Game Changer

YEAR 2019 • ST1 NORDIC OY

About this Report

THIS IS THE THIRD INTEGRATED corporate sustainability report by St1 Nordic and it is published to recount our most material disclosure topics in corporate sustainability as well as our business activities. The corporate sustainability reporting follows the same principles of consolidation as our Financial Statement and the report includes all Group companies.

This report has been prepared in accordance with the second Global Reporting Initiative (GRI) Standards (2016): Core option. Additionally, our oil refinery in Gothenburg complies both with ISO 14001 and EMAS environmental management system (the Eco-Management and Audit Scheme) and publishes EMAS report after auditing in June 2020.

Content

Our 2020 reporting consists of the following publications:

Integrated Report 2019

Cover: St1 carbon sequestration research pilot in semi-arid area in Ben Guerir Morocco

St1 Outlook 2020

provides an overview of the challenges in our global energy system and the main elements needed for the clean energy transition.

Nordic strength

The decade has ended on several positive notes for St1. We achieved strong financial results and the organizational change has began to positively impact our daily operations. Also our investments in renewable energy solutions have progressed according to schedule.

In many ways, our operating environment continued to be challenging. Traditional, mainly fossil fuel-based demand is on the decline, as old cars are being phased out and particularly electric cars become more common. Sales of our sustainable energies increased slightly, though it still only represents a small share of our turnover.

St1's Group net sales was EUR 6.6 billion, down EUR 0.3 billion year-on-year. Of this, 48% came from Sweden, 23% from Finland and 29% from Norway. Our operating profit increased to EUR 150 (2018: EUR 63 million). The refining and wholesale margins were better than the previous year in spite of the maintenance turnaround in the spring. Tight price competition continued in the Retail market, which had a negative impact on the operating profit. Profitability was negatively affected by the spring maintenance shutdown of our Gothenburg refinery, and further hindered by strong price competition in the industry. The price of crude oil fluctuated sharply during the year, not least due to tensions in the Middle East and a threat of a potential global trade war. The subsequent rise in prices strengthened our earnings as stock appreciation rose.

Culture for growth

In 2018, we implemented a major organisational overhaul aimed at creating common operating policies across our business, and thus support our growth. During 2019, internal changes were indeed

> **"Climate change is a major challenge for all of humanity and the energy sector is in a key position in addressing this threat."**

significant. We have simplified decision-making, and also distributed power and responsibilities. Our organisation and staff are more self-managing, and decision-making happens closer to our customers. We are making better use of our existing knowledge and expertise across the whole organization. The boundaries between operating countries and units have been lowered and closer cooperation increased. Our Nordic strength is beginning to emerge.

As part of strengthening our unity, we also began developing our corporate culture toward a more conversational style. The exchange of information and ideas is critical, and we wish to encourage everyone to participate in the discussions. Through varied discourse we are able to understand our situation more comprehensively and also can define our opinions.

People are our strength

Improving our shared values and a common rule book have also reflected in our efforts to develop our human resource management. The transition from country-specific and site-specific arrangements to consistent operating methods across the board, as well as to using the latest HR management tools; enable us to develop our expertise on the long-term. Our markets are undergoing huge changes and our goals are ambitious, so our nurturing of new skills and know-how will remain vital. We are in many areas at the forefront of our industry and pioneering completely new innovations. Strong investments toward developing our skills are a prerequisite for future success.

Our strength lies in our employees, for whom we want to be a good employer. In 2019, we conducted a comprehensive staff survey in the whole Group, in which employee participation rose as high as 95 percent. On average we reveiced good grades, although there was some clear variations between units. Based on these results, we have launched several initiatives, such as improving work well-being and training managers.

A revolution in the energy economy

Climate change is a major challenge for all of humanity and the energy sector is in a key position in addressing this threat. Our goal is to develop new ways to produce energy from climate-friendly sources. The majority of our turnover is still based on fossil fuels, but the focus of our research and investment is on sustainable energy. We are engaged in revolutionising the energy economy through: pilot projects that sequestrate carbon via afforestation and produce synthetic fuels via Power-to-x-concept, the building of an industrial-scale heating plant based on geothermal energy, the production of ethanol from waste, and investing in renewable energies such as wind power.

Many of these projects are groundbreaking and require collaboration across many fields of expertise. We have been delighted that our projects and know-how have attracted widespread interest, both from the general public and potential partners. The success of these investments will pave the way for large-scale commercialisation in the future.

Investments in the future

In 2019, our largest investment decision was the construction of a biorefinery at our Gothenburg refinery site, to be implemented over the next two years. The refinery will in the future be able to repurpose a wide range of raw materials, and the fuel it produces will meet current and future standards for renewables.

The new decade will be a time of great change for us at St1. We do not intend to simply adapt, but aim to seize the opportunities of an evolving market. The growing demand for energy requires more sustainable solutions, and it feels thrilling to be a part of developing these solutions with St1 professionals. I would like to thank all our employees for their commitment to our common goals, and for the trust and smooth cooperation given to us by all our partners and customers.

Henrikki Talvitie, *CEO*

P.S. The new decade has truly begun in an exceptional manner with the threat to human health posed by the coronavirus pandemic. We have taken this threat with due seriousness, and have rapidly changed our day-to-day practices in accordance with the official guidelines. We will also do our utmost to contribute to ensuring the functioning of society by securing uninterrupted distribution of fuels and other energy products during the exceptional situation. I am exceedingly grateful to all our employees for your supporting and responsible attitude during this difficult situation. Indeed this pandemic has shown, that now more than ever the world needs international cooperation to solve its problems. United we will make it through this challenge as well.

St1 in Brief

St1 is a Nordic energy company that operates in Finland, Sweden, Norway and Thailand. In our operations we implement our vision to be the leading producer and seller of CO_2- aware energy.

We research, develop and invest in economically viable, environmentally sustainable energy solutions. Our goal is to increasingly replace fossil energy with renewable and carbon neutral options. Our production of renewable electricity exceeds the amount needed to compensate the fossil emissions of the energy we need for the functions of our Group. St1 focuses on fuels marketing activities, oil refining and renewable energy solutions such as waste-based advanced ethanol fuels and industrial wind power. The Group has 1 300 St1 and Shell branded retail stations in Finland, Sweden and Norway. Headquartered in Helsinki, St1 employs currently 770 people. Our operations are strengthened by strategic long-term partnerships in various areas.

Retail Stations

- The fuel distribution network provides quality food and other convenience retailing services in Finland, Sweden and Norway
- In all, 1 300 St1 and Shell stations: unmanned and service stations as well as HGV sites
- Increasingly environmentally friendly liquid fuel products and high-quality services for customers
  Secure mobile payment services

Renewable Energy

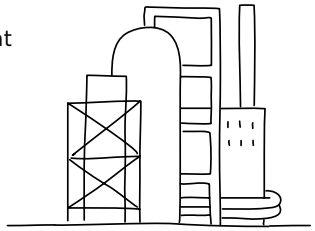
- Biorefining advanced biofuels for transport
- Production of clean electricity from wind power
- Sustainable, energy-efficient geothermal heat production pilot
- Ground source heating solutions

Customer Relations and Corporate Sales

- A wide range of energy products and services for both private and corporate customers
- Premium class heating oils and liquid fuels for machinery
- Marine fuels
- Fuel cards for private and corporate use

Future Energy Business

- New business development Think Tank
- Carbon sequestration pilot
- Power-to-x-concept development projects
- Partnerships and co-operation with Academia and Business

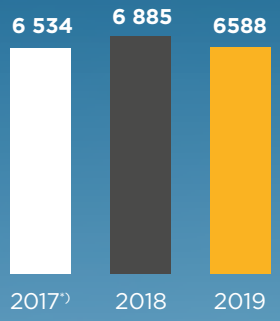


Supply & Logistics

- Oil refinery in Gothenburg with an annual capacity of appr. 30 million barrels of crude oil
- The refinery's products include petrol, sulphur-free MK-1 diesel, other middle distillates, liquid gas – mostly sold through our own network
- Together with NEOT, a comprehensive logistics chain in all of our operating countries consisting of terminals for storing the products and a wide transport network

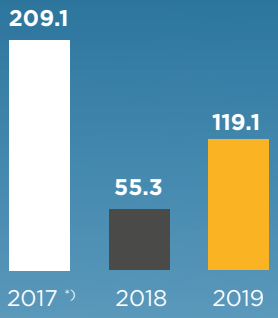
Year 2019 in Figures

Net sales
MEUR



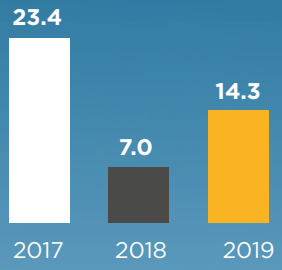
*) pro forma

Profit for the period
MEUR



*) pro forma

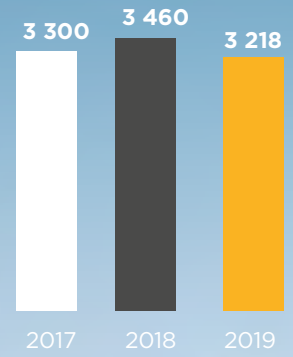
Return on equity
%



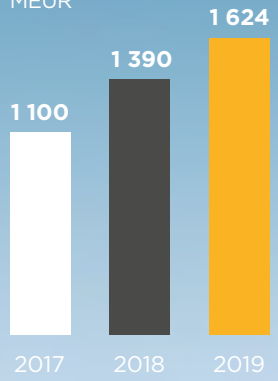
Market shares
%

FINLAND		SWEDEN		NORWAY	
Petrol	22.9	Petrol	20.4	Petrol	17.9
Diesel	18.8	Diesel	15.2	Diesel	17.6
Light Fuel Oil	20.2	Light Fuel Oil	27.5	Marine Gas Oil	29.8

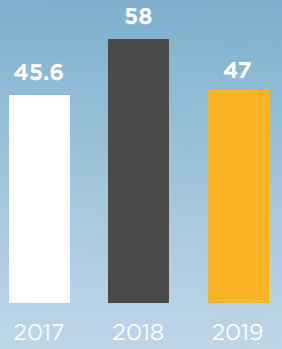
Retail net sales
MEUR



Direct sales, net sales
MEUR



Renewable energy, net sales MEUR



Supply & Logistics, net sales MEUR

Personnel

767

R&D expenditure

MEUR

15.4

Investments MEUR

136

Renewable energy investments MEUR

(incl. TuuliWatti)

42

Gothenburg refinery

Throughput million barrels

23.9

Utilization rate

90.2%

76.1%*

(*incl. maintenance shutdown)

Excise & property taxes

MEUR

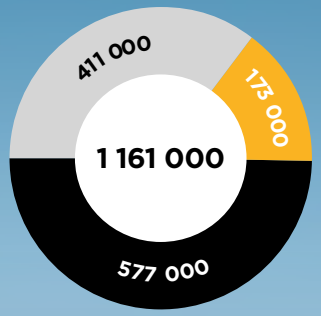
1979

Income taxes

MEUR

31.4

CO_2 -reduction from use of biofuels, tons



CO_2-reduction equalled more than

557 228

passenger cars (*

(* a car with an annual mileage of 13 794 km and emissions of 151 g CO_2/km

Biorefineries

100%

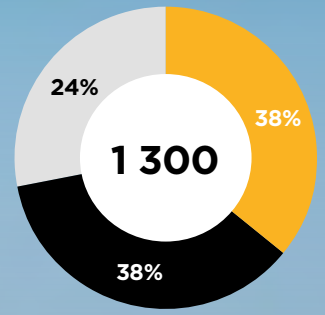
of the feedstock of our advanced ethanol production is waste-based.

Wind power production

GWh

615

Retail station network



Finland Sweden Norway

Events 2019

January

Kristine Vergli Grant-Carlsen appointed as the new CEO of St1 Norge AS

February

Plantations started at carbon sequestration pilot site in Morocco

March

St1 Sverige finalized the roll-out of 104 new Välkommen in shops at the station network

May

TuuliWatti celebrated 10 years' anniversary

August

Q Power and St1 started piloting synthetic fuel production from biore-finery carbon dioxide in Finland

Sampsa Halinen was elected to St1 Nordic's Board of Directors

September

St1 bought 20 stations from Såifa in Värmland in Sweden.

St1 announced the construction a biorefinery to produce renewable diesel and jet fuel.

St1 launched the final phase of drilling the world's deepest geothermal heat wells in Otaniemi in Finland.

October

TuuliWatti constructed the first market-based wind farm in Finland at Ii Viinamäki

November

St1 was one of the winners of Energy Globe World Award 2019

Timo Huhtisaari was appointed Director, Sustainability and Future Business

December

Construction of Hydrogen Manufacturing Unit finalised in Gothenburg Refinery

Feasibility study on synthetic fuels pilot plant started together with LUT University and a group of companies

Permitting process started for Davvi wind farm of 800 MW in Eastern Finnmark in Norway

Pilot project to produce ethanol from cassava pulp waste finalised in Thailand

MIKA ANTTONEN:

"The information is there – what we need now is action"

The progress of climate change is increasingly evident. The many natural disasters that occurred in 2019, such as the increasing number of hurricane-level storms, the European heat wave, the decline of groundwater levels in India, and the devastating Australian wildfires, indicate how our climate is suffering. Extreme weather phenomena have become an unfortunately common occurrence across the world. Nature is now actively battling against human activities.

It is clear that at the current rate, we are heading towards a planet-wide ecological meltdown. Overpopulation, our ever-increasing energy consumption, and the reckless use of natural resources have outstripped our planet's ability to cope. Climate change has contributed to significantly reduced living conditions in many regions. Biodiversity is rapidly depleting as animal and plant species become extinct. People's ability to maintain their livelihoods all across the Earth is also in rapid decline, increasing the threat of conflict and the explosive growth of climate refugees.

Although the situation may seem bleak, there are encouraging signs of hope emerging on the horizon. Climate change is the most discussed issue of our times. Active and diverse efforts are being made on all fronts to find ways to combat it. Questioning the existence of a problem has become harder and is decreasing altogether. Progressively more people are willing to make changes in their own lives. For those of us who are ready to find ways together to combat this common threat, we have the knowledge and means to turn the tide. Comprehending the whole picture when considering climate change and its scale requires accurate facts, and there are reliable sources of information out there. Panic and anxiety do not contribute to meeting climate goals, positive actions do. There is no need to loose hope.

Towards a sustainable carbon cycle

The scientific community and companies are working together to develop technologies that will aid us in combating this common challenge. We need to start taking steps towards a sustainable carbon cycle. In addition to energy efficiency and renewable energy investments, we need to focus on carbon sinks together with carbon capture and utilisation. One such promising solution in fuel production is the Power-to-x concept. Fuels are produced through a synthesis process from captured carbon dioxide and hydrogen, which is produced with renewable electricity. The end-product is a completely carbon neutral fuel. This can be directly used in current combustion engines as carbon neutral transportation fuels. I personally believe that this Power-to-x concept will be a major factor in stopping climate change.

So, good solutions are already available, but the pace of change is currently far too slow. Most investments in the energy sector continue to be made into the exploitation of fossil sources. Policy decisions have sought to reduce emissions, yet often through locally implemented and cost-ineffective means. As an example, there is no incentive to invest in carbon sinks, which is why companies have not undertaken this work. Political leadership needs a new kind of backbone with the determination to rapidly multiply investments in solutions that truly enhance sustainable carbon cycle. It must also be remembered that a global problem requires global solutions.

"I personally believe that this Power-to-x concept will be a major factor in stopping climate change"

We have been treating our mother Earth poorly indeed. If we do not change our behaviour now, it will strike back with vengeance. At St1 we want to be game changers, working with different companies, research institutes, and our clients to help solve the climate challenge. Most of our business continues to come from fossil fuels, but with its profits we are developing renewable energy solutions. We hope to encourage everyone to become involved in climate action. We must all make the effort.

Mika Anttonen
Chairman of the Board

St1 Corporate Sustainability Framework

St1 Nordic's Corporate Sustainability Framework

The vision of St1 is to be the leading producer and seller of CO_2-aware energy. We believe we will attain this vision by running a responsible and profitable business where economic performance, social sustainability and environmental impact are balanced. Our accompanying value creation model is presented in the infographics.

A responsible company must ambitiously take in the big picture at all times. We must keep abreast of what's going on in the world and understand what clients will need in the future. We base our growing energy business in Nordic society values. As a Nordic corporate citizen, we believe in transparency, fairness, responsibility and equal opportunities, resulting social security, equal education and health care. While fossil fuels are still our main source of income, it allows us to build world-class expertise in introducing more and more renewable energy to the market.

The key enablers of our solid performance are our world-class people, partners, business technology, financing services, and cash flow together with our return on equity. Our financial performance enables new sustainable investments in the renewable energy. Passion for replacing fossil fuels also powers our research and development of new, sustainable and innovative CO_2 -aware energy solutions. Our customers benefit from the competitive edge we gain by managing the complete value chain from raw materials and energy sources to service at the pump.

Based on such an understanding and on demand, we are solving global energy challenges by taking steps into direction where we move ourselves from fossil world into renewable world. We try to ensure that everything we do in our whole value chain is based on world-conquering mentality and passion.

"A responsible company must ambitiously take in the big picture at all times."

Sustainability governance

Sustainability is integrated in our daily work. The Board of Directors has the joint responsibility in matters and decision-making related to sustainability; economic, environmental and social issues. Business unit management decides on the sustainability approach and support the Board of Directors in these matters. Sustainability and Future Business -unit is coordinating and developing sustainability matters at Group level.

Sustainability governance at St1 Nordic is based on the realization of the company's vision, values and strategy. The company management and personnel are expected to comply with the principles of business code of conduct approved by the board, together with the laws and other regulations of the countries where we operate.

We respect the United Nations Universal Declaration of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work, which aim at promoting sustainable and fair business. We expect our business partners and their business partners to be committed to ethical and sustainable business principles and actively supporting their use within their own sphere of influence.

The most significant risks and uncertainties related to sustainability are assessed in the annual report page.

Our oil refinery in Gothenburg complies both with 14001 and EMAS environmental management system (the Eco-Management and Audit Scheme) and publishes EMAS report.

St1 RESPECT sustainability program

The main themes of our RESPECT Sustainability Program for the entire Group are: Renewable energy solutions, Investments in the future, World-class expertise and Customers now and in the future. In 2019, further development of the program was extended to the Business Units to select the most important development goals. At the Business Units, the implementation of the program was designed to meet the needs of successful and responsible business as well as to understand and manage the impact of our own operations. The design work extends to our affiliated company, North European Oil Trade Oy, in the area of sustainable sourcing. We have already taken steps in our focus areas and the work will continue materializing along our Value Chain in coming years.

In 2019, St1's sustainability organization was strengthened with the Director of Sustainability.

Our sustainability focus areas are:

Renewable energy solutions
Sustainable raw materials such as waste and other sources of energy, energy efficiency, circular economy, CO_2-reduction, R&D, pilots, production concepts.

Investments in the future Financial performance, traditional fuels business generating income to enable investments in renewable energy, commercializing the pilots.

World-class expertise
Employee satisfaction, well-being, skills, development, remuneration, safety.

Customers now and in the future
Understanding of what clients will need in the future, customers benefit from the competitive edge we gain by managing the complete value chain, provide customers with innovative, sustainable and affordable energy solutions.

Stakeholder Engagement

Stakeholder dialogue is important to ensure the success of all our operations and it is thus vital part of the daily work of Group's management and employees. We engage with our many stakeholder groups continuously in a variety of formal and informal settings across the markets where we operate. Examples of engagement cover from day-to-day interaction with our customers and employees to memberships of business and industry associations, community meetings and organizing seminars. Active and open dialogue helps us to live up to our stakeholders' expectations related to our business environment and sustainability matters.

"Stakeholder dialogue is important to ensure the success of all our operations"

Stakeholder Group	Expectations	Our Engagement Action
CUSTOMERS • Consumers • Companies • Public entities	• Develop sustainable and safe products, services and solutions that fulfill their needs • Help customers to make sustainable choices • Superior customer service	• Mobile App, which enables secure digital payment, mobile fueling and multiple other benefits displayed in a single App. • Introduced Fuel Pay in Sweden, St1 Mastercard in Norway • Introduced new shop concepts and products
EXTENDED PERSONNEL AND MANAGEMENT • 770 employees in Group's and its subsidiaries' offices, terminals and production facilities in Finland, Sweden and Norway • More than 70 employees in associated companies • More than 6 500 indirectly employed: entrepreneurs and distributors and their staff, station managers, sales channel traders, employees of transportation companies	• Vision and values to be proud of • A fulfilling and inspiring work place • Open communication and dialogue • Company culture that enhances involvement, professional development and respect • Successful and sustainable business conduct	• Yearly Retail and Sales Kick Off -events • St1 Value Chain engagement • St1 Story day for employees • Employee surveys • Regular performance development and training opportunity reviews • Group Intranet, Nordic and local Town Halls, review sessions
PARTNERS • Distribution chain entrepreneurs and traders • Strategic product and service providers • Business partners • Organizations • Research organizations and universities	• Long-term partnerships • Successful and sustainable business conduct • Mutual development opportunities	• Yearly Retail and Sales Kick Off -events • Meetings, seminars, direct interaction • Participation in various research projects and studies

Stakeholder Group	Expectations	Our Engagement Action
FINANCIERS • Banks and financial institutions • Investors • Analysts	• To provide timely and consistent data about St1's progress • To highlight significant topics affecting St1's financial performance	• Company releases, direct communication with financiers, presentations, Annual report
MEDIA • Domestic and international media • Social media	• To provide transparent fact-based information • To contribute to general discussion • To be easily approachable and available	• Press releases, company releases, social media posts, web-site, newsletter, regular updates and events, site visits, presentations at seminars, interviews • Immediate response to media requests • Transparent dialogue also on challenging topics
SOCIETY • Local communities • Authorities, decisionmakers and legislators • Academia • Non-governmental organizations, industry associations and cooperation bodies • National Emergence Supply Agency	• To provide market specific and general information on energy to further enhance the basis for decision making • Technological and scientific challenges for research • Local presence • Social sustainability • Job creation	• One-to-one meetings, hosting site and company visits, meetings, seminars, round-tables, articles, excursions to St1 sites • Service segment training program • Recruitment channel for service segment • Various university research projects • Access to work life learning for young people • National crisis trainings • St1 Outlook -publication

Involvement in Organizations and Joint Projects

Trade associations and industry platforms

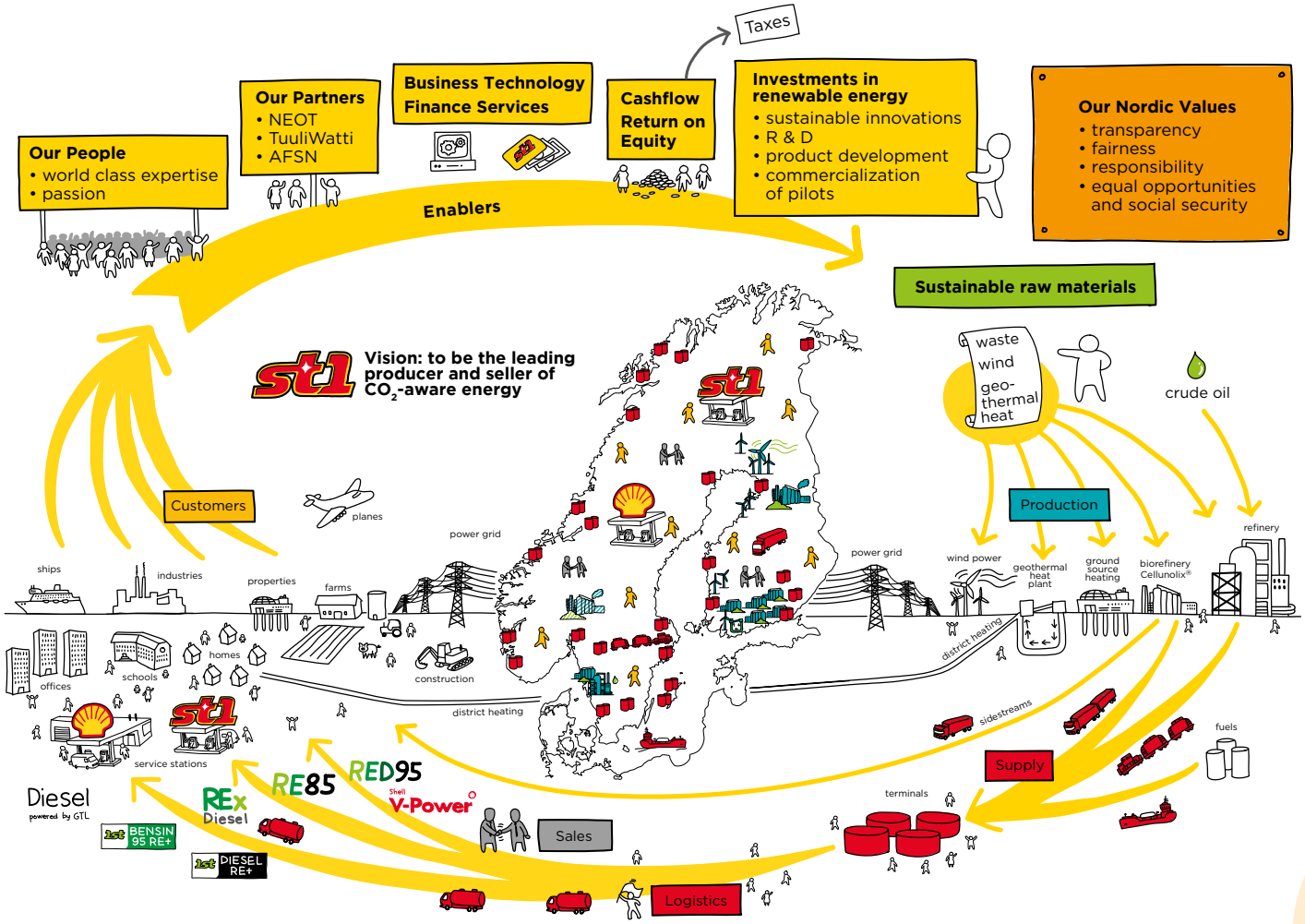
- Leaders of Sustainable Biofuels
- Chemical Industry Federation of Finland
- World Energy Council Finland
- FuelsEurope (previously "Europia" or European Petroleum Industry Association), represent the interests of companies conducting refinery operations in the EU
- Also consists of Concawe, the oil companies' European association for environment, health, and safety in oil refinining
- Svenska Petroleum och Biodrivmedel Institutet (SPBI)
- Drivkraft Norge
- Lähienergialiitto (Finnish Clean Energy Association)

Sustainability and environmental initiatives

- CLC (Climate Leadership Council), the purpose is to improve the Finnish businesses' and research organizations' competitiveness and ability to respond to climate change and the scarcity of natural resources
- Helsinki Metropolitan Smart & Clean Foundation, collaboration aims at making the metropolitan area a global reference area for intelligent and ecologically sustainable solutions
- Responsible Care, a voluntary initiative by the global chemical industry aimed at supporting sustainable development in the industry
- Sustainable Use of Natural Resources Advisory Board at Technical Research Centre ofFinland (VTT)
- Bio4Fuels aims to develop viable technologies that are relevant for the sustainablecommercial conversion of biomass feedstocks to biofuels and other products.
- Biodrivstoff 2030/Biofuels 2030, a collaboration consisting of 16 players who work to accelerate the transition to a fossil-free transport sector through increased use of sustainable biofuels.
- ZERO, an independent ideal environmental foundation that believes that climate is the most important environmental issue and is working to drive zero emissions solutions and prevent investments in emissions solutions.
- The Bellona Environmental Foundation, an independent non-profit foundation that works to solve the world's climate challenges by, among other things, identifying and implementing sustainable climate solutions.
- The Norwegian Wind Energy Association
- (NORWEA), the the voice of the Norwegian wind and ocean energy industry
- F3 – Fossil Free Future, Coordination program together with Energimyndigheten
- 2030 sekretariatet, National secretariat for follow up of Government target Fossil Free Vehicle fleet 2030
- Mekanisterna – Swedish mechanists national organization (Member at lubricant and fuels committee)
- SIS – Swedish Standards Institute. Coordinates standardisation in Sweden and also member of Europe standardization organization CEN
- Fossilfritt Sverige – Swedish government initiated coordination with the ambition is to make Sweden one of the first fossil free welfare countries in the world
- Svebio – a commercial environmental organization with focus on developing bioenergy in a sustainable society
- Committed network: Innovation Community initiative by Wärtsilä, Tieto, St1, Fortum and Demos Helsinki
- Ilmastokumppanit network aiming to carbon neutral city of Helsinki
- Arctic Energy Forerunners aiming to have cheap and clean electricity to Nordic market to ensure competitiveness of industry and achievement of national carbon neutrality goals
- Fortum Charge & Drive – EV charging
- The Research Council of Norway – Lignin and enzyme research


St1 Value
Chain 2019

VALUE CHAIN



WATCH THE VIDEO:
St1 Value Chain

Raw Materials

100%

of the feedstock of our advanced ethanol production comes from fully traceable sources.

Our value chain begins with the raw materials. In the spirit of our vision, we research, develop, produce and invest in CO_2-aware energy from various raw materials and sources. Wind power, geothermal heat, ground source heating and biorefining are therefore our strategic focus areas, as well as oil refining. While our raw materials are still to large extent of fossil origin, our goal is to increase the share of renewable energy sources in our production. We are actively looking for new advanced technologies in new CO_2-aware energy solutions. For example, we are investing in renewable energy sources to enable capturing of CO_2 released to the atmosphere and turning that into synthetic fuels.

The objective of our long-term renewable fuels strategy is to reduce global CO_2 emissions while creating positive societal impact. We achieve this while enhancing our competitiveness and fulfilling the renewable energy and GHG reduction requirements in our domestic market.

Crude oil

St1 purchases all the crude oil used at the refinery. We are not involved in crude oil production, oil exploration or drilling. Purchasing of crude oil is done in co-operation with our partner NEOT, although the contracts are made directly between St1 and the seller. The crude oil is mainly sourced from the North Sea and only from identifiable sources. During 2019 the purchasing quantities were lower due to the major maintenance turnaround in spring 2019 at the refinery.

The price of crude oil started off low at a level of 53 USD but increased up to a level of above 60 USD by the end of January. The level increased to just below 75 USD in April/May, and then evened out at a level between 60-67 USD with a yearly average of 64 USD, ending the year at almost 67 USD. Many factors affect the price of crude oil; however the 2019 price level was largely pushed down due to the large supply of US shale oil.

Waste

We are a pioneer in cellulosic, as well as waste-based ethanol production technologies. 100 percent of the feedstock of our advanced ethanol production comes from fully traceable sources. St1's advanced ethanol produced from waste has a uniquely low CO_2 footprint; it reduces up to 90 percent of emissions compared to conventional fossil fuels. We have been building a network of advanced ethanol production since 2007, and today have three types of biorefineries, producing advanced ethanol from various kinds of waste and cellulosic material. In

> **"We are a pioneer in waste-based ethanol production technologies."**

2019, we converted 98 000 tons of waste into advanced ethanol, that is ready for use in high-blend ethanol fuels or as a bio component in low blends.

The use of waste in fuel, is encouraged by national regulation in the Nordic countries. The requirement is that a certain percentage of sold fuels must originate from renewable sources and reduce a minimum threshold of greenhouse gas emissions. As the result of tightening EU regulations and national laws, the demand for biofuels is growing. This leads to increasing fuel prices, and raw materials being collected and imported from farther locations. A growing trend for circular economy and the rational use of resources has also resulted in a decreased availability of waste. Waste and residue streams are utilized more effectively in e.g. biogas production or petrochemical industry. At the same time, the feedstock suppliers are more environmentally aware and want to secure their feedstock sourcing to companies whose operations are considered sustainable.

Sawdust, which is a process residue from the sawmill industry is used as a raw material for bioethanol at our Kajaani Cellunolix® biorefinery. Finland has the availability of approximately 3.3 million solid cubic meters of sawdust annually. In addition to fossil fuels, sawdust is utilized for power generation in heating plants, and in the paper and wood processing industries. Traditionally, there has been a steady supply of sawdust at moderate price levels.

We are continuously looking for new potential sustainable raw materials to produce advanced fuels. This happens both in our own R&D activities as well as by participating in partnership-funded R&D projects. For example, recycled wood, bark, and waste streams from the chemical forest industry and cassava waste have proven to be potential new raw materials in the future. Read more about our biorefining feedstock in St1 Biorefineries section p. 25.

Wind Power

St1 has been developing and producing industrial wind power already for a decade in Finland through our associated company TuuliWatti.

Wind power is a renewable energy form, which decreases the need to produce electricity from fossil fuels. Compared to other sources of renewable energy in use today, wind power is one of the most cost-efficient ways to produce electricity. Out of all the sources of renewable energy, wind power has the most potential in the Nordic countries. The wind conditions are very favourable for substantial wind power production. The conditions in the Arctic areas in Northern Norway are exceptionally good and could potentially provide renewable energy for the needs of the whole Nordic region.

St1 is collaborating on a project to build a large-scale wind park in Eastern Finnmark, northern Norway. The production would serve the energy intensive industries operating in the North Baltic Sea area. The wind park area is almost uninhabited and has high wind power potential. When completed, the park will generate more energy than all the area's currently existing wind farms combined. Read more about case on p. 29.

Geothermal Heat

Geothermal heat is a sustainable, low carbon, energy efficient, and non-combustion-based form of energy; and there lies a great potential for the energy production deep in the bedrock. Several countries, such as the USA, Indonesia, Philippines, New Zealand, Turkey, Germany, France, and Iceland are already successfully using geothermal energy in heat and electricity production.

We are active in two types of geothermal energy production. In our ground source heat pump solutions, the production wells are typically drilled to a depth of 250 – 350 meters. In larger projects, the wells have extended down to 600 meters. The temperature difference between the input and output circulating fluid temperature creates more eco-efficiency. Also, the heat wells field can be managed with fewer wells, hence with a smaller footprint. In the development of deep geothermal heat plants, the drilling extends several kilometres down into the bedrock. In deep heat solutions, high temperature enables the circulating water to be fed directly into the district heating network. There is no need to utilize heat pumps in the process, but simply use the transferred heat from the bedrock as such.

In 2016, we launched a project to construct Finland's first industrial-scale heating plant based on geothermal energy. In the development of the deep geothermal heat plant, the drilling of two boreholes has extended over 6 kilometres down into the bedrock, where temperatures reach 120 degrees and will be used as such in local district heating network. The construction of the site advanced well in 2019 and the construction work is expected to be complete in the summer of 2020. The target schedule for the start of commissioning of the geothermal heating plant is in the autumn of 2020.

CASE

Q Power and St1 piloted synthetic fuel production

ST1 AND A RENEWABLE ENERGY start-up Q Power launched in September a joint project for developing a novel way of making synthetic biomethane from carbon dioxide. In the pilot project, Q Power's biological methanation technology utilised the carbon dioxide recovered from the production of waste-based ethanol at St1's biorefinery. The biological methanation technology was developed by utilising methanogenic archaea isolated from boreal peat. Biomethane can be used as a renewable fuel in traffic, in passenger cars as biogas or in liquefied form in shipping, for example.

The pilot project was implemented at St1's Etanolix® biorefinery in Vantaa, where advanced ethanol is produced from bakery waste for use as a traffic fuel. Q Power's methanation unit was integrated with the biorefinery. The pilot phase lasted three months, during which the concept was tested, and its technical and economic scalability specified. A refuelling station was connected with the pilot unit, from which the gas vehicles participating in the pilot was directly filled with biomethane produced in the process.

The pilot project was an excellent success, the goals set for it were achieved and the results were as desired. The carbon dioxide by-product recovered from the production process of our plant was very well suited to the process. From the pilot phase, Q-Power will continue to scale its technology to production scale in cooperation with St1.

Q Power's technology offers concrete solutions for combatting climate change. In the broad scale, biomethane will play an important role especially as a renewable fuel for heavy duty vehicles and in shipping. The concept also offers the possibility to store energy and can thus be used as an energy storage for renewable energy.

"Combating climate change calls for both sustainable fuels and capturing the carbon already present in the atmosphere. Q Power's technology has vast potential to transform carbon dioxide from different industrial processes into sustainable fuels. We consider the concept very interesting from the point of view of converting the carbon dioxide flows from our own oil and biorefineries as well as other industry into sustainable fuels", says **Patrick Pitkänen**, Director of Biorefining Business Development at St1.

CASE

Palm oil mill effluent

The Feedstock Game

THE WORLD IS IN A DESPERATE NEED for more greener solutions practically in every sector. Transportation being one of the most CO_2-intensive sectors largely due to its oil demand, there is an urgent necessity to bring those emissions down – fast. Nordic countries have the world's highest targets for reducing greenhouse gas (GHG) emissions from the transportation sector. These targets are now set to be achieved by increasing the use of biofuels.

Where the current regulatory set-up within EU is aiming in reducing carbon emissions in a fast pace by focusing on ramping up the use of biofuels, it is important to acknowledge that it all boils down to the raw materials. While in a search for more sustainable solutions we have entered a feedstock game where the demand promoted by the regulatory framework requires that all raw materials available must be utilized.

The current renewable energy directive sets the criteria on feedstocks and their sustainability. The feedstock pool is consisted of cultivated feedstock such as crude palm oil and soy, and waste and residue feedstocks such as animal fats and used cooking oil. Sustainability schemes set high standards on all the feedstocks, and it is good to understand, that biofuels business is still the only industry having a binding legislation ensuring the feedstock sustainability. However, it must be stated, that no feedstock is trouble-free when it comes to the feedstock game.

Let's examine the fact, that the amount of waste and residue-based feedstocks is limited; the fuel companies still need to fulfill their bio mandates in each market they operate in. Utilizing all feedstocks - also the ones which originate from cultivation and are considered sustainable under the regulation - is therefore not merely a market decision made by the fuel companies. It is forced by the current regulation with high bio mandates. If we therefore want to fulfill those mandates with biofuels, all companies operating under this mandated business are forced to utilize the whole feedstock pool available. Otherwise the national mandates, and the EU level targets for cutting greenhouse gas emissions would not be met.

From legislative perspective, biofuels still are the best-known solution in reducing carbon emissions from transportation – at the moment - but what should be remembered is, that it should not the only one. Therefore, we at St1 aim to discover and innovate new CO_2-aware solutions, which would enable us to win the battle against the climate change. Read more about our investments in the future p. 40.

Production

Our vision is to be the leading producer and seller of CO_2-aware energy. While fossil fuels are still our main source of income, it allows us to build world-class expertise in introducing more and more renewable energy to the market through innovation and partnerships.

Gothenburg refinery

Half of the fuels we sell come from our own oil refinery in Gothenburg, which has an annual refining capacity of approximately 30 million barrels of crude oil. In 2019, the refinery output was 23.9 million barrels, which was 17 percent lower than 2018, due to the maintenance turnaround during the spring. The utilization rate, which describes the utilization of all different units in the refinery, was lower than planned in 2019 due to an unplanned extension of the turnaround. After a somewhat lengthy start up, the refinery was back up and running, with high utilisation and at a good level in terms of safety and environmental emissions, which made us capture a good margin period during the last quartile. When it comes to safety performance in 2019, we regret to report that one serious personal injury occurred at the refinery during the maintenance turnaround.

In 2019 refinery procured crude oil of North Sea origin 3 451 500 m3 out of 3 801 500 m3 in total.

Our refinery operates as a blending hub. In addition to fuel refined from crude oil at our Gothenburg refinery, rest of our demand is fulfilled with fuels supplied by our partner NEOT. These fuels contain fossil and biofuels from other refineries mainly located in Baltic Sea. High quality and suitability are emphasized in the selection of fuels from these refineries.

Our fuel blends contain several bio components that are mainly sourced from the global market, with the objective to maximize greenhouse gas reduction. The blends of fossil and bio components in our products vary by operating country, depending on national regulations and demand factors. We are constantly aiming to develop and bring to the market new products, that enable better fuel economy and lower impact on the environment.

In recent years, the share of renewable components has increased with the introduction of greater volumes of components such as ETBE and HVO-naphtha. In 2019, we supplied two new biocomponents to the end market, bio-MTBE and co-processed diesel.

The refinery's products include petrol, sulphur-free MK-1 diesel, and other middle distillates, marine fuels as well as, liquefied petroleum gas – most of these products are sold directly through our own network in Sweden, Finland, and Norway. All products comply with the applicable environmental requirements. During the fall 2019,

Our own oil refinery in Gothenburg has an annual refining capacity of approximately

30

million

barrels of crude oil

the refinery started to produce the 0.5% S marine fuel, complying with the global specification change from 1st January 2020 according to the IMO 2020 standard.

St1's refinery is very energy efficient with a high degree of heat recovery. Nearly a third of the heat generated by the production equipment is recycled to Gothenburg's district heating network to heat almost 70 000 homes in the city area.

The St1 Refinery was the first refinery in Europe to acquire the ISO 14001 environmental management certificate and was registered according to the EMAS (Eco-Management and Audit Scheme) in 1997. It also has in place an HSE Management System to minimize risk of incidents. External audits of the environmental management system are carried out annually by accredited bodies. Internal audits are carried out by trained St1 personnel and cover the entire management system for health, safety, and environment. The audits are conducted so that the entire system is reviewed within a three-year period, with specially selected areas inspected every year.

The volume of refined crude oil at the Gothenburg refinery is expected to remain stable in the near future. In addition, the start of our own production of renewable diesel in 2022 will introduce new sustainable feedstocks to production.

Renewable energy production

We are focusing on three renewable energy production areas:

1. Biorefining renewable fuels, especially focusing on advanced waste and cellulosic-based ethanol and renewable diesel
2. Geothermal heat, both ground-source heating and deep heat
3. Industrial wind power for renewable electricity production

St1 Biorefinery solutions

The objective of our long-term advanced renewable fuels strategy is to competitively fulfil the 2030 regulations planned in our domestic market in Finland, Sweden, and Norway. In Sweden, the industry will face a challenging GHG reduction obligation, whilst in Finland and Norway it must meet the tightening biofuel blending mandates.

St1's advanced ethanol produced from waste has a uniquely low CO_2 footprint; it reduces up to 90 percent of emissions compared to conventional fossil fuels. Life cycle emissions have been cut down using waste as feedstock. Renewable energy is used in production and energy efficiency has been one of the top priorities in developing our technologies. We collaborate closely with many partners and organisations to develop and produce renewable energy, in order to create increased production capacity and improved efficiency.

In the increasingly competitive feedstock market, we have moved our focus on improving our production to yield more advanced ethanol from the same amount of feedstock. By using new manufacturing technologies and enhanced production processes, we have been able to increase our yields substantially.

On the other hand, the commercialisation of by-products of our production and the discovery of circular economy applications have also increased the total value of production. In addition, some by-products can be used as substitutes for plastics or as recycled nutrients in organic fertilizers.

St1's Etanolix® solution produces advanced ethanol from fermentable waste and process residue, which is rich in starch, sugar or alcohol. Currently the feedstock includes bakery waste and process residue, e.g. dough, brewery waste, and residue such as excess yeast and confectionery production waste. Also packaged feedstock, such as surplus bread can be utilized. The clean, non-meat based, feedstock used in ethanol production allow us to produce protein rich animal feed as a co-product.

St1's Bionolix® solution produces advanced ethanol-based biofuel and biogas from municipal and commercial biowaste. Pre-handling of packaged biowaste enables more efficient recycling. Thus, the amount of biodegradable waste ending up in landfills can be minimized. The Bionolix® biorefinery meets the criteria set by EU legislation for the treatment of expired food products. Instead of mere energy recovery, biowaste can be treated as feedstock for advanced ethanol production. The stillage residue from the process is used in biogas production. Biogas can be utilized for local electricity and district heating or other local energy needs. The biorefining process also produces organic soil improvers and fertilizers as co-products.

Our Cellunolix® solution enables the use of forest industry co-products, like saw dust and wood chips, in advanced ethanol production. We have developed a technology to utilize saw dust from soft wood, such as pine and spruce. The Cellunolix® solution produces valuable co-products such as lignin, wood syrup, furfural, and turpentine.

***Etanolix®* biorefineries:**

Lahti, Finland

- Integrated with the Oy Hartwall Ab brewery
- Production capacity of 1.25 Ml/a advanced ethanol
- Feedstock: brewery and bakery waste, packed and unpacked bread waste
- Co-products: liquid animal feed

Hamina, Finland

- Integrated with a dehydration plant
- Production capacity of 1 Ml/a advanced ethanol

- Feedstock: waste from alcohol industry
- Co-products: liquid animal feed
- Processes were simplified and use of bakery waste and animal feed production ended in 2019

Vantaa, Finland

- Stand-alone plant
- Production capacity of 1.25 Ml/a advanced ethanol
- Feedstock: bakery waste, packed and unpacked bread waste
- Co-products: liquid animal feed
- Pilot project in 2019 to develop a new way to produce synthetic biomethane from carbon dioxide in co-operation with Q Power

Gothenburg, Sweden

- Integrated with St1 Oil Refinery
- Production capacity of 5 Ml/a advanced ethanol
- Dehydration in Gothenburg is done on-site
- Feedstock: bakery industry and retail waste, packed and unpacked
- Co-products: liquid animal feed, feedstock for biogas production

Jokioinen, Finland

- Production capacity of 9 Ml/a advanced ethanol
- Feedstock: process residue of enzyme production, waste sugar
- Co-products: liquid animal feed
- In operation for 6 months in 2019; source of raw material ended 6/2019, new production is planned with partners

***Bionolix*® biorefinery: Hämeenlinna, Finland**

- Production capacity of 1 Ml/a advanced ethanol and 15 MWh biogas
- Feedstock: municipal biowaste collected by Kiertokapula Oy, biowaste from retail and industry, packed and unpacked
- Co-products: renewable electricity, heat, organic soil conditioner and liquid fertilizer
- Planned expansion of production

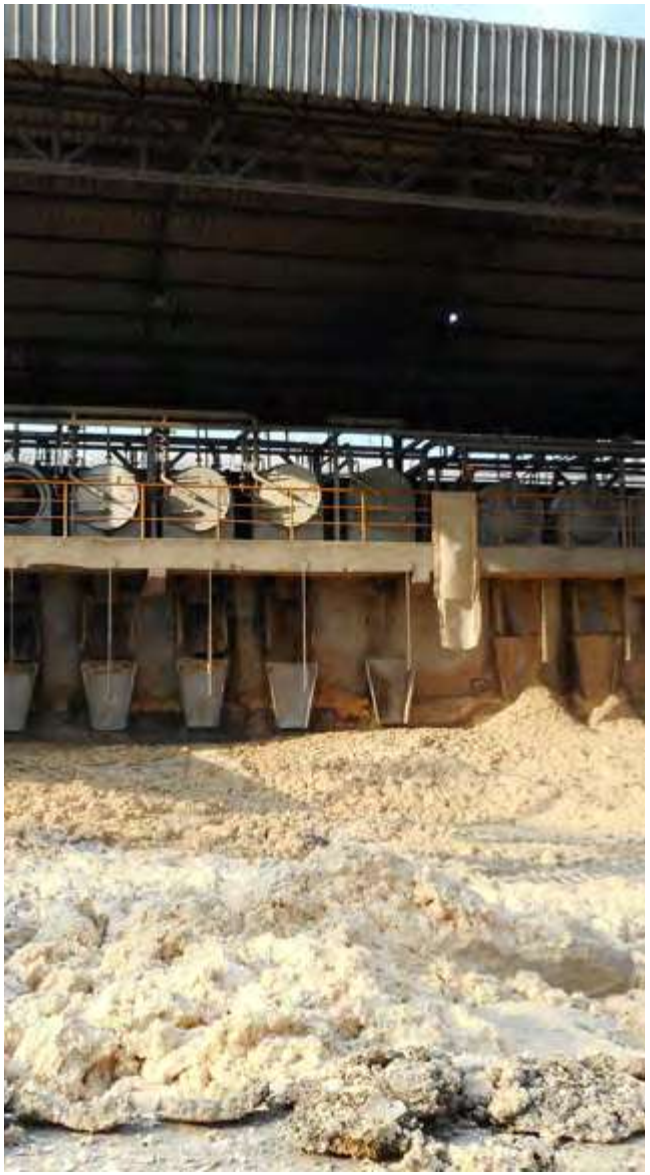
***Cellunolix*® biorefinery: Demonstration plant in Kajaani, Finland**

- First of its kind in the world
- Production capacity of 10 Ml/a advanced ethanol
- Feedstock: local sawdust, approx. 80 000 tn
- Co-products: currently: solid and liquid boiler fuels; in the future: renewable products for various industries
- Number of maintenance and modification operations year 2019
- Challenges of plan availability relating to the pre-treatment module of the Kajaani plant has led to a postponement of the up-scaling and construction of a full-sized biorefinery.
- Products: ethanol, wood syrup/vinasse for organic fertilizer industry, turpentine, lignin, biogas and furfural

Dehydration plant Hamina: Finland

- Production capacity of 88 Ml/a of 99.8 percent ethanol
- Dehydration of hydrous ethanol produced in St1 biorefineries in Finland and from third-party producers

In Thailand, we successfully completed a pilot project that reutilized waste from the cassava starch production industry in ethanol production. The pilot confirmed that waste from the cassava starch production is among the best feedstock sources in terms of yield and availability. Furthermore, it was confirmed that the production cost of cassava starch mill pulp as feedstock is lower in the Etanolix® process than in the conventional ethanol production from sugar cane molasses or cassava root.



The results of the pilot project were encouraging, and negotiations relating to a demonstration plant are under way. St1 seeks to license this innovation, which will have significant potential in South East Asian markets.

Renewable diesel production in Gothenburg

St1 is building a new renewable diesel plant at its oil refinery in Gothenburg. The biorefinery will have an annual capacity of 200,000 tons of renewable diesel production and is expected to start production in 2022. The combined value of related investments will be in the order of EUR 200 million. The design brings flexibility to the process allowing a wide range of feedstocks to be used. The unit can meet the current and future specifications for renewable fuels to be produced, such as HVO diesel, jet fuel, and naphtha. The produced renewable fuels will have significantly lower CO_2 emissions compared to traditional fossil fuels. Preparations for the procurement of feedstock for the plant and related negotiations with various partners started already in 2019.

As the first step, the construction work of the new hydrogen unit in Gothenburg was finalized at the end of 2019 and the unit will be commissioned at the end of Q1 2020.

Wind Power

Our subsidiary TuuliWatti is responsible for our wind power production. TuuliWatti has ten wind parks across Finland. In 2019 TuuliWatti produced 1,2 TWh, which corresponds to approximately 20 percent of the wind power produced in Finland. The produced renewable electricity equals approximately a 1 000 000 tonne decrease in CO_2 emissions per year.

TuuliWatti's aim is to utilize the expertise gained in the development, financing, construction, and operation of wind power projects to build geographically decentralised and cost-effective production. TuuliWatti Oy made an investment decision in June 2019 to construct a wind park in the Sarvisuo area in Simo, southwest Lapland. The project comprises of 27 state-of-the-art 5.6 MW wind turbines. By the time it was the largest wind park investment decision made in Finland so far. The project is expected to be completed by year end 2021.

The Ii Viinamäki wind park project in northern Finland was completed in December 2019. The wind park comprises of five 4,2 MW wind turbines which utilise the latest turbine technology. The fully market-based project is realised without government subsidies.

TuuliWatti Oy constructs the largest electricity storage in the Nordic countries in connection with the wind farm in Ii Viinamäki. The 6 MW giant battery will be located in the neighbouring municipality Simo and has three times the size and power output compared to previous similar electrical storages. The battery aims to be ready in spring 2020.

The production of wind power is gradually reaching the cost level needed for being profitable without public subsidies. The increased cost-efficiency has been achieved by advances in production technology. The diameter of the wind turbines has multiplied during the past years, and turbine towers have become taller. It is estimated that the decrease in production costs will continue.

Geothermal Heat

Ground source heat pumps

In the ground source heat pump segment, our subsidiary St1 Lähienergia Oy (St1 Local Energy) sells, drills, installs, and offers services for ground source heat pump solutions for real estate, such as larger housing properties and public buildings. Lähienergia has built over 1000 plants, which utilize ground source heating to replace fossil energy such as coal and oil.

Deep geothermal heat plant project

In 2016, we made the decision to invest in a deep geothermal heat plant in Otaniemi, Espoo. The goal is to build and operate the first industrial-scale deep geothermal heat plant in the Nordics, by using the natural heat of the bedrock originating from more than 6 kilometres below ground. Energy company Fortum will act as our partner and distribute the energy for the city of Espoo's district heating network.

Being the first of it's kind in many ways, not just in Finland but also globally; it's challenge is managing Finland's hard bedrock which requires specially designed and manufactured drilling tools and technologies. The Project started in 2016, and in early 2017 it was halted for a few months to develop and test the drill and related technologies. During 2018, we successfully executed the water stimulation phase followed by 3D water flow analysis to determine the precise location where to drill the final route to the second well. The target is to create optimal waterflow between the two boreholes to enable the best thermal outtake of the underground heat exchanger. As expected, the stimulation caused several controlled micro-earthquakes, of which some were heard above ground. The stimulation was successfully conducted in a controlled manner according to and within the limitations approved by the authorities. In 2019 the drilling of the production well reached 4,9 km. It will be completed in April 2020 when the well will reach 6,2 kilometres in length. After the above ground piping and installation work is completed, the target schedule for the start of

commissioning of the geothermal heating plant is in the autumn of 2020.

Geothermal energy has been utilized globally for several years. The potential is significant, and it can be a major contributor in converting heat and electricity production towards chimneyless, sustainable production. The Otaniemi pilot project is in many ways the first of its kind particularly in terms of drilling and stimulation technology in the hard, Nordic bedrock. In addition, it offers valuable seismological knowhow on how similar kind of projects can be executed in a controlled manner. The goal for the Otaniemi project is to define financially feasible solutions for all phases of the deep geothermal plants for them to be multiplied and scaled to replace fossil energy, first in the Nordics but also globally.

CASE

Affordable energy from Arctic winds

NORWAY'S ARCTIC COASTLINE is known for its rough weather and beautiful landscapes, but less so for its excellent potential to produce affordable renewable energy. It may come as a surprise to many that Norway's Arctic coastline could in fact be the best suited place for wind power production in Europe.

Arctic winds blow fast and they blow steadily. The region has high average wind production and the variability of production is 40% lower compared to inland forest areas. Even if balancing and grid access are accounted for, the cost of energy for Arctic wind power is very low. In fact, Arctic wind power is so cheap that it is more competitive to build a new wind power plant in the Arctic than operate an existing coal power plant. This is great news for the climate, if we can harness the potential.

St1 is part of the **Arctic Energy Forerunners**, a group of companies and research institutions seeking to make the most of this potential. The group - ABB, Eltel, Empower, GE Renewable Energy, Lappeenranta University of Technology, Spinverse, SSAB, St1, Tesi, ABO Wind, Outokumpu, Wicetec and Wartsila – is developing new forms of cooperation and partnerships to push for clean and cheap energy investments in the Arctic. They are also keen to pinpoint obstacles on the way of renewable energy projects and thus hasten the societal change needed to realize the potential.

The area of Finnmark in Northern Norway has some of Europe's best wind resources, but currently investments are being slowed down by the lack of central grid connection to Southern parts of Norway and Finland.

St1 has been planning a wind park in Eastern Finnmark, Norway, with a capacity of 800 MW. If the central grid connection was in place, the park could provide much needed clean, affordable energy for the needs of heavy industry in the Arctic and around the Bothnian Bay. The demand will only grow as industries will decarbonise in the Nordic countries. Data centres that need huge amounts of energy are also set to become more common in the Arctic because of new data connections through the area.

Development of infrastructure in the Arctic is sensitive because of the fragile Northern ecosystems and indigenous cultures that are important to protect. Partners of Arctic Energy Forerunners are committed to find ways to harness the Arctic powers of the wind while preserving these treasures.

CASE

Energy Globe World Award for geothermal heat and renewable fuels project

ST1, TOGETHER WITH three other Finnish companies, was awarded the Energy Globe World Award in the category of Air in November 2019. The winning project combines geothermal energy for the district heating with renewable fuels for sustainable transportation in the city of Espoo, Finland.

Espoo has been ranked as one of the most sustainable cities in Europe, and the city is committed to taking new measures to fight the climate change with new knowledge, new innovative solutions, new concepts and industrial breakthrough initiatives. In 2019, St1, Fortum, Neste, and HSY established partnerships between people, the private sector and the public with the goal of making the city carbon neutral by 2030.

To achieve this, the use of coal in Espoo would be replaced by renewables. Several activities were targeted to promote regional circular economy solutions. Planning and implementing activities for the production of carbon-free energy was also a significant part of the project.

An important step towards a carbon neutral future, St1's Deep Heat geothermal pilot project aims to build the first industrial-scale geothermal heat plant in Finland at Fortum's site in Otaniemi, Espoo. Once completed, the six-kilometres-deep plant will produce up to 40 MW of emission-free district heat, covering annual heating for 20 000 people.

The award criteria states that the companies must be involved in the regional transformation to carbon neutrality, but also innovative in their business fields. For example, the introduction of renewable jet fuel achieves up to 80 percent reduction of greenhouse gas emissions since it is made of renewable raw materials. Another example is the construction of a wastewater treatment plant which is able to remove over 96 percent of phosphorus and organic matter, and in addition produces carbon-neutral district heating.

Supply & Logistics

Throughout our supply and logistics chains, we co-operate closely with our associated company North European Oil Trade Group (NEOT). Co-owned by us and the Finnish S Group, NEOT is a significant fuel procurement company in the Baltic Sea area. The purpose of NEOT's operations is to enable its owners to prosper by providing them with competitive and sustainable fuel solutions in a manner that secures the relative competitive advantage of the customer chains in the market. More information about NEOT's operations can be found from NEOT's Sustainability Report 2019 available here.

Supply

NEOT acquires fuels from the global trading markets and handles their storing and transportation from refineries to terminals. Our Gothenburg refinery is the most important source of supply for NEOT, but the company also sources oil products from other refineries in the Baltic Sea region, mainly from Finland, Norway, Denmark, and Poland. NEOT supplies the St1 Gothenburg refinery with biofuels that are increasingly used in fuel blends. NEOT sources renewable fuels globally from suppliers that comply with official EU sustainability criteria, such as ISCC (International Sustainability & Carbon Certification), or nationally accepted sustainability schemes. NEOT sources bio components from the global market and has an off-take for 100% of our waste-based advanced ethanol production.

The supply chain of renewable fuels supplied by NEOT complies with a sustainability scheme following the principles of the European Directive on Renewable Energy. The scheme has been approved as a Finnish national sustainability scheme, according to Norwegian sustainability rules, and as an ISCC trading and storage scheme.

St1 is collaborating with NEOT on improving supply chain sustainability. The goal of the collaboration is to enhance traceability on products and to enable the calculation of their carbon footprint. During the past few years NEOT has emphasised developing its social sustainability. In 2019, NEOT assessed the human rights risks in its supply chain and has selected priorities for further development.

Logistics

Together with NEOT, we have a comprehensive logistics chain in all our operating countries, consisting of terminals for storing the products and a wide transportation network. Quality, safety, and environmental aspects are taken into careful consideration throughout the logistics chain.

In Finland the network consists of six terminals operated by NEOT, eight in Sweden, and eleven in Norway, which are operated by St1. The transportation network includes shipping as well as road and rail transport. The network transports biofuel components to the refinery, mainly with charter vessels, and likewise the end products from the refineries to the terminals.

"Quality, safety, and environmental aspects are taken into careful consideration throughout the logistics chain. "

The main activities focus around the Baltic Sea area. The road transportation is handled by a co-operation partner network. In Finland, NEOT is responsible for the road transportation from the refinery all the way to the fuel stations and hundreds of thousands of homes and companies. In Sweden and Norway, other transportation operators are responsible for the deliveries to St1 stations and our direct sales customers.

Transportation of fuel products between Hamina seaport terminal and Varkaus inland terminal in Finland are operated via domestic railways. Trains are leased from the government owned railway company VR Transpoint. In Sweden the products are delivered by train from Gothenburg to Karlstad and Jönköping, and from Gävle to Arlanda Airport.

A theme for our logistics chain in 2019, was preparation towards the new market of marine fuels. There was a significant reduction in the global limit of sulphur allowed in marine fuels, which was lowered to 0.5 percent in early 2020. Previously fuels were allowed to contain up to 3.5 percent sulphur.

CASE

AI improving the safety of fuel loadings

IN 2019, NEOT TOOK a leap into digitalisation as Artificial Intelligence (AI) was implemented to improve the safety of loading operations at its Oulu terminal. The purpose of using AI is to help prevent unwanted product mixes by recognising the compatibility of the attached loading arms and a loading plan automatically, and in real time, with the help of video technology.

"AI is perfect for this type of use, where it can help prevent incidents resulting from human error. The driver will oversee the operation also in the future, with AI giving additional reliable support. According to our knowledge, this type of technology has not been used in other companies' terminals. Our pilot project has provided promising results - we may therefore expand the use of this technology also to other terminals in the future," says **Miika Leskinen**, CIO, NEOT.

CASE

Identifying human rights risks is a starting point

DURING THE PAST FEW years, human rights have been one of the topics on NEOT's sustainability development agenda.

In 2019, NEOT conducted a human rights risk assessment to identify the most pressing human rights risks in the company's supply chain. The human rights risk mapping project consisted of a desktop risk analysis, assessment of NEOT's relevant documents, and business processes, as well as, interviews and workshops with NEOT's management and other key personnel.

"The human rights risk mapping offered us valuable insights and a good starting point for further development work," says **Milla Kaikuluoma**, Director, Sustainability, Communications, and People Development, NEOT.

The results of the risk mapping are used to define the focus of NEOT's human rights development work for the following years.

Sales & Customers

We are committed to continuously improving our customers' experience by offering high quality premium fuels, products, and services. Our customers are at the top of our value chain. More than 600 000 customers visit our station network daily. In addition, we have an extensive direct sales customer base. This sets a high demand for us to understand and fulfil our customers' needs now and in the future.

According to our customers we have a very positive brand image. St1 is seen as a pioneer; particularly its activities to combat climate change have gained wide interest. St1's sustainability and reliability as a partner are increasingly highlighted as significant positive factors among our corporate customers.

Our customers benefit from the competitive edge we have created, by managing the complete value chain from raw materials and energy sources all the way to service at the pump. In accordance with St1's vision, our goal is to keep introducing more renewable energy solutions to the market. For conventional vehicles we offer fuels with lower impact on the environment with better fuel economy and performance.

Sustainability of biofuels

- All biofuels sold by St1 comply with the sustainability criteria set by the EU Renewable Energy Directive
- The sustainability and traceability are ensured with EU voluntary schemes, such as International Sustainability & Carbon Certification (ISCC) and nationally (Finland, Sweden, Norway) accepted sustainability schemes.
- Schemes are subject to internal and external auditing yearly

EU sustainability criteria ensures that:

Traceability of the supply chain is covered to the point of origin of the raw material

Biofuel production does not harm primary forest, nature protection areas or highly bio-diverse grassland. Land with high carbon stock was not converted for biofuel production

Biofuel production leads to a minimum of 50% greenhouse gas (GHG) emission savings, 60% if the plant has been started after 2015 compared to fossil fuels

Retail station operations

Our retail business has its foundation in a strong nationwide petrol station network that comprises of approximately 1,300 St1 and Shell petrol stations across Finland, Sweden, and Norway. The network serves the different needs of hundreds of thousands of people on the go. The retail network consists of unmanned stations and service stations with convenience stores, restaurants, and car washes, which fulfil customer needs; from just filling up the car to having a break and enjoying high quality food.

The markets for fuel distribution are challenging: the demand volumes decrease by a few percent each year as fuel-efficient models and electric vehicles become more common. In 2019, price competition was fairly even in Norway and Sweden, but continued to be fierce in Finland. In response to tough competition, St1 has invested in the quality of its service.

In September, we expanded our petrol station network in Sweden by acquiring 20 heavy duty fuel distribution stations from Såifa Värmland AB. They will be integrated into the Shell TruckDiesel chain. Some of the stations have already previously been supplied with fuels containing components from renewable sources. In the future, our offering will also include 100% renewable fuels.

We have continued the development of the full-service convenience store concept in all our countries. For example, the Service Champions serving at around 50 stations in Finland, are one of the factors differentiating us from our competitors and their annual use has risen to 500 000 visits. Additionally, the St1 mobile refuelling concept and St1 Mastercard are in use in all our operating countries.

The extent of the fuelling station network, and the price, quality, and safety of our products and services are major factors affecting which fuelling station our customers prefer. The environmental impact of products can also be seen driving the customer behaviour, although the dominant factor still remains to be the price of the products.

Customer relations and corporate sales

We provide private and corporate customers with a wide range of products and services. The main products sold are premium class heating oils, middle distillates for machinery, and marine fuels. Our offering also includes a wide range of enhanced payment cards, methods and services, both for fleet customers and commercial road transportation customers, as well as for consumers.

We have invested heavily into services for the offshore industry, cruise liners and fishing industry. In December 2018, we completed the acquisition of Norwegian Statoil Fuel and Retail Marine AS, a company that delivers fuel to the marine sector along the Norwegian coast. The company was named St1 Norge Marine AS. During 2019, its operations were successfully integrated into St1. The business has developed positively, sales have increased and customer satisfaction has improved. St1 now has a good position and well-established marine business in Norway and Sweden, and the business area offers new growth opportunities.

The commercial sales market remained fairly stable in our home market. In Norway, we increased our market share in direct deliveries with a partnership model, and in Sweden we managed to grow, especially in the service of heavy vehicles. In order to improve the customer experience, we created a new customer service strategy, which was already partially implemented in our Finnish operations during 2019. The improvements will affect customer service as a whole, including longer office hours and better customer experience. Implementation of the plan will be completed during 2020, and then phased out to other countries where relevant.

"We have continued the development of the full-service convenience store concept in all our countries"

During 2019 it became even more evident, that companies in different industry sectors are taking steps to combat climate change and aiming to reduce their carbon footprint. During the year we created the opportunity for our corporate customers to compensate their emissions originating from the fuel purchased. The compensation model was created in partnership with a Finnish non-profit foundation called Compensate foundation. The foundation will use the compensation payments in reforestation projects, which play an important role in climate change mitigation actions. All actions are needed in the battle against climate change. Forests act as natural carbon sinks and are therefore an integral part of our vision in creating more CO_2-aware solutions and services.

Business Technology and Financial Services

Effective business technology enables the reliability of our operations and a good customer experience. In 2019, our BT systems were improved and made more agile, to meet our rapidly changing needs in the future. Security risks are clearly a growing challenge. We have prepared for this by providing data protection training for all staff.

St1 Finance Oy provides payment services with the license issued by the Financial Supervisory Authority. St1 strives to be a responsible creditor and therefore assesses the credit status of customers with diligence and efficiency. Customer experience is an important part of the service, and is therefore constantly being developed and improved.

The St1 Mastercard service is available in all our operating countries. The number of credit cards being issued is constantly growing. The St1 Mastercard allows the use of the St1 mobile application and Apple Pay. The St1 Way App, downloaded onto a smart phone, facilitates the introduction of mobile payments for fuelling in addition to other useful features. The app is used by close to 100 000 customers across all countries.

St1 strives to be a responsible lender, and therefore assesses customers' credit standings diligently and effectively. During 2019, we improved the credit granting process and clarified our credit risk management and compliance activities.

The popularity of mobile payments has also grown rapidly for refuelling and wash services. St1 offers several possible methods for mobile refuelling. When using with the St1 Way mobile app, fuelling can be paid for with the St1 Mastercard or any other credit card. The Apple Pay app, on the other hand, uses the contactless payment feature.

CASE

Purchase of 20 stations to supply renewable truck fuels

IN 2019, ST1 PURCHASED 20 fuel stations for truck diesel from SÅIFA Värmland. Located in Värmland, Sweden, the stations enable the sale of fuel to heavy traffic and expand St1's opportunities to supply renewable fuels.

For a number of years, SÅIFA has made significant investments to ensure the availability of sustainable fuels for the transportation industry in the area. Many of the 20 stations have already had renewable fuel alternatives, and now many of them will be converted to provide completely renewable fuel. The market for renewables is growing as the development towards sustainable alternatives is accelerating.

The investment will reduce carbon dioxide emissions in our supply chain, as well as, from the transportation in the Värmland region in general. Since the acquisition, the fuel has been transported from the refinery in Gothenburg to the depot in Karlstad by train instead of boats and trucks. Heavy transportation accounts for about 10 percent of carbon dioxide emissions. Given that there are already good renewable fuel alternatives that cut the carbon dioxide emissions to a fraction compared to fossil fuels, St1 is committed to reducing emissions by making several of the stations to focus on renewable alternatives only. "Our most important task is to make sure that all transportation companies have access to them," says Mattias Paulsson, Sales Manager at St1.

SÅIFA was founded in 1971 by the Värmland haulage industry and operated the fuel stations until the acquisition. From December 2019 on, the stations became part of Shell TruckDiesel, a chain that comprises a total of 190 Swedish stations.

People

St1's goal is to be a highly sought-after employer that offers employees meaningful and motivating work, positive working environment, and the opportunity to develop both themselves and the company. We are solving global energy challenges, by taking steps to move ourselves from the fossil world into a renewable world. The cash flow generated by our traditional fuel business is enabling us to develop and invest into new CO_2-aware energy solutions. Thus, our employees working in the oil sector are strategy enablers, and our employees working in renewable energy sector are strategy executors – both equally important roles in reaching our goals.

Building a culture for growth

St1 has grown its size through several acquisitions over the years. Over the last few years, we have been creating a more cohesive and unified corporate culture and common operating methods. In order to remain as a strong player in the Nordic market, we must be able to operate efficiently and share knowledge across borders, while simultaneously taking into account local and unit-specific needs.

In 2018, we initiated a major reorganisation of our company structure, and in 2019, we continued to work on defining the ideas which form our corporate culture. Our intended corporate culture will support growth objectives, development of knowhow, and the quality of leadership throughout the organization. The internal development project was renamed Culture for Growth, and included many different gatherings and events where corporate culture was discussed. Following a verbal definition of our working culture, company managers received training on how to implement corporate culture across the whole workforce. Working together and having open discussions has strengthened our internal cooperation and created natural-feeling communication channels between many colleagues and units. Common themes are being considered and challenges are now being solved in a more inclusive manner and utilizing a broader range of our skills.

St1 also conducted its first Group-wide employee engagement survey, with a wonderfully keen participation rate covering as much as 95 percent of our employees. The web-based questionnaire was answered in the participant's own language. The survey measured well-being at work, satisfaction, and motivation. Overall, St1 was ranked mid-range when compared to other companies. The results varied quite notably from one unit to the next, and has provided us a basis for future development plans. Moving forward, we will be repeating the employee survey annually.

During 2019, we were also devoted to perfecting our human resource management, particularly the way it is organised and managed, and continued streamlining our HR practices and processes.

A focus on skills development

Our vision begins with responding to the major and global need for change. In order to meet these goals, our

skills and competencies must evolve to meet future challenges. One of the projects we launched during the year, focused on developing shared expertise and pathways for acquiring new knowledge. At the individual level, the need for competence development and training is identified through annual performance and career development reviews and daily management work. In 2019, 100 percent of our employees participated in performance and career reviews. St1's goal is to be a rewarding and fair employer, which provides many opportunities for developing oneself and to be a part of developing the way our company operates. A common reward structure covers all employees. The bonuses rewarded are linked to the performance of the company as a whole, the unit, and in reaching personal goals.

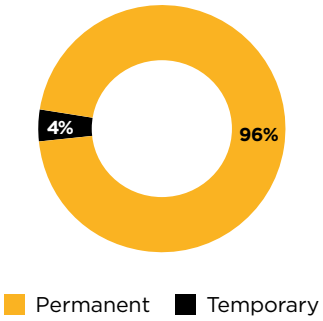
Well-being and safety at work

Our long employment relationships signify that St1 is a working community, which employees enjoy being a part of. Maintaining well-being at work is a key priority for us. We engage in a variety of activities to ensure the physical, mental, social, and organisational well-being of our employees and actively support their own initiatives to that end. Our employees also have access to comprehensive occupational health services. In 2019, the absence rate among our employees remained low at 1.7 percent (absence hours per average working hours).

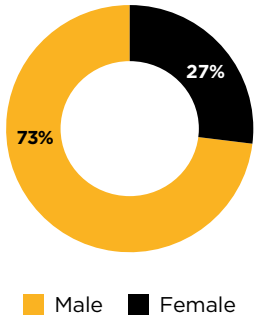
Our operations are planned with a view to maximising safety and we take a proactive approach to preventing accidents at work. In 2019, the incident and accident rates remained equally low in all of our operating countries, and there were no work-related fatalities. We review all accidents and dangerous occurrences closely in order to avoid them in the future. We have a zero-tolerance policy for harassment of any kind. In 2020, we will also start using an ethical channel through which all stakeholders can report suspected breaches of our Code of Conduct.

"Our employees working in the oil sector are strategy enablers, and our employees working in renewable energy are strategy executors – both equally important roles to reach our goals."

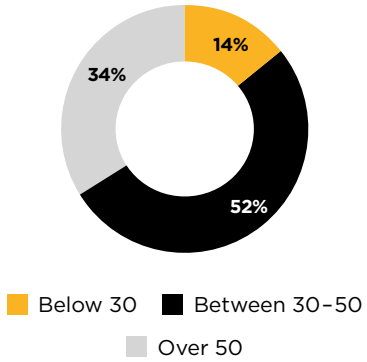
Employees by Contract



Employees by Gender



Breakdown of employees by age



Occupational Health and Safety Results 2019

Number of lost-time injuries	**8**
Lost time injuries frequency	**6.9**
Work-related fatalities	**0**
Absence rate, %	**1.7**

Partners

NEOT Group

North European Oil Trade Group (NEOT) is a significant independent fuel supply and distribution company in the Baltic Sea area. NEOT acquires fuels from the global trading markets and handles fuel storing and transport from refineries to terminals. Fuel transportation to stations and direct customers is undertaken by NEOT in Finland, and by St1 in Sweden and Norway. NEOT provides approximately 7 billion litres of fuel annually to Nordic service station chains. In Finland, NEOT delivers fuel to ABC, St1 and Shell stations; in Sweden and Norway, to St1 and Shell stations. NEOT also delivers fuel oils to hundreds of thousands of homes and companies, as well as, fuel for sea vessels and the aviation industry. North European Oil Trade is owned by S Group (51%) and St1 Nordic (49%). More information about NEOT's operations can be found from NEOT's Sustainability Report 2019 available here.

TuuliWatti Oy

Wind power company TuuliWatti is owned in equal parts by St1 and S-Voima Oy. The company aims to offer its owners with cost efficient wind power. TuuliWatti operates in the business of industrial scale project development of wind parks, construction and wind power production. By the end of 2019 TuuliWatti Oy's production of renewable electricity was 1,2 TWh, i.e. approximately 20 percent of wind power produced in Finland.

Aviation Fuelling Services Norway As

Owned in equal parts by St1 Nordic and Shell Exploration and Production Holdings B.V., AFSN is a provider of aviation fuelling services at Norwegian airports. AFSN operates at 11 airports in Norway, serving both Norwegian and international customers, ranging from big international airlines to smaller local companies and private owners.

Investments in the Future

We are solving global energy challenges by taking steps to move ourselves from a fossil world towards a sustainable carbon cycle. Our financial performance enables new sustainable investments in renewable energy. Passion for replacing fossil fuels also powers our research and development of new, sustainable, and innovative CO_2 -aware energy solutions.

New raw materials

St1's research and development laboratory is testing and screening new potential raw materials to be used as feedstock in biorefining. The research is focused on waste-based and cellulosic feedstock, the main feasibility criteria being the availability and cost-efficiency of the raw material and the sustainability of the overall process. According to EU regulations, advanced bioethanol can be produced from a limited variety of feedstock. Especially in the Nordic countries, there is plenty of cellulosic raw materials available – such as sawdust and forest industry residue.

St1's advanced ethanol pilot production tests in Thailand have also shown that waste from cassava starch production is one of the best feedstock sources for our Etanolix® technology.

St1 has an ongoing research program to develop our own enzyme for cellulosic ethanol production. The cost of enzyme use is one of the major cost components in cellulosic ethanol production. Our aim is to set up our own onsite enzyme production facility in the next Cellunolix® biorefinery investment.

Production development

St1 scientists are working closely together with process engineers and business developers to realise future biorefineries. New processes are first studied in a bench scale laboratory at very small scales, until they are ready to be transferred to the process engineers for the design of industrial scale plants.

"Our passion for replacing fossil fuels powers our research and development of new, sustainable and innovative CO_2 -aware energy solutions."

St1's biorefineries also refine many co-products from the advanced ethanol production. These are important to the overall cost efficiency of the process. For example, one co-product of our St1 Cellunolix® process is lignin – a natural component in wood that is separated in the pre-treatment step, which can be used to produce biocrude, and co-fed into the traditional oil refinery for renewable diesel production. Other valuable co-products are turpentine and furfural. As our production volumes increase, we are researching higher-added-value applications of these co-products, e.g. in the steel, concrete, fertilizer, or plastics industries. Obtaining additional income from co-products is important for us in securing the profitability of biorefining.

Cellunolix® biorefinery concept optimization and construction

We continue to develop new advanced ethanol production technologies with a strong focus on ligno-cellulosic feedstock. The demonstration plant, built in Kajaani in 2017, is the first of its kind in the world to produce advanced ethanol from soft wood sawdust. We are not yet satisfied with the availability and the yield in pre-treatment module of the demonstration and we are working on the solution with our partners. St1 has prepared various locations in the Nordics, as potential candidates for a larger Cellunolix® biorefinery with an annual capacity of 50 million litres. The final decisions will be made as the concept is finalized, and will be based on the business case outlining the success of the demonstration in Kajaani.

Production of advanced ethanol from cassava waste

In 2017, we launched a pilot project for the production of bioethanol from cassava starch waste. The amount

of cassava waste generated by Thailand's largest starch production plants is great enough to supply 20 units producing 20 million litres of ethanol each year. The pilot plant was built in 2018 and 80 test runs were executed at two starch factories to test different starch mill feedstock, and seasonal changes. The pilot phase was essential to finalize the concept for a full-scale ethanol production plant using cassava pulp. St1 is currently negotiating with its partner for the next demonstration-scale Etanolix project, where St1's role is to license its production technology and bring its expertise to the project.

Renewable diesel production

In 2019, St1 finalised the construction of a new hydrogen manufacturing unit at the Gothenburg refinery. This is the first step in the series of planned investments, which will enable the refinery to start the production of renewable diesel in the early 2020s. The goal is to produce 200 000 tons of renewable diesel annually.

Renewable fuels from tall oil

St1 and the forest products company SCA have formed a partnership to develop the large-scale production of renewable fuels from tall oil. The planned production site will be our refinery site in Gothenburg. The aim is to construct a new facility to produce advanced renewable fuels, from tall oil with a capacity of 100 000 tons per annum. Tall oil is a residual product from the production of kraft pulp from SCA's mills in Östrand, Obbola and Munksund. SCA is presently expanding its kraft pulp mill in Östrand, and as a result the production of tall oil from the mill will increase by more than 100 percent. Between the two partners, the parties make up the full value-chain from raw material to refining process, and distribution and sale of the renewable fuel to the customers.

Wind energy

We are developing wind energy solutions with our associated companies TuuliWatti Oy and Grenselandet AS, where St1 is a minority shareholder. Grenselandet AS is aiming to develop a wind farm project in the Finnmark area of northern Norway. At the first stage, Grenselandet will focus on development work and the environmental impact assessment. Further steps will be determined based on the outcome of this process. The wind farm development work consists of two planning areas with a total production capacity of 800 MW.

The Finnmark area bordering Finland is considered one of the best in Norway in terms of wind conditions. The location would also enable investigation of the possibility of connecting the farms to both the Norwegian and Finnish grids. When in production, the farms would generate up to 4 TWh annually. The project will be developed without governmental subsidies, and marks a step change for the renewable energy industry in Finnmark.

Geothermal heating plant

The global geo-energy installed capacity reached over 15,4 GW in 2019. In Europe there are over 300 geothermal heat plants without a heat pump in operation and about 200 plants under development or production expansion. There are well-known technologies which enable the steady rise of the geothermal effect annually.

Most of the conventional plants utilize heat pump technology, hence requiring sustainably produced electricity to run the heat pumps. For larger, geothermal units utilize the existing water deposits deep, several kilometres under the ground level. Plants utilising these basins are called hydrothermal plants.

In the Otaniemi project, St1 will be utilising deep dry bedrock heat which is being water stimulated from above

ground creating an underground heat exchanger. This advanced technology is called a petrothermal plant or EGS technology, which can be utilised especially in the Nordic countries but also in various parts in the world were the bedrock structure and the thermal conditions are favourable for such geo-energy production. The EGS technology has been recognized as most lucrative technology for St1 to the develop and to create world-class expertise in. Once the Otaniemi R&D project has been completed and proven, the building of consecutive plants will follow. St1 has pre-agreements for new plants both in Finland and elsewhere in the Nordics. In late 2019, Turku Energy Ltd in the south-west of Finland announced that they had filed in a permit to allow a geothermal plant to be built in Turku. St1 is the active partner for this project.

Given the tightening emissions regulations, the decision to ban coal, combined with need for increasing heating and cooling in the expanding cities, St1 Deep Heat technology is offering a sustainable and scalable means to replace any combustion-based energy form with extremely small space requirements, requiring no primary energy transportation with trucks and offering 24/7 energy production regardless of weather conditions.

New technologies towards sustainable carbon cycle

Carbon Sequestration

We have been preparing a carbon sequestration pilot in Morocco since 2018. Reforestation is an effective way to sequestrate carbon from atmosphere, and thus to slow down global warming. The aim of the pilot project is to test fast growing tree species in two different locations in Morocco. Irrigation and soil improvement are included in the test and the goal is to find the optimal combination of all the above mentioned.

Besides the pilot project, carbon capture measurement and verifying methods are studied. The entire process needs to be regularly verified and audited to ensure legislative compliance. A widely accepted verification method of carbon sequestration will be the prerequisite for economic basis and wider use of the carbon sequestrating concept.

Synthetic fuels

The transition to a carbon-free economy will need investments on a massive scale. One promising and scalable solution is Power-to-x-concept. Power-to-X describes methods for converting electrical energy and carbon dioxide or nitrogen into liquid or gaseous chemical energy sources through electrolysis and further synthesis processes. Power-to-x-concept can produce fuels that have an immediate decreasing effect on greenhouse gas emissions: E-Methanol, e-Methane, e-Gasoline, e-Diesel, e-Jet or in general synthetic fuels can be used within existing fuel infrastructure and logistics. It allows a smooth transition from the fossil world to a sustainable one with increasing emission reductions on the way: carbon neutral synthetic fuels can be mixed with fossil fuels to reduce the overall carbon footprint.

E-fuels or sustainable synthetic fuels are produced with renewable electricity and they could also be produced with excess electricity from wind and solar farms, avoiding the current temporary reductions or shutdowns of these energy sources when they generate too much power to the grid. These occasional shutdowns are reality in some areas like Germany today. For the synthesis of e-Fuels, CO_2 is required. It can be withdrawn from unavoidable emissions in carbon-based industrial processes or will be obtained directly from the air – an active method for decarbonization!

"The petrothermal technology has been recognized as most lucrative technology for St1 to the develop and to create world class expertise"

With its wide network of gas stations St1 would be able to provide sustainable fuels for current and new customers. St1 has also renewable electricity production, several carbon dioxide sources to utilize in synthetic fuel production and St1 is constantly looking for new promising sustainable energy projects and potential partners to cooperate. Excellent wind conditions in Northern Norway and St1's Arctic energy project create a good possibility to develop sustainable synthetic fuel projects in that region too. St1 is participating a synthetic fuel feasibility project in Joutseno lead by LUT University. The project goal is to have a pilot unit for industrial scale production of methanol in operation within five years. St1 has also active cooperation and projects in synthetic fuel area going on.

CASE

Feasibility study on synthetic fuels pilot plant

LUT UNIVERSITY AND a group of companies including St1, have started a feasibility study for a synthetic fuels pilot production plant. The intended industrial scale pilot facility is based on the Power-to-x concept, and the target is to produce carbon neutral fuels for transportation.

The pilot plant would use CO_2 from Finnsementti cement facility in Lappeenranta and the excess hydrogen from Kemira's production as the main raw materials. CO_2 and hydrogen can be combined together in a synthesis process, giving synthetic methanol as a result. Methanol can be further processed into for example synthetic, emission-free transportation fuels. LUT University has piloted the production of hydrocarbon to replace fossil fuels on a laboratory scale since 2017.

The feasibility study would be located in Joutseno, Eastern Finland and it focuses on the production possibilities and profitability of transportation fuels including gasoline, kerosene, and diesel. "The use of fossil oil and gas as transportation fuels is coming to an end. They need to be replaced with carbon neutral fuels, which can be used in current engines and in this way set the CO_2 emissions caused by transportation to zero. Recycling of CO_2 released to the atmosphere by the industry offers a major opportunity for Finnish companies to advance carbon neutral fuel production", says **Petteri Laaksonen**, Research Director, LUT School of Energy Systems. He continues that the production costs for synthetic fuels are already reasonable in areas where the price of hydrogen or electricity is low.

Jarmo Partanen, professor and dean at LUT School of Energy Systems describes the interest towards the study as exceptional. "Decarbonizing traffic is a huge challenge, and it makes the production of carbon neutral fuels a rapidly growing business. This opens opportunities for a wide range of companies", Partanen concludes.

LUT is in charge of conducting the feasibility study and it is mainly funded by the regional council of South Karelia (ERDF funded project). The total budget is 320 000 euros. Funding partners from the industry sector are Finnsementti, Kemira, Neste, St1, Wärtsilä, Finnair, and Shell (New Technology Research Centre, the Netherlands), along with local manufacturing companies Premekon, Terästorni, Jotex Works, and Refinec. The City of Lappeenranta is also a partner in the project.

CASE

Carbon sequestrating through afforestation in Morocco

WATCH THE VIDEO:
Carbon Farming

IN ORDER TO LIMIT global warming **to well below 2 degrees Celsius**, the actions taken should not be limited to local level – we must act globally and invest in innovative collaboration, and aim to put all means we know of to use. Sufficient emission reductions will not be achieved with only the current policies and mitigation tools. To examine and improve the utilization of carbon sinks, St1 has started a pilot project for researching sustainable carbon sequestering through afforestation in Morocco. The pilot project is implemented together with the Université Mohammed VI Polytechnique in Morocco and its affiliated fertilizer company OCP.

Over a period of three years, the pilot project will examine carbon sequestration by trees under various controlled conditions in Morocco. The research project involves testing seven tree species and various irrigation and soil improvement methods. The aim is to find the optimal growth conditions for large-scale, cost-effective afforestation and carbon sequestering.

In the course of the pilot project, 9000 seedlings are planted in the four-hectare research area. Planting has started in February 2019 at the two-hectare university research sites and finished in December 2019 at old two-hectare mining site. The first results show the need of irrigation, but also preliminary results for species growing very fast in these conditions. The field tests are directed and monitored by LUKE, the Natural Resource Institute of Finland.

St1 wants carbon sinks to be seen as an incremental tool, not a substitutive one. If carbon sinks are to become an official and commercial method of reducing carbon dioxide emissions, an internationally accepted verification method of carbon sequestration is also needed. Discussions with local people on their needs, potential collaborations and studies for scaling up the pilot project have already started with Finnish, Moroccan, and other international partners.

Climate change does not know national borders. Increasing carbon sinks through afforestation of arid and semi-arid unused areas can both remove carbon emissions and help people in areas affected by drought and desertification.

GRI Content Index

St1 GRI Content Index

GRI-code	Disclosure	Location in the Report	Additional information		
	GRI 102: GENERAL DISCLOSURES				
	Organizational profile				
102-1	Name of the organization		St1 Nordic Oy		
102-2	Activities, brands, products, and services	St1 in brief, p. 5, Value chain, p. 19			
102-3	Location of headquarters		Helsinki, Finland		
102-4	Location of operations	St1 in brief, p. 5, Value chain, p. 19			
102-5	Ownership and legal form	Report on operations, p. 61–65			
102-6	Markets served	St1 in brief, p. 5			
102-7	Scale of the organization	Year 2019 in figures, p. 6–7			
	Products and by-products				
	Ethanol production		**2019**	**2018**	**2017**
	- Ethanol, t		8 662	11 010	14 300
	- Lignin, t		11 004	14 800	9 800
	- Vinasse, t		0	1 800	2 400
	- Furfural, t		165	76	260
	- Turpentine, t		0	0	9
	- Electricity, GWh		3	5	5
	- Heat, GWh		13	6	6
	- Feed, t		50 420	76 200	64 300
	- Biogas drank, t		4 295	3 600	10 700
	- Fertilizers, t		5 661	9 400	7 800
	Oil production				
	- Sold refined component, t		24 100	73 700	74 500
	- Petrol, t		813 200	969 000	936 300

	- Diesel, t		1 010 200		1 242 800		1 100 800	
	- Other middle distillates, t		526 400		568 500		686 900	
	- LPG, t		78 800		119 200		117 000	
	- Light fuel oil (JET A1), t		14 200		30 200		20 100	
	- Heavy fuel oil, t		556 700		621 900		632 900	
	- Sulfur, t		3 100		4 500		4 000	
	Heat, GWh		571		671		668	
	Wind power production							
	- Electricity produced, GWh		615		628		574	
	St 1 Sold fuels:							
	- Gasoline, 1000 m^3		1 300		1 430		1 468	
	- Diesel and Light Fuel Oil, 1000 m^3		2 998		3 195		3 938	
	- JET, 1000 m^3		596		587		436	
	- Marine gas oil, 1000 m^3		984		394		351	
102-8	Information on employees and other workers	People, p. 37–39						
	Number of employees, St1 Group		**2019**		**2018**		**2017**	
	- Total number of employees, 31.12		767		774		757	
	- Average number of employees during the year		779		788		761	
	Total number of employees by employment contract							
	- Permanent		737	96%	743	96%	730	96%
	- Temporary		30	4%	31	4%	27	4%
	- Total		767	100%	774	100%	757	100%
	Total number of employees by employment type							
	- Full-time		754	98%	759	98%	749	99%
	- Part-time		13	2%	15	2%	8	1%
	- Total		767	100%	774	100%	757	100%
102-9	Supply chain	Supply and logistics, p. 31–33						
102-10	Significant changes to the organization and its supply chain	Report on operations, p. 61–65						
102-11	Precautionary Principle or approach	Report on operations, p. 61–65	Precautionary principle is included in risk management based on legal requirements					
102-12	External initiatives	Involvement in organizations and joint projects, p. 17						

102-13	Membership of associations	Involvement in organizations and joint projects, p. 17			
	Strategy				
102-14	Statement from senior decision-maker	CEO's review, p. 3–4, Statement of the Board, p. 10–11,			
102-15	Key impacts, risks, and opportunities	CEO's review, p. 3–4, Statement of the Board, p. 10–11,			
	Ethics and integrity				
102-16	Values, principles, standards, and norms of behavior	Corporate sustainability, p. 13–14, Report on operations, p. 61–65			
	Governance				
102-18	Governance structure	Report on operations, p. 61–65			
	Stakeholder engagement				
103-40	List of stakeholder groups	Stakeholder engagement, p. 15–16			
103-41	Collective bargaining agreements		**2019**	**2018**	**2017**
	Employees covered by collective bargaining agreements		98%	85%	85%
103-42	Identifying and selecting stakeholders	Stakeholder engagement, p. 15–16			
103-43	Approach to stakeholder engagement	Stakeholder engagement, p. 15–16			
103-44	Key topics and concerns raised	Stakeholder engagement, p. 15–16			
	Reporting practice				
102-45	Entities included in the consolidated financial statements	About this report, p. 2, Notes to the Financial Statement, p. 75			
102-46	Defining report content and topic Boundaries	About this report, p. 2			

102-47	List of material topics		Based on St1 materiality assessment the following GRI disclosure topics were considered as material. *Economic:* • Economic performance • Indirect economic impacts • Anti-corruption *Environment:* • Materials • Energy • Water • Emissions • Effluents and waste • Environmental compliance *Social:* • Employment • Occupational health and safety • Training and education • Diversity and equal opportunity • Non-discrimination • Customer health and safety • Marketing and labeling • Customer privacy • Socio-economic compliance.
102-48	Restatements of information		Restatements comminucated within the data.
102-49	Changes in reporting		No major changes
102-50	Reporting period		1.1–31.12.2019
102-51	Date of most recent report		30.4.2019
102-52	Reporting cycle		Annual
102-53	Contact point for questions regarding the report		https://www.st1.com/about-st1/contact-us
102-54	Claims of reporting in accordance with the GRI Standards		This report has been prepared in accordance with the GRI Standards: Core option.
102-55	GRI content index	GRI index, p. 47–56	
102-56	External assurance		This report is not externally assured by an independent third-party.
	Material Topics		
	GRI 103: Management Approach		
103-1	Explanation of the material topic and its Boundary	About this report, p. 2, Corporate sustainability, p. 13–14	
103-2	The management approach and its components	Corporate sustainability, p. 13–14	
103-3	Evaluation of the management approach	Corporate sustainability, p. 13–14	

	GRI 200: ECONOMIC STANDARD SERIES				
	GRI 201: Economic Performance				
201-1	Direct economic value generated and distributed	Consolidated income statement, p. 66–67			
	Economic impact		**2019**	**2018**	**2017**
	- Renewable energy investments, M€		42.1	41.8	84.2
	- Environmental investments, M€		6.8	13.4	9.4
	- Investments, M€		135.9	132	103.3
	- Research and development expenditure, M€		15.4	13.5	10.8
	- Personnel cost, M€		78.9	72.9	72
	- Excise and property taxes, M€		1 978.7	2 176.90	2 116.40
	- Income taxes, M€		31.4	15.3	51.7
	GRI 205: Anti-corruption				
205-3	Confirmed incidents of corruption and actions taken		No cases in 2019		
	GRI 300: ENVIRONMENTAL STANDARD SERIES				
	GRI 301: Materials				
301-1	Materials used	Raw materials, p. 20–23, Production, p. 24–30			
	Ethanol production feedstock		**2019**	**2018**	**2017**
	- Biowaste and residues, t		98 000	133 000	154 000
	Raw materials				
	- Crude oil, million t		3.17	3.82	3,74
	Paraffinic fuels				
	- Paraffinic fuels, million l		666	630	740
	Biofuels				
	- 1st generation biofuels, million l		332	215	357
	- 2nd generation biofuels, million l		234	356	326
	GRI 302: Energy				
302-1	Energy consumption	Production, p. 24–30, Supply and logistics, p. 31–33			
	Energy consumption in production		**2019**	**2018**	**2017**
	Ethanol production				
	- Electricity, GWh		16.1	20	20

	from which renewable, GWh		97 %		
	- Heat, GWh		47,3	67	79
	from which renewable, GWh		53 %		
	Oil production				
	- Natural gas, GWh		228	217	258
	- Refinery gas, GWh		1 630	2 174	2 140
	- Electricity, GWh		125.4	150	144
	from which renewable, GWh		25%		
	- Heat, GWh		0	0	0
	Total energy consumption, GWh		**1 983.4**	**2 628**	**2 641**
	Energy consumption in supply and logistics				
	Terminals in Finland (NEOT)				
	- Electricity, GWh		5	4	5
	- Heat, GWh		2	3	2
	Terminals in Norway and Sweden				
	- Electricity, GWh		7	6	7
	from which renewable, GWh		32%		
	- Heat, GWh		2	2	3
	from which renewable, GWh		61%		
	Total energy consumption in supply and logistics, GWh		**16**	**15**	**17**
	GRI 303: Water				
303-1	Water withdrawal				
	Water use in production		**2019**	**2018**	**2017**
	- Water use in ethanol production[1)], 1000 m^3		3 182	3 467	3 410
	- Water use in oil production, 1000 m^3		831	717	605
	Total water consumption, 1000 m^3		**4 013**	**4 184**	**4 015**
	1) Water use figures for 2018 and 2017 in ethanol production restated due to corrected information.				
	GRI 305: Emissions				
305-1	Direct (Scope 1) GHG emissions	Production, p. 24–30			
	GHG-emissions (scope 1) from production		**2019**	**2018**	**2017**
	- GHG-emissions from ethanol production, tCO_2		6 500	8 800	8 400

	- GHG-emissions from oil production, tCO_2		456 600	546 800	522 500
	Total GHG-emissions (scope 1), tCO_2		**463 100**	**555 600**	**530 900**
305-2	Energy indirect (Scope 2) GHG emissions				
	GHG-emissions (scope 2) from production				
	- GHG-emissions from ethanol production, tCO_2		66	Not reported	Not reported
	- GHG-emissions from oil production, tCO_2		31 445	Not reported	Not reported
	Total GHG-emissions (scope 2), tCO_2		**31 463**		
305-3	Other indirect (Scope 3) GHG emissions		**2019**		
	GHG-emissions from ethanol production, tCO_2		282		
305-5	Reduction of GHG emissions	Production, p. 24–30, Sales and customers, p. 34–36			
	Reduction of GHG-emissions from ethanol production		**2019**	**2018**	**2017**
	- Reduction of GHG-emissions according to Renewable Energy Sources Directive, tCO_2 (Weighted average of reduction percentages of all production units based on RED's fossil fuels comparative.)		78%	82%	83%
	Reduction of GHG-emissions from the use of products				
	-CO_2-reduction from use of biofuels, tCO_2		1 160 647	1 199 000	1 367 000
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions				
	VOC-emissions from production		**2019**	**2018**	**2017**
	- VOC-emissions from ethanol production, t		18	10	11
	- VOC-emissions from oil production, t		858	939	937
	- VOC-recovery from oil production, t		24.6	11.9	20.5
	Nox-emissions from production				
	- Nox-emissions from oil production, t		280	230	283
	Particulates from production				
	- Particulate emissions from oil production, t		12	17	12
	GRI 306: Effluents and waste				
306-1	Water discharges				
	Waste water discharges from production		**2019**	**2018**	**2017**
	-Waste water from ethanol production:				
	- Process water, 1000 m^3		139	202	216
	- Cooling water, 1000 m^3		3 043	3 366	3 210

	- Waste water from oil production:				
	- Process water, 1000 m³		670	648	646
	- Cooling water, 1000 m³		6 754	7 706	7 753
	Total waste water, 1000 m³			**11 922**	**11 825**
306-2	Waste by type and disposal method				
	Waste from production		**2019**	**2018**	**2017**
	Non-hazardous waste, utilized, t		12 825	5 113	11 504
	- from ethanol prodcution, t		1 531	3 471	10 189
	- from oil production, t		11 294	1 642	1 315
	Non-hazardous waste, landfilled, t		1 339	1 279	1 778
	- from ethanol prodcution, t		0	6	463
	- from oil production, t		1 339	1 273	1 315
	Total non-hazardous waste, t		**14 164**	**6 392**	**13 281**
	Hazardous waste, utilizied, t		2 150	2 812	462
	- from ethanol production, t		244	101	81
	- from oil production, t		1 906	2 711	381
	Hazardous waste, landfilled, t		13 732	2 264	4 328
	- from ethanol production, t		0	0	0
	- from oil production, t		12 732	2 264	4 328
	Total hazardous waste, t		**15 882**	**5 076**	**4 790**
	Waste from supply and logistics				
	Hazardous-waste, utilized, t				
	- from terminals in Finland (NEOT), t		213	230	151
	- from terminals in Sweden and Norway, t		567	634	1 086
	Total hazardous waste, utilized, t		**780**	**864**	**1 237**
306-3	Significant spills	Report on operations, p. 61–65			
	Number of significant spills		**2019**	**2018**	**2017**
	- from ethanol production		0	0	0
	- from oil production		0	0	3
	- from logistics in Finland (NEOT)		0	0	1
	- from terminals in Sweden and Norway		0	3	0

	Total number of significant spills		**0**		**3**		**4**	
	GRI 307: Environmental compliance							
307-1	Non-compliance with environmental laws and regulations		No cases in 2019					
	GRI 400: SOCIAL STANDARDS SERIES							
	GRI 401: Employment							
401-1	New employee hires and employee turnover	People, p. 37–39						
	Changes in employees		**2019**		**2018**		**2017**	
	- Total number of new employee hires		100		134		78	
	- Total number of leavers		108		99		94	
	- Employee turnover, %		9%		13%		13%	
	GRI 403: Occupational Health and Safety							
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	People, p. 37–39						
	Occupational health and safety results		**2019**		**2018**		**2017**	
	- Number of lost-time injuries		8		6		4	
	- Lost time injuries frequency		6,9		5,3		2.6	
	- Work-related fatalities		0		0		0	
	- Absence rate, %		1.7		3.3		2.1	
	GRI 404: Training and Education							
404-3	Percentage of employees receiving regular performance and career development reviews	People, p. 37–39						
	Performance and career development reviews		**2019**		**2018**		**2017**	
	- Percentage of employees receiving regular performance and career development reviews, %		100%		98%		88%	
	GRI 405: Diversity and Equal Opportunity							
405-1	Diversity of governance bodies and employees	People, p. 37–39						
	Breakdown of employees by gender		**2019**		**2018**		**2017**	
	- Female		204	27%	209	27%	205	27%
	- Male		563	73%	565	73%	552	73%
	- Total		767	100%	774	100%	757	100%

	Breakdown of employees by age group							
	- Below 30		111	14%	100	13%	96	13%
	- Between 30–50		397	52%	395	51%	409	54%
	- Over 50		259	34%	279	36%	252	33%
	- Total		767	100%	774	100%	757	100%
	GRI 406: Non-discrimination							
406-1	Incidents of discrimination and corrective actions taken		No cases in 2019					
	GRI 416: Customer Health and Safety							
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services		No cases in 2019					
	GRI 417: Marketing and Labeling							
417-2	Incidents of non-compliance concerning product and service information and labeling		No cases in 2019					
417-3	Incidents of non-compliance concerning marketing communication		No cases in 2019					
	GRI 418: Customer Privacy							
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data		No significant external breaches for privacy were observed, and less than 10 internal breaches recorded.					
	GRI 419: Socioeconomic Compliance							
419-1	Non-compliance with laws and regulations in the social and economic area		No cases in 2019					

Board of Directors

Mika Anttonen

Chairman of the Board of Directors
St1 Nordic Oy

Mikko Koskimies

Managing Director
eQ Varainhoito Oy

Kim Wiio

Managing Director
Mininvest Oy

Sampsa Halinen

Management

Henrikki Talvitie
CEO

Mika Wiljanen
Director, Sales
CEO St1 Oy, St1 Finance

Hilde Wahl
Director, Brands
CEO St1 Sverige AB

Kati Ylä-Autio
CFO

Timo Huhtisaari
Director, Sustainability and Future Business

Timo Jokinen
Director, Supply & Logistics

Bo-Erik Svensson
CEO
St1 Refinery AB

Kristine Vergli Grant–Carlsen
CEO
St1 Norge AS

Financial statements 2019

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Report for 1 january 2019–31 december 2019

1. Business operations and financial performance of St1 Nordic Oy

St1 Nordic Oy is the parent company to St1 Nordic group which is a versatile Nordic player in the energy sector. The group engages in sale of traffic and heating fuels to consumers and the corporate sector in Finland, Sweden and Norway. The group operates a total of 1 274 retail stations under the St1 and Shell brands in Finland and Sweden and under the Shell brand in Norway. The group manufactures, develops and refines liquid fuels at its oil refinery in Gotherburg, Sweden. The refinery's annual capacity is 30 million barrels of crude oil. The majority of the refinery's production is sold in Sweden through the retail station network and other sales channels. St1 focuses on renewable energy initiatives. The group has production facilities producing bioethanol from waste in Kajaani, Vantaa, Lahti, Hamina and Gothenburg in connection with the refinery. Construction of a geothermal heat plant in under way in Otaniemi, Espoo. In addition, the subsidiary St1 Lähienergia Oy sells and installs devices based on geothermal heat.

Through its associated company Tuuliwatti Oy, the group participates in the production of industrial wind power.

With an objective to maximise the competitiveness of the group's fuel procurement, the purchase of liquid fuels is centralised in the group's associated company North European Oil Trade Oy (Neot). Neot purchases the majority of the Gothenburg refinery's production.

The group's revenue in 2019 was MEUR 6 588.3 which was MEUR 296.9 less than in the previous year. The maintenance break at the Gothenburg refinery in the spring impacted the volume of products sold directly from the refinery. In addition, the sale of trafic fuels declined in Norway as St1 withdrew from sites operating under the 7-Eleven concept. On the other hand, sales of marine fuels increased as the revenue of St1 Norge Marine AS, which was acquired in December 2018, was now consolidated for the first time for full year.

23% of revenue came from Finland, 48% from Sweden and 29% from Norway.

The group's operating profit was MEUR 150.1 which was MEUR 87.0 more than in the previous year. The main factor contributing to the increase in operating profit was oil price which increased during 2019. The price change as well as the impact of margin hedges for the years 2020 - 2021 was approximately MEUR +6 during the financial period and MEUR +66 compared to the previous year's result. Also refinery and wholesale margin was better than in the prior year despite the maintenance break in the spring. On the Retail market price competition continued to be tight which had a declining effect on the operating profit. Commercial sales result increased somewhat due to increased volume.

The subsidiary St1 Oy booked a MEUR -4.4 write-off on the Jokioinen ethanol plant as the plant ceased operations due to shutdown of the entzyme plant which provided the raw material to the ethanol plant.

Key indicators of St1 Nordic Oy´s financial position and results of operations:

	2019	2018	2017	2016	2015
Net sales. MEUR	51.1	50.5	37.5	30.3	7.8
Operating profit. MEUR	13.0	14.8	15.8	6.6	7.7
Operating profit. % of net sales	25.4	29.3	42.2	21.7	97.6
Profit for the period. MEUR	27.1	44.0	159.4	172.8	37.6
Return on equity %	5.3	8.7	40.1	69.0	31.3
Equity ratio %	63.5	67.2	65.0	50.8	29.8

Key indicators of St1 Nordic group´s financial position and results of operations:

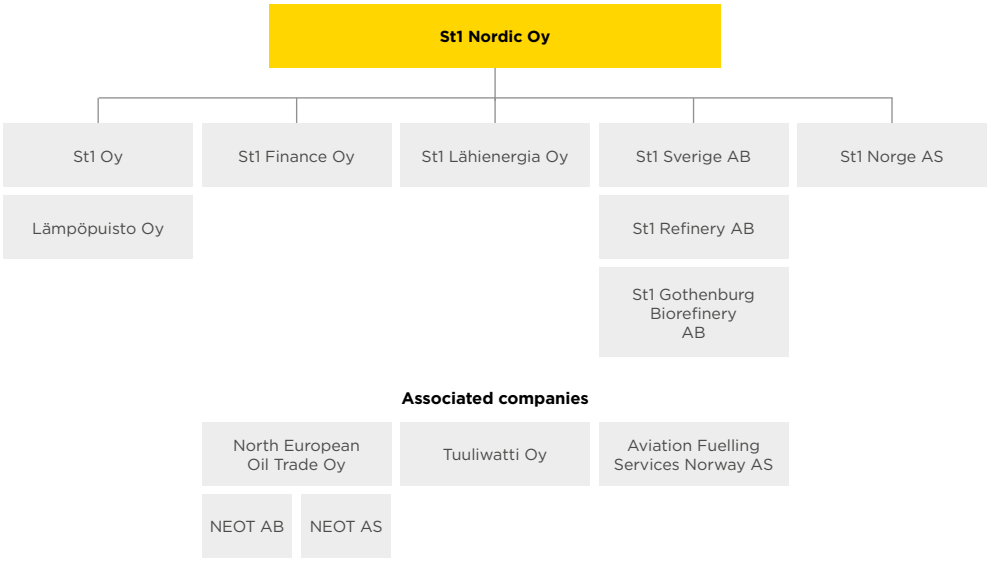
	2019	2018	2017	2016	2015
Net sales. MEUR	6 588.3	6 885.2	5093.5	4390.4	3602.4
Operating profit. MEUR	150.1	63.1	176.6	150.5	86.7
Operating profit % of net sales	2.3	0.9	3.5	3.4	2.4
Profit for the period. MEUR	119.1	55.3	372.8	112.7	72.4
Return on equity %	14.3	7.0	23.4 *)	30.9	28.0
Equity ratio %	46.3	40.7	42.7	31.3	26.7

*) calculated excluding the merger profit on the profit and loss statement

2. Group structure

St1 merged its Norwegian subsidiary St1 Norge Marine AS into its parent company St1 Norge AS in October to simplify the group structure. In Finland, North European Bio Tech Oy merged into its sister company St1 Oy on 1 January 2019. In Sweden St1 Gothenburg Biorefinery AB was established as a subsidiary of St1 Refinery AB. The company will construct an HVO production facility in connection with the refinery in Gothenburg.

Chart of the group's main companies



In addition to the parent company, St1 Nordic group consists now of the operative subsidiaries St1 Oy, Lämpöpuisto Oy St1 Finance Oy, St1 Lähienergia Oy, St1 Sverige AB, St1 Refinery AB, St1 Gothenburg Biorefinery AB and St1 Norge AS.

St1 Nordic Oy's most significant associated companies comprise North European Oil Trade Oy, Tuuliwatti Oy and Aviation Fuelling Services Norway AS. The associated company is engaged in the aircraft refuelling in Norway and purchases its products from St1 Norge AS.

3. Company shares

	31 Dec 2019	31 Dec 2018	31 Dec 2017	31 Dec 2016	31 Dec 2015
Share capital	100 000	100 000	100 000	100 000	100 000
A-shares	38 737 118	38 737 118	38 737 118	20 000 000	20 000 000
B-shares		4 912 285	4 912 285	4 912 285	4 912 285

In 2018 the company acquired the remainder of its B-shares and therefore owned 4 912 285
B-shares. The board decided to cancel the shares on 30 November 2018 and it was registered on 3 January 2019.

4. Investments

The group's largest investment in 2019 were focused on the Gothenburg refinery. In the spring the refinery underwent a maintenance break which is done every four years. In addition, the construction of a hydrogen unit at the refinery was completed.

In the summer 2019 a decision was made of the construction of a renewable diesel facility at the refinery. Detailed engineering was conducted in the autumn and construction will begin in spring 2020. The facility is estimate to start up in spring 2022.

Analysis and drilling activity at the geothermal heat plant under construction in Otaniemi, Espoo continued during 2019. The facility will be commissioned in late 2020.

The daughter company St1 Sverige AB purchased in October a heavy traffic chain consisting of 19 stations in Värmland in Southwest Sweden.

Other investments were directed at developing and maintaining current operations.

The group's investments in intangible and tangible assets and daughter company and associated company shares amounted to MEUR 136.

Technological initialisation expenditure includes development projects aimed at developing methods for producing ethanol to be used as advanced trafic fuel and other biorefining products from softwood sawdust and starch production process residues as well as entzyme production technology for decomposing sawdust pulp. In addition, the development costs for the construction of geothermal pilot heat plant have been capitalized as development expenditure.

The said expenditure fulfills requirements set for capitalization by the Ministry of Trade and Industry. The capitalised development expenses are shown as a separate item and depreciated over their economic lifetime, however as a maximum in 10 years. Depreciation starts when the projects are in production.

Should investment decision not be made, the development expenses would be written off.

5. Research and development expenses

The research and development expenses of St1 Nordic group were MEUR 15.4. in 2019 (MEUR 13.5 in prior year). Research and development expenses comprise the expenses related to development of new production technologies and methods.

6. Assessment of the most significant risks and uncertainties

6.1 Risk management policy and arranging risk management

In the St1 Nordic group, risk management refers to a systematic and proactive approach to analyse and manage the opportunities and threats related to operations, rather than solely eliminating the risks. For this purpose, the group's risk management is based on awareness of the key threats, including strategic, operational and financial risks as well as risk of loss or damage, which have the potential to prevent the group from achieving its objectives.

The Board of Directors is responsible for the company's and group's risk management policy and monitors its implementation. The CEO is responsible for the appropriate organisation of risk management measures. Risk management has been integrated into the daily business operations and decision-making of business units and the group's support functions. Thus, each employee shares a responsibility to identify risks that might threaten the achievement of the group's objectives.

6.2. Strategic and operational risks

The group has defined a number of potential risks that could affect its future profitability and development:

- Prolonged unhealthy competition in the traffic fuel retail market may reduce profitability also in the future
- Refining margins on petroleum products may turn out to be insufficient to cover the costs related to refining.
- The company may incur considerable costs due to environmental legislation and regulations, affecting the group's financial performance.
- Political, financial and legislative changes may affect demand for the company's products.
- The price risks related to petroleum products and refining margins can be managed with derivatives.

In accordance with the nature of the group's business operations, the largest balance sheet items consist of trade receivables and inventories. The credit loss risk related to sales receivables is managed through a uniform credit policy and efficient debt-collection activities. Principles used for the measurement of trade receivables and inventories in the financial statements are consistent and based on the principle of prudence.

The continuity of the group's business operations is based on functional and reliable information systems. The group seeks to manage the risks related to information systems through measures such as duplicating critical information systems and data communications links, paying attention to the selection of partners and standardising the work station models, software and information security practices used in the group.

The group's core competencies are related to business processes comprising oil refining, sales and procurement and to the requisite support functions, such as information management, finance, human resources, real estate services, logistics, marketing and communications. Unexpected and significant weakening of the group's core competencies would present a risk. The company continuously seeks to improve the core competencies and other significant competencies of its personnel by offering opportunities for in-work learning and training, as well as by recruiting competent new employees, as needed.

The most significant portion of the group's revenue consists of retail and wholesale trade of liquid fuels as well as exports. Historically, the demand for these products has not been subject to sudden, drastic changes. Taking the company's line of business and products into account, factors that might affect the company's revenue include decisions by the government or the authorities on how different forms of energy are combined, subsidised or taxed, as well as general economic trends and, with regard to heating oil, regionally prevailing temperatures. All of these factors may influence demand across the whole sector.

6.3. Risks of loss or damage

The company seeks to protect itself from significant risks to its assets by regularly reviewing its insurance policies as part of the overall risk management process. The company

strives to cover with insurance all risks which are financially or otherwise reasonable. The group's insurance portfolio's coverage is subject to regular reviews.

There are no pending trials or any other legal risks that the Board is aware of, which would materially affect the results of the company's operations.

6.4. Financial risks

Management of financial risks: The parent company manages the financing operations for the whole group. In order to secure liquidity, the group has bank overdraft facilities.

Interest rate risk: At the end of the financial year, the share of interest rate-sensitive loans in the group's whole interest-bearing loan portfolio was approximately EUR 13 million, compared to approximately EUR 101 million in the previous year. Derivative agreements can be used to help in the management of interest rate risks. Interest rate derivates were not in use at the end of the year.

Currency risk: The group's operative currency risk is mainly driven from crude oil purchases and inventory denominated in USD. In addition, the group is exposed to currency risk through the foreign currency denominated equity items of Swedish and Norwegian subsidiaries as well as eventual currency receivables from and liabilities with these companies. Currency risks can be managed through forward agreements.

6.5. Environmental risks

In order to eliminate the risk of human casualties or oil spills and the related costs, attention must be paid to safe and environmentally sound operating methods in the company's operations. St1 Nordic Oy has systematically evaluated and monitored its environmental obligations, as well as the obligations arising at group operating sites. Environmental protection obligations have been defined within the scope of legislation and in the quality programmes applied by the company. The financial statements include a provision for environmental liabilities, which is reviewed for each financial period.

6.6 Cyber risks

The group continuosly takes various measures aiming to protect it from cyber risks. This includes continuous preventive work and measures to increase the personnel's awareness of cyber security related topics.

7. An estimate of probable future development

In the view of the group management, the business environment will remain challenging and volatile. In the traffic fuels trade, competition in the group's home market, particularly in Finland, remains over-emphasised. The group aims to further improve its competitiveness by rationalising systems and business processes, by measures to improve the average sales of retail stations as well as through carefully targeted investments. When feasible, refining margin is hedged.

Daughter company St1 Oy is expected to commission the geothermal heat plant in Otaniemi in late 2020, after which more information will be available on the plant's production capacity.

Impacts of the covid-19 virus are not yet fully visible, but will have an impact, at least on the short-term, on the demand of products, oil price levels, refining margins as well as increased risk of credit losses. Impact on current year result will depend on the duration of the extraordinary measures taken due to the covid-19 virus as well as on the prevailing oil price level.

St1's financing position is in principle strong, but for example the absence of normal corporate papers market at the moment increases the cost of financing. St1 can utilize the new payment times granted or planned by the authorities for value added tax and excise duties is each of St1's countries of operation. This will have a positive impact on working capital. St1 will do all it can in its part to ensure the functioning of the society by securing uninterrupted delivery of fuels and other energy products during the state of emergency.

8. Significant events after the end of the financial period

St1 Nordic Oy's headquarters moved to Tripla in Helsinki in February 2020.

9. Personnel

Key figures describing the group's personnel

	2019	2018	2017	2016	2015
Average number of personnel during the financial period	779	774	556	537	419
Wages and salaries during the financial period, MEUR	58.4	53.1	40.4	40.2	37.7

10. Organisation

The company's Board of Directors consisted of Mika Anttonen (chair), Mikko Koskimies, Kim Wiio and Sampsa Halinen. Halinen was elected to the board at the extraordinary general meeting on 16 August 2019. Henrikki Talvitie acted as the company's Chief Executive Officer.

The company's auditor is PricewaterhouseCoopers Oy.

11. Disclosure of non-financial information

The vision of St1 is to be a leading producer and seller of CO2-aware energy. We believe we will attain this vision by running a responsible and profitable business where economic performance, social responsibility and environmental impact are balanced. Attaining goals is important, but so are the means for attaining them. The company management and personnel are expected to comply with the principles of business code of conduct approved by the board, together with the laws and other regulation of the countries where we operate. We respect the United Nations Universal Declaration of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work, which aim at promoting sustainable and fair business. We expect our business partners and their business partners to be committed to ethical and sustainable business principles and actively supporting their use within their own sphere of influence.

In 2019, further development of the RESPECT Corporate Sustainability Program for the entire Group was extended to the Business Units to select the most important development goals. At the Business Units, the implementation of the program was designed to meet the needs of successful and responsible business as well as to understand and manage the impact of our own operations. The design work extends to our affiliated company, North European Oil Trade Oy, in the area of sustainable sourcing. The RESPECT program was launched for all staff at the end of the year.

St1 Nordic publishes its integrated corporate responsibility report at its internet site www.st1.eu on 30 April 2020 the latest. The report complies, as appropriate, with the Global Reporting Initiative Standards and contains the non-financial information material to St1 as required by the Accounting Act. Additionally, our oil refinery in Gothenburg complies both with 14001 and EMAS environmental management system (the Eco-Management and Audit Scheme) and publishes EMAS report after auditing in June 2020 the latest.

12. Proposal for profit distribution

The Board of Directors proposes to the general meeting that the company will not pay a dividend on the previous financial year's profit with the ordinary general meeting's decision due to the financial uncertainty caused by the covid-19 virus. However, the Board of Directors proposes that the general meeting authorizes the board, on its discretion, after the covid-19 situation has stabilized, to decide to pay a dividend from the previous financial year's result which is a maximum of 0.39 euro/share equalling as a maximum a total of 15 107 476.02 euros. The authorization is valid until the start of the next ordinary general meeting.

Consolidated Income Statement

1 000 euros	Notes	1.1.–31.12.2019	1.1.–31.12.2018
NET SALES	1.	6 588 318	6 885 201
Manufacturing for own use		2 640	4 768
Other operating income	2.	143 555	116 100
Materials and services			
Materials, supplies and products			
Purchases during the period		-6 215 465	-6 484 556
Change in inventories		43 058	-75 131
External services		-9 367	-10 680
		-6 181 774	-6 570 368
Personnel expenses			
Wages and salaries		-58 375	-53 082
Social security costs			
Pension costs		-9 291	-8 497
Other social security costs		-11 443	-11 431
		-79 109	-73 010
Depreciation and amortisation			
Depreciation and amortisation according to plan	5.	-65 691	-60 380
Amortisation of goodwill	5.	-12 023	-11 489
Reduction in value of noncurrent assets		-7 592	-1 806
		-85 306	-73 675
Other operating expenses	6.	-238 185	-225 882

1 000 euros	Notes	1.1.–31.12.2019	1.1.–31.12.2018
OPERATING PROFIT		150 140	63 134
Finance income and costs			
Income from other investments of non-current assets			
Share of profit of investments using the equity method	7.	8 054	4 263
Other interest and finance income	7.	10 335	8 006
Impairment of investments in non-current assets	7.	0	-301
Impairment of investments in current assets		-4 474	0
Interest expenses and other finance costs			
To others	7.	-6 724	-10 603
		7 191	1 364
PROFIT BEFORE APPROPRIATIONS AND TAX		157 330	64 498
Current income tax	9.	-31 402	-15 353
Deferred tax	9.	-6 869	6 126
		-38 271	-9 227
PROFIT FOR THE PERIOD BEFORE MINORITY INTEREST		119 059	55 271
PROFIT FOR THE PERIOD		**119 059**	**55 271**

Consolidated Balance Sheet

1 000 euros	Notes	31.12.2019	31.12.2018
ASSETS			
NON-CURRENT ASSETS			
Intangible assets			
Capitalised development expenditure	10.	2 887	2 415
Intangible rights	10.	33 462	29 930
Goodwill	10.	3 380	1 503
Goodwill on consolidation	10.	165 316	175 792
Other capitalised long-term expenditure	10.	2 072	1 971
		207 117	211 612
Tangible assets			
Land and water areas	11.	207 310	196 003
Buildings and structures	11.	138 164	132 077
Machinery and equipment	11.	346 176	286 071
Other tangible assets	11.	30 486	28 968
Advance payments and construction in progress	11.	151 859	166 122
		873 995	809 242
Investments			
Investments in associated companies	13.	99 406	91 072
Other shares and holdings	13.	2 426	965
Other receivables	13.	261	215
Other investments	13.	0	32 307
		102 093	124 559

1 000 euros	Notes	31.12.2019	31.12.2018
CURRENT ASSETS			
Inventories			
Materials and supplies		169 263	126 205
Receivables			
Non-current receivables			
Trade receivables		2 331	2 668
Deferred tax assets	17.	2 355	1 395
Loan receivables		5 289	13 416
Other receivables		4 968	4 652
		14 943	22 131
Current receivables			
Trade receivables		452 772	508 125
Receivables from Group companies	14.		
Other receivables		2	0
Loan receivables		5	7
Deferred tax assets		0	63
Other receivables		15 419	10 452
Prepayments and accrued income	19.	54 679	71 930
		522 877	590 577
Cash and cash equivalents		8 746	47 819
		1 899 035	**1 932 144**

1 000 euros	Notes	31.12.2019	31.12.2018
EQUITY AND LIABILITIES			
EQUITY			
Share capital	15.	100	100
Revaluation reserve	12.,15.	40 093	40 093
		40 193	40 193
Reserve for invested unrestricted equity	15.	54 232	54 232
Retained earnings	15.	665 053	637 036
Profit (loss) for the period	15.	119 059	55 271
		838 344	746 539
Total equity		878 537	786 732
PROVISIONS			
Other provisions	16.	50 436	51 765
		50 436	51 765

1 000 euros	Notes	31.12.2019	31.12.2018
LIABILITIES			
Non-current			
Liabilities to Group companies		3 915	3 915
Liabilities to associated companies		0	50
Deferred tax liabilities	17.	36 701	35 816
Other liabilities		1 087	614
Accruals and deferred income		8 360	8 806
		50 062	49 200
Current			
Loans from financial institutions		13 312	101 122
Bonds		0	100 000
Commercial paper		135 000	100 000
Advance payments		773	12
Trade payables		264 843	212 246
Liabilities to Group companies:			
Trade payables	18.	251	0
Deferred tax liabilities	17.	47 489	40 512
Liabilities to associated companies:			
Trade payables		158 440	194 424
Other liabilities		221 992	219 051
Accruals and deferred income	20.	77 898	77 080
		919 999	1 044 447
		1 899 035	**1 932 144**

Consolidated Cash Flow Statement

1 000 euros	1.1.–31.12.2019	1.1.–31.12.2018
Cash flow from operating activities:		
Profit (loss) before appropriations and income tax	157 330	64 498
./. Merger profit	0	0
Profit (loss) before appropriations and income tax	157 330	64 498
Adjustments:		
Depreciation and amortisation according to plan	77 715	71 868
Other income and expenses with non-cash transactions	-11 441	-27 211
Other finance income and costs	863	-2 146
Impairment of investments in non-current assets	0	1 187
Cash flow before change in working capital	224 467	108 196
Change in working capital:		
Increase (-)/ decrease (+) in current non-interest bearing receivables	65 828	-2 843
Increase (-)/ decrease (+) in inventories	-43 058	71 358
Increase (+)/ decrease (-) in current non-interest bearing payables	-11 918	8 970
Cash flow from (used in) operating activities before financial items and taxes	235 319	185 681
Interest paid and charges on other finance costs	-6 380	-6 528
Interest received	3 959	1 757
Taxes paid	-7 342	-38 625
Net cash generated from operating activities (A)	225 556	142 284

1 000 euros	1.1.–31.12.2019	1.1.–31.12.2018
Cash flow from investing activities:		
Purchase of tangible and intangible assets	-136 079	-131 892
Acquisitions deducted by acquired cash and cash aquivalents	-4 998	-25 814
Proceeds from sale of tangible and intangible assets	798	73
Proceeds from sale of subsidiaries	7 097	0
Investments in associated companies	0	-1 602
Loans granted	0	-6 850
Purchase of other investments	0	-1 718
Proceeds from other investments	29 717	0
Dividends received	3 655	3 036
Net cash used in investing activities (B)	-99 811	-164 767
Cash flow from financing activities:		
Purchase of own shares	0	-40 640
Proceeds from current loans	35 000	45 000
Repayment of current loans	-187 809	-111
Dividends paid and other profit distribution	-12 009	-8 442
Net cash used in financing activities (C)	-164 818	-9 022
Net increase (+) / decrease (-) in cash and cash equivalents (A+B+C)	-39 073	-31 505
Cash and cash equivalents at beginning of period	47 819	79 324
Cash and cash equivalents at end of period	8 746	47 819

Parent Company Income Statement

€	Notes	1.1.–31.12.2019	1.1.–31.12.2018
NET SALES	1.	51 114 646.67	50 457 276.42
Other operating income	2.	17 418 909.86	17 440 798.46
Raw materials and services			
Raw materials and consumables			
Purchases during the financial year		-25 391 362.90	-28 336 499.50
Personnel expenses			
Wages and salaries		-4 802 435.05	-3 719 567.24
Social security costs			
Pension costs		-796 518.12	-735 711.06
Other social security costs		-220 607.98	-79 697.14
		-5 819 561.15	-4 534 975.44
Depreciation according to plan	5.	-6 031 175.23	-4 646 020.93
Other operating expenses	6.	-18 338 092.38	-15 615 244.79
OPERATING PROFIT		12 953 364.87	14 765 334.22
Finance income and costs			
Income from shares in group companies	7.	12 941 480.57	23 864 070.26
Income from shares in associated companies	7.	3 654 663.28	3 035 785.88
Other interest and finance income			
From group companies	7.	7 458 104.82	9 291 728.76
From others	7.	1 216 023.03	4 051 604.43
Impairment of investments in current assets	7.	-4 474 336.74	0.00
Interest expenses and other finance costs			
To group companies	7.	-888 209.37	-2 659 022.87
To others	7.	-3 054 556.12	-4 655 040.62
		16 853 169.47	32 929 125.84
PROFIT BEFORE APPROPRIATIONS AND INCOME TAX		29 806 534.34	47 694 460.06
Appropriations			
Change in cumulative accelerated depreciation	8.	45 601.71	21 072.44
Received (+), given (-) group contributions	8.	0.00	0.00
		45 601.71	21 072.44
Income taxes	9.	-2 722 224.90	-3 732 731.02
PROFIT FOR THE PERIOD		**27 129 911.15**	**43 982 801.48**

Parent Company Balance Sheet

€	Notes	1.1.–31.12.2019	1.1.–31.12.2017
ASSETS			
NON-CURRENT ASSETS			
Intangible assets			
Intangible rights		33 462 449.84	29 811 595.32
Other capitalised long-term expenses		7 529.09	271 505.35
		33 469 978.93	30 083 100.67
Property, plant and equipment			
Machinery and equipment	11.	591 081.43	743 752.87
Advance payments and construction in progress	11.	106 982.07	0.00
		698 063.50	743 752.87
Investments			
Shares in group companies	13.	454 748 578.00	453 248 578.00
Receivables from group companies	14.	1 290 000.00	33 940 000.00
Investments in associated companies	13.	67 729 124.31	67 729 124.31
Other shares and holdings	13.	20 765.69	32 293 507.01
		523 788 468.00	587 211 209.32

€	Notes	1.1.–31.12.2019	1.1.–31.12.2018
CURRENT ASSETS			
Receivables			
Non-current receivables			
Loan receivables	14.	142 788 786.38	119 310 416.18
		142 788 786.38	119 310 416.18
Current receivables			
Receivables from group companies	14.	57 209 189.69	355 861.53
Receivables from associated companies		19 749.16	0.00
Loan receivables		45 621 362.96	10.20
Other receivables		42 809.37	412 150.29
Prepaid expenses and accrued income	19.	5 054 748.20	6 004 711.16
		107 947 859.38	6 772 733.18
Cash and cash equivalents		2 508 197.60	128 633.27
		811 201 353.79	**744 249 845.49**

€	Notes	31.12.2019	31.12.2018
EQUITY AND LIABILITIES			
EQUITY			
Share capital	15.	100 000.00	100 000.00
Reserve for invested unrestricted equity	15.	54 231 561.66	54 231 561.66
Retained earnings	15.	433 983 369.64	402 009 074.74
Profit for the period		27 129 911.15	43 982 801.48
		515 344 842.45	500 223 437.88
TOTAL EQUITY		515 444 842.45	500 323 437.88
APPROPRIATIONS			
Cumulative accelerated depreciation		0.00	45 601.71

€	Notes	31.12.2019	31.12.2018
LIABILITIES			
Non-current			
Liabilities to group companies	18.	16 100 388.56	36 195 613.94
		16 100 388.56	36 195 613.94
Current			
Loans from financial institutions		13 312 367.64	0.00
Commercial paper		135 000 000.00	100 000 000.00
Bonds		0.00	100 000 000.00
Trade payables		1 448 937.91	2 809 465.14
Liabilities to group companies	18.	126 573 415.96	629 150.39
Other liabilities		98 770.70	437 789.94
Accruals and deferred income	20.	3 222 630.57	3 808 786.49
		279 656 122.78	207 685 191.96
TOTAL LIABILITIES		295 756 511.34	243 880 805.90
		811 201 353.79	**744 249 845.49**

Parent Company Cash Flow Statement

€	1.1.–31.12.2019	1.1.–31.12.2018
Cash flow from operating activities:		
Profit (loss) before appropriations and income tax	29 806 534.34	47 694 460.06
Adjustments:		
Depreciation and amortisation according to plan	6 031 175.23	4 646 020.93
Unrealised exchange rate profits and losses	0.00	-708 738.61
Finance income and costs	-22 016 364.66	-23 499 239.51
Other adjustments	0.00	-9 572 521.74
Cash flow before change in working capital	13 821 344.91	18 559 981.13
Change in working capital:		
Increase (-)/ decrease (+) in current non-interest bearing receivables	3 911 976.52	4 319 367.89
Increase (+)/ decrease (-) in current non-interest bearing payables	3 609 526.92	-5 595 854.00
Cash flow from operating activities before financial items and taxes	21 342 848.35	17 283 495.03
Interest paid and other financial expenses	-6 135 367.89	-4 634 976.58
Interest received from operating activities	2 376 874.27	4 028 996.73
Taxes paid (received)	-2 380 541.90	-4 601 532.79
Net cash generated from operating activities (A)	15 203 812.83	12 075 982.39

€	1.1.–31.12.2019	1.1.–31.12.2018
Cash flow from investing activities:		
Purchase of property, plant and equipment and intangible assets	-9 372 364.12	-15 208 904.58
Investments in associated and subsidiary companies	-1 500 000.00	-7 205 586.71
Proceeds from other investments	29 716 905.69	0.00
Dividends received	16 596 143.85	26 899 856.14
Repayment of loan receivables	0.00	5 918 618.14
Net cash used in investing activities (B)	35 440 685.42	10 403 982.99
Cash flow from financing activities:		
Purchase of own shares	0.00	-40 640 151.38
Proceeds from current loans	82 964 317.57	45 000 000.00
Repayment of current loans	-100 000 000.00	0.00
Repayment of long-term loans	-19 220 744.91	-19 382 269.23
Dividends paid and other profit distribution	-12 008 506.58	-8 442 156.45
Net cash used in financing activities (C)	-48 264 933.92	-23 464 577.06
Net increase (+) / decrease (-) in cash and cash equivalents (A+B+C)	2 379 564.33	-984 611.69
Cash and cash equivalents at beginning of period	128 633.27	1 113 244.96
Cash and cash equivalents at end of period	2 508 197.60	128 633.27

Notes to the financial statement 31 December 2019

Financial period

Financial period
The company's financial period is from 1 January to 31 December.

Consolidated financial statements
St1 further simplified its group structure during 2019 by merging companies in Finland and Norway. In Finland North European Bio Tech Oy merged into St1 Oy on 1 January, 2019 and 1 March acquired St1 HRK Oy merged into St1 Oy after it's subsidiary Kiinteistö Oy Mantsälän Kotiranta was merged into it. In addition, Kiinteistö Oy Olarinluoman huoltamo merged into St1 Oy on 31 December 2019.

In Norway St1 Norge Marine AS merged into St1 Norge AS. Shell Bilbyen was sold and Shell Klett AS, Shell Narvik AS and Lasses AS were acquired. Lasses AS merged to into parent company Nemob AS. New company, St1 Bioferinery Gothenburg AB was established in Sweden. The subsidiaries St1 Oy, Lämpöpuisto Oy, St1 Lähienergia Oy, St1 Finance Oy, St1 Renewable Energy (Thailand) Ltd, St1 Sverige AB, St1 Refinery AB, St1 Biorefinery Gothenburg AB, St1 Norge Group AS, St1 Norge AS, Nemob AS, Shell Klett AS ja Shell Narvik AS are consolidated in St1 Nordic group financial statements.

Associated companies North European Oil Trade Oy, Tuuliwatti Oy, Aviation Fuelling Services Norway AS, Lamia Oy, Brang Oy, Knapphus Energi Norge AS and Grenselandet AS are consolidated in the financial statements of St1 Nordic Oy using the equity method.

St1 Nordic Oy's parent company is Keele Oy, which prepares the consolidated financial statements in which St1 Nordic Oy group is included in. Copies of the consolidated financial statements are available at: Keele Oy, Firdonkatu 2, 00520 Helsinki, Finland.

The group's inter-company transactions, margins, receivables and payables have been eliminated. Internal ownership has been eliminated using the acquisition method. Minority interest has been separated from consolidated equity and profit and it is shown as a separate line item in the consolidated income statement and balance sheet.

The income statements of foreign group companies have been converted into euros at the average foreign rate of exchange rates during the financial period. The balance sheet has been converted into the Finnish currency using the closing date exchange rate. Translation differences resulting from the currency conversions, as well as translation differences in foreign subsidiaries' equity arising from conversion, have been presented in 'retained earnings'.

Valuation of inventories
Liquid fuel inventories are valued at the last day's purchase price in the group companies. If inventory would be be valued using the FIFO method, the difference would not be material. Other inventories are valued according to the FIFO principle using cost of purchase, or cost of repurchase, or likely sale price, if lower.

Measurement of non-current assets
Intangible and tangible assets have been capitalised at cost. Depreciation and amortisation according to plan have been recognised on a straight-line basis during the economic life of the assets. Depreciation and amortisation starts in the month when the assets have been
taken into use. A revaluation of land has been recognised in the consolidated financial statements based on the land's market value.

Depreciation and amortisation periods in the group

capitalised development expenditure	10 years
sortware programs	7 years
other long-term capitalised expenditure	5–7 years
trademarks	20 years
goodwill	5–20 years
buildings and structures	20–50 years
machinery and equipment	3–20 years
other tangible assets	10–30 years

Goodwill on consolidation
Goodwill on consolidation is amortised on straight-line basis over 10 - 20 years. In addition, additional amortisation is booked if there is a decrease in the future income expectations of the assets to which goodwill is allocated. Goodwill on consolidation has been compounded of strategically important acquisitions, the effect of which expands over 10 - 20 years.

Deferred tax assets and liabilities in the group
A deferred tax asset has been recognised for provisions and a deferred tax liability for appropriations for the part not yet deducted in taxation, by applying the following years' tax rate as confirmed on the closing date.

Foreign currency items in the group
Receivables and payables denominated in foreign currencies have been converted into the Finnish currency using the closing date exchange rate.

Notes to the income statement

1. Net sales

	Consolidated		Parent company	
Meur	**2019**	**2018**	**2019**	**2018**
Liquid fuels	6 544.0	6 839.5	0.0	0.0
Energy products and electricity	37.1	37.0	24.9	27.6
Other	7.2	8.7	26.2	22.9
	6 588.3	6 885.2	51.1	50.5
Domestic	1 521.9	1 574.9	35.3	36.7
Foreign	5 066.4	5 310.3	15.8	13.8
	6 588.3	6 885.2	51.1	50.5

2. Other operating income

	Consolidated		Parent company	
Meur	**2019**	**2018**	**2019**	**2018**
Gains on sale of non-current assets and shares	7.5	0.1	0.0	0.0
Other operating income	136.0	116.0	17.4	17.4
	143.6	116.1	17.4	17.4

3. Average number of personnel

	Consolidated		Parent company	
	2019	**2018**	**2019**	**2018**
Personnel on average	779	774	55	47
	779	774	55	47

4. Management salaries and fees

Wages and salaries paid to the members of the board and the managing directors during the financial period amounted to EUR 2 060 559 (1 658 848 in 2018).

5. Depreciation, amortisation and impairment charges

	Consolidated		Parent company	
In thousand euros	**2019**	**2018**	**2019**	**2018**
Depreciation and amortisation according to plan				
Intangible assets				
Capitalised development expenses	385	288	0	0
Intangible rights	5 636	4 626	5 615	4 169
Goodwill	1 188	625	0	0
Other long-term capitalised expenditure	754	607	264	331
Tangible assets				
Buildings and structures	13 136	12 384	0	0
Machinery and equipment	42 036	38 811	153	146
Other tangible assets	2 557	3 039	0	0
	65 691	60 380	6 031	4 646
Amortisation of goodwill on consolidation	12 023	11 489	0	0
Impairment of investments to non-current assets	7 592	1 806	0	0
Depreciation and amortisation according to plan, total	85 306	73 675	6 031	4 646

6. Other operating expenses

	Consolidated		Parent company	
In thousand euros	**2019**	**2018**	**2019**	**2018**
Rents	37 675	49 320	1 735	744
Advertising and sales promotion	27 079	25 107	124	44
Operating and maintenance expenses	77 007	75 920	109	147
Other operating expenses	96 423	75 536	16 370	14 680
	238 184	225 882	18 338	15 615

	Consolidated		Parent company	
In thousand euros	**2019**	**2018**	**2019**	**2018**
Audit expenses				
Audit	786	810	108	100
Tax consultation	33	0	22	0
Other services	77	0	0	0
	896	810	130	100

7. Finance income and expenses

	Consolidated		Parent company	
In thousand euros	**2019**	**2018**	**2019**	**2018**
Income from investments in other non-current assets				
From group companies	0	0	12 941	23 864
From associated companies	8 054	4 263	3 655	3 036
	8 054	4 263	16 596	26 900
Other interest and finance income				
From group companies	0	0	7 458	9 292
From others	10 335	8 006	1 216	4 052
	10 335	8 006	8 674	13 343
Impairment of investments				
Impairment of investments to non-current assets	0	301	0	0
Impairment of investments to current assets	4 474	0	4 474	0
Interest costs and other finance costs				
To group companies	0	0	888	2 659
To others	6 724	10 603	3 055	4 655
	6 724	10 603	3 943	7 314
Finance income and expenses, total	7 191	1 364	16 853	32 929

8. Appropriations

	Consolidated		Parent company	
In thousand euros	**2019**	**2018**	**2019**	**2018**
Change in accelerated depreciation	0	0	-45	21
	0	0	-45	21

9. Income taxes

	Consolidated		Parent company	
In thousand euros	**2019**	**2018**	**2019**	**2018**
Current tax on profits for the financial period	31 402	15 353	2 722	3 733
Change in deferred taxes	6 869	-6 126	0	0
	38 271	9 227	2 722	3 733

Notes to the balance sheet

Tangible and intangible assets in the group

Capitalised development expenditure and intangible rights

Technological initialisation expenditure includes development projects aimed at developing methods for producing ethanol to be used as advanced traffic fuel as well as other biorefinery products from softwood sawdust and starch production process residues as well as entzyme production technology for decomposing sawdust pulp.

In addition, the development costs for the construction of geothermal pilot heat plant have been capitalized as development expenditure.

The said expenditure fulfills requirements set for capitalization by the Ministry of Trade and Industry. The capitalised development expenses are shown as a separate item and depreciated over their economic lifetime, however as a maximum in 10 years. Depreciation starts when the projects are in production.

Should investment decision not be made, the development expenses would be written off.

10. Intangible assets

In thousand euros	Intangible rights	Other long-term expenses	Advance payments and construction in progress	Total
Parent company				
Acquisition cost January 1, 2019	37 457	897	0	38 355
Additions	9 265	0	0	9 265
Acquisition cost December 31, 2019	46 723	897	0	47 620
Accumulated amortisation January 1, 2019	-7 646	-626	0	-8 272
Amortisation during the financial period	-5 615	-264	0	-5 879
Accumulated amortisation December 31, 2019	-13 260	-890	0	-14 150
Net book value December 31, 2019	33 462	8	0	33 470

In thousand euros	Development expenses	Intangible rights	Goodwill
Group			
Acquisition cost January 1, 2019	3 981	45 267	12 061
Additions	870	9 147	3 167
Disposals	-13	0	-10
Translation difference	0	0	-92
Acquisition cost December 31, 2019	4 838	54 414	15 126
Accumulated amortisation January 1, 2019	-1 566	-15 337	-10 558
Amortisation during the financial period	-385	-5 615	-1 188
Accumulated amortisation December 31, 2019	-1 951	-20 951	-11 746
Net book value December 31, 2019	2 887	33 462	3 380

In thousand euros	Goodwill on consolidation	Other long-term expenses	Total
Acquisition cost January 1, 2019	216 523	15 133	292 965
Additions	1 547	874	15 604
Disposals	0	-2	-25
Translation difference	0	3	-88
Acquisition cost December 31, 2019	218 070	16 008	308 455
Accumulated depreciation January 1, 2019	-40 731	-13 161	-81 353
Depreciation during the financial period	-12 023	-775	-19 986
Accumulated depreciation December 31, 2019	-52 755	-13 936	-101 338
Net book value December 31, 2019	165 316	2 072	207 117

11. Tangible assets

In thousand euros	Machinery and equipment	Advance payments and construction in progress	Total
Parent company			
Acquisition cost January 1, 2019	1 056	0	1 056
Additions	0	107	107
Acquisition cost December 31, 2019	1 056	107	1 163
Accumulated depreciation January 1, 2019	-312	0	-312
Depreciation during the financial period	-153	0	-153
Accumulated depreciation December 31, 2019	-465	0	-465
Net book value December 31, 2019	591	107	698

In thousand euros	Land	Buildings	Machinery and equipment	Other tangible assets
Group				
Acquisition cost January 1, 2019	126 357	240 733	543 189	54 038
Additions	13 523	21 324	107 745	4 847
Disposals	-2 116	-1 703	-4 893	-136
Translation difference	-100	-398	-1 342	-6
Acquisition cost December 31, 2019	137 664	259 956	644 700	58 742
Accumulated depreciation January 1, 2019	0	-130 715	-280 911	-27 714
Depreciation during the financial period	0	-13 136	-41 407	-3 186
Accumulated depreciation December 31, 2019	0	-143 851	-322 317	-30 900
Revaluations January 1, 2019	69 646	22 059	23 793	2 644
Additions	0	0	0	0
Disposals	0	0	0	0
Revaluations December 31, 2019	69 646	22 059	23 793	2 644
Net book value December 31, 2019	207 310	138 164	346 176	30 486

In thousand euros	Advance payments and construction in progress	Total
Acquisition cost January 1, 2019	166 122	1 130 439
Additions	108 247	255 686
Disposals	-121 588	-130 435
Translation difference	-923	-2 769
Acquisition cost December 31, 2019	151 859	1 252 922
Accumulated depreciation January 1, 2019	0	-439 340
Depreciation during the financial period	0	-57 729
Accumulated depreciation December 31, 2019	0	-497 069
Revaluation January 1, 2019	0	118 142
Additions	0	0
Disposals	0	0
Revaluation December 31, 2019	0	118 142
Net book value December 31, 2019	151 859	873 995

12. Revaluations

The revaluation is based on discounted cash flow calculation made by the company, income value and in some cases on building rights which are supported by an independent third-party expert's valuation on the likely sale price of the land.

13. Investments

Group companies	Group ownership	Parent ownership
St1 Oy	100.00%	100.00%
St1 Lähienergia Oy	79.11%	79.11 %
St1 Sverige AB	100.00%	100.00%
St1 Refinery AB	100.00%	0.00%
St1 Gothenburg Biorefinery AB	100.00%	0.00%
St1 Norge AS	100.00%	0.00%
St1 Norge Group AS	100.00%	100.00%
Lämpöpuisto Oy	100.00%	0.00%
St1 Finance Oy	100.00%	100.00%
Kiinteistö Oy Uusmarjala	77.27%	77.27%
Shell Klett AS	100.00%	0.00%
Shell Narvik AS	100.00%	0.00%
Nemob AS	100.00%	0.00%
St1 Renewable Energy (Thailand) Ltd	100.00%	0.00%

Associated companies	Group ownership	Parent ownership
Tuuliwatti Oy, Helsinki	50%	50%
Equity EUR 93 584 734.77 and profit for the period EUR 8 122 202.06		
North European Oil Trade Oy. Helsinki	49%	49%
Equity EUR 21 034 679.02 and profit for the period EUR 5 981 248.54		
Brang Oy. Turku	25%	0%
Equity EUR 233 342.68 and profit for the period EUR 56 898.18		
Lamia Oy. Helsinki	20%	20%
Equity EUR 2 043 036.26 and profit for the period EUR 1 766 087.86		
Aviation Fuelling Services Norway AS	50%	50%
Equity EUR 16 215 337.37 and profit for the period EUR 7 973 689.91 remainin goodwill on consolidation EUR 7 852 666.49		

Knapphus Energi Norge AS, Vindafjord	49%	0%
Equity EUR 53 575.02 and profit for the period EUR 3 512.84 (year 2017)		
Grenselandet AS. Harstad	22%	0%
Equity EUR -1 573 396.16 and profit for the period EUR -422 219.57		

Investments, parent company

Shares

In thousand euros	Group companies	Associated companies	Others	Total
Acquisition cost January 1, 2019	453 249	67 729	32 294	553 271
Additions	1 500	0	0	1 500
Disposals	0	0	-32 273	-32 273
Acquisition cost December 31, 2019	454 749	67 729	21	522 498
Net book value December 31, 2019	454 749	67 729	21	522 498

Investments in the group

	Shares		Receivables	
In thousand euros	Associated companies	Others	Others	Total
Acquisition cost January 1, 2019	91 072	33 272	215	124 559
Additions	8 334	1 461	46	9 841
Disposals	0	-32 307	0	-32 307
Acquisition cost December 31, 2019	99 406	2 426	261	102 093
Net book value December 31, 2019	99 406	2 426	261	102 093

14. Receivables from group companies

	Consolidated		Parent company	
In thousand euros	2019	2018	2019	2018
Current				
Trade receivables	0	0	356	356
Other receivables	0	0	0	0
Equity loans	0	0	1 290	33 940
Loan receivables	0	0	102 474	0
	0	0	104 121	34 296
Long-term				
Loan receivables	0	0	142 789	119 310

15. Equity

	Consolidated		Parent company	
In thousand euros	**2019**	**2018**	**2019**	**2018**
Share capital January 1	100	100	100	100
Share capital December 31	100	100	100	100
Revaluation reserve January 1	40 093	40 093	0	0
Revaluation reserve December 31	40 093	40 093	0	0
Reserve for invested unrestricted equity January 1	54 232	95 253	54 232	94 872
Change	0	-41 022	0	-40 640
Reserve for invested unrestricted equity December 31	54 232	54 232	54 232	54 232
Retained earnings January 1	692 307	664 699	445 992	410 451
Dividend distribution	-12 009	-8 442	-12 009	-8 442
Adjustment to prior period taxes	-11 480	0	0	0
Translation differences of foreign subsidiaries	-3 765	-19 221	0	0
Retained earnings December 31	665 053	637 036	433 983	402 009
Profit for the period	119 059	55 271	27 130	43 983
	838 344	746 539	515 345	500 223
Capitalized development expenditure	-2 887	-2 415	0	0
Distributable earnings December 31	835 457	744 124	515 345	500 223
Equity total	878 537	786 732	515 445	500 323

The company's share capital by type of shares

	31.12.2019	31.12.2018
Shares, amount		
A-shares (1 vote / share)	38 737 118 (100%)	38 737 118 (88.7%)
B-shares (no voting rights)		4 912 285 (11.3%)

The B-shares have been cancelled on 3 January 2019.

The Board of Directors proposes to the general meeting that the company will not pay a dividend on the previous financial year's profit with the ordinary general meeting's decision due to the financial uncertainty caused by the covid-19 virus. However, the Board of Directors proposes that the general meeting authorizes the board, on its discretion, after the covid-19 situation has stabilized, to decide to pay a dividend from the previous financial year's result which is a maximum of 0.39 euro/share equalling as a maximum a total of 15 107 476.02
euros. The authorization is valid until the start of the next ordinary general meeting.

16. Provisions

	Consolidated	
In thousand euros	**2019**	**2018**
Certain retirement pensions for which company is liable	35 703	35 975
Other provisions	988	1 607
Expected environmental obligations	13 745	14 183
Total provisions	50 436	51 765

Environmental obligations: The total liability cannot be reliably determined. A provision has been recognised for knownliabilities, for which the company is likely to be responsible for in the near future. These liabilities relate mainly to the environmental obligations concerning soil decontamination. Change in the provision has been recognised in other operating expenses against actual costs.

Pension provision is mainly composed of pension provisions in St1 Sverige AB and St1 Refinery AB as well as pension provision in St1 Oy.

17. Deferred tax assets and liabilities

	Consolidated	
In thousand euros	**2019**	**2018**
Deferred tax assets		
From provisions	2 355	1 458
	2 355	1 458
Deferred tax liabilities		
From appropriations	47 489	24 376
From revaluations and goodwill allocations	36 701	35 816
From consolidation	0	16 136
	84 190	76 327

18. Liabilities to group companies

	Consolidated		Parent company	
In thousand euros	**2019**	**2018**	**2019**	**2018**
Non-current loans	3 915	3 915	16 100	36 196
Current loans:				
Trade payables	251	0	727	629
Other liabilities	0	0	125 843	0
Accruals and deferred income	0	0	4	32
	4 166	3 915	142 674	36 857

19. Adjusting entries for assets/Receivables carried forward

	Consolidated		Parent company	
In thousand euros	**2019**	**2018**	**2019**	**2018**
Financing cost allocations	79	34	79	737
Tax receivables	2 273	22 994	269	613
Other adjusting entries	52 328	48 903	4 707	4 654
	54 679	71 930	5 055	6 005

20. Accrued expenses

	Consolidated		Parent company	
In thousand euros	**2019**	**2018**	**2019**	**2018**
Personnel cost accruals	31 832	11 702	615	435
Interest accruals	3	2 373	0	2 373
Tax accruals	19 194	546	0	0
Other accrued expenses	26 868	62 460	2 608	1 001
	77 898	77 080	3 222	3 809

21. Financial instruments

Bond
St1 Nordic Oy's MEUR 100 bond which was issued on June 4th, 2014 expired on June 4th, 2019 at which time it was repaid.

Commercial paper program
St1 Nordic launched a Commercial paper program in November 2016. Maximum size of the program is 200 MEUR and it is used for short-term working capital purposes. Outstanding amount at the end of the year was 135 MEUR (100 MEUR in 2018 financial period).

Revolving Facility Agreement
St1 renewed its 150 million euro revolving facility agreement in 2018 for a new 3-year term. The facility also includes two option years of which the first one has already been decided upon. In addition, the 50 MEUR accordion was taken into use in 2019.

Oil financing facility
St1 Sverige AB has a 100 million dollar oil financing facility. The facility was not drawn at year-end.

22. Commitments and contingencies

The group has not given business mortgages, real estate mortgages or shares as collateral.

	Consolidated		Parent company	
In thousand euros	**2019**	**2018**	**2019**	**2018**
Guarantees				
Bank guarantees	7 790	41 932	0	0
Guarantees on behalf of group companies				
Other guarantees	291 782	178 778	291 782	178 778

Oil has been pledged as against the oil financing facility (EUR 68 956 697) and oil (EUR 74 021 771) and oil products receivables (EUR 143 215 279) have been pledged against account payables of oil. The oil financing facility was not in use at year end.

In addition, a guarantee was given for the associated company North European Oil Trade Oy's accounts payable amounting to EUR 42 972 463, derivatives liabilities EUR 270 100 and L/C liabilities EUR 49 355 088 on 31 December 2019.

St1 Nordic Oy has also pledged for Tuuliwatti Oy's loans receivables from any balance responsible party acting on the electricity market (FI: tasevastaava). According to an investor undertaking issued by the St1 Nordic Oy and S-Voima Oy, Tuuliwatti and/or the agent of the finance parties may require the shareholders to make an equity investment into Tuuliwatti to enable it to ensure that any leasehold registered to Tuuliwatti remains in force if any mortgages registered to the relevant real estate are enforced.

	Consolidated		Parent company	
In thousand euros	**2019**	**2018**	**2019**	**2018**
Rent liabilities				
No later than one year	24 548	23 251	1 276	545
Later than one year	140 169	135 821	11 295	1 075

	Consolidated		Parent company	
In thousand euros	**2019**	**2018**	**2019**	**2018**
Future leasing payments:				
No later than one year	2 466	1 620	358	256
Later than one year	3 258	1 586	336	312
Total	5 724	3 206	694	568
Residual value liability	94	180	6	27

In addition, guarantees have been given for lease agreements of the subsidiaries.

Derivatives

Price hedging of compulsory storage obligation

The group can use long-term commodity derivatives to hedge against price risk associated with inventory kept for the compulsory storage obligation in Sweden. Price of compulsory storage obligation inventory is in such case fixed with a commodity hedge. The hedge has been assessed efficient. The hedged part of compulsory storage obligation inventory and the commodity derivatives hedging it would be handled with the net practice according
to KILA 1912/2014 opinion. There were no open price hedges at the closing date.

In addition, and in accordance with its risk management policies, the group may hedge the variations in inventory levels of operating activities with short-term commodity derivatives in different oil products. The changes in the value of the short-term commodity derivatives are reconciled daily against the counterparty, and they are recognised as income or expense in the income statement.

Refinery margin hedges

Part of the future refining margins consisting of the price difference between refined end products and crude oil price have been hedged for 2020 to 2021. There are contracts with several counterparties. Fair values at the closing date are presented in the table.

	Consolidated		Parent company	
	2019	**2018**	**2019**	**2018**
Volume, mill. bbl	15.9	26.2	0,0	0,0
Fair value, thousand euro	-76 263	-50 791	0	0
Foreign exchange derivatives	0	0	0	0
Volume, mill. Eur	259	124	118	0
Fair value, thousand euro	-331	699	-90	0

Unrealized positive fair value changes are not booked to the income statement.

Signatures to the financial statements and the report on operations

Helsinki, 26 March 2020

Mika Anttonen
Chairman of the Board

Kim Wiio
Member of the Board

Mikko Koskimies
Member of the Board

Sampsa Halinen
Member of the Board

Henrikki Talvitie
CEO

Auditor's Note

Our auditor's report has been issued today.

Helsinki, 27 March 2020

PricewaterhouseCoopers Oy
Authorised Public Accountants

Janne Rajalahti
Authorised Public Accountant (KHT)

Auditor's Report

(Translation of the Finnish Original)

To the Annual General Meeting of St1 Nordic Oy

Report on the Audit of the Financial Statements

Opinion

In our opinion, the financial statements give a true and fair view of the group's and the company's financial performance and financial position in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements.

What we have audited

We have audited the financial statements of St1 Nordic Oy (business identity code 2082259-7) for the year ended 31 December 2019. The financial statements comprise the balance sheets, the income statements, cash flow statements and notes for the group as well as for the parent company.

Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor's Responsibilities for the Audit of Financial Statements section of our report.

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

Independence

We are independent of the parent company and of the group companies in accordance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director are responsible for the preparation of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. 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 financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the parent company's and the group's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the parent company or the group or to cease operations, or there is no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with

good auditing practice 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 financial statements.

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

- Identify and assess the risks of material misstatement of the financial statements, 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 opinion. 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 internal control relevant to the 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 parent company's or the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the parent company's or 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 financial statements or, if such disclosures are inadequate, to modify our opinion. 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 the parent company or the group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Other Reporting Requirements

Other Information

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises the report of the Board of Directors.

Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. Our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion, the information in the report of the Board of Directors is consistent with the information in the financial statements and the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

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

Helsinki 27 March 2020

PricewaterhouseCoopers Oy
Authorised Public Accountants

Janne Rajalahti
Authorised Public Accountant (KHT)

St1 Nordic Oy
Visiting address: Tripla Workery West, Firdonkatu 2,
reception 6th floor,FI-00520 Helsinki, Finland
Mail: PL 68, FI-00521 Helsinki, Finland
Tel. +358 10 557 11
www.st1.com

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