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## Annual General Meeting 2021

With regard to the current circumstances, the Board has decided that the 2021 AGM will be held solely through postal voting with the support of temporary statutory rules. Publication of the notice is intended to take place by a press release on 22 March 2021. The protocol from the AGM will be made available on [www.swedishstirling.com](http://www.swedishstirling.com)

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# The year in review



## First quarter

Swedish Stirling signs an agreement with Glencore for the installation of up to 25 PWR BLOK units (9.9MW) at the Lydenburg smelter in South Africa. The Company significantly strengthens its cash position through the issue of convertible bonds and shares, and receives a total of SEK 147 million when Daniel Ek, CEO and founder of Spotify, and several Swedish and international institutional investors choose to invest in the Company. The new Stirling lab in Gothenburg comes into operation.



## Second quarter

The Company implements an action plan in response to the corona pandemic and the uncertainties in the world economy. Re-prioritising and re-scheduling projects result in immediate savings of MSEK 1 per month. The Company recruits Dennis Andersson as the new Chief Marketing and Sales Officer.



## Third quarter

Swedish Stirling signs memorandum of understanding with Samancor Chrome for the installation of up to 135 PWR BLOK (54MW) at the TC Smelter, Ferrometals and Tubatse Alloys smelters in South Africa. The Company signs letters of intent with Richards Bay Alloys for the sale and installation of up to 18 PWR BLOK (7.2MW) at Richards Bay, South Africa, and with Glencore Operations South Africa for the installation of up to 88 PWR BLK (35.2MW) at the company's smelter Lion.



## Fourth quarter

Swedish Stirling and ABB Sverige initiate technical collaborations. The Company changes market places to Nasdaq First North Premier Growth Market. An agreement with all convertible bond holders of 2019/2021:2 ("KV3") regarding conversion is made, and the Company receives irrevocable commitments from convertible bond holders of convertible bonds 2019/2021 ("KV2") regarding conversion in accordance with the terms corresponding to approximately 68 percent of the total outstanding loan amount under KV2. Swedish Stirling completes a direct issue of 5 million shares, raising proceeds of SEK 67.5 million. Investors comprise new Swedish and international institutional investors, including BNP Paribas Energy Transition and Daniel Ek (through company), as well as some existing shareholders. The Company files a new patent application for the PWR BLOK 400-F unit with the European Patent Office (EPO).





**Third quarter:** Swedish Stirling signs memorandum of understanding with Samancor Chrome for the installation of up to 135 PWR BLOK (54MW) at the TC Smelter, Ferrometals and Tubatse Alloys smelters in South Africa.



# Swedish Stirling in brief

Swedish Stirling AB is a Swedish clean tech company founded in 2008 with a mission to further develop the outstanding ability of Stirling technology to convert thermal energy to electricity. The Company's product, the PWR BLOK 400-F, is a unique proprietary solution for recovering energy from industrial residual and flare gases and converting these into 100% carbon-neutral electricity at high efficiency. The PWR BLOK, according to Lloyd's Register, an independent certification company, is the cheapest way to generate electricity that exists today, yielding greater CO<sub>2</sub> savings per krona invested than any other type of energy. Swedish Stirling AB is listed in Sweden on Nasdaq First North Premier Growth Market.







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Gunnar Larsson  
CEO

## CEO's statement

It is not possible to sum up Swedish Stirling's 2020 financial year without mentioning the corona pandemic. The global pandemic has had a greater impact on the world than we could ever imagine. It will continue, in different ways, to affect everyone for many years to come, but we can only speculate on how and act accordingly.

From Swedish Stirling's side, the Board of Directors and management team took a number of measures early on to prepare the Company for a long and drawn-out period of shutdowns and financial uncertainties. The measures consisted mainly of different re-prioritisations and postponements of different projects, where we adapted to the new conditions. We also established routines to reduce the risk of spreading the infection and ensuring safety for clients and employees.

Like most others, we were affected by the different shutdowns. A typical example was our PWR BLOK unit that was due to be installed in the summer as part of the pilot project at TC Smelter. The unit got delayed due to the lockdown of the carrier vessel in the Port of Durban (South Africa), and remained anchored there for weeks without the possibility of being unloaded. When we finally managed to get the unit on land, we could not transport it to TC Smelter as the area was in total lockdown, with the exception of emergency personnel. Starting the initial tests thus felt very far away, but thanks to our focused and solution-orientated personnel in South Africa, we were able to arrange for some of the work to be performed at one of our local subcontractors instead. When the shutdown eased off at the end of the summer, we finally got authorisation to deliver the equipment to TC Smelter and were able to start the preparations and installation.

In hindsight, I can state that the pandemic caused some delays but that it also, in a positive way, changed our way of working in 2020. Above all, I can say with pride that we have a strong organisation in the Company today, and competent personnel who quickly finds alternative solutions. The pandemic has affected, but not stopped, us and most certainly not thwarted our ambition to contribute to Swedish industrial history with PWR BLOK and our Stirling technology.

### Commercialisation in South Africa

You cannot start a fire without a spark. I am convinced that our development in South Africa in 2020 was the very spark that is going to light and initiate our commercialisation phase for PWR BLOK. The ferrochrome industry in South Africa clearly showed us in the course of the year that it is now ready to take the next step and fully invest in the PWR BLOK technology. Early in the year, we signed an agreement with Glencore for the installation of an energy conversion plant of up to 25 PWR BLOK units (9.9MW). We then signed memorandum of understanding and letters of intent in the summer with Samancor, Richards Bay Alloys and Glencore for installations of up to 241 PWR BLOK units (96MW), and we are now in negotiations with all three customers.

We are currently experiencing a new-found, albeit reserved, optimism in the South African ferrochrome industry, despite the high local electricity prices, which are moreover predicted to increase by at least 15 percent in 2021. Richards Bay Alloys' decision to modernise and restart installations that had previously been shut down is tangible proof. In addition, the South African authorities have shown even more clearly in 2020 that they really want to help the domestic ferrochrome industry. The decision to levy an export tax on chromium ore last autumn is a clear example of this, and the proposal this February to abolish the licence requirement for installations of up to 50MW is another. Moreover, the authorities are also imposing requirements on the industry to take measures to reduce their electricity needs. Requirements that further strengthen our position.

I have already stated in the 2020 half-year financial report that we are now, quicker than ever, on our way towards full commercial roll-out of the PWR BLOK product in South Africa. The development during the second half of the year has further strengthened that image.



### Next market

When we introduced PWR BLOK 400-F in the autumn of 2017, we were very clear that our intent was to initially focus on one market to prove the technology commercially. South Africa was a natural choice, as the country is one of the world's largest producers of ferrochrome, has large amounts of residual gas, has high electricity prices and is also in constant short supply of electricity. Customers' benefit and demand for our energy recovery solution are going to increase quickly once the technology has proven itself. As production costs of each PWR BLOK unit decrease with serial production, we are going to achieve good profit margins well before we have even covered the entire market in the country, which we estimate at approximately 550 PWR BLOK units.

By the end of spring in 2020, and in parallel with the positive development in South Africa, I observed a significantly higher interest in our technology from the metal industry in other countries. Based on this we chose to recruit an experienced Chief Marketing and Sales Officer with the assignment to lead the Company's commercialisation phase for PWR BLOK, responsible for the commercial roll-out in South Africa and to identify Swedish Stirling's next market. We know that it takes time to establish ourselves and build infrastructure in a new market, and with the development we expect in South Africa, we want to be prepared for the next step.

In the autumn and winter of 2020, we carried out discussions with several interested actors in different markets. The negotiations in the winter became more firm and I hope that we can soon announce our next market for PWR BLOK.

### Generation 3 – suitable for serial production

An important factor for the Company's financial success is to get manufacturing costs down for each PWR BLOK unit when we start serial production. Our first generation of PWR BLOK showed the metal industry that our technology for recovering energy from residual gas works. Generation 2, which was installed at TC Smelter in the autumn, is an upgrade, with several improvements and simplifications which, among other things, reduce and simplify servicing and maintenance. In 2020, development work on a third generation of PWR BLOK, which is the model that we are going to start serial production with, has been the focus.

Development work on generation 3 has focused on making changes and adjustments that reduce manufacturing costs. This work has been ongoing throughout 2020. In generation 3, we have, among other things, repositioned the engines to facilitate servicing, but most importantly, the engines now take up less space. This means that generation 3 is smaller than previous generations, at 40 feet instead of the previous 45 feet, which not only reduces production costs but also transport costs. We have also constructed a completely new load carrier ("container") for the PWR BLOK unit, which is easier and less expensive to produce. These are just a few specific examples of changes that have been made, and we are now in line with the cost projections we have made internally. We are continuing this work in 2021 and together with subcontractors, including ABB, we are focusing on finding other adjustments to reduce manufacturing costs before serial production starts.

### New shareholders and a new market place

In 2020 we also strengthened the Company's financial position by means of two direct share issues, totalling MSEK 214.5. The interest to invest in the Company has been high and we have attracted several Swedish and international institutional investors. These new shareholders include BNP Paribas Energy Transition and Daniel Ek, CEO and founder of Spotify. The Company now has a solid financial standing and is well-equipped for the commercialisation phase. In November we also changed market places to Nasdaq First North Premier Growth Market. This has further increased investor interest in the Company, and increased the volume of share transactions and the number of shareholders in the Company. We have, as of March 2021, more than twice as many shareholders compared to the end of December 2019, which is very pleasant and positive.

### Emission rights

Finally, I would like to address a topic that started to emerge in the last quarter, namely emission rights, or rather the economic value of the major carbon reductions that PWR BLOK provides, and who will be credited. We observed, in the autumn and winter, an increased interest in this matter, not least when Glencore's resigning CEO, Ivan Glasbenberg, presented the company's global plan to achieve net zero emissions by 2050, and mentioned the PWR BLOK technology as an example of a measure to achieve this.

As early as 2019, Lloyd's Register verified that PWR BLOK is the investment that yields the greatest reduction of carbon dioxide per krona invested compared to other types of energy. When we launched PWR BLOK in South Africa, we were also able to note that the company who owns the technology that enables carbon dioxide reductions can be credited for this. Possible "carbon credits" were not included in any of the estimates that were presented to customers, thereby ensuring that we retain them within the Company. We have attempted to obtain economic value on carbon dioxide reductions but have yet to accomplish this. However, it is clear that an economic value exists.

It can be stated that if the value paid for emission rights in the EU is used, a PWR BLOK unit in South Africa generates as much value in "carbon credits" as it does in produced electricity. If we manage to ascertain that value, it would double the value of our product. Today, there is no comparable system for trading emission rights in South Africa yet, but Glencore's and many other companies' ambition to at a faster pace becoming carbon neutral suggests clearly that an economic value on carbon dioxide reduction will become a reality also in South Africa. Carbon dioxide emissions are of course nonetheless a global problem. I can assure you that this is something we are going to look more closely at in the coming years. An exciting 2021 awaits Swedish Stirling.

### Gunnar Larsson

CEO

Swedish Stirling AB (publ)



It can be stated that if the value paid for emission rights in the EU is used, a PWR BLOK unit in South Africa generates as much value in “carbon credits” as it does in produced electricity. If we manage to ascertain that value, it would double the value of our product.

# Vision, business concept and objective

Since its inception, Swedish Stirling's ambition has been to further refine the unique ability of Stirling technology to convert thermal energy into electricity at high capacity and with great efficiency. The ultimate objective is to harness its unique characteristics in commercial applications for the generation of climate-friendly energy at a competitive price.



## Vision

Our vision is to establish Stirling technology as the best alternative for local and sustainable electricity generation.



## Business concept

Our business concept is to develop, manufacture and sell technical solutions based on Stirling technology, providing customers with climate-friendly electricity generated at competitive prices.



## Objective

Our goals for the coming years are to increase the number of order bookings, grow our gross margins, and to achieve positive cash flow.

# Values

Swedish Stirling works on the basis of a set of values and a number of guiding principles that permeate all aspects of the Company's operations. These are Focus, Perseverance and Fairness. Together with the ten principles of the UN Global Compact, these make up the Company's code of conduct. It ensures that the company at minimum fulfills its fundamental responsibility in the areas of human rights, work, environment and anti-corruption. The code of conduct applies throughout the Company and in all activities in which the company is involved.



## Focus

We are always focused. Focus ensures that we always work towards the goal and that we have the courage to opt out of secondary initiatives.



## Perseverance

We never give up. The solution to a problem, no matter what it may be, is always there for those who persist in seeking it.



## Fairness

We are always fair. We only enter into agreements with counterparties that actually stand to benefit. Everything we do is characterised by integrity and business acumen. We never accept any type of arrangement based on anything other than current market conditions.



# Strategy

To achieve our vision and objectives, Swedish Stirling employs the following strategies:



## Increased focus on sales and marketing to drive volume

The Company's earnings potential and competitive advantage increase dramatically with the volume produced. The trend for unit costs to drop rapidly at scale in the automotive industry is directly applicable to the Company's Stirling engine. By focusing on the keen interest shown by the South African ferrochrome industry in the PWR BLOK, Swedish Stirling will be able to significantly ramp up its volumes over the next few years, which opens up new market opportunities for the PWR BLOK as unit costs decrease.



## Robustness and lower unit costs

The technological lead conferred by the unique combination of high power and high efficiency achieved by the Stirling engine is of central importance. A development plan calling for further adaptations to the engine for mass production will help the Company entrench its market-leading value proposition. The PWR BLOK technology is based on a high-modularity construction method that provides a robust solution with high reliability and low service costs. These factors are crucial for customers to choose the Company's technology.



## Secure and improve financing opportunities for the PWR BLOK 400-F for customers and partners

The value created by the PWR BLOK is reduced electricity consumption at a low price. Swedish Stirling can increase its profit in several ways and not only by producing the PWR BLOK at a lower cost. It is nearly as important to be able to finance installations more economically, whether the financing is handled by the customer or a financing company. The financing company Southern Shield is a first step in this direction, but much effort will be invested in getting more and more commercial banks and other financiers to set up credits for PWR BLOK as it gives the product a higher value.



## Identify new customer segments

The PWR BLOK 400-F has been tested for its ability to convert residual gas occurring in the ferrochrome industry. Residual gases from other blast furnace manufacturing are similar but can differ somewhat. However, there are several industries that produce residual gases with largely identical content. In the ongoing PWR BLOK development work, the Company's engineers are currently designing with gases from the ferrochrome industry in mind, but they have the theoretical tools and skills to evaluate and understand which gases are reasonable to use. On this basis, the Company will then be able to identify new customer segments and markets.







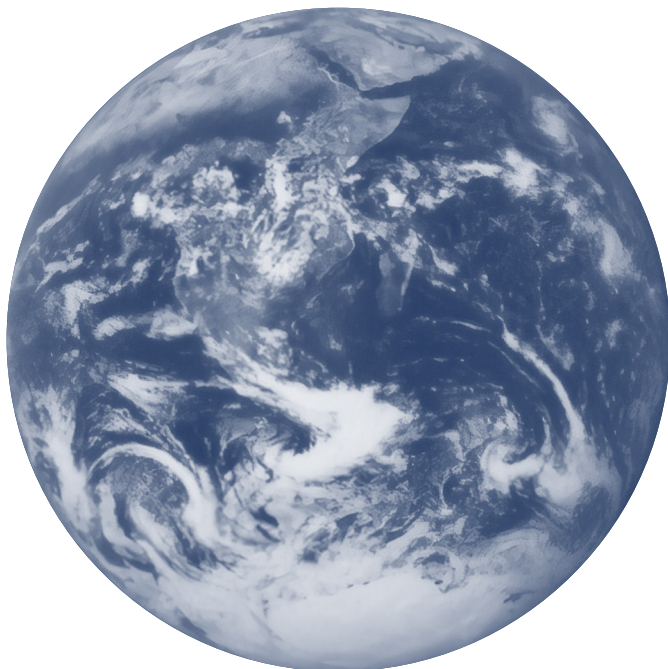


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# The global electricity market



According to the International Energy Agency (IEA), global power generation amounted to 26,730 TWh in 2017<sup>1</sup>. This represents an increase of over 100 percent since 1990. Power generation is dominated by coal, with a market share of around 38 percent, followed by natural gas at around 23 percent. Between 1990 and 2018, coal generation has increased by nearly 130 percent. Natural gas generation, which has largely replaced oil generation, has increased by around 200 percent during the period. Renewable sources of energy, such as hydro, wind, biofuels, solar, etc., account for 25 percent of total power generation. Hydro dominates the sector, accounting for approximately 63 percent of renewable power generation.

According to the IEA, global energy demand is expected to increase by approximately 49 percent by 2040<sup>2</sup>. Although coal power currently accounts for the largest single track of power generation thanks to its ability to reliably produce electricity cheaply, the environmental harm it causes means that it is not a good long-term alternative. Tightened environmental requirements, international conventions to reduce CO<sub>2</sub> emissions, government regulation and requirements imposed on utilities to increase their use of sustainable, renewable energy sources have combined to dramatically change the prevailing market conditions in recent years.

## 26 730

According to the International Energy Agency (IEA), global power generation amounted to 26,730 TWh in 2017.

## 38%

Power generation is dominated by coal, with a market share of around 38 percent

## 49%

The global energy demand is expected to increase by approximately 49 percent by 2040.

<sup>1</sup> <https://www.ekonomifakta.se/fakta/energi/energibalans-internationellt/elproduktion/>

<sup>2</sup> <https://www.capp.ca/energy/world-energy-needs/>

Between 1990 and 2018, coal generation has increased by nearly 130 percent. Natural gas generation, which has largely replaced oil generation, has increased by around 200 percent during the period.



# General market development and challenges

Efforts to identify new renewable and climate-neutral methods of power generation and to reduce dependence on fossil fuels have been underway for several decades. These developments have accelerated over the last decade and enjoy strong global support. At the UN Summit in 2015, world leaders adopted a number of goals for global sustainable development. The goals include “sustainable energy for all,” “ensuring universal access to economically affordable, reliable and modern energy services,” and “increasing substantially the share of renewable energy in the global energy mix by 2030”<sup>3</sup>.

Developments in the field of renewable energy are taking place above all in solar energy and wind, but also in hydro, biofuels, geothermal and geoenery. Significant resources are being invested in research and innovation, with numerous operators and companies continuously presenting new commercial solutions and methods. Yet these initiatives enjoy uneven success, and the challenges are many. Foremost among them are:



**PRICE:** Generally speaking, the price per MWh generated is higher for renewable electricity compared to tried-and-tested technologies like coal and natural gas. New technology carries high initial costs for research, development, testing, etc., and due to the fact that generation costs are initially high at low volumes. The costs only begin to drop at scale. The fact that renewable technology has been able, and continues to be able, to compete on price is due almost exclusively to hefty subsidies and state support.



**POLITICAL DEPENDENCE:** The dependence on subsidies, and thus also on governmental policy, creates market uncertainty. There is certainly a widespread global desire and a pronounced ambition to increase renewables' share in the energy mix, but stated ambitions, political priorities and orientations can always change. The uncertainty relates both to the ability of policymakers to identify what technologies to prioritise, as well as how enduring the decisions will be and how determined policymakers will be to stick to them. A change of government following elections in any given country may lead to a change of course and the shuffling of priorities, thus radically changing conditions on the market.

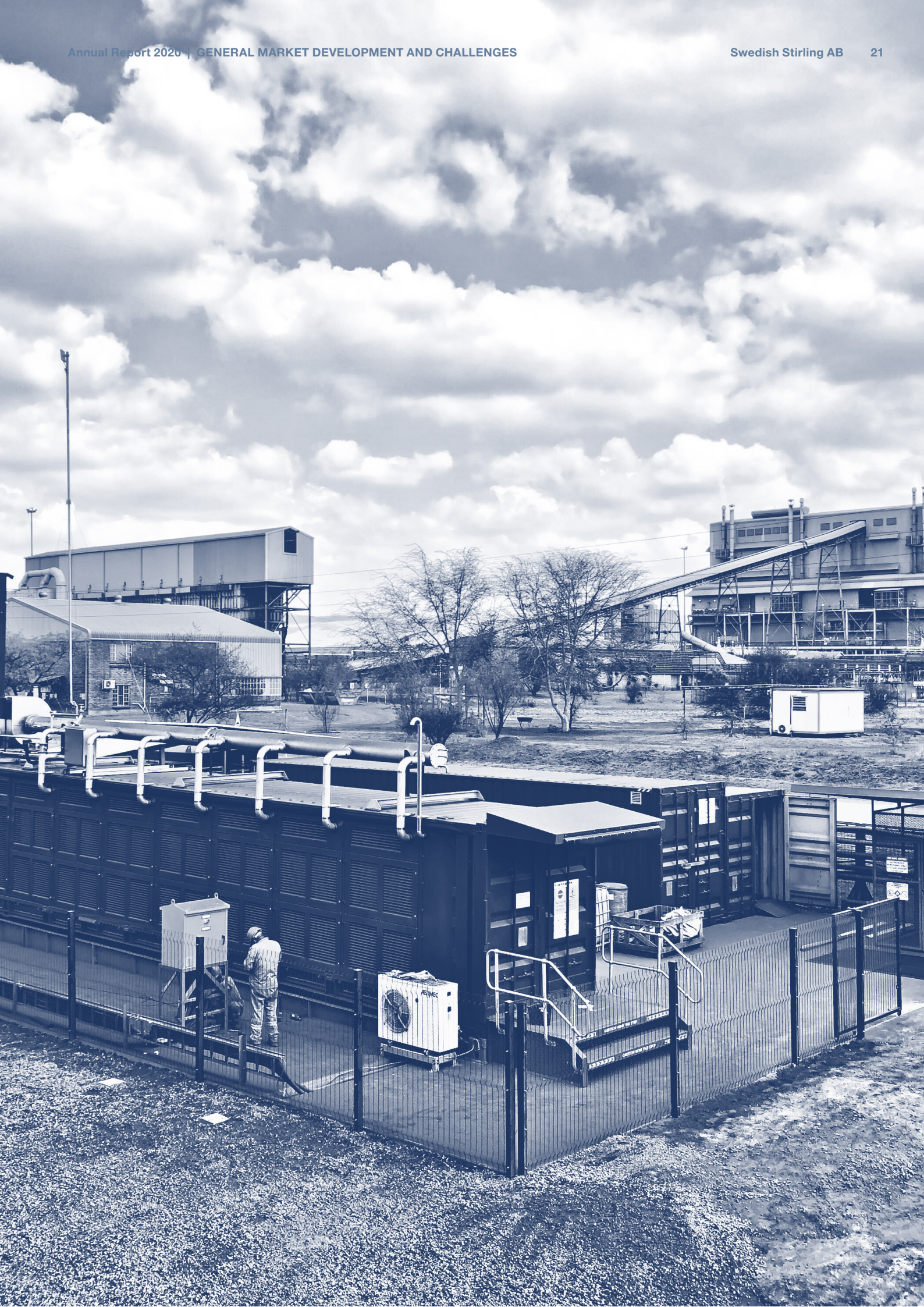


**WEATHER DEPENDENCE:** Many types of renewable energy – such as wind and solar – are directly dependent on the weather. This creates several problems and challenges. Electricity is needed round-the-clock, even when the sun is not shining or when the wind is still. Several new energy storage technologies are being developed and tested to solve this problem, but these will raise the cost structure. In addition, the storage technologies often require additional material and energy inputs, meaning that a life cycle analysis (LCA) does not always result in as positive an outcome for the renewable technologies in terms of total environmental impact and sustainability.



**GEOGRAPHICAL LOCATION:** For larger-scale power generation projects, the right geographical location is often an absolute prerequisite for certain renewable technologies to be able to compete on price. For solar power, for example, generating capacity may need to be installed in deserts or other areas of high solar intensity. The problem, often, is that these areas are not densely populated and that the need for electricity in the local area is low, resulting in higher electricity distribution costs.







# Residual gases - significant market potential for the PWR BLOK 400-F

Swedish Stirling's assessment is that the continued increase in global demand for energy and the effort to increase the share of renewable and climate-neutral power generation methods create an attractive market situation for the company. The price per MWh generated using the PWR BLOK is already competitive without subsidies or state support, nor is the product weather-dependent or dependent on geographical location. The Company's view is that "Waste-to-Energy (WtE)", the generic term for climate-friendly processes in which various types of waste are reused for the generation, for example, of electricity or heat, will continue to be a very important component in the effort to reduce climate impact for a long time. The PWR BLOK 400-F makes it possible to start recovering energy from large amounts of residual gases in a cost-effective manner.

Global market potential for extracting electricity from residual gas is significant. Many kinds of industries and societal phenomena produce by-products in the form of what are referred to as residual and flare gases, which are currently burned off without harnessing their energy. The oil industry alone flares off around 145 billion cubic meters of gas each year, the potential energy of which corresponds to the electricity consumption of the entire African continent<sup>4</sup>. The metallurgical sector also produces very large amounts of residual gas, and this type of industry is also extremely electricity-intensive. In the South African ferrochrome industry for example, the energy bill accounts for approximately one-third of the total cost of doing business<sup>5</sup>. The ability to recover some of the energy from the business' own waste gas (the residual gas) becomes all the more attractive for this reason.

South Africa, the market that Swedish Stirling is initially focusing on, accounts for nearly one-third of global ferrochrome production<sup>6</sup>.

The oil industry alone flares off around 145 billion cubic meters of gas each year, the potential energy of which corresponds to the electricity consumption of the entire African continent.

Total market potential for the PWR BLOK in this sector is estimated at approximately 220 MW, which corresponds to more than 550 PWR BLOK units and a sales value of over USD 550 million. According to the Company's own calculations, total global market potential within the ferrochrome industry is approximately three times the size of the market in South Africa.

Swedish Stirling has initially focused on the ferrochrome industry, but residual gases from other parts of the metallurgical sector that use ferro-alloys basically have equivalent content and are a natural place for the Company to focus in the coming years. The Company's assessment is that the PWR BLOK will work for these as well without major adjustments. In recent years, the Company has also tested the PWR BLOK's ability to generate electricity using syngas and low-quality LPG (Liquefied Petroleum Gas) with good results. Because the actual Stirling engine is closed and only heated from the outside, virtually any fuel can be used, such as natural gas, hydrogen, methane, biogas, ethanol, and so on, opening up many potential additional uses. The Company intends to continue testing other residual gases in order to identify future markets and potential customers.

4 Opec Bulletin, May 2015 and <https://www.worldbank.org/en/news/press-release/2019/06/12/increased-shale-oil-production-and-political-conflict-contribute-to-increase-in-global-gas-flaring>

5 <https://www.ijarlit.com/manuscripts/v4i1/V4i1-1285.pdf>

6 [http://www.miningweekly.com/article/south-africa-crucial-to-global-chrome-supply-chromium-2017-hears-2017-11-10/rep\\_id:3650](http://www.miningweekly.com/article/south-africa-crucial-to-global-chrome-supply-chromium-2017-hears-2017-11-10/rep_id:3650)

Because the actual Stirling engine is closed and only heated from the outside, virtually any fuel can be used, such as natural gas, hydrogen, methane, biogas, ethanol, and so on, opening up many potential additional uses.





# Operations

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# Technology

## Stirling technology

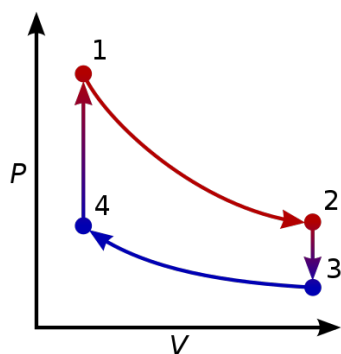
The Stirling engine, which is what is referred to as a gas pressure engine, was invented in the early 19th century. From an historical perspective, its practical applications have been limited compared to, for example, the internal combustion engine, with the result that the technology has never had a major commercial breakthrough. Combined with an overall societal push to reduce the use of fossil fuels, the refinements made to the technology in recent decades may mean that the breakthrough is imminent.

The Stirling engine has a number of characteristics making it particularly well-suited to the development of climate-friendly, cost-effective power generation solutions. Among other things, the Stirling engine can be operated using any heat source at all, in principle. The combustion that drives the engine takes place externally, i.e. outside of the engine itself. It is quiet and virtually vibration-free. Above all, the Stirling engine features very high efficiency, i.e. the ability to convert thermal energy to kinetic energy.



In its simplest version, the Stirling engine is a closed system with an expansion cylinder and a compression cylinder filled with a working gas. The pistons of the cylinders are linked by a connecting rod. When the working gas in the expansion cylinder is heated, pressure increases. This depresses the piston and thus performs work. Part of the force is used to push the hot working gas from the expansion cylinder into the compression cylinder. Once its outward motion in the compression cylinder is arrested, the piston returns by the inertia of the connecting rod, and by the fact that the working gas is compressed at low temperatures. The gas is then forced back into the expansion cylinder. Overall, the expansion of the hot gas in the expansion cylinder does more work than is needed to compress the cold gas in the compression cylinder. This work can be used to drive an electrical alternator that is directly connected to the engine's connecting rod.

The Stirling cycle itself is the most efficient thermodynamic cycle for the transformation of heat into mechanical energy. A constant quantity of hydrogen gas is heated in the engine (4 in figure below). Through its expansion when heated (1 in the figure below) and contraction when cooled (3 in the figure below), the gas sets the pistons in motion. The pistons are linked by a connecting rod that drives an alternator that produces electrical energy. The efficiency of the Stirling engine increases at high temperature differentials between the hot side and the cold side. Since there are no internal contaminants caused by combustion, the pistons, bearings and seals have a very long service life.

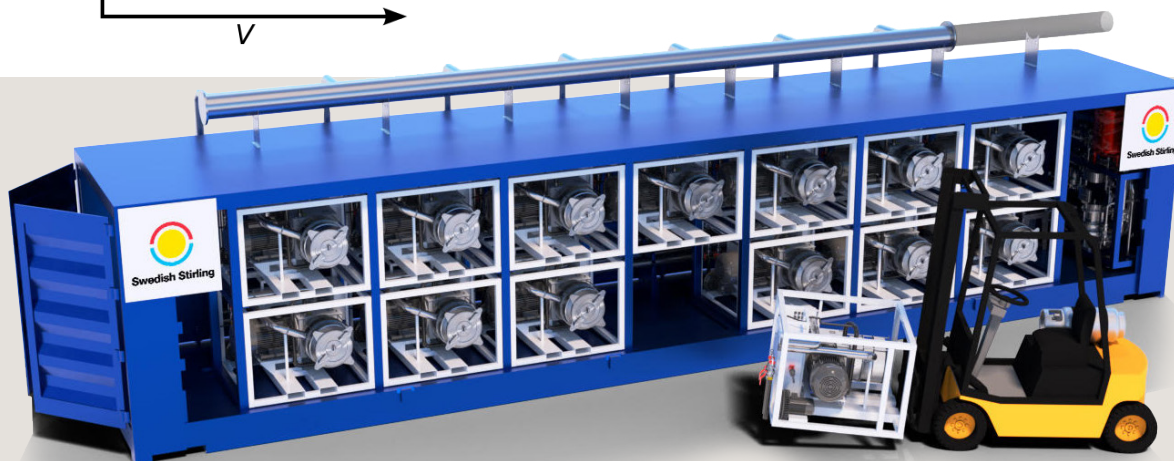


### Swedish Stirling's Stirling engine

The main technology underpinning Swedish Stirling's Stirling engine is under license from Kockums, as governed by the terms of a manufacturing license and technical support agreement entered into with Kockums in 2008. The agreement gives Swedish Stirling a perpetual worldwide license to develop, market, sell and manufacture Stirling engines (with the exception of defence applications). License fees are based on delivery volumes.

By developing the technology and by harnessing some of its unique characteristics (its high efficiency and external combustion design), Swedish Stirling has been able to develop a Stirling engine that provides a higher rate of conversion of solar energy to electricity (32 percent) than any other technology has been able to demonstrate<sup>7</sup>. The design also allowed the same engine to run on various heat sources, hybridisation. In principle any liquid or gaseous fuel can be used, such as natural gas, biogas, ethanol and more. This development also served as the basis for the PWR BLOK 400-F, the company's unique solution for converting energy from industrial residual gases into electricity.

Historically speaking, the major disadvantage of the Stirling engine has been its high production cost. That is why Swedish Stirling has made considerable investments in optimising and adapting the engine for mass production since the company's inception. Some of this work has been done in conjunction with the company's manufacturing partner Sibbhultsverken AB which has many years of experience in automotive production under its belt. The Company's Stirling engine currently has very low maintenance costs, and the unit costs per engine drop off in series production. Analyses conducted by Swedish Stirling also show that the service life of the technology is at least 25 years.









# PWR BLOK-400F

The PWR BLOK 400-F is a container-based solution developed by Swedish Stirling in which the Company's Stirling engines are used to extract energy from residual and flare gases in industrial applications. Many industrial applications, especially in the metallurgical sector, produce by-products in the form of gases (residual gas) that are currently burned off without harnessing their energy. Residual gas is generally of uneven quality, and engines based on internal combustion have a hard time handling it. Yet thanks to its external combustion design, the Stirling engine is practically indifferent to the type of gas burned and to the quality of the gas in question.

Each PWR BLOK contains 14 Stirling engines in a container format and delivers a total net output of 400 kW. The PWR BLOK is deployed in industrial applications and facilities where residual gas combustion occurs and converts the heat from combustion to electricity at high efficiency. This allows for significant energy savings and cost reductions, while also significantly reducing carbon dioxide emissions.

The LCOE<sup>8</sup> calculation made by Swedish Stirling, and verified by the independent certification company Lloyd's Register in May 2019, shows that the cost of generating electricity from residual gases using the PWR BLOK is about 22.5 USD/MWh<sup>9</sup>. This cost level is considerably lower than that normally cited in global studies for both conventional energy types (such as coal and natural gas) and renewables (wind and solar<sup>10</sup>).

A clear example of the benefits offered by the PWR BLOK can be seen in the ferrochrome industry in South Africa (accounting for a third of world production<sup>11</sup>). This industry produces large amounts of residual gas that are currently flared off. At the same time, electricity costs account for nearly a third of the industry's total production costs<sup>12</sup>.



The PWR BLOK makes it possible to burn the gas while at the same time using it to generate electricity at a cost of USD 22.5/MWh.

According to industry sources, the average annual price for the ferrochrome industry in South Africa is USD 57.60/MWh<sup>13</sup>. During ferrochrome production, approximately half of the energy in the process is converted to residual gas. The PWR BLOK 400-F has an efficiency of approximately 29 percent, which means that the energy recovered from the residual gas reduces the company's need for purchased grid electricity by approximately 15 percent. Together with the savings in purchased grid electricity, the current price of the PWR BLOK results in a estimated payback period of five years. With a service life of at least 25 years, this makes the PWR BLOK a highly attractive solution for the customers, which also gives Swedish Stirling latitude to increase the selling price in the future.

8 LCOE (Levelized Cost of Energy) is an established method for calculating the energy cost of a power source that makes it possible to compare it to other methods of power generation in a consistent, fair way. [https://en.wikipedia.org/wiki/Cost\\_of\\_electricity\\_by\\_source](https://en.wikipedia.org/wiki/Cost_of_electricity_by_source)

9 Inputs: Total CapEx (It) 635 000 USD, Annual fuel cost (Ot) 0 USD, Annual O&M cost (Mt) 35 000 USD, Discount rate (r) 5%, Net Annual Energy Production (Et) 3 480 MWh  
10 [https://en.wikipedia.org/wiki/Cost\\_of\\_electricity\\_by\\_source#Current\\_global\\_studies](https://en.wikipedia.org/wiki/Cost_of_electricity_by_source#Current_global_studies)

11 [http://www.miningweekly.com/article/south-africa-crucial-to-global-chrome-supply-chromium-2017-hears-2017-11-10/rep\\_id:3650](http://www.miningweekly.com/article/south-africa-crucial-to-global-chrome-supply-chromium-2017-hears-2017-11-10/rep_id:3650)

12 <https://www.ijariit.com/manuscripts/v4i1/V4I1-1285.pdf>

13 <http://www.eskom.co.za/CustomerCare/TariffsAndCharges/Documents/Complete%20Tariff%202019%20web1.pdf>

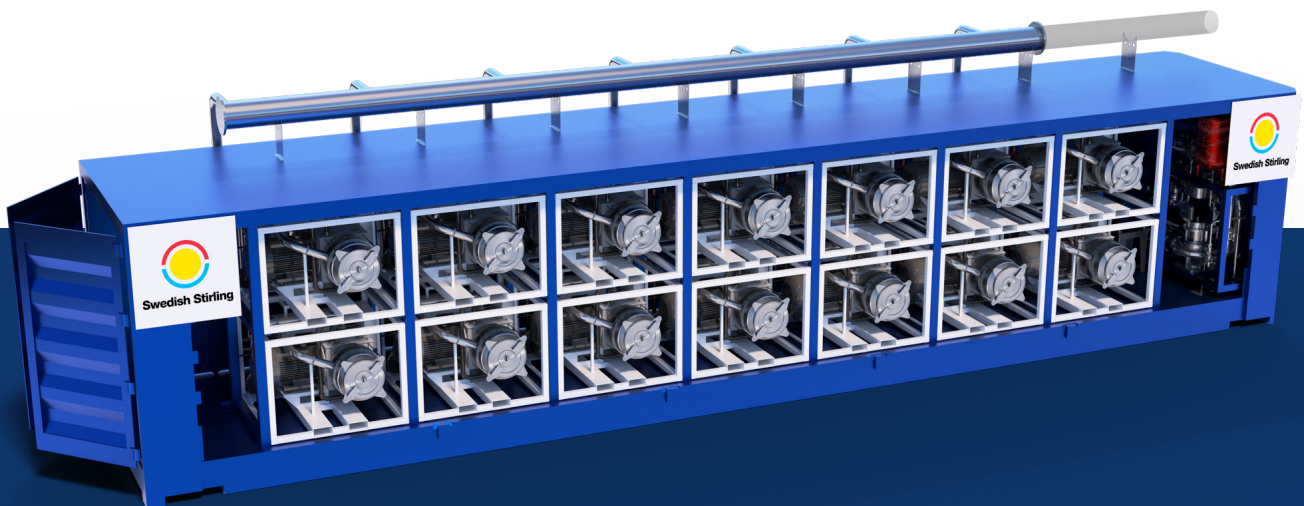
Because the PWR BLOK reduces the company's need for purchased grid electricity, it also reduces the companies' carbon dioxide emissions. South Africa generates approximately 87 percent of all its electricity from fossil fuels<sup>14</sup>. According to Swedish Stirling's calculations, the technology results in an annual 3,500-tonne reduction in carbon dioxide emissions in South Africa per PWR BLOK installed.

In December 2017, just three months after the product was launched, Swedish Stirling sold its first seven PWR BLOK units to the South African ferrochrome producer Afarak Mogale (Pty). The agreement was renegotiated in May 2019 into a conversion service. Tough market conditions for Afarak Mogale, however, led to the companies jointly agreeing to terminate the service in March 2020.

In December 2019, Swedish Stirling signed an agreement with the South African ferrochrome manufacturer Samancor Chrome's subsidiary TC Smelter Proprietary Limited for a pilot installation of an energy conversion service with one PWR BLOK. The unit was commissioned in November 2020. In February 2020, the Company signed an agreement with Glencore for an energy conversion service of up to 25 PWR BLOK (9.9MW) at the company's smelter in Lydenburg, South Africa.

Today, three and a half years after the launch, two customers who together account for just over 90 percent of the ferrochrome production in South Africa have signed agreements with Swedish Stirling for both pilot and full-scale facilities with PWR BLOK. During the summer of 2020, Swedish Stirling also signed memorandum of understanding and letters of intent with Samancor, Richards Bay Alloys and Glencore for orders of up to a total of 241 PWR BLOK.

14

[https://energypedia.info/wiki/South\\_Africa\\_Energy\\_Situation](https://energypedia.info/wiki/South_Africa_Energy_Situation)


# 14 engines

Each PWR BLOK contains 14 Stirling engines in a container format and delivers a total net output of 400 kW.


# 25 years

With a service life of at least 25 years, this makes the PWR BLOK a highly attractive solution for the customers.

# 3 500 tonne

According to Swedish Stirling's calculations, the technology results in an annual 3,500-tonne reduction in carbon dioxide emissions in South Africa per PWR BLOK installed.





Today, three and a half years after the launch, two customers who together account for just over 90 percent of the ferrochrome production in South Africa have signed agreements with Swedish Stirling for both pilot and full-scale facilities with PWR BLOK.

# Risks and risk management

## Expected future development

In 2020, the Company's focus will be on the following:

- Get contract sign for full-scale facilities in South Africa with Samancor Chrome, Richards Bay Alloys and Glencore.
- Further developing the PWR BLOK with a focus on robustness and lower unit costs.
- Start production of PWR BLOK generation 3 for delivery to South Africa.
- Identify and sign agreements with partners in the Company's next market.
- Initiate volume production of PWR BLOK.
- Further strengthening IP protection.

## MATERIAL RISKS AND UNCERTAINTIES

The Board of Directors and management continuously assess the risks that may affect both the valuation of the Company's assets and liabilities, and the Company's profitability. It should be noted that the Company's business is related mainly to developing and commercialising new technology. The Company's development is thus associated with technical, financial and regulatory risks. The Company's various risks are described in detail in the Management Report. The most essential risks, their estimated extent and how they are managed by the Company are described below.

### TYPE

### HOW THIS IS DEALT WITH:

### RISK

**Currency risks:** Due to its international operations, Swedish Stirling is exposed to exchange rate fluctuations. These fluctuations relate primarily to transaction exposure caused by the fact that the Company currently earns and is estimated to continue earning the majority of its revenue in foreign currencies, such as USD and ZAR, while the bulk of its costs, especially personnel costs, are denominated in Swedish kronor. The Company also has translation exposure. On consolidation, the South African subsidiary's net assets are translated to SEK, causing translation differences to arise that affect group earnings. Thus, it cannot be ruled out that future exchange rate fluctuations may have an adverse effect on the Company's operations, financial position and earnings.

There is no currency hedging. At present, South Africa is the Company's only market, and the Company is primarily seeking agreements in USD. However, the Company's newly established financial strength means that there are good opportunities to quickly become established on other markets where there is already significant interest. In the future, the Company will also further increase its focus on increased sales, as large volumes result in significant cost savings for Swedish Stirling, and thus also the ability to retain a competitive selling price in conjunction with a positive gross margin, even in the case of dramatic adverse currency fluctuations.



**Financing and future capital requirements:** Depending on overall business performance, Swedish Stirling may need additional capital to further develop existing assets on terms that are commercially acceptable to the Company, or to otherwise finance future projects. The Company's ability to secure financing in the future will depend on how the Company's business performs, but also on other factors beyond the Company's control, such as capital market liquidity and the willingness of the capital market to finance companies in the sector in which Swedish Stirling operates.

The Swedish Stirling management team regularly participates in capital market events in order to maintain public interest in the Company's shares. The Company also hires several counterparties who regularly produce analyst reports about the Company to promote interest among institutional investors. In addition, unlike most companies in the clean tech industry, the Company is completely independent of any form of government support or public development funds. The Board of Directors will be able to move to shore up its treasury in a timely manner if needed, either by conducting a new share issue or by raising loans.

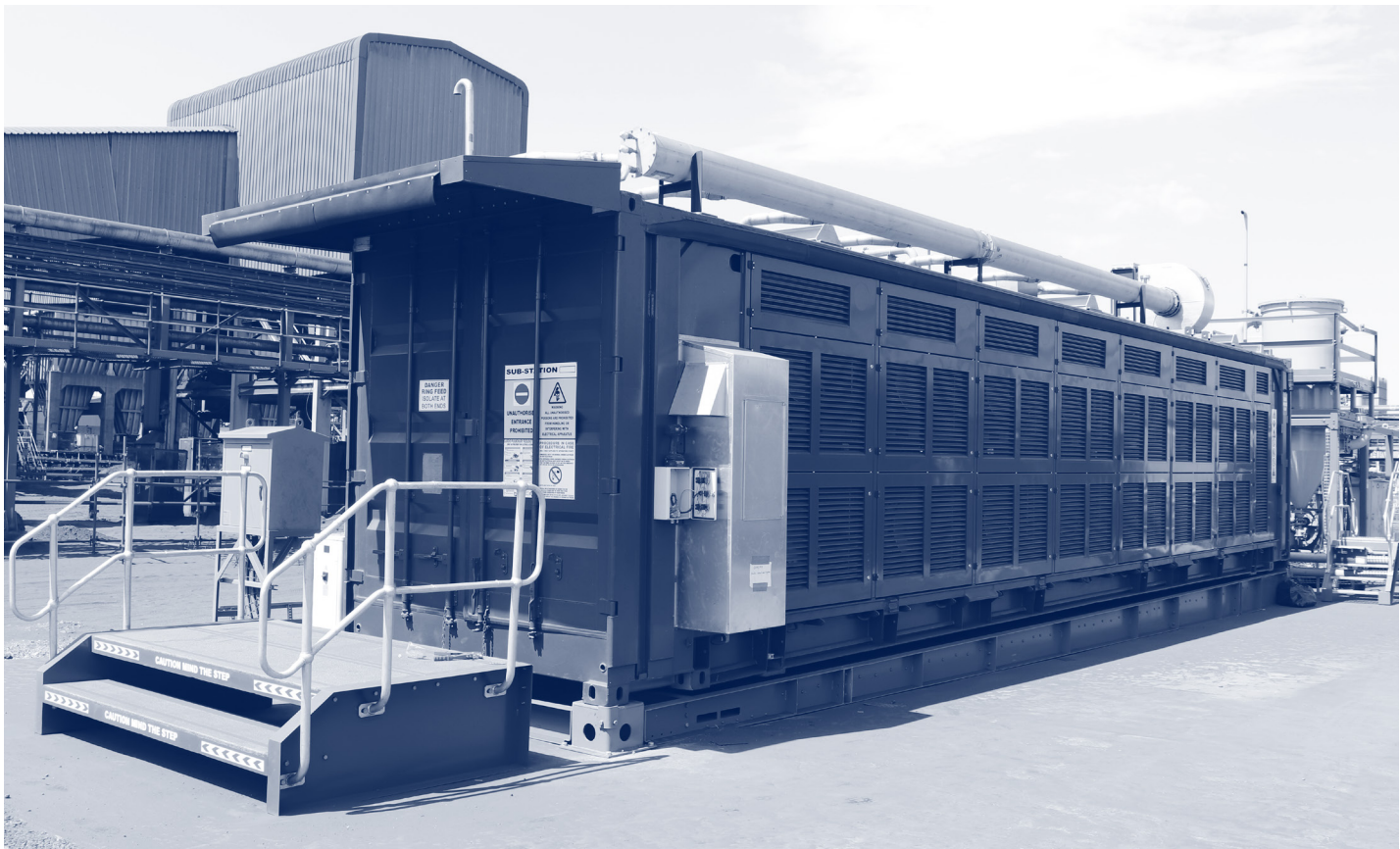


**Dependence on key personnel and employees:** Swedish Stirling has key personnel who are important to the successful development of the Company's operations. The Company is dependent on having qualified and motivated personnel in every post. It is very important to manage to retain key personnel, and that such personnel perceive Swedish Stirling as being a stimulating employer. If such key personnel and employees were to leave the Company, this would have an adverse effect on the Company's business. Moreover, Swedish Stirling intends to further strengthen its own organisation, which will require the recruitment of additional personnel. There is a risk that it will prove difficult to identify or attract employees with the right skills.

By having good financial resources to draw on, a good reputation and an attractive product that can be sold on commercial terms (without the need for subsidies or other support), the Company is able to attract more and more personnel possessing the right knowledge, experience and networks. Swedish Stirling is able to offer remuneration on market terms and has a unique technology that prospective recruits will want to be a part of.



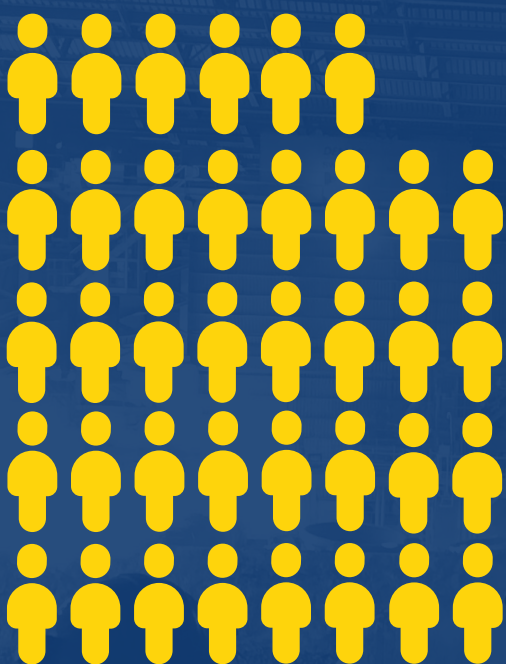




TYPE	HOW THIS IS DEALT WITH:	RISK
<p><b>Dependence on suppliers:</b> In the manufacturing of Swedish Stirling's products, the Company collaborates with a number of suppliers specialising in, for example, manufacturing, assembly, testing and logistics. There is a risk that these suppliers may raise their prices or change their terms, or that delivery difficulties may occur, for example due to fire, sabotage, strike, bankruptcy or other circumstances causing external suppliers to be unable to deliver critical components on time, at a reasonable cost or at all, which by extension may lead to Swedish Stirling being unable to deliver its products on time, at a reasonable cost or at all. In such cases, it may be difficult to find a new supplier in accordance with the company's requirements and specifications.</p>	<p>During the year, the Company strengthened its purchasing organisation and commenced efforts to gradually develop several suppliers that can be used in competitive procurements, which also entails alternative suppliers that reduce the effect of this risk. With growing production volumes, these efforts will be intensified with the objective, in a few years, of achieving a situation where there are always at least two suppliers per component.</p>	
<p><b>Possible technical deficiencies and uncertainties in the Company's products:</b> The PWR BLOK 400-F, Swedish Stirlings's product for extracting electricity from industrial residual and the flare gases, is new on the market. The Company has therefore not had the opportunity to collect enough data regarding, for instance, any typical faults, deficiencies and service needs. These types of deficiencies and uncertainties regarding the technology may also lead to delays in the commercialisation of the PWR BLOK and deliveries to Swedish Stirling's customers.</p>	<p>In recent years, Swedish Stirling has built up a dedicated technology and product development organisation with a large number of technical experts and engineers in order to further develop the technology and to address any problems and deficiencies. The first PWR BLOK 400-F was commissioned at Afarak Mogale in South Africa in May 2019. The results we are getting are usually in line with expectations, in some cases better, and in some cases require action on our part. Although the PWR BLOK works as intended, the Company is constantly working on development to make the PWR BLOK even more robust. The second PWR BLOK being delivered to TC Smelter during Q2 of 2020 includes several upgrades.</p>	

# Employees

As of 31 December 2020, Swedish Stirling had 38 employees, five of whom were based in South Africa, with the remainder in Gothenburg and Sibbhult. They are primarily involved in technology, research, development, purchasing, production technology, quality and sales. Most of the employees are engineers and technicians.



**2020** | 38 employees



**2019** | 30 employees



**2018** | 23 employees



**2017** | 8 employees



# Partners

Swedish Stirling collaborates with a number of suppliers specialising in their respective areas. These partnerships are primarily related to manufacturing, assembly, testing and logistics, but also include marketing communications, legal counsel, accounting, etc. This way the Company ensures a high degree of flexibility, focus on core operations and cost-effective solutions, but above all access to state-of-the-art technology and systems for development, manufacturing and assembly. This enables a high level of quality and the ability to rapidly bring down the costs for the Company's products.



## Sibbhultsverken AB

Swedish Stirling has been partnered with Sibbhultsverken AB since 2009 for the production of Stirling engines. Sibbhultsverken has many years of experience within the automotive industry and is well-suited for series production of strategic components for Stirling engines. The engines are manufactured at the Company's factory in Sibbhult, Sweden, based on Swedish Stirling's production documentation. Over the years, Sibbhultsverken has also been involved in the effort to adapt the Stirling engine for mass production. The Company currently has the capacity to deliver components for 100,000 Stirling engines each year.



## PwC

The accounting firm Öhrlings PricewaterhouseCoopers AB (PwC) is Swedish Stirling's auditor since the Annual General Meeting in 2020.



## Mannheimer Swartling

To ensure that Swedish Stirling always complies with regulations and legislation and that it enters into effective business agreements, Mannheimer Swartling, the largest law firm in the Nordic region, was retained as legal counsel in the spring of 2018. Mannheimer Swartling assists the Company with ongoing board activities as well as raising capital.



## Carnegie Investment Bank

Carnegie Investment Bank AB has been assisting Swedish Stirling with financial advice since the autumn of 2020, and has been commissioned to review the Company's capital structure and evaluate the possibility of a listing on Nasdaq Stockholm, Main Market.



## ABB Motion

In the autumn of 2020, Swedish Stirling began a technical collaboration with ABB Motion regarding PWR BLOK. ABB will supply low-voltage products and drive for the PWR BLOK, and will contribute its skill and expertise in the field.

# Sustainable entrepreneurship

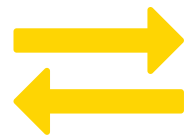


For Swedish Stirling, issues of resource efficiency, environmental stewardship, manufacturing efficiency and employer responsibility have been very much part and parcel of the business' healthy and stable financial development. The Company's sustainability efforts are based on a materiality analysis in which the most relevant issues relating to sustainable entrepreneurship are continuously identified and discussed by the management team and Board of Directors.

Ever since its inception, the Company's main focus has primarily been on research and development. The most central and relevant issues from a sustainability perspective, therefore, have been financial resilience, business acumen and cooperation, and the ability to create procedures and rule sets to continuously reduce the environmental impact of the business' own operations.



**Financial responsibility**



**Business responsibility**



**Environmental responsibility**

## 2021

With Swedish Stirling's launch of serial production at the end of 2021, the Company will conduct a new sustainability analysis with increased focus on the environmental impact of the Company's own manufacturing.



## Financial responsibility

Swedish Stirling works to ensure a course of financial development making it possible for the Company to invest in further development. This creates value for shareholders, employees and society at large, in both the short term and the long term. To secure the Company's future operating capital needs the Company carried out directed issues in 2020, which provided Swedish Stirling with SEK 214.5 million. In 2020, the Company also entered into an agreement with Glencore for a full-scale facility of up to 25 PWR BLOK, and signed declarations of intent in South Africa on additional orders of up to 241 PWR BLOK. This secures and ensures the Company's continued financial development.

## Business responsibility

One of the Company's important and guiding principles, and one that permeates all its operations, is Fairness. What this means, among other things, is that the Company only does business with customers who actually benefit from the deal. This also means that Swedish Stirling will not agree to pay excessive remunerations or benefits to anyone in order to close a deal, nor will it agree to accept such remuneration. Swedish Stirling always endeavours to ensure that each transaction will be sustainable, that is, economically sound over the long term and competitive in its own right, instead of being dependent on public grants or subsidies.

## Environmental responsibility

Swedish Stirling supplies products and solutions that give the Company's customers climate-positive electricity at competitive rates. The Company's product, the PWR BLOK 400-F, will result in significantly reduced carbon dioxide emissions, thus contributing to the achievement of the UN's goals for global sustainable development. Recovering all the energy from the South African ferrochrome industry's residual gases using the PWR BLOK 400-F would reduce global carbon dioxide emissions in South Africa by nearly 2,000,000 tonnes annually. That is three times as much as the emissions caused by Swedish domestic aviation before the pandemic. In the short term, the Company also takes environmental responsibility both by working according to procedures and regulations to reduce the impact of its own operations, and by collaborating with suppliers subject to stringent environmental and quality requirements, such as ISO 14001 and ISO 9001 certification, as well as the automotive industry's IATF 16494 quality standard.

## Future sustainability efforts and reporting

With Swedish Stirling's launch of volume production at the end of 2021, the Company will conduct a new sustainability analysis with increased focus on the environmental impact of the Company's own manufacturing. This effort will begin in 2021 and the ambition is to develop new routines, internal regulations and relevant key figures for the Company's overall sustainability work, as well as to report this in a separate sustainability report.



# Sales and marketing activities

Work on Swedish Stirling's sales and marketing activities has of course been affected by and adapted due to the pandemic. However, this has not stopped the Company from intensifying and achieving great success in its sales and marketing activities targeting the ferrochrome industry in South Africa in 2020.

## Successes in South Africa and strengthening of sales and marketing

Swedish Stirling's sales and marketing activities in 2020 were mainly focused on South Africa and the country's ferrochrome industry. The Company has also been greatly strengthened in that area with the recruitment of Dennis Andersson in the new position of Chief Sales and Marketing Officer. Dennis' stated mission in the short term is primarily to lead the Company's commercialisation phase for the PWR BLOK unit, to manage the commercial roll-out in South Africa and to identify Swedish Stirling's next market.

The global pandemic meant that much of the planned sales and marketing activities had to be adapted over the year from physical to digital. Negotiations with the South African ferrochrome producers, Samancor, Richards Bay Alloys and Glencore, were most often held digitally, but a lot of the preparatory work could be performed directly on site thanks to our own sales organisation in the country. And in February 2020, before the pandemic became a reality, we gave a successful on-site demonstration of the PWR BLOK unit at Afarak Mogale's smelter in South Africa, for a number of selected investors, analysts and customers.

Sales and marketing efforts have, despite Covid-19, been very successful throughout the year, and as a result of this, Swedish Stirling signed memorandums of understanding and letters of intent in the summer with Samancor, Richards Bay Alloys and Glencore for orders of up to 241 PWR BLOK units. This is in addition to the agreement on up to 25 PWR BLOK units for an energy conversion service at Glencore, which was signed in February. In the autumn of 2020, we started negotiations that will transform the declarations of intent into definite agreements in 2021. In October, the Company's new Chief Sales and Marketing Officer was also able to visit South Africa and meet the industry and other important players on site.

The successes in South Africa have also led to further increased interest in the PWR BLOK unit, with enquiries and notifications of interest from several sources in the global metallurgical sector. Swedish Stirling has therefore started work on identifying the market on which the Company is going to launch the PWR BLOK unit after South Africa.

## Information and investor relations

In 2020, the Company continued to participate, on a regular basis, in various external informational and investor meetings. The purpose of these meetings was both to present the Company to new investors and to inform current investors of the Company's development. Prior to 2020, there were also over 15 local informational meetings scheduled around the country, but most of these were unfortunately cancelled on account of Covid-19. The Company has however strongly increased its digital provision of information in both social media and on its own website, which has been developed and upgraded in the course of the year.

The choice to list Swedish Stirling on First North Premier Growth Market in November has also contributed to increased awareness of and interest in investing in the Company. Towards the end of 2020, both turnover in Swedish Stirling shares and the number of shareholders increased. In the autumn, an agreement was signed on recurring analysis with both Aktiespararna and Emergers, and collaboration with London-based Longspur, which has tracked and regularly published analyses of the Company since 2019, continued in 2020. The Company has also contracted Carnegie Investment Bank AB to review the Company's capital structure and evaluate the possibility of listing on the Nasdaq Stockholm Main Market.

The Company's positive stance towards increased investor relations and enhanced provision of information has been very successful. Several Swedish and foreign institutional investors have chosen to become owners, and the Company has more than twice as many shareholders today as in December 2019. The Company intends to develop the provision of information to the market and shareholders in 2021.



Chief Marketing and Sales Officer, Dennis Andersson, met Sweden's ambassador, Håkan Juholt, during his trip to South Africa.



Visit in February to Samancor's plant, TC Smelter.



The pilot plant at TC Smelter is completed and commissioned in the autumn.



# Shares

## Shares

Swedish Stirling has been publicly listed in Sweden since 28 November 2016, and since 6 November listed on the Nasdaq First North Premier Growth Market under the ticker symbol STRLNG and with ISIN code SE0009143993. As at 31 December 2020, the share capital amounted to SEK 971,189,61 divided into 97,118,961 shares with a quota value of 0.01. All shares confer equal rights to the Company's assets and profits and entitle their holders to one vote at the Annual General Meeting (AGM). At the AGM, each shareholder with voting rights may vote the full number of shares owned and represented by such party without any restrictions on voting rights.

## Stock market trading

In 2020, 32,078,409 Swedish Stirling shares were traded for a total value of 342,4 MSEK and at an average price of SEK 10,67. The share price was SEK 11,20 at the beginning of the year and SEK 13,34 at the end of the year.

## Ownership structure

As of 31 December 2020, Swedish Stirling had 10,402 shareholders, most of whom were private individuals with a small shareholding. The largest individual owners were Sven Sahle (through company) with a holding of 28,485,700 shares, and AC Cleantech Growth Fund I Holding AB, with 13,407,500 shares.

## Shareholder information

The 2020 annual report will be made available to the general public on 19 March 2021 on the website, [www.swedishstirling.com](http://www.swedishstirling.com). Quarterly reports are also available on the website. For additional information about the Company please contact Swedish Stirling AB by email: [ir@swedishstirling.com](mailto:ir@swedishstirling.com).

Largest shareholders per 2021-02-28	Number of shares	Share of capital and votes (%)
Sven Sahle (through Dagny OÜ)	28,485,700	25.5%
AC Cleantech Growth Fund I Holding AB	13,407,500	12.0%
East Guardian SPC	10,240,000	9.2%
Miura Holding Ltd	8,508,571	7.6%
Gunnar Larsson (through Estreet AB)	2,000,000	1.8%
<b>Total the five largest shareholders</b>	<b>62,641,771</b>	<b>56.1%</b>
Others	49,017,482	43.9%
<b>Total</b>	<b>111,659,253*</b>	<b>100%</b>

\* The number of shares has increased since the balance sheet date due to conversion (KV2 and KV3) and exercise of warrants.

Source: Euroclear Sweden AB with known subsequent changes

**NASDAQ FIRST NORTH  
PREMIER GM  
WELCOMES  
SWEDISH STIRLING**



**Swedish  
Stirling**



**Nasdaq**



# The Company's history

Swedish Stirling AB was founded in 2008 by Gunnar Larsson, the former CEO of Kockums AB. His years at Kockums gave him deep insight into Stirling technology. Over the years, the Company had successfully developed this technology for its submarines, producing an engine that was unique in terms of its ability to convert thermal energy into electricity at high capacity and with great efficiency. Swedish Stirling's journey started with Gunnar's idea that it ought to be possible to harness these characteristics in commercial applications for the generation of renewable energy. Initially, the Company focused on the solar energy application. The Company is currently focused on the proprietary PWR BLOK 400-F, whose Stirling technology recovers energy from industrial residual gases and converts it into electricity. The Company's vision is to establish Stirling technology as the best alternative for local electricity generation.



## 2008

The Company is formed, and an agreement is signed between Ripasso Energy AB (Swedish Stirling) and Kockums AB.



## 2009

Agreement signed with Metallbearbetning i Sibbhult for the production of Stirling engines.



## 2010

Successful test of Ripasso Energy's (Swedish Stirling's) first Stirling engines produced in-house. Conclusion of agreement to test a solar power facility in Antalya, Turkey, and to construct a reference facility in Uppington, South Africa.



## 2011

The second-generation Stirling engine with a rated output power of 29 kW is tested in Antalya, Turkey.



## 2012

Net efficiency of 32 per cent is measured at the reference facility in South Africa. No other technology has previously demonstrated such efficiency at converting solar energy into grid-quality electricity.



## 2013

Initial studies on a hybridised product are carried out, showing good results in terms of combining solar heat with other fuel-based methods for heating the Stirling engine.

## 2014

Ripasso Energy (Swedish Stirling) relocates its headquarters from Malmö to Gothenburg.

## 2015

Following initial analysis, the first steps are taken toward a product able to burn residual gases as a fuel.



## 2016

Enters into a framework agreement with the Italian company Horizon. The agreement is for 100 or so engines for commercial use in Sicily, along with a demonstration unit at the University of Palermo. After an oversubscribed new share issue, Ripasso Energy (Swedish Stirling) is listed on the NGM Nordic SME under the ticker RISE MTF (STRLNG).

## 2017

Submits three patent applications for the Company's hybridization solution. Conducts tests with residual gas from the ferrochrome industry. Horizon orders three solar hybrid Stirling engines from Ripasso Energy (Swedish Stirling) for delivery to a pilot commercial facility in Sicily. Launches the PWR BLOK 400-F, a container-based solution for the extraction of energy from residual and flare gases. The South African company Afarak Mogale (Pty) Ltd orders seven PWR BLOK units.

## 2018

The Company opens an office in South Africa. Starts production of the first PWR BLOK units in Sibbult. Signs a letter of intent with the South African ferrochrome producer Glencore regarding installation at their facilities in South Africa. Files a patent application concerning a system for central monitoring and control of the working gas in each Stirling engine within a PWR BLOK.

## 2019

The Company's first commercial PWR BLOK unit is shipped to Afarak Mogale in South Africa and put into operation in May. The Company changes its name from Ripasso Energy to Swedish Stirling. Signs an exclusive agreement with Glencore to finalize an installation of up to 25 PWR BLOK 400-F units. Signs letter of intent with the South African development bank IDC to form a jointly-owned financing/leasing company – Southern Shield. Signs an agreement with South African Samancor Chrome's subsidiary TC Smelter for a pilot installation.



## 2020

Signs an agreement with Glencore for an energy conversion service with up to 25 PWR BLOK (9.9MW) at the company's smelter in Lydenburg in South Africa. Writes letter of intent with Samancor Chrome, Richards Bay Alloys and Glencore for orders of up to a total of 241 PWR BLOCKS. Swedish Stirling is listed on Nasdaq First North Premier Growth Market. Installs PWR BLOK in a pilot project at Samancor Chrome's smelter, TC Smelter in South Africa.





# Corporate governance

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# Corporate Governance Report

## Corporate governance at Swedish Stirling

Swedish Stirling is a Swedish public company. Before the listing on Nasdaq First North Premier Growth Market on 6 November 2020, the corporate governance was based on Swedish law, the Company's Articles of Association, the regulations of NGM Nordic SME as well as other rules and recommendations. Following the Nasdaq First North Premier Growth Market listing in November 2020, the Company also adheres to Nasdaq First North's Rule Book for Issuers and the Swedish Code of Corporate Governance (the Code).

The corporate governance report refers to the financial year 2020 and has been prepared in accordance with the Annual Accounts Act.

The corporate governance report is not incorporated into the formal annual report documents. The Company's auditor takes note of the corporate governance report and makes a statement regarding the preparation of the corporate governance report and that its statutory information is presented in accordance with the other parts of the annual and consolidated accounts.

## Deviations from the Code

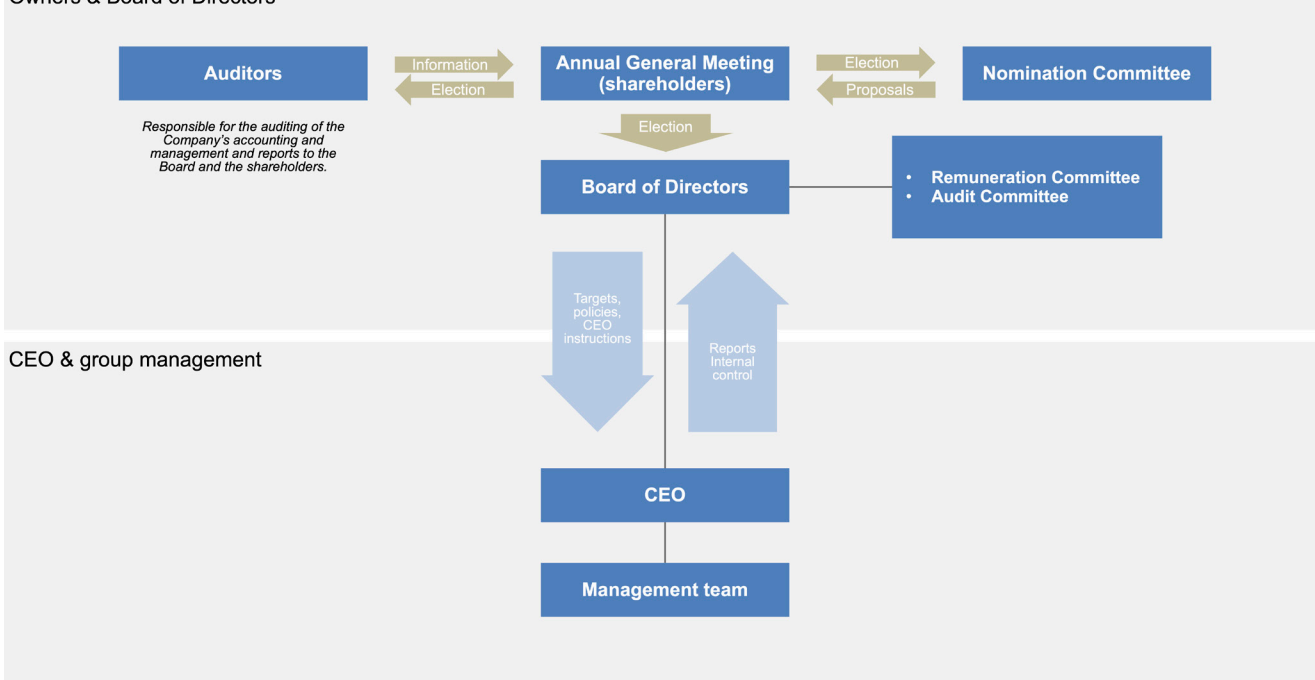
Swedish Stirling has the following deviation from the Code during the financial year of 2020:

Code rule 7.6, to not have interim reports that have been reviewed by the Company's auditors. The Company considers that it is not yet of significant importance with regards to size and extent of the business, however, intends to do so when the Board considers it necessary.

## Shareholders

The shareholders' influence is exercised primarily through voting during the Annual General Meeting (AGM) and appointing members to the Company's Nomination Committee. All shareholders have the right to propose new Board members to the Nomination Committee. This should be done well in advance of the AGM in order for the Nomination Committee to have adequate time to make relevant assessments of the proposed candidates. The largest shareholders are Sven Sahle through company and AC Cleantech Growth Fund I Holding AB. For further information regarding the share and shareholders, please refer to Swedish Stirling's annual report 2020, page 40.

### Owners & Board of Directors



## Annual General Meeting

According to the Swedish Companies Act, the Annual General Meeting (AGM) is the highest decision-making body in a Swedish public company and the shareholders exercise their voting rights at these meetings. Swedish Stirling's AGM is held each year before the end of June. In addition to the AGM, an Extraordinary General Meeting (EGM) can be carried out if required. Swedish Stirling's AGM is held in Gothenburg, where the Company has its registered office, or in Stockholm.

Resolutions made by the AGM include, among others, the adoption of the consolidated income statement and balance sheet, allocation of the Company's profit or loss, discharge from liability for the members of the Board and the CEO, election of Board members, Chairman of the Board and statutory auditor, remuneration to Board members and auditor as well as guidelines for remuneration to CEO and other senior executives. The shareholders of Swedish Stirling also decide on other issues of importance at the AGM, for example amendments to the Articles of Association.

All shares confer equal rights to the Company's assets and profits and entitle their holders to one vote at the AGM. At the AGM, each shareholder with voting rights may vote the full number of shares owned and represented by such party without any restrictions on voting rights.

### The Annual General Meeting 2020

The 2020 AGM was conducted on 24 April in Gothenburg. The AGM resolved, among other things, to re-elect the Board members Sven Sahle, Andreas Ahlström, Gunilla Spongh, Erik Wigertz and David Zaudy. Carina Andersson was elected as new Board member. Sven Sahle was re-elected as Chairman of the Board. Furthermore, board fees of SEK 200,000 each were decided to be paid to the Board members Carina Andersson and Gunilla Spongh. A remuneration of SEK 100,000 was decided to be paid to the Chairman of the Audit Committee. The auditing firm Öhrlings PricewaterhouseCoppers AB (PwC) was elected as the Company's new auditor until the time of the next AGM. PwC announced that the Authorized Public Accountant Johan Malmqvist will be the auditor in charge. It was decided that the auditor's fee will be paid according to approved invoices.

Furthermore, the AGM resolved, in accordance with the Board's proposal, that no dividend will be distributed and that the retained profits shall be carried forward to the new accounts. The Board was authorized to resolve on new share issues, within the framework of the Articles of Association. Such resolution on share issues can be made with provisions of contribution in-kind, set-off or cash payment. The number of shares issued based on the authorisation may not exceed 30 percent of the registered share capital at the time of the resolution.

### Extraordinary General Meetings 2020

In 2020, Swedish Stirling held two Extraordinary General Meetings (EGM), on 8 April 2020 and on 22 December 2020.

The EGM on 8 April 2020 was held in Gothenburg. The meeting resolved to approve the Board of Directors' proposal to issue convertible bonds of SEK 100,000,000. Further, the meeting resolved to amend the limits for the number of Board members by amending the Articles of Association and resolved, in accordance with the proposal of the Nomination Committee, to appoint David Zaudy as new ordinary Board member.

The EGM on 22 December 2020 was held only by postal voting without any physical presence. The meeting resolved, in accordance with the proposal of the Board of Directors, and in accordance with the announced agreement with the holders of convertible bonds 2019/2021:2 (KV3), to amend the conversion price for convertible bonds 2019/2021:2 (KV3) from SEK 10 per share to SEK 9 per share.

### Annual General Meeting 2021

The 2021 AGM will be held on 23 April. The protocol from the AGM will be made available on [www.swedishstirling.com](http://www.swedishstirling.com).

With regard to the current circumstances, the Board has decided that the 2021 AGM will be held solely through postal voting with the support of temporary statutory rules. This means that the AGM will be held without physical presence shareholders, delegates or external parties, and that shareholders' exercising of their right to vote can only be done by advance voting. Publication of the notice is intended to take place by a press release on 22 March 2021.



## Nomination Committee

According to the Code, companies must have a Nomination Committee tasked with preparing resolutions to the AGM regarding the appointment of Chairman of the AGM, Board of Directors, Chairman of the Board and auditor, remuneration to Board members (distributed between Chairman of the Board and other Board members as well as remuneration for committee work) and remuneration to the auditor. The 2018 AGM resolved on instructions for the Nomination Committee to apply until further notice, including among other things that the Nomination Committee should consist of representatives from the three largest shareholders, in terms of votes, according to the share register kept by Euroclear Sweden AB as at the last banking day in August each year.

The Nomination Committee consists of Stanislav Kotov, appointed by East Guardian SPC, Sebastian Burmeister, appointed by AC Cleantech Growth Fund I Holding AB, and Sven Sahle, appointed by Dagny OÜ. The Nomination Committee is chaired by Stanislav Kotov.

### Work of the Nomination Committee before the Annual General Meeting

The Nomination Committee held one recorded meeting in preparation for the 2021 AGM, in addition to having several interactions over email and telephone.

The evaluation of the current Board's work, competence, experience, and composition has been based on the following information:

- The Chairman of the Board's report on the Board's work.
- Survey with answers from all Board members.
- Reports from the Chairman of the Board, CEO and management team regarding the Company's operations, targets and strategy.

## Auditor

The auditing firm Öhrlings PricewaterhouseCoopers AB (PwC), with address Skånegatan 1, 405 32 Gothenburg, was elected by the 2020 AGM to serve as Swedish Stirling's auditors through the conclusion of the 2021 AGM.

Johan Malmqvist, Authorised Public Accountant, acts as auditor in charge and is a member of Financial Accounting and Reporting (FAR), the industry association for auditors in Sweden.

The auditor has completed the audit for the annual accounts the annual accounts and consolidated accounts for the year 2020-01-01 to 2020-12-31. The auditor has also made the statement that this corporate governance report has been prepared and that information herein is consistent with the annual accounts and consolidated accounts. The auditor's review is described primarily through the auditor's report but also through certain statements regarding the corporate governance report. These are presented to the AGM. In addition, the auditor has provided more detailed reports on both the planning of the audit as well as observations made to the Audit Committee and the Board. In the parts concerning the review of the company management, the reporting has been done without the presence of management. The invoiced auditor's fees for the last two financial years are reported in note 6 in the annual report 2020.

## Board of Directors

The Board has the overall responsibility of Swedish Stirling's organisation and management. The Board's tasks are regulated in the Swedish Companies Act, the Company's Articles of Association and the Code. In addition, the Board's work is regulated by rules of procedure adopted annually by the Board. The rules of procedure regulate, among other things, the division of work and responsibilities between the Board members, the Chairman of the Board, and the CEO, and contains procedures for financial reporting. The Board also resolved instructions for the Board's committees.

### Composition of the Board

According to the Company's Articles of Association, the Board should consist of no less than four (4) and no more than eight (8) ordinary Board members. The Board has since the 2020 AGM consisted of six members: Chairman of the Board Sven Sahle, Andreas Ahlström, Erik Wigertz, Gunilla Spongh, Carina Andersson and David Zaudy. For further information on members of the Board see pages 52-53.

### Chairman of the Board

The Chairman of the Board is proposed by the Nomination Committee and is elected by the AGM. In addition to the Board members' regular responsibilities the Chairman shall lead the Board's work, convene board meetings, prepare agendas and make sure that adequate follow-up is performed, and that the Board's work is carried through as well-organised and efficient as possible. The Chairman of the Board also keeps himself informed about the Company through ongoing dialogue with the CEO and the Executive Team, in addition to Board meetings and committee work. The Chairman shall also make sure that existing, as well as newly added members of the Board, receive sufficient information to get acquainted with the Company's operations and that they have the right conditions to continuously update and deepen their knowledge in matters concerning the Company.

### Work of the Board

The Board meets at predetermined dates during the year, as well as when it is considered necessary, depending on information disclosure or when certain decisions are to be made. In addition to the Board members, the Company's CEO and the CFO participate in the Board meetings as rapporteurs.

### Material events that occurred during the year of 2020

During 2020, the Board held 22 meetings relatively evenly distributed over the year. The reason for the large number of board meetings was matters concerning, among other things, measures taken due to the corona pandemic, decisions regarding the listing on Nasdaq First North Premier Growth Market, as well as capital issues, and agreements with convertible loan holders regarding conversion. In addition to Board meetings, Swedish Stirling's Board of Directors conducts an annual strategy meeting. In June 2020, the Board held a strategy meeting where the strategic plan for the years 2020 to 2028 was presented by the Company's CEO and CFO, and subsequently resolved by the Board.

## Board committees

The Company has established an Audit Committee and a Remuneration Committee. The committees' work is mainly of preparatory and advisory nature, but the Board may in certain cases delegate decision-making power to the committees.

### The Audit Committee

The tasks of the Audit Committee include, among others, supporting the work of the Board to ensure the quality of the Company's financial reporting, overlook of the internal audit function and reporting, meeting regularly with the Company's statutory auditor, assisting the Board in preparing a report on internal control and risk management, monitoring compliance status and incidents reported, monitoring significant disputes and damage claims, establishing guidelines on the non-auditing services the Company may procure from its statutory auditor and evaluating the statutory auditor's performance. At the Audit Committee meetings representatives from the Company may participate as rapporteurs on relevant matters. The Audit Committee consists of Gunilla Spongh (Chairman), Andreas Ahlström and Sven Sahle. The Audit Committee held six meetings during 2020. The Company's CFO participates as secretary at all meetings. The auditor participated in three meetings in 2020. The Audit Committee continuously reports to the Board.

### The Remuneration Committee

The Remuneration Committee develops guidelines and frameworks for the Company's senior executives regarding salary and other terms of employment and provides the Board with proposals regarding the CEO's salary and other benefits, in accordance with the remuneration policy annually determined by the AGM. Furthermore, the Remuneration Committee decides upon salary and other terms of employment for other senior executives, following a proposal from the CEO. The Remuneration Committee held one meeting during 2020. The Remuneration Committee reports to the Board and comprises, as of the 2020 AGM, Erik Wigertz (Chairman) and Sven Sahle.

## Remuneration to the Board

Remuneration to the Board and committees is determined by the AGM. At the 2020 AGM it was decided that remuneration to the Company's Board members Carina Andersson and Gunilla Spongh was set at SEK 200,000, respectively. The Chairman of the Audit Committee is paid an additional fee of SEK 100,000.



## CEO and Executive Team

The Executive Team comprises the CEO and five to six senior executives. The CEO is appointed by and receives instructions from the Board. The CEO in turn is responsible for the appointment of members in the Executive Team and for the day-to-day management of the Company's operations in accordance with the Board's instructions. The CEO has legal responsibilities and in addition, the division of work between the Board and the CEO is regulated in the CEO instructions, which the Board has decided upon at its statutory Board meeting. In summary, the CEO's instructions imply that the CEO is responsible for the following areas:

- Manage the Company's day-to-day operations
- Take necessary measures to ensure that the organisation and the control of the Company's accounting is satisfactory and that the accounting is conducted in accordance with applicable rules and regulations
- Decide on certain urgent matters which otherwise would have required a board decision
- Prepare necessary information and supporting documents prior to Board meetings
- Ensure that the Board continuously receive such information that is required in order to assess the financial situation of the Company
- Generally promote the interest of the Company

During 2020 the Executive Team, apart from the CEO, comprised of Chief Financial Officer (CFO), Chief Technical Officer (CTO), Chief Operating Officer (COO), Chief Communication Officer (CCO), Chief Marketing and Sales Officer and R&D Manager. For more information on the Executive Team please refer to the pages 54-55.

## Remuneration to the CEO and other senior executives

Remuneration to the CEO and other senior executives shall be paid in accordance with the Company's guidelines for remuneration to senior executives, adopted by the AGM. The total remuneration varies in relation to the individual executive's responsibilities and performance and shall consist of fixed cash salary, any variable cash remuneration, pension benefits and

other benefits. In the financial year of 2020, variable remuneration was paid out to certain executives based on the achievement of set performance targets. Variable remuneration to other senior executives is determined by the CEO.

A mutual notice period of twelve months applies between the Company and the CEO and six months between the Company and the CFO. No agreements have been reached between the Company and the CEO or any other senior executives regarding severance pay. For more information regarding remuneration to the CEO and other senior executives, please refer to note 7 in Swedish Stirling's annual report 2020.

## Internal control and risk management

The Board is responsible for the internal control regulated by the Swedish Companies Act, the Annual Accounts Act and the Swedish Code of Corporate Governance. The Board should make sure that the Company has good internal control and formalised routines that ensure that determined principles for financial reporting and internal control are followed and that there are appropriate systems in place for follow-up and control of the Company's processes and other risks that the Company is associated with. The routines for the internal control regarding the financial reporting have been developed to ensure reliable overall financial reporting and external reporting in accordance with IFRS, applicable laws and regulations as well as other requirements applicable to companies listed on Nasdaq First North Premier Growth Market.

### Control environment

A good internal control is based on a well-functioning control environment. At Swedish Stirling, the control environment consists of, among other things, organisational structure, policies, instructions, guidelines, reporting and defined areas of responsibility. The Board has the overall responsibility for the internal control regarding the financial reporting. The Board's division of work is stated in the Board's rules of procedure. It has been decided, in the Board's instructions to the CEO as well as a formal reporting instruction, how the financial reporting to the Board shall be carried out. The Board has also delegated the responsibility to the CEO to ensure an efficient control environment, even though the Board remains ultimately responsible.

Systems and routines have been created to provide the Executive Team with appropriate reports for them to be able to continuously assess risks and meet the requirements on correct financial reporting. The Board has, based on the current assessment of a good control environment in place along with limited scope, determined that there are no certain circumstances in the Company's operations or other engagements that justify the establishment of an internal audit function.

### **Risk assessment**

Swedish Stirling's assessment of risks connected to the financial reporting aims to identify and evaluate the most significant risks that affect the internal control regarding the financial reporting throughout the Company. The most significant risks identified connected to the financial reporting are handled through control structures that are based on the reporting of deviations from established targets or budgets.

### **Control activities**

The design of control activities within Swedish Stirling is based on clear roles in the organisation that enables an efficient division of responsibility regarding specific control activities which, among other things, include authorization and controls in IT systems, ERP systems and certification routines. The continuous analysis performed in the financial reporting function is essential to ensure that the financial reporting does not contain significant inaccuracies.

### **Information and communication**

The internal information and communication is to ensure that those of the Company's employees who can affect the financial information or manage identified risks are updated regarding changes in policies, guidelines, laws or regulations. When needed, the Executive Team handles these matters at meetings and employees are informed continuously regarding changes that affect their ability to make decisions or that impact their decisions' effect on the financial reporting. The external information aims to keep the market updated regarding the Company's development and to make sure that Swedish Stirling meets the requirements on correct information to the market. This is also governed by the information policy defined by the Company and resolved by the Board.

### **Follow-up, evaluation and reporting**

The Board receives financial reporting on a monthly basis and tracks the Company's financial development. The financial position, capital needs, investments, and cost are discussed at every Board meeting. Reconciliation versus budget and actuals from previous years are conducted continuously and larger deviations are reported to the Board. The internal controls are closely monitored and evaluated, and new routines are established regularly to further strengthen the internal control of the Company's financial reporting and to handle risks identified. The external auditors, the Company's financial department and the Audit Committee have ongoing interactions throughout the financial year to, at an early stage, identify potential risks and handle issues that might affect the financial reporting. The auditors also report continuously to the Audit Committee and at least once a year to the Board.



# Board of Directors



**Sven Sahle**

Born 1974.

Chairman of the Board since 2016 and board member since 2015. Member of the Audit Committee and the Remuneration Committee.

**Education:**

Business Administration at Stockholm University and Svenska Handelshögskolan in Helsinki.

**Other ongoing assignments/**

**positions:** Director at Dagny OU (EE) and SIA Hank Rearden.

**Shareholding:** 28,485,700 shares.

Independence towards the Company and management. Dependence towards major shareholders.



**Andreas Ahlström**

Born 1976.

Member of the Board since 2013. Member of the Audit Committee.

**Education:**

M.Sc in Economics from Hanken.

**Other ongoing assignments/**

**positions:** CEO of AC Cleantech Management Oy. Member of the Board at Suominen Oyj and Scandinavian Biogas Fuels.

**Shareholding:** –

Independence towards the Company and management. Dependence towards major shareholders.



**Erik Wigertz**

Born 1971.

Member of the Board since 2019. Chairman of the Remuneration Committee.

**Education:**

M.Sc in Economics from Stockholm School of Economics.

**Other ongoing assignments/**

**positions:** CEO of East Guardian Asset Management AG, member of the Board at Mara Social Media Limited and East Guardian SPC and partner at OÜ Capital Coordination.

**Shareholding:** 500,000 shares.

Independence towards the Company and management. Dependence towards major shareholders.


**Gunilla Spongh**

Born 1966.

Member of the Board since 2018.  
Chairman of the Audit Committee.

**Education:**

M.Sc in Engineering from Linköping University.

**Other ongoing assignments/**

**positions:** Member of the Board at Momentum Group AB, AQ Group AB, Byggmax Group AB, Pierce Group AB, Lernia AB, Systemair Aktiebolag, Consivo Group AB and G Spongh Förvaltning AB.

**Shareholding:** 10,000 shares.

Independence towards the Company, management and major shareholders.


**Carina Andersson**

Born 1964.

Member of the Board since 2020.

**Education:**

M.Sc in Materials Engineering from Royal Institute of Technology.

**Other ongoing assignments/**

**positions:** Member of the Board at Beijer Alma AB, Gränges AB, Systemair AB, BE Group AB (publ), eiCandersson AB and Detection Technology.

**Shareholding:** 6,000 shares.

Independence towards the Company, management and major shareholders.


**David Zaudy**

Born 1979.

Member of the Board since 2020.

**Education:**

CFA (Certified Financial Analyst) and Business Administration from University of Lund.

**Other ongoing assignments/**

**positions:** Chairman of the Board at Dulcinea Invest AB and member of the board at Cervantes Capital AB.

**Shareholding:** 200,000 shares, 8,000,000 convertibles 2020/2025 (KV4) and 312,500 call options.

Independence towards the Company, management and major shareholders.



# Executive Team



**Gunnar Larsson**

Born 1962.

.....

CEO since 2009.

**Education and professional**

**experience:** M.Sc in Engineering from Chalmers. Previous division manager at Ericsson and CEO of Saab Kockums.

**Other ongoing assignments/**

**positions:** Member of the Board at Estreet AB

**Shareholding:** 2,000,000 shares and 250 warrants.



**Heléne Öqvist**

Born 1962.

.....

Chief Financial Officer and Human Resources Manager since 2019.

**Education and professional**

**experience:** M.Sc in International Business Economics from Gothenburg School of Business, Economics and Law. More than 30 years' experience from work within finance, strategy and business management. Previous management consultant at Capacent AB and CFO of Volvo Penta of the Americas Inc.

**Other ongoing assignments/**

**positions:** Vice president of Handelshögskolans i Göteborg Alumniförening (HHGA).

**Shareholding:** 10,000 shares.



**Dennis Andersson**

Born 1966.

.....

Chief Marketing and Sales Officer since 2020.

**Education and professional**

**experience:** DIHM Marketing at IHM Business School. More than 25 years' experience in marketing and sales. Previous experiences from senior positions in international companies such as Ericsson and Ascom.

**Other ongoing assignments/**

**positions:** –

**Shareholding:** 10,600 shares.



**Fredrik Abrahamsson**

Born 1979.

Chief Operating Officer since 2017 and employee since 2010.

**Education and professional**

**experience:** Previous experiences as quality manager, production manager and Key Account Manager from several different industries.

**Other ongoing assignments/**

**positions:** Site Manager for the operations in Sibbhult since 2017.

**Shareholding:** 1,741 shares and 7 warrants.



**Sven Ljungberg**

Born 1966.

Chief Communication Officer since 2018.

**Education and professional**

**experience:** Studies at Uppsala University. Close to 30 years' experience from communication in different roles. Previous Communications and Brand Manager at Skandia.

**Other ongoing assignments/**

**positions:** Chairman of the Board and Vice President at Almedalens Bed & Breakfast & Fik AB, CEO and deputy board member at SK Ljungberg Konsult AB and member of the Board at Stratminds AB, JAC Gastronomi AB, Caelesti AB and Föreningen Centrum för Näringslivshistoria.

**Shareholding:** 10,000 shares.



**Ulrika Grimfeldt**

Born 1974.

R&D Manager since 2018 and acting CTO.

**Education and professional**

**experience:** M.Sc in Chemical Engineering with engineering physics from Chalmers. Previous Manager exhaust aftertreatment systems at Volvo Penta.

**Other ongoing assignments/**

**positions:** –

**Shareholding:** –

## Amount in SEK thousands

Name	Position	Elected	Independence	Remuneration	Remuneration Remuneration Committee	Remuneration Audit Committee	Attendance Board meetings	Attendance Remuneration Committee meetings	Attendance Audit Committee meetings
Sven Sahle	Chairman	2015	Company and management				22 of 22	1 of 1	6 of 6
Andreas Ahlström	Member	2013	Company and management				20 of 22		3 of 3
Erik Wigertz	Member	2019	Company and management				22 of 22		
Gunilla Spongh	Member	2018	Company, management and major shareholders	200		100	22 of 22		6 of 6
Carina Andersson	Member	2020	Company, management and major shareholders	200			13 of 13		
David Zaudy	Member	2020	Company, management and major shareholders				14 of 14		

The reason for the large number of board meetings was matters concerning, among other things, measures taken due to the corona pandemic, decisions regarding the listing on Nasdaq First North Premier Growth Market, as well as capital issues, and agreements with convertible loan holders regarding conversion.



# Signatures

**Gothenburg 19 March 2021**

**Sven Sahle**

CHAIRMAN

**Andreas Ahlström**

DIRECTOR

**Erik Wigertz**

DIRECTOR

**Gunilla Spongh**

DIRECTOR

**Carina Andersson**

DIRECTOR

**David Zaudy**

DIRECTOR

**Gunnar Larsson**

CEO

# The auditor's examination of the corporate governance report

To the Annual General Meeting for Swedish Stirling AB (publ.),  
org.nr 556760-6602.

## **Mission and division of responsibility**

The Board is responsible for the corporate governance report of 2020 on pages 46-57 and that it has been prepared in accordance with the Annual Accounts Act.

## **The audit's focus and scope**

The audit has been done according to FAR's statement RevU 16 The auditors audit of the corporate governance report. This means that the audit of the corporate governance report has a different focus and significantly smaller scope compared to an audit done according to International Standards on Auditing and good auditing practice in Sweden. We believe that this audit provides us with sufficient basis for our statements.

## **Statement**

A corporate governance report has been prepared. Information in accordance with ch. 6, 6§, second paragraph, items 2-6 in the Annual Accounts Act as well as ch. 7, 31 §, second paragraph of the same act, are compatible with the annual report and consolidated accounts and are in accordance with the Annual Accounts Act.

**Gothenburg 19 March 2021**

**Öhrlings PricewaterhouseCoopers AB**

**JOHAN MALMQVIST**

AUTHORIZED PUBLIC AUDITOR

Main auditor







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# Management report

The Board of Directors and the CEO of Swedish Stirling AB (publ), 556760-6602, with its registered office in Gothenburg, hereby submit the annual consolidated accounts for 2020.

## Swedish Stirling in brief

Swedish Stirling is a Swedish cleantech company founded in 2008 with a mission to further refine the incomparable ability of the Stirling technology to convert thermal energy to electricity. Swedish Stirling's technology is based on Kokums's world leading Stirling engine for submarines. By adapting and further developing this technology, Swedish Stirling has constructed a Stirling engine with a unique combination of high power and high efficiency. The Company's product, the PWR BLOK 400-F, is a unique proprietary solution for recovering energy from industrial residual and flare gases and converting them to 100 percent carbon-neutral electricity at a high rate of efficiency. The PWR BLOK is, according to the independent certification company Lloyd's Register, the cheapest way to generate electricity that exists today, yielding greater CO<sub>2</sub> savings per SEK invested than any other type of energy.

Swedish Stirling's business model is to develop, manufacture and sell technical solutions based on the Stirling technology, which provides customers with climate-friendly electricity produced at competitive prices. Initially, the Company will demonstrate the technology commercially and then take the next step and create demand so that the Stirling engine can be manufactured in large volumes. Swedish Stirling's vision is to establish the Stirling technology as the best alternative for local and sustainable electricity production.

## Comments on the income statement and balance sheet

The Company's operating income amounted to TSEK 53,395 (TSEK 45,169) and primarily comprised capitalised development cost in the amount of TSEK 53,025 (TSEK 44,540).

Net sales amounted to TSEK 0 (TSEK 0) and profit/loss after financial items was TSEK -71,440 (TSEK -126,406). The negative results were primarily attributable to increasing financial costs as well as increased personnel costs, however lower than previous year due to a one-time impairment on capitalised development cost related to the solar energy project in 2019. A realised loss in the amount of TSEK 1,732 was recognised in the fourth quarter, related to disposal of materials for PWR BLOK generation 1, which have now been classified as obsolete. During the year, capitalised costs at a total amount of TSEK 41,929 for generation 1 and 2 were moved from work in progress to capitalised development costs, since these PWR BLOK will not be sold but only to be used for testing and verification purposes. At year-end, capitalised development costs amounted to TSEK 342,769 (TSEK 245,086).

## Cash flow

The cash flow for the year amounted to TSEK 104,801 (TSEK 7,130). As at the balance sheet date, cash and cash equivalents amounted to TSEK 141,631 (TSEK 36,862). The positive cash flow for the year was primarily due to new share issues and a new convertible loan KV4, partially offset by product development related costs in operating and investing activities.

## Changes in equity

As at the balance sheet date, the Company's equity amounted to TSEK 293,225 (TSEK 215,598). During the year 2020 the Company's equity increased by a total of TSEK 77,627 (TSEK -64,998). The increase was mainly attributable to new share issues and the option component on convertible loan KV4, however offset by the result of the year. As at the balance sheet date, there were 97,118,961 (85,090,390) shares outstanding having a quota value of SEK 0.01.

## Parent company

The parent company's operating income during the year amounted to TSEK 50,975 (TSEK 42,456). Net sales for the period amounted to TSEK 0 (TSEK 0) and profit/loss after financial items amounted to TSEK -70,944 (TSEK -128,852). The parent company cash balance as at the balance sheet date amounted to TSEK 141,578 (TSEK 36,637).



## Material events that occurred during the financial year

The following significant events have been published in quarterly reports during 2020.

### First quarter

An agreement was signed with Glencore for an installation of up to 25 PWR BLOK at the smelter Lydenburg in South Africa. Significant injection of cash was made through issues of convertibles and shares, where a total of MSEK 147 was added to the Company. PWR BLOK 2 was shipped from Gothenburg for delivery to Samancor's smelter TC Smelter in South Africa. Carina Andersson was proposed by the Nomination Committee to be elected as a new member of the Board. Swedish Stirling's newly built lab and test center for Stirling engines was put into use in Gothenburg.

### Second quarter

An action program was implemented in the light of the ongoing corona pandemic and the turmoil in the world economy. Re-prioritisations and shifts in time plans for projects resulted in immediate savings of MSEK 1 per month.

At the Extraordinary General Meeting on 8 April 2020 the Board's decision to issue convertibles of maximum MSEK 100 was approved, with deviation from the shareholders' preferential rights. Furthermore, the General Meeting decided to change the Company's articles of association as well as to elect David Zaudy as member of the Board.

At the Annual General Meeting on 24 April 2020, Sven Sahle, Andreas Ahlström, Gunilla Spongh, Erik Wigertz and David Zaudy were re-elected and Carina Andersson was newly elected. Sven Sahle was re-elected as Chairman of the Board. The General Meeting authorised the Board to decide on an issue of new shares. The Board is authorized to, within the framework of the articles of association, on one or more occasions until the time of the next Annual General Meeting decide on an issue of new shares with or without deviation from the shareholders' preferential rights. Such a decision regarding issue of new shares should be able to be made with a provision on non-cash, set-off or cash payment. An issue based on authorization shall imply a maximum increase in share capital of 30 percent.

The Company employed Dennis Andersson as Global Chief Sales & Marketing Officer and he became a part of the Company's management team. The recruitment is an important step in the Company's global commercial launch of the PWR BLOK.

### Third quarter

Swedish Stirling and Samancor Chrome Limited entered into a memorandum of understanding regarding an installation of up to 135 PWR BLOK (54 MW) at Samancor Chrome's smelter TC Smelter, Ferrometals and Tubatse Alloys.

Swedish Stirling and Richard Bay Alloys entered into a letter of intent regarding sales and installation of 18 PWR BLOK to a 7,2 MW plant in Richard Bay, South Africa.

Swedish Stirling and Glencore Operations South Africa Proprietary Limited signed a letter of intent regarding an installation of up to 88 PWR BLOK (35,2 MW) at Glencore's smelter Lion.

### Fourth quarter

Swedish Stirling was listed on Nasdaq First North Premier Growth Market. First day of trading was 6 November 2020.

Swedish Stirling and ABB initiated a technical collaboration. ABB will deliver components and systems to the PWR BLOK, as well as providing knowledge and expertise.

Swedish Stirling reached an agreement with all holders of convertible bonds 2019/2021:2 ("KV3") regarding conversion provided that an extraordinary general meeting decides on a change in the terms and conditions of KV3 entailing that the conversion rate shall be changed from SEK 10 per share to SEK 9 per share. Furthermore, the company received irrevocable commitments from holders of convertibles 2019/2021 ("KV2") regarding conversion in accordance with the terms and conditions corresponding to approximately 68 percent of the total outstanding loan amount under KV2. At the Extraordinary General Meeting on 22 December 2020, it was resolved to amend the conversion price for convertibles 2019/2021:2 (KV3) from SEK 10 per share to SEK 9 per share.

A new patent application was handed in to the European Patent Office (EPO) regarding the Company's product PWR BLOK 400-F. The application includes the construction for how the residual gas is led into and burned in the Stirling engines' combustion chambers for a more efficient energy conversion. The purpose of the patent application is to prevent direct copying of design principles and construction parts that Swedish Stirling has developed.

## Material events that occurred after the end of the financial year

The conversion period for Swedish Stirling's convertible loans 2019/2021 ("KV2") and 2019/2021:2 ("KV3") ended on 15 February 2021. Out of the total outstanding loan amount of SEK 79,505,021 under KV2, an amount of SEK 78,814,050 was requested for conversion, corresponding to around 99 percent. Under KV3, 100 percent of the total outstanding loan amount of SEK 53,000,000 has been requested for conversion in accordance with previously received conversion commitments.

As a result of the conversion of KV2 and KV3, Swedish Stirling's share capital will increase by SEK 137,702.92, from SEK 971,189.61 to SEK 1,108,892.53 and the number of shares and votes will increase with 13,770,292 shares and votes, from 97,189,610 shares and votes to 110,889,253 shares and votes, corresponding to a dilution of around 13.2 percent of the total number of shares and votes as at the balance sheet date.

## Market development

Swedish Stirling's assessment is that the continued increase in global demand for energy and the effort to increase the share of renewable and climate-neutral power generation methods create an attractive market situation for the Company. The price per MWh generated using the PWR BLOK 400-F is already very competitive without subsidies or state support. Nor is the product weather-dependent or dependent on geographical location, which is often the case with renewables like wind and solar power. The product is also able to contribute to a significant reduction in carbon dioxide emissions. Global potential for extracting electricity from the metal and petroleum industries' residual gas is significant.

Initially, Swedish Stirling focuses on the South African ferrochrome industry, which accounts for nearly one-third of the global ferrochrome production. Since production of other ferroalloys produce similar residual gases, Swedish Stirling's assessment is that the PWR BLOK will work for these as well, without requiring major adjustments. The Company has also during the recent years tested the PWR BLOK's ability to produce electricity by using synthesis gas and low quality LPG (Liquefied Petroleum Gas) with good results. Since the Stirling engine is closed and only heated from the outside, virtually any fuel could be used such as natural gas, hydrogen, methane, biogas, ethanol, and so on, opening up many potential additional uses. The Company intends to continue testing other residual gases in order to identify future markets and potential customers.

## Risks and uncertainties

Swedish Stirling's operations mainly consist of developing and commercialising new technology. Consequently, the Company's development is associated with technical, financial and regulatory risks.

### General economic and political conditions

Like other companies, Swedish Stirling is affected by general global economic, financial and political conditions. Demand for the Company's products depends, among other things, on general macroeconomic trends, including recession, inflation, deflation, changes in customer purchasing power and public-sector investments. Uncertainty regarding the economic outlook, including political unrest, may have an adverse effect on customers' purchases of Swedish Stirling's products. Furthermore, there is a potential risk that other changes to the market conditions, such as the price of electricity, may have an impact on the demand for the Company's products. Additionally, changes in the political situation in a region or country where the Company currently operates or may operate in the future, or political decisions that affect an industry to which the Company's operates and potential customers belong, could also have a material effect on the sale of the Company's products. Any unfavourable development regarding global or regional factors of the kinds mentioned above could have an adverse effect on Swedish Stirling's operations, financial position and earnings.

### Financing and future capital requirements

Swedish Stirling is dependent on capital in order to finance operations, for example to produce the PWR BLOK, and is therefore subject to the risk that the Company's abilities to finance its operations become difficult. The Company's ability to secure future financing will depend on how the Company's operations develop, but also by other factors beyond the Company's control, such as capital market liquidity and its willingness to finance companies in the sector in which Swedish Stirling operates.

### Business model and strategy

The long-term strategy of Swedish Stirling is to sell the Company's product, PWR BLOK 400-F, to end-customer. With the purpose of increasing market presence, a short-term business model in the form of an energy conversion service has been introduced. In this model, the customer commits to purchasing electricity generated by PWR BLOK 400-F, but the product itself is owned by Swedish Stirling. In this short-term business model, the production will be paid for by the Company and will therefore be added to the Company's balance sheet, initially entailing higher cash requirements and need for different financing models. There is a risk that this short-term business model fails to generate success, for example as a result of inadequate financing models or difficulty in realising the full value of the product. If Swedish Stirling's short-term business model shows to be unsuccessful, the Company will also risk facing difficulties implementing the long-term business model according to plan.

### Possible technical deficiencies and uncertainties in the Company's products

Swedish Stirling's customers place high security and quality requirements on the products, services and software that the Company provides. If Swedish Stirling's products, services and software that are delivered do not meet the customers' expectations regarding quality, reliability or function, the Company risks not reaching its target customers or the market share level that the Company wants to achieve.

Swedish Stirling's PWR BLOK 400-F product, that extracts electricity from industrial residual and flare gases, is new on the market. Consequently, the Company has not had the opportunity to collect enough data regarding, for instance, any typical faults, deficiencies and service needs.

Such deficiencies and uncertainties in Swedish Stirling's products may lead to delays in the commercialisation and deliveries to the Company's customers.

### Dependence on the ferrochrome industry

Swedish Stirling's product for recovering energy from residual gas combustion, the PWR BLOK 400-F, is currently being marketed primarily to the ferrochrome industry, which is mainly concentrated in South Africa and China. South Africa and China are emerging markets, which entails increased political risks compared to more developed economies. The ferrochrome industry is also capital intensive, and its revenues are volatile, which poses a challenge to ferrochrome producers. The corona pandemic has had a significant negative impact on the ferrochrome industry and the companies' financial positions, and if the situation does not change there is a risk that some smelters will be forced to close, temporarily or permanently.

Swedish Stirling has been present in South Africa since 2012 and has good communication with all major players. The market potential is estimated to be around 220 MW, or 550 PWR BLOK units. As the South African ferrochrome production makes up roughly a third of the global market, the total market size is about three times larger. If conditions to produce ferrochrome in South Africa, or China, should deteriorate, or if the market for ferrochrome should significantly deteriorate, there is a risk that the prospects for selling the PWR BLOK 400-F will deteriorate as a result.

### Dependence on entering of agreements and the execution of signed agreements

Swedish Stirling is dependent on the entering of agreements and the fulfilment of already signed agreements with strategic customers in order to prove the Company's product PWR BLOK 400-F commercially and move from a development company to an industrial company. At the time of preparation of the annual report, Swedish Stirling has entered agreements as well as letters of intent with different ferrochrome producers regarding energy conversion service through installation of PWR BLOK 400-F at the producers' smelters.

Failure to fulfil agreements, to enter binding agreements for the projects where Swedish Stirling has entered letters of intent, or to enter agreements regarding full-scale facilities for energy conversion, would not only imply lost revenue but also that the Company cannot prove the product



PWR BLOK as commercially successful. This would have a negative impact on the Company's operations, growth, earning capacity, results and financial position.

### **Dependence on suppliers and partners**

In the manufacturing of Swedish Stirling's products, the Company collaborates with several suppliers specialising in, for example, manufacturing, assembly, testing and logistics. Furthermore, Swedish Stirling collaborates with partners that are of great importance to the Company since these collaborations generate valuable knowledge about the engine industry (which is of importance in the manufacturing of the Company's Stirling engines) and the ferrochrome industry, which creates favourable conditions for local business opportunities and contacts with suppliers and authorities. There is a risk that the Company's suppliers do not deliver on time or in accordance with the agreed price, quality or accepted industry standards. Furthermore, there is a risk that Swedish Stirling's partners discontinue their collaboration with the Company, for example as a result of bankruptcy, liquidation, insolvency, strike or for any other reason. If the Company is forced to replace a supplier or partner, there is a risk that this could lead to significant costs, difficulty in purchasing critical components or services on time, at a reasonable cost or at all. In such cases, it may be difficult to find a new supplier or partner in accordance with the Company's requirements and specifications.

### **Currency risks**

The Company's accounting is done in SEK. At the same time, Swedish Stirling runs international operations with South Africa as the main market and the majority of revenue is therefore expected to be generated in foreign currencies, while major costs (such as personnel costs) will be in SEK. This exposes the Company to currency risks and exchange rate fluctuations which affect the Company's operating profit. The currencies to which Swedish Stirling is mainly exposed to are ZAR and USD, since the Company's revenues will be generated in ZAR and USD.

The Company also has translation exposure. When consolidating, the South African subsidiary's net assets are translated to SEK, causing translation differences to arise that affect group earnings. Thus, it cannot be ruled out that future exchange rate fluctuations may have an adverse effect on the Company's operations, financial position and earnings.

### **Intellectual property**

Swedish Stirling invests significant sums in the development of the Company's products and technology. In order to safeguard the revenue from these investments, it is crucial to protect the Company's products and technology from unlawful use by competitors. Swedish Stirling has pending patent applications relating to the technology behind the PWR BLOK 400-F (the Company's container-based solution in which Stirling technology is used to harness energy from residual gases). There is a risk that the Company will not be able to obtain patent protection for important parts of its technology or that rights gained cannot be maintained. There is also a risk that new products and new technology will be developed that circumvent or replace gained intellectual property rights, or that Swedish Stirling's competitors will develop corresponding know-how.

### **Dependence on key personnel and employees**

Swedish Stirling's employees are an important asset and the key to growth and success. Therefore, Swedish Stirling is dependent on the ability to attract, develop, keep and motivate employees with key competence regarding for example product development, manufacturing, purchasing and logistics, sales and marketing, business development, finance, strategy and project management. It is of great importance that the Company succeeds in keeping key personnel and that these employees experience Swedish Stirling as a stimulating place to work. If such key personnel and employees would leave the Company, this would have a negative impact on the Company's operations. Furthermore, Swedish Stirling intends to strengthen the Company's organisation, which will require recruitment of additional personnel. There is a risk that it proves to be difficult to identify or attract employees with the right competencies.

### **Regulatory changes in markets in which the Company operates**

Changes in laws, ordinances or other regulations in the markets in which the Company operates and which entail the introduction of new or stricter requirements or changed conditions governing the Company's operations or those of its customers, may require Swedish Stirling to make additional investments, or may otherwise result in increased costs and additional undertakings on the part of the Company, or may result in reduced purchasing power for the Company's customers. This may have an adverse

effect on the Company's operations, financial position and earnings. Since the South African ferrochrome industry is currently Swedish Stirling's primary market, the Company is particularly exposed to risks related to regulatory changes in this market.

### Research and development

The focus for Swedish Stirling has since the start been primarily on research and development. Initially the focus was put on solar energy, but since 2017 exclusively on PWR BLOK and residual gases. From 2020 and onwards, more of the Company's resources will be geared toward sales and marketing, as well as production. However, the Company will continue to conduct a significant amount of R&D work, both relating to robustness and performance, as well as product cost. In the long-term, Swedish Stirling will most likely develop the PWR BLOK technology further, so that additional residual gases from other types of industries, such as the petroleum industry, can be used as fuel. Most of the Company's employees at the main office in Gothenburg work with R&D projects and will remain to do so in the future. During 2020, Swedish Stirling introduced an engine testing facility adjacent to the main office and expanded testing operations in Sibbhult.

## Shares and financing

### Ownership structure

Swedish Stirling has been publicly listed in Sweden since 28 November 2016 and is as of 6 November 2020 listed on Nasdaq First North Premier Growth Market under the ticker symbol STRLNG and ISIN: SE0009143993. As at 31 December 2020, the share capital amounted to SEK 971,189.61 divided into 97,118,961 shares with a quota value of SEK 0.01. All shares confer equal rights to the Company's assets and profits and entitle their holders to one vote at the Annual General Meeting. At the General Meeting, each shareholder with voting rights may vote for the full number of shares owned and represented by such party without any restrictions on voting rights.

### Warrant program

At Swedish Stirling's Extraordinary General Meeting held on 10 October 2014, a resolution was passed unanimously at the behest of the Board of Directors approving the issue of 464 warrants to the Company's employees. In addition to employees, 35 warrants were issued to previous board

member Ulf Gundemark and 250 warrants were issued to CEO Gunnar Larsson. The warrants were issued at an estimated market value of SEK 6,722 per warrant. Payment was made in a total amount of SEK 3,119,008. The program is not subsidised by Swedish Stirling, and the Company is not expected to incur any significant expenses in connection to the program. The reason for the program's introduction was to give employees and certain senior executives an opportunity to invest in the Company.

One (1) warrant entitles the holder to subscribe for ten thousand (10,000) new shares for approximately SEK 2.30 per share during the period from 1 November 2017 to 31 October 2021. If all remaining warrants are exercised, the Company will raise approximately MSEK 9.8, and its share capital will increase by SEK 42,900. The 4,290,000 shares thus issued currently correspond to around 4.2 percent of the Company's share capital. The warrants are not recorded in the securities register and expire on 31 October 2021. A total of 35 warrants have been exercised as at the balance sheet date to subscribe for 350,000 new shares in Swedish Stirling, which has provided the Company with around SEK 800,000.

### Convertible loan 2017/2019 ("KV1")

At Swedish Stirling's Extraordinary General Meeting held on 7 September 2017, a resolution was passed unanimously at the behest of the Board of Directors approving the issue of 61,157,709 convertibles with preferential rights for the Company's existing shareholders. The convertibles were issued at a subscription price of SEK 0.41 per convertible bond, corresponding to a total amount of SEK 25,074,660.69. At the time of issue, the convertible bond granted its holder an entitlement to redeem the convertible bond for shares in the Company at a conversion rate of SEK 5 per share. As the Company subsequently carried out a share issue, the conversion rate for the convertibles has been recalculated in accordance with its terms and conditions, to SEK 4.40 per share.

Of the total outstanding loan amount of SEK 25,074,660.69 an amount of SEK 24,575,624 was requested for conversion by 18 November 2019, which corresponds to approximately 98 percent. As a result of the conversion, Swedish Stirling's share capital increased with SEK 55,853.69 from SEK 795,050.21 to SEK 850,903.90 and the number of shares and votes increased by 5,585,369

shares and votes from 79,505,021 shares and votes to 85,090,390 shares and votes. This corresponded to a shareholder dilution of around 6.6 percent.

#### **Convertible loan 2019/2021 ("KV2")**

At the Extraordinary General Meeting on 16 January 2019 it was resolved to raise a convertible loan of a maximum amount of SEK 79,505,021 through the issue of convertibles with preferential rights for existing shareholders. Shareholders received one (1) subscription right for each existing share held on the record date, entitling them to subscribe for one (1) convertible bond. The subscription period began on 11 February 2019 and ended on 26 February 2019.

On 7 March 2019 the issue was registered in the amount of SEK 79,505,021 divided into 79,505,021 convertibles (STRLNG KV2). The loan ran at an interest rate of ten (10) percent annually. The conversion price was SEK 10 per share. Requests for conversion into shares in the Company could be submitted between 1 January 2021 and 15 February 2021.

The conversion period for KV2 ended on 15 February 2021. Out of the total outstanding loan amount of SEK 79,505,021 an amount of SEK 78,814,050 was converted, which corresponds to approximately 99 percent and a dilution of 7.5 percent.

#### **Convertible loan 2019/2021:2 ("KV3")**

At the Extraordinary General Meeting on 20 September 2019 it was resolved to raise a convertible loan of a maximum of SEK 53,000,000 through an issue of convertibles with deviation from the shareholders' preferential rights.

On 26 November 2019, the convertible loan of SEK 53,000,000 divided into 53,000,000 convertibles (KV3) was registered. The loan ran at an interest rate of nine (9) percent annually and fell due on 28 February 2021. The conversion price was originally SEK 10 per share. The decision to change the conversion price for convertibles 2019/2021:2 (KV3) from SEK 10 per share to SEK 9 per share was resolved at the Extraordinary General Meeting on 22 December 2020. Request of conversion to shares in the Company could be done from 1 January 2021 to 15 February 2021.

The conversion period for KV3 ended on 15 February 2021. Out of the total outstanding loan amount of SEK 53,000,000 a full 100 percent was converted in accordance with previously received conversion commitments, which corresponds to a dilution of 5.7 percent.

#### **Convertible loan 2020/2025 ("KV4")**

On 30 June 2020 an issue of a convertible loan was conducted with deviation from the shareholders' preferential rights in the amount of SEK 100,000,000 divided into 100,000,000 convertibles (KV4). The convertible loan was registered on 1 July 2020. The loan runs at an interest rate of fourteen (14) percent per annum and falls due on 30 June 2025. The conversion price is SEK 8 per share. Requests for conversion to shares in the Company can be done from 2 May 2025 to 16 June 2025. However, in the event of a list change to a regulated market (or corresponding market outside the European Economic Area) or a change of controlling owner, all convertible holders have the right to request early conversion of all their convertibles.

At full conversion the Company's share capital may increase by a maximum of SEK 125,000 and the number of shares and votes in the Company may increase by a maximum of 12,500,000 shares and votes. This corresponds to a dilution of around 11.4 percent. The convertible loan will not be traded on any marketplace.



**FINANCIAL OVERVIEW, GROUP**

Amount in SEK thousands	2020	2019
Operating income	-	-
Own work capitalised	53,025	44,540
Total operating income	53,395	45,169
Operating profit	-22,951	-100,931
Profit/loss after tax	-72,877	-127,026
Earnings per share (before dilution) SEK	-0.80	-1.59
Equity/asset ratio, %*	57%	62%
Cash flows from operating activities	-45,096	-86,744
Cash flow for the year	104,801	7,130
Cash and cash equivalents	141,631	36,862

(\*) See note 26 for definitions

## Parent company

**FINANCIAL OVERVIEW, PARENT COMPANY**

Amount in SEK thousands	2020	2019
Operating income	-	-
Own work capitalised	50,627	41,853
Total operating income	50,975	42,456
Operating profit	-23,253	-103,609
Profit/loss after tax	-70,949	-128,852
Earnings per share (before dilution) SEK	-0.78	-1.61
Equity/asset ratio, %*	58%	63%
Cash flows from operating activities	-43,330	-90,614
Cash flow for the year	104,941	6,971
Cash and cash equivalents	141,578	36,637

(\*) See note 26 for definitions

**PROPOSED APPROPRIATION OF RETAINED EARNINGS**

The Annual General Meeting is asked to decide on the appropriation of the following earnings:

**Amount in SEK thousands**

Share premium account	431,583
Retained earnings	-239,454
Net profit / loss for the year	-70,949
<b>Total</b>	<b>121,180</b>

The Board of Directors proposes that this unrestricted capital be appropriated as follows:

**Amount in SEK thousands**

Carried forward	121,180
<b>Total</b>	<b>121,180</b>

Regarding the Parent Company and the Group's earnings and position in general, reference is made to subsequent income statements and balance sheets, cash flow analysis and notes.

# Consolidated statement of profit and loss and comprehensive income

Amount in SEK thousands	Note	2020	2019
Net sales		-	-
Own work capitalised		53,025	44,540
Other operating income	8	370	629
<b>Total</b>		<b>53,395</b>	<b>45,169</b>
Raw materials and consumables		-18,240	-19,562
Other external expense		-20,717	-20,421
Costs of personnel	7	-34,593	-27,876
Depreciation/amortisation of tangible fixed assets and right-of-use assets	12, 21	-2,694	-1,826
Write-down of intangible fixed assets	3.2, 11	-	-76,143
Other operating expenses	9	-102	-272
<b>Total</b>		<b>-76,346</b>	<b>-146,100</b>
<b>Operating profit</b>		<b>-22,951</b>	<b>-100,931</b>
Financial cost	13.3	-48,489	-25,475
<b>Financial items</b>		<b>-48,489</b>	<b>-25,475</b>
<b>Net income before tax</b>		<b>-71,440</b>	<b>-126,406</b>
Tax	10	-1,437	-620
<b>Profit/loss for the year</b>		<b>-72,877</b>	<b>-127,026</b>
Other comprehensive income:			
Items that may be classified to profit/loss for the year:			
Exchange rate differences from foreign operations		-22	54
<b>Other comprehensive income for the year</b>		<b>-22</b>	<b>54</b>
<b>Total comprehensive income for the year</b>		<b>-72,899</b>	<b>-126,972</b>

The profit/loss for the year and total comprehensive income for the year are attributable in their entirety to the parent company's shareholders.

Earnings per share, based on the profit/loss for the year attributable to the parent company's shareholders:

Amount in SEK	2020	2019
Earnings per share prior to dilution	-0.80	-1.59
Diluted earnings per share	-0.80	-1.59



# Consolidated balance sheet

## ASSETS

Amount in SEK thousands	Note	31-12-2020	31-12-2019
<b>Intangible fixed assets</b>			
Capitalised expenditures for development work	11	342,769	245,086
<b>Total</b>		<b>342,769</b>	<b>245,086</b>
<b>Tangible fixed assets</b>			
Leasehold improvements	12	859	552
Machinery and other technical assets	12	24	49
Property, plant and equipment	12	4,191	3,095
Vehicles	12	851	235
Right-of-use assets	21	3,319	4,311
<b>Total</b>		<b>9,244</b>	<b>8,242</b>
<b>Financial fixed assets</b>			
Other long-term receivables		37	68
Deferred tax asset		44	34
<b>Total</b>		<b>81</b>	<b>102</b>
<b>Total fixed assets</b>		<b>352,094</b>	<b>253,430</b>
<b>Current assets</b>			
Inventory		17,570	20,115
Work in progress		148	32,215
<b>Total</b>	14	<b>17,718</b>	<b>52,330</b>
<b>Current receivables</b>			
Current tax receivables		606	566
Other receivables	15	627	2,790
Prepaid expenses	16	773	405
<b>Total</b>		<b>2,006</b>	<b>3,761</b>
Cash and cash equivalents	17	141,631	36,862
<b>Total current assets</b>		<b>161,355</b>	<b>92,953</b>
<b>TOTAL ASSETS</b>		<b>513,449</b>	<b>346,383</b>

# Consolidated balance sheet

## EQUITY AND LIABILITIES

Amount in SEK thousands	Note	31-12-2020	31-12-2019
<b>Equity</b>			
Share capital	18	971	851
Share premium reserve	18	431,583	323,737
Other reserves		-23	32
Retained earnings		-139,306	-109,022
<b>Total equity attributable to the parent company's shareholders</b>		<b>293,225</b>	<b>215,598</b>
<b>Long-term liabilities</b>			
Convertible loans	13, 24	59,129	105,328
Lease liabilities	24	2,096	3,194
Other long-term loans	13, 24	10,000	10,000
Deferred tax	10	2,194	752
<b>Total</b>		<b>73,419</b>	<b>119,274</b>
<b>Current liabilities</b>			
Convertible loans	13, 24	127,895	-
Accounts payable	13	5,498	2,252
Leasing liabilities	21, 24	1,231	1,061
Other current liabilities	13	7,531	3,795
Accrued expenses and deferred income	20	4,650	4,403
<b>Total</b>		<b>146,805</b>	<b>11,511</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>513,449</b>	<b>346,383</b>

## Consolidated changes in equity

2019					
Equity attributable to parent company shareholders					
Amount in SEK thousands	Share capital	Other capital contributions	Reserves	Retained earnings including profit/loss for the year	Total equity
<b>Opening balance as at 1 January 2019</b>	795	299,217	-22	-19,394	280,596
Profit/loss for the year				-127,026	-127,026
Other comprehensive income for the year			54		54
<b>Total comprehensive income for the year</b>			<b>54</b>	<b>-127,026</b>	<b>-126,972</b>
<b>Transactions with shareholders in their capacity as owners</b>					
Option component convertible loan				37,398	37,398
Conversion to stocks from convertible loan	56	24,520			24,576
<b>Total transactions with shareholders</b>	<b>56</b>	<b>24,520</b>		<b>37,398</b>	<b>61,974</b>
<b>Closing balance as at 31 December 2019</b>	<b>851</b>	<b>323,737</b>	<b>32</b>	<b>-109,022</b>	<b>215,598</b>
2020					
Equity attributable to parent company shareholders					
Amount in SEK thousands	Share capital	Other capital contributions	Reserves	Retained earnings including profit/loss for the year	Total equity
<b>Opening balance as at 1 January 2020</b>	851	323,737	32	-109,022	215,598
Profit/loss for the year				-72,877	-72,877
Other comprehensive income for the year			-55	33	-22
<b>Total comprehensive income for the year</b>			<b>-55</b>	<b>-72,844</b>	<b>-72,899</b>
<b>Transactions with shareholders in their capacity as owners</b>					
New share issue, net of transaction costs	117	106,811			106,928
Conversion of warrants	3	1,035		-235	803
Option component convertible loan				42,795	42,795
<b>Total transactions with shareholders</b>	<b>120</b>	<b>107,846</b>		<b>42,560</b>	<b>150,526</b>
<b>Closing balance as at 31 December 2020</b>	<b>971</b>	<b>431,583</b>	<b>-23</b>	<b>-139,306</b>	<b>293,225</b>



# Consolidated cash flow statement

Amount in SEK thousands	Note	2020	2019
<b>Operating activities</b>			
Profit/loss after financial items	13.3	-71,440	-126,406
Adjustments for items not included in cash flow, etc.	25	33,677	92,176
<b>Cash flow from operating activities before changes in working capital</b>		<b>-37,763</b>	<b>-34,230</b>
Increase (-) / decrease (+) in inventories, etc.		-12,006	-20,275
Increase (-) / decrease (+) in operating receivables		924	1,157
Increase (-) / decrease (+) in operating liabilities		3,749	-33,396
<b>Cash flow from changes in working capital</b>		<b>-7,333</b>	<b>-52,514</b>
<b>Total cash flow from operating activities</b>		<b>-45,096</b>	<b>-86,744</b>
<b>Investing activities</b>			
Investments in intangible assets		-53,155	-45,796
Investments in tangible fixed assets		-3,491	-1,351
<b>Cash flow from investing activities</b>		<b>-56,646</b>	<b>-47,147</b>
<b>Financing activities</b>			
New share issue		106,927	-
Payment of warrants		804	-
Amortisation of lease debt		-1,188	-984
Repayment of convertible loan		-	-499
New loans		-	10,000
New convertible loans		100,000	132,504
<b>Cash flow from financing activities</b>		<b>206,543</b>	<b>141,021</b>
<b>Cash flow for the year</b>		<b>104,801</b>	<b>7,130</b>
<b>CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE YEAR</b>		<b>36,862</b>	<b>29,732</b>
Exchange rate differences in cash and cash equivalents		-32	-
<b>CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR</b>		<b>141,631</b>	<b>36,862</b>

## Parent company income statement

Amount in SEK thousands	Note	2020	2019
<b>Operating income</b>			
Net sales		-	-
Own work capitalised		50,627	41,853
Other operating income	28	348	603
<b>Total</b>		<b>50,975</b>	<b>42,456</b>
<b>Operating expense</b>			
Raw materials and consumables		-18,231	-19,526
Other external expense		-21,977	-23,244
Costs of personnel	31	-32,643	-26,010
Depreciation/amortisation of tangible fixed assets		-1,294	-870
Write-down of intangible fixed assets		-	-76,143
Other operating expenses	29	-83	-272
<b>Total</b>		<b>-74,228</b>	<b>-146,065</b>
<b>Operating profit</b>		<b>-23,253</b>	<b>-103,609</b>
<b>Profit/loss from financial items</b>			
Interest income and similar items		495	-
Interest expense and similar items		-48,186	-25,243
<b>Financial items - net</b>		<b>-47,691</b>	<b>-25,243</b>
<b>Net income before tax</b>		<b>-70,944</b>	<b>-128,852</b>
Income tax	32	-5	-
<b>Profit/loss for the year</b>		<b>-70,949</b>	<b>-128,852</b>

In the parent company, no items are recognised as other comprehensive income, for which reason total comprehensive income for the year corresponds to the profit/loss for the year.

# The parent company balance sheet

ASSETS			
Amount in SEK thousands	Note	31-12-2020	31-12-2019
<b>Intangible fixed assets</b>			
Capitalised expenditures for development work	34	334,955	242,399
<b>Total</b>		<b>334,955</b>	<b>242,399</b>
<b>Tangible fixed assets</b>			
Leasehold improvements	35	859	552
Property, plant and equipment	35	4,051	3,031
<b>Total</b>		<b>4,910</b>	<b>3,583</b>
<b>Financial fixed assets</b>			
Shares in subsidiaries	33	0	0
Receivables from subsidiaries		6,085	-
Other long-term receivables		-	68
<b>Total</b>		<b>6,085</b>	<b>68</b>
<b>Total fixed assets</b>		<b>345,950</b>	<b>246,050</b>
<b>Current assets</b>			
Inventory		17,570	20,115
Work in progress		148	32,215
<b>Total</b>	36	<b>17,718</b>	<b>52,330</b>
<b>Current receivables</b>			
Receivables from subsidiaries		551	400
Current tax receivables		539	488
Other receivables	39	330	2,717
Prepaid expenses	40	960	601
<b>Total</b>		<b>2,380</b>	<b>4,206</b>
Cash and cash equivalents	38	141,578	36,637
<b>Total current assets</b>		<b>161,676</b>	<b>93,173</b>
<b>TOTAL ASSETS</b>		<b>507,626</b>	<b>339,223</b>



# The parent company balance sheet

## EQUITY AND LIABILITIES

Amount in SEK thousands	Note	31-12-2020	31-12-2019
<b>Equity</b>			
<b>Restricted equity</b>			
Share capital		971	851
Fund for development costs		170,928	78,372
<b>Total</b>		<b>171,899</b>	<b>79,223</b>
<b>Unrestricted equity</b>			
Share premium reserve		431,583	323,737
Retained earnings		-239,454	-60,606
Profit and loss for the year		-70,949	-128,852
<b>Total</b>		<b>121,180</b>	<b>134,279</b>
<b>Total equity attributable to the parent company's shareholders</b>		<b>293,079</b>	<b>213,502</b>
<b>Long-term liabilities</b>			
Convertible loans		59,129	105,328
Other long-term loans		10,000	10,000
<b>Total</b>	45	<b>69,129</b>	<b>115,328</b>
<b>Current liabilities</b>			
Convertible loans		127,895	-
Accounts payable		4,983	2,215
Other current liabilities		7,907	3,775
Accrued expenses and deferred income	41	4,633	4,403
<b>Total</b>		<b>145,418</b>	<b>10,393</b>
<b>TOTAL EQUITY AND LIABILITIES</b>		<b>507,626</b>	<b>339,223</b>

# Parent company changes in equity

2019					
Equity attributable to parent company shareholders					
Amount in SEK thousands	Share capital	Development reserve	Reserves	Retained earnings including profit/loss for the year	Total equity
<b>Opening balance as at 1 January 2019</b>	795	111,406	299,217	-131,038	280,380
Profit/loss for the year				-128,852	-128,852
Provisions for development reserve		-33,034		33,034	-
<b>Total comprehensive income for the year</b>		<b>-33,034</b>		<b>-95,818</b>	<b>-128,852</b>
<b>Transactions with shareholders in their capacity as owners</b>					
Option component convertible loan				37,398	37,398
Conversion to stocks from convertible loan	56		24,520		24,576
<b>Total transactions with shareholders</b>	<b>56</b>		<b>24,520</b>	<b>37,398</b>	<b>61,974</b>
<b>Closing balance as at 31 December 2019</b>	<b>851</b>	<b>78,372</b>	<b>323,737</b>	<b>-189,458</b>	<b>213,502</b>
2020					
Equity attributable to parent company shareholders					
Amount in SEK thousands	Share capital	Development reserve	Reserves	Retained earnings including profit/loss for the year	Total equity
<b>Opening balance as at 1 January 2020</b>	851	78,372	323,737	-189,458	213,502
Profit/loss for the year				-70,949	-70,949
Provisions for development reserve		92,556		-92,556	-
<b>Total comprehensive income for the year</b>		<b>92,556</b>		<b>-163,505</b>	<b>-70,949</b>
<b>Transactions with shareholders in their capacity as owners</b>					
New share issue, net of transaction costs	117		106,811		106,928
Conversion of warrants	3		1,035	-235	803
Option component convertible loan				42,795	42,795
<b>Total transactions with shareholders</b>	<b>120</b>	<b>-</b>	<b>107,846</b>	<b>42,560</b>	<b>150,526</b>
<b>Closing balance as at 31 December 2020</b>	<b>971</b>	<b>170,928</b>	<b>431,583</b>	<b>-310,403</b>	<b>293,079</b>

# Parent company cash flow statement

Amount in SEK thousands	Note	2020	2019
<b>Operating activities</b>			
Profit/loss after financial items		-70,944	-128,852
Adjustments for items not included in cash flow, etc.	46	31,806	91,220
<b>Cash flow from operating activities before changes in working capital</b>		<b>-39,138</b>	<b>-37,632</b>
Increase (-) / decrease (+) in inventories, etc.		-9,390	-20,275
Increase (-) / decrease (+) in operating receivables		1,486	521
Increase (-) / decrease (+) in operating liabilities		3,712	-33,228
<b>Cash flow from changes in working capital</b>		<b>-4,192</b>	<b>-52,982</b>
<b>Total cash flow from operating activities</b>		<b>-43,330</b>	<b>-90,614</b>
<b>Investing activities</b>			
Investments in intangible assets		-50,645	-43,109
Investments in tangible fixed assets		-2,622	-1,311
<b>Cash flow from investing activities</b>		<b>-53,267</b>	<b>-44,420</b>
<b>Financing activities</b>			
New share issue		106,927	-
Payment of warrants		804	-
Repayment of convertible loan		-	-499
New loans		-	10,000
New convertible loans		100,000	132,504
Loans issued to subsidiaries		-6,193	-
<b>Cash flow from financing activities</b>		<b>201,538</b>	<b>142,005</b>
<b>Cash flow for the year</b>		<b>104,941</b>	<b>6,971</b>
<b>CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE YEAR</b>		<b>36,637</b>	<b>29,666</b>
<b>CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR</b>		<b>141,578</b>	<b>36,637</b>



# Notes

## Note 1 General information

Swedish Stirling AB (publ) ("Swedish Stirling"), corp. ID no. 556760-6602, is a parent company with registered office in Gothenburg, Sweden. The address of the head office is Gruvgatan 35B, 421 30 Gothenburg, Sweden.

Unless otherwise specifically indicated, all amounts are expressed in thousands of Swedish kronor (TSEK). Figures in parentheses refer to the comparative periods.

The notes for the consolidated Group are presented in note 2 to 27. The notes for the parent company are presented in note 28 to 48.

## Note 2 Significant accounting principles

The most important accounting principles applied in the preparation of these consolidated accounts are set out below. These principles have been applied consistently for all periods presented, unless otherwise stated.

### 2.1 Basis for the preparation of the reports

The consolidated accounts for Swedish Stirling 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 presented by the IFRS Interpretations Committee (IFRS IC), as adopted by the EU. The annual report has been prepared through the acquisition value method.

Establishing reports in accordance with IFRS requires the use of a few important accounting estimates. Furthermore, management is required to make certain assessments when applying the Group's accounting principles. The areas that entail a high degree of assessment, or which are complex or where assumptions and estimates are of material importance to the consolidated accounts, are set out in Note 3.

The parent company applies RFR 2 Financial Reporting for Legal Entities and the Swedish Annual Accounts Act. The application of RFR 2 means that the parent company, in the interim report for the legal entity, applies all of the IFRS standards and statements adopted by the EU as far as possible within the framework of the Swedish Annual Accounts Act, the Swedish Pension Obligations Vesting Act, and having regard to the connection between accounting and taxation.

Establishing reports in accordance with RFR 2 requires the use of a few important accounting estimates. Furthermore, management is required to make certain assessments when applying the parent company's accounting principles. The areas that entail a high degree of assessment, or which are complex or where assumptions and estimates are of material importance to the annual accounts, are set out in Note 2.2 of the consolidated accounts.

The parent company applies accounting principles that differ from those of the Group in the cases listed below:

### Presentation formats

The income statement and balance sheet adhere to the presentation format prescribed by the Swedish Annual Accounts Act. The report on changes in equity also adheres to the consolidated presentation format but must contain the columns specified in the Swedish Annual Accounts Act. Moreover, this entails a difference in the terms used compared to those used in the consolidated accounts, primarily with regard to financial income, financial costs and equity.

### Shares in subsidiaries

Shares in subsidiaries are recognised at cost after deducting any impairment losses. The cost basis includes acquisition-related costs and any additional consideration.

When there is an indication that shares in subsidiaries have decreased in value, a calculation of the recoverable amount is made. If this is less than the carrying amount, a write-down is carried out. Write-downs are recognised in the item "Income from shares in Group subsidiaries companies."

### Financial instruments

IFRS 9 is not applied in the parent company. Instead, the parent company applies the points set out in RFR 2 (IFRS 9 Financial Instruments, p. 3-10). Financial instruments are valued at cost. Within subsequent periods, financial assets that are acquired with the intention of holding them short-term will be recognised in accordance with the lowest value principle, at the lower of either the cost basis or market value.

When calculating the net realisable value of receivables recognised as current assets, the principles governing impairment testing and loss risk reserves set out in IFRS 9 shall be applied. For a receivable recognised at amortised cost at the consolidated level, this means that the loss risk reserve recognised in the Group in accordance with IFRS 9 must also be recognised in the parent company.

### Lease agreements

All lease agreements are recognised as operational leasing, regardless of whether the agreements are financial or operational. The lease payment is recognised as an expense on a straight-line basis over the lease period.

### Year-end allocations

Group contributions are reported as year-end allocations.

#### 2.1.1 New and amended standards that have been published but have not yet entered into force

None of the IFRS or IFRIC interpretations that have been published but have not yet entered into force are expected to have any material impact on the Group.

### 2.2 Consolidated accounts

#### 2.2.1 Basic accounting principles

##### Subsidiaries

Subsidiaries are all companies over which the Group has a controlling influence. The Group controls a company when it is exposed to or is entitled to variable returns from its holdings in the company and can affect these returns through its influence in the company. Subsidiaries are included in the consolidated accounts as from the date on which the controlling influence is transferred to Group. They are excluded from the consolidated accounts as from the date on which the controlling influence discontinues.

The purchase method is used for reporting the Group's business combinations. The purchase price for the acquisition of the subsidiary consists of the fair value of transferred assets, the liabilities that the Group incurs to previous owners of the acquired company, and the shares issued by the Group. The purchase price also includes the fair value of all liabilities that result from a conditional purchase price agreement. Identifiable acquired assets and assumed liabilities in a business combination are initially valued at the fair value as at the acquisition date.

Acquisition-related costs are expensed as they arise and are recognised in the item "Other operating expenses" in the Group's statement of comprehensive income.

Goodwill is initially valued as the amount by which the total purchase price and any fair value of non-controlling interests as at the date of acquisition exceed(s) the fair value of identifiable acquired net assets. If the purchase price is lower than the fair value of the acquired company's net assets, the difference is recognised directly in the profit/loss for the year.

Intra-group transactions, balance sheet items, income and expenses on transactions between Group companies are eliminated. Gains and losses resulting from intra-group transactions and which are recognised in assets are also eliminated. The accounting principles for subsidiaries have, where applicable, been changed in order to guarantee consistent application of the Group's principles.

### 2.3 Segmental reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision maker. The chief operating decision maker.

The chief operating decision maker is the function that is responsible for allocating resources and for assessing the results of the operating segments. Swedish Stirling's CEO is the Group's chief operating decision maker.

Swedish Stirling has identified one operating segment that comprises the Group's operations as a whole. This assessment is based on the fact that the business as a whole is regularly reviewed by the CEO as a basis for making decisions regarding the allocation of resources and the assessment of its results.

### 2.4 Foreign currency translation

#### 2.4.1 Functional currency and reporting currency

The various units in the Group use the local currency as the functional currency, as the local currency has been defined as the currency used in the primary economic environment where the respective unit mainly operates. Swedish kronor (SEK) are used in the consolidated accounts. The krona is the parent company's functional currency and the Group's reporting currency.

#### 2.4.2 Transactions and balance sheet items

Transactions in foreign currency are translated to the functional currency according to the exchange rates in effect on the transaction date. Exchange rate gains and losses arising upon payment of such transactions and upon translation of monetary assets and liabilities into foreign currency at the balance sheet date rate are recognised in operating profit in the statement of comprehensive income.

Exchange rate gains and losses attributable to loans and cash and cash equivalents are recognised in the statement of comprehensive income as financial income or costs. All other exchange rate gains and losses are recognised in the item "Other operating expenses" or "Other operating income", respectively, in the statement of comprehensive income.

### 2.4.3 Translation of foreign Group companies

The earnings and financial position for all Group companies with a functional currency other than the reporting currency are translated to the Group's reporting currency. Assets and liabilities for each of the balance sheets are translated from the functional currency of the foreign entity to the Group's reporting currency, Swedish kronor, at the exchange rate prevailing on the balance sheet date. Income and expenses for each of the income statements are translated to Swedish kronor using the average exchange rate for the year. Translation differences arising on currency translation of foreign entities are recognised in other comprehensive income. Cumulative gains and losses are recognised in the profit or loss for the year when the foreign entity is sold in whole or in part.

## 2.5 Revenue recognition

The Group's principles for revenue recognition from agreements with customers are shown below.

### 2.5.1 Sale of goods

The Group develops, manufactures and sells a Stirling engine-based product. Sales occur primarily directly to industrial customers. Sales are recognised as revenue when control of the goods is transferred, which occurs when the goods are delivered to the customer. Delivery occurs when the goods have been transported to the specific location, when the risks of obsolete or lost goods have been transferred to the customer and the customer has either accepted the goods in accordance with the agreement, when the time period for objecting to the agreement has expired, or when the Group has objective evidence to the effect that all criteria for acceptance have been met. Revenue from the sale of PWR BLOK 400-F is recognised based on the price in the agreement, and the revenue is only recognised to the extent that it is highly likely that a significant reversal will not occur. No financing component is deemed to exist at the time of sale. The Group is yet to report income from sale of goods.

### 2.5.2 Sale of services

The Group has announced an alternative revenue model that assumes that Swedish Stirling places the Stirling

engine-based product PWR BLOK 400-F at the customer, and there provides a conversion service of the energy (heat) in the waste gases to electricity. The price for the service is linked to an implied electricity price that the customer is charged on a continuous basis. The sale is reported in accordance with the five-step model in IFRS 15. The revenue is reported monthly when the control for the services is transferred, which occurs when the customer has received the contractual amount of electricity. The Group is yet to report income from sale of services.

### 2.5.3 Interest income

Interest income is recognised as revenue using the effective interest rate method.

## 2.6 Leasing

A lease is a contract, or part of a contract, that defers a right of use for an asset (the underlying asset) for a contracted period of time in exchange for compensation. In the evaluation of whether a lease contract exists, any potential lease component is separating from the non-lease components and treated as a lease contract.

The Group leases premises and vehicles. The lease agreements are recognised as rights of use and a corresponding liability on the day on which the leased asset becomes available for use by the Group. Each lease payment is spread between repayment of the liability and a financial cost. The financial cost is to be allocated over the leasing period to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The right of use is depreciated on a straight-line basis over the shorter of either the asset's useful life or the duration of the lease agreement. Assets and liabilities arising from lease agreements are initially recognised at present value. The lease liabilities include the present value of the following lease payments:

- fixed fees,
- variable lease payments that depend on an index.

The lease payments are discounted by the marginal borrowing rate. The assets with rights of use are valued at cost and include the following:

- the initial valuation of the lease liability,
- payments made at or before the time when the leased asset is made available to the lessee.



Lease agreements of lesser value are expensed on a straight-line basis in the statement of comprehensive income.

Options to extend agreements are included in most the Group's lease agreements for properties and vehicles. These terms are used to maximise flexibility in the course of contract management.

## 2.7 Remuneration to employees

### 2.7.1 Short-term remuneration

Liabilities for salaries and remuneration, including non-monetary benefits and paid leave, which are expected to be settled within 12 months of the end of the financial year, are recognised as current liabilities at the undiscounted amount that is expected to be paid when the liabilities are settled. The cost is recognised as the services are rendered by the employees. The liability is recognised as an obligation to provide remuneration to employees in the statement of financial position.

### 2.7.2 Post-employment benefits

The Group companies have defined contribution pension plans only. A defined contribution pension plan is a pension plan according to which the Group pays fixed contributions to a separate legal entity. The Group has no legal or constructive obligations to pay additional contributions if this legal entity does not have sufficient assets to pay all employee benefits linked to the employees' service during the current period or prior periods. The contributions are recognised as an expense in the profit/loss for the year as they are vested by the employees' having performed services on the company's behalf during the year in question.

## 2.8 Current and deferred income tax

The tax expense for the year includes current and deferred tax. Tax is recognised in the statement of comprehensive income, except when the tax relates to items recognised in other comprehensive income or directly in equity. In such cases, the tax is also recognised in other comprehensive income or equity, respectively.

Current tax is calculated based on the taxable earnings for the year according to the applicable tax rate. The current tax expense is calculated based on the tax rules enacted as at the balance sheet date or which are in effect in practice in the countries where the parent company and its subsidiaries operate and generate taxable income. Management regularly evaluates the claims made in tax returns regarding situations in which the applicable tax rules are subject to interpretation. Where deemed appropriate, management makes provisions for amounts likely to be paid to the tax authority.

Deferred tax is recognised for all temporary differences arising between the taxable value of assets and liabilities and their carrying amount in the consolidated accounts. Deferred tax liability, however, is not recognised if it arises as a result of the initial recognition of goodwill. Deferred tax is also not recognised if it arises as a result of a transaction that comprises the initial recognition of an asset or liability that is not a business combination and which, at the time of the transaction, affects neither reported nor taxable earnings. Deferred income tax is calculated using tax rates (and tax legislation) that have been enacted or announced as at the balance sheet date and which are expected to apply when the deferred tax asset in question is realised, or when the deferred tax liability is settled.

Deferred tax assets are recognised to the extent that it is probable that future tax surpluses against which the temporary differences can be utilised will be available. Deferred tax assets and liabilities are offset when there is a legal right of set-off for current tax assets and tax liabilities and when the deferred tax assets and tax liabilities are attributable to taxes assessed by the same tax authority and relate either to the same tax subject or to different tax subjects, yet where there is an intention to settle the balances by means of net payments.

## 2.9 Intangible assets

### 2.9.1 Capitalised expenditures for development work

Costs for maintenance are recognised as an expense as they arise. Development costs that are directly attributable to the development of the Stirling engine-based products and systems and which are controlled by the Group, are recognised as intangible assets when the following criteria are met:

- it is technically possible to complete the products and systems so that they can be used,
- the Company's intention is to complete them and to use or sell them,
- the conditions are in place to use or sell them,
- it can be shown how they will generate probable future economic benefits,
- adequate technical, financial and other resources are available in order to complete the development and in order to use or sell them, and
- the expenses attributable to them during their development can be calculated in a reliable way.

Directly attributable expenses that are capitalised as part of development work include expenses for employees and external consultants.

Other development costs that do not meet these criteria are expensed as they arise. Development costs that were previously expensed are not recognised as an asset in the subsequent period.

As the Company is still operating in an expansion phase, the Company has yet to start amortising the capitalised development work.

## 2.10 Tangible fixed assets

It's the intent of holding an asset that determines whether the asset should be classified as fixed asset or current asset. An asset shall be classified as fixed asset, unless it's held for sale or consumption within 12 months or within the Company's business cycle.

Tangible fixed assets are recognised at cost, less depreciation and any write-downs. The cost basis includes expenses that can be directly attributed to the acquisition of the asset and to the process of putting it in the location and condition required in order for it to be utilised in accordance with the purpose of the acquisition. Additional expenses are added to the asset's carrying amount, or are recognised as a separate asset, depending on what is appropriate in the given situation, yet only when it is probable that the future financial benefits associated with the asset will flow to the Group, and the asset's cost basis can be measured in a reliable way. The carrying amount for a replaced part is eliminated from the balance sheet.

All other forms of repairs and maintenance are recognised as costs in the statement of comprehensive income during the period in which they arise.

Depreciation of assets, in order to allocate their cost basis down to the estimated residual value over the estimated useful life. For tangible fixed assets held under financial lease agreements, depreciation is recognised over the shorter of either the useful life or the lease period.

The useful lives are as follows:

Machinery and other technical assets	<b>5 years</b>
Property, plant and equipment	<b>5 years</b>
Leasehold improvements	<b>Lease-term</b>
Vehicles	<b>5 years</b>

The residual values and useful life of the assets are tested at the end of each reporting period and are adjusted as needed.

Please refer to the accounting principles above regarding depreciation periods for right of use assets. An asset's carrying amount is immediately written down to its recoverable amount if the asset's carrying amount should exceed its estimated recoverable amount. Gains and losses on the disposal of a tangible fixed asset are determined by a comparison between the sales proceeds and the carrying amount and are recognised in the items "Other operating income" or "Other operating expenses" in the statement of comprehensive income.

## 2.11 Impairment of non-financial assets

Intangible assets that are not ready for use (capitalised development work expenses) are not depreciated but are tested annually for impairment. Assets that are depreciated are assessed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised in the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of the asset's fair value less selling expenses and its value in use. When assessing impairment, assets are grouped at the lowest

levels in which essentially independent cash flows are present (cash-generating units). For assets that have been impaired previously, a review is conducted as to whether a reversal of the impairment loss is needed on each balance sheet date.

## 2.12 Financial instruments

### 2.12.1 Initial recognition

Financial assets and financial liabilities are recognised when the Group becomes party to the contractual terms of the instrument. Purchases and sales of financial assets are recognised on the transaction date, the date on which the Group undertakes to buy or sell the asset.

Financial instruments are initially recognised at fair value plus transaction costs that are directly attributable to the acquisition or issuance of a financial asset or financial liability, such as fees and commissions.

### 2.12.2 Classification

The Group classifies its financial assets and liabilities in the category amortised cost.

#### Financial assets at amortised cost

The classification of investments in debt instruments depends on the Group's business model for managing financial assets and the contractual terms for the assets' cash flows. The Group reclassifies debt instruments only if Group's business model for the instruments should change.

Assets held for the purpose of collecting contractual cash flows and where these cash flows are made up only of principal and interest are valued at amortised cost. The carrying amount of these assets is adjusted by any expected credit losses that have been recognised (see impairment loss below). Interest income from these financial assets is recognised using the effective interest rate method and is included in financial income. The Group's financial assets valued at amortised cost comprise the items other long-term receivables and cash and cash equivalents.

#### Financial liabilities at amortised cost

The Group's financial liabilities are classified as subsequent and valued at amortised cost using the effective interest rate method. Financial liabilities consist of convertible loans, other long-term loans, accounts payable and current liabilities.

### 2.12.3 Derecognition of financial instruments

#### Derecognition of financial assets

Financial assets or a portion thereof are removed from the statement of financial position when the contractual rights to receive cash flows from the assets have expired or been transferred and either (i) the Group substantially transfers all risks and benefits associated with ownership or (ii) the Group does not transfer or substantially retains all risks and benefits associated with ownership but the Group has not retained control over the asset.

#### Derecognition of financial liabilities

Financial liabilities are removed from the statement of financial position when the obligations have been settled, cancelled or otherwise discontinued. The difference between the carrying amount of a financial liability (or part of a financial liability) that has been extinguished or transferred to another party and the consideration paid, including any non-cash assets transferred or liabilities assumed, are recognised in the statement of comprehensive income.

When the terms of a financial liability are renegotiated and are not derecognised from the statement of financial position, a profit or loss is recognised in the statement of comprehensive income. The gain 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.

### 2.12.4 Offsetting financial instruments

Financial assets and liabilities are offset and recognised in a net amount in the statement of financial position only when there is a legal right to offset the carrying amounts and an intention to settle them with a net amount or to simultaneously realise the asset and settle the debt. The legal right may not be dependent on future events and it must be legally binding on the company and the counterparty, both in the normal course of business and in the event of suspension of payments, insolvency or bankruptcy.

### 2.12.5 Impairment of financial assets

#### Assets recognised at amortised cost

The Group assesses the future expected credit losses linked to assets recognised at amortised cost. The Group recognises a credit reserve for such expected credit losses at each reporting date. For accounts



receivable, the Group uses the simplified approach for provision to credit reserves, i.e. the reserve will correspond to the expected loss over the entire expected life of the account receivable. In order to measure the expected credit losses, accounts receivable have been grouped based on distributed credit risk characteristics and days past due. The Group uses forward-looking variables for expected credit losses. Expected credit losses are recognised in the consolidated statement of comprehensive income, in the item "Other external expenses".

### 2.13 Inventories

Inventories are recognised using the first-in first-out principle at the lower of the cost basis and net realisable value. The net realisable value is the estimated selling price in the ordinary course of business, less applicable variable selling expenses.

### 2.14 Cash and cash equivalents

In both the statement of financial position and in the cash flow statement, cash and cash equivalents include cash and bank deposits.

### 2.15 Share capital

Common shares are classified as equity. Transaction costs that can be directly attributed to the issuance of new common shares are recognised, net after tax, in equity as a deduction from the issue proceeds.

### 2.16 Convertible loans and other loans

The fair value of the liability component of a convertible bond is calculated using a discount rate comprising the market interest rate for a liability having the same terms yet without the right of conversion into shares.

The amount is recognised as a liability at amortised cost until such time as the liability is converted or matures. The conversion right is initially recognised as the difference between the fair value of the entire compound financial instrument and the fair value of the liability component. This is recognised in equity, net, after tax.

The liability is classified as current in the balance sheet if the company does not have an unconditional right to postpone the settlement of the liability for at least 12 months after the reporting period.

Other loans are classified as long-term and recognised as a liability at amortised cost.

### 2.17 Borrowing costs

All borrowing costs are expensed as they arise.

### 2.18 Accounts payable

Accounts payable are financial instruments which relate to obligations to pay for goods and services that have been acquired from suppliers in the ordinary course of business. Accounts payable are classified as current liabilities if they fall due within one year. If not, they are recognised as long-term liabilities.

The liabilities are initially recognised at fair value and subsequently at amortised cost using the effective interest rate method.

### 2.19 Cash flow statement

The cash flow statement is prepared in accordance with the indirect method. The reported cash flow comprises only transactions that have resulted in incoming or outgoing payments.

### 2.20 Earnings per share

(i) Undiluted earnings per share

Undiluted earnings per share are calculated by dividing:

- earnings attributable to the parent company's shareholders
- by a weighted average number of ordinary shares outstanding during the period.

(ii) Diluted earnings per share

To calculate diluted earnings per share, the amount used to calculate undiluted earnings per share is adjusted by taking into account:

- the after-tax effect of dividends and interest expenses on potential common shares, and
- the weighted average of the additional common shares that would have been outstanding on conversion of all potential common shares.

### 2.21 Dividends paid

A dividend paid to the parent company's shareholders is recognised as a liability in the Group's financial statements in the period during which the dividend is approved by the parent company's shareholders.

### Note 3 Critical accounting estimates and judgements

The Group makes estimates and assumptions about the future. The resulting accounting estimates will by definition seldom equal the related actual results. Estimates and assumptions which involve a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities in the next financial year are addressed below.

#### 3.1 Valuation of convertible loans

Swedish Stirling is in an expansion phase where revenues from sale have yet to be reported. As the risk is considered greater in a company that has yet to secure significant sales volumes compared to a mature company, the yield requirements have also been adjusted accordingly. In light of this, a discount rate of 35% has been used to determine the market value of the loan and option component.

#### 3.2 Impairment of intangible fixed assets

The Group completes a review annually whether there is any need for impairment of intangible fixed assets in accordance with the accounting principle described in Note 2 section 2.11 Impairment of non-financial assets. The Group currently has one cash-generating unit for the development and sale of PWR BLOK. Recoverable amounts for the cash-generating units have been determined by calculating value in use. For these calculations, some estimates must be applied.

Terminal value has been set to 2 percent growth.

The estimated discount rate before tax used for the impairment test is presented below.

Discount factor before tax	2020	2019
Own work capitalised	31,0%	30,7%

The Board's forecast for the coming 10-year period has been used for the basis of calculating the value in use. The terminal growth value thereafter has been set at 2 percent. The Board's forecast is based initially on received letters of intents and subsequently, the Board's assessment of new customer demand. If the estimated pre-tax discount rate applied to discounted cash flows would have been 2 percent (1 percent) higher than management's assessment, there would still be no impairment of the intangible fixed assets. If the estimated growth rate applied for discounted cash flows after the forecasted 10-year period had been 1 percent (1 percent) lower than management's assessment, there would still be no write-down of the intangible fixed assets.

During the period ending on 31 December 2019, the company's management has decided to end the development of solar powered projects. As a result, an assessment was made to write down the related intangible asset for capitalised development cost. The write-down amounted to TSEK 76,143, which represents 23 percent of total capitalised development cost at year-end 2019.

### Note 4 Financial risk management

#### 4.1 Financial risk factors

Through its operations, the Group is exposed to a wide variety of financial risks related to accounts receivable, accounts payable and loans: market risk (comprising interest rate risk and currency risk), credit risk and liquidity risk. The Group strives to minimise potential adverse effects on the Group's financial results.

The objective of the Group's financial activities is to:

- ensure that the Group can meet its payment obligations,
- manage financial risks,
- ensure access to the necessary financing, and
- optimise the Group's net financial income/expense.

#### (a) Credit risk

Credit risk is managed by senior management. Only banks and credit institutions that have received a credit rating of "A" or higher from an independent rating agency are accepted. If customers are credit-rated by independent valuers, these assessments are used. If no independent credit assessment exists, a risk assessment is made of the customer's creditworthiness based on the customer's financial position, experience and other factors. As a significant portion of the Group's contracts provide for full or partial advance payment or have been entered into with financially strong customers, customer credit risk is considered to be limited.

The Group's current credit risk is limited to cash and cash equivalents.

#### (b) Market risk / Currency risk

The Group's long-term liabilities are contracted at fixed interest rates and as a result, the Group is not exposed to interest risk from fluctuations in the market.

Due to its international operations, Swedish Stirling is exposed to exchange rate fluctuations. These fluctuations relate primarily to transaction exposure caused by the fact that the Company currently earns

and is estimated to continue earning the majority of its revenue in foreign currencies, primarily the South African rand short term and the Euro long term, while the bulk of its costs, especially personnel costs, is denominated in Swedish krona. The fluctuations also relate to translation exposure due to the translation of balance sheet items denominated in foreign currency. Thus, it cannot be ruled out that future exchange rate fluctuations may have an adverse effect on the Swedish Stirling's operations, financial position and earnings.

### (c) Liquidity risk

Through cautious liquidity management, the Group ensures that adequate cash is available to meet its operational requirements. The Group also ensures that it has significant cash and cash equivalents to pay its liabilities as they fall due.

Senior management monitors rolling forecasts for the Group's cash and cash equivalents based on expected cash flows.

The following table shows an analysis of the Group's non-derivative financial liabilities that are financial liabilities by remaining maturity from the balance sheet date. The amounts indicated in the table are the contractual, undiscounted cash flows. Future foreign currency cash flows related to variable interest rates have been calculated based on the balance sheet date exchange rate and interest rate.

Amount in SEK thousands							
As at 31 December 2019	Less than 3 months	Between 3 months and 1 year	Between 1 and 2 years	Between 2 and 5 years	After more than 5 years	Total contractual cash flows	Carrying amount
<b>Financial liabilities</b>							
Convertible bonds			132,505			132,505	105,328
Other financial liabilities		825	825	11,650		13,300	10,000
Lease liabilities	259	802	1,130	1,824		4,015	4,255
Accounts payable	2,252					2,252	2,252
<b>Total</b>	<b>2,511</b>	<b>1,627</b>	<b>134,460</b>	<b>13,474</b>	<b>-</b>	<b>152,072</b>	<b>121,835</b>

Amount in SEK thousands							
As at 31 December 2020	Less than 3 months	Between 3 months and 1 year	Between 1 and 2 years	Between 2 and 5 years	After more than 5 years	Total contractual cash flows	Carrying amount
<b>Financial liabilities</b>							
Convertible bonds	132,505				100,000	232,505	187,024
Other financial liabilities		825	825	10,825		12,475	10,000
Lease liabilities	348	1,046	1,228	997		3,619	3,327
Accounts payable	5,498					5,498	5,498
<b>Total</b>	<b>138,351</b>	<b>1,871</b>	<b>2,053</b>	<b>11,822</b>	<b>100,000</b>	<b>254,097</b>	<b>205,849</b>

## 4.2 Management of capital

The Group's goal in respect of capital structure is to secure its ability to continue its operations with a view to continuing to generate a return for the shareholders and benefits for other stakeholders, and to maintain an optimal capital structure in order to keep the costs of capital down.

The Group assesses the capital based on the debt/equity ratio. This key performance indicator is calculated as net debt divided by total capital. Net debt is calculated as total borrowings (comprising the items short-term borrowings and long-term borrowings in the consolidated balance sheet) less cash and cash equivalents. Total capital is calculated as net debt plus equity.

Amount in SEK thousands	31-12-2020	31-12-2019
Short-term liabilities	18,910	11,511
Convertible loans, long-term and short-term	187,024	105,328
Long-term loans	10,000	10,000
Other long-term liabilities	4,290	3,946
Total borrowings	220,224	130,785
Less: cash and cash equivalents	-141,631	-36,862
Net debt	78,593	93,923
Total equity	293,225	215,598
<b>Total capital</b>	<b>371,818</b>	<b>309,521</b>
<b>Debt / Equity ratio</b>	<b>21%</b>	<b>30%</b>

The Group has made the assessment that the current debt / equity ratio is satisfactory.

## Note 5 Segment information

### Description of segments and principal business activities

Swedish Stirling's Chief Executive Officer (CEO) is the chief operating decision maker of the Swedish Stirling Group and assesses the Group's financial position and makes strategic decisions.

The CEO has defined operating segments based on the information that is discussed and used as a basis for decisions on the allocation of resources and evaluation of results. The CEO monitors and assesses the Group based on one operating segment, which is the Group as a whole.

The CEO mainly uses operating profit to assess the Group's earnings.

Amount in SEK thousands	2020	2019
Operating profit / loss	-22,951	-100,931

Tangible fixed assets by country.

Amount in SEK thousands	2020	2019
Sweden	8,077	7,658
South Africa	1,167	584
<b>Total, Group</b>	<b>9,244</b>	<b>8,242</b>

## Note 6 Audit fees

Amount in SEK thousands	2020	2019
<b>PWC</b>		
Audit engagement	420	-
Audit work outside of the audit engagement	15	-
Tax consulting services	155	-
Other services	142	-
<b>Total</b>	<b>732</b>	<b>-</b>
<b>KPMG</b>		
Audit engagement	-	110
Other services	-	168
<b>Total</b>	<b>-</b>	<b>278</b>
<b>Total, Group</b>	<b>732</b>	<b>278</b>



## Note 7 Employee benefits

### Salaries, other remuneration and social security contributions

Amount in SEK thousands	2020	2019
Salaries, Board of Directors and CEO	2,004	2,023
Other employees	21,395	16,905
<b>Total salaries</b>	<b>23,399</b>	<b>18,928</b>
Retirement benefit cost, Board of Directors and CEO	334	353
Other employees	3,266	2,042
Social security contributions, Board of Directors and CEO *	641	556
Social security contributions, other employees **	6,339	5,277
<b>Total, Group</b>	<b>33,979</b>	<b>27,156</b>

\* Of which retirement benefit cost for 2020 was TSEK 81 (TSEK 86).

\*\* Of which retirement benefit cost for 2020 was TSEK 786 (TSEK 495).

### Average number of employees by country

	2020		2019	
	Total	Of which were men	Total	Of which were men
Sweden	28	21	23	17
South Africa	6	5	5	5
<b>Total, Group</b>	<b>34</b>	<b>26</b>	<b>28</b>	<b>22</b>

### Gender distribution in the Group (incl. subsidiaries) for Directors and other senior executives

	2020		2019	
	Number at balance sheet date	Of which were men	Number at balance sheet date	Of which were men
Board of Directors	9	6	8	6
Chief executives and other senior executives	8	5	7	4
<b>Total, Group</b>	<b>17</b>	<b>11</b>	<b>15</b>	<b>10</b>

**Remuneration and other benefits of senior executives in 2020**

Amount in SEK thousand	Director's fee/ Base salary	Variable remuneration/ Consulting fees	Other benefits	Retirement benefit cost	Total
2020					
Chairman Sven Sahle					-
Director Andreas Ahlström					-
Director Erik Wigertz					-
Former Director Ulf Gundemark (Jan - Apr)	67				67
Former Director Morgan Benedict (Jan - Apr)	67				67
Director Gunilla Spongh	300				300
Director Carina Andersson	133				133
Director David Zaudy					-
CEO Gunnar Larsson	1,433		4	334	1,771
Other senior executives (7 persons)	6,405	101	15	1,277	7,797
<b>Total, Group</b>	<b>8,405</b>	<b>101</b>	<b>19</b>	<b>1,611</b>	<b>10,135</b>

**CEO and senior executives**

In addition to a fixed monthly salary, some senior executives receive variable remuneration if the pre-determined performance conditions are met. The remuneration is determined by the CEO. During the year, total variable remuneration of TSEK 101 (TSEK 65) to the other senior executives.

Other benefits consist of benefit value for health insurance in the amount of TSEK 19 (TSEK 16).

The contract between the company and the CEO is terminable on 12 months' notice by either party. No severance pay agreement has been entered. Other senior executives have up to six months' notice.

## The Board of Directors

Under a resolution of the shareholders' meeting on 24 April 2020, Directors' fees of TSEK 500 are payable for the period until the next Annual General Meeting to some non-executive Directors not employed by the company.

## Remuneration and other benefits of senior executives in 2019

Amount in SEK thousand 2019	Director's fee/ Base salary	Variable remuneration/ Consulting fees	Other benefits	Retirement benefit cost	Total
Chairman Sven Sahle					-
Director Andreas Ahlström					-
Director Johan Ekessiö	100				100
Director Erik Wigertz					-
Director Ulf Gundemark	217				217
Director Benedict Morgan	217				217
Director Gunilla Spongh	275	250			525
CEO Gunnar Larsson	1,215		7	523	1,745
Other senior executives (7 persons)	4,071	65	9	688	4,833
<b>Total, Group</b>	<b>6,094</b>	<b>315</b>	<b>16</b>	<b>1,211</b>	<b>7,636</b>

## Note 8 Other operating income

Amount in SEK thousands	2020	2019
Realised exchange rate gains	323	542
Other income	29	87
Invoiced costs	18	-
<b>Total</b>	<b>370</b>	<b>629</b>

**Note 9 Other operating expenses**

Amount in SEK thousands	2020	2019
Realised exchange rate losses	102	272
<b>Total</b>	<b>102</b>	<b>272</b>

**Net exchange rate difference**

Amount in SEK thousands	2020	2019
Realised exchange rate gains	323	542
Realised exchange rate losses	-102	-272
<b>Total</b>	<b>221</b>	<b>270</b>

**Note 10 Income tax**

Amount in SEK thousands	2020	2019
Current tax on profit for the year	-	-
Deferred tax	-1,432	620
Other tax expense	-5	-
<b>Total</b>	<b>-1,437</b>	<b>620</b>

Deferred taxes have been applied on lease liabilities and temporary differences in capitalised project development cost in the subsidiary company.

The income tax on the consolidated profit before tax differs from the theoretical amount that would have resulted from the use of the Swedish tax rate for the results of the consolidated companies as follows:

Reconciliation of income tax Amount in SEK thousands	2020 Percent	2020 Amount	2019 Percent	2019 Amount
Profit/loss before tax		-71,440		-126,406
Income tax calculated at tax rate in Sweden	-21.4%	-15,288	-21.4%	-27,051
Non-deductible expenses	13.7%	9,753	4.1%	5,245
Deductible expenses that are not part of profit/loss results	-2.2%	-1,567	0.0%	-
Non-taxable income	0.0%	-	0.0%	-
Other paid tax expense	0.0%	-5	0.0%	-
Tax losses incurred during the year for which deferred tax assets are not recognised	9.9%	7,102	17.3%	21,806
<b>Income tax</b>	<b>0.0%</b>	<b>-5</b>	<b>0.0%</b>	<b>-</b>



**Note 11 Intangible assets**

Amount in SEK thousands	Capitalised development cost	License	Total
<b>Financial year 2019</b>			
Opening balance	275,413	20	<b>275,433</b>
Purchases	45,796		<b>45,796</b>
Impairment	-76,143		<b>-76,143</b>
<b>Carrying amount at year-end</b>	<b>245,066</b>	<b>20</b>	<b>245,086</b>

Amount in SEK thousands	Capitalised development cost	License	Total
<b>As per 31 December 2019</b>			
Cost	321,209	20	<b>321,229</b>
Accumulated impairments	-76,143		<b>-76,143</b>
<b>Carrying amount</b>	<b>245,066</b>	<b>20</b>	<b>245,086</b>

Amount in SEK thousands	Capitalised development cost	License	Total
<b>Financial year 2020</b>			
Opening balance	245,066	20	<b>245,086</b>
Reclasses	41,929		<b>41,929</b>
Purchases	55,754		<b>55,754</b>
<b>Carrying amount at year-end</b>	<b>342,749</b>	<b>20</b>	<b>342,769</b>

Amount in SEK thousands	Capitalised development cost	License	Total
<b>As per 31 December 2020</b>			
Cost	418,892	20	<b>418,912</b>
Accumulated impairments	-76,143		<b>-76,143</b>
<b>Carrying amount</b>	<b>342,749</b>	<b>20</b>	<b>342,769</b>

**Note 12 Tangible fixed assets**

Amount in SEK thousands	Machinery and other technical assets	Property, plant and equipment	Leasehold improvements	Vehicles	Total
<b>Financial year 2019</b>					
Opening balance	68	2,629	523	290	<b>3,510</b>
Exchange rate differences	3	1	-	15	<b>19</b>
Purchases	-	1,208	165	-	<b>1,373</b>
Scrapping, cost	-	-742	-	-	<b>-742</b>
Amortisation	-22	-743	-136	-70	<b>-971</b>
Scrapping, accumulated depreciation	-	742	-	-	<b>742</b>
<b>Carrying amount at year-end</b>	<b>49</b>	<b>3,095</b>	<b>552</b>	<b>235</b>	<b>3,931</b>

Amount in SEK thousands	Machinery and other technical assets	Property, plant and equipment	Leasehold improvements	Vehicles	Total
<b>As per 31 December 2019</b>					
Cost	76	10,065	793	385	<b>11,319</b>
Accumulated amortisation	-27	-6,970	-241	-150	<b>-7,388</b>
<b>Carrying amount</b>	<b>49</b>	<b>3,095</b>	<b>552</b>	<b>235</b>	<b>3,931</b>

Amount in SEK thousands	Machinery and other technical assets	Property, plant and equipment	Leasehold improvements	Vehicles	Total
<b>Financial year 2020</b>					
Opening balance	49	3,095	552	235	<b>3,931</b>
Exchange rate differences	-7	-9	-	-35	<b>-51</b>
Purchases	-	2,178	558	753	<b>3,489</b>
Scrapping, cost	-	-1,836	-	-	<b>-1,836</b>
Amortisation	-18	-1,073	-251	-102	<b>-1,444</b>
Scrapping, accumulated depreciation	-	1,836	-	-	<b>1,836</b>
<b>Carrying amount at year-end</b>	<b>24</b>	<b>4,191</b>	<b>859</b>	<b>851</b>	<b>5,925</b>

Amount in SEK thousands	Machinery and other technical assets	Property, plant and equipment	Leasehold improvements	Vehicles	Total
<b>As per 31 December 2020</b>					
Cost	65	10,398	1,351	1,086	<b>12,900</b>
Accumulated amortisation	-41	-6,207	-492	-235	<b>-6,975</b>
<b>Carrying amount</b>	<b>24</b>	<b>4,191</b>	<b>859</b>	<b>851</b>	<b>5,925</b>

**Note 13 Financial instruments**

Amount in SEK thousands As per 31 December 2019	Financial assets at amortised cost	Total
<b>Assets in balance sheet</b>		
Cash and cash equivalents	36,862	<b>36,862</b>
<b>Carrying amount</b>	<b>36,862</b>	<b>36,862</b>

Amount in SEK thousands As per 31 December 2019	Financial assets at amortised cost	Total
<b>Liabilities in balance sheet</b>		
Convertible loans, long-term and short-term	105,328	<b>105,328</b>
Other long-term loans	10,000	<b>10,000</b>
Accounts payable	2,252	<b>2,252</b>
Other current liabilities	3,193	<b>3,193</b>
<b>Carrying amount</b>	<b>120,773</b>	<b>120,773</b>

Amount in SEK thousands As per 31 December 2020	Financial assets at amortised cost	Total
<b>Assets in balance sheet</b>		
Cash and cash equivalents	141,631	<b>141,631</b>
<b>Carrying amount</b>	<b>141,631</b>	<b>141,631</b>

Amount in SEK thousands As per 31 December 2020	Financial assets at amortised cost	Total
<b>Liabilities in balance sheet</b>		
Convertible loans, long-term and short-term	187,024	<b>187,024</b>
Other long-term loans	10,000	<b>10,000</b>
Accounts payable	5,498	<b>5,498</b>
Other current liabilities	6,680	<b>6,680</b>
<b>Carrying amount</b>	<b>209,202</b>	<b>209,202</b>

Carrying amount is a reasonable approximation of fair value.

### 13.1 Convertible loans

Convertible loans have both debt- and equity-like features. Swedish Stirling AB has three outstanding convertible loans of TSEK 79,505 (STRLNG KV2), TSEK 53,000 (KV3) and TSEK 100,000 (KV4).

The terms of the Group's convertible loans are presented below.

Convertible loans	Total loan amount (TSEK)	Interest rate	Conversion rate (SEK)	Due date
Convertibles 2019/2021 (KV2)	79,505	10%	10	26 February 2021
Convertibles 2019/2021:2 (KV3)	53,000	9%	9	26 February 2021
Convertibles 2020/2025 (KV4)	100,000	14%	8	30 June 2025

Swedish Stirling is in an expansion phase in which no revenue from sales have yet been recognised. As the risk is considered to be greater in a company that has not yet secured material sales volumes than in a mature company, the required rates of return have been adjusted accordingly. A discount rate of 35 percent has therefore been used to determine the market value of the debt and option components.

### 13.2 Other long-term loans

The Group has one long-term loan in the amount of TSEK 10,000. The loan has a maturity of 4 years, with the option to extend for 2 years, and falls due 29 September 2023. The nominal interest rate of 8.25 percent is payable annually.

### 13.3 Interest expense

Amount in SEK thousands	2020	2019
Interest convertible loans	44,250	24,412
Other interest expense	4,239	1,063
<b>Total financial expenses</b>	<b>48,489</b>	<b>25,475</b>

During the year 2020, interest expense in the amount of TSEK 20,098 (TSEK 8,212) was paid.

Materials in inventory are valued according to most recent acquisition price with a 4 percent surcharge for shipping and handling costs.

During the year 2020, material cost in the amount of TSEK 3,688 (TSEK 2,682) was recorded in the income statement. These costs are primarily related to materials used for testing and development purposes. During the year, capitalised cost in the amount of TSEK 41,929 for generation 1 and generation 2 were reclassified from work in progress to capitalised development cost.

An impairment loss in the amount of TSEK 1,732 (TSEK 0) was reported in the line "Raw materials and consumables" of the income statement for disposal of obsolete materials. A stock obsolescence reserve has been reflected in the income statement in the amount of TSEK 350 (TSEK 0) for materials that will not be used in future production, but are solely to be used for testing and development purposes.

### Note 14 Inventories

Amount in SEK thousands	2020	2019
Inventory	17,570	20,115
Work in progress	148	32,215
<b>Total</b>	<b>17,718</b>	<b>52,330</b>

### Note 15 Other current receivables

Amount in SEK thousands	31-12-2020	31-12-2019
Tax account	330	1,089
Other	297	1,701
<b>Total</b>	<b>627</b>	<b>2,790</b>



**Note 16 Prepaid expenses**

Amount in SEK thousands	31-12-2020	31-12-2019
Prepaid rent	257	258
Prepaid insurance	131	-
Prepaid other	385	147
<b>Total</b>	<b>773</b>	<b>405</b>

**Note 17 Cash and cash equivalents**

Amount in SEK thousands	31-12-2020	31-12-2019
Bank deposits	141,631	36,862
<b>Total</b>	<b>141,631</b>	<b>36,862</b>

**Note 18 Share capital and additional paid-in capital**

Amount in SEK thousands

	Number of shares	Share capital	Reserves	Other capital contributions
<b>As per 1 January 2019</b>	<b>79,505,021</b>	<b>795</b>	<b>-22</b>	<b>299,217</b>
Other comprehensive income for the year			54	-
Conversion to stocks from convertible loan	5,585,369	56		24,520
<b>As per 31 December 2019</b>	<b>85,090,390</b>	<b>851</b>	<b>32</b>	<b>323,737</b>
Other comprehensive income for the year			-55	-
New share issue, net of transaction costs	11,678,571	117		106,811
Conversion of warrants	350,000	3		1,035
<b>As per 31 December 2020</b>	<b>97,118,961</b>	<b>971</b>	<b>-23</b>	<b>431,583</b>

At at 31 December 2020, the share capital consisted of 97,118,961 ordinary shares with a quotient value of SEK 0.01 per share.

All shares issued by the parent company are fully paid.

**Note 19 Deferred tax**

Deferred tax assets are recognised for tax losses or other deductions to the extent that it is probable that these can be used to offset future taxable profits. Unused tax losses for which a deferred tax asset has not been recognised totalled TSEK 171,079 at 31 December 2020 (TSEK 138,380). The unused tax losses contain a carry forward of a Group allocation restriction in the amount of TSEK 15,086.

**Note 20 Accrued expenses and deferred income**

Amount in SEK thousands	31-12-2020	31-12-2019
Accrued staff cost	2,923	3,376
Research and development cost	1,205	385
Accrued interest expense	208	208
Other accrued expense	314	434
<b>Total</b>	<b>4,650</b>	<b>4,403</b>

**Note 21 Leases****Amounts recognised in the balance sheet**

Right-of-use assets

Amount in SEK thousands	Offices	Vehicles	Total
<b>As at 1 January 2019</b>	<b>1,443</b>		<b>1,443</b>
New contracts	3,543	286	<b>3,829</b>
Amortisation	-908	-53	<b>-961</b>
As at 31 December 2019	<b>4,078</b>	<b>233</b>	<b>4,311</b>
Exchange rate differences		-34	<b>-34</b>
New contracts		293	<b>293</b>
Amortisation	-1,116	-135	<b>-1,251</b>
<b>As at 31 December 2020</b>	<b>2,962</b>	<b>357</b>	<b>3,319</b>

The following lease-related amounts are recognised in the balance sheet:

Amount in SEK thousands	31-12-2020	31-12-2019
<b>Right-of-use assets</b>		
Offices	2,962	4,078
Vehicles	357	233
<b>Total</b>	<b>3,319</b>	<b>4,311</b>

Amount in SEK thousands	31-12-2020	31-12-2019
<b>Lease liabilities</b>		
Long-term	2,096	3,194
Short-term	1,231	1,061
<b>Total</b>	<b>3,327</b>	<b>4,255</b>

## Amounts recognised in the income statement

The following lease-related amounts are presented in the income statement:

Amount in SEK thousands	2020	2019
<b>Depreciation of right-of-use assets</b>		
Offices	1,116	908
Vehicles	135	53
<b>Total</b>	<b>1,251</b>	<b>961</b>
Interest expense (included in financial expense)	244	230
Expenses related to short-term leases / leases for which the underlying asset is of low value that are not short-term leases (included in other external expenses)	594	604

The total cash flow related to leases in 2020 was TSEK -2,118 (TSEK -1,664).

For information on the maturity of the Group's lease liabilities, refer to Note 4.1 of the consolidated accounts.

## Note 22 Earnings per share

	2020	2019
<b>SEK</b>		
Earnings per share prior to dilution	-0.80	-1.59
Diluted earnings per share	-0.80	-1.59
<b>Earnings measurements used in the calculation of earnings per share</b>		
Earnings attributable to the parent company's shareholders used in the calculation of earnings per share before and after dilution, TSEK	-72,877	-127,026
<b>Amount</b>		
Weighted average number of common shares when calculating earnings per share before dilution	91,020,971	80,025,302
<b>Total weighted average number of common shares when calculating earnings per share after dilution</b>	<b>91,020,971</b>	<b>80,025,302</b>

No dilutive effect as the earnings are negative

**Note 23 Related party transactions**

In 2019, board member Gunilla Spongh provided consulting services to the Company, in addition to her directorship, to assist with preparations for a planned listing on a regulated marketplace and compliance with the enhanced requirements that follow such a listing.

Ian Curry, former board member of Swedish Stirling's wholly owned subsidiary in South Africa, Swedish Stirling SA, has on a consulting basis acted as an advisor to both the subsidiary and parent company in connection with the intensification of the company's South African operations.

Below transactions were based on market value.

Amount in SEK thousands	2020	2019
G Spongh Förvaltning AB	-	250
Fox Energy Ltd	1,178	696
<b>Total</b>	<b>1,178</b>	<b>946</b>

Accrued consulting costs in the amount of TSEK 120 (TSEK 0) for services rendered by Fox Energy Ltd has been recognised in the income statement at year-end.

**Note 24 Changes in liabilities related to financing activities**

Amount in SEK thousands	01-01-2019	Cash inflow	Cash outflow	Non-cash items	31-12-2019
Convertibel loans	21,089	132,505	-25,075	-23,191	105,328
Lease liabilities	2,927		-743	2,071	4,255
Other long-term loans	-	10,000			10,000
<b>Carrying amount</b>	<b>24,016</b>	<b>142,505</b>	<b>-25,818</b>	<b>-21,120</b>	<b>119,583</b>

Amount in SEK thousands	01-01-2020	Cash inflow	Cash outflow	Non-cash items	31-12-2020
Convertibel loans	105,328	100,000		-18,304	187,024
Lease liabilities	4,255		-1,432	504	3,327
Other long-term loans	10,000				10,000
<b>Carrying amount</b>	<b>119,583</b>	<b>100,000</b>	<b>-1,432</b>	<b>-17,800</b>	<b>200,351</b>

Specification of non-cash items.

Amount in SEK thousands	2020	2019
Non-cash related interest on convertible loans	-18,304	-23,191
New lease liabilities	293	1,841
Interest expense	244	230
Exchange rate differences	-33	-
<b>Carrying amount</b>	<b>-17,800</b>	<b>-21,120</b>



**Note 25 Adjustments for items not included in cash flow**

Amount in SEK thousands	2020	2019
Discount rate convertible loans	24,491	14,208
Amortisation of tangible fixed assets	2,694	1,825
Write-down of intangible fixed assets	-	76,143
Stock obsolescence reserve and scrapped material	2,091	-
Accrued interest	4,312	-
Unrealised currency translation adjustment	89	-
<b>Total</b>	<b>33,677</b>	<b>92,176</b>

**Note 26 Events after the end of the year**

The conversion period for Swedish Stirling AB's convertible loans 2019/2021 ("KV2") and 2019/2021:2 ("KV3") ended on 15 February 2021. Of the total outstanding loan amount of SEK 79,505,021 under KV2, an amount of SEK 78,814,050 has been requested for conversion, which corresponds to approximately 99 percent. Under KV3, 100 percent of the total outstanding loan amount of SEK 53,000,000 has been requested for conversion in accordance with previously received irrevocable undertakings regarding conversion.

**Note 27 Financial key ratios**

In addition to the financial ratios prepared in accordance with IFRS, Swedish Stirling presents financial ratios that have not been defined in accordance with IFRS, for example equity and quick ratio. These alternative ratios are considered important earnings and performance indicators for investors and other users of the annual report. The alternative ratios should be considered a complement to, but not a substitute for, the financial information prepared in accordance with IFRS. The Swedish Stirling Group's definitions of these measures, not defined in accordance with IFRS, are described in this note.

Financial ratio	Definition	Purpose
<b>Equity/asset ratio in %</b>	Profit after tax in relation to equity.	The ratio shows the return on the owners' invested capital.
<b>Equity ratio</b>	Equity as a percentage of total assets.	Equity ratio is relevant for investors and other stakeholders who want to assess the Company's financial stability and ability to cope in the long term.
<b>Quick ratio</b>	Current assets, excluding inventories, divided by current liabilities incl. proposed dividends.	The key figure gives an idea of the Company's payment readiness in the short term. At a cash flow about 100% the Company manages to pay all their short-term debts.

## Key ratios for the group

Amount in SEK thousand	2020	2019
<b>Profitability</b>		
Operating income	53,395	45,169
Operating profit	-22,951	-100,931
Operating profit, after tax	-72,877	-127,026
Return on equity *	-25%	-59%
<b>Capital structure</b>		
Equity/asset ratio *	57%	62%
Quick ratio *	760%	353%
Weighted average outstanding shares	91,020,971	80,025,302
- Outstanding warrants (**)	4,290,000	4,640,000
- Convertible loans (***)	23,250,502	13,250,502
Number of shareholders (**)	10,402	7,539
Earnings per share	-0.80 kr	-1.59 kr
Diluted earnings per share	-0.80 kr	-1.59 kr
Dividend per share	-	-
<b>Employees</b>		
Average number of employees	34	28
Personnel costs	34,593	27,876

(\*) See definitions in note 26

(\*\*) At the balance sheet date

(\*\*\*) Estimated number based on a conversion rate of STRLNG KV2: SEK 10.0 per share, KV3: SEK 9.0 per share and KV4: 8.0 per share.

## Key ratio definitions

<b>Operating income</b>	All revenue, including capitalised work for own account.
<b>Operating profit</b>	Profit/loss after amortisation and depreciation.
<b>Operating profit, after tax</b>	Profit after tax.
<b>Return on equity</b>	Profit after tax divided by equity.
<b>Equity/asset ratio</b>	Equity as a percentage of total assets.
<b>Quick ratio</b>	Current assets, excluding inventories, divided by current liabilities incl. proposed dividends.
<b>Weighted average outstanding shares</b>	Outstanding shares at the beginning of the period adjusted for newly issued shares during the period, multiplied by a time-weighting factor.
<b>Potential shares attributable to outstanding warrants</b>	Outstanding warrants at the end of the period converted into potential shares.
<b>Earnings per share</b>	The profit/loss for the year divided by the weighted average of outstanding shares.
<b>Diluted earnings per share</b>	The profit/loss for the year divided by the weighted average of outstanding shares and potential shares attributable to outstanding warrants and convertibles.
<b>Dividend per share</b>	Established dividend per eligible share.
<b>Average number of employees</b>	Average number of employees during the year.
<b>Personnel costs</b>	Personnel costs during the year, including wages, salaries, other benefits and social welfare costs.

# Notes to the parent company accounts

## Note 28 Other operating income

Amount in SEK thousands	2020	2019
Realised exchange rate gains	302	542
Invoiced costs	18	-
Other income	28	61
<b>Total</b>	<b>348</b>	<b>603</b>

## Note 29 Other operating expenses

Amount in SEK thousands	2020	2019
Realised exchange rate losses	83	272
<b>Total</b>	<b>83</b>	<b>272</b>

## Note 30 Audit fees

Amount in SEK thousands	2020	2019
<b>PWC</b>		
Audit engagement	420	-
Audit work outside of the audit engagement	15	-
Tax consulting services	155	-
Other services	142	-
<b>Total</b>	<b>732</b>	<b>-</b>
<b>KPMG</b>		
Audit engagement	-	110
Other services	-	168
<b>Total</b>	<b>-</b>	<b>278</b>
<b>Total, parent company</b>	<b>732</b>	<b>278</b>

## Note 31 Employee benefits

Amount in SEK thousands	2020	2019
Salaries, Board of Directors and CEO	2,004	2,021
Other employees	19,632	15,058
<b>Total salaries</b>	<b>21,636</b>	<b>17,079</b>
Retirement benefit cost, Board of Directors and CEO	334	353
Other employees	3,266	2,042
Social security contributions, Board of Directors and CEO *	641	556
Social security contributions, other employees **	6,339	5,277
<b>Total, parent company</b>	<b>32,216</b>	<b>25,307</b>

\* Of which retirement benefit cost for 2019 was TSEK 81 (TSEK 86).

\*\* Of which retirement benefit cost for 2019 was TSEK 786 (TSEK 495).

## Average number of employees, per country

	2020		2019	
	Total	Of which were men	Total	Of which were men
Sweden	28	21	23	17
<b>Total</b>	<b>28</b>	<b>21</b>	<b>23</b>	<b>17</b>



**Gender distribution in the parent company for Directors and other senior executives**

	2020		2019	
	Number at balance sheet date	Of which were men	Number at balance sheet date	Of which were men
Board of Directors	6	4	6	5
Chief executives and other senior executives	7	4	6	3
<b>Total</b>	<b>13</b>	<b>8</b>	<b>12</b>	<b>8</b>

**Remuneration of senior executives**

Amount in SEK thousands	2020	2019
Salaries and other short-term remuneration	7,139	4,581
Retirement benefit cost	1,611	1,041
<b>Total remuneration of senior executives</b>	<b>8,750</b>	<b>5,622</b>

**Note 32 Tax on profit for the year**

Amount in SEK thousands	2020	2019
Current tax on profit and loss	-	-
Deferred tax	-	-
Other tax expense	-5	-
<b>Total</b>	<b>-5</b>	<b>-</b>

The income tax on profit before tax differs from the theoretical amount that would have resulted from the use of the tax rate for the parent company as follows:

Reconciliation of income tax Amount in SEK thousands	2020 Percent	2020 Amount	2019 Percent	2019 Amount
Profit/loss before tax		-70,949		-128,852
Income tax calculated at tax rate in Sweden	-21.4%	-15,183	-21.4%	-27,574
Non-deductible expenses	13.7%	9,753	4.1%	5,245
Deductible expenses that are not part of profit/loss results	-2.2%	-1,567	0.0%	-
Non-taxable income	0.0%	-	0.0%	-
Other paid tax expense	0.0%	-5	0.0%	-
Tax losses incurred during the year for which deferred tax assets are not recognised	9.9%	6,997	17.3%	22,329
<b>Income tax</b>	<b>0.0%</b>	<b>-5</b>	<b>0.0%</b>	<b>-</b>

**Note 33 Investments in subsidiaries**

The tables below show investments in subsidiaries, percentage and cost respectively.

Investments in subsidiaries	Registered country of operation	Share, %	
		2020	2019
Swedish Stirling South Africa	South Africa	100	100

The carrying cost for Swedish Stirling South Africa is SEK 66.

Swedish Stirling South Africa has a service level agreement with the parent company for which it receives income in exchange for sales and marketing, spare parts handling and repairs and maintenance services. The service level agreement income amounted to TSEK 1,010 in 2020 (TSEK 3,670).

**Note 34 Intangible assets**

Amount in SEK thousands	Capitalised development cost	License	Total
<b>Financial year 2019</b>			
Opening balance	275,413	20	275,433
Purchases	43,109		43,109
Impairment	-76,143		-76,143
<b>Carrying amount at end of the year</b>	<b>242,379</b>	<b>20</b>	<b>242,399</b>

Amount in SEK thousands	Capitalised development cost	License	Total
<b>As per 31 December 2019</b>			
Cost	318,522	20	<b>318,542</b>
Accumulated impairments	-76,143		<b>-76,143</b>
<b>Carrying amount</b>	<b>242,379</b>	<b>20</b>	<b>242,399</b>

Amount in SEK thousands	Capitalised development cost	License	Total
<b>Financial year 2020</b>			
Opening balance	242,379	20	242,399
Reclasses	41,929		41,929
Purchases	50,627		50,627
<b>Carrying amount at end of the year</b>	<b>334,935</b>	<b>20</b>	<b>334,955</b>

Amount in SEK thousands	Capitalised development cost	License	Total
<b>As per 31 December 2020</b>			
Cost	411,078	20	<b>411,098</b>
Accumulated impairments	-76,143		<b>-76,143</b>
<b>Carrying amount</b>	<b>334,935</b>	<b>20</b>	<b>334,955</b>

**Note 35 Tangible fixed assets**

Amount in SEK thousands	Property, plant and equipment	Leasehold improvements	Vehicles	Total
<b>Financial year 2019</b>				
Opening balance	2,619	523	-	<b>3,142</b>
Purchases	1,146	165	-	<b>1,311</b>
Scrapping, cost	-742	-	-	<b>-742</b>
Amortisation	-734	-136	-	<b>-870</b>
Scrapping, accumulated depreciation	742	-	-	<b>742</b>
<b>Carrying amount at end of the year</b>	<b>3,031</b>	<b>552</b>	<b>-</b>	<b>3,583</b>

Amount in SEK thousands	Property, plant and equipment	Leasehold improvements	Vehicles	Total
<b>As per 31 December 2019</b>				
Cost	9,991	793	35	<b>10,819</b>
Accumulated amortisation	-6,960	-241	-35	<b>-7,236</b>
<b>Carrying amount</b>	<b>3,031</b>	<b>552</b>	<b>-</b>	<b>3,583</b>

Amount in SEK thousands	Property, plant and equipment	Leasehold improvements	Vehicles	Total
<b>Financial year 2020</b>				
Opening balance	3,031	552	-	<b>3,583</b>
Purchases	2,063	558	-	<b>2,621</b>
Scrapping, cost	-1,836	-	-	<b>-1,836</b>
Amortisation	-1,043	-251	-	<b>-1,294</b>
Scrapping, accumulated depreciation	1,836	-	-	<b>1,836</b>
<b>Carrying amount at end of the year</b>	<b>4,051</b>	<b>859</b>	<b>-</b>	<b>4,910</b>

Amount in SEK thousands	Property, plant and equipment	Leasehold improvements	Vehicles	Total
<b>As per 31 December 2020</b>				
Cost	10,218	1,351	35	<b>11,604</b>
Accumulated amortisation	-6,167	-492	-35	<b>-6,694</b>
<b>Carrying amount</b>	<b>4,051</b>	<b>859</b>	<b>-</b>	<b>4,910</b>

**Note 36 Inventory**

See Note 14 of the consolidated accounts for information on the parent company's inventory.

**Note 37 Deferred tax**

Deferred tax assets are recognised for tax losses or other deductions to the extent that it is probable that these can be used to offset future taxable profits. No deferred tax asset arising from tax losses is recognised, as the parent company does not consider that the criteria for recognition of deferred tax in IAS 12 have been met.

Unused tax losses for which a deferred tax asset has not been recognised totalled TSEK 171,079 at 31 December 2020 (TSEK 138,380).

**Note 38 Cash and cash equivalents**

In the balance sheet and cash flow statement, the following is included in the item cash and bank balances:

Amount in SEK thousands	31-12-2020	31-12-2019
Bank deposits	141,578	36,637
<b>Total</b>	<b>141,578</b>	<b>36,637</b>

**Note 39 Other current receivables**

Amount in SEK thousands	31-12-2020	31-12-2019
Tax account	330	1,089
Other	-	1,628
<b>Total</b>	<b>330</b>	<b>2,717</b>

**Note 40 Prepaid expenses**

Amount in SEK thousands	31-12-2020	31-12-2019
Prepaid rent	467	454
Prepaid insurance	125	-
Prepaid other expenses	368	147
<b>Total</b>	<b>960</b>	<b>601</b>

**Note 41 Accrued expenses and deferred income**

Amount in SEK thousands	31-12-2020	31-12-2019
Accrued staff cost	2,908	3,376
Accrued research and development cost	1,205	385
Accrued interest expense	208	208
Other accrued expense	312	434
<b>Total</b>	<b>4,633</b>	<b>4,403</b>



## Note 42 Operating leases

### Operating lease commitments

Essentially all premises leased by the parent company are leased under non-cancellable operating leases. The lease terms vary from one to five years and most leases can be extended at the end of the lease term for a fee that is in line with market rates.

Leasing expenses of TSEK 2,067 (TSEK 2,053) for rental premises and vehicles are included in the income statement for the financial year 2020.

Future total minimum lease payments under non-cancellable operating leases fall due as follows:

Amount in SEK thousands	2020	2019
Within 1 year	1,910	1,550
Between 1 and 5 years	2,483	3,954
After more than 5 years	-	-
<b>Total</b>	<b>4,393</b>	<b>5,504</b>

## Note 43 Share capital

See Note 18 of the consolidated accounts for information on the parent company's share capital.

## Note 44 Related party transactions

See Note 23 of the consolidated accounts for information regarding related party transactions.

## Note 45 Changes in liabilities related to financing activities

Amount in SEK thousands	01-01-2019	Cash inflow	Cash outflow	Non-cash items	31-12-2019
Convertible loans	21,089	132,505	-25,075	-23,191	105,328
Other long-term loans	-	10,000	-	-	10,000
<b>Carrying amount</b>	<b>21,089</b>	<b>142,505</b>	<b>-25,075</b>	<b>-23,191</b>	<b>115,328</b>

Amount in SEK thousands	01-01-2020	Cash inflow	Cash outflow	Non-cash items	31-12-2020
Convertible loans	105,328	100,000	-	-18,304	187,024
Other long-term loans	10,000	-	-	-	10,000
<b>Carrying amount</b>	<b>115,328</b>	<b>100,000</b>	<b>-</b>	<b>-18,304</b>	<b>197,024</b>

Specification of non-cash items:

Amount in SEK thousands	2020	2019
Non-cash related interest on convertible loans	-18,304	-23,191
<b>Total</b>	<b>-18,304</b>	<b>-23,191</b>

**Note 46 Adjustments for items not included in cash flow**

Amount in SEK thousands	2020	2019
Discount rate convertible loans	24,491	14,207
Amortisation of tangible fixed assets	1,294	870
Write-down of intangible fixed assets	-	76,143
Stock obsolescence reserve and scrapped material	2,091	-
Accrued interest expense	3,817	-
Expected credit loss	108	-
Unrealised currency translation adjustment	5	-
<b>Total</b>	<b>31,806</b>	<b>91,220</b>

**Note 47 Events after the end of the year**

The conversion period for Swedish Stirling AB's convertible loans 2019/2021 ("KV2") and 2019/2021:2 ("KV3") ended on 15 February 2021. Of the total outstanding loan amount of SEK 79,505,021 under KV2, an amount of SEK 78,814,050 has been requested for conversion, which corresponds to approximately 99 percent. Under KV3, 100 percent of the total outstanding loan amount of SEK 53,000,000 has been requested for conversion in accordance with previously received irrevocable undertakings regarding conversion.

**Note 48 Proposed appropriation of retained earnings**

The Annual General Meeting is asked to decide on the appropriation of the following earnings:

Amount in SEK thousands	
Share premium account	431,583
Retained earnings	-239,454
Net profit / loss for the year	-70,949
<b>Total</b>	<b>121,180</b>

The Board of Directors proposes that this unrestricted capital be appropriated as follows:

Amount in SEK thousands	
Carried forward	121,180
<b>Total</b>	<b>121,180</b>

# Signatures

The consolidated income statement and balance sheet will be submitted for approval to the Annual General Meeting on 23 April 2021.

The Board of Directors and Chief Executive Officer affirm that the consolidated accounts have been prepared in accordance with the International Financial Reporting Standards (IFRS), 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 standards and provide a true and fair view of the parent company's financial position and results.

The auditor's report for the Group and parent company provides a true and fair overview of the development of the Group's and parent company's business, financial position and results, and describes significant risks and uncertainties faced by the parent company and the companies included in the Group.

**Gothenburg, 19 March 2021**

**Sven Sahle**

CHAIRMAN

**Carina Andersson**

DIRECTOR

**Gunilla Spongh**

DIRECTOR

**Erik Wigertz**

DIRECTOR

**Andreas Ahlström**

DIRECTOR

**David Zaudy**

DIRECTOR

**Gunnar Larsson**

CHIEF EXECUTIVE OFFICER

**We presented our audit report on 19 March 2021.**

**ÖHRLINGS PRICEWATERHOUSECOOPERS AB**

**Johan Malmqvist**

AUTHORISED PUBLIC ACCOUNTANT

## Contact

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Swedish Stirling, Main office: +46 (0)31-385 88 30

The information was submitted for publication through the agency of the contact person set out above, at 12:00 on 19 March 2021.



# Auditor's report

To the general meeting of the shareholders of Swedish Stirling AB (publ),  
corporate identity number 556760-6602

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## Report on the annual accounts and consolidated accounts

### Opinions

We have audited the annual accounts and consolidated accounts of Swedish Stirling AB (publ) for the year 2020. The annual accounts and consolidated accounts of the company are included on pages 62-113 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 parent company and the group as of 31 December 2020 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 2020 and their 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 statutory administration report is consistent with the other parts of the annual accounts and consolidated accounts.

We therefore recommend that the general meeting of shareholders adopts the income statement and balance sheet for the parent company and the consolidated statement of profit and loss and comprehensive income and the consolidated balance sheet for the group.

### Basis for Opinions

We conducted our audit in accordance with International Standards on Auditing (ISA) 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 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.

### Other matter

The audit of the annual accounts and consolidated accounts for year 2019 was performed by another auditor who submitted an auditor's report dated 12 March 2020, with unmodified opinions in the Report on the annual accounts and consolidated accounts.



**Other Information than the annual accounts and consolidated accounts**

This document also contains other information than the annual accounts and consolidated accounts and is found on pages 1-45. The Board of Directors and the Managing Director 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 conclusion 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 we, based on the work performed concerning this information, 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.

**Responsibilities of the Board of Director's and the Managing Director**

The Board of Directors and the Managing Director are responsible for the preparation of the annual accounts and consolidated accounts and that they give a fair presentation in accordance with the Annual Accounts Act and, concerning the consolidated accounts, in accordance with IFRS as adopted by the EU. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is 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 Managing Director are responsible for the assessment of the company's and the group's ability to continue as a going concern. They disclose, as applicable, matters related to going concern and using the going concern basis of accounting. The going concern basis of accounting is however not applied if the Board of Directors and the Managing Director intend to liquidate the company, to cease operations, or has 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 can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts and consolidated accounts.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual accounts and consolidated accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of the company's internal control relevant to our audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Director's and the Managing Director.
- Conclude on the appropriateness of the Board of Director's and the Managing Director's use of the going concern basis of accounting in preparing the annual accounts and consolidated accounts. We also draw a conclusion, based on the audit evidence obtained, as to whether any material uncertainty exists related to events or conditions that may cast significant doubt on the company's and the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the annual accounts and consolidated accounts or, if such disclosures are inadequate, to modify our opinion about the annual accounts and consolidated accounts. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause a company and a group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the annual accounts and consolidated accounts, including the disclosures, and whether the annual accounts and consolidated accounts represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated accounts. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.

We must inform the Board of Directors of, among other matters, the planned scope and timing of the audit. We must also inform of significant audit findings during our audit, including any significant deficiencies in internal control that we identified.

## 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 Director's and the Managing Director of Swedish Stirling AB (publ) for the year 2020 and the proposed appropriations 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 statutory administration report and that the members of the Board of Director's and the Managing Director 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 Director's and the Managing Director**

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 organization 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 organization is designed so that the accounting, management of assets and the company's financial affairs otherwise are controlled in a reassuring manner. The Managing Director shall manage the ongoing administration according to the Board of Directors' guidelines and instructions and among other matters take measures that are necessary to fulfill the company's accounting in accordance with law and handle the management of assets in a reassuring manner.

**Auditor's responsibility**

Our objective concerning the audit of the administration, and thereby our opinion about 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 Managing Director in any material respect:

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

Our objective concerning the audit of the proposed appropriations of the company's profit or loss, and thereby our opinion about this, is to assess with 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 to the company, or that the proposed appropriations of the company's profit or loss are not in accordance with the Companies Act.

As part of an audit in accordance with generally accepted auditing standards in Sweden, we exercise professional judgment and maintain professional skepticism throughout the audit. The examination of the administration and the proposed appropriations of the company's profit or loss is based primarily on the audit of the accounts. Additional audit procedures performed are based on our professional judgment with starting point in risk and materiality. This means that we focus the examination on such actions, areas and relationships that are material for the operations and where deviations and violations would have particular importance for the company's situation. We examine and test decisions undertaken, support for decisions, actions taken and other circumstances that are relevant to our opinion concerning discharge from liability. As a basis for our opinion on the Board of Directors' proposed appropriations of the company's profit or loss we examined whether the proposal is in accordance with the Companies Act.

**Göteborg 19 March 2021**

Öhrlings PricewaterhouseCoopers AB

**Johan Malmqvist**

Authorised Public Accountant



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