



exilion

**Exilion Tuuli Ky  
Sustainability Report 2022**

Sustainability requires anticipation of global megatrends, catering to the expectations of different stakeholders and building new modes of operations in order to manage the challenges related to sustainable business practices. It is important to recognise the positive impacts of the actions effecting the environment, people and society in addition to minimizing the negative effects. Sustainability also needs to be evaluated throughout the whole company based on the value chain due diligence.

This is the sustainability report for Exilion Tuuli for the year 2022. The report consists of the company's sustainability program for the years 2022-2025 and a description of the sustainability actions carried out during 2022. The main sustainability focus areas for Exilion Tuuli are positive societal impacts, role in minimizing climate change and the local significance of actions.

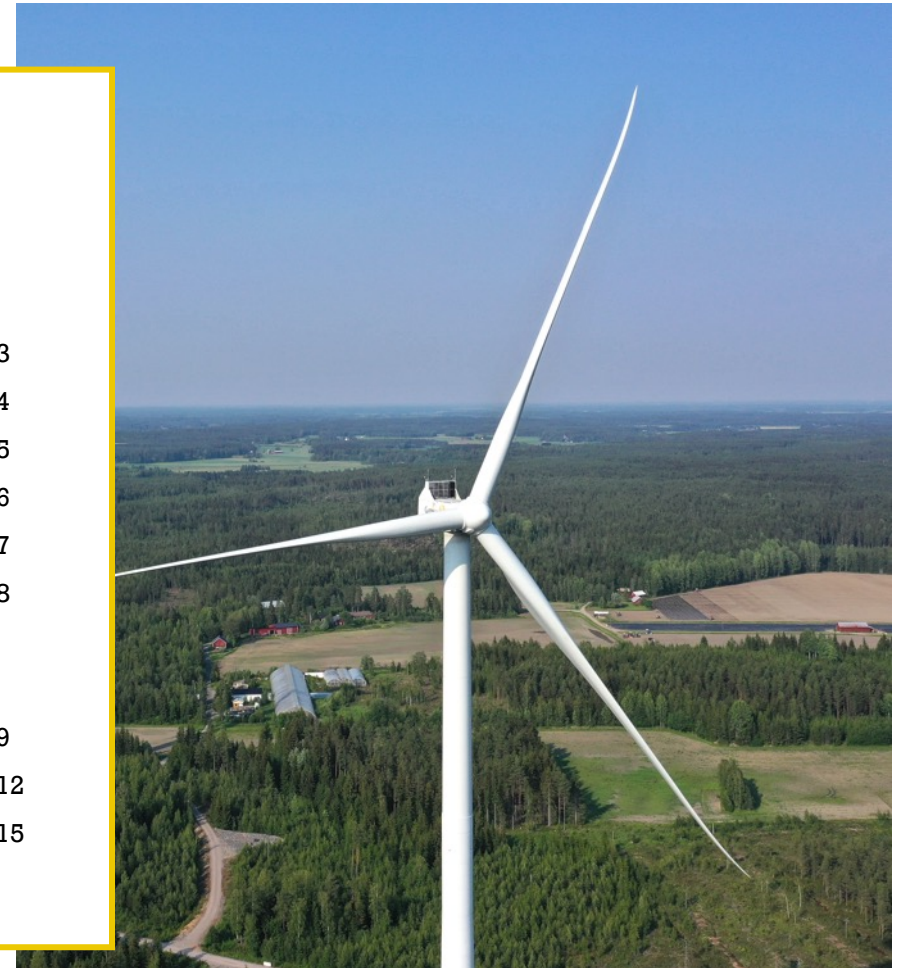
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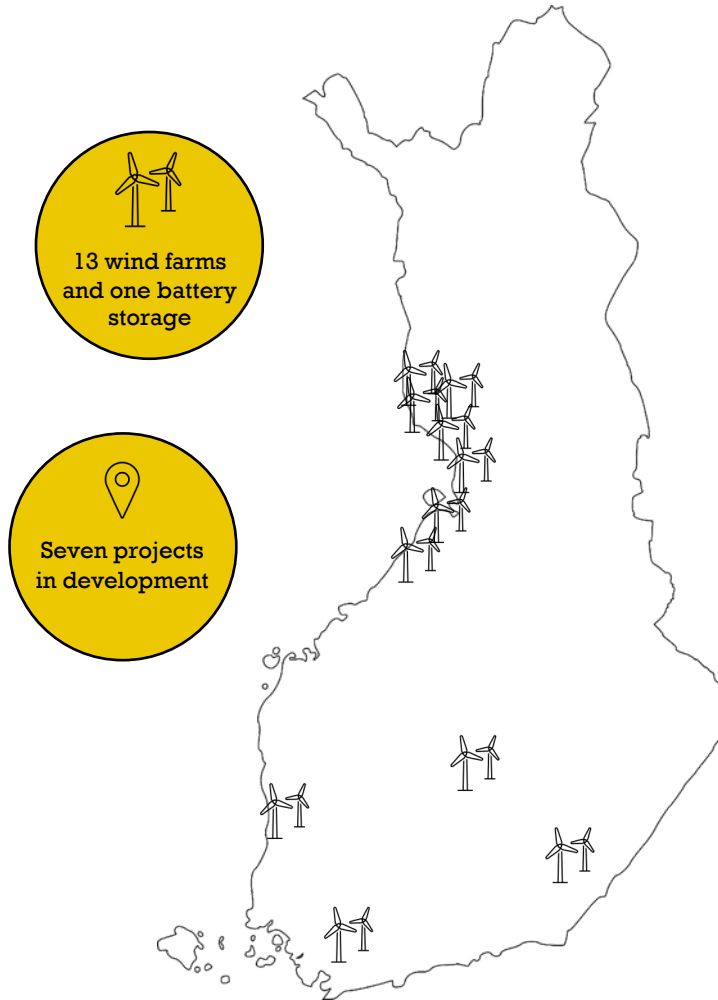
# Exilion Tuuli Ky in Brief

Exilion Tuuli Ky is one of the largest domestic wind energy providers in Finland. The company currently owns thirteen wind farms around Finland and one battery storage. In addition to this, in 2022 there were two construction projects, four development projects and one solar project underway.

The combined wind power capacity of wind farms owned by Exilion Tuuli is approximately 380 MW, which is around one tenth of Finland's overall capacity. The yearly production volume is over 1000 GWh, which equals the yearly consumption of all households in Helsinki.

The company was founded in 2019 and the operations are managed by Exilion Management Oy. Exilion Tuuli Ky is owned by the Finnish institutions Elo Mutual Pension Insurance Company, Veritas Pension Insurance and the State Pension Fund of Finland.

The goal of the company is to achieve steady return with a low risk profile. The profits are directed to pensions of Finnish citizens.



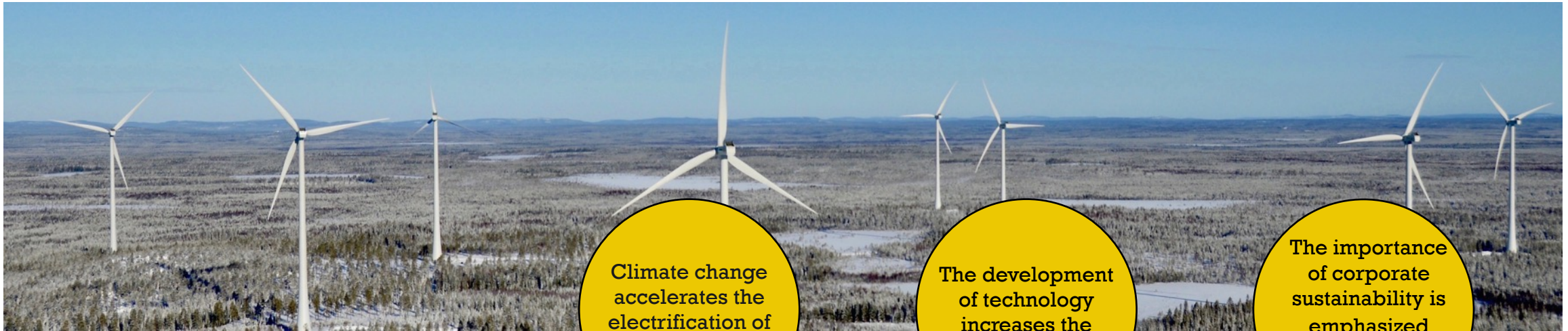
## Wind Farms and Battery Storage

- Simo Halmekangas Tuuli (2017; 11 power plants)
- Simo Onkalo Tuuli (2017; 3 power plants)
- Simo Leipiö Tuuli (2014; 4 power plants)
- Ii Viinämäki Tuuli (2019; 5 power plants)
- Ii, Battery Storage (2021)
- Pori Tahkoluoto Tuuli (2009; 1 power plant)
- Pori Peitto Tuuli (2014; 12 power plants)
- Tervola Varevaara Tuuli (2013; 10 power plants)
- Kalajoki Mustilankangas Tuuli (2017; 28 power plants)
- Luhanka Tuuli (2014; 6 power plants)
- Siikajoki, Varinoja Tuuli (2016; 9 power plants)
- Lappeenranta, TuuliMuukko (2013; 7 power plants)
- Salo Märynummi Tuuli (2014; 2 power plants)
- Tornio Kitkiäisvaara Tuuli (2014; 8 power plants)

## Projects in Development

- Ii Isokangas, construction project – 5 power plants
- Ii Palokangas, construction project – 12 power plants
- Vaala Naulakangas, development project
- Tervola Hevosselkä, development project
- Tervola Löylyvaara, development project
- Tornio Karhakkamaa, development project
- Simo, solar development project

# Megatrends Impacting our Business



We have identified and assessed in advance how the tightening requirements and global megatrends will affect society and thus our operations now and in the near future. We have identified the following three megatrends, which are the basis for the development of our operations and our sustainability work; climate change accelerates the electrification of society, the development of technology increases the possibilities and the importance of corporate sustainability is emphasized throughout the value chain.

**Climate change accelerates the electrification of society**

The climate is heating up, extreme weather conditions are increasing and biodiversity is declining. Tightening climate goals and global problems force us to abandon fossil fuels, which increases the need for renewable and self-sufficient energy.

**The development of technology increases the possibilities**

The development of digitalization and technology enables new innovations also in the energy production field and storage capabilities when society becomes more electrified. Technology development makes societies increasingly vulnerable for example to cyber threats.

**The importance of corporate sustainability is emphasized throughout the value chain**

The importance of corporate responsibility is emphasized and the reporting requirements for it are increasing. Companies must constantly look for ways to increase the positive effects of their operations in addition to minimizing the harmful effects. Companies must consider sustainability aspects throughout the value chain.

# Stakeholder Cooperation

An open discussion with our stakeholders is important to us, since it brings a significant competitive advantage in developing our business and operations. Well-functioning stakeholder cooperation increases transparency and common understanding of our operations and its development.

We interviewed representatives of our most important stakeholders in autumn 2022 in connection with the update of the sustainability program. Through the interviews we gathered data on how we have succeeded in our current work and which sustainability themes are emphasized in the expectations of our stakeholders for the coming years. We have taken these expectations into account when determining the most significant sustainability themes.

We are also part of the Finnish Wind Energy Association and the Finnish Solar Energy Association.

## PARTNERS

- ✓ According to our partners we have succeeded in maintaining open and regular communication. Our significant strengths are domesticity of our operation and the related effect on employment through subcontracting.
- The partners expect responsibility to be extended throughout the value chain. It must be ensured that subcontractors also take sustainability into account in their actions. In addition, it is important to be aware of the negative environmental footprint in addition to the positive footprint of wind power. Equal and fair treatment of landowners is also considered at the center of the operation.

## FINANCIERS

- ✓ According to our financiers, we have been extremely successful regarding the sustainability of our basic operations, which also have a positive impact on society. The operations are perceived as professional, and the cooperation is also well functioning.
- In the future, financiers see the importance of ensuring sustainability through the value chain and comprehensive risk management. Life cycle thinking should be strengthened, especially in the end of the life cycle.

## OWNERS

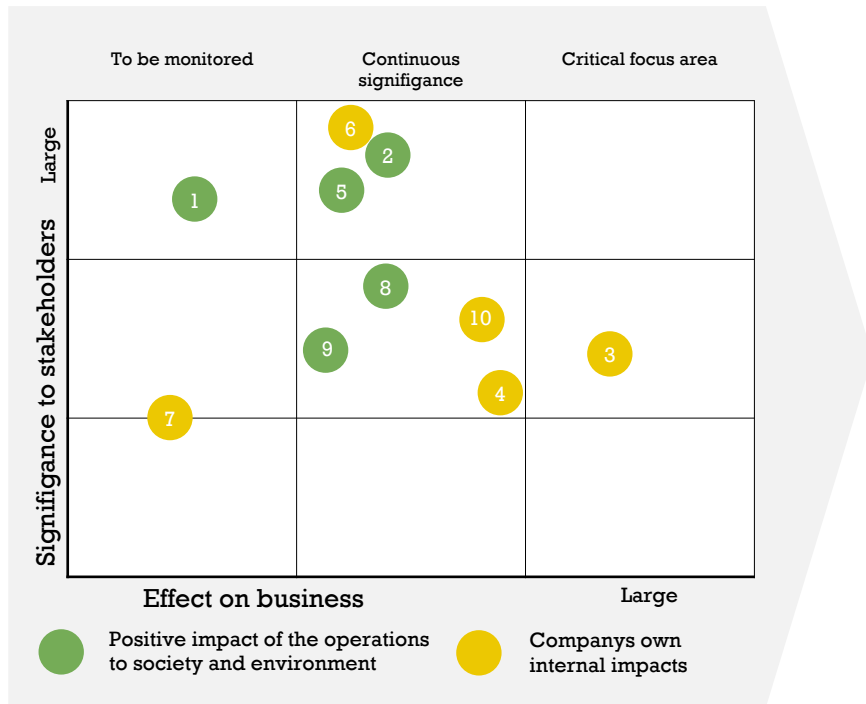
- ✓ The owners expect sustainable returns from us, as well as broader sustainability work and communication that extends through the entire value chain. We have succeeded in social influence and careful decision-making. We are seen as a fair and objective pioneer.
- According to the owners, it is important in the future to ensure the sustainability of third parties, for example through a sustainability policy. In addition, social effectiveness should be strengthened in communication.

## MUNICIPALITIES AND AUTHORITIES

- ✓ Representatives of municipalities and authorities feel that our operations have a significant financial impact, especially on the operations of smaller towns. As wind power can cause conflicting feelings, interactivity and the involvement of the locals are seen as an important factor for getting correct information to the stakeholders
- ✓ The representatives hope that participation and regular communication would continue even after the projects are completed. Stronger positive visibility in municipalities, for example through local events or small operators, is also perceived as important.

# Sustainability Focus Areas

We have identified 10 most essential responsibility focus areas for our operations. In addition to internal effects, our operations have a significant positive impact on society, the environment and people. This so-called handprint is a significant part of our sustainability work.



### POSITIVE SOCIETAL IMPACTS

1. Strengthening energy self-sufficiency
2. Profits directed to pensions of Finnish citizens
3. Risk management
4. Sustainability throughout the value chain

We play a significant role in renewing Finland's self-sustaining energy infrastructure, and we also direct the profits to pensions for Finnish citizens.

### ROLE IN MINIMIZING CLIMATE CHANGE

5. Role in mitigating climate change and avoided emissions
6. Environmental protection and biodiversity
7. Life cycle emissions of wind power plants

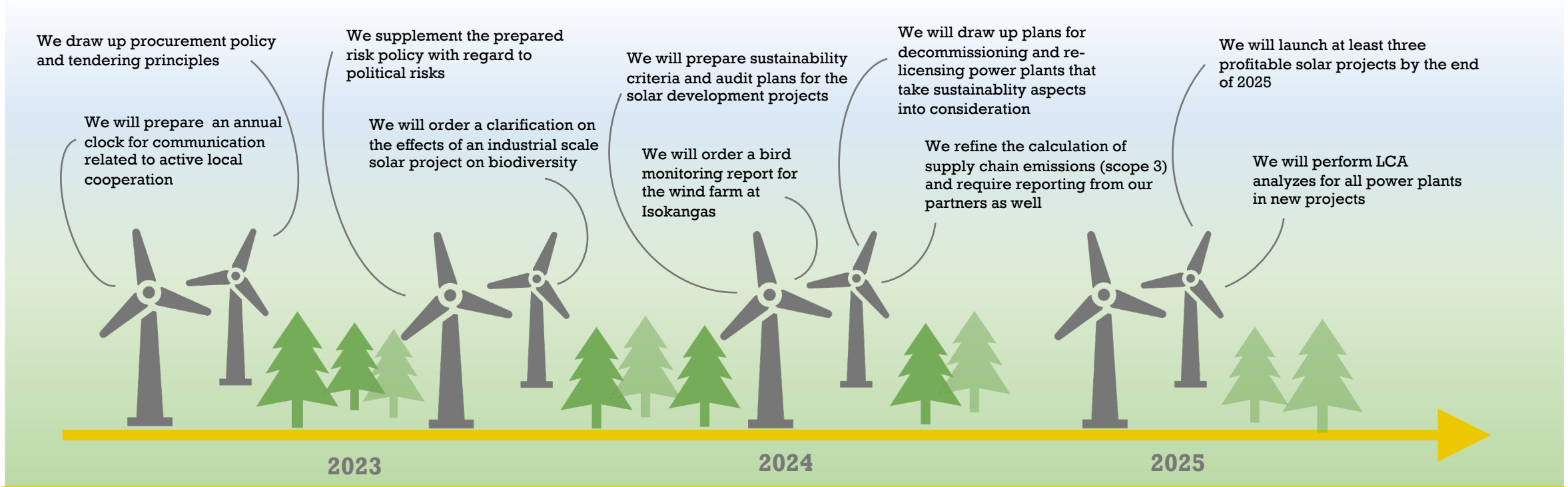
We improve Finland's readiness to mitigate climate change by ensuring clean, self-sufficient and reliable energy production.

### LOCAL SIGNIFICANCE OF ACTIONS

8. Positive impact on communities
9. Local employment
10. Active local cooperation

We promote local sustainable economic growth and employment by producing renewable and clean energy all over Finland.

# Sustainability Roadmap



- Continuous goals**
- We will strengthen Finland's energy self-sufficiency each year
  - We will increase the production of renewable energy
  - We will direct the profits to the pensions of Finnish citizens
  - We will take into account environment and biodiversity in all projects and during the wind power plans life
  - We will promote local sustainable growth and employment
  - We will develop active local cooperation

# Leading Sustainability

Exilion Management Oy handles the operation and sustainability leadership of Exilion Tuuli. The company has an outsourced sustainability expert, whose responsibility is to develop, execute, and integrate the sustainability actions into practice together with the personnel of the company. Exilion Management Oy employees and indirectly the cooperations partners are responsible for the day to day execution of the sustainability actions.

## Sustainability Program Leads the Work

The company's sustainability work is guided by Exilion Management Oy's sustainability and environmental policy, which are based on the principles of the UN Global Compact. In addition, the day to day work is guided by the company's strategy, risk management and sustainability program for the years 2023-2025 which was updated in 2023. The operations follow the principles listed in the UN's Universal Declaration of Human Rights and the basic employee rights defined by the International Labor Organization (ILO).



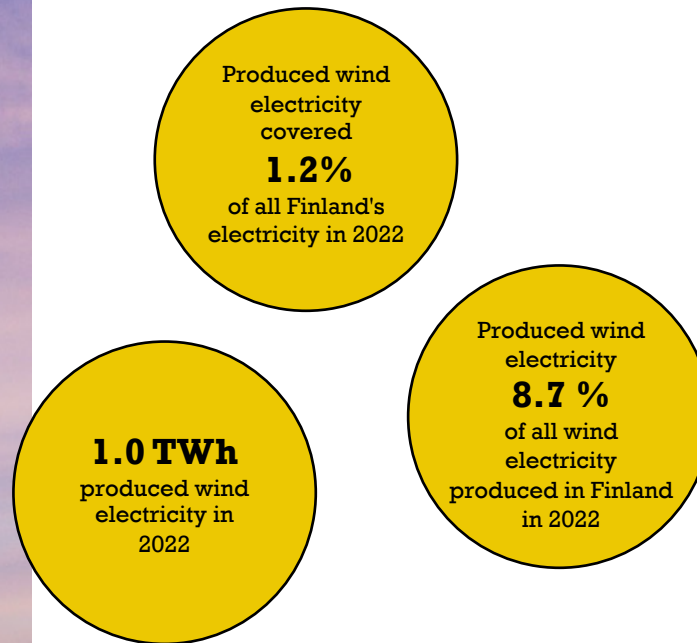
 WE FOLLOW GOOD GOVERNANCE PRACTICES AND OPERATE OPENLY AND	 WE FOLLOW LAWS AND REGULATIONS	 WE RESPECT AND PROMOTE HUMAN RIGHTS
 WE OFFER A SAFE, HEALTHY AND FAIR WORKING AND BUSINESS ENVIRONMENT	 WE FOLLOW SUSTAINABLE DEVELOPMENT GOALS	
 WE COMMIT TO FAIR COMPETITION AND AVOID CONFLICTS OF INTERESTS	 WE DO NOT OFFER OR ACCEPT BRIBES	 WE TAKE CARE OF DATA PRIVACY



# Positive Societal Impacts



As one of the Finland's largest domestic producers of wind power, we play a major role in mitigating climate change. We produce clean, self-sufficient and reliable energy, which produces no emissions into the air, water or soil during production.



## Strengthening Finland's energy self-sufficiency

The EU's goal is to reduce greenhouse gas emissions by 55% by 2030 and increase the share of renewable energy to at least 27%. Finland's goal is to reduce greenhouse gas emissions up to 95% by 2050. The production of wind power plays a key role in this goal, as it increases Finland's independence from fossil fuels and strengthens the self-sufficiency of our country's energy production. The national wind power production target for 2025 is 9 TWh.

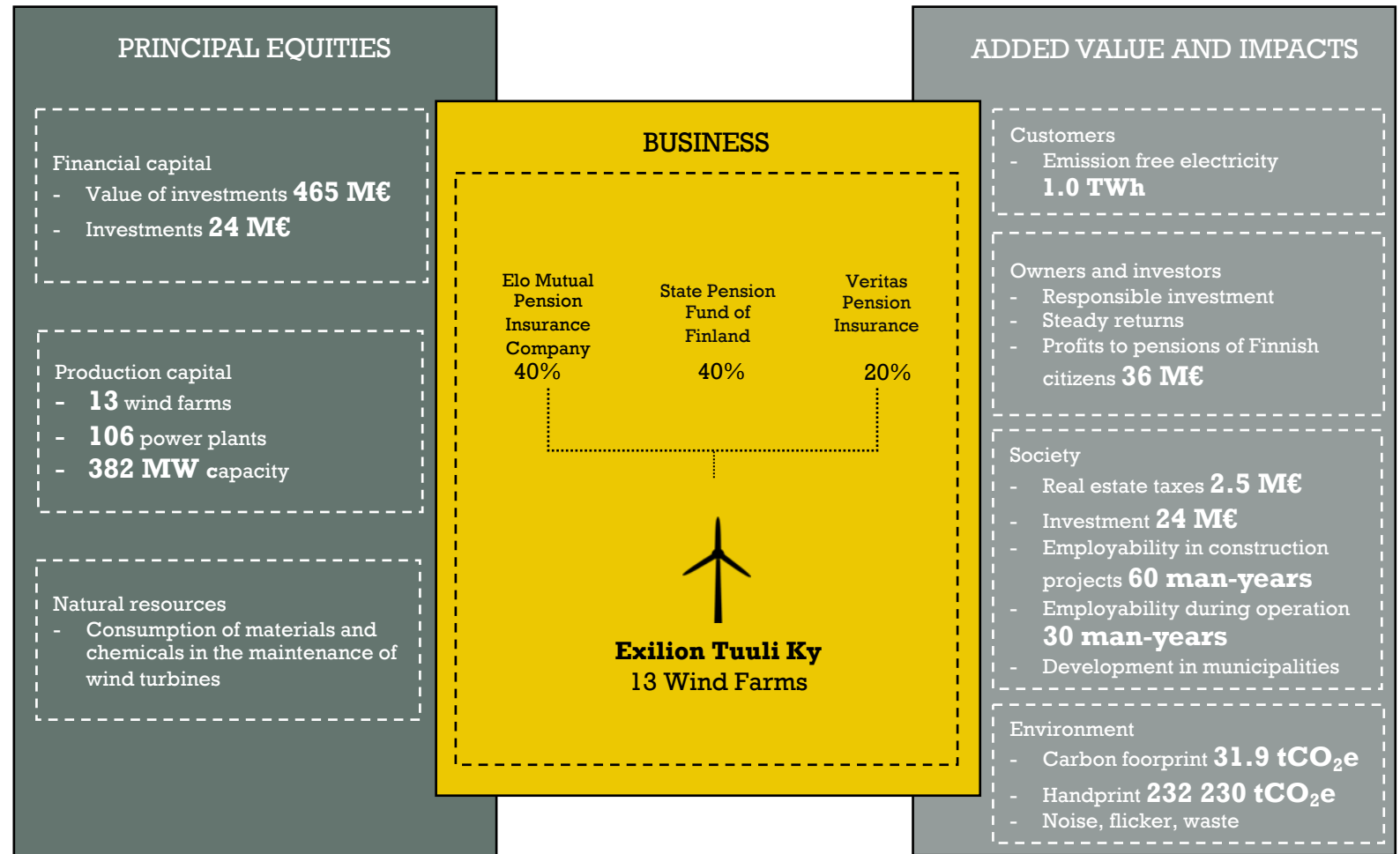
In 2022, wind power produced approximately 11.5 TWh of electricity in Finland, which covered approximately 14.1% of Finland's total electricity consumption. In 2022, Exilion Tuuli produced a total of approximately 1.0 TWh of wind electricity, which is approximately 8.7% of all wind electricity produced in Finland. The produced wind electricity thus covered a around 1.2% of all electricity consumed in Finland in 2022. This corresponds to the annual electricity consumption of all households in Helsinki.

# Positive Societal Impacts

## Profits to pensions

As a domestic investment and asset management company focused on renewable energy, operations of Exilion Tuuli creates added value for Finnish citizens. The company directs the profits of the operation to the pensions of Finnish citizens. In 2022, the profits directed to pensions was around 36 million euros. In addition to this, Exilion Tuuli paid property tax in total of around 2.5 million euros to 10 municipalities with wind farms.

During 2022, approximately 24 million euros were invested in new development and construction projects. Investments, as well as maintenance of wind farms during operation, bring added economic value to society by employing several people. In 2022, the employability of construction projects was 60 man-years and during operation 30 man-years.



# Positive Societal Impacts

## Systematic risk management

Wind power is a safe way to generate electricity and it rarely poses a danger to outsiders. An important part of Exilion Tuuli's sustainability work is the identification and management of operational risks to ensure safety. Identifying risks produces information to support decision-making and increases awareness of opportunities and threats.

Risk management at Exilion Tuuli is guided by the policy of technical and operational risks and the policy of financial risks. With the help of politicians, the most significant operational and damage risks of wind power plants are identified and evaluated, and their management is developed. In addition, it increases risk and safety awareness and supports decision-making. The risk policies are valid for the time being and will be reviewed annually if necessary. Operational responsibility for risk management, its implementation and monitoring rests with the Investment Manager responsible for technical matters.

As part of risk management, we have identified the risks and opportunities of climate change that significantly affect our operations. The risks in question are summarized in the attached picture and are part of Exilion Tuuli's planned risk management.

## Sustainability throughout the supply chain

As an investment and asset management company, Exilion Tuuli utilizes a lot of cooperation partners in its operations. The operation of the wind farms is the responsibility of the partners, and in addition, several different partners are involved in the development and construction projects.

In order to ensure sustainable operations throughout the supply chain, Exilion Tuuli aims to commit all partners to the sustainability policy that guides the company's operations. Procurement is also guided by the procurement policy of the management company Exilion Management Oy. During 2023, the goal is to supplement the policy from the perspective of Exilion Tuuli and to define more precise procurement criteria

### Identified Risks



An increase in wildfires during dry seasons may endanger the operation of existing solar and wind power plants.



Extreme weather phenomena, such as cold winters and severe temperature fluctuations challenge the structure of power plants.



Floods and rising sea water levels must be taken into account when planning new wind farms.

### Identified Opportunities



The rise in temperature increases the use of air conditioning equipment in buildings, which increases electricity consumption. The need for self-sufficient and renewable electricity is also rising in Finland. Sustainable development activities are also emphasized, which increases the importance of Exilion Tuuli's operations even more.

# Role in Minimizing Climate Change

## We help mitigate climate change

In 2022, Exilion Tuuli produced a total of approximately 1.0 TWh of wind electricity, which is approximately 8.7% of all wind electricity produced in Finland. The greenhouse gas emissions avoided by wind power production were therefore approximately 232,230 tCO<sub>2</sub>\* in 2022. This corresponds to the carbon footprint of more than 22,500 average Finns. For comparison, the maintenance and service of wind power parks and the waste generated in them produced approximately 31.9 tCO<sub>2</sub>e during the year 2022.



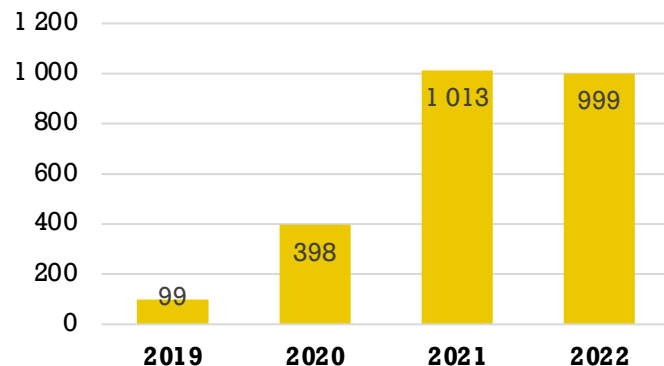
## Snellmann and Exilion to cooperate

Exilion Tuulis operations also help numerous companies to achieve their own climate goals. In November 2022, Snellman and Exilion agreed on a long-term wind power supply contract. The supply of wind electricity will begin in 2025, when the Ii Palokangas wind farm being built north of Oulu will produce clean electricity for Snellman's needs for 10 years.

*"We have been looking at various possibilities to reduce the carbon footprint of our production for a long time and we are very satisfied with the agreement reached now. Exilion was selected as the most natural partner for us, because we want to invest specifically in domestic renewable energy."*

- Head of Snellman Group Erkki Järvinen.

Produced wind power, GWh



Carbon Footprint  
**31.9 tCO<sub>2</sub>e**  
Including maintenance and services as well as waste

\*Calculated according to Finland's residual distribution. The residual distribution indicates the production distribution of electricity consumed in Finland whose origin is not verified, as well as the average carbon dioxide emissions of the production.

# Role in Minimizing Climate Change



## We acknowledge environmental effects

The most important environmental effects of wind power are the reduction of carbon dioxide and climate emissions from energy production, because its production does not create emissions into the air, water or land. However, we are aware that the operation has regional effects, which we can influence by careful planning of the investment.

- 🍃 **The landscape impact** is always evaluated in the planning phase in advance with the help of a map of the visible area and observational photos. In this way, nationally valuable landscape areas can be taken into account in particular.
- 🍃 **Impacts on biodiversity** and vegetation are always assessed in the project phase. When choosing new locations, aspects related to environmental protection are always taken into consideration.
- 🍃 **Effects on fauna** are evaluated along with biodiversity during the projects. If necessary, bird monitoring will also be continued in wind farms in during their active operation.

## Environmental impact assessment procedure

The goal of the environmental impact assessment procedure in wind power projects is to promote the consideration of environmental impacts in project planning and decision making. The procedure is mandatory in projects where the number of plants is at least 10 or the total power is at least 45 MW.

Local authorities can also demand that the assessment procedure will also be applied to smaller projects, if it is estimated to have harmful environmental effects.

Exilion Tuuli investigates the environmental effects in all its projects, even if the project does not go through the formal environmental impact assessment procedure. The landscape impact, the effects on vegetation and fauna are always evaluated in the development projects. Good planning in advance can also reduce possible noise and flickering problems.

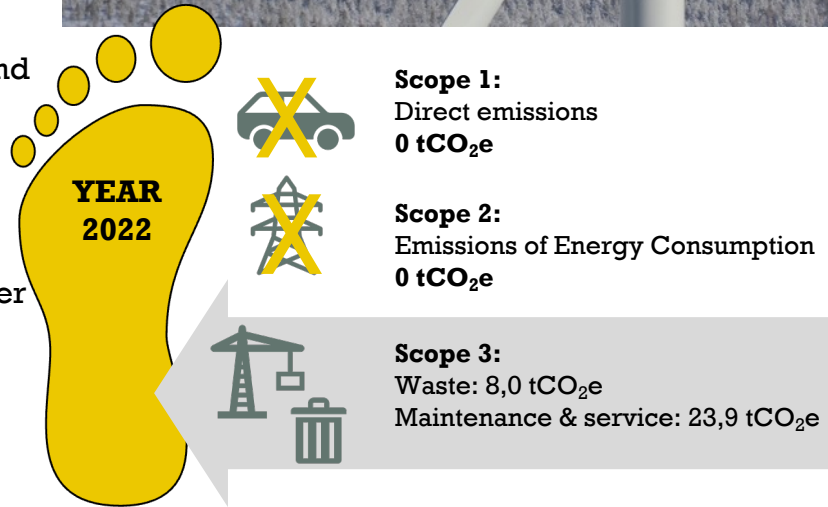
# Role in Minimizing Climate Change

## We monitor our own emissions

No emissions are generated from the production of wind energy, but they are generated through the supply chain from the construction of wind turbines and maintenance. In addition, wind farms generate some waste, which requires processing and that produces emissions.

In 2022, Exilion Tuuli's procurement chain emissions (scope 3) from maintenance and upkeep services generated approximately 23.9 tCO<sub>2</sub>e of emissions and from waste collection and processing approximately 8.0 tCO<sub>2</sub>e of emissions. The calculations are based on euros.

In the calculation of emissions, the emissions of construction costs have not been taken into account. These are significantly higher than other activities. In the upcoming years, the goal is to refine the calculation of emissions to also cover emissions from construction investments. This means LCA assessment of new projects. In addition, we will demand more detailed information from our partners.



## We are expanding into solar electricity

During the past year, we started a development project to implement a land-based solar power plant in Simo. The future power plant is supposed to be located in connection with the wind farms and electricity storage in Ii and Simo. The power plant will be Finland's largest so far, with an output of 70 MWh. So far, the solar power plants built in Finland have had less than 10 MW output.

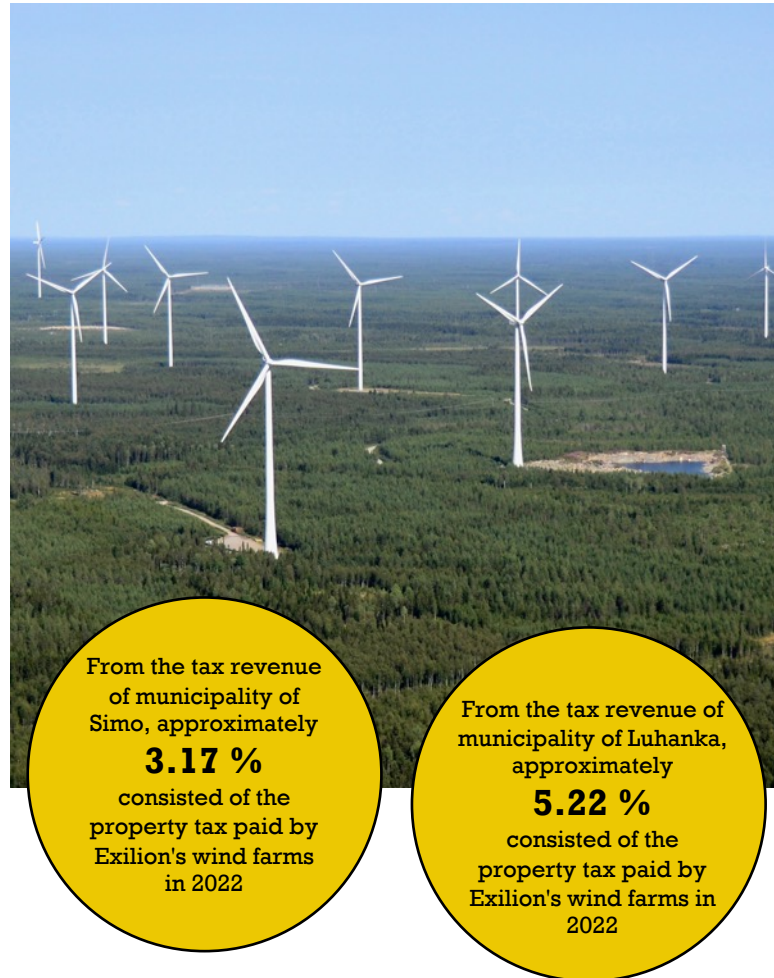
We commissioned a separate report on the solar power park's carbon sinks and carbon storage. During the construction project, as a result of the cultivation of the land, a total of approximately 15,300 tCO<sub>2</sub> is removed from the carbon stock, of which the share of trees is approximately 5,600 tCO<sub>2</sub>. When the solar power plant is ready, it will produce an average of 70,000 MWh of clean solar electricity annually. In terms of avoided greenhouse gas emissions, this means approximately 16,222 tCO<sub>2</sub> per year.

# Local Significance of Actions

## Positive impact on communities

Wind power production has many positive effects both societally and locally. Wind power municipalities receive property tax income from wind power, as an average of 30% of the investment costs of an onshore wind farm is covered by property tax. The amount of the cumulated tax varies depending on many factors. The effect is great, especially for small municipalities, where there are many wind turbines and the tax collection is a significant addition to the income of the municipal economy. In 2022, Exilion Tuuli paid a total of 2.5 million euros in real estate taxes to various municipalities.

In addition to property taxes, landowners are compensated for the operation of wind turbines. Compensation is paid to the group of owners of a land area larger than the site of the foundation of the individual power plant, what I call the wind extraction area. Since the parks are often located in already cultivated forestry terrain, the yield of wind power is better than the yield of the same area only used for forestry.



## Municipality of Simo is planning a new school

Simo, located in Western Lapland, is one municipality that receives significant property tax revenues from wind farms. Simo's municipal finances are subject to many uncertainties as the population decreases, in which case real estate tax revenues are in a decisive position. Exilion Tuuli has a total of three wind farms in Simo, which consist of a total of 18 wind turbines.

Currently, the construction of an 11 million euro unified school is being prepared in Simo, which would cover elementary school, middle school and high school. However, according to the municipal director Vivi Marttila, the implementation of the project requires more detailed calculations of the sustainability of the municipal economy, because a large investment needs to be considered carefully. Property tax revenues from wind farms will continue to have a major impact in the municipality's finance. Exilion Tuuli also has a solar project underway in Simo, whose power plant will be Finland's largest so far.

# Local Significance of Actions

## We employ locally

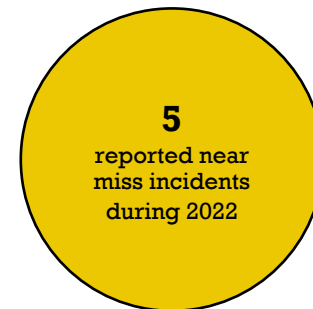
The employment effects of wind power consist of the planning, construction, operation and maintenance of wind power projects. The most jobs are created in the operation phase, which includes the operation, maintenance and repair of the wind turbine, as well as administration.

The operation of Exilion's wind farms has been outsourced to partners. Whenever possible, we use local partners for both maintenance and repairs. In addition, we employ local partners through road and electricity grid maintenance and renovation work. Ten power plants requires an estimated two maintenance personell.

In the project locations, employment is high during the construction phase. The employment rate of the construction projects implemented during 2022 was 60 man-years and the service and maintenance employment rate was 30 man-years.

## We take care of work safety

Maintaining the safety level of wind power plants requires regular maintenance and upkeep of the power plants. The operation of Exilion Tuuli's wind farms has been outsourced to cooperation partners. However, Exilion Tuuli requires that the maintenance personnel must have sufficient training and qualifications for the work they perform. Service installers are required to be trained in special working conditions. The number of work accidents is monitored annually and they are always reacted to as necessary. In 2022, there were no workplace accidents, but there were a total of five near misses.



## Employment with new investments

Exilion Tuuli is building two new wind farms in North Ostrobothnia in Ii municipality. The wind farms will be called Isokangas and Palokangas, and their combined power will be 100 MW.

A total of 17 power plants that Exilion has ordered from Nordex will go up in the wind farms. A 30-year service and maintenance contract has also been signed with the company.

The construction of wind farms started with the road infrastructure construction during the end of the year. The power plants will be erected in the summer of 2024 and production will begin in early 2025. During the construction period, the project will employ approximately 60 people converted to full-time employees.



# Local Significance of Actions

## Active cooperation with locals

Active cooperation with locals is particularly emphasized during the planning phase of projects. When developing wind power areas, we talk about our plans and wind farm projects currently under construction with the locals, and we listen to landowners, nearby residents and other municipal residents. We cooperate closely with the municipality's authorities throughout the project.

It is important to consider the effects caused by wind power, especially noise and flickering, already in the planning phase. Questions regarding the location are resolved on a project-by-project basis. The planned location in relation to the settlement is part of the initial data for the assessment, and thus the distance sufficient for the settlement will be assessed as part of the project's impact assessment. The distances of wind power to traffic routes and the effects on air traffic are already taken into account in the project development phase.

## Wind farm areas in normal use

Movement in the area around active wind farms is not restricted, and after the construction phase, agriculture and forestry can be practiced in the area as it normally would, with the exception of the areas directly adjacent to the wind turbines. The area can also be used for hunting, picking berries and other outdoor activities. A well-maintained road is available to everyone and makes access to forest areas easier.



An aerial photograph of two large white wind turbines standing in a vast, green forested landscape. The turbines are positioned in the middle ground, with a dense forest extending to the horizon under a clear blue sky. In the background, there are some buildings and a large open field. The overall scene is bright and clear, suggesting a sunny day.

# Exilion Management Oy

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In Cooperation with

**EcoReal**   
PART OF  RAKSYSTEMS