3	-4	-4	-4	-7	-6

Source: VOW, SpareBank 1 Markets

High order backlog is supportive of long-term business case

4Q21 order backlog stood at almost NOK1.3bn with an additional ~NOK825m in options

Historical development of VOW’s order backlog



Source: VOW, SpareBank 1 Markets

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Assuming no orders beyond firm, VOW is valued at 18.9x 2022e EV/EBITDA

We regard it as unlikely that no additional orders materialize during 2022.

Implied 2022e multiples considering only firm orders to be delivered in 2022

Cruise (NOKm)		Comments
Revenue	**350**	Revenue from firm newbuild contracts
EBITDA-margin	25%	
EBITDA	**88**	
Aftersales (NOKm)		
Revenue	**117**	NOK1m/vessel. 135 vessels w/ VOW system
EBITDA-margin	16%	In line with pre-COVID
EBITDA	**19**	
Land-based (NOKm)		
Revenue firm	**280**	Only including revenue from firm backlog
Gross-margin	42%	Delivered ~50% in H2 21
Gross profit	118	
Other opex	-75	25% higher than LTM
EBTIDA	**43**	
EBITDA-margin	15%	Implied margin given above assumptions
Admin & Other (NOKm)		
EBITDA	**-28**	15% higher than 2021

Group (NOKm)		Comments
Revenue	747	
EBITDA	**120**	
D&A	-31	
EBIT	**89**	
Net financials, tax & other	-38	See note*
PTP	**51**	
Tax	-11	Assuming 22% tax rate
Net profit	**40**	

2022e EV @ current share price	
Share price	18.6
Mcap.	2132
Current NIBD	141
2022e EV	**2274**
Implied 2022e multiples	
EV/EBITDA	18.9x
EV/EBIT	25.4x
P/E	53.3x

Note: *In its P&L reporting, VOW will have to eliminate 30.5% of the gross-profit from the Follum contract due to its ownership in VGM. VOW receives 100% of the cash.
Source: VOW, SpareBank 1 Markets

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On our estimates, VOW is currently priced at 16.4x 2022e EV/EBITDA…

On our estimates VOW will deliver above 50% "rule of 40" for at least the next 4 years

Implied 2022e multiples on SB1M estimates

Cruise (NOKm)		Comments
Revenue	**365**	Almost fully secured. Retrofits may add revenue
EBITDA-margin	25%	Lower than YTD performance
EBITDA	**91**	

Aftersales (NOKm)		
Revenue	**117**	Assumes ~80% of potential
EBITDA-margin	16%	In line with pre-COVID
EBITDA	**19**	

Land-based (NOKm)		
Revenue	**396**	Only NOK280m secured. New orders required
EBITDA-margin	15%	Delivered 13% in Q4 21 with only NOK50m rev.
EBITDA	**58**	

Admin & Other (NOKm)		
EBITDA	**-28**	15% higher than 2021

Group (NOKm)		Comments
Revenue	878	
EBITDA	**139**	
D&A	-31	
EBIT	**108**	
Net financials, tax & other	-38	See note*
PTP	**70**	
Tax	-15	Assuming 22% tax rate
Net profit	**55**	

2022e EV @ current share price	
Share price	18.6
Mcap.	2132
Current NIBD	141
2022e EV	**2274**

Implied 2022e multiples	
EV/EBITDA	16.4x
EV/EBIT	21.0x
P/E	38.6x

Note: *In its P&L reporting, VOW will have to eliminate 30.5% of the gross-profit from the Follum contract due to its ownership in VGM. VOW receives 100% of the cash.
Source: VOW, SpareBank 1 Markets

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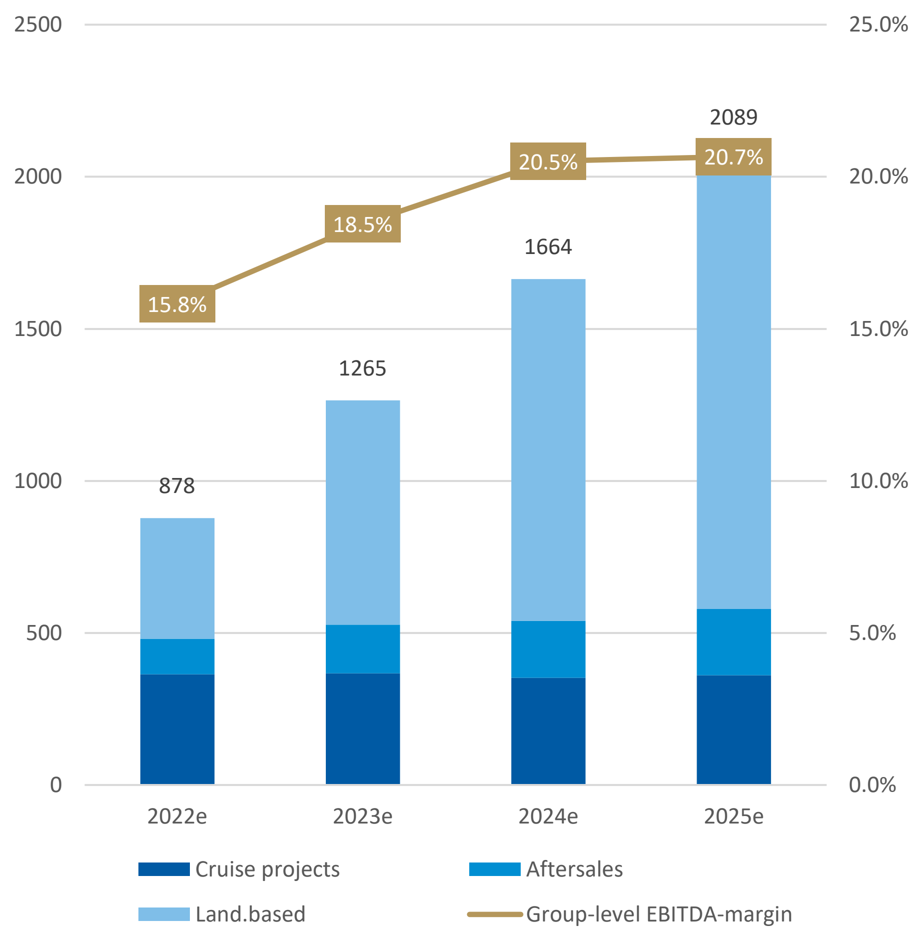
… and we expect multiples to rapidly decline over the next 4 years as land-based picks up

Our target price implies ~14x 2025e EV/EBIT

Revenue and margin development VOW – SB1Me



Multiples

Valuation (our target)	2022 Est.	2023 Est.	2024 Est.	2025 Est.
EV/Sales	6.7x	4.7x	3.5x	2.6x
EV/EBITDA	42.3x	25.2x	16.9x	12.8x
EV/EBIT	54.4x	29.4x	18.8x	14.1x
P/E	103.9x	40.3x	23.4x	17.2x

Valuation (todays share price)	2022 Est.	2023 Est.	2024 Est.	2025 Est.
EV/Sales	2.6x	1.8x	1.3x	0.9x
EV/EBITDA	16.4x	9.8x	6.3x	4.5x
EV/EBIT	21.1x	11.4x	7.1x	4.9x
P/E	38.6x	15.0x	8.7x	6.4x

Source: VOW, SpareBank1 Markets, Cruise industry news

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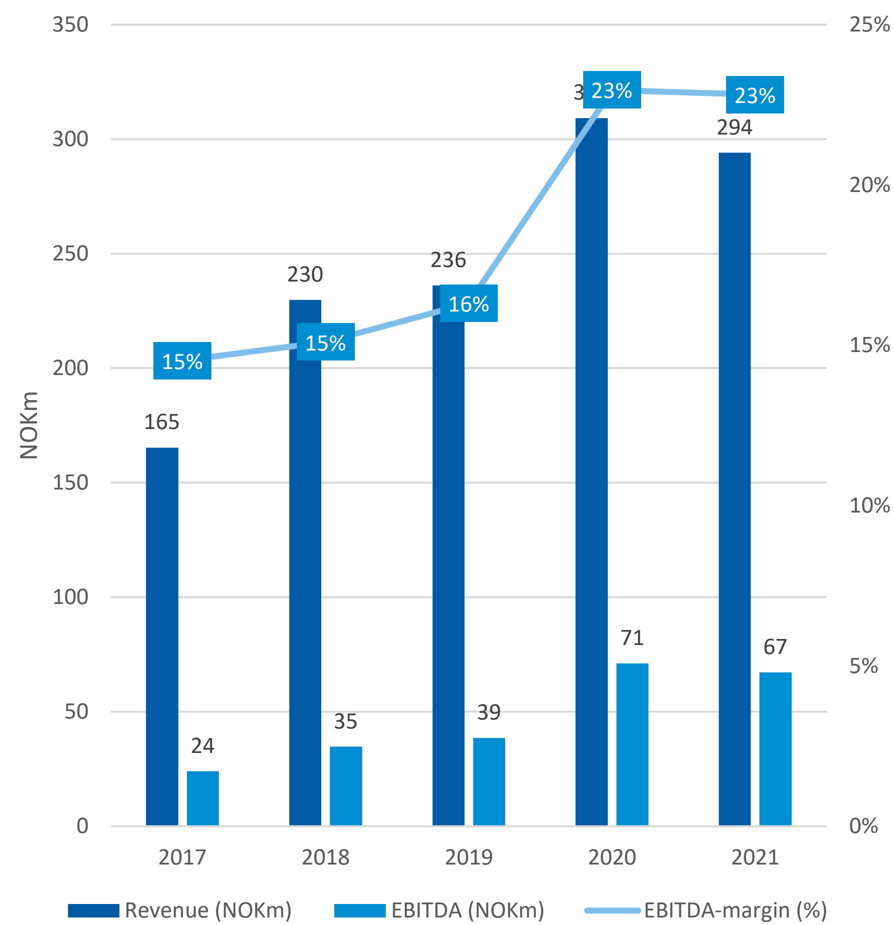
VOW has a proven delivery model and landbased growth potential is enormous

Cruise project margins have increased despite Covid-19, proving VOW's strong delivery model

Development of VOW's cruise project segment



Land-based potential – put into context

- VOW is currently working together with VGM and an undisclosed non-ferrous metals producer on a **50,000 tonnes** biocarbon project. **If realized it will translate to NOK850-1,000m in contract value to VOW.** (delivered in 2023 and 2024 if confirmed)
- **Elkem has a target of 500,000 tonnes of biocarbon by 2030**, implying 10x the abovementioned project.
- The two previous bullets tells us that **Elkem's 2030 target translates to NOK8.5-10bn in potential contract value** for VOW. (an illustration of scale and should not be read as actual contract value)
- If the EU was to substitute 40% of 2021 coking coal demand with biocarbon it would imply 22.5 million tonnes**… Or a pyrolysis equipment value of around ~NOK385-450bn.**
- Note that **current biocarbon production in Europe** is around 20,000 tonnes → In other words, it **is close to nothing** compared to expected future demand

Source: VOW, SpareBank1 Markets, Cruise industry news

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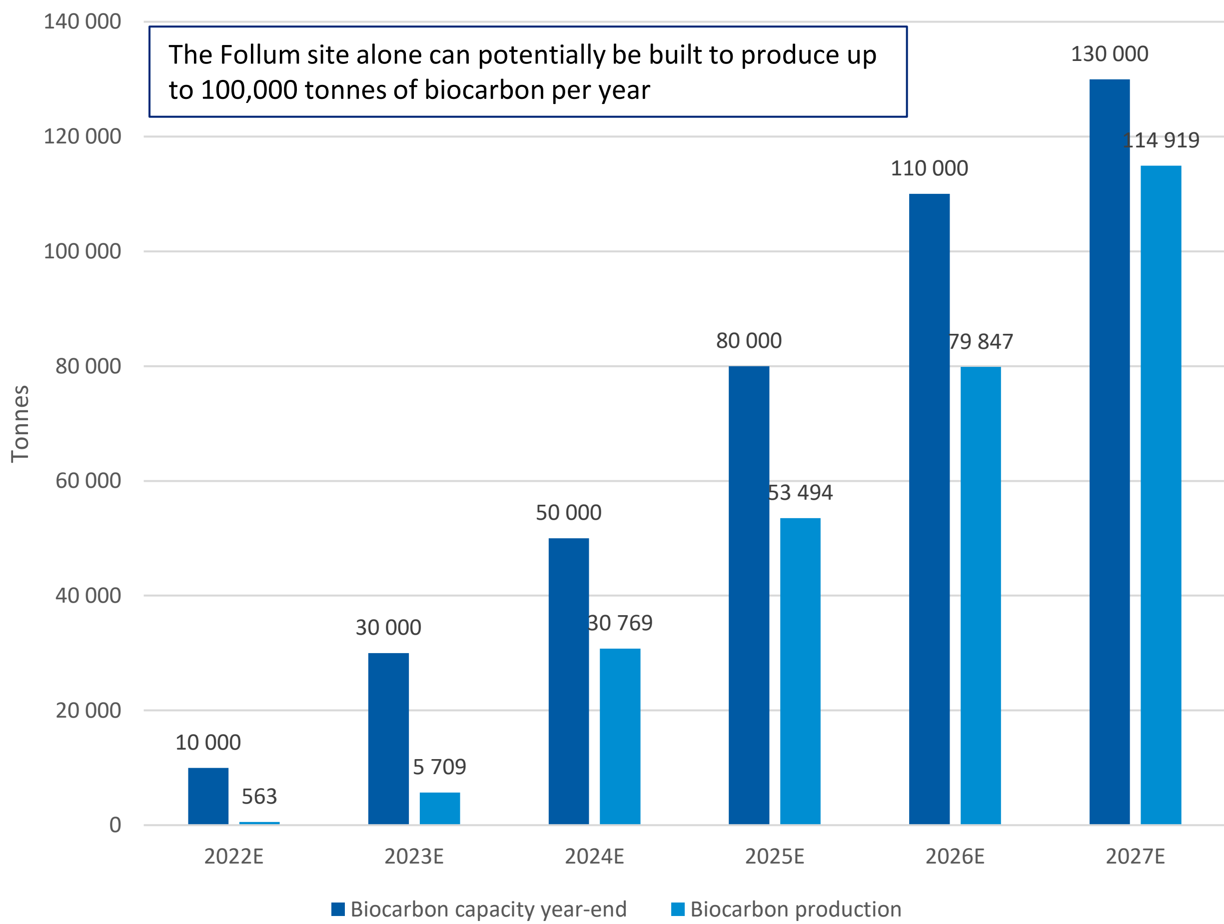
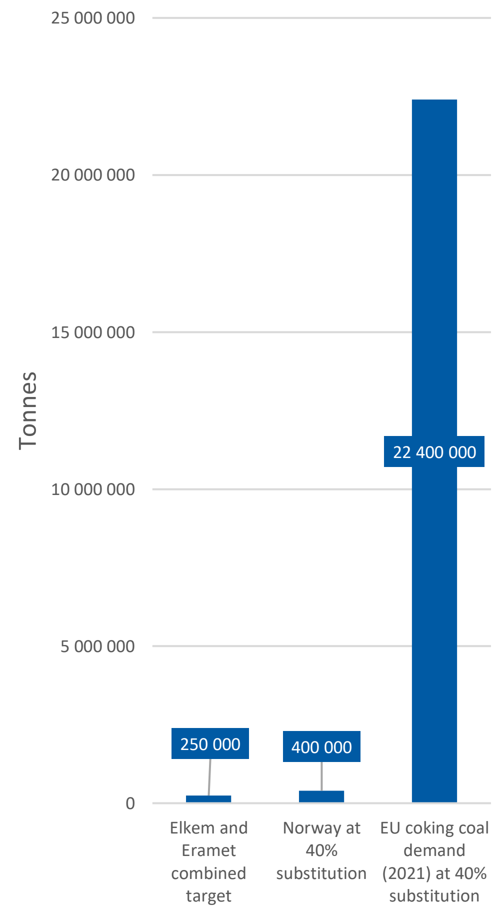
VGM's 2025e biocarbon capacity translates to equipment orders to VOW of >NOK1.5bn

... and implies less than 20% of Elkem's 2030 global biocarbon target

SB1M estimated ramp-up of VGM's capacity and biocarbon production...



... nowhere close demand*



Source: VGM, IEA, Elkem, Eramet, Prosess21, SpareBank 1 Markets
Note: *Elkem target in Norway

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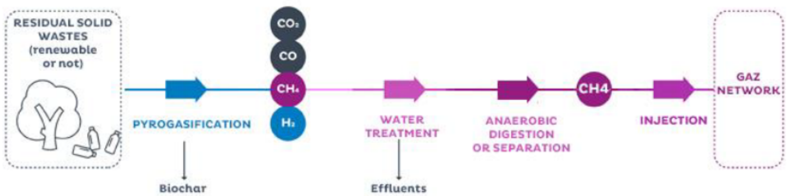
VOW's equipment also enables CO2 neutral gas – perfect timing with REPowerEU

GTRgaz and VOW (via ETIA) are currently working on qualifying pyrogas for the European grid

GTRgaz announcement came just ahead of REPowerEU



GRTgaz

Europe's second largest gas distributor

"Pyrogasification for injection has reached a level of technological maturity that means we can envisage the construction of the first industrial facilities in France from 2023."

"By 2030, the network operators' forecast assessment based on the goals set out in the regional plans shows that pyrogasification could represent 6 TWh of injected gas per year, i.e. up to 1 million tonnes of CO2 avoided."

"This technology of the future will thus contribute to achieving 100% renewable or low-carbon gas consumption in France by 2050."

REPowerEU

MORE RENEWABLE GAS	17 bcm of biomethane production, saving **17 bcm**	Boost biomethane production to 35bcm by 2030	3.5	18

GTRgaz's press release regarding the collaboration

- GRTgaz and ETIA today announced the launch of an initial test campaign to analyse the gas produced from different categories of solid waste: forest biomass, non-recyclable plastics, and solid recovered fuels from household waste.
- The SYNTHANE© project's originality lies in the coupling of two complementary technologies – pyrolysis and methanation – to produce a renewable, low-carbon gas that can be injected into the French gas networks.
- The coupling and instrumentation of the test facilities are now finalised. The system consists of a "Biogreen©" high-temperature pyrolysis facility that ETIA has been testing for several years. It allows inputs to be continuously heated in the absence of oxygen to break down the gaseous molecules. This facility is supplemented by a purification tool and a catalytic methanation unit to maximise the quantity of injectable methane.
- With this partnership, ETIA and GRTgaz are part of the industrialisation of the pyrogasification sector for injection into the French networks: a renewable and low-carbon means of gas production that supports the circular economy.
- Injection into the gas networks from pyrogasification offers a solution to the challenges of waste treatment, in line the target set by the French Law on Energy Transition for Green Growth (LTECV) to halve the volume of waste sent to landfill by 2025.
- Construction of the sector's first industrial-scale projects is expected to begin from 2023. Alongside the other renewable and low-carbon gas sectors (anaerobic digestion, hydrothermal gasification, hydrogen), these will contribute to achieving carbon neutrality by 2050.

Source: VOW, SpareBank1 Markets, Cruise industry news

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Acquisition of C.H. Evensen seems sensible – strengthening VOW's pyrolysis offering

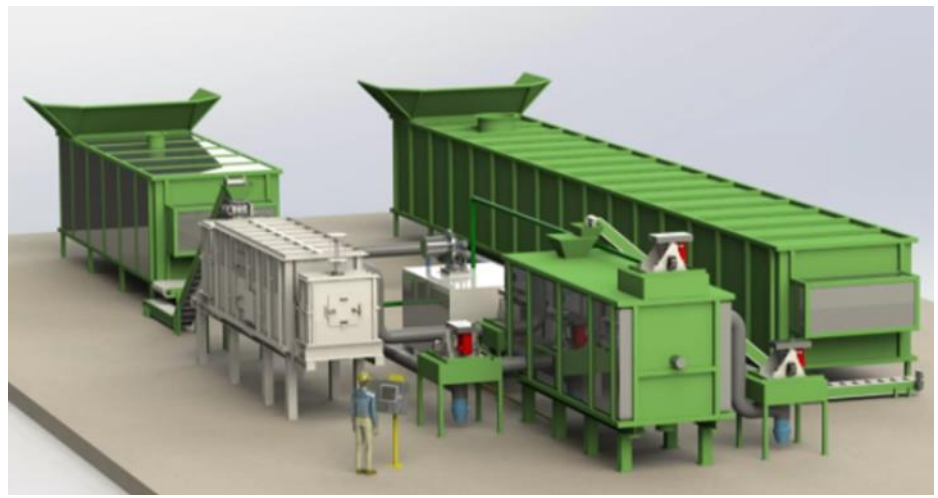
C.H. Evensen is a supplier of technology and solutions for high temperature industrial solutions

Acquisition details

- The purchase price for 100 % of the shares in C. H. Evensen is NOK 50 million. At closing, contemplated to take place towards end of March 2022, VOW shall settle the purchase price as follows:
  - » NOK 25 million shall be paid in cash to the Seller.
  - » NOK 25 million in seller's credit (Vendor Note) payable by VOW 14 months after closing.
- C.H Evensen reported pre-audit 2021 revenue of NOK 57 million and an adjusted EBITDA margin of 10.4%, implying an adj. EBITDA of around NOK6m.
- The company delivers heat treatment furnaces and ovens, hot-dip galvanising solutions, and green technology based on pyrolysis.
- C.H. Evensen has an installed base consisting of more than 4 200 systems worldwide. Its customer base includes renowned names such as Elkem, Hydro, REC, BMW, Voestalpine, Raufoss, Speira, Thyssen and Aludyne.

Why is VOW acquiring C.H. Evensen?

- After discussions with VOW management the two main rationales for acquiring C.H. Evensen include:
  1. Their pyrolysis process equipment
     - Suitable for larger reactors
     - Can be used together with VOW's Spirajoule
  2. The technical competence → Further strengthening the position as a leader on high temperature processes



Source: VOW, SpareBank1 Markets, Cruise industry news

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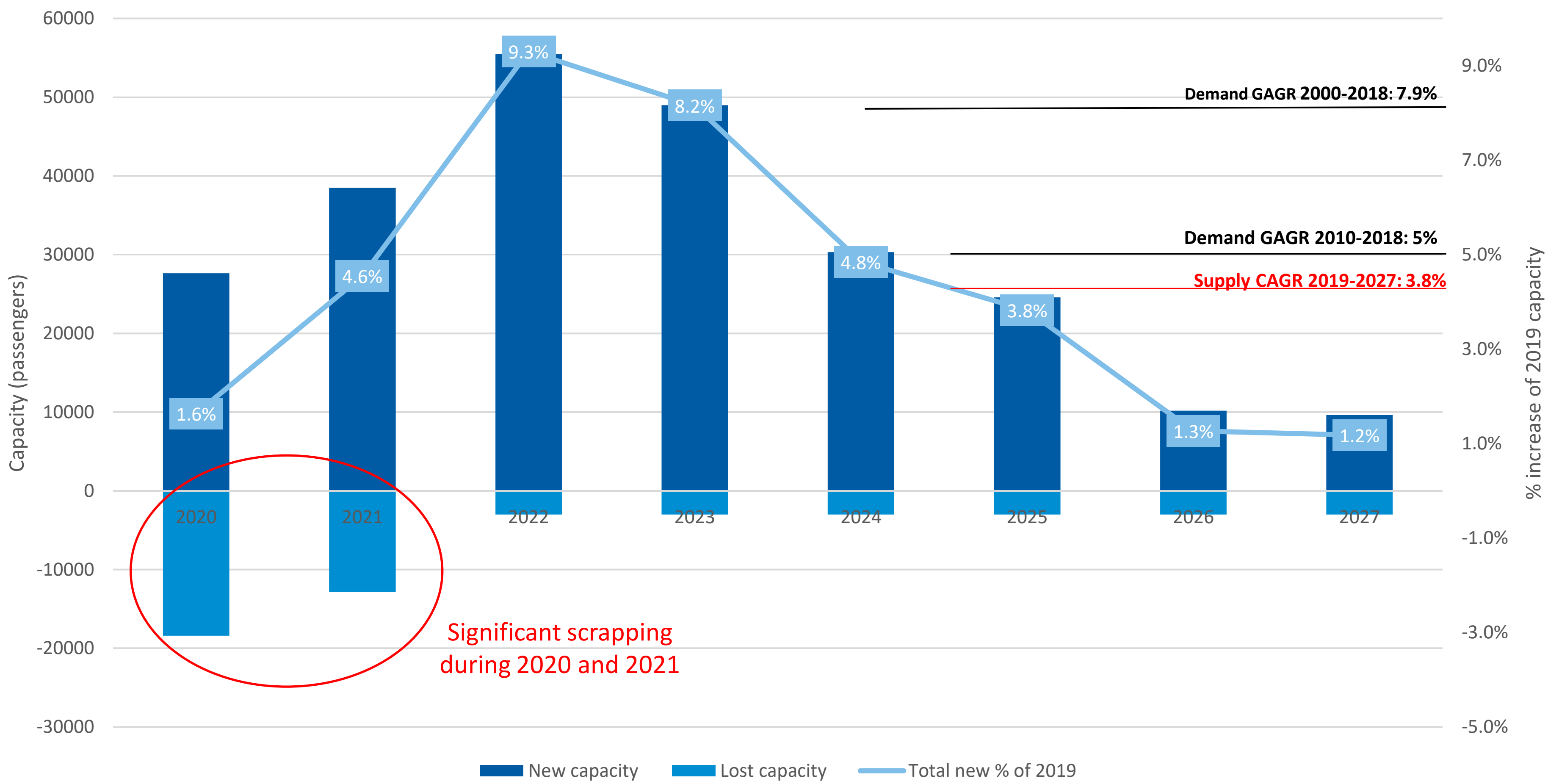
Also, the cruise market balance looks healthy when activity returns to "normal"...

We expect a supply deficit of 1.2% with current newbuild order backlog

Estimates



Source: VOW, SpareBank 1 Markets

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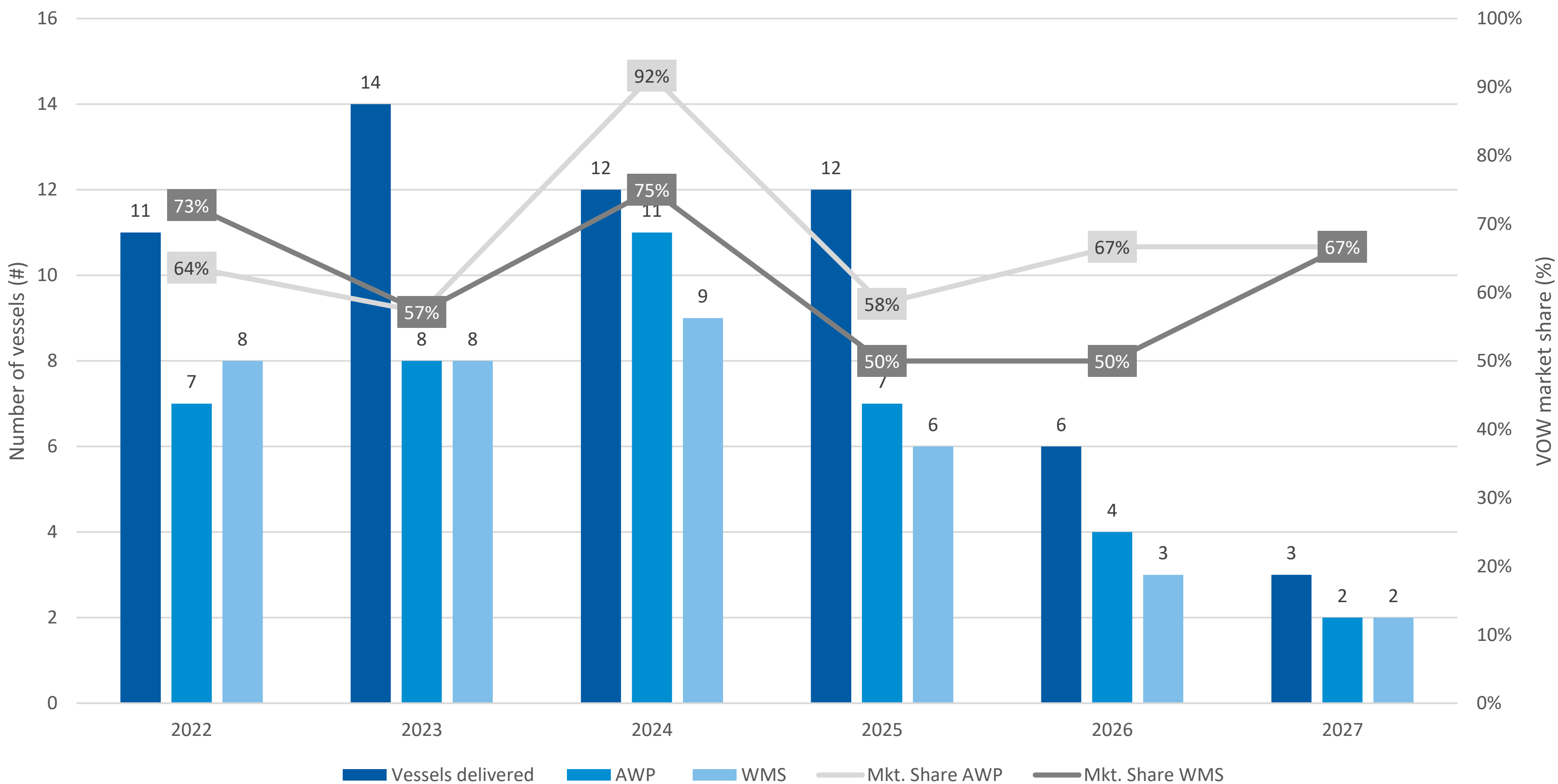
… and VOW is increasing its market share, delivering systems to 67% of new vessels

Market share has historically been around ~33%

Global cruise vessel newbuild order backlog and firm VOW orders (options not included)

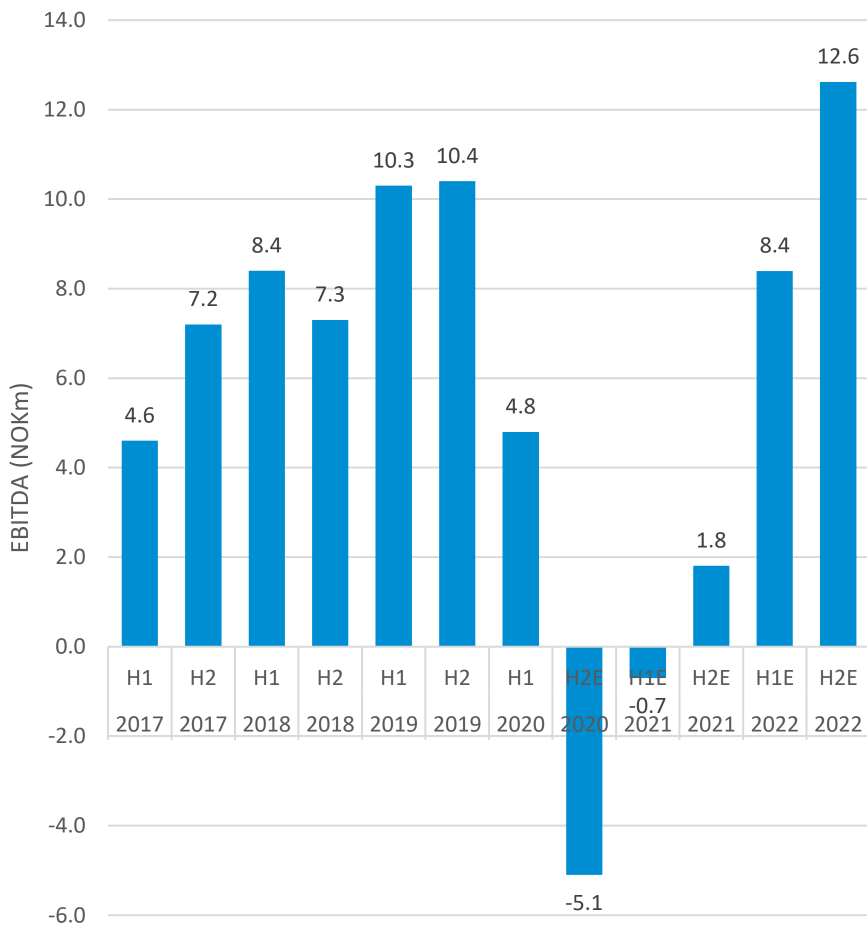


Note: Smaller ships with less than 600 pax capacity is not included in this overview.
Source: VOW, SpareBank 1 Markets

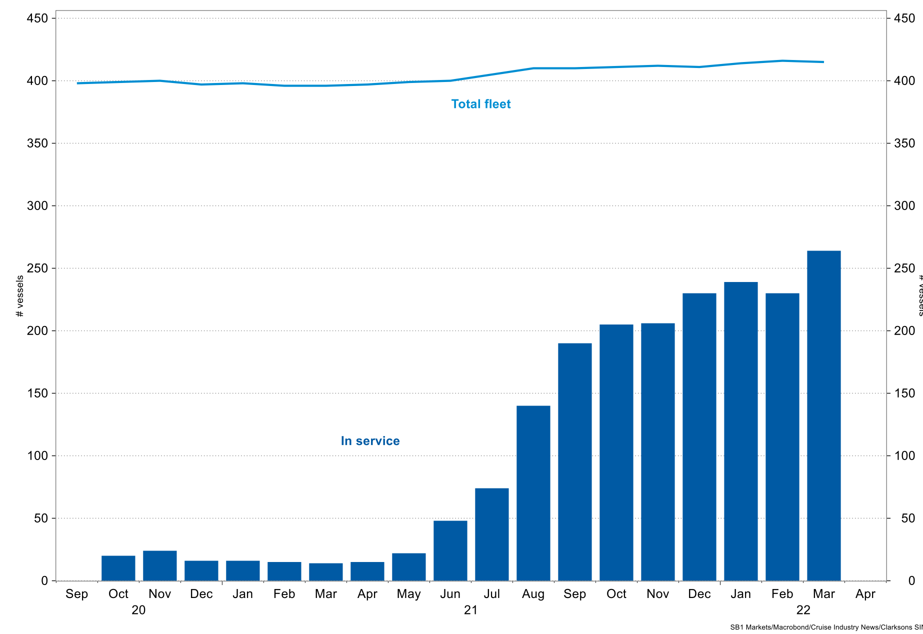
Lastly, Aftersales will return as number of cruise ships in service continue to pick up

In 2019, aftersales contributed with NOK20m in EBITDA vs. negative EBITDA since COVID 19

Historical and forecasted EBITDA from aftersales



Cruise vessels in service (#)



Source: VOW, SpareBank1 Markets, Cruise industry news

SOTP Valuation – TP Implies ~14x EV/EBIT on 2025e estimates

Sum of the parts		Comments
Division	**EV (NOKm)**	
Projects	1360	15x EV/EBITDA (2022e) - market leader
Aftersales	284	15x EV/EBITDA (2022e) - reccuring on 120+ vessels - still some C19 effect in 2022
Land-Based	4500	10% of revenue potential @ EV/EBITDA of 15x
EV Business segments	**6144**	
Debt	-240	As of H2 2021e
Free cash	141	As of H2 2021e
Admin&Other	-284	10x EV/EBITDA (2022e)
Sum overhead business	**-384**	
VGM (NOK/share)	3.5	
Market cap. VGM (NOKm)	575	
VOW ownership (%)	30.5%	
Equity value to VOW (NOKm)	**176**	
Total equity value	**5937**	
Shares	115	
Fair equity value (NOK/share)	**52**	
Target price (NOK/share)	**50**	
Share price (NOK)	18.6	
Upside to target (%)	169%	

Valuation (our target)	2022 Est.	2023 Est.	2024 Est.	2025 Est.
EV/Sales	6.7x	4.7x	3.5x	2.6x
EV/EBITDA	42.3x	25.2x	16.9x	12.8x
EV/EBIT	54.4x	29.4x	18.8x	14.1x
P/E	103.9x	40.3x	23.4x	17.2x

Valuation (todays share price)	2022 Est.	2023 Est.	2024 Est.	2025 Est.
EV/Sales	2.6x	1.8x	1.3x	0.9x
EV/EBITDA	16.4x	9.8x	6.3x	4.5x
EV/EBIT	21.1x	11.4x	7.1x	4.9x
P/E	38.6x	15.0x	8.7x	6.4x

Land-based valuation		Comment
VOW delivery capacity (# of systems per annum)	100	
Average sales price (NOKm)	150	4-6 lines of the most common system (Biogreen 750)
Revenue potential in VOW (NOKm)	**15 000**	
Assumed VOW deliveries of total capacity	10%	
Annual estiamted revenue from land-based systems (NOKm)	**1 500**	
Estiamted EBITDA margin (%)	20%	Slightly lower than cruise projects
EBITDA estimate (NOKm)	300	
EV/EBITDA (x)	15	Lowered since last update due to VGM potential in seperate entity
Value of land-based (NOKm)	**4 500**	
Shares (m)	115	
Value of land based (NOK/share)	**39**	

Source: VOW, SpareBank 1 Markets

Financials

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Complete half-year deviation table

Some non-recurring items seem to be recurring – we account for this in our updated estimates

H2 21 reported vs. SB1M and consensus

VOW - Half-year *NOKm*	1H18 Rep.	2H18 Rep.	1H19 Rep.	2H19 Rep.	1H20 Rep.	2H 20 Rep.	1H 21 Rep.	2H 21 Rep.	2H 21e SB1M	Diff. Abs.	Diff. Rel.	2H 21e Cons.	Diff. Abs.	Diff. Rel.
Revenue	146	183	181	199	248	212	201	253	243	10	4%	245	8	3%
EBITDA before non-rec.	**16**	**23**	**23**	**23**	**25**	**22**	**20**	**23**	**24**	**(0)**	**-2%**	**26**	**(3)**	**-11%**
EBITDA-margin	*11.1%*	*12.6%*	*12.5%*	*11.6%*	*9.9%*	*10.4%*	*10.1%*	*9.2%*	*9.7%*			10.6%		
EBITDA	16	23	22	5	24	14	14	18	24	(6)	-26%			
EBITDA-margin	*11.1%*	*12.6%*	*12.1%*	*2.3%*	*9.8%*	*6.7%*	*6.8%*	*6.9%*	*9.7%*					
EBIT	15	21	18	-3	14	3	7	3	14	(11)	-79%			
EBIT-margin	*10.3%*	*11.3%*	*10.1%*	*-1.4%*	*5.7%*	*1.2%*	*3.3%*	*1.1%*	*5.6%*					
Pre-tax profit	16	18	20	-29	35	-7	0	325	6	319				
Net profit	12	14	15	-30	27	0	0	327	5	322	6953%			
EPS Adj. (diluted)	0.1	0.1	0.2	-0.3	0.2	0.0	0.0	2.8	0.0					

Source: VOW, SpareBank 1 Markets

SpareBank 1 MARKETS

Estimate changes (C.H Evensen acquisition is not included before completion)

Segment estimates almost unchanged, but some increased admin costs and other items*

Estimate changes

VOW Group total	New estimates 2021E	2022E	2023E	Old estimates 2021E	2022E	2023E	Change 2021E	2022E	2023E
Revenues	454	878	1 265	444	890	1 266	10	(12)	(1)
EBITDA before non-rec.	44	145	236	44	145	236	-	(0)	0
EBITDA	**31**	**139**	**233**	**39**	**145**	**236**	**(8)**	**(6)**	(2)
EBITDA-margin	6.9%	15.8%	18.5%	8.9%	16.3%	18.6%			
EBIT	**10**	**108**	**200**	**20**	**125**	**216**	**(11)**	**(17)**	**(16)**
EBIT-margin	2.1 %	12.3 %	15.8 %	4.5 %	14.1 %	17.1 %			
Net profit	323	55	142	4	87	160	319	(32)	(18)
EPS	**2.8**	**0.5**	**1.2**	**0.0**	**0.8**	**1.4**	**2.8**	**(0.3)**	**(0.2)**

VOW Segment break-down	New estimates 2021E	2022E	2023E	Old estimates 2021E	2022E	2023E	Change 2021E	2022E	2023E
Projects - Cruise									
Revenue	294	365	367	291	366	369	3	(1)	(1)
EBITDA	66	91	90	73	97	96	(7)	(6)	(7)
EBITDA-margin (%)	*22.4%*	*24.8%*	*24.5%*	*25.0%*	*26.5%*	*26.1%*			
Aftersales									
Revenue	52	117	161	53	121	161	(1)	(5)	-
EBITDA	0	19	31	1	21	31	(1)	(2)	(0)
EBITDA-margin(%)	*0.6%*	*16.2%*	*19.2%*	*2.1%*	*17.3%*	*19.3%*			
Land-based									
Revenue	108	396	737	100	402	737	8	(6)	-
EBITDA	(10)	58	148	(15)	53	144	5	5	4
EBITDA-margin(%)	*-9.4%*	*14.6%*	*20.1%*	*-15.0%*	*13.1%*	*19.5%*			
Admin & Other									
Revenue	-	-	-	-	-	-	-	-	-
EBITDA	(25)	(28)	(35)	(20)	(26)	(35)	(5)	(3)	0

Note: *Added some non-reccuring items going forward as they seem to be in fact recurring. Also, In its P&L reporting, VOW will have to eliminate 30.5% of the gross-profit from the Follum contract due to its ownership in VGM. VOW receives 100% of the cash.

Source: VOW, SpareBank 1 Markets

Annual financials (NOKm)

P&L, NOKm	2018	2019	2020	2021	2022e	2023e	2024e	2025e
Revenue	**330**	**381**	**460**	**454**	**878**	**1265**	**1664**	**2089**
Y-o-Y growth		16%	21%	-1%	93%	44%	32%	26%
COGS	230	259	296	283	543	771	1002	1250
Gross-profit	**100**	**121**	**164**	**172**	**334**	**495**	**662**	**839**
Gross-profit-margin (%)		*32%*	*36%*	*38%*	*38%*	*39%*	*40%*	*40%*
SG&A and other opex	61	95	126	138	195	261	321	407
EBITDA	**39**	**27**	**39**	**34**	**139**	**233**	**341**	**432**
EBITDA-margin (%)	*12%*	*7%*	*8%*	*7%*	*16%*	*18%*	*21%*	*21%*
D&A	3	11	22	24	31	33	36	39
EBIT	**36**	**16**	**17**	**10**	**108**	**200**	**305**	**393**
EBIT-margin (%)	*11%*	*4%*	*4%*	*2%*	*12%*	*16%*	*18%*	*19%*
Net profit	**27**	**-15**	**27**	**317**	**55**	**142**	**244**	**333**

Balance sheet, NOKm	2018	2019	2020	2021	2022e	2023e	2024e	2025e
Total fixed assets	42	278	348	572	641	708	772	833
Cash and equivalents	7	86	27	141	109	86	197	398
Other current assets	145	238	335	395	574	846	1021	1208
Total assets	**194**	**602**	**710**	**1109**	**1324**	**1639**	**1989**	**2439**
Total equity	93	232	321	526	581	723	968	1301
Total non current liabilities	15	133	157	285	261	240	221	204
Total current liabilities	86	237	232	298	482	676	801	935
Total equity and liabilities	**194**	**602**	**710**	**1109**	**1324**	**1639**	**1989**	**2439**
GIBD	3	130	147	282	259	238	219	201
NIBD	-4	44	121	141	150	152	22	-196

Condensed cash flow, NOKm	2018	2019	2020	2021	2022e	2023e	2024e	2025e
Cash flow from operations	31	-17	10	5	105	111	242	329
Cash flow from investments	-11	-95	-65	-246	-100	-100	-100	-100
Cash flow from financing	-19	191	-3	354	-36	-35	-31	-28
Change in cash	**1**	**79**	**-58**	**113**	**-32**	**-24**	**111**	**201**

Source: VOW, SpareBank 1 Markets

SpareBank 1 MARKETS

Half-year financials (NOKm)

P&L, NOKm	1H19	2H19	1H20	2H20	1H21	2H21	1H22	2H22	1H23	2H23
Revenue	**181**	**199**	**248**	**212**	**201**	**253**	**420**	**457**	**557**	**708**
Y-o-Y growth			*37%*	*6%*	*-19%*	*19%*	*109%*	*81%*	*32%*	*55%*
COGS	128	131	167	129	127	155	261	282	340	431
Gross-profit	**53**	**68**	**81**	**83**	**74**	**98**	**159**	**175**	**217**	**277**
Gross-profit-margin (%)	*29%*	*34%*	*33%*	*39%*	*37%*	*39%*	*38%*	*38%*	*39%*	*39%*
SG&A and other opex	31	64	57	69	60	80	96	99	115	146
EBITDA	**22**	**5**	**24**	**14**	**14**	**18**	**63**	**76**	**102**	**132**
EBITDA-margin (%)	*12%*	*2%*	*10%*	*7%*	*7%*	*7%*	*15%*	*17%*	*18%*	*19%*
D&A	4	7	10	12	10	15	15	16	16	17
EBIT	**18**	**-3**	**14**	**3**	**7**	**3**	**48**	**60**	**85**	**115**
EBIT-margin (%)	*10%*	*-1%*	*6%*	*1%*	*3%*	*1%*	*11%*	*13%*	*15%*	*16%*
Net profit	**15**	**-30**	**27**	**0**	**0**	**324**	**19**	**37**	**59**	**83**

Balance sheet, NOKm	1H19	2H19	1H20	2H20	1H21	2H21	1H22	2H22	1H23	2H23
Total fixed assets	63	278	323	348	394	572	607	641	675	708
Cash and equivalents	10	86	54	27	303	141	130	109	93	86
Other current assets	163	238	319	335	342	395	534	574	682	846
Total assets	**236**	**602**	**696**	**710**	**1039**	**1109**	**1271**	**1324**	**1450**	**1639**
Total equity	100	232	261	321	537	526	544	581	640	723
Total non current liabilities	19	133	180	157	320	285	273	261	250	240
Total current liabilities	117	237	255	232	182	298	454	482	559	676
Total equity and liabilities	**236**	**602**	**696**	**710**	**1039**	**1109**	**1271**	**1324**	**1450**	**1639**
GIBD	25	130	170	147	293	282	270	259	248	238
NIBD	16	44	115	121	-10	141	140	150	155	152

Condensed cash flow, NOKm	1H19	2H19	1H20	2H20	1H21	2H21	1H22	2H22	1H23	2H23
Cash flow from operations	-1	-2	-8	18	-36	41	57	48	51	59
Cash flow from investments	-8	-103	-41	-24	-52	-194	-50	-50	-50	-50
Cash flow from financing	12	181	15	-18	363	-9	-18	-19	-18	-17
Change in cash	**3**	**76**	**-34**	**-24**	**276**	**-163**	**-11**	**-21**	**-16**	**-7**

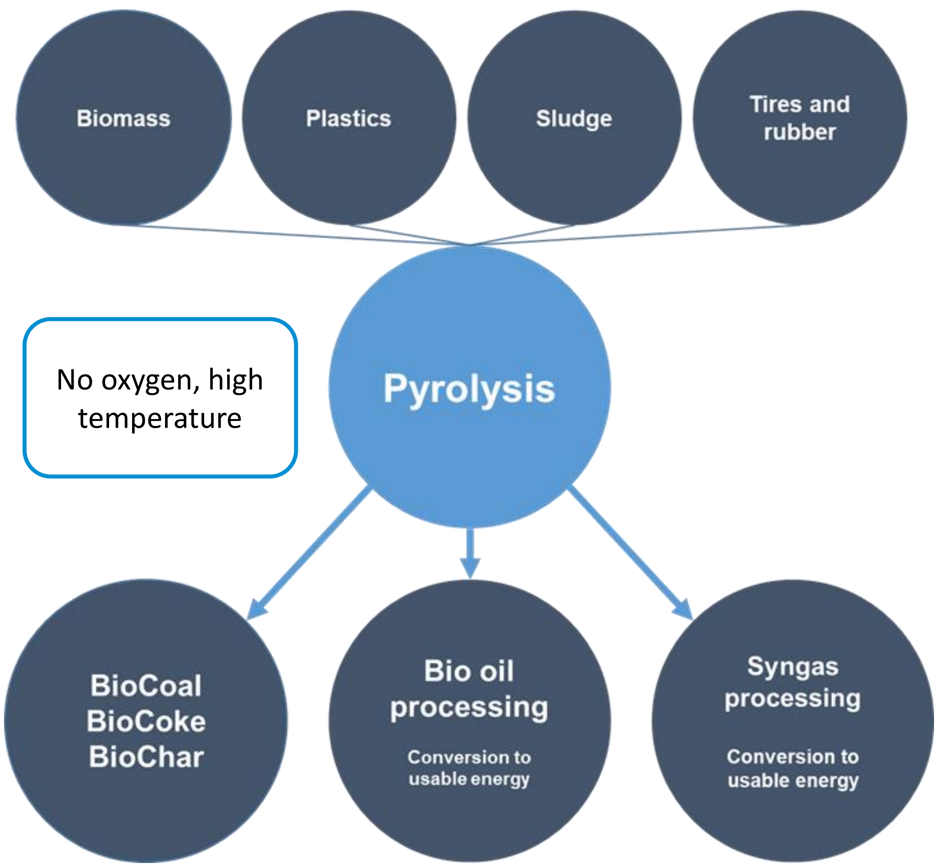
Source: VOW, SpareBank 1 Markets

Appendix

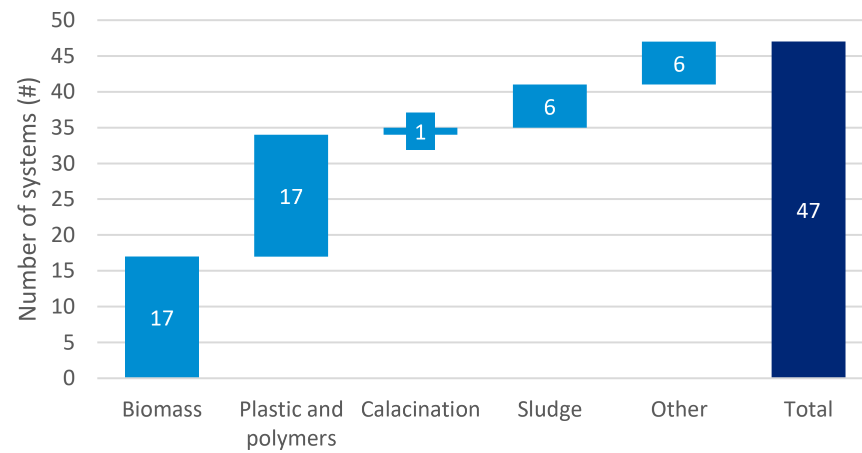
VOW's most important land-based technology is Pyrolysis

VOW's pyrolysis technology is powered by electricity – allows energy from renewable resources

VOW offers a flexible pyrolysis technology...



... has multiple "Biogreen" systems in operation

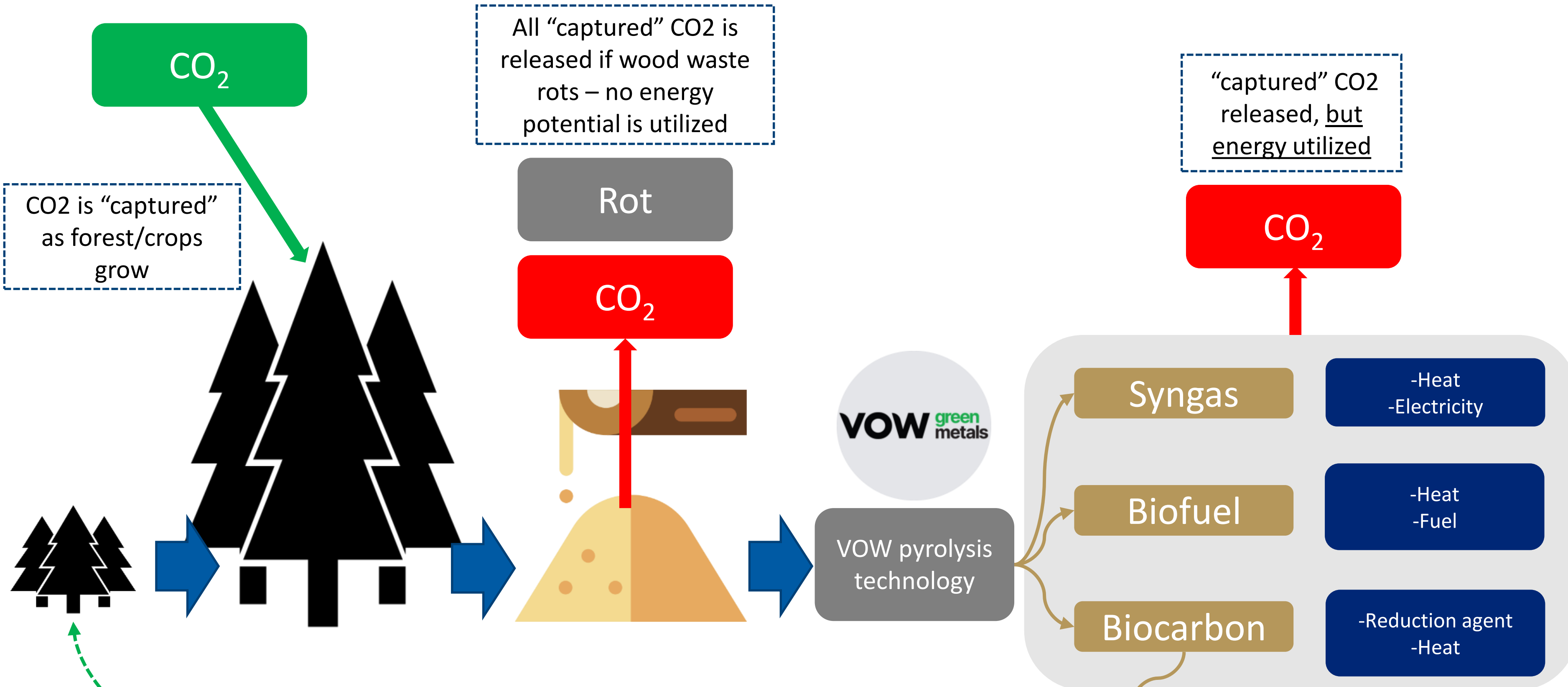


... and is a well recognized technology

Source: VOW, VGM, SpareBank1 Markets

SpareBank 1 MARKETS

Biocarbon, syngas and biofuel are carbon neutral products - carbon negative if combined with CCS



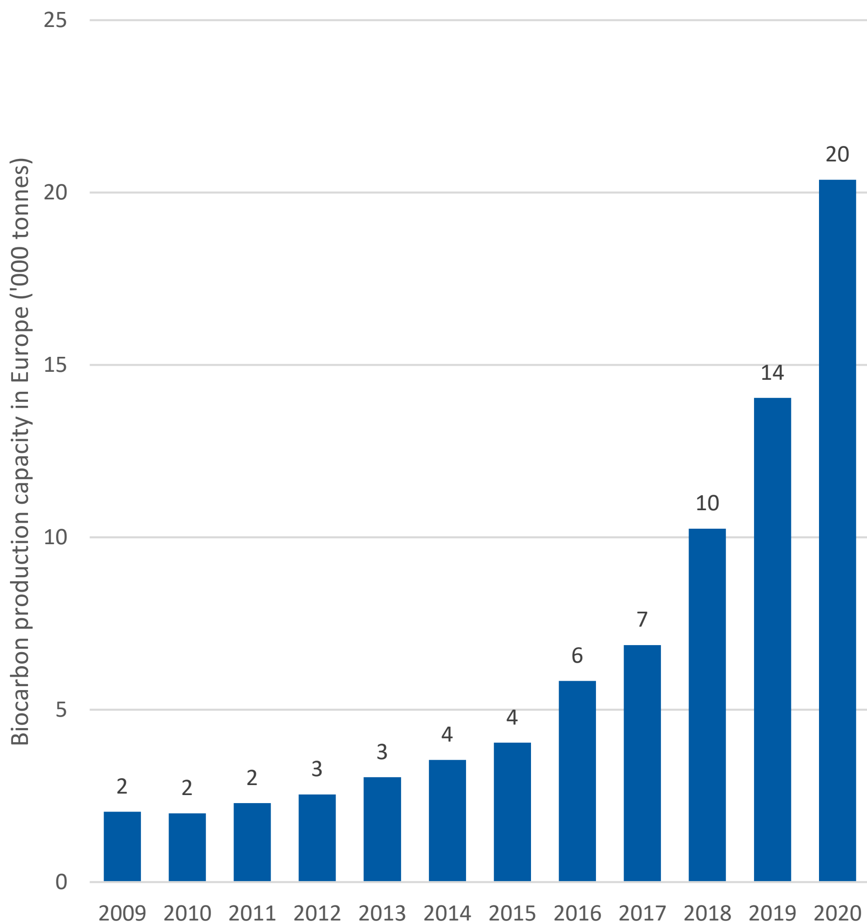
Utilizing VOW technology is a carbon neutral or negative process as the rotting biomass would release the CO_2, regardless of the energy being utilized (NB: Only the case if "waste" biomass is being utilized). Furthermore, biocarbon used as a fertilizer does not only capture carbon once, but also enhances the future capture rate by improving crop growth conditions

Source: VGM, SpareBank 1 Markets

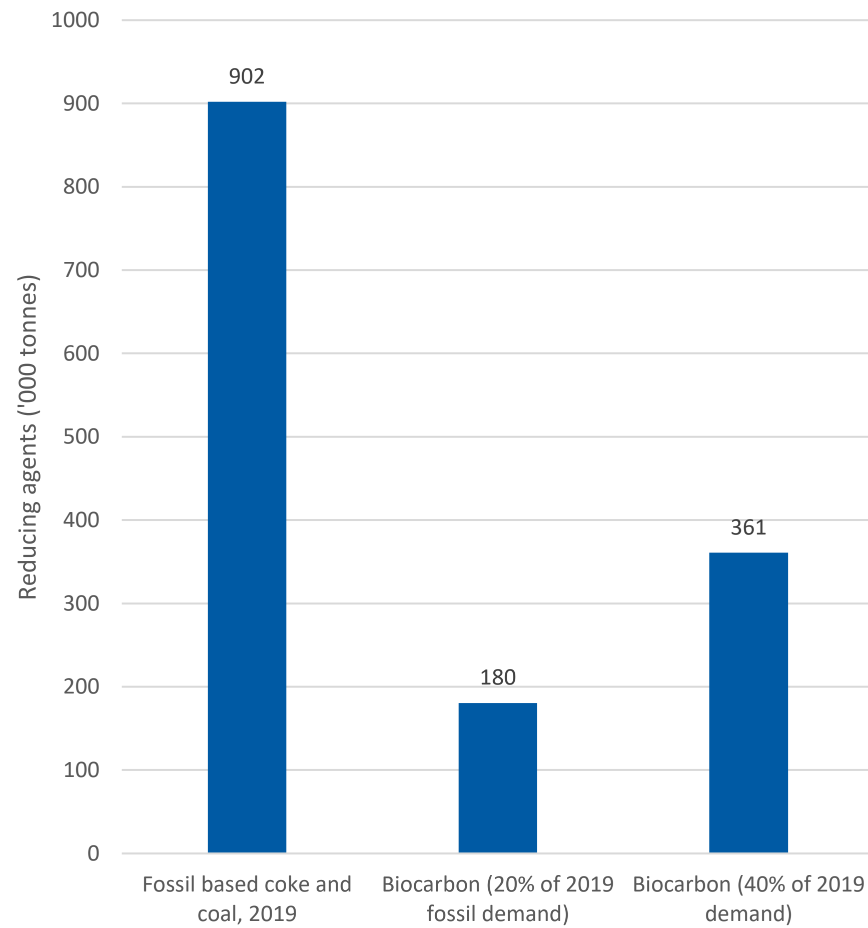
Limited production of biocarbon is currently a significant bottleneck…

VGM's facility at Follum will increase European production capacity by almost 50%

Total European biocarbon production…



… not even close to supply Norwegian demand



Source: European biochar association, Process21, IEA, SpareBank1 Markets

SpareBank 1 MARKETS

… explaining why VOW already has announced several major partners

REPSOL

Announced 30.10.2020

ArcelorMittal

Announced 28.01.2021

Elkem

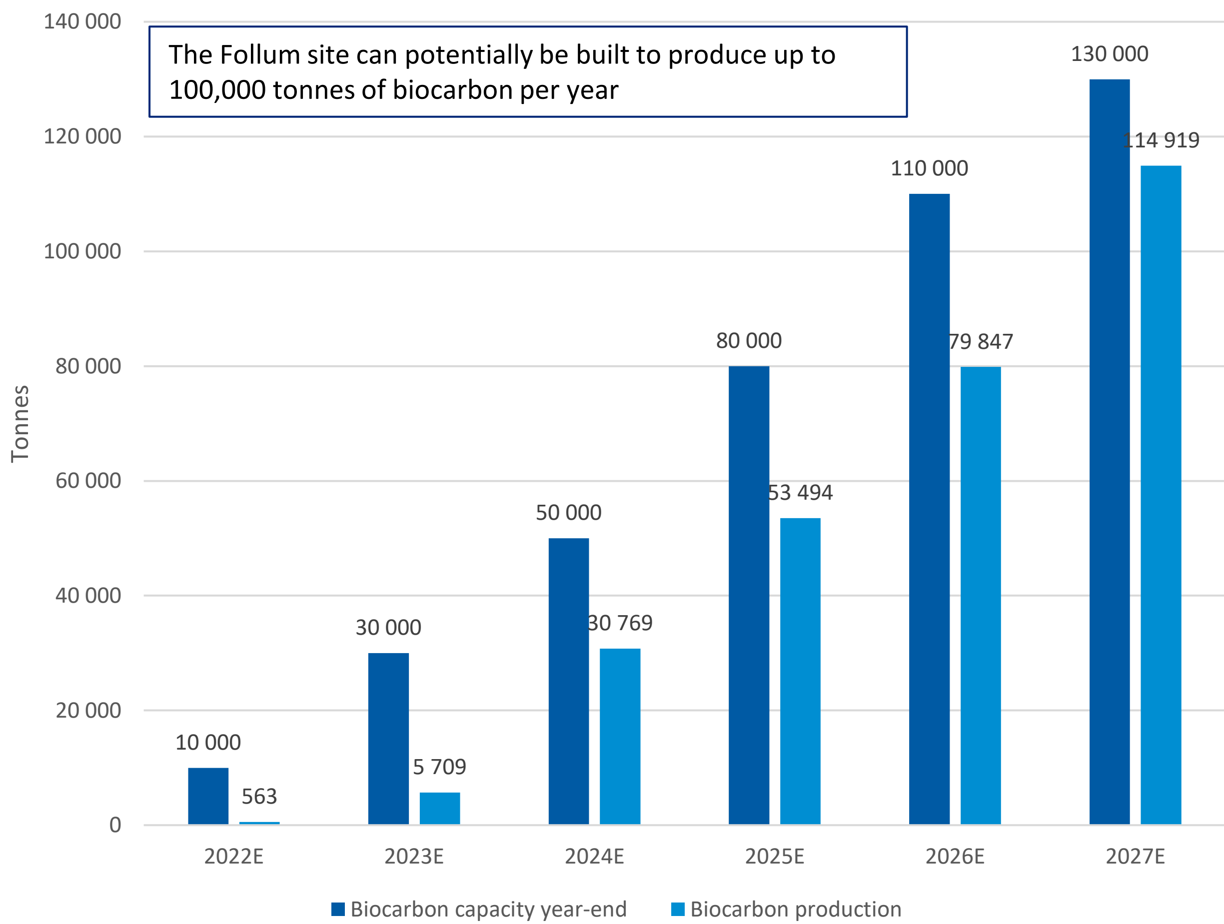
Announced 02.02.2021

Source: VOW, SpareBank 1 Markets

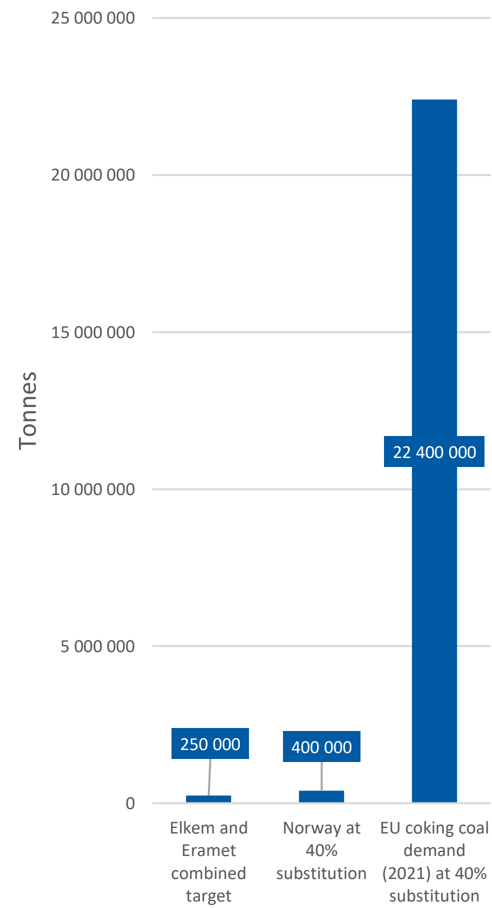
VGM aims to take a leading role on biocarbon with VOW technology

We estimate 80kpta. of biocarbon production capacity in operation or under construction by 2025

SB1M estimated ramp-up of VGM's capacity and biocarbon production…



… nowhere close demand



Source: VGM, IEA, Prosess21, SpareBank 1 Markets

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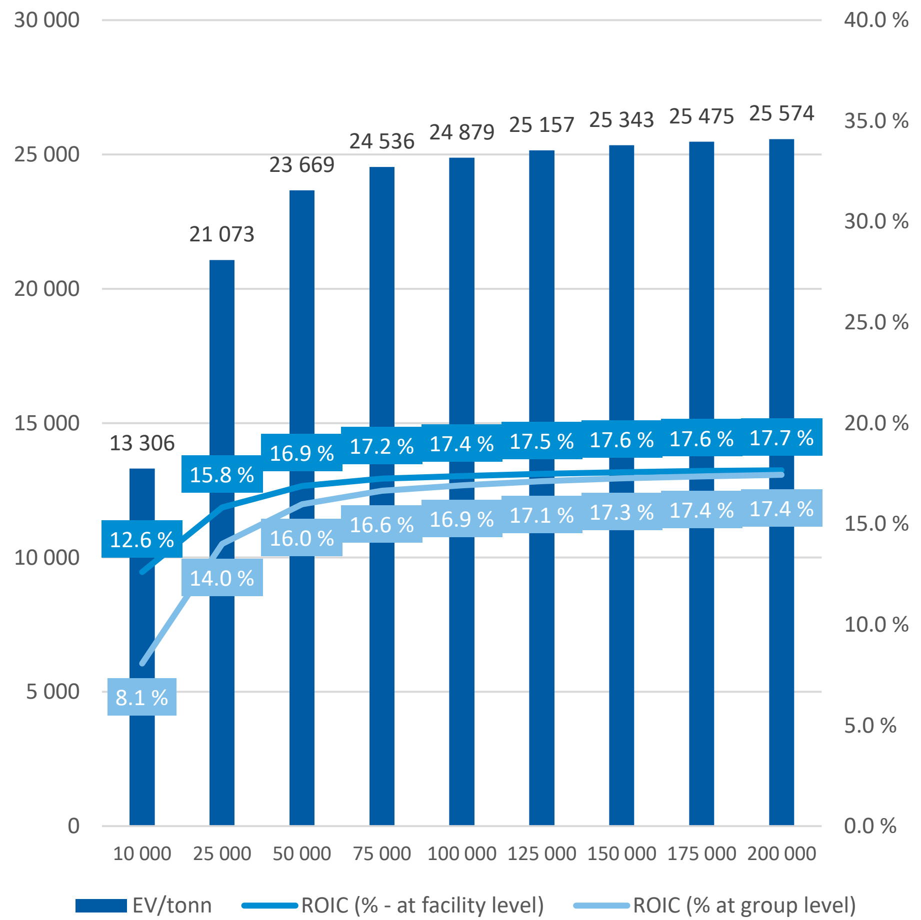
We estimate VGM ROIC of 16.9% if 100ktpa. biocarbon production is reached

Profitability is most sensitive to 1) Biocarbon price, 2) Biomass cost, 3) Syngas/Biooil price

EV/tonne and ROIC vs. biocarbon prod. capacity*



ROIC – sensitivity

ROIC - sensitivity		Biocarbon price (NOK/tonne)					
Biomass cost (NOK/tonne)		3000	4500	6000	7500	9000	10500
	350	9.2 %	14.7 %	20.1 %	25.6 %	31.0 %	36.5 %
	500	6.8 %	12.3 %	17.7 %	23.2 %	28.6 %	34.1 %
	650	4.4 %	9.9 %	15.3 %	20.8 %	26.2 %	31.7 %
	800	2.0 %	7.5 %	12.9 %	18.4 %	23.8 %	29.3 %
	950	-0.4 %	5.1 %	10.5 %	16.0 %	21.4 %	26.9 %
	1100	-2.8 %	2.7 %	8.1 %	13.6 %	19.0 %	24.5 %

Note: Assuming Syngas/Biooil fixed at NOK0.25/kWh

ROIC - sensitivity		Syngas (NOK/kWh)					
Biooil (NOK/kWh)		0.10	0.25	0.40	0.55	0.70	0.85
	0.10	10.0 %	14.4 %	18.8 %	23.2 %	27.7 %	32.1 %
	0.25	12.5 %	16.9 %	21.3 %	25.7 %	30.1 %	34.6 %
	0.40	15.0 %	19.4 %	23.8 %	28.2 %	32.6 %	37.1 %
	0.55	17.5 %	21.9 %	26.3 %	30.7 %	35.1 %	39.5 %
	0.70	19.9 %	24.4 %	28.8 %	33.2 %	37.6 %	42.0 %
	0.95	24.1 %	28.5 %	32.9 %	37.3 %	41.8 %	46.2 %

Note: Assuming Biocarbon fixed at NOK6000/tonne and biomass at NOK550/tonne

Source: VGM, SpareBank1 Markets
Note: *Follum has a maximum capacity of 100,000tpa We assume ramp-up of additional sites may deflate ROIC by about 1-2% which is not included. See input assumptions on previous slide.

Biocarbon value is driven by CO2 allowance cost + price of alternative coal/coke

Recent rally in EU ETS allowance price hits directly on the profitability of metal producers

EU ETS allowance price (EUR/ton CO2)

Carbon taxes drives the value of biocarbon

~NOK2-4,000/Tonne

Price of fossil alternative:
Metallurgical coal, coke, pet. coke etc.

+ ~NOK650/Tonne

3 x CO2 allowance cost
(~3 tonnes CO2 per tonne coal)

= ~NOK4-6,000/Tonne

Willingness to pay for Biocarbon

+

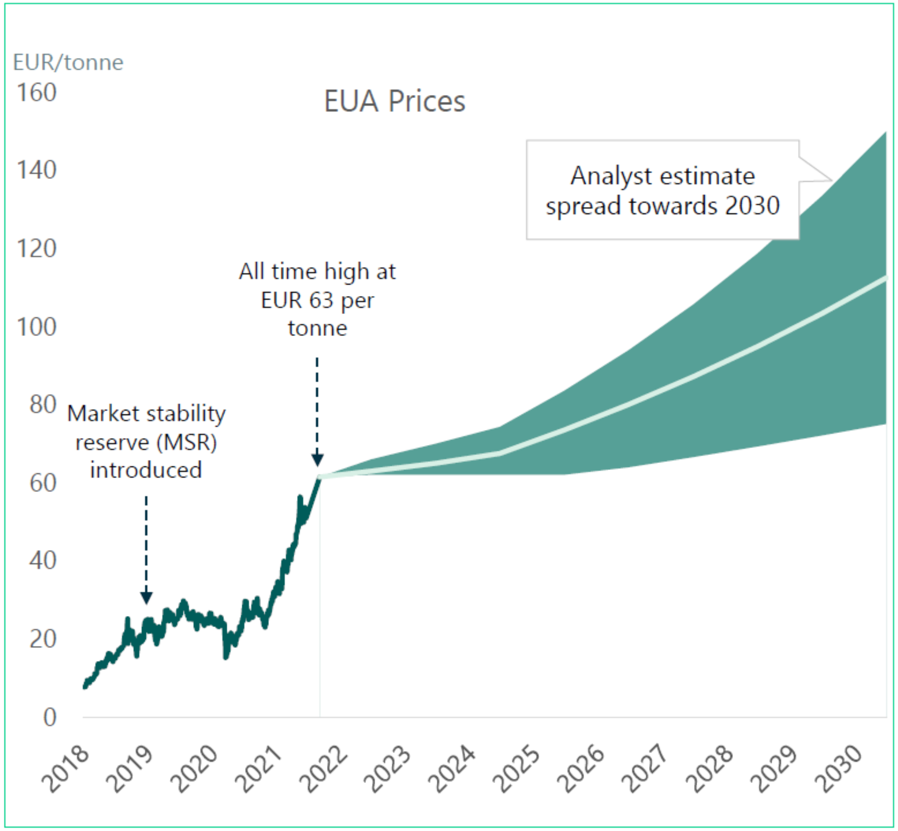
Green metal premium (~XX/tonne)

Source: Bloomberg, VGM, SpareBank1 Markets

Potential shortage of CO2 emission allowances projected

EU ETS allowance price has more than doubled past 12 months

Thoughts on EU ETS allowance outlook – From Aker Carbon Capture's CMD



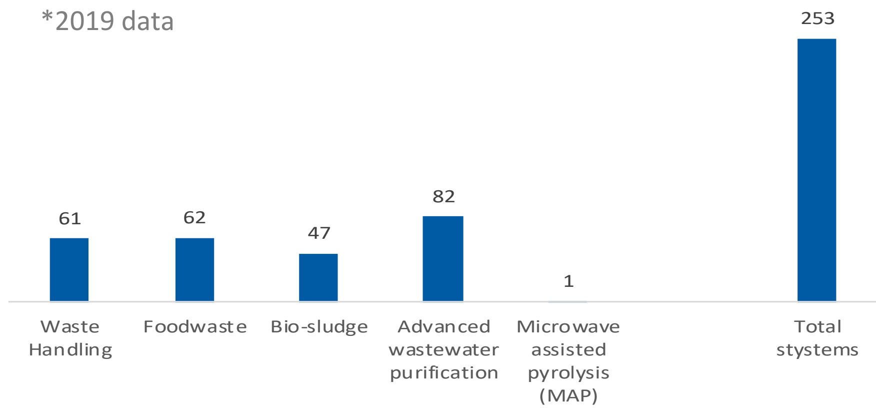
- Analyst 2030 targets range from EUR 75 to EUR 150 per tonne
- IEA sustainable development scenario requiring EUR 110 per tonne[1]
- Role of the ETS emphasized in EU's "Fit for 55" climate policy proposal:
  - Further tightened allowance supply from 2023
  - Allowances in MSR above the previous year's auction volume no longer be valid from 2023
  - Carbon boarder adjustment mechanism introduced
- Complementary local carbon taxes and carbon contracts for difference increasingly being discussed

Source: Aker Carbon Capture, IEA NetZero by 2050, A Roadmap for the Global Energy Sector, SpareBank 1 Markets
Note: (1 USD = 0.85 EUR)

VOW is #1 market leader within cruise waste handling systems

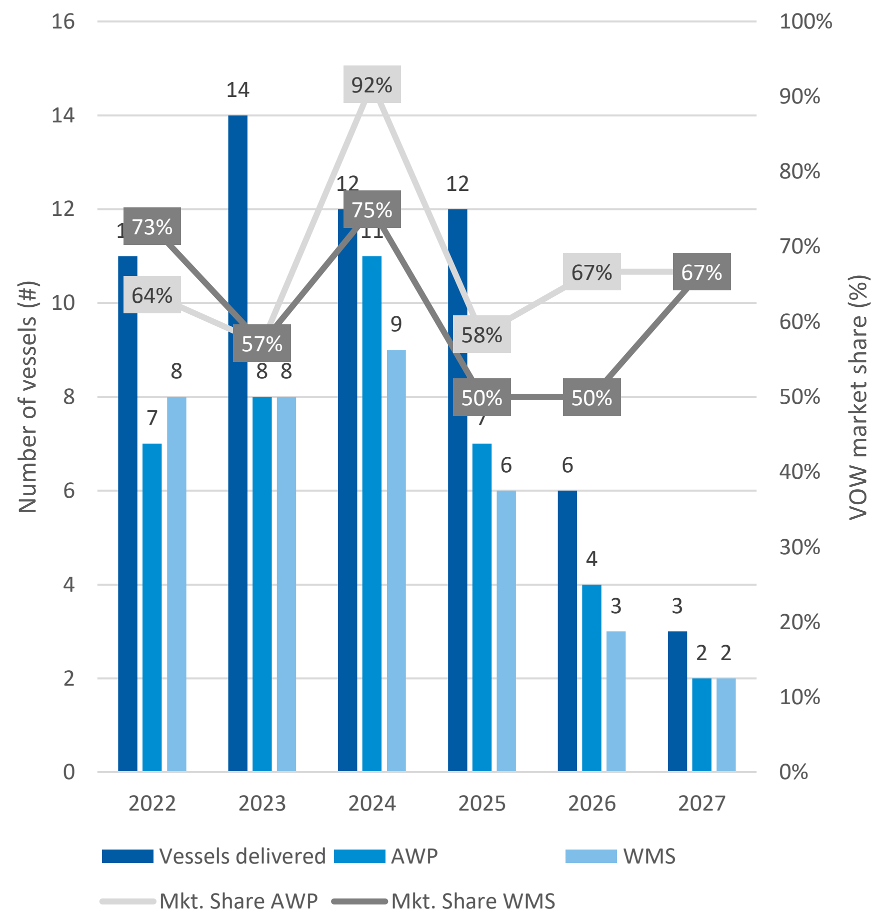
Historically VOW has had 1/3 market share and delivered technology to all tier 1 cruise clients

VOW has delivered more than 250 systems



… to all tier 1 cruise companies

…and has ~65% market share of current backlog*



Source: Global Cruise Industries, VOW, SpareBank 1 Markets
Note: *Not including options

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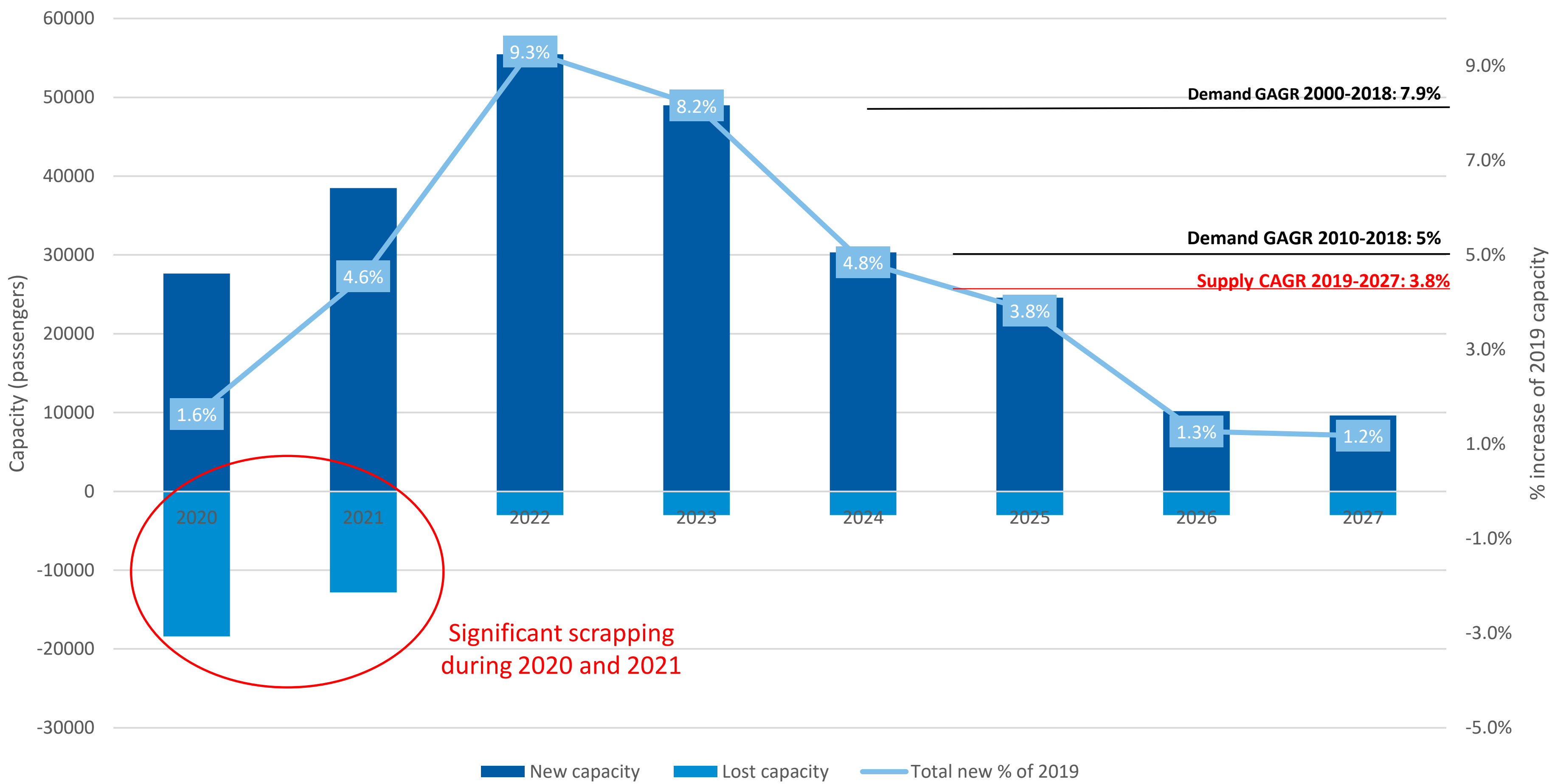
…and market balance looks healthy when activity returns to "normal"…

…Although aftersales are still hit hard by C19, we argue quick recovery as activity picks up

Estimates



Source: VOW, SpareBank 1 Markets

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Source: SpareBank 1 Markets

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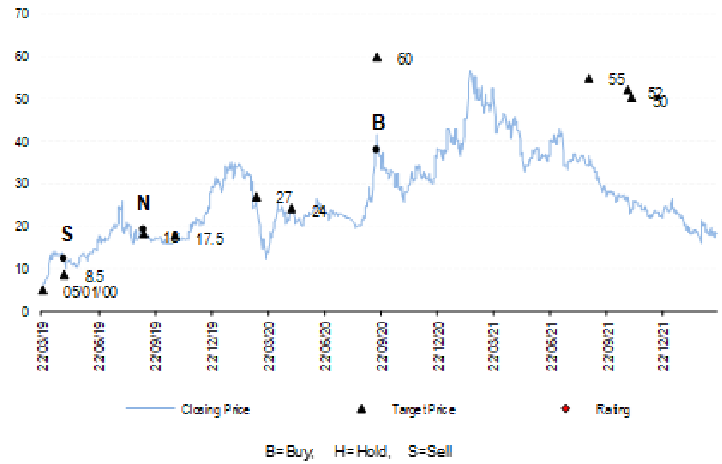
3-Year Price, Target Price and Rating Change History Chart for VOW NO

VOW NO Date	Closing Price	Target Price	Rating
28/04/2019	12	8.5	SELL
02/09/2019	19.1	18	NEUTRAL
24/10/2019	17.6	17	NEUTRAL
24/10/2019	17.6	17.5	NEUTRAL
03/03/2020	26.7	27	NEUTRAL
29/04/2020	23.7	24	NEUTRAL
14/09/2020	38	60	BUY
23/08/2021	35.28	55	BUY
25/10/2021	26.16	52	BUY
02/11/2021	23.44	50	BUY



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Recommendation distribution
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Current recommendations of the Research Department

Recommendation	Percentage of companies under coverage with this recommendation	Percentage of companies under coverage for which SB1 Markets has provided investment banking services in the past 12 months
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Neutral	25.6%	11.9%
Sell	12.6%	9.1%
Total	100%	

Source: SpareBank 1 Markets

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