



TURNING
WASTE

ENERGY
FOR A CLEANER
WORLD

ANNUAL REPORT
2019

Contents

- 3** About Scandinavian Biogas
- 4** 2019 in brief
- 5** Performance in 2019
- 6** CEO commentary
- 8** Strategy and business model
- 12** Market and key drivers
- 16** Circular economy of biogas
- 17** Operations
- 18** Sweden
- 21** Norway
- 23** South Korea
- 25** Our view of sustainability
- 28** Environment
- 32** Responsible operations
- 34** Safe and secure workplace with committed employees
- 36** Board of Directors
- 38** Executive management
- 39** Board of Directors' report
- 46** Consolidated statement of comprehensive income
- 47** Consolidated balance sheet
- 49** Consolidated statement of changes in equity
- 50** Consolidated statement of cash flows
- 51** Parent Company income statement
- 52** Parent Company balance sheet
- 54** Parent Company changes in equity
- 55** Parent Company statement of cash flows
- 56** Accounting principles and notes to the accounts
- 76** Auditor's report
- 78** About the sustainability report
- 80** Glossary
- 81** GRI content index

Cover photo: View of Stockholm. Scandinavian Biogas plants convert the city's food waste to biogas used by, among others, Stockholm Public Transport buses – an example of the circular economy.

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About Scandinavian Biogas

As one of the Nordic region's largest private producers of biogas, Scandinavian Biogas helps customers and partners with what we are best at – designing and operating biogas plants with high resource and energy efficiency. In this way, we support the transition from fossil fuels to renewable energy.

Scandinavian Biogas, founded in 2005, sells renewable energy based on compressed biogas (CBG) and liquid biogas (LBG), as well as several related services. With world-leading expertise in the design and operation of biogas facilities to optimise biogas and bio-fertiliser production, we are market leaders in large-scale biogas production in the Nordic region and South Korea.

A fundamental part of Scandinavian Biogas's strategic focus is the development of methods and services to improve biogas and bio-fertiliser production efficiency for established as well as new types of waste. The main feedstocks currently used are wastewater sludge, food waste, salmon farming waste, and residues from industrial processes. Based on our research and development work with new and more efficient methods, biogas can be produced far more cost- and resource-efficiently than ever before, and we work continuously to develop and improve the digestion process when producing biogas from bio-mass. We also have leading expertise in purification processes for upgrading biogas to vehicle fuel quality, as well as in biogas liquefaction.

Our main products are biogas used in heat production, upgraded and liquid biogas used as vehicle fuel, and bio-fertiliser as a substitute for artificial fertiliser. Our focus is on the Nordic and South Korean markets.

In close collaboration with partners and customers, we also work to identify growth projects outside our Nordic home market. These projects may include value-creation services in the design, construction, and operation of new plants and improving existing plants' efficiency through process improvements.

Scandinavian Biogas Fuels International AB (publ) is domiciled and headquartered in Stockholm. During 2019 the business had a total of 76 (75) employees: 39 (39) in Sweden, 21 (21) in South Korea and 16 (15) in Norway.

Scandinavian Biogas currently has five plants in operation: three in Sweden, one in South Korea, and one in Norway, where liquid biogas is produced. Total biogas sales increased more than 100 per cent over the past six years, from 165 GWh to 352 GWh.



2019 in brief

Long-term supply contract signed between Biokraft and Hurtigruten

During the second quarter, Norwegian subsidiary Biokraft and Hurtigruten signed a 7.5-year supply contract.

MAY

High production levels at Skogn

In May 2019, the biogas plant in Skogn, Norway, outside Trondheim, achieved a high production rate. The plant is the world's largest for the production of liquid biogas fuel (LBG). At Skogn, 12.5 million normal cubic metres of biogas are produced each year at full production. The primary feedstocks are waste and by-products from the Norwegian fishing and forestry industry.

JUN
-AUG

New share issue

During the year, new share issues were conducted for a total value of SEK 146.8 million before transaction costs. Transaction costs totalled SEK 9.2 million.

Secured financing for repayment of bond loan

In September, the Company secured financing for repayment of the outstanding 2016/2020 bond loan of SEK 230 million maturing on 10 February 2020.

SEP

Application being processed by Klimatklivet initiative

In early September, an application was filed with the Klimatklivet initiative for subsidies for certain process improvements and a capacity increase for the existing biogas plant at Södertörn to 164 GWh.

Biogas Commission report published

In December, the Biogas Commission submitted its final report to the government. The report is an important step forward for competitive neutrality and growth, proposing a production target of 10 TWh for Swedish biogas by 2030.

DEC

Record year at Skogn and Södertörn

Total biogas sales exceed 300 GWh for the first time.

2019

Strengthened profitability

During the year, Scandinavian Biogas improved the Group's profitability in all quarters, and profitability is significantly better than last year.

Performance in 2019

Group biogas sales

352
GWh (278)

Group organic waste management¹

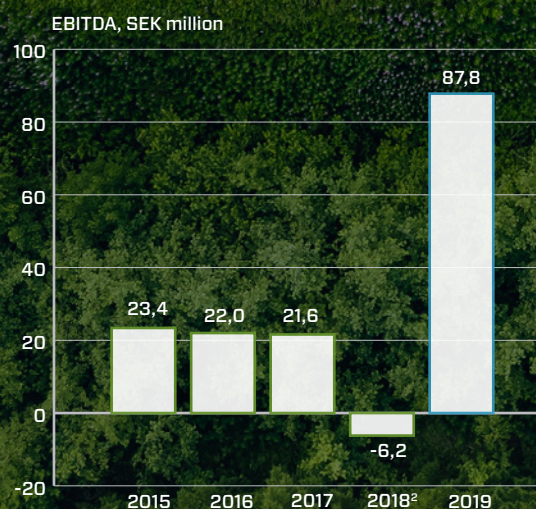
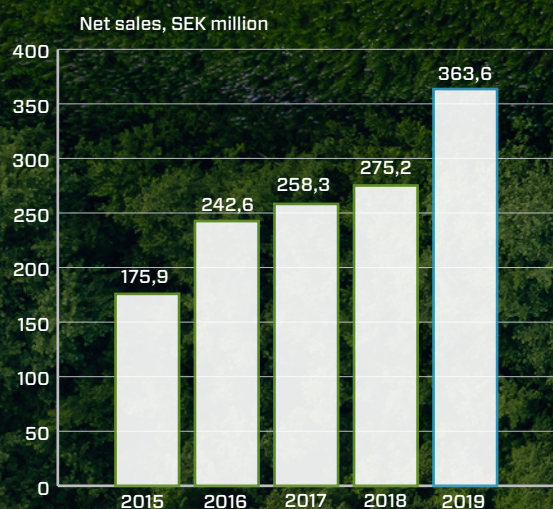
139,458
tonnes (119,300)

Consolidated net sales

364 SEK M
(275)

Emissions reduction in Sweden

52,806
(tonnes CO₂e (51,600))



Scandinavian Biogas Fuels International AB

Group, SEK thousand	2019	2018	2017	2016	2015
Net sales	363,559	275,234	258,363	242,610	175,891
EBITDA	87,848	-6,247	21,587	21,972	23,358
EBITDA %	24.2	-2.3	8.4	9.1	13.3
EBIT	-1,940	-71,808	-42,159	-24,580	-16,817
EBIT %	-0.1	-26.1	-16.3	-10.1	-9.6
Balance sheet total	1,294,063	1,234,842	1,161,238	1,026,648	760,652
Adjusted equity/assets ratio, %	26.6	20.5	25.5	25.5	28.6

See Note 39 for definitions.

¹ Excluding Skogn.

² During 2018, the Group incurred one-off costs totalling SEK 21.8 million (13.6) for disputes and penalty fees, which reduced EBITDA. 2018 EBITDA for Business Area Norway was SEK -14.8 million (-7.7), as the plant at Skogn was not commissioned until June 2018. See page 41.

CEO commentary

Scandinavian Biogas's focus on liquid biogas (LBG) began to pay off in 2019. The agreement signed with Hurtigruten in Norway was our first incursion into an extremely exciting and expansive biogas market. One essential requirement for this has been the operation of our LBG production facility in Skogn, Norway, at full capacity since late 2019, thanks to the hard work of our employees. The plant is now the world's largest liquid biogas production facility.

LBG is particularly well suited for shipping companies that want to reduce their climate footprint. More and more shipping companies are moving towards using gas as fuel, not least due to tougher sulphur emissions standards. And with biogas in the fuel mix, shipping companies significantly improve their climate profile. Both Scania and Volvo have developed new engines that run on LBG. This offers an attractive solution for hauliers with high climate ambitions. Read our interview with Anders Lampinen, Director of New Technologies at Scania, on page 14.

In coming years, the challenge will therefore be to identify ways to increase production at a sufficiently rapid rate. This is also the basis for our collaboration with Mönsterås Municipality, described in more detail on page 20.

Thanks to investments made in previous years to increase operational capacity, we achieved high biogas production volumes and high security of supply at all of our plants in 2019. This allowed us to achieve a record-high production volume of 352 GWh, a 27 per cent year-on-year increase. Bio-fertiliser production at Södertörn also reached new levels, and we are seeing increased demand for bio-fertiliser from the agricultural sector. We systematically manage society's waste products and convert them into renewable energy – a true circular economy.

The Group's profitability and cash flow from operating activities improved significantly in 2019 and we were able to secure additional financing with share issues of SEK 146.8 million, which is very gratifying. The improved profitability is primarily due to the plant at Skogn being in operation for the entire year, as well as to positive development at our other plants. The plant at Södertörn, for example, surpassed its production record by 75 GWh due to improved process stability.

Sweden's achievement of climate neutrality requires political resolve

The Biogas Market Commission presented its official report, "More Biogas! For a Sustainable Sweden" in late 2019. The commission found that the Swedish biogas industry is at a disadvantage as compared with, for instance, Danish biogas producers, which receive subsidies at both the production and consumption stage. This has been affecting the industry for several years, resulting at times in a lower growth rate for Swedish biogas production. Swedish biogas consumption has nearly doubled since 2015, while Swedish biogas production has increased only 5 per cent.

The commission proposes that Sweden set an annual production target of 10 TWh (as compared with the current 2 TWh/year) for Swedish biogas production, to be achieved by 2030. The main proposal for achieving the target is introduction of a biogas production subsidy in Sweden.

We take a positive view of the commission's proposal, although we believe the subsidy level should be higher. Over the long term, we cannot have a situation with different ground rules for producers in different markets – especially as we are moving towards greater biogas market integration. We assume that the proposed subsidy is a first step in the process to offset the current competitive disadvantage vis-à-vis Danish biogas.

It is now up to politicians and decision makers to demonstrate determination, fortitude and resolve on the biogas issue. The government's top priority should be processing the commission's report and introducing legislation later this year. The pace of the economic adjustment needs to increase if Sweden is to have any chance of achieving its goal of climate neutrality by 2045.

In a positive political message, the government decided in 2019 to extend its biogas subsidy for raw gas producers. The 2020 spring budget also includes provisions for the subsidy through the entire year. The subsidy, administered by the Swedish Board of Agriculture, is allocated to the production area where biogas is upgraded to vehicle gas. Scandinavian Biogas has been granted a government biogas production subsidy for the plant at Södertörn, amounting to just over SEK 16 million in 2019.

Meanwhile, political decisions are being made at the local and regional level. If these decisions are not aligned with national ambitions, this will impede Sweden's opportunities to achieve its climate targets. Prudent politicians recognise the value of taking care of local resources for local use, and are willing to promote the use of biogas as a prioritised fuel for regional and general bus services in Sweden. Skånetrafiken and Västtrafiken have both singled out biogas as a prioritised fuel.

Development of Stockholm-area facilities

The plant at Södertörn had a record year in 2019. Production capacity is now at maximum utilisation at Södertörn, which highlights the need for capacity enhancement measures. The plant is already Northern Europe's largest food waste-based biogas facility.

The intention is to invest SEK 100 million as a first step in expanding the plant at Henriksdal for large-scale LBG production.

This is fully in line with the trend we are seeing for biogas. Establishing a LBG production facility in the Stockholm area would be a strategic foothold in an entirely new market for Scandinavian Biogas, while also providing greater diversification when other market segments show less robust growth.

Non-recurring costs

The legal proceedings in South Korea, in which we have been involved in recent years, continued in 2019. We remain optimistic

” Awareness of the advantages of biogas – as well as its challenging competitive situation – has reached the highest political level. Political resolve is now needed to take the Swedish biogas industry to the next level.”

about the outcome and are anticipating a favourable decision, which is expected to be issued during the first half of 2020.

During 2019 we conducted a directed share issue of SEK 100 million and a preferential rights issue of SEK 10 million. The total issue volume, including conversion of shareholder loans, was approximately SEK 146.8 million.

As part of the Group’s strategic plan, the board of directors and management have evaluated the prospect of listing the share in a suitable marketplace. Preparations for an IPO have commenced.

Proactive sustainability focus

We have been working with resource-efficient biogas production for nearly 15 years. With climate-smart, sustainable products, the company is part of the circular economy. Anaerobic digestion at wastewater treatment plants and management of food waste for biogas production are two examples of ways in which we support greater circularity. We actively support several global environmental goals as well as the national goal of achieving a fossil-free vehicle fleet, waste management, and recycling nutrients to agriculture.

For us, sustainability comes down to the way we design, build, and manage our plants. This must be done with regard to environmental, social and economic impact on the external environment, our employees, the local community where we operate, our other stakeholders, and society as a whole. We published our first GRI-referenced sustainability report in 2018.

During the year, we worked actively with our sustainability goals, which in the initial stage are designed as environmental goals for the Swedish operations. We have implemented and followed up on activities to reach our goals (p. 31), and strive to constantly surpass ourselves in terms of resource efficiency and climate performance. Our most important environmental issue is emissions to air, where the goal is to annually reduce methane gas emissions from the plants.

Health & Safety is an important sustainability issue for our employees. In 2019 we arranged for an external review of our work environment management to examine ways we can strengthen the areas that need improvement. We continued our important work with the safety committee, which comprises the director of Business Area Sweden, the HR manager, and all safety representatives. We also worked with our employees during the year to clarify and secure support for the company’s values. Our core values are Respect, Expertise, Joyfulness, and Passion! Our company is characterised by job satisfaction and unique know-how, and we are proud of what we do – because we know that we make a difference.

A bright future

The Paris Agreement, Agenda 2030 and the IPCC’s most recent report on the consequences of rising global temperatures have opened the eyes of many decision makers in the political sphere and the business sector. Awareness of the advantages of biogas – as well as its challenging competitive situation – has reached the highest political level. Political resolve is now needed to take the Swedish biogas industry to the next level.

The global energy market is on the verge of a tremendous conversion and the need for renewable energy is increasing year by year. We are now seeing a paradigm shift, with the advantages of liquid biogas becoming increasingly apparent for heavy transports and shipping in the Nordic region. Liquid biogas (LBG) is the key to future biogas growth.

2019 was in large part a successful year for Scandinavian Biogas. I would like to extend my warmest thanks to all of our employees, customers, partners, and investors for your support. We look forward to offering more people the opportunity to join one of the Nordic region’s leading biogas companies on our journey.

COVID-19

Although COVID-19 has had a major impact on the global and Scandinavian economies, its impact on the Group’s business has been limited. We have also worked diligently to protect our employees and reduce the risk of infection.



Stockholm, May 2020

Matti Vikkula

President and CEO



Scandinavian Biogas's mission is to help achieve society's goal of converting to renewable energy.

Strategy and business model

Through its operations, Scandinavian Biogas supports a sustainable transition from fossil to renewable energy. The Company's strategy is based on utilising the Group's unique engineering expertise and in-depth knowledge of microbiology to expand the production and sale of biogas, in Sweden and internationally.

Scandinavian Biogas's aim is to be world-leading in large-scale biogas and bio-fertiliser production. The Company currently holds a leading position in renewable energy and biogas production in the Nordic region. Scandinavian Biogas works to ensure an increased use of biogas in the energy mix. The Nordic heavy road transport sector is currently the most significant area for the Company's growth ambitions, although the biogas

market is also expected to grow within maritime transport and industry. Demand for liquid biogas (LBG) has increased in recent years, along with the supply of biogas-powered vehicles. This affects the market for compressed biogas (CBG), which is currently local but is expected to develop into regional or national markets in future.

Business concept

Our business concept is to be a leader in the design, management and operation of biogas plants.

Vision - how we generate value for shareholders

Our vision is to be world-leading in large-scale biogas production.

Operational goals

Scandinavian Biogas's long-term growth target is to increase the Company's biogas sales and deliveries by 20-30 per cent annually. Our mid-term goal is to achieve a total production volume of 1 TWh.

Long-term financial goals

- Project profitability \geq 15 per cent IRR
- EBIT margin \geq 10 per cent
- Equity/Assets ratio \geq 30 per cent

Sustainable and profitable growth

In the Company's efforts to realise its vision, three main areas form the basis of Scandinavian Biogas's growth strategy for the next few years.

Utilise HOLD Technology™ and the Company's unique expertise

HOLD Technology™, Scandinavian Biogas's self-developed process technology for biogas production, is the core of the Company's operations. HOLD Technology™ produces a stable process capable of handling extremely large loads, which in turn produces optimal cost- and resource-efficient production.

After more than ten years of research and development, combined with in-depth practical experience in biogas production, Scandinavian Biogas has world-leading expertise in the optimal design and operation of biogas facilities. The Company's plants in South Korea and at Södertörn are good examples of the technology's application. High production levels and a minimal amount of digestates are achieved with optimised digestion tank capacity. Based on its extensive and world-leading expertise in the field of biogas, Scandinavian Biogas is well positioned to capture growth in the market for resource and energy recovery.

➔ Read more about HOLD Technology™ on page 11.

Increased production capacity

The expansion of production capacity is a key aspect of Scandinavian Biogas's growth strategy. Ongoing efforts to increase capacity are pursued on multiple levels. New investment opportunities are continuously explored, ranging from the design of new plants and takeover of biogas plants from third parties to the expansion of own existing plants. The Company's HOLD Technology™ will be further developed and utilised to a greater extent to improve capacity at existing plants.

The trend in biogas production is towards the construction of larger and larger plants. Scandinavian Biogas's strategy is to focus on plants with an annual capacity of over 80 GWh (CBG) or over 120 GWh (LBG). In recent years, a key aspect of the strategy has been to consolidate a strong position in the Stockholm area. One step towards the realisation of this strategy is the agreement previously entered into by the Company with Stockholm Vatten och Avfall, which guarantees operations at Henriksdal and Bromma for many years to come.

In the next step, Scandinavian Biogas will further expand its LBG production capacity. This will give the Company greater access to national and Nordic gas markets. The investment in and commissioning of the plant in Skogn, Norway, was a step in this strategic direction.

Important work is being done to identify new substrate sources. The Group's research and development efforts have evaluated the suitability of more than 400 organic materials. Potentially interesting substrates have been identified in the pulp and paper industry and elsewhere.

Develop partnerships

Due to its market-leading expertise in biogas production, Scandinavian Biogas has formed trusting relationships with several local and regional players. An example of this is the Company's long-term agreement with Stockholm Vatten och Avfall for the upgrading of raw gas to fuel-quality biogas at the Henriksdal wastewater treatment plant in Stockholm.

Scandinavian Biogas will continue to secure and strengthen long-term strategic partnerships across the entire value chain, from substrate suppliers to valuable by-product customers. The growth projects currently under development by the Company will also be pursued in close collaboration with partners and customers.

In assessing potential new growth projects, the Company uses its well-established project development process, which covers everything from thorough evaluation of the project's potential to construction of the plant in accordance with HOLD Technology™. Based on this process, Scandinavian Biogas can offer long-term partnerships, such as designing and operating biogas production plants for external partners.

Investments in renewable energy

In recent years, Scandinavian Biogas has made extensive investments to support a fossil-free, circular and sustainable society. The Company's core business is focused on producing renewable energy in the form of biogas. Increased production, and the Company's consequent growth, requires investments in new or existing plants. This applies particularly to production capacity for liquid biogas (LBG). The investment in Skogn, Norway, and the plans for Södertörn are examples of this.

Total investments in 2019 amounted to nearly SEK 47 million.

Scandinavian Biogas intends to make significant investments to improve and expand plants in the Stockholm area. The goal is to invest just over SEK 100 million in the first stage – a step towards expanding the plant at Henriksdal for large-scale production of LBG.

Business model

Scandinavian Biogas essentially operates under two business models, based on its world-leading HOLD Technology™. The Company's strength lies in its qualified engineering expertise and knowledge of microbiology, which enable development of resource-efficient, economical processes for many different types of substrate.

With HOLD Technology™, the process concept includes the entire chain – from biogas plant design to managing, pre-treating, and digesting organic material and upgrading biogas to vehicle fuel quality. The efficient operation of biogas facilities is at the core of Scandinavian Biogas's business model. The Company attaches great importance to systematically improving and fine-tuning the digestion process.

Scandinavian Biogas's two business models

Build-Own-Operate (BOO) focuses on constructing biogas plants in accordance with HOLD Technology™ and on operating them in a resource-efficient manner based on Scandinavian Biogas's expertise.

Engineering and Operations (E&O) emphasises Scandinavian Biogas's service offering as biogas plants are being designed and operated in accordance with HOLD Technology™.

Value creation through Scandinavian Biogas's qualified engineering expertise and knowledge of microbiology.

- Produces more gas per cubic metre of digestion tank volume
- Provides qualified expertise for a wide range of substrates
- Dramatically shortens the period between start-up and full production capacity
- Achieves greater reactor stability during the digestion process
- Ensures high-quality bio-fertiliser
- Upgrades gas with very low levels of methane leakage
- Achieves cost- and resource-efficient production
- Continuously increases production capacity through process improvements



HOLD Technology™

One of Scandinavian Biogas's success achievements is its self-developed HOLD Technology™, an advanced process technology used to optimise large-scale biogas production. The method is one of the most effective in the world and has been utilised on a full scale in Ulsan, South Korea, where production efficiency has increased 3–5 times since the Company took over in 2007. HOLD stands for High Organic Load Digestion.

The method, developed by the Company's R&D department in close collaboration with Linköping University, is founded on three cornerstones:

- The first cornerstone involves the way a biogas plant should be designed to increase efficiency and reduce energy consumption between stages – e.g. from food waste collection site to digestion tank. This is the system's hardware, involving mainly stirring and also pipes, pumps, and heat exchangers.
- The second cornerstone is based on in-depth expertise and well-proven methodology regarding the substrates that work best in various combinations. Since 2005, Scandinavian Biogas has tested over 400 different substrates in a laboratory environment. Substrates need to be mixed with chemicals and other additives to achieve an optimal balance between maximum energy extraction, efficient decomposition, and minimal production of by-products. The right combination – the recipe – is the system's software.
- The third cornerstone involves the way the substrate is introduced to the digestion tank to allow the micro-organisms to maintain efficient production with a high utilisation rate of substrate energy. The product – biogas and bio-fertiliser – is then packaged and transported, and any by-products are taken care of in order to close the circle.

The development of HOLD Technology™ is one of the Company's greatest successes. The technology also forms the foundation of the business. Identification of a substrate mix that provides efficient microbiological decomposition and that can subsequently be refined into vehicle fuel quality via an optimised digestion process: this is the Company's key driver – The Leadership of Microbes™.

The EffiSludge for Life project is an example of an innovative use of new substrates. The project is aimed at using the by-product bio-sludge to produce liquid biogas (LBG) and is jointly operated by Scandinavian Biogas, Norske Skog, and majority-owned Norwegian subsidiary Biokraft. The project promotes better resource utilisation, reducing energy and nutrient consumption while converting organic material from the mill's process water into liquid biogas.

Market and key drivers

Today’s infrastructure for natural gas is well developed, and biogas can easily be blended into existing natural gas flows. Biogas has many advantages as an energy source. It is normally produced from organic waste that has few other uses, which means that biogas extraction increases the circularity of the energy system and the economy. With low particle and nitric oxide emissions, biogas also benefits the local environment.

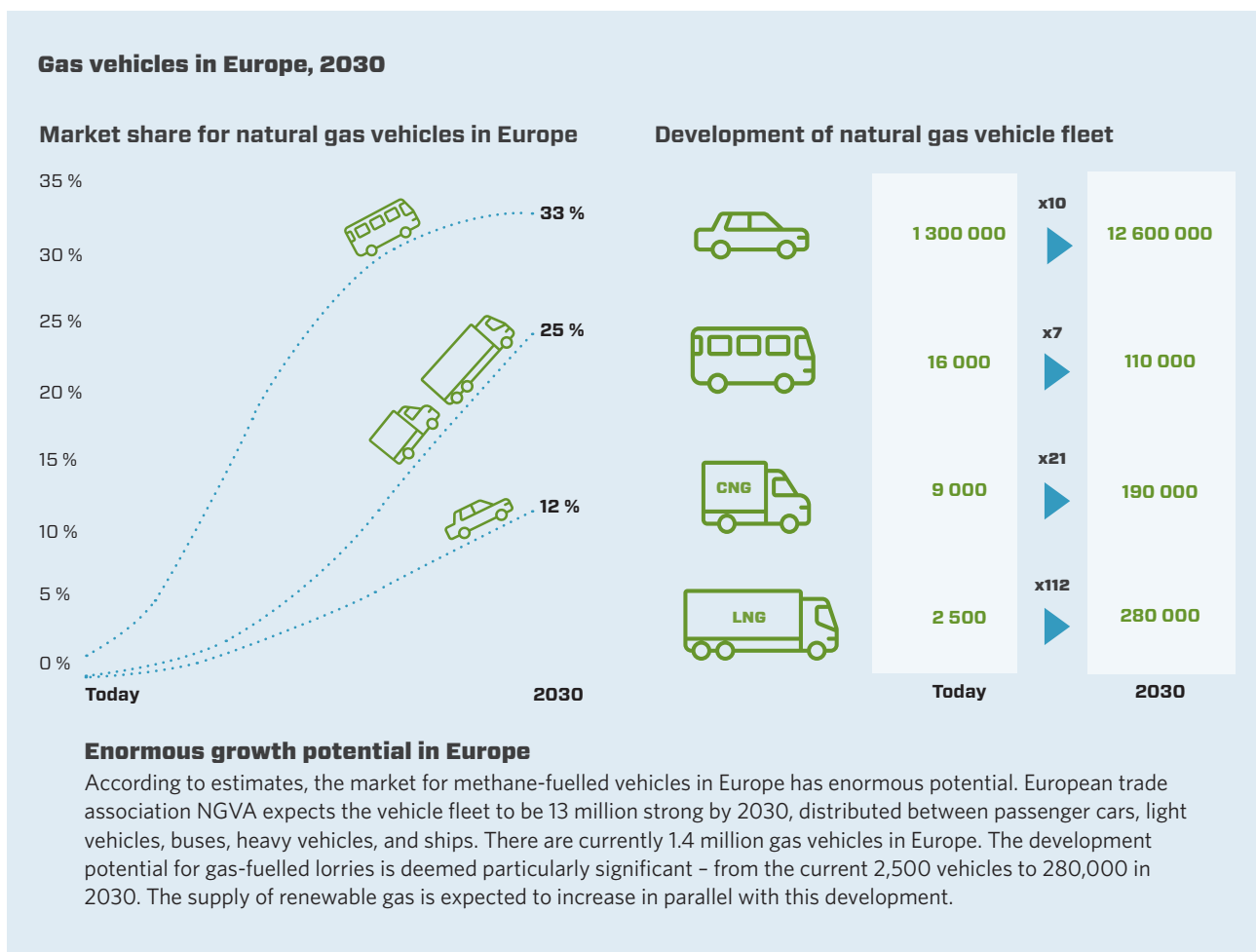
The biogas market

Biogas has a wide range of applications. The purpose for which biogas is used is partly determined by conditions and demand in markets where it is produced. In Scandinavia, biogas is used primarily as fuel or for heating, with the greatest growth potential found in the vehicle fuel market and industrial processes. In South Korea, biogas is more commonly used to produce industrial heat or electricity.

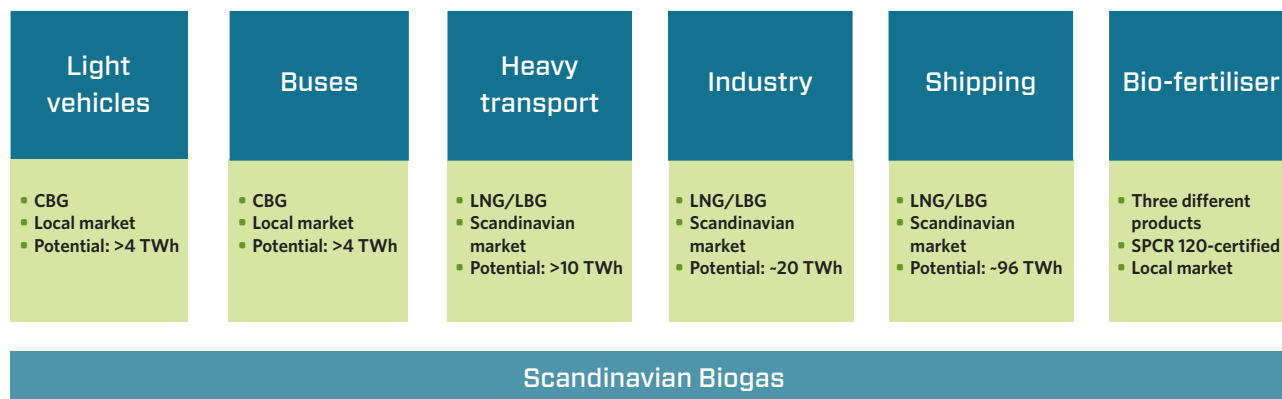
Liquid biogas

A paradigm shift is currently underway as the advantages of liquid biogas become increasingly apparent for heavy transports and shipping in the Nordic region. The Swedish Environmental Protection Agency, through the Klimatklivet initiative, has

granted subsidies for 45 filling stations and the procurement of over 400 heavy lorries run on liquid biogas. More and more gas-powered vessels are being procured by Nordic shipping companies. These may eventually be powered by liquid biogas. The manufacturing industry has also begun to show interest in LBG. Toyota Material Handling in Mjölby, which manufactures industrial trucks, was one of the first industry operators to do so. A prerequisite for realising the long-term potential of biogas is continuing to scale up LBG production, as it is easier to use gas in liquid form in industry and as vehicle fuel. Liquid biogas is also better suited for longer transports and can therefore open the way for a Scandinavian biogas market. Biogas is currently distributed locally and regionally by lorry or via a gas pipeline network.



Source: NGVA, <https://www.ngva.eu/medias/natural-gas-infrastructure-and-outlook-towards-2030>



Feedstock for biogas

Substrate is needed to produce biogas, and in most cases various types of waste are used as feedstock. Today, as the circular economy mind-set gains more traction, more and more players view waste as a valuable resource. This increases competition for certain waste streams. To improve efficiency and strengthen competitiveness, Scandinavian Biogas places great emphasis on identifying new substrates.

In Sweden, sewage sludge is the most common substrate used in biogas production. Most Swedish treatment plants are equipped with digestion tanks, which limits the growth potential for sewage sludge as a substrate. Food waste is one substrate with great growth potential, as only a small amount of Swedish household food waste is currently being collected. In 2018, 38 per cent of food waste was collected and only 33 per cent of food waste was used for biogas production.¹ Meat industry and forestry residues are other feedstocks with developing potential as biogas substrates.

Main market segments for biogas

Light vehicles

Compressed biogas (CBG) for light vehicles is currently the main segment for biogas in Sweden, although this market is currently dependent on policy instruments. The market is also limited by the supply of gas cars and filling stations. In Sweden, filling stations are mainly concentrated in metropolitan areas, along the natural gas pipeline on the country's west coast, and in Bergslagen. It is today possible to drive a gas vehicle throughout Göta- and Svealand and along the entire Norrland coast.

Buses

Public transport is a strong market for biogas and will remain a key driver in the industry. In 2019, approximately 20 per cent of Sweden's entire bus fleet was comprised of gas-powered buses². Municipalities often oversee treatment plants as well as public transport, which has provided opportunities for local cycles that utilise waste. In Sweden, Stockholm Public Transport (SL) and its operators have historically used the most biogas, although it is primarily Skånetrafiken and Västtrafiken that have

identified biogas as an important step towards fossil-free public transport going forward.

Heavy transport

An increasing number of heavy vehicles are powered by alternative fuels such as biogas. This also applies to long-haul traffic. Volvo, Scania, MAN, Mercedes, and Iveco are some of the companies that have invested heavily in developing efficient, sustainable fuel solutions. The Euro 6 gas engine is essentially as effective as a diesel engine. Meanwhile, interest in gas trucks and lorries is on the rise in several European countries. Since freight transport is normally done across national borders, this also affects conditions for biogas use in Sweden and Norway. Renewable alternatives such as biogas also benefit from the expected rise in oil prices in the long term. Liquid biogas production and access to filling stations are factors that are currently limiting the use of biogas as a fuel for heavy transport.

Industry

Approximately 9 TWh of gas is used annually by Swedish industry, with biogas representing only a small share of this amount.³ Most of the industries that use gas are located along the gas grid on Sweden's west coast. In addition to reducing climate impact, the transition to gas from oil and other fossil fuels enables more precise process control. The food industry is therefore particularly interested in gas as a fuel. Estrella, for example, has been using biogas in its production of crisps and snacks since 2017, reducing its carbon emissions by 92 per cent. Stronger financial incentives and increased LBG production would enable biogas to achieve a real impact in industry.

Shipping

The shipping sector has increased its use of gas as fuel in recent years. A 2017 review of newly ordered vessels with links to Sweden showed that half of all new vessels were built to run on gas. Although mainly liquid natural gas is being used, biogas can easily be blended with natural gas, or can replace it entirely. This trend has its origin in the sector's environmental ambitions and tough new sulphur emissions standards for the Baltic Sea. Neither natural gas nor biogas give rise to sulphur emissions. Carbon dioxide emissions can be reduced by around 30 per

1 Matavfall i Sverige - uppkomst och behandling 2018. Swedish Environmental Protection Agency, p. 12. <https://www.naturvardsverket.se/Documents/publ-filer/978-91-620-8857-6.pdf?pid=26031>

2 Trafiksäkerhetshöjande insatser för gasbussar, Swedish Transport Agency, 2019, p. 5. <https://www.transportstyrelsen.se/globalassets/global/publikationer/vag/yrkestrafik/utredningsuppdrag-trafiksakerhetshojande-atgarder-for-gasbussar.pdf>

3 Swedish Gas Association. <https://www.energigas.se/fakta-om-gas/saa-haer-annaends-gas-i-sverige/industri/>

cent using natural gas instead of heavy oil, and by a full 120 per cent using biogas.¹ Supplying the shipping sector's needs, however, requires large quantities of gas. As the supply of LBG increases, several shipping companies are ordering gas-powered vessels. And as more and more vessels are powered by gas, the need for biogas (LBG) also increases dramatically.

The Norwegian shipping company Hurtigruten has decided to invest over SEK 7 billion in technology and sustainable solutions through the year 2021. The company signed an agreement with the Group in 2019 for the delivery of liquid biogas, making Hurtigruten the world's first shipping company to use biogas on a large scale.²

The shipping sector is of great interest for the future. In Sweden, the newly started shipping company Wallenius SOL will run its vessels on liquid natural gas. Another example is Gothia Tanker Alliance, which currently has thirteen vessels that can be run on biogas or natural gas.³

Market for bio-fertiliser by-product

A residue is formed when organic waste is broken down into biogas. This residue is called 'digested sludge' at treatment plants and 'bio-fertiliser' when produced at other types of plants. Digested sludge and bio-fertiliser can both be used to advantage as fertiliser. Bio-fertiliser is made of nutrients recovered from waste, and some substrates are more appropriate than others. Animal waste, for example, needs to be heat-treated to kill bacteria and infective agents, while vegetable waste does not.

Because bio-fertiliser is rich in nitrogen and phosphorous, it can be highly beneficial in organic farming, where alternatives for nitrogen and phosphorous fertilisers are limited. Today, around half of all bio-fertiliser produced by Swedish biogas plants is utilised. Fertiliser production will be a significant revenue stream for the biogas plants going forward.

Interview with Anders Lampinen, Director of New Technologies at Scania

What do you see as the advantages of biogas?



We have been working with our gas offering for quite a while and we are finally achieving high sales levels for our gas vehicles. Biogas provides excellent opportunities for making a positive impact on the climate, here and now. It will be a long time before we're able to drive heavy long-haul vehicles with

electric power, so we realise that we need to invest heavily in converting as much of our fleet as we can to biogas in order to have an impact on the national and the EU level. We will also be developing our customer offering, and continuing to increase sales of our gas vehicles is a top priority for the future.

What sort of interest is there in biogas?

We are now seeing a lot happening in terms of demand, particularly in Europe. In the Nordic region we are also seeing that several operators are investing in infrastructure, laying the groundwork for customers to make the leap and invest in biogas.

What are your views on liquid biogas?

Liquid biogas is what we really need to move towards. Compressed biogas is very good, but in order to take meaningful positive action for the climate with long-haul transports, we must have liquid biogas. This is how we can impact the long-haul and heavy transports that are major CO₂ emitters.

Do you see any challenges for biogas?

We need to increase production capacity to drive down costs. Customers will find the courage to invest when there infrastructure and filling stations are in place. It needs to be as easy to drive on biogas as on diesel. And in pure commercial terms, we need to develop a vehicle fleet that has a good second-hand value. So we need to increase production, but a lot of infrastructure needs to be in place.

In your opinion, what is the most important consideration for the future in terms of growing the biogas market?

From a Swedish perspective, our most important factor for success is that we have decision makers and politicians on our side and that there are long-term ground rules in the industry, for biogas producers as well as vehicle manufacturers. Long-range policy instruments are needed to encourage us and, above all, our customers to invest. Something needs to be done here and now if we are to achieve the climate targets.



1 www.energigas.se/fakta-om-gas/biogas/biogas-och-miljoen/biogasens-klimatprestanda/

2 www.hurtigruten.no/om-oss/presse/presse-mynewsdesk/#/pressreleases/hurtigruten-investerer-over-7-milliarder-i-groenn-teknologi-skal-seile-paa-doe-fisk-2799539

3 <https://www.di.se/nyheter/storsatsning-pa-nytt-svenskt-rederi-bestaller-for-miljarder/>

Biogas consumption in Scandinavian Biogas markets

Sweden

- The Swedish biogas market is distinguished by having a large number of small-scale operators – a total of 280 plants.¹
- Companies taking steps to reduce greenhouse gas emissions are eligible to apply for financial support via Klimatklivet. The initiative, part of the government budget, granted a total of SEK 1.5 billion in 2019.
- The Biogas Commission presented its report in December 2019, proposing a production target of 10 TWh for Swedish biogas by 2030. This represents a fivefold increase over current production.
- Swedish biogas production remains basically unchanged from 2017 and totalled 2,044 GWh in 2018. The most important substrates are sewage sludge (34 %), manure (22 %) and food waste (12 %).²
- The biogas car fleet increased 238 % between 2009 and 2018.³
- The share of biogas in vehicle gas has increased rapidly since introduction in the 1990s and totalled 94 % in 2019.⁴

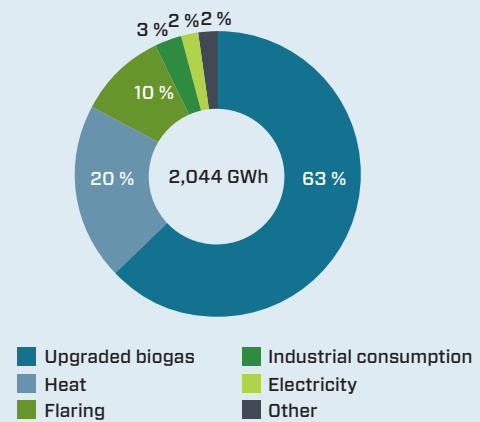
Norway

- Norway's biogas production is the least developed among Nordic countries, although there is a clear strategy to increase biogas production in coming years.
- The Norwegian Environment Agency estimates a potential increase in biogas production of 400 % during the 2015–25 period.⁵
- Gas-powered buses are driving demand for biogas. In 2018, 210 GWh of biogas was used in the transport sector, an increase of nearly 100 % over 2017.
- Several transport companies are investing in liquid biogas and have signed intent agreements for hundreds of heavy biogas-powered vehicles. Since autumn 2017, operators can apply via Norwegian Enova for financial support for investments in heavy transport and refuelling infrastructure.
- There is great potential within shipping, where liquid biogas can be used as a natural gas supplement and a fossil fuel substitute. Shipping company Hurtigruten was the first to procure LBG.

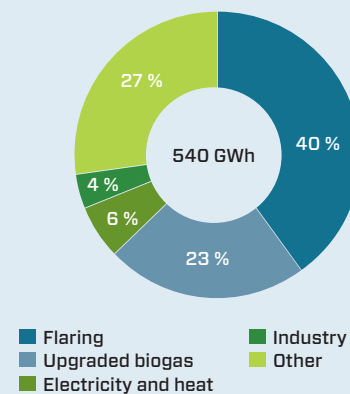
South Korea

- The market is comprised of a few large-scale biogas plants.
- Electricity and heat production account for most biogas consumption, with vehicle fuel accounting for only a small percentage.
- The main focus of biogas production is electricity generation, which is expected to increase 27 % between 2015 and 2020.⁶
- The South Korean government has announced an increase in renewable electricity to 20 % by 2030, in line with the Paris Agreement's climate target.
- Subsidies and low-interest loans are offered to support investments in the biogas industry.

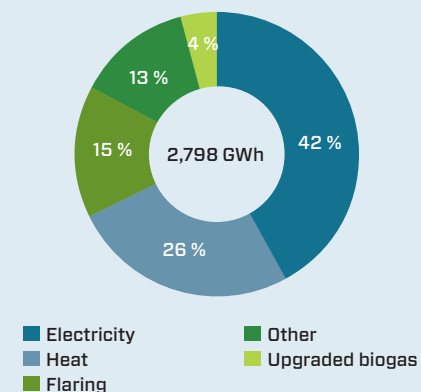
Biogas consumption, Sweden 2018¹



Biogas consumption, Norway 2016



Biogas consumption, South Korea 2016²



1 Produktion och användning av biogas och rötrestar år 2018, Swedish Energy Agency, p. 3.

2 Ibid., p. 17.

3 Vehicle fleet 2018, Statistics Sweden.

4 <https://www.energies.se/fakta-om-gas/fordonsgas-och-gasbilar/statistik-om-fordonsgas/>

5 Norwegian Environment Agency

6 Ministry of Environment

1 Swedish Energy Agency

2 IEA Bioenergy

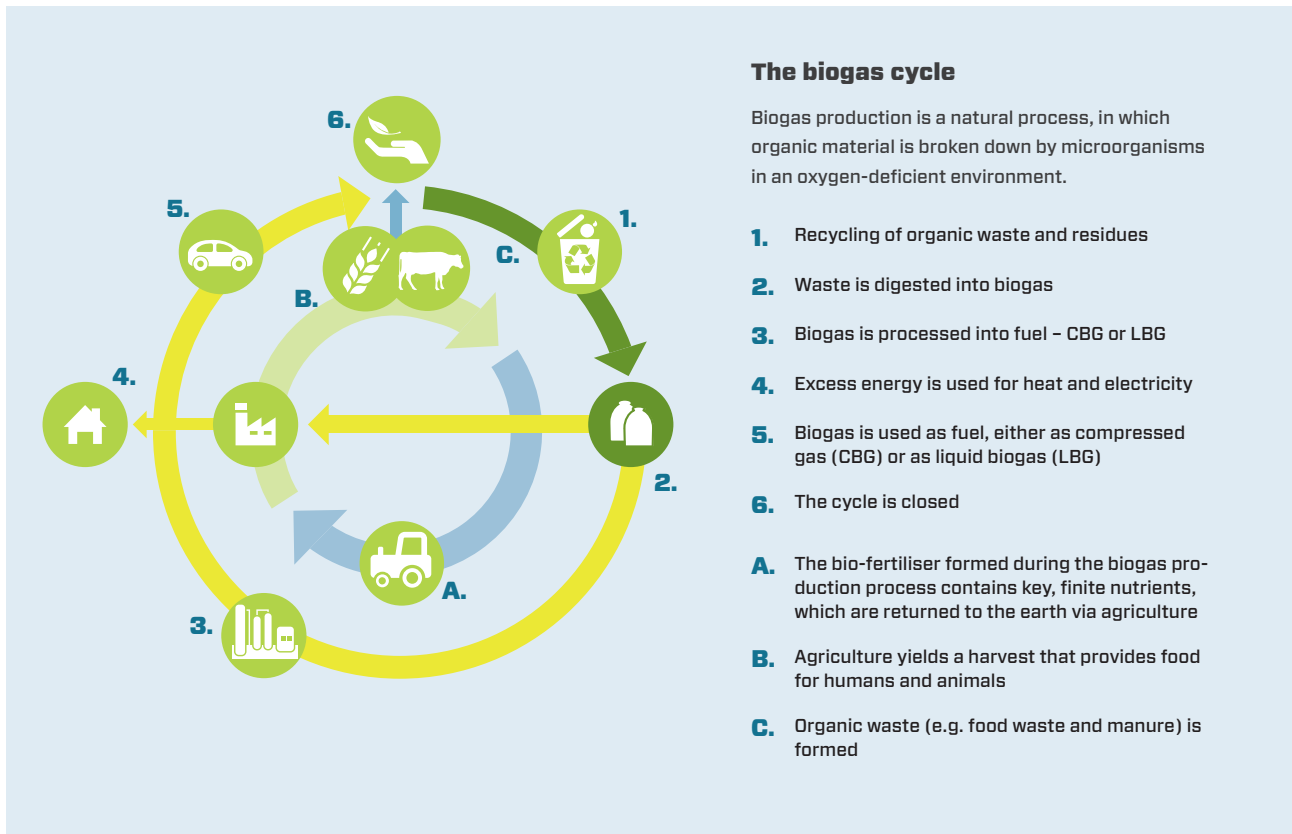
Circular economy of biogas

Circular economy is a term referring to economic models that view circular cycles as a business opportunity. The approach is inspired by nature's cycle, with the goal of utilising waste as raw material to the greatest possible extent through re-use or recycling. Biogas is often highlighted as a cornerstone of the circular economy, as it forms part of a closed loop in which waste, wastewater, and forestry and industrial residues are used in renewable products such as fuel, electricity, and heat.¹ Nutrients in the waste can also be returned to the earth via agriculture as bio-fertiliser. The circle is closed when gas and bio-fertiliser are used.



Organic waste is processed in Scandinavian Biogas's production of biogas. This gives rise to renewable and locally produced fuel and bio-fertiliser. Nutrients are returned to the earth through agriculture in the form of bio-fertiliser.

In this way, Scandinavian Biogas closes the circle, participates in the circular economy and promotes a sustainable society. Biogas is the most eco-friendly vehicle fuel from a comprehensive perspective, and helps reduce CO₂ emissions.



The biogas cycle

Biogas production is a natural process, in which organic material is broken down by microorganisms in an oxygen-deficient environment.

1. Recycling of organic waste and residues
 2. Waste is digested into biogas
 3. Biogas is processed into fuel - CBG or LBG
 4. Excess energy is used for heat and electricity
 5. Biogas is used as fuel, either as compressed gas (CBG) or as liquid biogas (LBG)
 6. The cycle is closed
- A.** The bio-fertiliser formed during the biogas production process contains key, finite nutrients, which are returned to the earth via agriculture
- B.** Agriculture yields a harvest that provides food for humans and animals
- C.** Organic waste (e.g. food waste and manure) is formed

¹ www.energigas.se/om-oss/nyheter-och-press/nyheter/biogas-nyckel-foer-cirkulaer-ekonomi/

Operations

Cost-efficient, large-scale biogas plants

Scandinavian Biogas's core business, which has historically been the production and upgrading of biogas in Sweden and biogas production in South Korea, now includes the production of liquid biogas (LBG) at the Company's plant in Norway, which has been delivering liquid biogas to the Norwegian market since September 2018. At the plant in Ulsan, application of the Company's self-developed HOLD Technology™ has produced a fivefold increase in production efficiency. The plant at Södertörn is scheduled for expansion.

Commissioning of the production plant at Skogn began in early summer 2018 and the plant now producing liquid biogas for the Norwegian market, where there is high demand from the heavy transport and shipping sectors. The plant is operated by subsidiary Biokraft AS, which includes energy company TrønderEnergi AS as a significant minority shareholder.

➔ Read more about operations in Norway on page 21.

Demand for vehicle gas and bio-fertiliser remains high in Sweden, and the business area is planning an expansion of the plant at Södertörn. The objective is to meet increasing demand and simultaneously fine-tune the process chain to enable delivery of greater volumes of food waste. The Company is planning to invest in a plant in Mönsterås for the production and liquefaction of fertiliser-based biogas.

➔ Read more about operations in Sweden on page 18.

New substrates and feedstocks are continuously tested, and new collaborations provide access to restaurant and household food waste and business waste from various industries. Scandinavian Biogas's operations lay the groundwork for a circular economy and support sustainable development.

.....

Biogas deliveries of **352 GWh** equivalent to annual supply for **829 city buses**

52,806 tonnes CO₂e emissions reduction in Sweden thanks to biogas

Production of 18,760 tonnes of bio-fertiliser covering an area equivalent to **6,410 football pitches**

.....



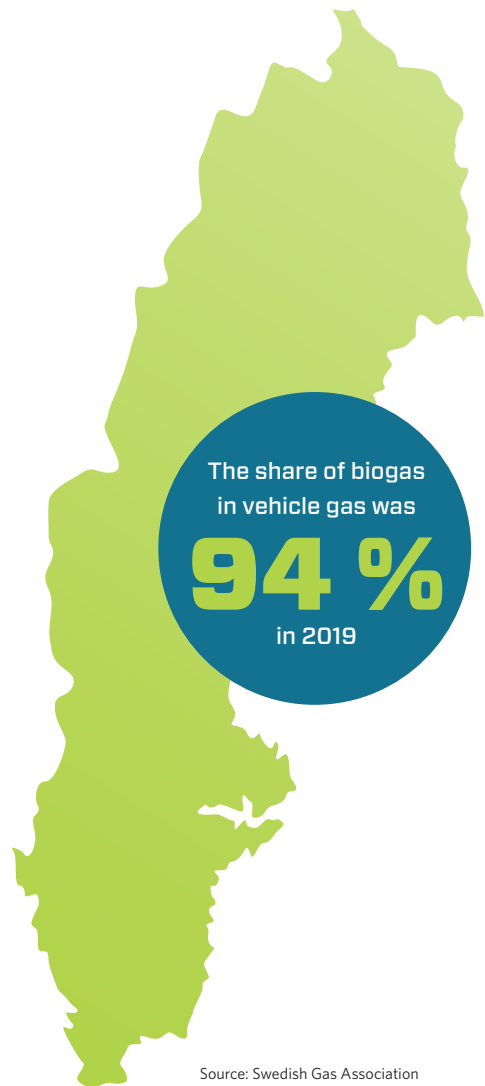
Operations Sweden

Sweden is Scandinavian Biogas’s main market for biogas as vehicle fuel. With three full-scale production plants in the Stockholm area and a production capacity of nearly 300 GWh in 2019, the Company supplies the Swedish market with both bio-fertiliser and biogas.

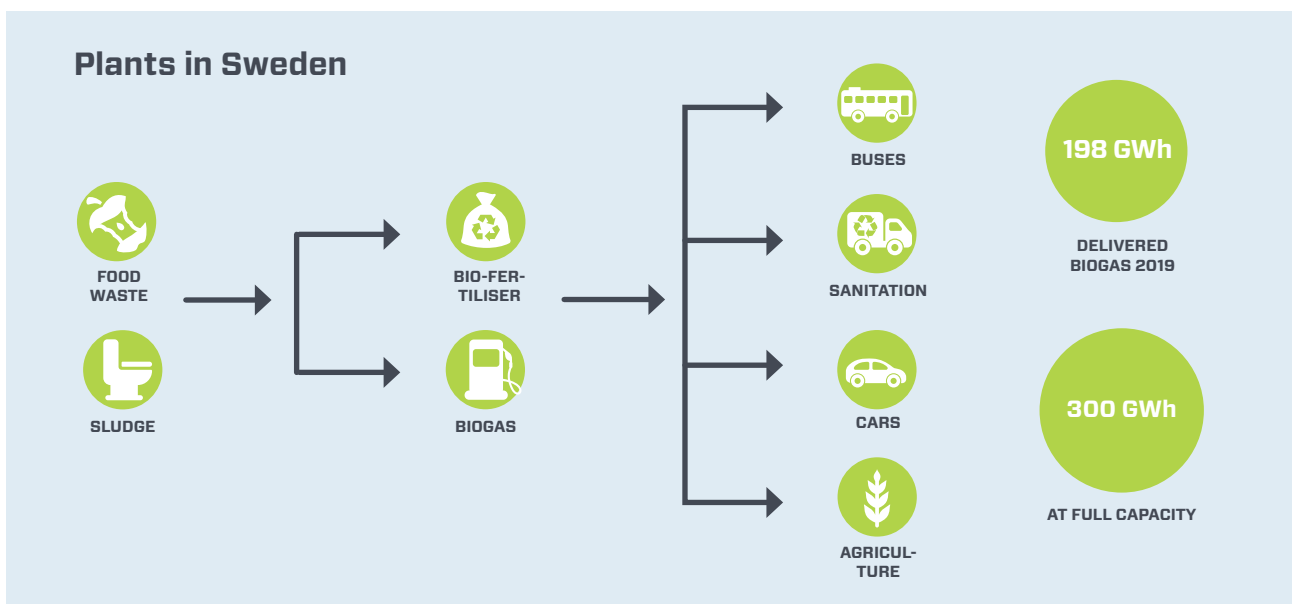
In Sweden we are seeing a positive development towards increased production capacity. The outlook is good in light of the positive political discussion on the future of biogas. Biogas is exempt from both the energy and carbon tax, and growth has been stable for many years. While the lack of long-term political management in the area since 2014 has resulted in some stagnation in gas car sales and the methane market, the official report submitted to the government by the Biogas Market Commission in December 2019 points in a positive direction.

The government’s official report presented in December 2019 proposes a production target of 10 TWh by 2030 for Swedish biogas, corresponding to a fivefold increase over current production. According to the report, this would produce benefits for the economy as whole that greatly outweigh the costs, while also dramatically reducing the transport sector’s climate emissions. The proposal is a step in the right direction and may be useful in establishing a long-term perspective for the biogas market. The report also proposed a production subsidy of 30–40 öre per kWh for biogas produced through a manure digestion process, which would partially offset the current competitive disadvantage against Danish production. The report’s proposals also include an upgrading subsidy of 20–30 öre per kWh and liquefaction subsidy of 10–15 öre per kWh.

Another step in the right direction was the government’s decision to provide SEK 200 million to the Drive LBG demonstration cluster to support demonstration projects that develop LBG as a vehicle fuel. The initiative demonstrates that the Group’s long-term investment in LBG production is in demand by both the



Source: Swedish Gas Association





market and the political sphere. In addition, the project for the large-scale fertiliser-based biogas plant in Mönsterås – which will be jointly built and operated by Scandinavian Biogas and Mönsterås Biogas – was awarded an SEK 108 million climate investment grant from Klimatklivet and an SEK 30 million grant from Drive LBG.

Biogas is particularly attractive within the public transport sector across the country. Approximately one in five bus kilometres is now fuelled by biogas. The transport sector is the single largest source of emissions in Sweden – accounting for one-third of the country's carbon emissions. Compared with other European countries, though, Sweden is well advanced when it comes to using renewable energy as fuel.

According to Swedish Energy Agency estimates, the total share of renewable fuel in Sweden's transport sector rose from 15 per cent in 2015 to 23 per cent in 2018.¹ The political target is to reduce the transport sector's greenhouse gas emissions by 70 per cent by 2030, with 2010 as base year. Biodiesel is Sweden's most prevalent renewable fuel, with 82 per cent of the market. With a 8.7 per cent market share, biogas ranks third (after ethanol)².

Facilities

Scandinavian Biogas's plants are situated based on the Company's strategy of establishing a strong presence in local and regional markets, with a focus on vehicle fuel. Strong relationships with long-term partners have allowed Scandinavian Biogas to deploy and further develop its operations.

All biogas production at Bromma and Henriksdal is conducted within the framework of close co-operation with Stockholm Vatten och Avfall, under which Scandinavian Biogas produces

biogas from sludge and raw gas produced by partners. To meet the demand from Stockholm's growing population, the City of Stockholm has decided to increase water treatment capacity and biogas production in the region. The Henriksdal treatment plant will therefore be modernised and expanded, while the Bromma plant is scheduled for decommissioning. Construction began in late 2017 on a tunnel that will redirect wastewater currently going to Bromma to the Henriksdal treatment plant. The biogas plant at Henriksdal is Scandinavian Biogas's largest in terms of biogas production.

The plant at Södertörn is owned and operated in collaboration with SRV Återvinning AB, a specialised waste management company owned by the municipalities of Huddinge, Haninge, Botkyrka, Salem, and Nynäshamn.

Under the new environmental permit granted in 2017, Scandinavian Biogas is licensed to process up to 260,000 tonnes of food waste annually per facility. Due to production process efficiency, a full 70–80 per cent of the waste's energy can be utilised. The plant's current production capacity is 80 GWh, corresponding to 8.8 million litres of petrol and enough to meet the annual fuel needs of 5,000 private motorists.

Based on the new environmental permit, the business area has begun planning a capacity increase at the plant for received volumes as well as biogas production. The expansion will also allow the reception of additional types of waste. Various changes to biogas logistics are also being considered. In early September, an application was filed with the Klimatklivet initiative for subsidies to more than double capacity to 164 GWh.

In addition to biogas, the Södertörn plant also produces quality-certified bio-fertiliser.

¹ <http://www.energimyndigheten.se/nyhetsarkiv/2016/allt-mer-fornybart-bransle-vid-transporter/>

² Monthly deliveries of biofuel to road traffic, 2019, Statistics Sweden. <https://www.scb.se/hitta-statistik/statistik-efter-amne/energi/tillforsel-och-anvandning-av-energi/manatlig-bransle-gas-och-lagerstatistik/pong/tabell-och-diagram/leveranser-av-biodrivmedel-till-vagtrafik-manadsvis-2019-m3/>



Liquid biogas in Mönsterås

Mönsterås is one of the country's most livestock-dense areas, with many farmers looking to expand or step up their production. Based on this, Scandinavian Biogas and Mönsterås Biogas have signed a co-operation agreement under which they will jointly build and operate a large-scale manure-based biogas and bio-fertiliser production plant. The parties have formed a joint development company, Mönsterås Biogasproduktion AB, as a base for future production.

Mönsterås is an excellent location for this type of project, with a good supply of substrate combined with strong local support and committed partners. Intended customers include the major filling station companies, industry and shipping operators, as well as large European energy companies. Mönsterås Biogasproduktion is also planning to build a filling station adjoining the biogas plant. The plant will treat manure from the area's beef, pork, and egg production and produce liquid biogas (LBG) and various types of refined bio-fertiliser. The plant will be designed to produce 120 GWh of biogas and approximately 70,000 tonnes of high-value bio-fertiliser.

Start of production is scheduled for 2022. The project has been granted subsidies of SEK 108 million from Klimatklivet and SEK 30 million from Drive LBG.

Operations

Norway

The biogas plant in Skogn, outside Trondheim in central Norway, was commissioned during the second half of 2018 and rapidly achieved a high level of production capacity. The plant is the world's largest for the production of liquid biogas (LBG) and has an annual capacity of 12.5 million³ of methane, corresponding to 120 GWh.

The Norwegian economy is facing a major conversion as fossil fuels are to be replaced with renewables. The Norwegian parliament and government have therefore improved conditions for biogas production, with a goal of producing 1 TWh of biogas in Norway by 2020. In the Norwegian public sector, several municipal companies are taking the lead and using biogas as vehicle fuel. Public transport in Oslo (Ruter) and Trondheim (AtB) are two good examples of this.

The Norwegian Climate Act, which came into force on 1 January 2018, forms the basis for the Norwegian conversion to a low-emission society by 2050 and includes specific sub-targets to be achieved by 2030. As from 2018, biofuel is required to comprise at least 10 per cent of the volume of fuel used in road traffic annually. Of this ten per cent, at least 3.5 per cent must be advanced biofuel and at least 4 per cent must be biofuel used in petrol-powered vehicles.

The plant

During 2019 the plant at Skogn delivered 9.6 Nm³ of liquid biogas to Norwegian customers. The main area of use is fuel for public transport buses and, increasingly, for private sector heavy transport vehicles. The biogas plant is therefore instrumental in converting the heavy transport sector and reducing total carbon dioxide emissions.

The intention is to double production capacity and increase total capacity to 240 GWh. The main feedstocks are ensilage from the Norwegian salmon farming industry and process water from the Norwegian salmon farming industry and process water from Norske Skog's pulp and paper industry in Skogn.

The liquid biogas is purchased and distributed by AGA – a key partner. Over the past ten years AGA has played an important

role in the development of the Norwegian biogas market. In November 2019 AGA and Gasum agreed on Gasum's takeover of AGA's Nordic gas operations. The market is expected to grow rapidly over the next decade and Scandinavian Biogas aims to position itself as the leading player in the Norwegian market.

In an important step, and as confirmation of the timeliness of the investment, Biokraft and Hurtigruten signed a 7.5-year supply contract in 2019 for delivery of liquid biogas for the shipping company's vessels.

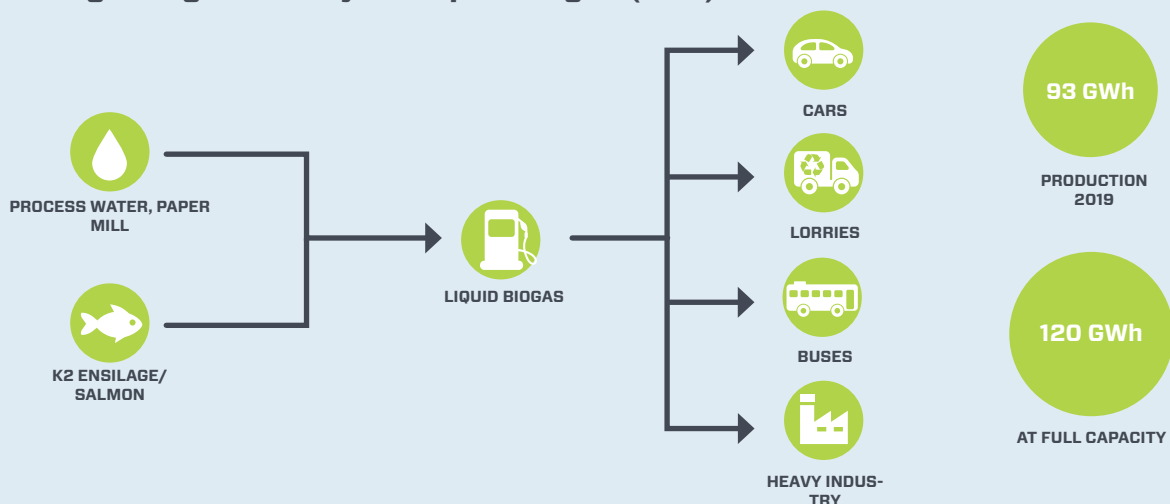
➔ Read more on page 22.

Collaborations

Scandinavian Biogas's work with Biokraft and TrønderEnergi and in collaborations with various national research programmes has enabled the Company to make major investments in research and development. The goal is to develop new methods and systems to increase productivity and make the most of resources along the entire production chain. Investments in a demonstration plant for the EffiSludge project were made possible through a collaboration with Norske Skog. Another research collaboration – the COMPLETE project – is being conducted with partners that include NTNU and SINTEF Ocean.

The Norwegian operations are also a key partner to the Norwegian fishing industry – Norway's second largest export industry. Ensilage from the Norwegian salmon farming industry is the main feedstock for biogas production in Skogn. The fishing industry is expected to grow over the next decade, which provides good prospects for increasing the biogas plant's feedstock and improving the reputation of the fishing industry.

Skogn biogas facility for liquid biogas (LBG)



An aerial photograph of a Norwegian fjord. In the background, there are jagged, rocky mountains under a clear blue sky. The water is a deep blue, and a white Hurtigruten ship with a red stripe is visible on the right side. The foreground shows a rocky shoreline with some green vegetation. A white text box is overlaid on the right side of the image, containing the text.

Hurtigruten - around Norway with liquid biogas

Biokraft, Scandinavian Biogas's Norwegian subsidiary, signed a 7.5-year contract with Hurtigruten in 2019 for delivery of liquid biogas (LBG) for Hurtigruten's vessels. The partnership signals a paradigm shift in the shipping industry and will substantially reduce emissions. The agreement, a step forward in Scandinavian Biogas's development, is a natural consequence of the commissioning in 2018 of the world's largest liquid biogas plant in Skogn, Norway.

Under the agreement – the largest global agreement to date for liquid biogas delivery to a shipping company – biogas produced from organic waste will be delivered nearly every day to Hurtigruten's vessels. Hurtigruten will adapt six of its vessels to run on biogas. The first delivery of liquid biogas produced at the Skogn plant is scheduled for year-end 2021/22.

Hurtigruten, a global leader in maritime tourism and expedition cruises, decided in 2017 to invest over SEK 7 billion in technology and sustainable solutions through the year 2021. The vessels will run on a combination of electricity, liquid natural gas (LNG) and liquid biogas, making Hurtigruten the world's first shipping company to use biogas on a large scale.

Hurtigruten is iconic in the Norwegian and international shipping industry, taking guests from around the globe to destinations including Antarctica, the Arctic, and the Norwegian coast. The Biokraft-Hurtigruten partnership is groundbreaking in the shipping industry. The promotion of renewable energy also protects nature and wildlife along the Norwegian coast.

Scandinavian Biogas's vision is the use of waste as a valuable resource, rather than viewing it as a costly problem. The agreement with Hurtigruten is evidence of the success of this vision.

Operations

South Korea

At the Yongyun plant in Ulsan, South Korea, Scandinavian Biogas manages the food waste produced by the more than one million residents of the industrial city of Ulsan. Biogas is produced through pre-treatment of collected food waste followed by co-digestion with primary sludge from Yongyun's wastewater treatment plant.

South Korea wants to promote sustainable development and is striving to become a world leader by successfully implementing Agenda 2030 in the country's development plan. Major focus is on the conversion to renewable energy. The capital city of Seoul has adopted its own development targets, based on global development goals, which specify how Seoul can be developed into a sustainable city. Among other things, greenhouse gas emissions will be reduced 40 per cent over 2005 levels.

The plant

After Scandinavian Biogas took over the biogas plant in Ulsan in 2007, the operations have undergone major changes. A fivefold increase in the amount of treated waste was achieved by optimising the plant and biogas production in accordance with the Company's self-developed HOLD Technology™. Approximately 40 tonnes of food waste were handled per day in 2007, as compared with 195 tonnes per day in 2019. With the changes, the City of Ulsan has positioned itself as a model for other South Korean cities – a position that was strengthened in 2013 when Yongyun's biogas facility was named the most efficient in South Korea. The plant was also designated a best practice facility by government authorities in 2015.

Operations in South Korea performed well in terms of volume of treated food waste, and production remained stable during 2019. Revenues are generated from fees for food waste management, which totalled an average of 195 tonnes (183) per day. Additional revenues were generated through the sale of a total of 61 GWh (62) of raw gas during 2019.

Management of food waste in South Korea, tonnes per day



Production includes the management, pre-treatment and digestion of large volumes of waste from City of Ulsan residents, as well as primary sludge from the adjacent Yongyun wastewater treatment plant. Operations in Ulsan are based on close collaboration with the major metropolis and are regulated by a concession agreement that runs through 2026. The plan to build an upgrading plant has been postponed, as gas prices in South Korea are low and demand for upgraded biogas has been weak. There is also a dispute between Scandinavian Biogas and Ulsan City regarding liability for damages due to the delay of such an investment, as well as the amount of such damages.



An aerial photograph of a vast green field, likely a farm or agricultural area. In the lower center, a blue tractor is pulling a green harrow. The field is marked with numerous white cylindrical markers scattered across its surface. The perspective is from a high angle, looking down on the machinery and the field's texture.

Sustainability

The key driver and vision for Scandinavian Biogas is to take an active role in the conversion to a fossil free, circular, and sustainable society.

Sustainability

Our view of sustainability

For us, sustainability comes down to the way we design, build, and manage our plants. This must be done with regard to environmental, social, and economic impact on the external environment, the local community where we operate, and our employees, customers, suppliers, and owners.

During 2019, we have worked strategically with our most important sustainability issues, including through working groups that investigate, develop action plans, and implement measures, to reduce emissions to air and land. We work continuously with our environmental goals, which are primarily linked to the production facilities where we have our greatest impact. Detailed goals and activities are presented on pages 29–34. In addition to the environmental goals, we also work with internal KPIs, linked to our essential sustainability issues.

It is important that Scandinavian Biogas has a vibrant value-based vision, so we work continuously with our value system. Our aim is to constantly improve and to grow and develop, as employees and as a company. Our core values are Respect, Expertise, Joyfulness, and Passion!

Materiality analysis and stakeholder dialogue

We conducted a materiality analysis during 2017, which included an internal workshop with representatives from all Company departments (page 78) as well as an employee survey for all employees. Results were compiled in a list of the Company's most important sustainability issues with regard to social, economic, and environmental impact on the external environment and on the Company (page 26). Health & Safety and compliance were ranked by employees and workshop participants among the three most important issues. Employees also ranked business ethics among the top three, while workshop participants selected emissions to air and water.

We are planning to conduct a new materiality analysis in 2020.

The analysis also identified Scandinavian Biogas's most important stakeholders: customers, owners and financiers, employees, suppliers, partners, government authorities, and the media.

Important sustainability issues emerged in our dialogues with stakeholders. For food waste collectors the most important issues are working environment, transports, product labelling, energy consumption, and waste recycling. The key issues for bio-fertiliser customers are product quality and eco-certification. Gas customers highlight fulfillment of sustainability criteria for biofuels, traceability, locally produced gas, and transports as important issues. During 2020 we plan to conduct in-depth stakeholder dialogues, with customer and supplier interviews, to gain an even better understanding of their needs and expectations for the Company's sustainability work.

Sustainability management

The goal of Scandinavian Biogas's sustainability management is to integrate sustainability in all parts of the business, with proactive accountability from an environmental, social, and economic perspective. In the next phase, the Company's sustainability focus will also include operations in Norway.

Group management is responsible for overall sustainability strategy, targets, activities, and follow-up, while operational responsibility lies with the individual business areas.



Scandinavian Biogas's three overarching sustainability goals

1

Promote a fossil-free, circular, and sustainable society through investments, innovation, and growth in the biogas field. One of the Company's strategic goals is an annual 20–30 per cent increase in biogas deliveries.

2

Efficient and responsible operations

- Continuously reduce the operation's negative environmental impact and produce renewable products with high environmental performance and resource efficiency.
- Be a responsible and transparent partner and manage the business in a trustworthy manner.

3

Be an attractive employer that supports a safe and secure workplace, with committed employees.

Sustainability work at the production facilities is carried out by the production manager and staff, who work with operating personnel to produce targets and action plans. Sustainability targets are monitored on a quarterly basis by production managers and business area management.

Business area management has overall responsibility for working environment and social sustainability issues, which are delegated to departmental heads. Targets and activities are monitored through an annual management review of systematic working environment efforts, led by the HR manager.

Operations are governed by a range of policies adopted by the Board of Directors. During 2019 a number of these policies were under review for adoption by Group management in 2020: the equal treatment policy, non-discrimination policy, alcohol and drug policy, personal data policy, job adaptation and rehabilitation policy, and policy on threats and violence. The policy on workplace discrimination, harassment, and bullying has been updated and supplemented with an action

plan. A comprehensive review of all Company policies will be conducted in 2020, along with identification and analysis of the Company's sustainability criteria.

Policy documents for operations in Sweden (most recent update)

- Business ethics policy (2013)
- Working environment policy (2013)
- Policy on workplace discrimination, harassment, and bullying (2016)
- Environmental policy (2018)
- Policy for inflammable and hazardous materials (2018)
- Quality policy (2017)
- Policy on intangible assets (2015)



Scandinavian Biogas's key sustainability issues

We have selected seven of our key sustainability issues, for which we report topic-specific information in a GRI index.

Overarching sustainability goal	Key sustainability issue	UN Sustainable Development Goals	Inform	GRI disclosure	Page reference
Promote a fossil-free, circular, and sustainable society	Investments in renewable energy	 	✓		10
	Sustainable biogas	 	✓	✓	28-29
	Long-term returns		✓		8
Efficient and responsible operations	Emissions to air	 	✓	✓	29
	Energy		✓	✓	29-30
	Waste		✓	✓	30
	Water		✓		29-30
	Material		✓		29-30
	Emissions to land and water		✓		30
	Labelling		✓	✓	32
	Compliance		✓		33
	Business ethics		✓	✓	32-33
	Suppliers		✓		9
Nearby operations		✓		32	
Be an attractive employer	Health & Safety		✓	✓	34-35
	Training		✓		35

Scandinavian Biogas actively supports sustainable development goals

Agenda 2030 – the UN's agenda for sustainable development, with 17 sustainable development goals – is based on the three dimensions of sustainability: economic, social, and environmental. According to a study by the Biogas Research Centre,¹ global biogas production directly or indirectly supports all sustainable development goals. The Swedish Gas Association,² a trade association, argues that utilisation of biogas and bio-fertiliser reduces dependence on imported natural gas and artificial fertiliser, which improves security of supply for energy and food. It also creates local jobs and new business opportunities.

Scandinavian Biogas's core business is directly linked to six of the global goals.



Sustainable energy for all – significantly increase the share of renewable energy in the global energy mix.



In achieving this development goal, biogas is a key component in the global energy mix. Scandinavian Biogas invests in and produces biogas, which replaces fossil fuels. We ensure that the biogas from our Swedish operations provides an emissions reduction of more than 90 % as compared with fossil fuels and that the feedstocks used have not caused damage to areas of high biological value.

Sustainable cities and communities – reduce cities' environmental impact per person. The goal involves devoting particular attention to air quality and waste management.



We create an alternative to waste incineration by offering biological treatment of organic waste, in which energy and nutrients are recovered. Biogas also improves city air quality by reducing exhaust emissions of nitric oxides and harmful particles as compared with combustion of other fuels. Noise emissions are also reduced by biogas-fuelled vehicles.

Decent work and economic growth – safeguard employee rights and promote a safe and secure working environment.



Laying the foundation for a safe and secure working environment through systematic working environment management and empathetic leadership is a high priority issue for Scandinavian Biogas.

Sustainable consumption and production – responsible waste recycling.



Scandinavian Biogas views organic waste as a resource. In Sweden, the Company recovers 81,530 tonnes of waste annually, delivers 198 GWh of biogas, and restores 18,760 tonnes of bio-fertiliser to Swedish agriculture. Operating our biogas plants in a responsible manner is a foundation of the Company's sustainability work. Focus is on material, energy, and water optimisation and on preventing emissions to air, water, and land.

Sustainable industry, innovation and infrastructure – adapt industries to make them more sustainable, and improve resource efficiency.



One of the Company's sustainability targets is to constantly improve resource efficiency at the production plants. We also work continuously to replace older technology with cleaner, more efficient alternatives.

Combat climate change – take urgent action to combat climate change and its impacts.



Scandinavian Biogas produces renewable products in the form of biogas and bio-fertiliser, enabling consumers to switch from fossil to renewable alternatives.

1 The Role of Biogas Solutions in the Circular and Bio-Based Economy, Biogas Research Centre, 2016.

2 Förslag till Nationell Biogasstrategi 2.0, Swedish Gas Association, April 2018

3 Based on a weighted average for our Swedish plants, according to sustainability criteria report submitted to the Swedish Energy Agency in 2019.

Sustainability

Environment

For Scandinavian Biogas, the sustainable production of biogas and bio-fertiliser involves production with the greatest possible resource efficiency and environmental and climate performance, and the lowest possible environmental impact.

Environmental benefit

Biogas production involves many environmental benefits. Society's waste and residues are taken care of and processed, biogas replaces fossil fuels and improves air quality, and bio-fertilisers replace artificial fertilisers and increase harvests by improving the soil. Södertörn's biogas plant is an excellent example of a circular economy, where society's food waste is collected and processed into renewable fuel and bio-fertiliser. The bio-fertiliser is then used in agriculture for food production, with residues again digested into biogas and bio-fertiliser. A biogas car can drive nearly 4 km with biogas produced from one bag of food waste.

During 2019 emissions were reduced 90.5 per cent for our biogas production in Sweden, compared with fossil fuels. Emissions reductions are ensured through regular feedstock evaluations and life cycle analyses that take into account transport emissions; consumption of energy, water, and chemical products; and the plants' methane emissions. The plants in

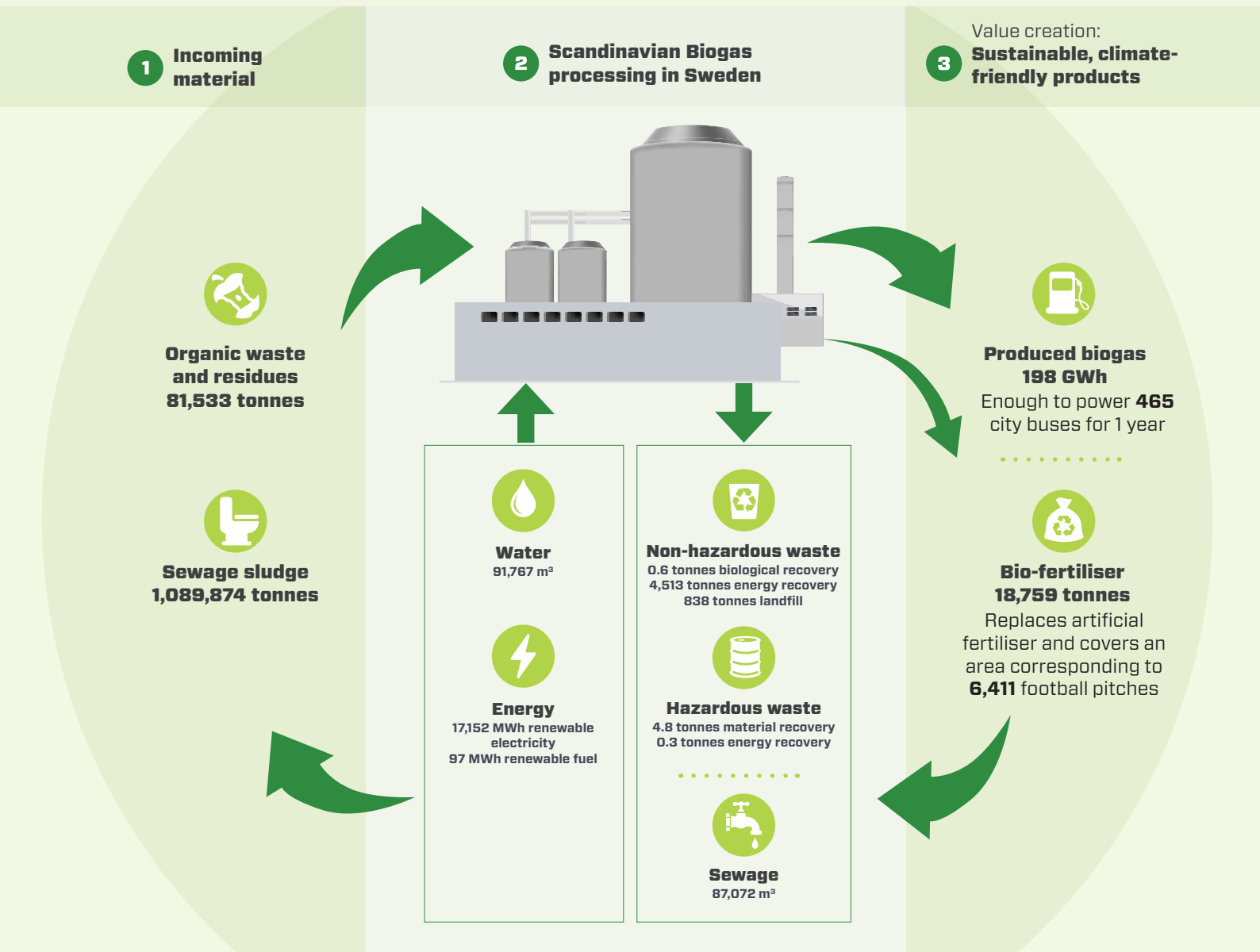
Sweden delivered 198 GWh of vehicle gas in 2019, corresponding to just over 22 million litres of petrol – enough to meet the fuel needs of around 22,900 private motorists (15,000 km). The plant at Södertörn produced 18,760 tonnes of bio-fertiliser as fossil fertiliser replacement. Total emissions reduction in 2019 for biogas and bio-fertiliser amounted to 52,806 tonnes CO₂e. The value chain, from a feedstock and product perspective, is illustrated on the following page.

Resource efficiency

The Company's HOLD Technology™ provides an optimised biogas process with efficient substrate utilisation, maximised production, and minimised water, energy, and chemical usage. The plants' resource-efficient operation also involves minimising emissions to air, water, and land. These parameters are directly linked to the plants' environmental impact and the products' environmental and climate performance. They also go hand-in-hand with cost efficiency. The table on page 31 presents environmental targets for the production facilities in Sweden.



Value chain from a feedstock and product perspective
52,806 tonnes CO₂e reduction in Sweden
 (for produced biogas)



Emissions to air

Scandinavian Biogas's most important and prioritised environmental issue is the emission of biomethane into the atmosphere. Low methane emissions are crucial to the biogas's climate performance, the plants' security, and the Company's finances. Emissions provisions for methane gas are included in the applicable environmental permits for each facility.

Systematic leakage detection is conducted regularly at the plants. The Swedish plants are affiliated with the Swedish Waste Management Association's Self-monitoring Methane Loss initiative, a voluntary undertaking for biogas plants focused on identification and reduction of methane emissions. The system for documenting systematic leakage detection has been improved and reviewed by an external party. To prevent leakage, pressurised devices and safety valves in the gas system are regularly checked by accredited bodies.

To minimise methane leaks and improve availability of the destruction units, which incinerate emissions from the digestion

and upgrading process, each facility has an action plan and internal targets in place for methane emissions and methane content in residual gas. Actions taken during the year are presented in the table specifying the Company's environmental goals, on page 31.

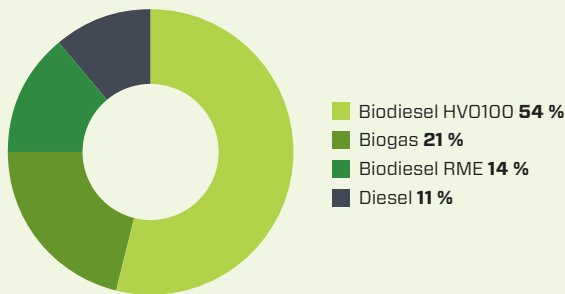
Water and energy

The Company has a circular production process, with internal water and heat recovery. The plants produce heat from the combustion of biogas and waste heat from machinery and equipment. All purchased electricity is origin- and eco-labelled, and machinery is run solely on renewable fuel.

Optimising water consumption involves minimising the amount of drinking water added during the process and recycling reject water from dewatered bio-fertiliser and rinse water. This is currently done at the Södertörn plant. Work will be intensified in 2020 with a Water Balance working group.

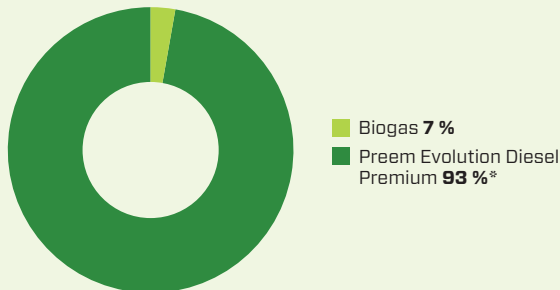
Around 10,650 transports of food waste, biogas, and bio-fertiliser travel to and from our plants in Sweden every year. Transports are made by customers, suppliers, and hauliers. Scandinavian Biogas maintains regular dialogue with market operators regarding the conversion to renewable fuels. Road transports of bio-fertiliser were significantly improved during 2019, with the percentage of renewable fuel increasing to 100 % (31 % in 2018). Details on 2019 transports are illustrated below. Feedstock for the diesel referenced in the diagram is 7-30 per cent renewable.

Fuels used in road transport of food waste



Percentages of fuel used in incoming transports of food waste. Over 9,100 transports. Percentage diesel was 26 % in 2018.

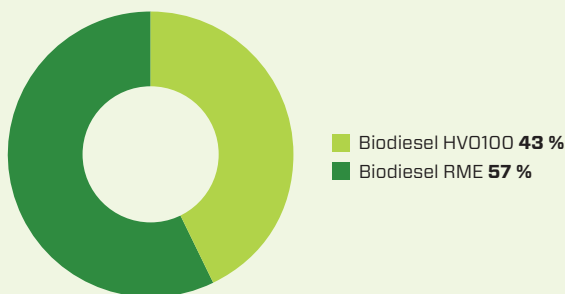
Fuels used in road transport of biogas



Percentages of fuel used in biogas transports in MEG containers. Approximately 800 transports. Percentage Evolution Diesel was 97 % in 2018.

* The Preem Evolution Diesel Premium used produces an 85 % emissions reduction compared with fossil diesel.

Fuels used in road transport of bio-fertiliser



Percentages of fuel used in bio-fertiliser transports. Approximately 550 transports. Percentage diesel was 69 % in 2018.

The Company's goal is to minimise drinking water consumption and biogas consumption in internal heat production per produced biomethane energy unit by 50 and 20 per cent, respectively, by 2023. We expect to achieve these targets through investments, renovations, and operational optimisation. The amount of wastewater and total amount of nutrients in wastewater are also expected to be reduced in conjunction with operational optimisations. Energy and water optimisation initiatives are led by production managers in collaboration with process and project managers.

Emissions to land and water

Emissions to stormwater and wastewater systems are a crucial issue at the Södertörn plant. Spillages may occur during the receiving, treatment, and dispatch of organic material (e.g. during unloading). The Company stepped up its work on preventive measures during the year by appointing an Emissions to Land and Water working group.

Examples include sealing cracks in the digestion tank, tightening up procedures to prevent spills, expanding the stormwater sampling schedule, and asphaltting surfaces to facilitate spill clean-up. A slurry refilling point was also relocated, and a stormwater well was redesigned and fitted with a stop valve to prevent spills from reaching the stormwater.

We avoid environmentally hazardous chemicals to the greatest possible extent by conducting pre-purchase risk assessments and regular chemicals inventories at the plants. We also ensure that cleaning agents and personal hygiene products in the staff areas are eco-labelled.

Waste

As a waste treatment company, it is essential that Scandinavian Biogas take responsibility for waste arising from the treatment process. Food waste includes plastic, sand, stone, and metal objects, which are separated in various stages and comprise non-hazardous waste. Metal is sent to material recovery and plastic is used for energy recovery (4,492 tonnes in 2019) and glass, sand, and stone are landfilled (838 tonnes in 2019). Hazardous waste, comprised mainly of waste oil, is sent to material recovery. The Company works continuously to reduce the waste amount and utilise the maximum possible amount of organic material.



Food waste is converted to bio-fertiliser that is spread on arable land.

Plant design and construction

To ensure high availability and resource-efficiency and minimise emissions, the Company has identified a workflow used when designing and planning new plants:

1. Identification of the plant's available energy sources, energy and water requirements, and potential emissions zones, and the type of waste to be treated.
2. Adaptation of plant design to minimise emissions to air, land, and water and to optimise water and energy use. This is achieved, for example, by ensuring the collection of waste- and stormwater, through methane destruction, by adapting choice of material to incoming feedstocks, and by reusing energy and water to the greatest possible extent.
3. Monitor unavoidable emissions and ensure measurement of resource flows.

The Company is committed to systematically draw lessons from previous projects, with a focus on methane emissions, wastage, and water and energy consumption. This experience is incorporated into future investment projects.

Scandinavian Biogas's environmental targets in Sweden

The environmental targets were updated in 2019 – four targets (activities) were removed: *Operating companies join Self-monitoring Methane Loss initiative*, *Identification of types of fuel used by road transports to and from the plants*, *Cleaning agents and personal hygiene products in staff areas to be eco-labelled*, and *Conduct an energy survey by 2020*. The first three activities were achieved in 2018 and the final activity is scheduled for 2020-21.

Two targets have been added: *No odours from Scandinavian Biogas plants* and *Annual reduction in share of flared gas per produced biomethane energy unit*. The first target is a prioritised issue for the local community, while the second target (formerly an internal KPI) has been highlighted as an external environmental target due to its relevance to the overall goal of efficient operations. The plan during 2020 is to expand the environmental targets to include targets on sustainability aspects, which are currently internal KPIs.

● Target achieved ● Progress towards target achievement ● Deviation from target achievement

Environmental target	Base year 2018	Results 2019	Target	Activities conducted in 2019
Emissions				
Annual reduction of methane gas emissions as a percentage of amount of biomethane produced	Base year	● 2.7 % reduction	Annual reduction	<ul style="list-style-type: none"> • Connection of digestion tank with methane destruction. • Procurement of two new MEG containers to prevent methane emissions resulting from recirculation when gas storage reservoirs are full. • Regular in-plant inspections and systematic leak detection, repair of leaks
Increase availability of own methane destruction units to 90 % by 2023	81,4 %	● 83,4 %	90,0 %	<ul style="list-style-type: none"> • Increased capacity for one of the methane destruction units • Upgrading process adjusted to reduce methane levels in residual gas • Methane destruction inspection procedures tightened • Regular in-plant inspections and maintenance of methane destruction units
100 % renewable fuel used by machinery	83 %	● 100 %	100 %	<ul style="list-style-type: none"> • Diesel replaced with HVO
No odours from Scandinavian Biogas plants	0 complaints	● 1 complaint ¹	0 complaints	<ul style="list-style-type: none"> • Regular in-plant inspections and biofilter maintenance • Supervision to ensure tanks are covered
Water and Energy				
Reduce consumption of drinking water per produced biomethane energy unit by 50 % by 2023 ²	0.84 l/kWh	● 0.69 l/kWh	0.42 l/kWh	<ul style="list-style-type: none"> • Operational improvement of evaporators for reject water from dewatered digestate – regular high-pressure rinsing and cleaning, acid reversal in the process to improve functionality, redundant line to concentrate tank, new feeding line to evaporators • Initiated water balance project to e.g. synchronise condensate production with pre-treatment plant water requirements
Reduce total amount of nutrients (nitrogen and phosphorus) in wastewater by 30 % by 2023 ²	110 tonnes	● 69 tonnes	77 tonnes	<ul style="list-style-type: none"> • Improved evaporator operation as per above • Leachate from digestate plastic separation (bio-fertiliser) is returned to the process • Renovation of polymer dosing plant commenced • Increased number of analytical parameters for wastewater sampling • Waste prevention procedures tightened
Reduce use of biogas for heat production per produced biomethane energy unit by 20 % by 2023 ²	3,6 %	● 3,5 %	2,8 %	<ul style="list-style-type: none"> • Digestate tank connected to residual gas boiler to utilise residual methane formed in tank • Replacement of heat exchanger
Annual reduction in share of flared gas per produced biomethane energy unit ²	Base year	● 33 % increase ³	Annual reduction	<ul style="list-style-type: none"> • Procurement of two new MEG containers to prevent flaring when containers are full; agreement signed with new gas customer • Improved container logistics – better communication with drivers
Annual reduction in share of electricity consumption per produced biomethane energy unit ⁴	Base year	● 3.3 % reduction	Annual reduction	<ul style="list-style-type: none"> • Process optimisation • Switch to more energy-efficient equipment

1 One complaint was received regarding odour from Södertörn's biogas plant; however, the odour could not be attributed to Scandinavian Biogas's operations.

2 Refers to plants where the targets are applicable.

3 Södertörn's biogas plant produced at near maximum capacity in 2019. Because the plant delivers gas solely via MEG container transports, well-functioning logistics are required to avoid flaring due to full containers.

4 Excluding evaporator at Södertörn; its electricity consumption cannot be reduced without reducing operating time, which contravenes the target of reducing nutrients in waste water.



Sustainability

Responsible operations

Sustainability work at Scandinavian Biogas is a matter of running operations in a responsible manner, maintaining high level of product quality, and being a responsible and transparent partner.

Certification and product quality

Product quality is a key issue for the Company and our customers. Thorough oversight of quality parameters, such as the energy content of produced biogas and the presence of undesirable substances in biogas and bio-fertiliser, is therefore of utmost importance to us.

The bio-fertiliser, produced at Södertörn, is spread on arable land and must maintain a high level of quality. Food waste contains undesirable substances, specified in the Waste section on page 31. Upstream work – in the form of detailed quality requirements, random sampling, regular supplier visits, and collaboration with waste management operators – is therefore crucial in maintaining a high level of product quality.

Our bio-fertiliser is certified under the *Swedish Waste Management and Recycling Association's SPCR 120* regulations. This certification involves strict quality control of everything from incoming feedstock to the final product, with stringent requirements for traceability, infectious disease control, metal content, and pollutants. The Swedish Waste Management and Recycling Association conducts annual visits and audits at the Södertörn plant. During 2019 the Company, in close collaboration with food waste collectors, applied to the Swedish Board of Agriculture for *Collection System Approval*. Approval would signify that Scandinavian Biogas is able to guarantee traceability, quality

control, and self-monitoring across the entire collection chain – a step towards KRAV-certified bio-fertiliser.

The upgraded biogas meets *Swedish Vehicle Gas Quality Standards*. The Swedish facilities hold Swedish Energy Agency sustainability determinations, certifying that the produced biogas is sustainable in accordance with the *Act on Sustainability Criteria for Biofuels and Bioliquids*. We conduct annual life cycle analysis calculations for biogas sold to ensure that it meets the sustainability criteria. According to the criteria, the feedstock used may not have caused damage to areas of high biological value and the biogas must produce at least 50 per cent less greenhouse gas emissions than fossil fuels.

Nearby operations

The Company's facilities are located near other waste businesses, wastewater treatment plants, and residential areas. Dialogue and co-operation with nearby operations is essential to Scandinavian Biogas's ability to operate as a biogas producer and to minimise risks. We take responsibility to maintain good relationships by holding regular collaborative meetings with neighbouring businesses, and nearby households are informed whenever changes are made to a production facility.

Ethical guidelines

The business ethics policy includes business ethics principles

for employees and stipulates zero tolerance for corruption, the importance of compliance, and respect for the UN Declaration of Human Rights. In order to meet the overall goal of being a responsible and transparent partner and managing operations in a manner that inspires confidence, the policy needs to be developed on a regular basis. A code of conduct for suppliers was produced during the year, specifying the Company's requirements and expectations for working conditions, human rights, the environment, and anti-corruption.

Our core values govern norms and behaviours and serve as an important benchmark for how we treat ourselves, each other, and our customers, suppliers, and partners. Respect, expertise, joyfulness, and passion should be reflected in everything we do. For us, this signifies that we have the right attitude. We are focused and committed in our daily work and have the right expertise. Our company is characterised by job satisfaction, and we are proud of what we do because we know that we make a difference. We are prepared to work hard, with passion, to deliver on our promises. To achieve this, we work with constant feedback, management by objectives, and transparency.

Compliance

The operating companies are subject to authorisation and notification requirements. Accordingly, the companies are required to have environmental permits as well as permits to use explosives and inflammable products and substances in their operations.

Scandinavian Biogas has a management system with self-monitoring programmes for safety, quality, environment,

and working environment. Working preventively and applying the precautionary principle are fundamental considerations when, for example, purchasing new technology. The Company maintains regular dialogue with regulatory authorities and reports any incidents and operational disruptions that may affect the external environment or human health.

During 2019 Scandinavian Biogas notified the Environmental Management Administration that the terms of the environmental permit for methane emissions would be exceeded during the year. An investigation was immediately initiated and measures were taken to incinerate and recycle the methane leak.

The Company otherwise had no monetary, administrative, or legal sanctions for non-compliance with environmental, security, or working environment legislation in 2019.

Legal requirements for security, environment, working environment, and quality

- Act on Sustainability Criteria for Biofuels and Bioliqids
- Act on Inflammable and Explosive Products
- Seveso Directive
- Environmental Code (environmental permits)
- ABP Ordinance (ABP permits)
- Planning and Building Act (building permits)
- Work Environment Act



Sustainability

Safe and secure workplace with committed employees

Skilled and committed employees are essential for Scandinavian Biogas's continued development. Scandinavian Biogas needs to be a safe and secure workplace, where our employees are inspired by their work and have opportunities to develop.

Our employees are responsible for the Company's advancement. Scandinavian Biogas operates in the gas, waste, and construction industries, and our employees may be exposed to various types of risks in their daily work. A systematic working environment is therefore a decisive factor in minimising risks and preventing ill-health and accidents. Psychosocial issues such as equal treatment, workload, and organisational working environment are crucial to employee well-being. We endeavour to continuously improve work attendance rates for our employees and to be an attractive employer for current and prospective employees.

Governance

Scandinavian Biogas has a working environment management system, with safety rules and procedures comprising a fundamental component of plant operation. The HR manager has overall responsibility for systematic working environment management. Each unit manager has operational responsibility and works with employees to pursue ongoing working environment efforts, identify inadequacies, and implement improvement measures.

The Company has a safety committee comprised of safety representatives from every workplace, the HR manager and the director of Business Area Sweden. This is an important forum for exchanging health & safety experience and managing potential risks and requirements. The Company also collaborates with local unions that pursue issues concerning the physical and psychosocial working environment.

A summary of the Company's systematic working environment management is reported annually to evaluate methods for improvement.

Leadership

Good leadership is a prerequisite for employee commitment and well-being. Empathetic leadership creates a sense of community and highlights successes in employees' daily work. An understanding of people's similarities and differences not only creates a sense of security – it also provides an internal structure that forms the foundation for employees' personal development and feeling of loyalty towards the organisation.

Values

In 2019 we launched an internal initiative to clarify and secure support for the Company's values. Our core values, developed by our employees, are Respect, Expertise, Joyfulness, and Passion! Through our work with values, we aim to be the industry's best workplace. We regularly arrange workshops and other programmes to ensure that we live up to our values.

Through its core values, Scandinavian Biogas aspires to develop the organisation's employees to achieve their full potential.

Respect, Expertise, Joyfulness, and Passion!



We want to ensure that we have the best, most committed employees and the right expertise in the Company, and secure succession planning.

Care for employees

Scandinavian Biogas is responsible for ensuring a safe and secure working environment for its employees as well as for contracted staff. All employees have collective agreements, health and wellness benefits, reduced working hours, and income and supplementary insurance. The Company pays for vaccinations for operating and laboratory personnel and for contracted operating staff. We ensure that contracted staff and contractors are insured via their employers. All staff and contractors who visit the plants are required to sign specific security regulations before beginning any work.

The Company offers occupational health services, as well as check-ups during working hours when required, and works continuously to develop health programmes adapted to various work duties. To safeguard employee privacy, results of medical exams and other health services are never compiled on the individual or small-group level. During 2019 the Company developed a preventive healthcare policy and a rehabilitation policy, and produced guidelines for HR officers.

Systematic working environment management

For quality assurance of working environment management, all unit managers, safety representatives, and HSEQ managers receive working environment training. Training in first aid, HLR, and fire safety is conducted on a regular basis. All training is conducted during working hours and is documented in the Company’s training register.

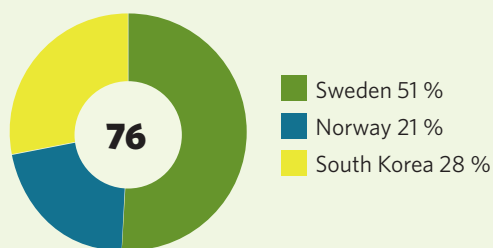
Regular safety inspections and targeted risk assessments are key components for detecting operational risks. Targeted risk assessments are conducted e.g. when renovations are made, new chemicals are purchased, new substrates are used at the plants, or organisational changes are made. The top priority is eliminating hazards, followed by reducing the likelihood of the event occurring, and finally introducing measures to mitigate consequences.

Scandinavian Biogas has a zero vision for accidents and incidents. Reports are regularly reviewed to identify systematic errors and inadequacies. Gas managers and safety representatives are entitled to stop a work process, or shut down the entire plant, if the work presents an immediate serious hazard for the employee.

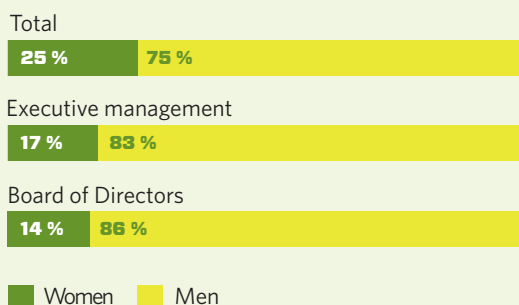
In 2019 the Company arranged for an external review of our work environment management to produce a situation assessment of the working environment at the plants in Sweden. Based on the results of the review, we will strengthen the areas that need improvement and produce guidelines, strategies, and tools to further improve workplace efficiency and safety.



Number of employees at 31 December 2019



Gender distribution 2019



Board of Directors

”All indications are that biogas is entering a strong new growth phase”

Göran Persson, Chairman of the Board
Scandinavian Biogas



Göran Persson
Chairman of the Board
Born 1949

Chairman of Scandinavian Biogas since November 2009. Prime minister of Sweden 1996–2006, finance minister 1994–96. Persson’s extensive experience covers public affairs, financial markets, mergers & acquisitions, international politics, and the EU. Chairman of LKAB, Pegroco Invest AB, Cambio Healthcare Systems AB, and Foresto AB.



Andreas Ahlström
Board member
Born 1976. Elected to the board 2011.

M.Sc. from the Hanken School of Economics in Helsinki. Ahlström has worked for Ahlström Capital since 2010, with overall responsibility for the company’s new cleantech investments. He sits on the boards of three of the company’s fund portfolio companies, including publicly listed Suominen.



Sara Anderson Board member
Born 1976. Elected to the board 2015.

M.Sc. in Chemical Engineering from the Royal Institute of Technology in Stockholm. Fifteen years’ experience in working with implementation of and increased use of biogas as a vehicle fuel. Anderson works as a consultant and heads the Sustainable Production Processes section at IVL Swedish Environmental Research Institute. Prior to that she worked as a consultant at 2050 Consulting and was responsible for fuel and energy strategy at Stockholm Public Transport (SL).



Anders Bengtsson Board member
Born 1962. Elected to the board 2009.

MBA from the Monterey Institute of International Studies, USA. Twenty years’ experience as CEO of small and mid-sized companies and several years’ experience as management consultant (including at Semcon AB). Board member and partner at BTAB Invest, board member of Diös Fastigheter AB and other publicly listed companies. Bengtsson invests in renewable energy and other companies and sits on the boards of several companies.



Hans Hansson Board member
Born 1947. Elected to the board 2013.

Hansson has served as CEO of seven Scania Group companies, including the group’s bus factory in Denmark. He then served as CEO of all of Scania’s bus operations and established a lorry factory in Russia. Currently runs his own business.



David Schelin Board member
Born 1965. Elected to the board 2017.

M.Sc. in Electrical Engineering from Chalmers University of Technology and Columbia Business School. Serves as board member and adviser to several companies. Former CEO of Ragn-Sells AB and COO of Niscayah Group. Schelin has also held senior positions in the telecom sector, most recently as VP Services for Ericsson in Southeast Asia. CEO of Euromaint Rail since 2017 and chairman of re:newcell ab.



Lars Bengtsson
Board member, employee representative
Born 1963. Employed 2015.

Studied biogas technology at Halmstad University. Background in industrial and municipal wastewater and water treatment operations. Over ten years' experience in research and testing of anaerobic wastewater treatment and biological decomposition.



Malin Gustafsson
Board member, employee representative
Born 1979. Employed 2010.

M.Sc. in Technical Biology from Linköping University's Institute of Technology. Previously worked as process engineer and project manager, and held similar roles, at Affibody AB, Mercatus Engineering AB, and Scandinavian GtS AB. Currently Sustainability and Project Manager for Business Area Sweden.



Erik Danielsson
Honorary chairman

Erik Danielsson, former President and CEO of Pharmacia, is founder of Scandinavian Biogas and was appointed honorary chairman on 26 November 2009.

Danielsson's experience and drive have contributed significantly to Scandinavian Biogas's development. He was involved in establishing operations in Sweden and South Korea during his tenure as chairman of the board, and his strong commitment and entrepreneurial spirit were crucial in efforts to move the Company into the next phase in the face of numerous challenges and financial difficulties during the 2008-09 financial crisis.

Executive management

As from January 2019



Matti Vikkula
President and CEO

President and CEO of Scandinavian Biogas since 2011. M.Sc. in Economics from the Helsinki School of Economics. Chairman of iTaito Oy. Previously management group member at telecom operator Elisa, CEO of Saunalahti, partner at PwC Management Consulting, and chairman of Efore Oyj and AinaCom Oy.



Anna Budzynski
CFO

Employed since 2019 as Group CFO. Responsible for all financial reporting. Previously worked as authorised public accountant at PwC and CFO of SRV Återvinning AB and OKQ8. Holds a Master's degree in Economics from Stockholm University.



Michael Wallis Olausson
Director Business Area Sweden

Employed since 2009. Responsible for Business Area Sweden, including customer and business strategies and development of new business opportunities and collaborations. Formerly Lt. Colonel, Swedish Armed Forces, and management consultant at Deloitte. MBA from the Stockholm School of Economics.



Jörgen Ejlertsson
Director of R&D

Professor Jörgen Ejlertsson is a co-founder of Scandinavian Biogas Fuels AB and has been active within R&D since then. M.Sc. in Agriculture from the Swedish University of Agricultural Sciences (SLU) in Uppsala and PhD in Environmental Microbiology from Linköping University, where he is a senior lecturer in Water in Nature and Society.



Håvard Wollan
Director Business Area Norway

Employed since 2016. Co-founder and CEO of Biokraft AS. Wollan has over 20 years' international experience as an entrepreneur, manager, consultant, and investor. M.Sc. from the Norwegian University of Science and Technology and MBA from Heriot-Watt University.



Kenny Cho
Director Business Area South Korea

Employed since 2011. Responsible for operations and development of business opportunities in South Korea. MBA from CA University.

Board of Directors' report

The Board of Directors and the Chief Executive Officer of Scandinavian Biogas Fuels International AB (publ), 556528-4733, hereby submit the annual report and consolidated accounts for financial year 2019.

Operations

Scandinavian Biogas is a leading player in large-scale biogas production, with world-leading expertise in the design and operation of biogas facilities – encompassing everything from pre-treatment to fuel upgrading – to optimise biogas production. The Group's focus is on facilitating the transition from fossil to renewable energy.

The business concept is to be a leader in the design, management, and operation of biogas plants. This is achieved by constantly improving the biogas production digestion process from various types of biomass, generated primarily from wastewater treatment sludge, food waste, and industrial processes such as food and biofuel (e.g. glycerol) manufacturing. The Group also provides leading expertise in the purification process for upgrading biogas to vehicle fuel quality and for utilising digestion process residues as bio-fertiliser. Scandinavian Biogas is focused on markets in the Nordic region and South Korea. The Group invests in owned or leased production facilities, primarily in the Nordic region, and provides its expertise as a service in other markets.

With the Group's strategic focus on research and development, Scandinavian Biogas places high priority on developing methods to improve biogas and bio-fertiliser production efficiency for both established and new types of waste, residues, and other organic material. Cost and resource efficiency improvements to production are made possible thanks to the Company's expertise and methodology.

The Group's operations are primarily conducted via subsidiaries, while the Parent Company serves in an administrative capacity.

Scandinavian Biogas Fuels International AB (publ) is domiciled and headquartered in Stockholm. At year-end 2019 the Company had a total of 76 (75) employees: 39 (39) in Sweden, 21 (21) in South Korea, and 16 (15) in Norway.

Licensable activities

The Company conducts operations subject to the environmental code in three Swedish subsidiaries. The Group's licence and registration activities affect the external environment mainly through subsidiaries Scandinavian Biogas Stockholm AB (SBSt), Scandinavian Biogas Södertörn AB (SBSö), and Scandinavian Biogas Recycling AB (SBR), which are subject to environmental permits and permits to conduct business with explosive and flammable products and substances. SBSt and SBSö produce upgraded biogas and may affect the external environment through the emission of methane. SBSö also produces bio-fertiliser, which may affect the external environment through the leakage of nitrogen-rich bio-fertiliser. SBR receives and pre-treats organic waste, which may affect the external environment primarily through the leakage of pre-treated organic

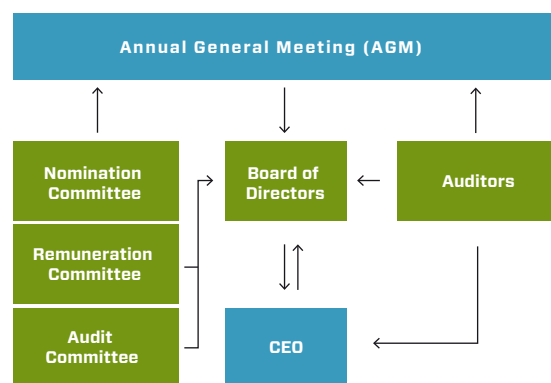
waste (slurry). To enable minimisation of the risk of external influences on the environment, all companies have a business system that includes regular controls and the ongoing management of any incidents. The upgrading facilities, for example, are connected to methane destruction facilities in order to combust any leakage of methane.

The Group

Scandinavian Biogas Fuels International AB (publ) is the Parent Company of the Scandinavian Biogas Group, which encompasses a number of wholly and partly owned companies registered in Sweden, South Korea, and Norway. Operations are primarily conducted in subsidiaries. Scandinavian Biogas Fuels AB also has a branch office in Norway.

Corporate governance

Scandinavian Biogas Fuels International AB (publ) is governed, managed, and controlled through a division of responsibilities between shareholders at the annual general meeting, the board of directors, and the chief executive officer in accordance with the Swedish Companies Act. The Company's corporate governance is organised and monitored as illustrated below.



Corporate governance within Scandinavian Biogas follows the Swedish Annual Accounts Act but does not yet fully follow the Swedish Corporate Governance Code. The internal corporate governance framework is comprised of the Company's Articles of Association, rules of procedure for the board of directors, instructions for the CEO, instructions for financial reporting, and other policies and guidelines.

Shareholders exercise their influence at the Annual General Meeting (AGM), the Company's highest decision-making body. The AGM elects the board of directors and auditors; adopts the income statement and balance sheet; and resolves on appropriation of profits, discharge from liability, and amendments to the Articles of Association. The AGM also adopts guidelines for board fees and resolves on new share issues. The Swedish Companies Act (2005:551) and the Articles of Association stipulate the manner in which Annual General Meeting and Extraordinary General Meeting notices are to be issued and specify who is entitled to attend and vote at meetings. Shareholders may not vote or otherwise participate in meetings remotely. In response to COVID-19 the government introduced

a law allowing for postal voting, including in cases where a company's articles of association stipulate otherwise. Each share carries one vote and all shareholders have identical rights.

The AGM is held within six months of the close of the financial year. Shareholders listed in the shareholders' register as at the record date and who have provided notification of their participation are entitled to participate at the AGM. The AGM notice is published in the Swedish Official Gazette and made available on the Company's website. Details on the AGM notice are published in Dagens Industri. Documents to be presented at the AGM are made available at the Company's head office and on the Company's website no less than three weeks prior to the AGM, and are mailed to shareholders upon request.

The AGM resolves on appointments and dismissals of board members and on amendments to the Articles of Association.

The AGM held on 27 June 2019 resolved to authorise the board to make decision(s), within the scope of the Articles of Association and during the period through the next AGM, on the issue of shares, bonds, and/or convertible instruments. The board is authorised to approve the issue of a maximum total of 60,000,000 shares. The shares are to be issued at the market subscription price, subject to market rate subscription discounts when applicable. Payment for shares shall be in cash, in kind, set-off of Company debt, or otherwise qualified.

Board of Directors

The board is comprised of Göran Persson (chairman), Anders Bengtsson, Andreas Ahlström, Hans Hansson (independent), Sara Anderson (independent), David Schelin (independent), and employee representatives Malin Gustafsson and Lars Bengtsson. Stefan Engström was a member of the board from 27 June 2019 through 16 February 2020. Board meetings are scheduled 12 months ahead of time, with at least five meetings per year. However, around 12-15 meetings are usually held per year, of which a few are via telephone. The auditors participate in at least one board meeting per year to report the results of their audit of the Group and its legal entities.

Nomination Committee

Nomination Committee members are Göran Persson, Örjan Björnsson, Jonas Bengtsson, Peter Agardh, and Andreas Ahlström. The committee meets at least once per year. Committee duties include proposing to the AGM board composition, remuneration fees for board and committee work, and election of auditors.

Remuneration Committee

Remuneration Committee members are Göran Persson, Anders Bengtsson, and Andreas Ahlström. The committee is tasked with determining salary and other benefits for the CEO and other senior executives.

Audit Committee

The Audit Committee is comprised of Anders Bengtsson (chairman), Hans Hansson, and Andreas Ahlström. The committee is responsible for i) monitoring the Company's financial reporting, ii) with respect to financial reporting, monitoring the efficiency of the Company's internal control and risk management, iii) staying informed on the audit of the annual report and consolidated accounts, iv) reviewing and monitoring the auditors' impartiality and independence, paying particular attention to whether the auditors provide the Company with services other than auditing services, and v) assisting in the preparation of proposals for the AGM's election of auditors.

Internal control and audit

Under the provisions of the Companies Act (2005:551), the board of directors has overall responsibility for ensuring that the Company's organisation is designed in such a way as to provide satisfactory control of the Company's accounting, management of assets, and financial condition. The Company's internal control structure is based on division of duties between the board and the CEO. Regular reporting and examination of financial results is conducted by the operational units' management bodies and by the board of directors.

The Parent Company's Articles of Association stipulate that one or two approved or authorised public accountants and up to two deputy auditors or, alternatively, a registered public accounting firm, are to be appointed by the AGM. The auditor and deputy auditors (if any) are elected on an annual basis by the AGM for the period through conclusion of the next AGM.

The auditor examines the annual accounts, consolidated accounts, and accounting records, as well as administration by the board and CEO.

Executive management

The Group's management team is comprised of President & CEO Matti Vikkula, Director of Business Area Sweden Michael Wallis Olausson, General Manager of South Korean operations Kenny Cho, and General Manager of Norwegian operations Håvard Wollan. Other key people in the Group include Director of R&D Jörgen Ejlertsson and CFO Anna Budzynski.

Ownership structure on balance sheet date, %

Bengtssons Tidnings AB and related parties	24.5 %
AC Cleantech Growth Fund 1 Holding AB and related parties	21.3 %
AB Apriori	20.5 %
Wipunen Varainhallinta Oy	11.6 %
Erik Danielsson and family, incl. companies	4.2 %
Reliquum and related parties	3.6 %
Ajanta Oy and related parties	3.5 %
John Nurminen Oy and related parties	3.1 %
Other	7.7 %
	100.0 %

Financial overview

Group

(SEK thousand)	2019-12-31	2018-12-31	2017-12-31	2016-12-31	2015-12-31
Net sales	363,559	275,234	258,363	242,610	175,891
EBITDA	87,848	-6,247	21,587	21,972	23,358
Operating results	-1,940	-71,808	-42,159	-24,580	-16,817
Balance sheet total	1,294,063	1,234,842	1,161,238	1,026,648	760,652
Adjusted equity/assets ratio, %	26.6	20.5	25.5	25.5	28.6

Parent Company

(SEK thousand)	2019-12-31	2018-12-31	2017-12-31	2016-12-31	2015-12-31
Net sales	1,220	1,200	1,200	1,200	1,200
Operating results	-487	-2,742	-1,930	-1,965	-2,513
Balance sheet total	633,668	509,816	517,628	504,351	299,093
Equity/assets ratio, %	55.9	41.7	49.4	55.1	98.9

Consolidated net sales for the financial year totalled SEK 363.6 million (275.2), a year-on-year increase of 32.1 per cent. The largest share of the increase (approximately 30 per cent) is attributable to the plant at Skogn, which was commissioned during the second half of 2018. Total revenues for 2019 amounted to SEK 407.1 million (310.2), an increase of 31.2 per cent. Other operating income includes SEK 1.1 million (0.5) of re-invoicing, with corresponding expenses reported under other external costs.

Costs for raw materials and consumables increased 15.7 per cent year-on-year, due mainly to commissioning of the plant at Skogn. Other external costs decreased during the interim period due primarily to a one-off cost of SEK 16.2 million in 2018 as a result of court decisions. Personnel costs are in line with the comparative period. The dispute in South Korea was reassessed during the fourth quarter, resulting in an adjustment of a previous provision. The change had a positive effect on operating profit of SEK 12.1 million. The adjusted assessment had a positive effect on the item Raw Materials and Consumables.

Consolidated EBITDA totalled SEK 87.8 million (-6.2) for the financial year. The significant improvement is mainly due to the lack of any major one-off costs during 2019, in contrast to 2018; to production and sales at Skogn during full-year 2019; and to the updated assessment of the dispute in South Korea. The biogas production subsidy totalled SEK 16.3 million (4.8) during the year. Receipt of the subsidy began in October 2018. The Group's reporting of finance leases, together with the effect of IFRS 16 (which entered into force 1 January 2019) improved EBITDA by SEK 33.5 million, although amortisation and financial expenses were increased by the corresponding amounts. Accordingly, profit/loss after tax is comparable to previous years.

The Group posted an operating loss of SEK -1.9 million (-71.8). The Group posted a loss after tax of SEK -55.9 million (-109.9), of which SEK 1.3 million (3.8) pertains to unrealised exchange rate fluctuations, attributable mainly to long-term intra-group financing in foreign subsidiaries.

Total assets at 31 December 2019 amounted to SEK 1,294.1 million (1,234.8), a 4.8 per cent year-on-year increase. Finance lease-related borrowing totalled SEK 334.3 million (304.6). Equity was impacted by net profit/loss for the period and by share issues. Two new share issues were conducted during the year. The directed share issues yielded SEK 136.5 million before issue expenses, with subordinated shareholder loans totalling SEK 34 million along with interest of SEK 2.5 million converted to shares. The directed share issue yielded SEK 10.3 million before issue expenses. Issue expenses totalled SEK 9.2 million. A contribution of SEK 11.2 million was made by minority shareholders.

The consolidated cash balance was SEK 136.4 million (94.8) at 31 December 2019.

Investments

Investments in tangible and intangible assets during the financial year totalled SEK 46.7 million (116.8).

The carrying amount of the Group's tangible and intangible assets was SEK 1,000.5 million (989.7) at 31 December 2019, of which SEK 327.8 million (292.5) pertains to objects leased by the Group through long-term finance lease agreements meeting IFRS 16 criteria.

Parent Company

Parent Company income during the financial year totalled SEK 2.4 million (1.4). Results before appropriations and tax totalled SEK -20.5 million (-18.3). The regular impairment assessment conducted during the financial year found no write-down requirement.

Parent Company results after tax totalled SEK 4.2 million (-43.3) in 2019. Net results for the year include group contributions from subsidiaries totalling SEK 24.7 million. In 2018 group contributions to subsidiaries totalled SEK 25.0 million.

The Parent Company balance sheet total was SEK 633.7 million (509.8) at the close of the financial year. The Parent Company's cash balance totalled SEK 57.2 million (1.6) at the same date.

Related-party transactions

Loan agreements totalling SEK 34 million were signed with the major shareholders during the May–November 2018 period. The loans had fixed rate of 8 per cent and were eligible for offset in any potential new rights issue. The loans and associated interest, totalling SEK 36.5 million, were offset in conjunction with the new share issue conducted in July 2019. A loan agreement totalling SEK 20 million was signed with a major shareholder in September 2019. The loan had a fixed rate of 8 per cent and matured on 10 February 2020. A loan agreement totalling SEK 200 million was signed with a major shareholder in September 2019 as part of refinancing of the corporate bond repaid 10 February 2020.

No other transactions with related parties have taken place during full-year 2019.

Significant events during the year

Record high biogas production and delivery at year-end

Biogas production at the plants at Skogn and Södertörn reached record levels at the end of the year, and both plants produced and delivered biogas at full capacity. The year's high rate of production significantly improved operational profitability.

Long-term supply contract for the plant at Skogn, Norway

A 7.5-year LBG supply contract was signed between Norwegian subsidiary Biokraft and Hurtigruten.

Improved production stability at Södertörn, Sweden

The positive trend for production at Södertörn, confirmed during the first half of the year, continued through year-end. Production remained high despite the cyclical shortfall of organic waste during the summer months. Development work at the operations department, which commenced during the first half of the year, continued through 2019 with a focus on further minimising production disruptions and maintenance costs.

Incident at the plant at Skogn

An incident occurred in a tank at the plant at Skogn, Norway, in September. No persons were injured and production was maintained at expected levels. A technical investigation of the incident has been conducted and the process is underway. The tank is valued at approximately SEK 6 million and large portions of the tank will be replaced. The incident has been approved as an insurance matter.

Group share issues

The Group conducted share issues during the period totalling SEK 146.8 million before transaction costs. Transaction costs totalled SEK 9.2 million.

A share issue of SEK 21.6 million was conducted in the Norwegian subsidiary in September. Scandinavian Biogas International Fuels AB's share in the issue amounts to SEK 10.9 million.

Financing secured for repayment of 2016/2020 bond loan

In September the Company secured financing for repayment of the outstanding 2016/2020 bond loan that matured on 10 February 2020. The credit facility amounts to SEK 200 million. Additional details are presented in the Information on Risks and Uncertainties section.

Written procedure

The Group identified a risk that the adjusted equity/assets ratio requirement may not be met for the first and second quarters of 2019 and therefore initiated a process during Q1 2019 to propose that bondholders waive the requirement. During April 2019 a clear majority of bondholders confirmed their support of the Group's proposal for a waiver. The terms of the waiver were fulfilled through the new share issues conducted during summer 2019. The original loan terms have been followed as from 30 September 2019 and have now been satisfied.

Production and sales

Business Area Sweden

Biogas sales from operations in Sweden totalled 20.4 Nm³ (20.0) during the financial year, corresponding to approximately 198 GWh (194). Customer deliveries of biogas have been made according to plan and all agreements have been fulfilled in full. An average of 140 tonnes (144) of organic waste per day was processed by Business Area Sweden during the financial year.

Business Area Norway

Commissioning of the liquid biogas facility in Skogn, Norway, started in late June 2018. A total 9.6 million Nm³ (1.6) million of liquid biogas (LBG) was sold to customers during the financial year, corresponding to approximately 93.3 GWh (15.5). Full production capacity is estimated at 12.5 million Nm³, equivalent to approximately 120 GWh.

Business Area South Korea

The facility in South Korea received an average of 195 tonnes (183) of food waste per day during the financial year. Sales of raw gas during the same period amounted to 8.8 million Nm³ (9.0), or approximately 61 GWh (62). A total of 10.9 million Nm³ (10.2) of raw gas was produced.

Ongoing investment projects

EffiSludge/LIFE

Scandinavian Biogas was previously awarded a grant from EU/LIFE aimed at increasing biogas production in the pulp and paper industry. The goal of the project is to build and operate the first demonstration process to produce biogas from wastewater from Norske Skog's paper mill in Skogn while also reducing the plant's electricity consumption. The total project cost is estimated at just under SEK 30 million, with the EU grant equivalent to approximately SEK 16 million. SEK 7.6 million was paid to the Group in December 2018 and SEK 5.2 million was received during 2015. The project is scheduled for completion in 2021.

Information on risks and uncertainties

Described below are the main risks that may have an impact on Scandinavian Biogas's operations and future development. The account does not purport to be comprehensive and the risk factors are not listed in any order of significance. See also Note 3, Financial Risk Management.

Competition and maintaining competitive edge

Scandinavian Biogas's operations are largely dependent on the demand for biogas, particularly in Sweden. Biogas is currently one of the most environmentally attractive energy carriers, and as the market matures more companies are expected to be established. Increased competition for the organic material used in biogas production is anticipated, both from other biogas producers and from producers of other renewable energy carriers. It is therefore vital that Scandinavian Biogas continue its strategic research and development activities that facilitate the digestion of new types of substrates, and eventually identify ways of producing biogas from organic waste more efficiently.

Revenue generation

Revenue streams from biogas production differ from market to market. At the same time, the price of biogas is of key significance to Scandinavian Biogas. There is a risk that revenue levels to fund the Group's future projects may not suffice if the market price of fossil energy remains at a low level.

Political risks

The political situation in areas where Scandinavian Biogas operates is of great significance to the Company's operations. Partners, customers, and suppliers are largely comprised of municipalities or the equivalent, public sector entities, and companies. This means that any change in political engagement or tax laws may have a major impact on projects and the Company's ability to generate revenues despite contracts entered into previously. Many projects are also contract-based, with revenue streams spanning time horizons 15 years or longer. The uncertainty of unforeseen events that may occur in future poses a risk for the Group. Continued expansion into markets with stable conditions may mitigate this type of risk for Scandinavian Biogas. The risk of any political decisions that might have a negative impact on the production of biofuels is currently deemed to be limited.

Dependence on public authority decisions and permits

Scandinavian Biogas's operations are dependent on permits granted by public authorities under the environmental code and the approval of applications. Processing times may take up to one year or more in some cases, with some projects consequently coming to a halt and being delayed. All of the Group's facilities hold valid permits.

Long sales cycles for new contracts

The sales cycle from the first point of contact with the customer to the generation of revenues may span several years. As a rule, projects are extensive and complex to carry out. Entrance into new markets also involves major work efforts and cultural understanding. All of these factors pose a risk, which may be mitigated through well-conducted market studies, employees with local knowledge and strong networks, and experience in the successful completion of similar projects.

Accidents and environmental hazards

One example of environmental risk associated with biogas production is major leakage of methane. Another example is emission of nitrogen-rich bio-fertiliser to soil and groundwater. Accidents may also occur, and Scandinavian Biogas works continuously to enhance its safety and security procedures. In many areas these are now integrated with day-to-day business activities, and the Company continuously strives to mitigate the risk of accidents and environmental hazards.

Operational risks

There is a risk that ongoing process adjustments may affect future production volumes.

Financial risks

The Company's financing structure is based on finance leases and loans from credit institutions. This financing structure presents a financial risk in the event of a significant adjustment to these agreements. In September 2019 the Company secured financing for repayment of the outstanding 2016/2020 bond loan of SEK 230 million that matured on 10 February 2020. The new credit facility amounts to SEK 200 million and will be repaid 30 September 2020. Management is working to secure longer-term financing and identify options for refinancing this credit facility. Management is conducting concrete, realistic negotiations with several independent parties deemed able to refinance the credit facility, although such refinancing has not been finalised as of the publication date of this annual report. The Board of Directors and management expect to succeed in securing refinancing and, accordingly, the annual accounts have been prepared in accordance with going concern assumptions.

Disputes

Due to disagreements with Ulsan City relating to operations in Ulsan, South Korea, the Korean subsidiary started legal proceedings in Ulsan's administrative court in 2017 regarding certain service costs that Ulsan City invoiced to the subsidiary. In the summer of 2018, the court ruled that the invoices from Ulsan City for service costs are not classified as an administrative issue, and are thus not subject to administrative law. The Group filed an appeal with the Supreme Court, which upheld the lower court's ruling. Given that the service costs are not subject to administrative law, the South Korean subsidiary is considering the possibility and consequences of initiating a civil lawsuit. The total nominal value of the disputed service costs is estimated at around SEK 80 million for the entire contract period (15 years), subject to annual food waste volumes, prices, and exchange rates. Annual service costs amount to around SEK 5 million, and it is assumed that the result of this dispute may have a mainly positive effect on Group profit, corresponding to a reduction in one-off costs of SEK 40 million and a reduction of approximately SEK 5 million per year going forward.

On 23 August 2018, the court in Ulsan announced its decision regarding the ongoing dispute with Ulsan City concerning the contractual obligation to invest in a gas upgrading facility at the Ulsan site by the end of 2017. The court's ruling has been appealed and the lawsuit is ongoing. During summer 2019, the presiding judge asked an independent financial adviser to provide an opinion on the dispute and alternative financial consequences. The financial adviser's opinion has been submitted to the judge. The Group and our legal advisers consider the opinion to be positive for SBK Ulsan. The lawsuit is proceeding but has been delayed longer than expected. The assessment of the provision for the potential penalty fee was updated in late 2019. Based on lawsuit activity during the year, the provision was updated to reflect management's assessment. The provision has been reduced by SEK 12.1 million, which had a positive impact on the Company's operating results.

As previously communicated, one of the Group's suppliers to the project in Skogn, Norway, has made compensation claims, mainly for groundwork. During Q2 2018 the supplier increased its demand from NOK 52 million to around NOK 64 million, and a formal demand was filed in October 2018. The Group has, however, previously entered into a settlement agreement with the supplier and continues to be of the opinion that the specified compensation is covered by the settlement. The Group has nevertheless, for precautionary purposes, reserved NOK 5 million of the demand amount in its Norwegian company as an increased capital cost pursuant to generally accepted practice.

Expectations regarding future development

There is a great need for renewable energy that can replace fossil fuels such as coal, oil, and natural gas at reasonable prices. Interest in biogas has increased in various evaluations of renewable alternatives that can be mass-produced, as has demand for biogas, which is expected to increase further as availability increases. In sectors including the heavy transport sector, demand for liquid biogas is expected to increase significantly in coming years. However, the current low market price of fossil energy causes some uncertainty as to the biogas market price as well as the growth of and new investments in renewable energy.

The Swedish parliament and government are clearly interested in biogas as a component of the future fossil-free energy solution. The government-appointed Biogas Commission submitted its report in December 2019.

The Group's long-term goal is to utilise Scandinavian Biogas's expertise and experience to ensure the expansion of biogas supply and use. Deliveries can be made not only from the Company's facilities but also by third parties, contributing to Group sales via licencing, operating or service agreements, etc.

Long-term goal

The Group's long-term goal is to ensure

- growth corresponding to a 20–30 per cent increase in average annual biogas sales and deliveries
- total capacity of one terawatt hour (1 TWh) achieved during the first stage, with growth based on own production or on contractual knowledge management
- project profitability of at least 15 % IRR
- an EBIT margin of at least 10 %
- an equity/assets ratio of at least 30 %

Due to the market transformation in Scandinavia, the Group anticipates increased demand for biogas, particularly liquid biogas (LBG). The Group plans investments and improvements in line with market needs. The Group has a goal of achieving approximately SEK 500 million in annual sales and profitability of at least 30 % (EBITDA %).

In recent years, the Group has focused on increasing biogas deliveries and production. This work is proceeding, but is now focused on LBG. The combined full technical capacity of all plants in Sweden is estimated at over 30 million Nm³ of fuel-quality biogas, or approximately 300 GWh. The environmental permit at Södertörn, granted in 2017, also enables a sharp production increase at Södertörn over time. The plant in South Korea is expected to continue to have an annual production capacity of around 65 GWh. In addition, the annual production capacity in Norway is estimated at 12.5 million Nm³ of liquid biogas, or about 120 GWh. With its current plants and ongoing projects, the Group's total production capacity is expected to be close to 500 GWh at full capacity.

Financing

The business is financed by way of equity, loans from external creditors, and finance leases. In Sweden, a major portion of production facilities are leased under lease agreements with original durations of around 25 years. Non-current interest-bearing liabilities, exclusive of finance leases, totalled SEK 286.5 million (566.0) as at 31 December 2019. The change is mainly attributable to the 10 February 2020 maturity date of the SEK 230 million corporate bond, which was refinanced with a private facility of SEK 200 million.

The Group's cash balances totalled SEK 136.4 million (94.8) as at 31 December 2019.

Any need for additional working capital is expected to be financed with debt or equity, subordinated to the corporate bond. The Group wants to expand and is actively working on new projects. The Group expects that financing of major future projects will require various types of co-operation and financing, depending on the project's structure and positioning.

As part of the Group's strategic plan, the board of directors and Group management have been working on a prospective listing of the Company's share in a suitable marketplace. In parallel with these efforts, various strategic and capital structure alternatives to create and realise the value of the Group's business opportunities and maximise shareholder value have been evaluated in collaboration with external advisers.

The share

The number of shares changed during the financial year due to two new share issues, and totalled 168,256,960 (107,098,839) at 31 December 2019. The quotient value is SEK 0.20 per share. Each share carries one vote. All outstanding shares are ordinary shares and therefore carry the right to equal shares in the assets and profit of Scandinavian Biogas Fuels International AB (publ).

Warrants

All options held by employees and the CEO as at 31 March 2018 expired on 1 April 2018 without being exercised. Accordingly, there are no outstanding warrants.

Significant events after the end of the period

Business opportunities throughout the world have been impacted by COVID-19 in early 2020. The impact on the Group's business after the close of the financial year is limited. Management is closely monitoring the situation and regularly assessing ways in which the situation may affect operations.

Management is actively working with various financing solutions to ensure a longer-term financing solution. The SEK 200 million credit facility will be repaid 30 September 2020.

Proposed allocation of profit/loss

The board of directors proposes that the following amount, SEK 318,527,209, be allocated as follows:

	Amount in SEK
Accumulated profit/loss	-424,601,393
Share premium reserve	738,919,052
Profit for the year	4,209,550
Total	318,527,209
Carried forward	318,527,209
Total	318,527,209

With regard to the Company's performance and financial position, please refer to the following financial statements and accompanying notes.

Consolidated statement of comprehensive income

Amounts in SEK thousand	Note	2019	2018
Operating income			
Net sales	6	363,559	275,234
Capitalised work on own account	8	12,033	13,077
Other operating income	11, 13	31,458	21,901
Total		407,050	310,212
Operating expenses			
Raw materials and consumables		-192,383	-166,336
Other external costs	9	-59,313	-81,664
Personnel costs	10	-67,506	-68,459
Depreciation, amortisation and impairment of tangible and intangible assets		-88,526	-64,057
Other operating expenses	11, 14	-1,262	-1,504
Total operating expenses		-408,990	-382,020
Operating profit/loss		-1,940	-71,808
Financial income		4,044	4,502
Financial expense		-65,260	-49,783
Net financial items	12, 14	-61,216	-45,283
Profit/loss before tax		-63,156	-117,091
Income tax	13	7,306	7,163
Profit/loss for the year		-55,850	-109,928
Other comprehensive income			
Actuarial results on post-employment benefits	10	-10	-349
Exchange differences	14	3,682	2,002
Other comprehensive income for the year, net after tax		3,672	1,653
Total comprehensive income for the year		-52,178	-108,275
All items in the Group's other comprehensive income may be reversed in the income statement.			
Profit/loss for the year attributable to:			
Parent Company shareholders		-42,536	-90,408
Non-controlling interests		-13,314	-19,520
		-55,850	-109,928
Profit/loss for the year attributable to:			
Parent Company shareholders		-40,834	-90,279
Non-controlling interests		-11,344	-17,996
		-52,178	-108,275

The notes presented on pages 56–75 are an integrated part of these annual and consolidated accounts.

Consolidated balance sheet

Amounts in SEK thousand	Note	2019-12-31	2018-12-31
ASSETS			
Non-current assets			
Intangible assets			
	15		
Capitalised development costs		11,713	12,975
Concessions and similar rights		67,832	78,210
Patents and licences		1,423	1,488
Goodwill		6,833	6,617
Total intangible assets		87,801	99,290
Tangible assets			
	16		
Buildings and land		367,237	186,350
Plant and machinery		489,308	335,017
Equipment, tools, fixtures, and fittings		12,001	10,936
Construction work in progress		44,175	358,124
Total tangible assets		912,721	890,427
Financial assets			
Deferred tax assets	18	23,453	16,956
Other non-current receivables	19	19,066	14,248
Total financial assets		42,519	31,204
Other non-current assets			
Accrued income and prepaid expenses	20	1,333	1,778
Total other non-current assets		1,333	1,778
Total non-current assets		1,044,374	1,022,669
Current assets			
Inventories, etc.			
Raw materials and consumables		14,770	5,499
Total inventories		14,770	5,499
Current receivables			
Trade accounts receivable	22	65,670	44,058
Other receivables	23	17,914	52,982
Prepaid expenses and accrued income	24	14,951	14,816
Cash and cash equivalents	25	136,384	94,788
Total current receivables		234,919	206,644
Total current assets		249,689	212,143
TOTAL ASSETS		1,294,063	1,234,842

The notes presented on pages 56-75 are an integrated part of these annual and consolidated accounts.

Consolidated balance sheet, continued

Amounts in SEK thousand	Note	2019-12-31	2018-12-31
EQUITY			
Equity attributable to Parent Company shareholders			
Share capital	26	33,651	21,420
Other paid-in capital		880,048	754,685
Translation reserve		5,298	3,636
Retained earnings including comprehensive income for the year		-743,173	-700,637
		175,824	79,104
Non-controlling interests		53,098	52,789
Total equity		228,922	131,893
LIABILITIES			
Non-current liabilities			
Borrowings	27, 29, 30	597,942	853,815
Deferred tax liabilities	18	1,961	2,053
Other provisions	28, 30	21,917	37,315
Total non-current liabilities		621,820	893,183
Current liabilities			
Borrowings	27	296,465	25,749
Accounts payable		66,325	86,755
Other liabilities	31	30,404	39,923
Accrued expenses and deferred income	32	50,127	57,339
Total current liabilities		443,321	209,766
TOTAL EQUITY AND LIABILITIES		1,294,063	1,234,842

The notes presented on pages 56-75 are an integrated part of these annual and consolidated accounts.

Consolidated statement of changes in equity

Amounts in SEK thousand	Note	Attributable to Parent Company shareholders				Total	Non-controlling interests	Total equity
		Share-capital	Other paid-in capital	Translation reserve	Retained earnings			
Opening balance, 1 January 2018		21,420	754,685	1,872	-608,597	169,380	59,544	228,924
Profit/loss for the year					-90,408	-90,408	-19,520	-109,928
Other comprehensive income								
Actuarial results on post-employment benefits					-291	-291	-58	-349
Exchange differences				1,764	-1,341	423	1,579	2,002
Total comprehensive income				1,764	-92,040	-90,276	-17,999	-108,275
Contributions from non-controlling interests	17						11,244	11,244
Total contributions from and distributions to shareholders, recognised directly in equity							11,244	11,244
Closing balance, 31 December 2018		21,420	754,685	3,636	-700,637	79,104	52,789	131,893
Opening balance, 1 January 2019		21,420	754,685	3,636	-700,637	79,104	52,789	131,893
Profit/loss for the year					-42,536	-42,536	-13,314	-55,850
Other comprehensive income								
Actuarial results on post-employment benefits					-8	-8	-2	-10
Exchange differences				1,661	8	1,669	2,013	3,682
Total comprehensive income				1,661	-42,536	-40,875	-11,303	-52,178
New share issue	26	12,231	134,548			146,780		146,780
Issue expenses ¹			-9,185			-9,185		-9,185
Contributions from non-controlling interests	17						11,613	11,613
Total contributions from and distributions to shareholders, recognised directly in equity		12,231	125,363	-	-	137,595	11,613	149,207
Closing balance, 31 December 2019		33,651	880,048	5,297	-743,173	175,824	53,098	228,922

The notes presented on pages 56–75 are an integrated part of these annual and consolidated accounts.

¹ The tax effect of issue expenses recognised in equity totals SEK 1,965 thousand (0).

Consolidated statement of cash flows

Amounts in SEK thousand	Note	2019	2018
Cash flow from operating activities			
Operating profit/loss before financial items		-1,940	-71,808
Amortisation/depreciation		88,526	64,057
Other non-cash items	35	-16,365	10,923
Interest received		141	121
Interest paid		-36,437	-37,235
Cash flow from operating activities before changes in working capital		33,925	-33,943
Cash flow from changes in working capital			
Increase/decrease in inventories		-9,271	-3,623
Increase/decrease in operating receivables		13,321	-33,841
Increase/decrease in operating liabilities		-37,991	69,645
Total changes in working capital		-33,941	32,181
Cash flow from operating activities		-16	-1,762
Cash flow from investing activities			
Acquisition of intangible assets	15	-402	-1,679
Acquisition of tangible assets	16	-46,726	-48,859
Divestment of tangible assets		305	6,985
Divestment/amortisation of other financial assets		333	444
Restricted bank balances and other changes in financial assets		-5,131	21,701
Cash flow from investing activities		-51,621	-21,408
Cash flow from financing activities			
New share issue	26	101,153	-
Loans raised	27	20,000	94,735
Loan amortisation		-40,242	-72,233
Contribution to/from minority shareholders	17	11,721	7,644
Cash flow from financing activities		92,632	30,146
Total cash flow for the year		40,995	6,979
Decrease/increase in cash and cash equivalents			
Cash and cash equivalents at beginning of the year	25	94,788	86,885
Exchange differences in cash and cash equivalents		601	927
Cash and cash equivalents at year-end	25	136,384	94,788

The notes presented on pages 56–75 are an integrated part of these annual and consolidated accounts.

Parent Company income statement

Amounts in SEK thousand	Note	2019	2018
Operating income			
Net sales	6, 7	1,220	1,200
Other operating income	11	1,163	230
Total operating income		2,383	1,430
Operating expenses			
Other external costs	9	-2,276	-3,382
Personnel costs	10	-594	-779
Other operating expenses	11	-	-11
Total operating expenses		-2,870	-4,172
Operating profit/loss		-487	-2,742
Profit/loss from participations in group companies	12, 17	-	-
Interest income		11,387	11,952
Interest expense		-31,409	-27,550
Net financial items	12	-20,022	-15,598
Profit/loss before appropriations and tax		-20,509	-18,341
Appropriations			
Group contributions paid		24,719	-25,000
Total appropriations		24,719	-25,000
Profit/loss before tax		4,210	-43,341
Income tax	13	-	-
Profit/loss for the year		4,210	-43,341

No items are recognised as other comprehensive income in the Parent Company and, accordingly, total comprehensive income corresponds with profit/loss for the year.

The notes presented on pages 56-75 are an integrated part of these annual and consolidated accounts.

Parent Company balance sheet

Amounts in SEK thousand	Note	2019-12-31	2018-12-31
ASSETS			
Non-current assets			
Financial assets			
Participations in group companies	17	226,613	189,453
Receivables from group companies		313,073	266,828
Total financial assets		539,686	456,280
Total non-current assets		539,686	456,280
Current assets			
Current receivables			
Receivables from group companies		36,084	48,270
Other receivables	23	169	202
Prepaid expenses and accrued income	24	504	3,415
Total current receivables		36,757	51,887
Cash and bank balances	25	57,225	1,649
Total current assets		93,982	53,536
TOTAL ASSETS		633,668	509,816

The notes presented on pages 56-75 are an integrated part of these annual and consolidated accounts.

Parent Company balance sheet, continued

Amounts in SEK thousand	Note	2019-12-31	2018-12-31
EQUITY AND LIABILITIES			
Equity	26		
Restricted equity			
Share capital		33,651	21,420
Statutory reserve		2,043	2,043
Total restricted equity		35,694	23,463
Non-restricted equity			
Retained earnings		-424,601	-381,260
Share premium reserve		738,919	613,503
Profit/loss for the year		4,210	-43,341
Total non-restricted equity		318,528	188,902
Total equity		354,222	212,365
Non-current liabilities			
Interest-bearing loans	27, 29	-	262,565
Intra-group loans	27	23,000	23,000
Total non-current liabilities		23,000	285,565
Current liabilities			
Borrowings	27	250,226	19
Accounts payable		139	932
Liabilities to group companies		2,008	6,112
Other liabilities	31	0	129
Accrued expenses and deferred income	32	4,073	4,693
Total current liabilities		256,446	11,886
TOTAL EQUITY AND LIABILITIES		633,668	509,816

The notes presented on pages 56-75 are an integrated part of these annual and consolidated accounts.

Parent Company statement of changes in equity

Amounts in SEK thousand	Note	Restricted equity		Non-restricted equity		Total equity
		Share capital	Statutory reserve	Share premium reserve	Retained earnings	
Opening balance, 1 January 2018		21,420	2,043	613,503	-381,260	255,706
Comprehensive income						
Profit/loss for the year					-43,341	-43,341
Total comprehensive income					-43,341	-43,341
Closing balance, 31 December 2018		21,420	2,043	613,503	-424,601	212,365
Opening balance, 1 January 2019		21,420	2,043	613,503	-424,601	212,365
Comprehensive income						
Profit/loss for the year					4,210	4,210
Total comprehensive income					4,210	4,210
Transactions with shareholders						
New share issue	26	12,231		134,548		146,779
Issue expenses ¹				-9,132		-9,132
Closing balance, 31 December 2019		33,651	2,043	738,919	-420,391	354,222

The notes presented on pages 56-75 are an integrated part of these annual and consolidated accounts.

¹ The tax effect of issue expenses recognised in equity totals SEK 1,965 thousand (0).

Parent Company statement of cash flows

Amounts in SEK thousand	Note	2019	2018
Cash flow from operating activities			
Operating profit/loss before financial items		-487	-2,742
Adjustments for non-cash items	35	293	325
Interest received		-	2,700
Interest paid		-26,935	-22,861
Cash flow from operating activities before changes in working capital		-27,129	-22,578
Cash flow from changes in working capital			
Increase/decrease in operating receivables		15,130	125,955
Increase/decrease in operating liabilities		-5,831	-1,618
Total changes in working capital		9,299	124,337
Cash flow from operating activities		-17,830	101,759
Investing activities			
Investments in subsidiaries	17	-10,881	-8,153
Loans to subsidiaries		-36,867	-122,536
Divestment/amortisation of other financial assets		-	-
Group contributions received/paid		-	-25,000
Restricted bank balances and other changes in financial assets	19	-	12,078
Cash flow from investing activities		-47,748	-143,611
Financing activities			
New share issue	26	101,153	-
Loans raised	27	20,000	35,984
Cash flow from financing activities		121,153	35,984
Cash flow for the year		55,576	-5,868
Cash and cash equivalents at beginning of the year	25	1,649	7,517
Cash and cash equivalents at year-end	25	57,225	1,649

The notes presented on pages 56-75 are an integrated part of these annual and consolidated accounts.

Notes

Note 1 General information

Scandinavian Biogas Fuels International AB (publ) is a public limited liability company and is registered in Stockholm, Sweden. The headquarters are located at Holländargatan 21A, SE 111 60, Stockholm, Sweden.

The board of directors approved the publication of the consolidated accounts and annual report on 28 May 2020.

Unless otherwise specified, all amounts are in SEK thousand. Figures in brackets pertain to the year-earlier period.

Note 2 Summary of key accounting principles

The principal accounting policies applied in these consolidated accounts are set out below. These policies have been consistently applied to all years presented, unless otherwise stated. The consolidated accounts include Scandinavian Biogas Fuels International AB and its subsidiaries.

2.1 Basis of presentation

The consolidated accounts for Scandinavian Biogas Fuels International AB have been prepared in accordance with the Swedish Annual Accounts Act, RFR 1 'Supplementary Accounting Rules for Groups', and International Financial Reporting Standards (IFRS) and interpretations by the IFRS Interpretations Committee (IFRS IC) as adopted by the EU. This is Scandinavian Biogas Fuels International AB's eighth annual report prepared in accordance with the International Financial Reporting Standards (IFRS). The consolidated accounts have been prepared using the cost method.

The Parent Company's financial statements are prepared in accordance with RFR 2 'Accounting for Legal Entities' and the Swedish Annual Accounts Act. In cases where the Parent Company applies other accounting principles than those applied by the Group, these are listed separately at the end of this note.

The preparation of financial statements in conformity with IFRS requires the use of certain significant estimates for accounting purposes. It also requires management to exercise its judgement in applying the Group's accounting policies; see Note 4, Significant Estimates and Assessments.

New standards, amendments and interpretations applied by the Group

Of the amended standards applicable during 2019, IFRS 16 had an impact on Scandinavian Biogas Fuels International AB's accounting principles or disclosures.

IFRS 16 'Leases' has replaced IAS 17 'Leases'. Nearly all lease agreements are now recognised in the balance sheet, as distinction is no longer made between operating and finance lease agreements. Under the new standard, an asset (the right to use a lease asset) and a financial obligation to pay leasing fees are recognised. Short-term leases and leases of low-value assets are excluded. The standard mainly affects recognition of the Group's operating lease agreements. IFRS 16 involves recognition by the Group of a large number of the lease agreements previously recognised as operating leases (e.g. land and storage tank leases) as assets and liabilities as from 1 January 2019. This signifies a decrease in other external costs and an increase in amortisation and financial expense. The standard also involves increased disclosure in the annual report. The Group applies a modified retroactive approach and has not applied the standard in advance of its effective date. The total effect on assets and liabilities in the consolidated balance sheet is estimated at approximately SEK 356 million and approximately SEK 359 million, respectively, from 1 January 2019 based on existing lease agreements, a large portion of which are already managed as finance leases.

New standards and interpretations not yet applied by the Group

A number of new standards and interpretations come into effect for financial years beginning after 1 January 2019 and were applied when preparing these financial statements.

No other IFRS or IFRIC interpretations that are not yet effective are expected to have any significant impact on the Group.

2.2 Consolidated accounts

A subsidiary is an entity over which the Group has the power to govern financial and operating policies (controlling interest) in a way normally associated with a shareholding of more than half of the voting rights. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. A subsidiary is no longer consolidated from the date such control ceases.

The acquisition method is applied in reporting the Group's business combinations. The purchase price for acquisition of a subsidiary is the fair value of transferred assets, liabilities and equity interests issued by the Group. The purchase price also includes the fair value of all assets and liabilities that are the result of an agreement on a conditional purchase price. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities assumed in a business combination are initially measured at their fair values at the date of acquisition.

Intra-group transactions, balances, and unrealised profit and loss on transactions between Group companies are eliminated. Accounting policies of subsidiaries have been changed where necessary to ensure consistent application of the Group's policies.

2.3 Translation of foreign currency

Functional currency and reporting currency

The Group's various units use local currency as functional currency, as local currency has been defined as the currency of the primary economic environment in which the entity mainly operates. The consolidated accounts are presented in Swedish Kronor (SEK), which is both the Parent Company's functional currency and the Group's presentation currency.

Transactions and balance sheet items

Foreign currency transactions are translated into functional currency using the exchange rates in effect on the transaction date. Exchange rate gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at the closing day rate are recognised in operating profit/loss in the income statement.

Translation of foreign Group companies

The results and financial position of all Group entities with functional currency different from the reporting currency are translated into the reporting currency. Assets and liabilities from each entity's balance sheet are translated from their functional currency into the Group's reporting currency (Swedish Kronor) at the exchange rate in effect at the closing date. Revenues and expenses from each income statement are translated to Swedish Kronor at the average exchange rates in effect at each transaction date. Exchange rate differences arising on translation of foreign operations are recognised in other comprehensive income.

2.4 Intangible assets

Capitalised expenditures for development and similar work

Capitalised expenditures for development and similar work are comprised of internally developed intangible assets. The Scandinavian Biogas Fuels International Group engages in research and development. Research costs are expensed as research expenditures when incurred. Development expenditures or such costs incurred in the development phase of an internal project, which are directly attributable to the development and testing of the substrates from which biogas can be produced, are recognised as intangible assets when all criteria specified in IAS 38, p. 57 are satisfied.

Internally developed intangible assets are amortised on a straight-line basis over a 5–10-year period.

Concessions and similar rights

The subsidiary in Ulsan, South Korea, has signed a service agreement that does not convey the right to control the use of the Company's public service infrastructure. The Group recognises an intangible asset to the extent it is entitled to charge for the use of the public service (see also subsection 2.18, Service Concession Arrangements). Amortisation is calculated over the contract period (i.e. 15-year period through March 2026) using the straight-line method.

Goodwill

The Group's goodwill is attributable to business combinations. The amount by which the purchase price exceeds the fair value of identifiable net assets acquired is reported as goodwill. If the amount is less than the fair value of the acquired subsidiary's assets, in the event of a 'bargain purchase', the difference is recognised directly in the statement of comprehensive income. The Group applies the 'partial goodwill' method in reporting goodwill arising from business combinations; accordingly, goodwill is calculated as the difference between the purchase price paid and the Group's share in identifiable acquired net assets.

2.5 Tangible assets

Tangible assets are reported at cost of acquisition less depreciation. Cost of acquisition includes expenditures directly attributable to acquisition of the asset.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will benefit the Group and the cost of the asset can be reliably measured. The carrying amount of a replaced part is removed from the balance sheet. All other repairs and maintenance are reported as expenses in the income statement during the period incurred.

Each part of a tangible asset with a cost of acquisition that is significant in relation to the asset's total cost of acquisition is depreciated separately. Land and construction work in progress are not depreciated. Other assets are depreciated on a straight-line basis as follows:

Buildings	30 years
Plant and machinery	10-30 years
Equipment, tools, fixtures, and fittings	3-5 years

The assets' residual value and useful life are reviewed at each reporting date and adjusted if necessary. An asset's carrying amount is immediately written down to its recoverable value if the carrying amount exceeds the estimated recoverable value. See also Note 4, Significant Estimates and Assessments.

Gains and losses on the disposal of tangible assets are determined by comparing sale proceeds with the carrying amount and are recognised in other operating income and other operating expenses in the income statement.

Of total tangible and intangible assets of SEK 1,000.5 million (989.4), SEK 549.7 million (536.1) are located in Sweden, SEK 68 million (78.5) in South Korea, and SEK 383.1 million (374.8) in Norway.

2.6 2.6 Impairment of non-financial assets

Assets with an indefinite useful life (e.g. goodwill) are not written down but are tested annually for impairment. Assets are assessed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised as the amount by which the asset's carrying amount exceeds its recoverable value. The recoverable value is an asset's fair value less costs related to its sale or its value in use, whichever is greater. For purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units).

2.7 2.7 Inventories

Inventories are comprised of granules and organic material substrates and are reported at cost of acquisition or net realisable value, whichever is lower. Obsolescence risk is taken into account. Cost of acquisition is calculated based on the first-in, first-out principle, and includes fees for bringing the goods to their present location and condition.

2.8 Financial instruments – general

Financial instruments are included in several balance sheet items and are specified below.

Initial recognition

Financial assets and financial liabilities are recognised when the Group becomes a party to the contractual provisions of the instrument. Purchases and sales of financial assets are recognised on the trade date; i.e. the date on which the Group commits to purchase or sell the asset.

Financial instruments are recognised initially at fair value plus transaction costs directly attributable to the acquisition or issue of the financial asset or financial liability (e.g. fees and commissions), with the exception of financial assets or financial liabilities at fair value through profit or loss. Transaction costs for financial assets and financial liabilities at fair value through profit or loss are carried as an expense in the statement of comprehensive income.

2.8.2 Classification

The Group classifies its financial assets and liabilities in the amortised cost category. Classification is based on the purpose for which the financial asset or liability was acquired.

Financial assets at amortised cost

Assets held to collect contractual cash flows comprising only principal and interest are recognised at amortised cost. The carrying amount of these assets is adjusted for expected credit losses that are reported (see the 'Impairment' section below). Interest income from these financial assets is recognised pursuant to the effective interest rate method and included in financial income. The Group's financial assets at amortised cost are comprised of the items trade accounts receivable, other receivables, and cash and cash equivalents (including restricted cash and cash equivalents; see Note 19).

Financial liabilities at amortised cost

The Group's other financial liabilities are recognised at amortised cost applying the effective interest rate method. Other financial liabilities are comprised of liabilities to credit institutions, liabilities to shareholders, accounts payable, and current liabilities.

Derecognition of financial instruments

Derecognition of financial assets

Financial assets or parts thereof are derecognised from the balance sheet when the contractual rights to receive cash flows from the assets have expired or been transferred and

- (i) substantially all risks and rewards of ownership or control have passed from the Group, or
- (ii) the Group does not transfer or retains substantially all risks and rewards associated with ownership and the Group has not retained control of the asset.

Derecognition of financial liabilities

Financial liabilities are derecognised from the balance sheet when the obligation has been settled, cancelled, or otherwise terminated. The difference between the carrying amount of a financial liability (or part thereof) that has been extinguished or transferred to another party and the remuneration that has been paid, including any transferred assets that are not cash or liabilities that have been assumed, is reported in the statement of comprehensive income. When the terms and conditions of a financial liability are renegotiated and are not derecognised from the balance sheet, a profit or loss is reported in the statement of comprehensive income. The profit or loss is calculated as the difference between the original contractual cash flows and the modified cash flows, discounted to the original effective interest rate.

2.8.4 Offsetting of financial instruments

Financial assets and liabilities are offset and the net amount is presented in the balance sheet only when there is a legally enforceable right to offset the recognised amounts and an intention to adjust them on a net basis or to realise the asset and adjust the liability simultaneously. The legal

right must not depend on future events and must be legally binding for the Company and the counterparty, both in the course of normal business activities and in the event of default, insolvency, or bankruptcy.

2.8.5 Impairment of financial instruments

Assets carried at amortised cost

The Group assesses the future expected credit losses that are connected to assets recognised at amortised cost. The Group recognises a credit reserve for expected credit losses at each reporting date. The Group applies the simplified approach to calculate impairment on trade receivables – i.e. the reserve corresponds to expected credit losses over the life of the trade receivable. To measure expected credit losses, trade receivables are grouped into categories of shared credit risk characteristics and days past due. The Group used prospective variables for expected credit losses. Expected credit losses are recognised in the statement of comprehensive income in other external costs.

2.9 Trade accounts receivable

Trade accounts receivable are financial instruments comprised of amounts due from customers for goods and services sold in the ordinary course of business. Payments expected within a year or less are classified as current assets; other expected payments are reported as non-current assets.

Trade accounts receivable are initially recognised at fair value and subsequently measured at amortised cost using the effective interest method, less any provisions for impairment.

2.10 Cash and cash equivalents

Cash and cash equivalents are financial instruments and include cash and bank balances reported in the balance sheet and statement of cash flows. Restricted bank balances are not reported as cash and cash equivalents, but as financial assets or other current receivables, depending on when they are expected to be released.

2.11 Accounts payable

Accounts payables are financial instruments and represent obligations to pay for goods and services acquired from suppliers in the ordinary course of business. Accounts payable are classified as current liabilities if payment is due within one year or less; otherwise, they are reported as non-current liabilities.

Accounts payable are recognised at nominal value. The carrying amount of accounts payable is assumed to approximate fair value, as this item is short-term in nature.

2.12 Borrowings

Borrowings and loans from shareholders are financial instruments and are initially recognised at fair value, net of transaction costs. Borrowings are subsequently stated at amortised cost, with any difference between the proceeds (net of transaction costs) and the redemption value recognised in the income statement over the term of the loan using the effective interest method.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting period.

2.13 Borrowing costs

General and specific borrowing costs directly attributable to the acquisition, construction, or production of qualifying assets (assets that necessarily take a substantial period of time to prepare for intended use or sale) are reported as part of such assets' cost of acquisition. Capitalisation ceases when all activities necessary to prepare the asset for its intended use or sale are substantially completed.

Capitalisable borrowing costs are reduced by financial income arising from temporary investment of specifically borrowed capital pending use in the financing of the asset. All other borrowing costs are expensed as incurred.

2.14 Government grants

Government grants related to investments in plants, machinery, and equipment are recognised as a liability until the corresponding investment cost has been incurred by the Company, after which the cost of acquisition for the relevant asset is reduced.

Government grants related to cost recovery are expensed and recognised as revenue in the income statement over the periods covered by the grants.

2.15 Current and deferred tax

Tax expense for the year comprises current and deferred tax. Current tax expense is calculated based on tax provisions enacted or substantively enacted as at the balance sheet date in the countries in which the Parent Company and its subsidiaries operate and generate taxable income.

Deferred tax is recognised, using the liability method, on temporary differences arising between the tax base of assets and liabilities and their carrying amounts in the consolidated accounts. Deferred income tax is determined using tax rates enacted or substantively enacted as of the balance sheet date and expected to be applicable when the related deferred income tax asset is realised or the deferred tax liability is paid.

Deferred tax assets on tax losses are recognised to the extent it is probable that future taxable profit will be available, against which the loss can be utilised.

Deferred tax assets and liabilities are offset when there is either a legally enforceable right to offset current tax assets against tax liabilities, or when the deferred tax assets and liabilities pertain to taxes levied by the same taxation authority on the same or different taxable entities and the intention is to settle the balances through net payments.

2.16 Employee benefits

Pension commitments

The Group has defined contribution and defined benefit pension plans.

In Sweden, the Group's primary defined contribution pension plan is the ITP1 plan, secured through fees to Alecta. The pension plan in Norway is similar to the plan in Sweden.

The Group has defined benefit plans in South Korea, where the employees are entitled to post-employment benefits based on final salary and length of employment.

A defined contribution plan is a pension plan under which the Group pays fixed contributions to a separate legal entity. The Group has no legal or constructive obligations to pay further contributions if the legal entity does not hold sufficient assets to pay all employee benefits relating to employee service in current and prior periods.

For defined contribution plans, the Group pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual, or voluntary basis. The Group has no further payment obligations once the contributions have been paid. The contributions are recognised as a personnel cost when they are due. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in future payments is available to the Group.

Bonus plans

The Group recognises a liability and an expense for bonuses. The Group recognises a provision when there is a legal obligation or a constructive obligation to do so due to past practice.

Other

Financial assets and liabilities at fair value through other comprehensive income are reported by applying the projected unit credit method. The mandatory severance pay provision in South Korea ('Severance Liability') is revalued in accordance with IAS 19 to fair value through other comprehensive income. Other translation differences for non-monetary financial assets and liabilities are also measured at fair value through other comprehensive income.

2.17 Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable and corresponds to the amount received for goods or services sold, less discounts and VAT. The Group recognises revenue when the amount can be measured reliably, it is probable that future economic benefits will flow to the Company, and specific criteria have been met for the Group's operations (described below).

2.17.1 Sale of goods

The Group's revenues from the sale of goods mainly consist of the sale of biogas. These revenues are recognised when control of the biogas is transferred to the customer, which occurs when the goods (biogas) are delivered to the customer.

2.17.2 Sale of services

The Group's revenues from the sale of services relate primarily to the receipt of organic waste. These revenues are recognised when the work is performed, i.e. when the organic waste is transferred to the Group.

2.17.3 Interest income

Interest income is recognised by applying the effective interest rate method.

2.18 Service concession arrangements

The operations in South Korea have entered into service concession arrangements associated with the biogas plant there. As service concession arrangements do not transfer the right to control the use of the infrastructure for public services to the Group, infrastructure associated with these arrangements is not recognised as a tangible asset. Compensation received or receivable by the Group is recognised at fair value. Compensation has been assessed as entitlement to an intangible asset, as the arrangement gives the Group the right (licence) to charge users for the public service. This intangible asset is reported in Note 15 in the item 'concessions and similar rights'.

2.19 Leases

The Group holds some short-term leases, including for office space and cars.

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are reported directly in the income statement. Payments made under short-term leases of equipment, office space, etc. and all low-value lease agreements are charged to the income statement on a straight-line basis. Short-term agreements have a lease term of 12 months or less.

The Group leases certain non-current assets. Leases of non-current assets in which the Group assumes substantially all of the risks and rewards of ownership are classified as finance leases and reported in accordance with IFRS 16. Right-of-use assets are valued at cost of acquisition, including the amount at which the lease liability was initially valued, leasing fees paid on or before the start date, and initial or direct expenditures incurred in restoring the asset to the condition specified by the lease terms.

Each finance lease payment comprises amortisation of the debt and financial charges. The corresponding payment obligations, net of financial charges, are included in balance sheet items 'non-current borrowings' and 'current borrowings'. The interest element of the financial cost is recognised in the income statement over the lease period so that each accounting period is charged with an amount corresponding to a fixed interest rate for the balance of the liability. Non-current assets held under finance leases are depreciated over the asset's useful life or the lease term, whichever is shorter. See Notes 16, 27, and 33 for further details.

2.20 Cash flow statement

The cash flow statement is prepared using the indirect method. Accordingly, operating income is adjusted for transactions that do not result in cash payments during the period and for any income or expense attributable to investment or financing activity cash flows.

2.21 Share capital

Ordinary shares are classified as equity. Transaction costs directly attributable to the issue of new shares or warrants are recognised in equity, net of tax, as a deduction from the issue proceeds.

2.22 Share-based benefits

The Group had a share-based programme (warrants) that matured in April 2018 without being exercised.

2.23 Parent Company accounting principles

The Parent Company applies accounting principles other than those applied by the Group as detailed below.

Presentation

The income statement and balance sheet follow the Swedish Annual Accounts Act. The statement of changes in equity also follows the Group's table format but must contain the columns specified in the Annual Accounts Act. There are also differences in terminology, particularly in respect of financial income, expenses, and equity.

Participations in subsidiaries

Participations in subsidiaries are recognised at cost after deduction for any impairment losses. Costs include acquisition-related expenses and any additional purchase consideration paid.

An estimate of recoverable amount is made when there is an indication that participations in subsidiaries have decreased in value. If this amount is lower than the carrying amount, a write-down is recognised and reported in the item 'participations in Group companies'.

Group contributions

Group contributions are recognised as appropriations in the income statement.

Lease agreements

All leases, regardless of whether they are finance or operating leases, are classified as operating lease agreements. Leasing fees are recognised as expenses on a straight-line basis over the lease term.

Financial instruments

IAS 39 is not applied in the Parent Company, and financial instruments are valued at cost of acquisition.

Guarantee commitments/financial guarantees

The Parent Company has signed guarantees on behalf of subsidiaries. Such commitments are classified under IFRS as financial guarantee contracts. For these agreements, the parent applies relaxation rules pursuant to RFR 2 (IAS 39, p. 2), and accordingly reports the surety as a contingent liability. A provision is made when the Parent Company believes that a payment will likely be required to settle an obligation.

Note 3 Financial risk management

3.1 Financial risk factors

Through its business activities, the Group is exposed to a variety of financial risks: market risk (including currency risk and interest rate risk), credit risk, and liquidity risk. The Group's overall strategy focuses on reducing the potentially adverse effects on financial performance.

a) Market risk

(i) Currency risk

Scandinavian Biogas is exposed to currency risk given that the Company conducts transactions in foreign currencies (transaction risk) and has foreign subsidiaries (translation risk).

Transaction risk

Transaction risk is the risk of impact on consolidated net income and cash flow due to changes to the value of commercial flows in foreign currencies following changes in exchange rates. The subsidiaries in South Korea and Norway use KRW and NOK, respectively, as accounting currency, but exposure is deemed negligible as revenue and expenses are in the same currency. The Group makes certain purchases in EUR but this does not present a significant currency risk, as it does not have any significant foreign currency transactions.

In 2019, exchange rate differences recognised in the consolidated income statement totalled SEK 1.2 million (3.8). The Group has analysed its sensitivity to changes in exchange rates. If the Swedish Krona had weakened/strengthened by one per cent against the USD, KRW, and EUR, with all other variables held constant, net results for the year would have been SEK 2.0 million (1.9) higher/lower.

Translation risk

There is risk associated with the Group's translation of the net assets of foreign subsidiaries to the consolidating currency, the Swedish Krona (SEK). The Group's foreign subsidiaries are in South Korea (KRW) and Norway (NOK). The Group is also affected by the translation of foreign subsidiaries' income statements into SEK. This exposure is not hedged.

The Group has analysed its sensitivity to changes in exchange rates. If the Swedish Krona had weakened/strengthened by one per cent against the KRW and NOK, with all other variables held constant, net results for the year would have been SEK 2.3 million (1.8) higher/lower.

(ii) Interest rate risk

Changes in interest-bearing financial assets and liabilities held by the Group linked to market interest rates affect the results and cash flow from operations. Interest rate risk is the risk that changes in market interest rates may have an adverse impact on the Group's net income. Borrowings issued at variable rates expose the Group to cash flow interest rate risk, which is partially offset by cash assets at floating rates. In 2019 and 2018, the Group's borrowings at variable interest rates were in Swedish Kronor.

Of the Group's total interest-bearing debt of SEK 894.4 million (879.6), SEK 262.8 million (268.2) is at a fixed interest rate and the remainder at a variable rate. The Group is therefore exposed to a certain amount of interest rate risk. The Group has cash and cash equivalents totalling SEK 136.4 million (94.8) at variable rates. The Group's interest income is affected by the general interest rate climate.

Variable-rate liabilities as at the balance sheet date totalled SEK 631.6 million (611.4) and the Company's cash and cash equivalents totalled SEK 136.4 million (94.8). A +/- one per cent change in interest rates would result in an impact on net interest income/expense of +/- SEK 6.3 million (6.1). An interest rate reduction produces a lower effect than an interest rate increase in SEK, as the rate on the corporate bond has a STIBOR floor of 0.00 per cent.

b) Credit risk

Credit risk or counterparty risk is the risk that the counterparty to a financial transaction fails to fulfil its obligations when due. Scandinavian Biogas's credit risk includes cash and cash equivalents, trade accounts receivable, and other receivables. With respect to cash and cash equivalents, credit risk is considered to be low given that counterparties are well-known banks with high credit ratings – such as Nordea (credit rating AA3) and Sparebank 1 SMN (credit rating A1) – for which loans to the Group are higher than deposits. Scandinavian Biogas deems credit risk to be low, as sales are made to large, stable customers with whom the Group has good WTP (willingness to pay) experience. The Group monitors customers' credit ratings and reviews the terms of credit if necessary.

c) Liquidity risk

Liquidity risk is the risk of the Group having insufficient funds to pay its financial liability obligations.

The objective of the Company's liquidity management is to minimise the risk that the Group will not have sufficient cash to meet its commercial obligations. Cash flow forecasts are prepared regularly. Management closely monitors rolling forecasts of the Group's liquidity reserve to ensure that the Group has sufficient cash resources to meet the needs of operating activities. Liquidity risks in the operating companies Scandinavian Biogas Stockholm AB and Scandinavian Biogas Korea Co., Ltd. are considered minor, while the risk is higher in the development company Scandinavian Biogas Fuels AB and in Scandinavian Biogas Södertörn AB.

The financing of existing projects and operations in the coming year will largely be resolved with equity. In order to arrange financing for future projects and strengthen liquidity, the Group is looking at a number of different alternatives such as project financing, refinancing, listing of the Company's share, and other strategic and capital structure alternatives.

A number of capital adequacy requirements (covenants) are applicable to the Group's borrowings. These are mainly comprised of requirements for financial key ratios such as profitability and equity/assets ratio, as well as requirements for cash-in-hand. In 2019 the Group identified a risk that the adjusted equity/assets ratio requirement may not be met for the first and second quarters of 2019 and therefore initiated a process during Q1 2019 to propose that bondholders waive the requirement. During April 2019 a clear majority of bondholders confirmed their support of the Group's proposal for a waiver. The terms of the waiver were fulfilled through the new share issues conducted during summer 2019. The original loan terms have been followed as from 30 September 2019 and have now been satisfied.

The Group also has restricted bank deposits in Norway. These are reported as other non-current receivables in cases where the funds are restricted for more than one year; otherwise, they are reported as other receivables. Of the Group's total borrowings of SEK 894.4 million (879.6), SEK 522.7 million (515.1) is subject to various capital adequacy requirements. There are no covenants for the Group's finance leases.

At 31 December 2019 the Group's liquid assets totalled SEK 136,384 thousand (94,788). The Group has no undrawn credit facilities. Other future liquidity pressures are the payment of accounts payable and other current liabilities and repayment of loans. The table below shows the contractual, undiscounted cash flows that comprise financial liabilities, broken down by duration on the balance sheet date to the contractual maturity date. The Parent Company issued an SEK 200 million corporate bond in February 2016 and a subsequent bond of SEK 30 million in June 2017. The bonds have four-year durations, mature on 10 February 2020, and are refinanced with an SEK 200 million credit facility.

At 31 December 2019 (SEK thousand)	< 1 year	1-2 years	2-5 years	> 5 years
Borrowings	318,074	80,388	163,436	126,699
Finance lease liabilities	28,008	27,509	78,827	261,283
Other provisions	9,041	5,877	8,137	8,589
Accounts payable	50,127	-	-	-
Other current liabilities	30,404	-	-	-

At 31 December 2018 (SEK thousand)	< 1 year	1-2 years	2-5 years	> 5 years
Borrowings	63,264	298,144	180,846	125,496
Finance lease liabilities	26,244	27,587	80,140	275,532
Other provisions	8,042	5,227	7,237	7,639
Accounts payable	86,755	-	-	-
Other current liabilities	39,923	-	-	-

Refinancing risk

The Company needs to continuously secure the Group's long-term financing. A refinancing risk may arise due to the market situation and the Company's underlying profitability in general. Management works on an ongoing basis with various financial alternatives. See the Financial Risks section of the Board of Directors' report for additional information.

3.2 Capital risk management

The Group's goal with regard to its capital structure is to safeguard the Group in its ability to continue its operations, in order to provide returns to shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

3.3 Calculation of fair value

The carrying value, less impairment provisions, of trade accounts receivable and other receivables and of accounts payable and other liabilities is assumed to correspond to their fair values, given that these items are short-term in nature.

Note 4 Significant estimates and assessments

Estimates and assessments are evaluated regularly and are based on historical experience and other factors, including expectations of future events deemed reasonable under current conditions.

Significant estimates and assessments for accounting purposes

The Group makes estimates and assumptions about the future. The accounting estimates that result from these, by definition, seldom correspond to actual results. The estimates and assumptions that have a significant risk of material adjustments to the carrying values of assets and liabilities within the next financial year are outlined below.

Valuation of loss carry-forwards

The Group reviews on an annual basis the appropriateness of capitalising deferred tax assets for the year's tax loss carry-forwards. Deferred tax assets are only recognised for loss carry-forwards when it is probable that they can be utilised against future taxable income and against temporary taxable differences. Loss carry-forwards in the Norwegian companies are valued upon determination that there is sufficient future profit to utilise them. No elements of the other loss carry-forwards have been valued, as it is not deemed that profits in the foreseeable future are likely to exceed the costs for development, commissioning of new investment projects, and Group-wide functions. See Note 18, Deferred Tax.

Goodwill

The Group's goodwill is derived from the acquisition of the Norwegian group and is considered to have an indefinite useful life. Impairment testing is conducted on a continuous basis through the Group's review of future cash flows and determination of a number of estimates and assessments, mainly related to future biogas price and operating costs. As the facility in Norway was just recently commissioned during summer 2018, production and sales volumes were estimated based on previous experience, performance data from suppliers, and management's expectations for future market development. Cash flow forecasts are based on the approved budget and forecasts for the next five years. See Note 15, Intangible Assets.

Service concession arrangements

The Group has service concession arrangements and, accordingly, an intangible asset (concession right) is recognised to the extent the Group is entitled to charge users of the public service. The intangible asset is recognised based on the fair value of consideration the Group has received or will receive. Fair value was estimated at the present value of future cash flows the Group expects to receive from the concession rights. Assessment of expected future cash flows requires management to make estimates and assessments concerning the future, the most significant of which are future market price of liquid natural gas (LNG) and operating costs. See Note 15, Intangible Assets.

Valuation of tangible assets

Impairment testing of the Group's facilities is conducted on a regular basis. Impairment testing is based on estimated future cash flows, with several assumptions applied in this assessment - the most significant of which are future production volumes, biogas price, and operating costs. Each facility was assessed independently, excluding the two leased from Stockholm Vatten och Avfall (Bromma and Henriksdal), which were treated as a single cash-generating unit. See Note 16, Tangible Assets. A 10.5 per cent cost of capital was applied.

Penalty fee provision

A provision for the penalty fee in Ulsan City has been made in view of the upgrading issue at the plant in South Korea. The provision was calculated as the present value of the South Korean subsidiary's accumulated liability under the terms of the contract, as at the balance sheet date. An assessment of the probable amount of the penalty fee was made in calculating present value, which produced a discount rate of 13.86 per cent. According to legal opinions received in 2018 from three leading South Korean law firms, the contractual amount is unreasonable and the penalty fee should be significantly lower - a maximum of 37.5 per cent of the contractual amount. Under the contract, the accumulated liability for the period November 2012 through December 2018 is to be amortised continuously through the end of the contractual period (i.e. for just over eight years). See also Note 28, Provisions. The lawsuit proceeded in 2019 and an updated overall assessment has been made. The overall assessment is that the provision as of 31 December 2019 will amount to 30 per cent.

Capitalised development costs

The Group recognises development costs that meet all criteria specified in IAS 38, p. 57, as intangible assets. Costs are primarily comprised of lab tests of various organic substrates and substrate combinations from which biogas can be produced and optimised. Capitalisation is only done on development costs for assets that the Group i) deems are technically possible to complete; ii) intends to complete; iii) deems are possible to use or sell; iv) deems will have the capacity to generate future financial advantages; v) deems there are sufficient technical, financial, and other resources to complete; and vi) deems it is possible to reliably measure development costs. Estimates and assessments must be made in assessing which development costs to capitalise, based on expectations of future cash flows that the asset is expected to generate.

Investment in Biogas Uppland

Management has analysed the degree of influence the Group has over Biogas Uppland AB and has determined that the Group has control over operations. This determination was based on representation on the board and on contract terms, even though the Group holds a 50 per cent stake. The investment has therefore been classified as a subsidiary and has been consolidated.

Claims on subsidiaries in South Korea

In the Swedish part of the Group there are claims on subsidiary Scandinavian Biogas Korea Co., Ltd., denominated in USD and KRW. Exchange rate fluctuations in 2019 resulted in an unrealised exchange difference of SEK 1.2 million (3.8). Given that debt is amortised pursuant to a fixed plan and is expected to be fully amortised by 2025, the Group has determined that this claim should not be seen as a net investment in the South Korean company. Accordingly, exchange rate fluctuations are recognised in net financial items and not, as otherwise would have been the case, in other comprehensive income.

Note 5 Segment reporting

As from 1 January 2017, Scandinavian Biogas's operations are divided into three segments based on geographic location. The Group's operations are managed and reported based on operating segments Business Area Sweden, Business Area South Korea and Business Area Norway. Operations also include a Service Centre and Research & Development segment. The business areas are geographic organisations, with the head of each business area reporting directly to Group management. Segment reporting was introduced in 2017, although more direct costs are included in Business Area Sweden (e.g. personnel costs) as from 2019.

Segment data is based on the same accounting policies as those applied by the Group as a whole and is consolidated (i.e. cleared of intra-group items).

All employees in Sweden are employed by subsidiary Scandinavian Biogas Fuels AB in the Service Centre and R&D segment, which then invoices other Group companies for work performed. Business Area Sweden therefore reports personnel costs as intra-group consultant fees in other external costs through December 2018.

As part of the reorganisation concluded in late 2018, a large share of costs previously reported in Service Centre and R&D are reported in the business areas as from 1 January 2019. Business Area Sweden, for example, will report direct personnel costs as from 2019. Comparative periods show values identical to those from the periods in which they were recognised and have not been restated.

Income statement by segment	1 Jan-31 Dec 2019	1 Jan-31 Dec 2018
Operating income		
Business Area Sweden	246,702	220,440
Business Area South Korea	56,042	52,215
Business Area Norway	103,138	29,718
Service Centre and R&D	9,576	44,859
Eliminations	-8,408	-37,020
Group total	407,050	310,212
Operating expenses		
Business Area Sweden	-180,288	-178,637
Business Area South Korea	-35,168	-53,297
Business Area Norway	-81,938	-44,470
Service Centre and R&D	-30,215	-73,158
Eliminations	8,408	31,599
Group total	-319,202	-317,963
EBITDA		
Business Area Sweden	66,413	41,803
Business Area South Korea	20,873	-1,082
Business Area Norway	21,200	-14,752
Service Centre and R&D	-20,639	-28,299
Eliminations	0	-5,421
Group total	87,848	-7,751
Depreciation & amortisation	-89,788	-64,057
Operating profit/loss	-1,940	-71,808

Note 6 Distribution of net sales

Net sales are distributed by type of revenue as follows:

Group	2019	2018
Sale of goods, Sweden	196,985	188,701
Sale of goods, South Korea	15,303	15,741
Sale of goods, Norway	92,082	14,516
Sale of services, Sweden	18,687	19,803
Sale of services, South Korea	40,788	36,474
Business-related re-invoicing, Sweden	-286	-1
Group total	363,559	275,234
Parent Company	2019	2018
Sale of services	1,220	1,200
Parent Company total	1,220	1,200

Business-related re-invoicing refers primarily to materials and consultant services purchased in the capacity as technical entrepreneur and re-invoiced to external parties within the scope of various types of co-operation agreements.

Of the Group's net sales of SEK 363.6 million (275.2), the largest individual customers account for SEK 97 million (92.1), SEK 87.9 million (37.6), SEK 40.8 million (36.5), and SEK 39.7 million, respectively. During 2019, four customers accounted for more than 10 per cent of sales, while three customers did so in 2018. These customers account for 73.0 per cent (64.3) of the Group's total net sales, of which 24 per cent (5) is attributable to Norway, 11.2 per cent (14.1) to South Korea, and the remainder to Sweden. No other customers account for more than 10 per cent of sales.

Note 7 Parent Company sales to and purchases from Group companies

During the year the Parent Company invoiced subsidiaries SEK 1,220 thousand (1,200) for Group-wide services and purchased services from subsidiaries in the amount of SEK 0 thousand (0).

Note 8 Capitalised work on own account

The Company capitalised staff costs related to work performed on new construction work in progress and on development projects. The costs capitalised relate to direct labour costs, social fees, and a mark-up for other expenses.

Note 9 Remuneration to auditors

An audit assignment refers to examination of the annual report and accounting records, the board and CEO's administration of the Company, other duties resting with the Company's auditors, and advisory services and other support arising in the course of such examination or performance of such other duties. Everything else is considered other services.

Group	2019	2018
PWC		
Audit assignment	960	1,322
Audit work other than audit assignment	59	64
Tax consultancy	82	54
Other services	364	342
Total	1,465	1,783
Other auditors		
Audit assignment	134	14
Tax consultancy	8	7
Other services	17	17
Total	159	38
Group total	1,624	1,821
Parent Company	2019	2018
PwC		
Audit assignment	437	902
Audit work other than audit assignment	15	10
Tax consultancy	0	3
Other services	160	79
Total	612	994

During financial year 2019, Group payments to the audit firm and its network totalled SEK 1,624 thousand (of which SEK 1,465 thousand to the audit firm), distributed into the following categories:

- Audit assignment (SEK 1,094 thousand to audit firm and network, of which SEK 960 thousand to audit firm)
- Other statutory audit work (SEK 59 thousand to audit firm and network, of which SEK 59 thousand to audit firm)
- Tax consultancy (SEK 90 thousand to audit firm and network, of which SEK 82 thousand to audit firm)
- Valuation services (nil to audit firm and network, of which nil to audit firm)
- Other services (SEK 381 thousand to audit firm and network, of which SEK 364 thousand to audit firm)

Note 10 Employee benefits, etc.

Group	2019	2018
Salaries and other benefits	47,325	49,720
Social fees	10,087	11,653
Pension expenses – defined contribution plans	4,930	4,535
Pension expenses – defined benefit plans	888	836
Group total	63,230	66,744

Salaries, other benefits, and payroll overhead

	2019		2018	
	Salaries and other benefits (of which, bonuses)	Social fees (of which, pension costs)	Salaries and other benefits (of which, bonuses)	Social fees (of which, pension costs)
Board members, CEO, and other senior executives	8,969	3,140	9,441	3,719
	(-)	(1,689)	(-)	(1,507)
	38,357	12,766	40,278	13,305
Other employees	(-)	(4,130)	(-)	(3,864)
Group total	47,325	15,906	49,720	17,024
	(-)	(5,819)	(-)	(5,371)

No share options were distributed to board members or employees during this or the previous financial year.

Gender distribution – board members and other senior executives, Group (including subsidiaries)

	2019		2018	
	No. on balance sheet date	Of which, women	No. on balance sheet date	Of which, women
Board members	7	1	6	1
CEO and other senior executives	6	1	7	1
Group total	13	2	13	2

Salaries, other benefits, and payroll overhead

	2019		2018	
	Salaries and other benefits (of which, bonuses)	Social fees (of which, pension costs)	Salaries and other benefits (of which, bonuses)	Social fees (of which, pension costs)
Board members, CEO, and other senior executives	705	102	655	124
	(-)	(-)	(-)	(-)
Other employees	-	-	-	-
Parent Company	705	102	655	124
total	(-)	(-)	(-)	(-)

Remuneration to senior executives

Remuneration to the CEO and other senior executives is comprised of basic salary, variable remuneration, other benefits, and financial instruments, etc. 'Other senior executives' are the individuals who, together with the CEO, comprise Group management. For management structure, see the Corporate Governance section of the Board of Directors' Report.

The CEO is entitled to 12 months' salary in the event his employment is terminated by the Company. There are no other termination benefit agreements.

Board members and senior executives received the following remuneration:

Remuneration and other benefits, 2019	Basic salary/ director's fee	Variable remuneration	Other benefits	Pension costs	Other remuneration	Total
Chairman Göran Persson	350	-	-	-	-	350
Board member Anders Bengtsson	75	-	-	-	-	75
Board member Andreas Ahlström	50	-	-	-	-	50
Board member Hans Hansson	65	-	-	-	-	65
Board member Sara Anderson	65	-	-	-	-	65
Board member David Schelin	50	-	-	-	-	50
Board member Stefan Engström	33	-	-	-	-	33
CEO Matti Vikkula	3,287	-	175	830	-	4,292
Other senior executives (5 persons)	4,977	-	116	852	-	5,945
Total	8,952	-	291	1,682	-	10,925

Remuneration and other benefits, 2018	Basic salary/ director's fee	Variable remuneration	Other benefits	Pension costs	Other remuneration	Total
Chairman Göran Persson	350	-	-	-	-	350
Board member Anders Bengtsson	75	-	-	-	-	75
Board member Andreas Ahlström	50	-	-	-	-	50
Board member Hans Hansson	65	-	-	-	-	65
Board member Sara Anderson	65	-	-	-	-	65
Board member David Schelin	50	-	-	-	-	50
CEO Matti Vikkula	3,138	-	141	676	-	3,955
Other senior executives (6 persons)	5,648	-	123	1,081	-	6,852
Total	9,441	-	264	1,757	-	11,462

The chairman, board members, and members of the Audit Committee receive remuneration as determined by the Annual General Meeting. No specific payment is made for other committee work. With regard to Parent Company salaries and compensation, board-related expenses totalled SEK 804 thousand (779), while the subsidiaries' other external expenses, totalling SEK 14 thousand (264), relate to consultancy fees to the employer of a board member.

Average number of employees, by country

	2019		2018	
	Average number of employees	Of which, women	Average number of employees	Of which, women
Sweden	-	-	-	-
Parent Company total	-	-	-	-
Subsidiaries				
Sweden	40.7	13.3	37.8	10.9
South Korea	21.3	1.3	20.9	0.6
Norway	16.0	5.0	13.2	4.1
Total subsidiaries	78.0	19.6	71.9	15.6
Group total	78.0	19.6	71.9	15.6

Gender distribution - board members and other senior executives, Parent Company

	2019		2018	
	No. at balance sheet date	Of which, women	No. at balance sheet date	Of which, women
Board members	7	1	6	1
CEO and other senior executives	1	-	1	-
Parent Company total	8	1	7	1

Pension plans

Group	2019-12-31	2018-12-31
Obligations on the balance sheet for:		
Defined benefit pension plans	-3,824	-3,113
Recognition in the income statement for:		
Costs for defined benefit pension plans	980	1,184
Costs for defined contribution pension plans	4,391	4,535
Amounts reported in other comprehensive income	-10	-349

Group	2019-12-31	2018-12-31
Present value of unfunded obligations	-3,824	-3,113
Unrecorded actuarial losses	-	-
Net liability in the balance sheet	-3,824	-3,113

Change in the defined benefit obligation for the year:

Group	2019-12-31	2018-12-31
At beginning of the year	3,113	2,584
Costs for employee service during the current year	810	757
Interest expense	78	79
Actuarial losses(+)/gains(-)	91	349
Exchange differences	25	118
Benefits paid	-294	-774
At year-end	3,824	3,113

Amounts recognised in the income statement for defined benefit plans:

Group	2019-12-31	2018-12-31
Costs for employee service during the current year	810	757
Interest expense	78	79
Actuarial gains/losses reported during the year	91	349
Total	980	1,184

Principal actuarial assumptions:

Group	2019-12-31	2018-12-31
Discount rate	2.30 %	2.57 %
Future salary increases	2.00 %	3.00 %

Plan assets are comprised of:

Group	2019-12-31	2018-12-31
Other	-	-
Total	-	-

Present value of defined benefit obligation	-3,824	-3,113
Fair value of plan assets	-	-
Deficit	-3,824	-3,113

Note 11 Other operating income and other operating expense

Other operating income	Group		Parent Company	
	2019	2018	2019	2018
Exchange gains	437	1,543	-	2
Grants received	22,867	15,777	-	-
Non-business-related re-invoicing	1,143	423	766	228
Other	7,011	4,158	397	-
Total other operating income	31,458	21,901	1,163	230

Other operating expenses	Group		Parent Company	
	2019	2018	2019	2018
Exchange losses	1,078	1,495	-	11
Other	184	9	-	-
Total other operating expenses	1,262	1,504	-	11

Note 12 Financial income and expense/Interest income and expense

Financial income/Interest income	Group		Parent Company	
	2019	2018	2019	2018
Interest income on bank deposits	34	111	-	-
Interest income from Group companies	-	-	10,990	11,578
Exchange gains	3,903	5,497	-	-
Other financial income	107	50	397	374
Total financial income/interest income	4,044	5,658	11,387	11,952

Financial expense/Interest expense	Group		Parent Company	
	2019	2018	2019	2018
Interest expense on borrowings	47,902	39,079	24,635	23,900
Intra-group interest expense	-	-	1,166	1,166
Exchange losses	2,629	1,703	-	-
Other financial expense	14,729	10,159	5,608	2,484
Total financial expense/interest expense	65,260	50,941	31,409	27,550
Total net financial items	-61,216	-45,283	-20,022	-15,598

Note 13 Income tax/Tax on profit for the year

	Group		Parent Company	
	2019	2018	2019	2018
Current tax:				
Current tax on profit for the year	-	-	-	-
Adjustments related to previous years	-	-	-	-
Total current tax	-	-	-	-
Deferred tax (see Note 18):				
Accrual and reversal of temporary differences	7,306	7,163	-	-
Total deferred tax	7,306	7,163	-	-
Income tax	7,306	7,163	-	-

Income tax on profit differs from the theoretical amount that would have arisen if the weighted average tax rate on profit was applied to profits for the consolidated companies, as follows:

	Group		Parent Company	
	2019	2018	2019	2018
Profit/loss before tax	-63,156	-117,091		-43,341
Tax calculated pursuant to applicable national tax rates on profit/ loss before tax in each country	14,143	24,005		9,535
Tax effects of:				
Non-taxable income	-	-	-	-
Non-deductible expense	-39	-32	-	-
Non-deductible interest expense	-6,790			-
Tax losses for which no deferred tax asset is recognised	-8	-16,810	-4,512	-9,535
Tax revenue/expense	7,306	7,163	-	-

The weighted average tax rate is 19.7 per cent (20.5 per cent) for the Group and 21.4 per cent (22.0 per cent) for the Parent Company.

Income tax recognised in equity during the year:	Group		Parent Company	
	2019	2018	2019	2018
Current tax:				
Issue expenses		-		-
Deferred tax:				
Issue expenses	1,965	-	1,965	-
Total income tax recognised in equity	1,953	-	1,953	-

Note 14 Exchange differences

Exchange differences are recognised in the income statement as follows:

	Group		Parent Company	
	2019	2018	2019	2018
Exchange differences in operating profit/loss	-641	48	0	-10
Exchanges differences in net financial items	1 274	3 794	543	374
Total exchange differences in the income statement	633	3 842	0	364
Amounts reported in other comprehensive income	3 682	2 002	-	-

Note 15 Intangible assets

Group	Goodwill	Capitalised development costs	Concessions and similar rights	Patents and licences	Total
Financial year 2018					
Opening carrying amount	6,466	14,279	85,486	104	106,335
Purchases/reprocessing	-	-	-	293	293
Reclassifications	-	157	-	1,261	1,418
Translation differences	151	-	3,441	1	3,593
Amortisation	-	-1,461	-10,741	-171	-12,373
Impairment	-	-	24	-	24
Closing carrying amount	6,617	12,975	78,210	1,488	99,290
At 31 December 2018					
Cost of acquisition	6,617	17,511	217,534	6,302	247,964
Accumulated amortisation and impairment	-	-4,536	-139,324	-4,814	-148,674
Closing carrying amount	6,617	12,975	78,210	1,488	99,290
Financial year 2019					
Opening carrying amount	6,617	12,975	78,210	1,488	99,290
Purchases/reprocessing	-	150	-	252	402
Reclassifications	-	51	-	-	51
Translation differences	216	-	640	-	856
Amortisation	-	-1,461	-11,018	-317	-12,796
Impairment	-	-	-	-	-
Closing carrying amount	6,833	11,713	67,832	1,423	87,800
At 31 December 2019					
Cost of acquisition	6,833	17,712	219,265	6,554	250,364
Accumulated amortisation and impairment	0	-5,999	-151,433	-5,131	-162,563
Closing carrying amount	6,833	11,713	67,832	1,423	87,800

The total amount for research and development expensed during the period was SEK 3,985 thousand (5,054).

Based on the results of an impairment test of goodwill, it was deemed that there was no write-down requirement during the financial year. The Group conducted a sensitivity analysis against changes in the impairment test. If the cost of capital had been 0.5 per centage point higher and profitability (EBITDA margin) one percentage point lower, with all other variables held constant, there would nonetheless have been no write-down requirement for goodwill. The cost of capital, produced by an external party, is based on assessments of weighted return requirements for interest-bearing liabilities and equity in proportion to estimated percentage in an optimal industrial capital structure. A 2 per cent long-term growth rate and a 10.5 per cent cost of capital were used in this year's impairment testing of goodwill. The Group's goodwill is attributable to Business Area Norway. The impairment test was prepared based on value in use.

Based on the results of an impairment test of the concession right, it was deemed that there was no write-down requirement during the financial year. The Group conducted a sensitivity analysis against changes in the impairment test. If the cost of capital had been 0.5 percentage point higher and profitability (EBITDA margin) one percentage point lower, with all other variables held constant, there would nonetheless have been no write-down requirement. A 2.5 per cent long-term growth rate and a 13.3 per cent cost of capital were used in this year's impairment testing of the concession right. The Group's concession right is attributable to Business Area South Korea. The impairment test was prepared based on value in use.

Note 16 Tangible assets

Group	Buildings and land	Plant and machinery	Equipment, tools, fixtures and fittings	Construction work in progress	Total
Financial year 2018					
Opening carrying amount	194,672	287,368	10,797	347,189	840,026
Acquisition	-1	67,889	4,164	43,687	115,739
Capitalisation	1,046	9,093	-	-10,139	-
Capitalised interest	-	-	-	10,101	10,101
Late penalty	-	-	-	-23,365	-23,365
Sale and disposal	-	-	-1,222	-5,750	-6,972
Reclassifications	37	-676	639	-684	-684
Translation differences	1	94	24	7,169	7,288
Amortisation	-9,405	-28,751	-3,466	-10,084	-51,706
Closing carrying amount	186,350	335,017	10,936	358,124	890,427
At 31 December 2018					
Cost of acquisition	232,628	442,585	33,189	405,705	1,114,108
Accumulated amortisation and impairment	-46,278	-107,568	-22,253	-47,581	-223,681
Carrying amount	186,350	335,017	10,936	358,124	890,427
Financial year 2019					
Opening carrying amount	186,350	335,017	10,936	358,124	890,427
Change in accounting principle	-116,693	-117,415	-7,717	124	-241,107
Right of use - buildings	115,544	-	-	-	115,544
Right of use - land	47,193	-	-	-	47,193
Right of use - plant and machinery	-	178,238	-	-	178,238
Right of use - equipment, tools, fixtures, and fittings	-	-	12,545	-	12,545
Acquisition	325	15,380	4,342	26,679	46,726
Capitalisation	8,857	20,408	422	-29,687	-
Capitalised interest	-	-	-	922	922
Sale and disposal	-	-130	422	-	292
Reclassifications	150,250	99,185	-2,060	-321,268	-73,893
Translation differences	-	1,944	-133	10,326	12,605
Amortisation - right of use	-10,623	-10,877	-5,645	-	-27,145
Amortisation	-13,966	-27,558	-1,131	-1,045	-43,700
Impairment	-	-4,885	-	-	-4,885
Closing carrying amount	367,237	489,308	12,001	44,175	912,721

Group	Buildings and land	Plant and machinery	Equipment, tools, fixtures and fittings	Construction work in progress	Total
At 31 December 2019					
Cost of acquisition	411 466	587 093	33 548	91 795	1 123 902
Accumulated amortisation and impairment	-44 229	-97 785	-21 547	-47 619	-211 181
Carrying amount	367 237	489 308	12 001	44 175	912 721

Construction work in progress as at 31 December 2018 was mainly comprised of investments in the Norwegian plant and part of the plant at Södertörn. The plant in Norway was completed in 2019 and has been reclassified to the proper category.

During the year the Group capitalised borrowing fees of SEK 922 thousand (10,101) on qualifying assets in the form of construction work in progress.

Based on the results of impairment tests, it was deemed that there was no write-down requirement for tangible assets during the financial year; see also Note 4, Significant Estimates and Assessments. The Group conducted a sensitivity analysis against changes in the impairment test. If the cost of capital had been 0.5 percentage point higher and profitability (EBITDA margin) one percentage point lower, with all other variables held constant, there would nevertheless have been no write-down requirement for the plants in Norway, Södertörn, Henriksdal, or Bromma. A cost of capital of 10.5 per cent for Sweden and Norway and of 13.3 per cent for South Korea was used in this year's assessment. The cost of capital is based on assessments of weighted return requirements for interest-bearing liabilities and equity in proportion to estimated percentage in an optimal industrial capital structure.

Tangible assets include objects leased by the Group through finance lease agreements at the following amounts:

	2019	2018
Buildings and land	152,425	109,298
Plant and machinery	167,709	170,410
Equipment, tools, fixtures, and fittings	7,708	5,867
Construction work in progress	0	6,974
Carrying amount	327,841	292,549

The Group applied a discount rate of 3.2 per cent for Business Area Sweden, as this corresponds to the interest rate on current bank loans and is on a par with the current ground rent interest rate. The discount rate applied for Business Area Norway was 4.43 per cent, corresponding to the interest rate on the business area's current bank loans.

With the transition to IFRS 16, several previous operating leases are now included in the overview presented above. There is also a difference in the discount rate, and the assets were depreciated during the financial year. Changes to accounting policy IAS 17 and the Group's previous calculations have been systemised to comply with IFRS 16. During the financial year EBITDA was improved by approximately SEK 33.5 million, as IFRS 16 reduces operating expenses while simultaneously increasing aggregate depreciation/amortisation and financial expense by a corresponding amount. The change for the 1 January–30 December 2019 period is presented below:

	2019-01-01
Opening carrying amount less construction work in progress:	285,575
Change in accounting principle	4,189
Additional rights of use	
Buildings	1,947
Land	47,193
Vehicles	726
Equipment, fixtures, and fittings	11,838
Change in accounting principle and change during financial year	-23,627
Carrying amount, 31 Dec 2019	327,841

Note 17 Participations in Group companies

Parent Company	2019-12-31	2018-12-31
Accumulated cost		
Opening cost of acquisition	620,014	606,460
Shareholders' contribution paid	24,719	-
Acquisitions during the year	12,441	13,554
	657,174	620,014
Accumulated impairment		
Opening balance	-430,561	-430,561
Impairment for the year	-	-
	-430,561	-430,561
Closing carrying amount at year-end	226,613	189,453

Participations in Group companies increased SEK 37.1 million during the financial year due to an SEK 1.56 million conditional capital contribution to Scandinavian Biogas Recycling AB (via Scandinavian Biogas Sweden AB) and an SEK 10.88 million share issue in Biokraft Holding AS. Scandinavian Biogas Sweden AB also received an unconditional shareholders' contribution of SEK 24.7 million. Subsidiaries received group contributions of SEK nil (25.0 million) during the same period.

Non-controlling interests contributed SEK 10.86 million in conjunction with the new share issue and SEK 1.04 million in conjunction with the conditional capital contribution.

The Parent Company holds shares in the following subsidiaries:

Name	Corp. reg. no.	Domicile	Share of equity/Share of votes	No. of shares	Carrying amount	
					2019-12-31	2018-12-31
Direct holdings						
Scandinavian Biogas Fuels AB	556691-9196	Stockholm	100 %	166,667	274	274
Scandinavian Biogas Sweden AB	556807-2986	Stockholm	100 %	50,000	133,729	107,450
Biokraft Holding AS	916683405	Trondheim (Norway)	50.03 %	52,147,487	92,610	81,729
Indirect holdings						
Biogas Uppland AB	556636-0227	Uppsala	50 %			
Mönsterås Biogasproduktion AB	559148-3168	Stockholm	100 %			
Scandinavian Biogas Södertörn AB	556712-1735	Stockholm	100 %			
Scandinavian Biogas Fuels i Varberg AB	556748-8357	Varberg	100 %			
Scandinavian Biogas Sydkorea Co., Ltd.	610-84-00961	Ulsan (South Korea)	82.17 %			
Scandinavian Biogas Sydkorea Co., Ltd.	285011-0174239	Seoul (South Korea)	90 %			
Scandinavian Biogas Stockholm AB	556489-7899	Stockholm	100 %			
Scandinavian Biogas Recycling AB	556934-4384	Stockholm	60 %			
Biokraft AS	894625902	Trondheim (Norway)	50.03 %			
Total					226,613	189,453

Significant subsidiaries and their activities

Scandinavian Biogas Fuels AB designs biogas facilities, with a major focus on optimising production and conducting research in the biogas field. Scandinavian Biogas Fuels AB also has a branch office in Norway with the same name, corporate ID number 917 357 420.

Scandinavian Biogas Korea Co., Ltd. operates a plant in Ulsan, South Korea, that produces raw gas, primarily from food waste. Revenues are generated by gate fees (i.e. payment for receiving waste) and from gas sales.

Scandinavian Biogas Stockholm AB's operations comprise the production and trade of upgraded biogas.

Scandinavian Biogas Södertörn AB (SBSö) and Scandinavian Biogas Recycling AB (SBR) work in close collaboration, with their overall business encompassing the entire biogas production process. SBR is responsible for pre-treatment and SBSö for the digestion, upgrading, and management of digestate.

In early 2016, 50.03 per cent of the shares were acquired in Norwegian company Biokraft Holding AS, which owns 100 per cent of the shares in Biokraft AS. Biokraft AS has made an investment in an LBG production

facility in Skogn, Norway, which has an estimated production capacity of 120 GWh at full capacity.

All subsidiaries are consolidated in the Group. The share of voting power in subsidiaries directly owned by the Parent Company does not differ from the share of ordinary shares owned.

Biogas Uppland AB is consolidated, given that Scandinavian Biogas Fuels AB is entitled to appoint the chairman who in turn holds the casting vote. Accordingly, Scandinavian Biogas Fuels is deemed to have control over Biogas Uppland.

The total ownership of non-controlling interests for the period amounted to SEK 53,098 thousand (52,789), which is mainly attributable to the Biokraft Group in Norway. Holdings of non-controlling interests in the remaining subsidiaries with minority shareholders are insignificant.

Significant constraints

There are no significant constraints within the Group other than certain restrictions in moving capital between subsidiaries due to loan agreement regulations, etc.

Note 18 Deferred tax

	Group		Parent Company	
	2019	2018	2019	2018
Deferred tax revenue, temporary differences	7,306	7,163	-	-
Total deferred tax in the income statement	7,306	7,163		

	2019-12-31	2018-12-31
Deferred tax assets		
Deferred tax assets to be utilised after 12 months	23,453	16,956
Deferred tax assets to be utilised within 12 months	-	-
Total deferred tax assets	23,453	16,956

	2019-12-31	2018-12-31
Deferred tax liabilities		
Deferred tax liabilities to be utilised after 12 months	1,961	2,053
Deferred tax liabilities to be utilised within 12 months	-	-
Total deferred tax liabilities	1,961	2,053
Net deferred tax liabilities/assets	21,492	14,903

Changes in deferred tax assets and liabilities during the year as reported in the income statement, without taking into account set-offs made in the same fiscal jurisdiction, are presented below.

	2019-12-31	2018-12-31
Deferred tax liabilities		
At 1 January	2,053	2,101
Development costs	-92	-91
Finance leases	-	43
At 31 December	1,961	2,053

	2019-12-31	2018-12-31
Deferred tax assets		
At 1 January	16 956	9 930
Deferred tax on net results for the year in Norwegian subsidiaries	6,777	6,989
Intra-group profit in non-current assets	-	-
Finance leases	-257	-
Translation difference	-23	37
At 31 December	23,453	16,956

Deferred tax assets are reported for tax loss carry-forwards to the extent it is likely they can be utilised against future taxable profit. Loss carry-forwards do not expire at any given date, with the exception of the South Korean loss carry-forward which expires after 10 years.

Deferred tax assets are mainly attributable to the Norwegian subsidiaries. An assessment has been made that operations in Norway will generate a taxable surplus in the foreseeable future, while within other operations there remain significant deficits that are not expected with any reasonable certainty to be covered by surpluses in the foreseeable future. Loss carry-forwards for which deferred tax assets have not been capitalised total SEK 492 million (467.4). Due to uncertainties at the time these companies show profit, not all loss carry-forwards are reported as deferred tax assets. For precautionary purposes, therefore, these loss carry-forwards have not been reported as deferred tax assets.

Note 19 Other non-current receivables

Group	2019-12-31	2018-12-31
Restricted bank balances	15,819	10,688
Other	3,248	3,560
Group total	19,066	14,248

Note 20 Other non-current assets

Group	2019-12-31	2018-12-31
Accumulated cost		
At beginning of the year	1,778	2,222
Deductible portion	-445	-444
Carrying amount at year-end	1,333	1,778

Non-current prepaid expenses pertain to a renegotiation fee expensed over the term of the agreement (9 years).

Note 21 Financial instruments per category

All Group assets and liabilities are valued at amortised cost

	2019-12-31	2018-12-31
Assets on the balance sheet at amortised cost		
Trade accounts receivable	65,670	44,058
Other receivables	36,980	67,230
Cash and cash equivalents	136,384	94,788
Total	239,034	206,076

	2019-12-31	2018-12-31
Liabilities on the balance sheet at amortised cost		
Borrowings	894,407	879,564
Accounts payable	66,325	86,755
Other liabilities	30,404	39,923
Total	991,136	1,006,242

Note 22 Trade accounts receivable

Group	2019-12-31	2018-12-31
Trade accounts receivable	65,736	44,058
Less: provision for doubtful receivables	-66	-
Trade accounts receivable - net	65,670	44,058

At 31 December 2019, substantiated trade accounts receivable totalled SEK 65,670 thousand (44,058).

At 31 December 2019, trade accounts receivable totalling SEK 23,138 thousand (8,532) were past due, but impairment was not deemed necessary.

An age analysis of trade accounts receivable is presented below.

	2019-12-31	2018-12-31
1-30 days	21,043	7,312
31-60 days	1,276	1,220
> 61 days	819	-
Total overdue trade accounts receivable	23,138	8,532

Changes in the provision for doubtful receivables:

	2019-12-31	2018-12-31
At 1 January	-	-
Receivables written off during the year as non-recoverable	-66	-
At 31 December	-66	-

Allocations to and reversals of provisions for doubtful receivables are included in other external expenses in the income statement. No collateral or other guarantee is provided for receivables outstanding as at the balance sheet date.

Note 23 Other receivables

Group	2019-12-31	2018-12-31
Tax account and preliminary F-tax	2,218	1,980
VAT receivable	799	3,733
Grants, unpaid	-	5,906
Late penalty	13,552	36,299
Other items	1,345	5,064
Group total	17,914	52,982
Parent Company	2019-12-31	2018-12-31
VAT receivable	62	202
Other	107	
Parent Company total	169	202

Note 24 Prepaid expenses and accrued income

Group	2019-12-31	2018-12-31
Accrued income	-	1,299
Prepaid insurance premiums	1,166	1,270
Prepaid rents and lease payments	2,433	2,548
Prepaid transaction and legal expenses	-	2,940
Other items	11,352	6,759
Group total	14,951	14,816
Parent Company	2019-12-31	2018-12-31
Prepaid insurance premiums	183	198
Prepaid transaction expenses	-	2,940
Other items	321	276
Parent Company total	504	3,415

Note 25 Cash and cash equivalents/Cash and bank balances

The following items are included in cash and cash equivalents on the balance sheet and statement of cash flows:

Group	2019-12-31	2018-12-31
Cash and bank balances	136,384	94,788
Group total	136,384	94,788
Parent Company	2019-12-31	2018-12-31
Cash and bank balances	57,225	1,649
Parent Company total	57,225	1,649

None of the funds in cash and cash equivalents are restricted.

Note 26 Share capital, other paid-in capital, and proposed appropriation of profit

	Number of shares (thousand)	Share capital	Other paid-in capital	Total
At 31 December 2017	107,099	21,420	754,685	776,105
New share issues	-	-	-	-
Issue expenses	-	-	-	-
At 31 December 2018	107,099	21,420	754,685	776,105
At 31 December 2018	107,099	21,420	754,685	776,105
New share issues	61,158	12,232	134,548	146,780
Issue expenses	-	-	-9,185	-9,185
At 31 December 2019	168,257	33,652	880,048	913,700

The number of shares changed during the financial year and totalled 168,256,961 (107,098,839) at 31 December 2019. The quotient value is SEK 0.20 per share. Each share carries one vote. All outstanding shares are ordinary shares and therefore carry the right to equal shares in the assets and profit of Scandinavian Biogas Fuels International AB (publ). All shares issued by the Parent Company are paid in full. During the year 61,158,122 new shares were issued for a total value of SEK 146.8 million before transaction costs. Transaction costs amounted to SEK 9.2 million. A set-off issue was conducted during the first half of 2019, in which subordinated shareholder loans totalling SEK 34 million along with interest of SEK 2.5 million were converted to shares in a directed new share issue totalling SEK 39.6 million. A rights issue totalling SEK 10.3 million and a directed share issue totalling SEK 60.4 million were conducted during the July-September period. All stated amounts are before transaction costs. The issues were subscribed at a rate of SEK 2.40 per share.

The Board of Directors proposes that unappropriated earnings, SEK 318,527,209, be distributed as follows:

	Amount in SEK
Retained earnings	-424,601,393
Share premium reserve	738,919,052
Profit/loss for the year	4,209,550
Total	318,527,209
Carried forward	318,527,209
Total	318,527,209

Warrants

All outstanding warrants held by employees and the CEO at 31 March 2018, expired on 1 April 2018 without being exercised. Accordingly, there are no outstanding options.

Note 27 Borrowings

Group	2019-12-31	2018-12-31
Non-current		
Loans from credit institutions	280,241	283,422
Bond loans	-	227,402
Finance lease liabilities	311,475	287,821
Other non-current borrowings	6,226	55,170
Total non-current borrowings	597,942	853,815
Current		
Loans from credit institutions	23,477	9,019
Bond loans	229,800	-
Loans from shareholders	20,407	-
Finance lease liabilities	22,781	16,730
Total current borrowings	296,465	25,749
Total borrowings	894,407	879,564
Parent Company	2019-12-31	2018-12-31
Non-current		
Bond loans	-	262,565
Intra-group loans	23,000	23,000
Total non-current borrowings	23,000	285,565
Current		
Bond loans	229,800	19
Loans from shareholders	20,426	-
Total current borrowings	250,226	19
Total borrowings	273,226	285,584

Loans from credit institutions

Loans from credit institutions mature through 2027 and finance leases run through 2039. Interest-bearing loans carry an average annual interest rate of 5.4 per cent (5.9). Group borrowings are in SEK and NOK.

Total borrowings include bank loans and other secured borrowings of SEK 879,898 thousand (813,174). Security for loans from credit institutions is comprised of liens on assets as well as pledged intra-group loans, assets, and shares in subsidiaries.

The carrying amount and fair value of non-current borrowings is presented below.

	Carrying amount		Fair value	
	2019-12-31	2018-12-31	2019-12-31	2018-12-31
Loans from lenders	280,241	283,422	280,241	283,422
Corporate bond	-	227,402	-	225,102
Finance lease liabilities	311,475	287,821	311,475	287,821
Other non-current borrowings	6,226	55,170	6,226	55,170
Total	597,942	853,815	597,942	851,515

The fair value of non-current financial liabilities is calculated based on future cash flows of principal and interest discounted at the current market rate on the balance sheet date.

The fair value of current borrowings corresponds to the carrying amount, as the discount rate is not significant.

With the transition to IFRS 16, the standard now covers several previous operating leases, resulting in a significant increase in current and non-current lease-related liabilities. A summary of the changes is presented below:

	2019-01-01
Opening carrying amount less construction work in progress:	304,551
Change in accounting principle	106
Additional lease agreements (amount as per rights of use):	
Buildings	1,947
Land	47,193
Vehicles	726
Equipment, fixtures, and fittings	11,838
Change in accounting principle and change during financial year	-32,105
Carrying amount, 31 Dec 2019	334,256

Note 28 Provisions

Group	2019	2018
At 1 January	37,315	24,925
Change for the year, penalty fee risk	-15,695	11,329
Translation difference	297	1,061
At 31 December	21,917	37,315

There is a risk that subsidiary Scandinavian Biogas Korea Co., Ltd. in Ulsan, South Korea, will need to pay a penalty to Ulsan City for not upgrading gas. As per agreement, an investment in an upgrading plant in Ulsan was to be made by December 2017. As there is currently no interest in upgraded gas in South Korea, the Company deems the contractual obligation to be unreasonable and has therefore not made the investment. Ulsan City is therefore entitled under the terms of the contract to charge a penalty fee equivalent to a portion of gas sales. This penalty fee applies retroactively from November 2012 (the Company has already paid through October 2012). The nominal value of the remaining provision was approximately SEK 43 million at the balance sheet date. The Company deems the penalty fee level to be unreasonable. In 2018 the Group retained three leading South Korean law firms, who maintain that a significantly lower penalty fee is more reasonable. Nonetheless, the provision at the close of the 2018 financial year corresponded to the present value of the entire remaining contractual penalty fee amount, payable within approximately seven years. A discount rate of 13.86 per cent was applied in calculating present value, which takes into account dispute-related risks. An updated assessment of the provision was made as of 31 December 2019. The overall assessment is that it will likely be only 30 per cent of the penalty fee. The provision was accordingly adjusted by SEK 12.1 million to reflect this assessment, with the change having a positive effect on income statement item 'raw materials and consumables'.

The Parent Company has no Provisions.

Note 29 Pledged assets

Group	2019-12-31	2018-12-31
Liens on assets	48,000	48,000
Pledged assets	447,809	412,144
Assets financed through finance leases	320,594	285,575
Shares in Scandinavian Biogas Fuels AB	-	-
Shares in Scandinavian Biogas Stockholm AB	53,348	58,227
Shares in Scandinavian Biogas Södertörn AB	10,071	9,153
Shares in Scandinavian Biogas Fuels i Varberg AB	76	76
Shares in Biokraft Holding AS	-	-
Group total	879,898	813,174
Parent Company	2019-12-31	2018-12-31
Shares in Scandinavian Biogas Sweden AB	133,729	107,450
Shares in Scandinavian Biogas Fuels AB	274	274
Shares in Biokraft Holding AS	92,610	81,729
Pledged intra-group loan to Scandinavian Biogas Sweden AB	-	-
Parent Company total	226,613	189,453

Note 30 Contingent liabilities

Group	2019-12-31	2018-12-31
Contingent liability		
- subsidiary investment grants	16,372	16,372
Contingent liability		
- Parent Company corporate bond	230,000	230,000
Contingent liability		
- subsidiary loans from credit institutions	32,500	
Group total	278,872	246,372
Parent Company	2019-12-31	2018-12-31
Contingent liability		
- subsidiary loans from credit institutions	32,500	32,500
Contingent liability		
- subsidiary investment grants	16,372	16,372
Parent Company total	48,872	48,872

Contingent liabilities for subsidiary loans from credit institutions pertain to general guarantee commitments. Subsidiary Scandinavian Biogas Fuels AB has guaranteed the Parent Company's corporate bond.

Note 31 Other liabilities

Group	2019-12-31	2018-12-31
VAT liability	1,176	446
Tax at source	1,344	1,313
Public funding	27,786	37,931
Other	98	233
Group total	30,404	39,923
Parent Company	2019-12-31	2018-12-31
Other	-	129
Parent Company total	0	129

Note 32 Accrued expenses and deferred income

Group	2019-12-31	2018-12-31
Accrued interest	6,066	6,715
Accrued payroll-related expenses	10,949	10,882
Accrued expenses - gas and electricity	12,259	9,778
Accrued board fees	470	627
Construction work in progress	6,976	7,252
Accrued lease and rental expenses	133	478
Accrued operation and maintenance expenses	2,657	467
Other items	10,617	21,141
Group total	50,127	57,339
Parent Company	2019-12-31	2018-12-31
Accrued interest	3,187	3,125
Accrued board fees	470	627
Other items	416	941
Parent Company total	4,073	4,693

Note 33 Lease agreements

Following the Group's transition to IFRS 16 in January 2019, a large number of the operating lease agreements are now classified as finance leases. The Group has been reporting finance leases for some time.

Finance leases formerly classified as operating leases pertain mainly to office space, land, storage tanks, and cars. No subleasing is conducted. Cars are leased under three-year contracts after which i) the car is returned at no charge, or ii) the lease may be extended on one-year basis, or iii) the car may be purchased at contractual residual value. The land at Henriksdal and Södertörn is leased for a 25-year period and the land at Bromma until the closure of Stockholm Vatten och Avfall's wastewater treatment plant, which is currently scheduled for 2026. The storage tank lease agreement runs for five years with a five-year extension option for the lessee. If the agreement is not cancelled or extended by five years, it is automatically extended for consecutive two-year periods. At the end of the leasing period, the lessee's only responsibility is to clean the tank thoroughly.

The Group's finance lease agreements comprise the lease of biogas/pre-treatment plants as well as other tangible assets located mainly at Henriksdal, Bromma, Södertörn, and, from 2018, Skogn. A 25-year lease agreement covering land and facilities at Henriksdal and Bromma was signed in 2014. Rent for the land and facilities at Henriksdal is calculated at book value at time of sale spread over 20 years, with a rent rebate the first and last 30 months, and a variable rate corresponding to two-year government bonds plus a market-rate margin. Rent for land and facilities at Bromma is calculated in the same way, without a rent rebate. This agreement applies as long as the facility at Bromma remains. The City of Stockholm has decided to phase out the facility during 2026, according to the current timetable. The effect of the phase-out of the treatment plant at Bromma is not expected to be significant, as redirection of biogas production to Henriksdal is planned.

Land and assets were broken down based on the carrying amount of assets sold at time of sale. The Group reports the portion related to other assets as tangible assets and the debt is recorded to Stockholm Vatten och Avfall AB.

Subsidiary Scandinavian Biogas Recycling AB leases land and facilities from SRV Återvinning AB under a 25-year lease agreement. Rent is calculated at carrying acquisition value at commencement of the rental period divided over 20, 15, and 7 years using a variable rate corresponding to three months STIBOR plus a market-rate margin.

Finance lease liabilities

Lease liabilities are effectively secured, as rights to the leased assets revert to the lessor in the event of non-payment.

Gross finance lease liabilities - minimum lease payments:

Group	2019-12-31	2018-12-31
Within 1 year	32,325	22,817
1 to 5 years	110,142	89,897
6 to 10 years	135,155	105,686
More than 10 years	155,311	137,605
Total	432,933	356,005

Present value of finance lease liabilities:

Group	2019-12-31	2018-12-31
Within 1 year	27,297	16,729
1 to 5 years	88,362	68,440
6 to 10 years	103,691	85,903
More than 10 years	112,288	121,244
Total	331,637	292,315

The tables above also include future minimum lease payments pertaining to contracted leases, which at 31 December 2019 are not on the balance sheet.

The Group's finance lease expenses totalled SEK 33.5 million (22.7) for the financial year.

No lease agreements are held by the Parent Company.

Note 34 Other non-cash items

Group	2019-12-31	2018-12-31
Other provisions	-16,073	12,390
Accrued late penalty	-	-
Actuarial results on post-employment benefits	-10	-349
Unrealised exchange difference	-	-169
Unallocated translation difference	-	-
Other	-282	-949
Group total	-16,365	10,923

Parent Company	2019-12-31	2018-12-31
Unrealised exchange difference	293	362
Other	-	-37
Parent Company total	293	325

Note 35 Net indebtedness

Group	2019-12-31	2018-12-31
Cash and cash equivalents	136,384	94,788
Finance leases - payable within 1 year	-22,781	-16,730
Other loans - payable within 1 year	-23,477	-9,019
Finance leases - payable after 1 year	-311,475	-287,821
Other loans - payable after 1 year	-536,674	-565,994
Net debt	-758,023	-784,776
Cash and cash equivalents	136,384	94,788
Gross debt - fixed interest rates	-262,845	-268,186
Gross debt - variable interest rates	-631,562	-611,378
Net debt	-758,023	-784,776

Group	Cash and cash equivalents	Finance leases < 1 year	Finance leases > 1 year	Loans < 1 year	Loans > 1 year	Total
Net debt at 31 December 2019	94,788	-16,730	-287,821	-9,019	-565,994	-784,776
Cash flow	40,994		-33,532	-13,250	-0	-5,788
Change in accounting principle		-6,051	9,878			3,827
Exchange rate adjustments	601			0	-7,080	-6,479
Other non-cash items				-1,208	36,400	35,192
Net debt at 31 December 2019	136,383	-22,781	-311,475	-23,477	-536,674	-758,024

Note 36 Related-party transactions

Bengtssons Tidnings AB (and related parties) owns 24.5 per cent of the shares in Scandinavian Biogas Fuels International AB (publ), AC Cleantech Growthfund 1 Holding AB (and related parties) owns 21.3 per cent, and Apriori AB (and related parties) owns 20.5 per cent, and are deemed to have significant influence over the Group. Of the remaining 33.7 per cent of the shares, no single owner holds more than 15 per cent. Other related parties are Group subsidiaries and senior executives (i.e. board members and management) and their families.

The following transactions were conducted with related parties:

Purchase of goods and services	2019	2018
Purchase of services:		
- Key management personnel (consultancy services)	14	264
Total	14	264

The purchase of services in the above table pertains to consulting fees paid to the employer of one board member. No sales were made to related parties outside the Group during this or the previous financial year.

Goods and services are purchased from and sold to subsidiaries on normal market terms. Services purchased from related parties are based on normal market terms and purchases are conducted on a commercial basis.

Loans from companies with significant influence over the company:

	2019	2018
At beginning of the year	35,164	-
Loans raised during the year	20,000	34,000
Loans repaid during the year	-34,000	
Interest	1,977	1,164
Interest paid	-2,734	-
At year-end	20,407	35,164

Note 37 Definition of key ratios

Debt/Equity ratio

The Group evaluates capital on the basis of the debt/equity ratio. This key ratio is calculated as net debt divided by total capital. Net debt is calculated as total borrowings (including consolidated balance sheet items current borrowings and non-current borrowings) less cash and cash equivalents. Equity is calculated as equity in the consolidated balance sheet. Total capital is calculated as net debt plus equity.

	2019-12-31	2018-12-31
Total borrowings (Note 27)	894,407	879,564
Less: cash and cash equivalents (Note 25)	-136,384	-94,788
Net debt	758,023	784,776
Equity	228,922	131,893
Total capital	986,945	916,669
Debt/Equity ratio	76.8 %	85.6 %

Operating results (EBIT)

Operating results (EBIT - Earnings Before Interest and Tax) provide an overview of the Group's total earnings generation and are calculated as operating results before financial items and tax.

EBITDA

EBITDA is a profitability measure considered by the Group as relevant for investors interested in earnings generation before investments in assets. The Group defines EBITDA (Earnings Before Interest, Tax, Depreciation, and Amortisation) as operating results exclusive of other operating expenses and amortisation/depreciation and impairment of tangible and intangible assets. The EBITDA margin is calculated by dividing EBITDA by total revenues.

	2019	2018
Operating results	-1,940	-71,808
- Amortisation/depreciation and impairment of tangible and intangible assets	88,526	64,057
Other operating expenses	1,262	1,504
EBITDA	87,848	-6,247

Gross profit/loss

Gross profit/loss is a profitability measure showing the Company's revenues less variable production costs.

	2019	2018
Total revenues	407,050	310,212
- Raw materials and consumables	-192,383	-166,336
Gross profit/loss	214,667	143,876

Adjusted equity/assets ratio

The equity/assets ratio shows the proportion of assets financed with equity. The Group uses an adjusted equity/assets ratio, as this metric is defined in the corporate bond prospectus. The adjusted equity/assets ratio is calculated as the sum of total equity (including non-controlling interests) and subordinated loans divided by total assets adjusted for the grant from Enova. The grant from Enova for the Norwegian project in Skogn is included in the prospectus as a subordinated loan, but is a grant that does not require repayment. Subordinated loans at the end of the financial year total SEK 42 million (55.2) and pertain to loans from the largest shareholders to the Parent Company and from minority shareholders in Biokraft Holding AS to that company.

	2019-12-31	2018-12-31
Total equity (incl. non-controlling interests)	228,922	131,893
Subordinated loans (incl. Enova)	127,910	138,375
	356,832	270,268
Total assets	1,294,063	1,234,842
Grant from Enova	47,841	83,205
	1,341,904	1,318,047
Adjusted equity/assets ratio	26.6 %	20.5 %

Note 38 Events after the balance sheet date

Business opportunities throughout the world have been impacted by COVID-19 in early 2020. The impact on the Group's business after the close of the financial year is limited. Management is closely monitoring the situation and regularly assessing ways in which the situation may affect operations.

A SEK 230 million corporate bond was refinanced in early February 2020 with a private facility of SEK 200 million. The new credit facility amounts to SEK 200 million and will be repaid 30 September 2020. Management is conducting concrete and realistic negotiations with several independent parties deemed able to refinance the credit facility, although such refinancing has not been finalised as of the publication date of the Annual Report.

The consolidated income statement and balance sheet will be presented to the Annual General Meeting on 25 June 2020 for adoption.

The Board of Directors and Chief Executive Officer certify that the consolidated accounts have been prepared in accordance with International Financial Reporting Standards as adopted by the EU and provide a true and fair view of the Group's financial position and results. The annual accounts have been prepared in accordance with generally accepted accounting principles and provide a true and fair view of the Parent Company's financial position and results.

The Board of Directors' Report for the Group and Parent Company provides a fair review of the development of the Group and the Parent Company's financial position and results and describes material risks and uncertainties facing both the Parent Company and the companies included in the Group.

Stockholm, 28 May 2020

Göran Persson
Chairman

Matti Vikkula
Chief Executive Officer

Anders Bengtsson
Board member

Andreas Ahlström
Board member

Hans Hansson
Board member

Sara Anderson
Board member

David Schelin
Board member

Malin Gustafsson
Board member

Lars Bengtsson
Board member

Our audit report was submitted on 30 May 2020

Öhrlings PricewaterhouseCoopers AB

Lars Kylberg
Authorised Public Accountant
Chief Auditor

Auditor's report

To the general meeting of the shareholders of Scandinavian Biogas Fuels International AB (publ),
corporate identity number 556528-4733

Report on the annual accounts and consolidated accounts

Opinions

We have audited the annual accounts and consolidated accounts of Scandinavian Biogas Fuels International AB (publ) for financial year 2019. The annual accounts and consolidated accounts of the company are included on pages 39–75 in this document.

In our opinion, the annual accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the parent company as of 31 December 2019 and its financial performance and cash flow for the year then ended in accordance with the Annual Accounts Act. The consolidated accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the group as of 31 December 2019 and its financial performance and cash flow for the year then ended in accordance with International Financial Reporting Standards (IFRS), as adopted by the EU, and the Annual Accounts Act. The Board of Directors' report is consistent with the other parts of the annual accounts and consolidated accounts.

We therefore recommend that the general meeting of shareholders adopt the consolidated statement of comprehensive income, the consolidated balance sheet, and the parent company's income statement and balance sheet.

Basis for opinions

We conducted our audit in accordance with International Standards on Auditing (ISAs) and generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities pursuant to these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

Information other than the annual accounts and consolidated accounts

This document also contains, on pages 1–38, information other than the annual accounts and consolidated accounts. The Board of Directors and the Chief Executive Officer are responsible for this other information.

Our opinion on the annual accounts and consolidated accounts does not cover this other information and we do not express any form of assurance regarding this other information.

In connection with our audit of the annual accounts and consolidated accounts, our responsibility is to read the information

identified above and consider whether the information is materially inconsistent with the annual accounts and consolidated accounts. In this procedure we also take into account our knowledge otherwise obtained in the audit and assess whether the information otherwise appears to be materially misstated.

If, based on the work performed concerning this information, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Material uncertainty related to going concern basis

Without prejudice to my above opinions, I would like to draw attention to the Financial Risks section of the Board of Directors' Report. The Board of Director's Report indicates that the company raised a new credit facility of SEK 200 million in February 2020 in conjunction with repayment of the 2016/2020 bond loan, with repayment scheduled for 30 September 2020. It also appears that the board of directors and management are conducting concrete, realistic negotiations with several independent parties deemed able to refinance the credit facility, although such refinancing has not been finalised as of the publication date of our Auditor's Report.

Given that the group is not considered capable of repaying the credit facility without securing refinancing, it is our assessment that there is a material uncertainty that may cast significant doubt on the company's ability to continue as a going concern.

Responsibilities of the Board of Directors and the Chief Executive Officer

The Board of Directors and the Chief Executive Officer are responsible for the preparation of the annual accounts and consolidated accounts and for ensuring that they give a fair presentation in accordance with the Annual Accounts Act and, with respect to the consolidated accounts, in accordance with IFRS as adopted by the EU and with the Annual Accounts Act. The Board of Directors and the Chief Executive Officer are also responsible for such internal control as they deem necessary to enable the preparation of annual accounts and consolidated accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts and consolidated accounts, the Board of Directors and the Chief Executive Officer are responsible for assessment of the company's and the group's ability to continue as a going concern. They disclose, as applicable, matters related to continuance as a going concern and application of the going concern basis of accounting. The going concern basis of accounting is not applied, however, if the Board of Directors and the Chief Executive Officer intend to liquidate the company, to cease operations, or have no realistic alternative but to do so.

Auditor's responsibility

Our objectives are to obtain reasonable assurance about whether the annual accounts and consolidated accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and generally accepted auditing standards in Sweden will always detect a material misstatement when it exists. Misstatements may arise from fraud or error and are considered material if, individually or in the aggregate, they can reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts and consolidated accounts.

A further description of our responsibility for the audit of the annual accounts and consolidated accounts is available on the Supervisory Board of Public Accountants website: www.revisorsinspektionen.se/revisorsansvar. This description is part of the auditor's report.

Report on other legal and regulatory requirements Opinions

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the administration of the Board of Directors and the Chief Executive Officer of Scandinavian Biogas Fuels International AB (publ) for financial year 2019 and the proposed appropriation of the company's profit or loss.

We recommend to the general meeting of shareholders that the profit be appropriated in accordance with the proposal in the board of directors' report and that the members of the Board of Directors and the Chief Executive Officer be discharged from liability for the financial year.

Basis for opinions

We conducted the audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

Responsibilities of the Board of Directors and the Chief Executive Officer

The Board of Directors is responsible for the proposal for appropriations of the company's profit or loss. At the proposal of a dividend, this includes an assessment of whether the dividend is justifiable considering the requirements which the company's and the group's type of operations, size, and risks place on the size of the parent company's and the group's equity, consolidation requirements, liquidity, and position in general.

The Board of Directors is responsible for the company's organisation and the administration of the company's affairs. This includes among other things continuous assessment of the company's and the group's financial situation and ensuring that the company's organisation is designed so that the accounting, management of assets and the company's financial affairs otherwise are controlled in a reassuring manner. The Chief Executive Officer manages ongoing administration in accordance with the Board of Directors' guidelines and instructions and takes measures necessary to ensure, among other things, that the company's accounting is in accordance with law and that assets are managed in a reassuring manner.

Auditor's responsibility

Our objective concerning the audit of the administration, and thus our opinion on discharge from liability, is to obtain audit evidence to assess with a reasonable degree of assurance whether any member of the Board of Directors or the Chief Executive Officer in any material respect:

- has undertaken any action or been guilty of any omission which may give rise to liability for the company, or
- has in any other way acted in contravention of the Companies Act, the Annual Accounts Act, or the Articles of Association.

Our objective concerning the audit of the proposed appropriation of the company's profit or loss, and thus our opinion on this, is to assess with a reasonable degree of assurance whether the proposal is in accordance with the Companies Act.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability for the company, or that the proposed appropriation of the company's profit or loss is not in accordance with the Companies Act.

A further description of our responsibility for the audit of the administration is available on the Supervisory Board of Public Accountants website: www.revisorsinspektionen.se/revisorsansvar. This description is part of the auditor's report.

Uppsala, 3 June 2020

Öhrlings PricewaterhouseCoopers AB

Lars Kylberg

Authorised Public Accountant

About the Sustainability Report

Accounting principles

The Sustainability Report follows Scandinavian Biogas's financial year and refers to the period 1 January–31 December 2019. The reporting of environmental data includes only operations in Sweden and is focused on the companies operating production facilities in Sweden. Employee data includes all business areas and countries. Financial information follows the same accounting principles as those used for Scandinavian Biogas's consolidated accounts.

The report is a GRI-referenced report and, accordingly, Scandinavian Biogas has selected a number of disclosures from the GRI Standards, which are presented in the GRI index on pages 81–82. This is the Company's second GRI-referenced report and is based on GRI principles: the inclusion of stakeholders, sustainability context, materiality, and completeness. The report has not been subject to external certification or third-party review.

Sustainability data was collected from various departments by a project manager.

Contact

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Validation of the materiality analysis

Sustainability issues commonly highlighted by customers, suppliers, and partners in regular contractual meetings were compiled during 2018 and are presented on page 28. This process confirmed several of the key issues identified during 2017. No further related activities were conducted during 2019.

Methods of measurement and calculation

Climate and environmental impact

Calculations of the operating companies' emissions reduction for produced biogas used an industry-specific life cycle analysis tool¹ (LCA tool) produced by the Swedish Gas Association for reporting on amounts of sustainable biofuel sold to the Swedish Energy Agency. Emissions reduction calculations include:

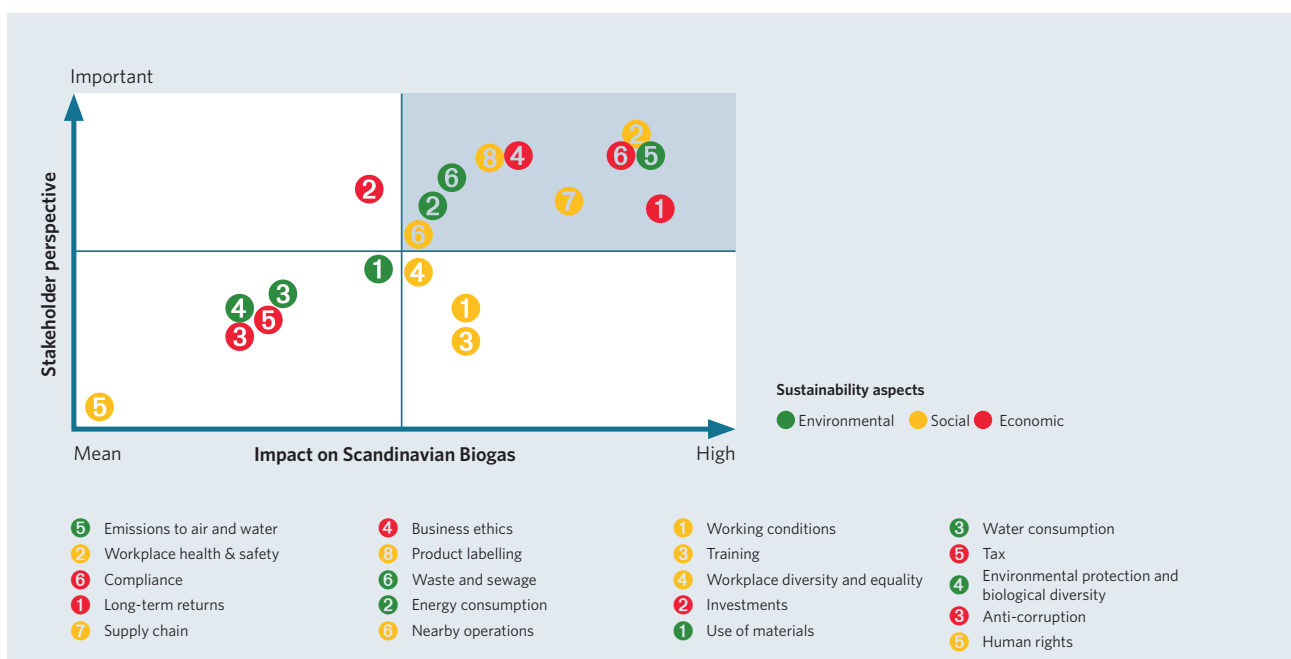
- Substrate gas potential and dry matter content
- Carbon dioxide emissions from transporting waste and residues to the plant
- The plant's methane gas emissions
- Carbon dioxide emissions from inputs such as water and chemical consumption
- Energy consumption
- The plant's internal fuel consumption

Emissions reductions for the bio-fertiliser product were not included in this year's report.

Waste

The plants' inbound waste includes all waste received at Bromma, Henriksdal, and Södertörn, including sewage sludge and grease trap sludge digested by Stockholm Vatten och Avfall at Bromma and Henriksdal.

Waste generated at the plants is disposed of by well-established waste operators holding valid licences for environmentally hazardous operations. No waste management targets have been set, as the amount of waste generated is dependent on the type of waste and residues received by the plants.





Energy and water consumption

Water consumption is monitored monthly and reconciled with invoiced volumes. Recycled water is measured and calculated with internal meters.

The operating companies and the office in Stockholm purchase only eco- and origin-labelled electricity, which does not give rise to carbon emissions. Energy consumption is measured and logged on a continuous basis, internally and externally.

Road transport

The calculation of emissions reduction for produced biogas includes carbon dioxide emissions from the transport of inbound waste and residues to the plants. The LCA tool takes into account distance, type of fuel used, and freight home. Emissions from the transport of gas sold by the plants to end customers are included in the LCA tool. For gas that is re-sold by customers, transport emissions are not included in the LCA tool, as customers include this in their reporting to the Swedish Energy Agency.

The fuel type pie charts on page 30 show results from all operators delivering more than 500 tonnes of food waste to the Södertörn biogas plant. These 12 operators transport 96 per cent of all inbound food waste. Gas and bio-fertiliser transports are represented by only 3 operators. The price and supply of HVO100 increased and decreased, respectively, during 2019, which affected operators' capacity to run on renewable diesel.

Methane emissions

Methane gas emissions are based on continuous measurement of incoming and outgoing gas flows, including diffuse emissions, and on external measurements of the plants' total emissions.

¹<http://www.energigas.se/publikationer/haallbarhetskriterier-foer-biodrivmedel/>

Glossary

Biomethane: Umbrella term for gas blends comprised mainly of methane gas and produced from biomass.

Drinking water: Water purchased from municipal treatment plants.

Energy carrier: Substance or physical process that is used to store or transport energy. Examples include electricity, hydrogen, ethanol, petrol, and methane.

Energy sources: Natural resources or natural phenomena that can be converted into energy forms such as light, movement, and heat. A distinction is made between stored (fossil) and abundant (renewable) energy sources. Examples of stored energy include oil, natural gas, and coal; examples of renewable energy sources are biomass, hydropower, and wind and solar energy.

Vehicle fuel: Energy source used as fuel in vehicles. Raw gas produced in the biogas process must be cleaned and upgraded to 97±1 per cent methane in order to be defined and sold as vehicle fuel.

Pre-treatment in biogas production: Organic material used in the production of biogas needs in some cases to be pre-treated prior to the digestion process. The purpose of pre-treatment is to increase the material's total biogas potential (i.e. the quantity of biogas that can be extracted from the material) and/or to increase the speed of digestion. Pre-treatment may be thermal, chemical, or mechanical, and combinations of one or more methods may be used. The treatment opens up/breaks down complex organic molecules, making them more accessible to digestion microorganisms.

Gas cleaning: Process for purifying raw gas from water vapour, sulphur compounds, and particulates. The gas may then be further processed to separate methane and carbon dioxide. Vehicle fuel-quality biogas contains 97±1 per cent methane.

HOLD stands for High Organic Load Digestion.

Methane: Odourless gas with high energy content (~10 kWh per normal cubic metre). Methane (CH₄) is the simplest hydrocarbon and is composed of one carbon atom and four hydrogen atoms.

Natural gas: A stored (fossil) gas mixture comprised of approximately 90 per cent methane.

Normal cubic metre relative to one litre: A normal cubic metre of biogas upgraded to vehicle fuel (97 per cent methane and 3 per cent CO₂) contains as much energy as 1.1 litres of petrol.

Organic waste: Waste from plants and animals.

Raw gas: Gas formed in a biogas process. Raw gas mainly contains methane and carbon dioxide but also sulphur compounds, water vapour, particulates, etc.

Digester / Digestion tank: Gastight container for the anaerobic digestion of organic material.

Digestate is the part of the organic material / substrate that has not been converted to biogas but remains in solid / liquid form.

Substrate: Organic material digested in a biogas process.

Upstream work: Preventive efforts to preclude appearance of undesirable substances in incoming material. Involves dialogue with and audit visits to waste operators.

Greenhouse gases: Gases that have the ability to absorb infrared radiation reflected from the Earth into the atmosphere (greenhouse effect). The greenhouse effect is essential for life on earth (without it the Earth's average temperature would be around -18°C). However, due to human activity the concentration of greenhouse gases is increasing. Examples of greenhouse gases are carbon dioxide, methane, water vapour, and nitrogen oxides.

GRI content index

Page references in this GRI index refer to Scandinavian Biogas's 2019 Annual Report.

General disclosures

Disclosure	Description	Page	Comment
GRI 102: General disclosures 2016			
Organisational profile			
102-1	Name of the organisation	Cover	
102-2	Activities, brands, products, and services	3	
102-3	Location of headquarters	3	
102-4	Location of operations	3	
102-5	Ownership and legal form	39	
102-6	Markets served	3, 12-15	
102-7	Scale of the organisation	3, 5, 39	
102-8	Information on employees and other workers	35	
102-9	Supply chain	9, 12-13, 19	
102-10	Significant changes to the organisation and its supply chain	41	
102-11	Precautionary Principle or approach	30, 33, 35	
102-12	External initiatives	29, 33	
102-13	Membership of associations		Avfall Sverige, Energigas Sverige, Biogas Öst, BioDriv Öst
Strategy			
102-14	Statement from senior decision-maker	6-7	
Ethics and integrity			
102-16	Values, principles, standards, and norms of behaviour	32-33, 34-35	
Governance			
102-18	Governance structure	25-26, 39-40	
Stakeholder engagement			
102-40	List of stakeholder groups	25	
102-41	Collective bargaining agreements	35	
102-42	Identifying and selecting stakeholders	25	
102-43	Approach to stakeholder engagement	25	
102-44	Key topics and concerns raised	25	
Reporting practice			
102-45	Entities included in the consolidated financial statements	56	
102-46	Defining report content and topic boundaries	25	
102-47	List of material topics	26	
102-48	Restatements of information	31	
102-49	Changes in reporting		No significant changes
102-50	Reporting period	79	
102-51	Date of most recent report		2019-06-06
102-52	Reporting cycle	79	
102-53	Contact point for questions regarding the report	79	
102-54	Claims of reporting in accordance with the GRI Standards	79	
102-55	GRI content index	81-82	
102-56	External assurance		The Sustainability Report has not been subject to third-party review.

Key topics

Disclosure	Description	Page	Comment
Economic standards			
GRI 201: Economic performance 2016			
103-1-3	Explanation of the material topic and its boundary, management approach, and evaluation of management approach	8, 39-40	
201-1	Direct economic value generated and distributed	46	
Environmental standards			
302-1 Energy consumption within the organisation 2016			
103-1-3	Explanation of the material topic and its boundary, management approach, and evaluation of management approach	25-26, 29-31	
302-1	Energy consumption within the organisation	29-31	
GRI 305-5 Reduction of GHG emissions 2016			
103-1-3	Explanation of the material topic and its boundary, management approach, and evaluation of management approach	25-26, 28-31, 79	
305-5	Reduction of GHG emissions	28-31, 79	
GRI 306-2 Waste by type and disposal method 2016			
103-1-3	Explanation of the material topic and its boundary, management approach, and evaluation of management approach	25-26, 30, 79	
306-2	Waste by type and disposal method	29	
GRI OG14 Volume of biofuels produced meeting sustainability criteria			
103-1-3	Explanation of the material topic and its boundary, management approach, and evaluation of management approach	25-26, 28, 33, 79	
OG14	Volume of biofuels produced meeting sustainability criteria	27-29	
Social standards			
GRI 403: Occupational health and safety 2018			
103-1-3	Explanation of the material topic and its boundary, management approach, and evaluation of management approach	26, 34-35	
403-1	Occupational health and safety management system	34	
403-2	Hazard identification, risk assessment, and incident investigation	34-35	
403-3	Occupational health services	35	
403-4	Worker participation, consultation, and communication on occupational health and safety	34	
403-5	Worker training on occupational health and safety	35	
403-6	Promotion of worker health	35	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	35	
403-8	Workers covered by an occupational health and safety management system	34	
GRI 417: Marketing and labelling 2016			
103-1-3	Explanation of the material topic and its boundary, management approach, and evaluation of management approach	25-26, 32	
417-1	Requirements for product and service information and labelling	32	





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