



**Welcome to
Stockholm Green
Innovation District**



Karin Wanngård, Chairman of the Municipal Board in the City of Stockholm

“Stockholm aims to be a world leader in reducing greenhouse gas emissions. Therefore, we are now implementing major climate investments and tightening Stockholm’s climate goals. By 2030, our city should be climate positive, which requires reduced emissions from construction, consumption and transportation. Stockholm Green Innovation District strengthens the city’s innovation capacity by bringing together actors with expertise, promoting concrete collaboration across organizational boundaries, and contributing to international knowledge exchange, especially regarding the opportunities of digitalization. Together, we ensure that Stockholm develops sustainably and with solidarity, and achieves a fair climate transition.”



Mats Gerdau, Chairman of the Municipal Board of Nacka

“Through the Green Innovation District, we can take further steps in developing a dynamic business climate that promotes innovation and entrepreneurship at the highest level. In Nacka, we aim to create good urban meeting places in the environmentally smart municipality, for Nacka residents and visitors, businesses and entrepreneurs. The development of unique and sustainable residential and work environments, rail-based public transport, and even more circular trade in Sickla and Nobelberget is the direction of Nacka as a whole, and particularly as part of the innovation district.”



Carl Piva, Chairman of Stockholm Green Innovation District

“Stockholm Green Innovation District is based on many years of successful collaboration between the city, academia, businesses, and residents with the ambition to be the leading district for green transformation in Europe. We have agreed on a powerful vision for the future where we can mobilize the right forces towards clear goals. We bring together innovation from the market, expertise from academia, implementation capabilities from urban development parties, and the strength of active citizen engagement. The area is geographically connected by the tram and practically by ‘Färdplan 2030’ where we jointly set the ambition for our future city.”



1. Invest in our Green Innovation District!

This is the right place for your business! Seven towns in a joint effort to take the lead in climate transition. Testbeds for innovation. Investment in clean tech.
Leading businesses and research institutions. Engaged citizens.
Supported by the City of Stockholm and Nacka municipality.
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2. Be part of our Journey for Twin Transition 2030.

We believe that the speed of climate transition will increase during the next few years. We aim at climate neutrality by 2030, explaining what can be achieved in energy, mobility, construction, water, consumption and waste - with digital support.
Welcome to become part of our journey for twin transition!
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3. Innovation to empower your Climate Transition.

Innovation is at the heart of our drive for twin transition. Here we offer ten examples of innovation that will help you to empower and speed up your transition. Our business partners stand ready to inform and demonstrate how it works and what can be achieved.
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1. Invest in our Green Innovation District!

This is the right place for your business!
Seven towns in a joint effort to take the lead in climate transition.

Hammarby Sjöstad – Innovation Centre for Climate Transition by 2030



Hammarby Sjöstad, with 25,000 inhabitants, is the first eco-city district in Stockholm and an international model for eco-friendly urban developments. The city district is based on a recycling concept known as "the Hammarby model," using new principles for governance to integrate strong environmental commitments in the construction process, termed "eco-governance." Today,

Hammarby Sjöstad 1.0 has evolved into Hammarby Sjöstad 2.0, a citizen-based initiative to "renew a new city." It serves as a testbed for sustainable city development and "twin transition," encompassing both climate transition and digital transition, with the aim of making the city district climate neutral by 2030. This process is driven by ElectricCITY Innovation, a quadruple helix organization consisting of civil society, academia, business, and the City of Stockholm.

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Sthlm New – Workplaces for Innovative Companies



Sthlm New in Hammarby Sjöstad is developed by the construction and development company Skanska, which has created a welcoming and attractive place for innovative companies. Here, in a former industrial port, a total of five out of eight buildings have been completed. Sustainable initiatives, new work methods, and solutions are in focus. Each building has its own character.

One of them, Sthlm 01, with its 27 floors and 102 meters in height, stands as a bold new landmark for the entire capital. Skanska has made a strong commitment to reducing CO2 emissions both in the construction process and in the management of the buildings. Several of Stockholm's innovative companies and organisations have already moved their operations to Hammarby Sjöstad and Sthlm New.

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Sickla, "the Wood City", a new Standard for Sustainable Urban Development



Once, Sickla was home to world-leading engineering. Now, it will take global leadership in urban development. "The Wood City" will be an international showcase for sustainable architecture and timber-based urban planning and construction. Sickla will set a new standard for sustainable urban development, combining resource-efficient methods for reuse and circular material flows with a focus on future energy solutions for storage and sharing of self-produced energy.

Sickla, an area covering almost 30 hectares, is becoming the Nordic epicenter for sustainability, innovation, and well-being, developed by the real estate company Atrium Ljungberg. Today, 8,000 people work here alongside shops, restaurants, cultural venues, schools, and homes. "The Wood City" is being developed with an additional 250,000 square meters of dense urban city blocks, providing 7,000 new office spaces and 2,000 new homes.

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The Meat Packing District – Alive and Vibrant Morning to Night



The Meat Packing District (Slakthusområdet) is one of Stockholm's largest urban development projects of all time. The real estate company Atrium Ljungberg has overall responsibility for the development of the district. By building a location that stays vibrant and alive around the clock and offers a broad range of culture and experiences, Slakthusområdet will be filled with culture, art, and nightlife.

The old industrial buildings will house theater, film, dance, e-sports, conferences, and events, alongside new office buildings and residences. New business entrepreneurs and creators will operate here, and their content will also be available on stages in the area. By linking creation and experience, the city district will stay alive and vibrant from morning to night.

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Valla Torg/Årsta – a Testbed for succesful Energy Renovation



Valla Torg in Årsta is a residential area built in the 1960s. The City of Stockholm has carried out extensive energy renovation through an EU-funded project, Grow Smarter.

The buildings were updated with better isolations and a wide range of efficiency measures, including heat recovery applications like exhaust air heat pumps and wastewater heat exchange systems. Separate heat exchangers were installed in every building for direct, efficient connections to the district heating system. The projects demonstrates how 12 smart solutions for buildings, infrastructure and mobility can reduce energy consumption and emissions by more than 60 per cent.

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A new way of City Planning: Both Urban and Nature



The concept 'Naturban' is the foundation for sustainable urban development in Central Nacka. The aim is to create a sustainable area that is primarily good for the environment, but also for the people who live and work there. The 'Naturban' concept encourages plants on building façades, green roof terraces and balconies, and sheltered areas that can withstand the winter, like rooftop gardens.

There are also innovative mobility and energy solutions being constructed in collaboration with real estate owners, inhabitants, and homeowner associations. Some examples include collective battery and charging infrastructure solutions combined with solar panels on roofs. Other examples include innovative solutions to manage precipitation and effective ecosystem services to increase resilience to future climate changes.

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The Mill Island (Kvarnholmen) – at the Waterway to Stockholm



The Mill Island (Kvarnholmen) is an old industrial area in Nacka, now transforming into a unique residential area at the waterway into Stockholm. It will provide homes for 7,000 people and workplaces for 1,000 people. Kvarnholmen's old industrial buildings are being carefully converted into homes. Other buildings, like the Macaroni Factory, will become offices, cultural centers, local hubs, or schools.

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2. Be part of our Journey for Twin Transition 2030.



Stockholm Green Innovation District (SGID) is a platform for investment and export promotion. It is also a think tank for the twin transition, using Hammarby Sjöstad as a laboratory and a showcase for what can be achieved by 2030. Here is a summary of our aims:

– Energy: Saving energy and adding more locally produced renewable energy, along with sharing and storing electricity, have been integrated into the old system of centralized energy production and distribution. The housing association sector in Hammarby Sjöstad has taken the lead in developing a more resilient and sustainable local energy system. BIO-CCS has been implemented in the district heating system to make home heating CO2-free.

– Mobility: The transformation of the transport system is under way. By 2030, all public transport, including buses and ferries, will be electrified. This also applies to taxicabs, car pools, and local delivery trucks. All parking places at home and work are equipped with charging facilities. By 2030, all new cars will be fossil-free.

– Construction: Buildings account for 40 percent of global CO2 emissions. A major change in construction is needed. Greening of steel and concrete is one way; using wood instead of steel and concrete is another. Recycling materials is a third way. Atrium Ljungbergs Wood City in Sickla and Skanska Sthlm New are leading examples of this transition.

– Consumption: From the very beginning, Hammarby Sjöstad has been built on the concept of a circular economy, recycling and reusing energy, water, and waste. However, climate-neutral consumption remains a significant challenge. ElectriCITY Innovation has adopted the Stockholm Climate Action Plan 2030 as a basis for strong consumer involvement in a contract-based action ("My Climate Contract").

– Digitalization: All key technologies—from IoT to AI and digital twins – must be used to speed up the transition. Hammarby Sjöstad serves as a testbed for the Urban Twin Transition Centre, which aims to address the 20 percent of CO2 emissions where digital tech can make a difference through energy system surveillance, coordination of electric vehicle charging, etc.

– Summary: Public policies like The Green Deal, new business models, new consumer behavior, and new technologies will drive and accelerate the process. Strong local action, as demonstrated in Hammarby Sjöstad, is needed. The twin transition is within reach by 2030.

For more information:
www.StockholmGreenInnovationdistrict.se

3. Innovation to Empower Climate Transition.

The City of Stockholm has approved a Climate Action Plan 2030 with strong commitments to show global leadership in the transition process. The Stockholm Green Innovation District (SGID) is confirmed as one of the city's "transition arenas." As such, SGID is supporting the city by offering a broad range of testbeds and innovations that will empower and accelerate climate and digital transitions.

Here – pages 6-16 - are ten examples of innovations that are implemented or tested in the Stockholm Green Innovation District. Our business partners are ready to inform and show how it works and what you can achieve.



Construction & Project Development: A constant Chase to reduce Carbon Dioxide Emissions from Process and Product is the new normal

The construction of Sthlm New, a residential and office area in Hammarby Sjöstad, is a leading example of new construction concepts. The construction and development company Skanska aims to reduce CO2 emissions in construction yearly to become climate neutral—Skanska Commercial Development by 2037 and the Group by 2045—by using, for example, concrete with substantially lower embodied carbon, choosing materials in general with lower embodied carbon, circular materials,

minimization of material transports, reuse of excavated earth and rubble from nearby projects, digital twins, high-standard sustainability certification, etc.

The houses are also built in such a way that they can be easily changed to fulfill new requirements from customers today and in the future. Today, carbon calculation and analysis are as natural in the process as economic calculations.



Construction: Wood instead of Concrete with 30-50 per cent CO2 reduction over life time

The development of Sickla by real estate company Atrium Ljungberg, from an industrial area to a vibrant urban neighborhood, involves ambitious goals regarding sustainable construction and climate action. Reusing some of the industrial buildings is a basic element.

The main new approach is the development of Stockholm Wood City—the world's largest urban development project built with wood. The advantages of wooden buildings are numerous,

both for the environment and for people's health. Studies show that wooden buildings provide better air quality, reduce stress, and increase productivity. Furthermore, wooden buildings can store carbon dioxide throughout their entire lifespan.

The carbon dioxide emissions could be 30-50 percent lower than building with conventional materials. Building with wood also results in quieter construction sites and reduces the number of heavy transports during the construction period.



District heating 2.0: Using Local and Clean Energy Sources

District heating, i.e., centralized cogeneration of heat for buildings using biomass and household waste, has been in operation all over Sweden for many years, thereby replacing individual heating. This has dramatically lowered carbon dioxide emissions.

Now, Stockholm Exergi is introducing the next stage of district heating and cooling by adding more local energy sources to the system, such as excess heat from data centers, industrial waste heat, and locally produced energy (heat

pumps). Furthermore, introducing a lower system temperature will increase the possibilities of using more residual heat. This also means that the cogeneration plant can produce more electricity for the citizens. This initiative goes hand in hand with activities to recycle more of the plastic from household waste, thereby minimizing carbon dioxide emissions from the cogeneration plant.



Carbon dioxide: Bio-CCS - Capturing and Storing,

Capturing and storing carbon dioxide has been identified by the UN climate body IPCC as a key technology to achieving global climate goals. Stockholm Exergi, the city's district heating company, operates a research facility that captures biogenic carbon dioxide at the heat and power plant in Hjorthagen, Stockholm.

The technology is called bio-CCS. The potential is to capture 800,000 tons of carbon dioxide, which is equivalent to the emissions from Stockholm's road traffic for an entire year.

The captured carbon dioxide will be sent to a permanent storage location below the sea. Due to high pressure, the carbon dioxide will be mineralized and become part of the bedrock. The goal is to have a full-scale plant in operation by 2028. This will be the largest Bio-CCS facility in Europe.

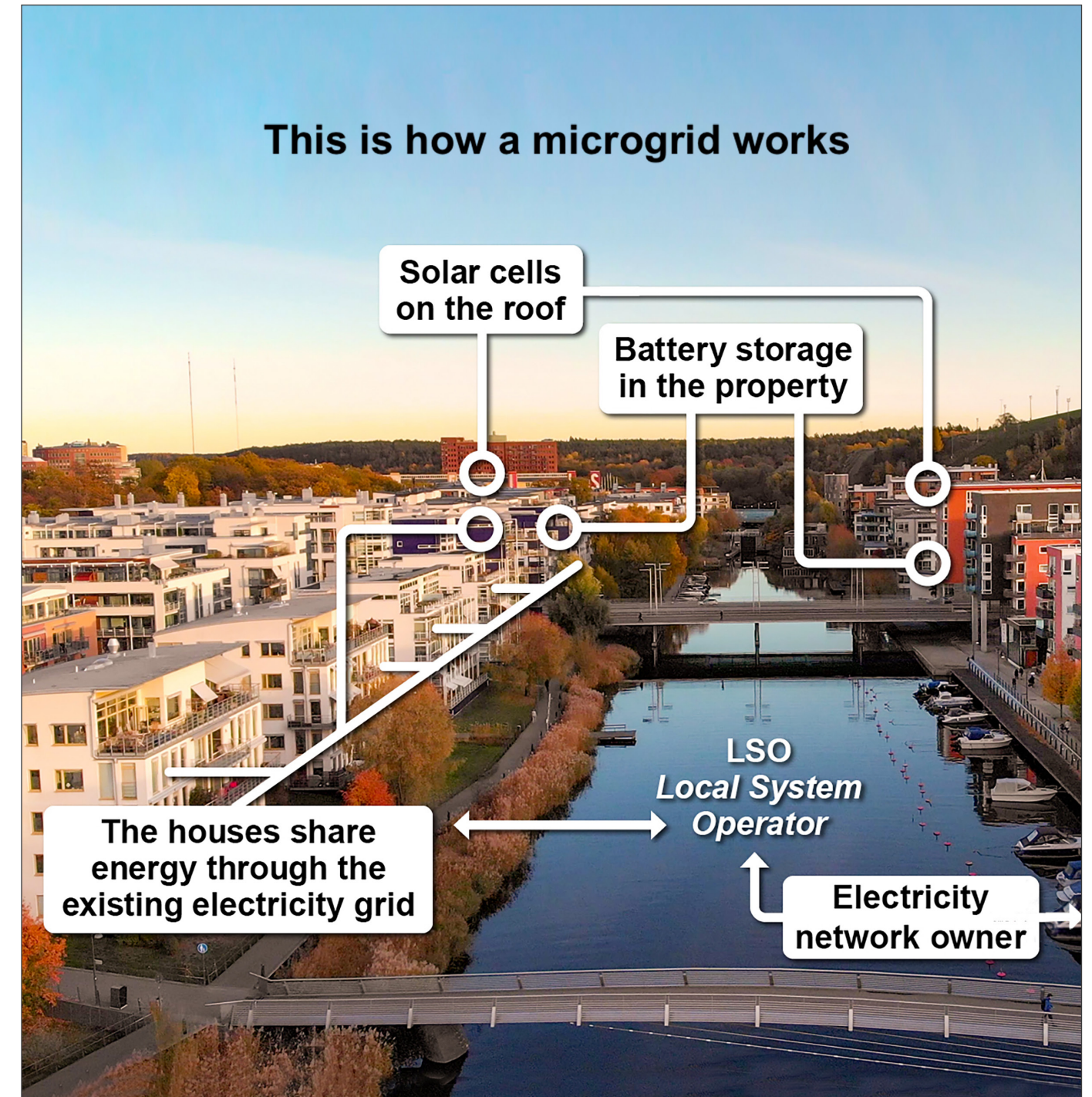


Waste Management 2.0: With Digital Support

From the outset of Hammarby Sjöstad's development, buildings have been equipped with an automated vacuum waste collection system (AWCS). This innovation promotes cleaner and more sustainable neighborhoods while requiring less space than traditional waste handling systems. The waste is transported underground, eliminating the need for waste trucks, rooms, and bins.

Hammarby Sjöstad serves as a global demonstration site for Envac, the inventor and producer of this techno-

logy, attracting visitors from around the world. Envac is now developing the next generation of automated waste collection by using digital data collection and AI to optimize waste management, reducing both environmental impact and operational costs. Through this digital platform, citizens are empowered to make more informed decisions about consumption and waste handling, further supporting sustainable living.



Energy Efficiency: Using Less, Saving Money, Climate Transition

Energy efficiency has been a primary aim of the "renew a new city" initiative in Hammarby Sjöstad and the energy renovation program in Årsta. The buildings in Årsta were updated with better insulation and a wide range of efficiency measures. The projects demonstrate how 12 smart solutions for buildings, infrastructure, and mobility can reduce energy consumption and emissions by more than 60 percent.

In Hammarby Sjöstad, 60+ housing associations are part of

a similar program to reduce energy use from the grid, reusing and producing more locally produced renewable energy, and investing in geothermal energy, solar cells, and energy-saving and sharing measures. With good returns!

Hammarby Sjöstad has now established a Local Energy Community, a microgrid for locally produced renewable energy, sharing, and storing of energy.



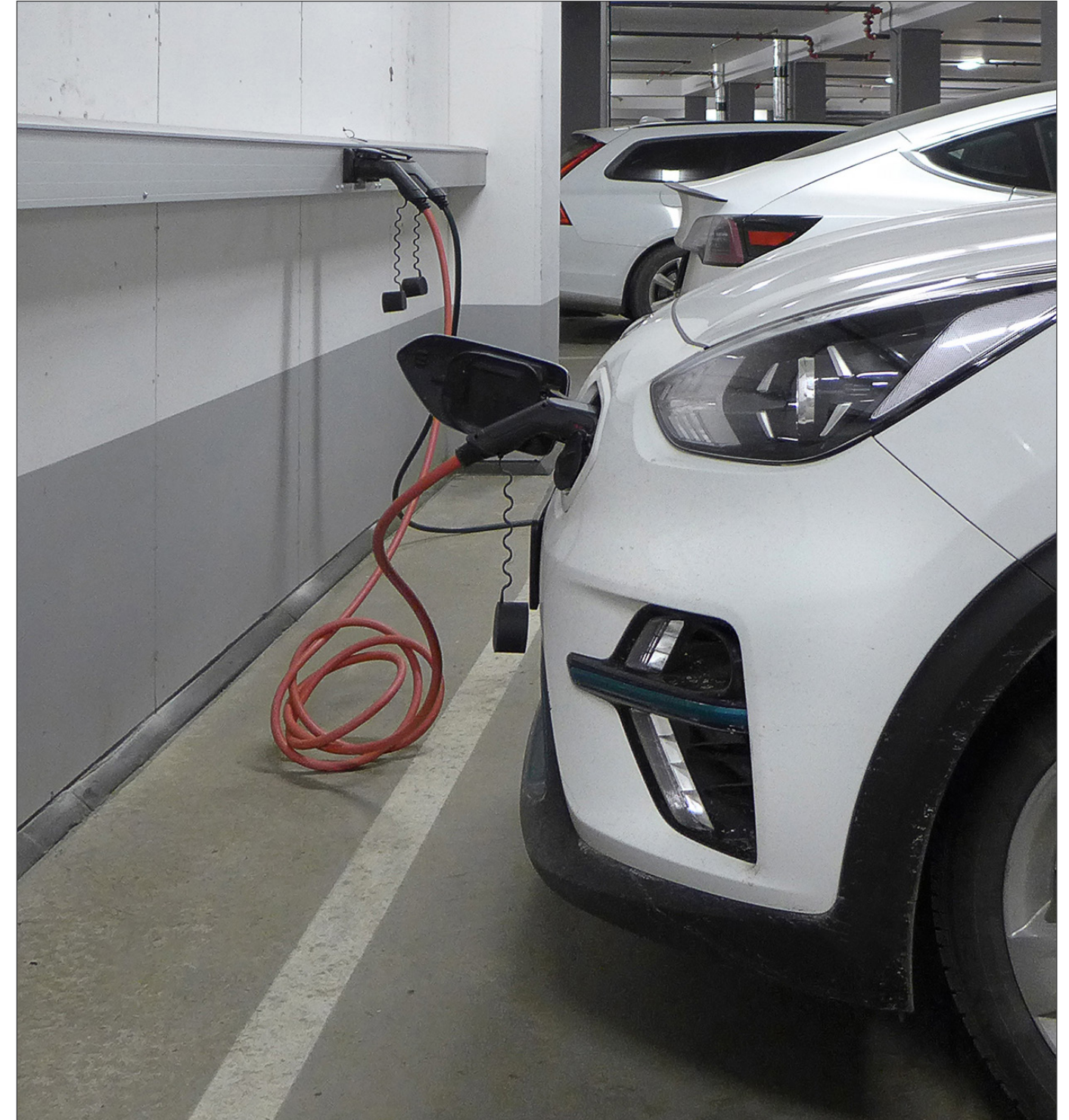
Water: World leading Technology for Sustainable Water Treatment

Stockholm Water and Waste Company is building a new treatment plant in Henriksdal, Hammarby Sjöstad, to meet Stockholm's future needs for clean water. The Sickla facility under the Hammarby Hill is being expanded and new sewage tunnel is being built from Bromma to the Sickla plant. It is equipped with new biological treatment technology and will become one of the world's largest facilities with membrane filtration.

With such membrane technology, larger amounts of wastewater can be treated on the same surface area. The emissions of nitrogen and phosphorus to the Baltic Sea will be significantly reduced and the sewage is also purified from small particles larger than 0.04 micrometres. The new plant will also have better possibilities to minimise the emissions of climate change gases and pharmaceutical residues.

Water Waste: From Waste separation to Production of utilities

Sjöstadsverkets Water Innovation Center, SWIC, is developing a facility for new climate-efficient and sustainable solutions for municipal and industrial water. The focus is in reducing levels of nitrogen and phosphorus, pharmaceutical residues and PFAS, using biological, chemical and physics methods, while also enabling nutrients, metals and purified water to be returned to the cycle and energy to be produced. The experiments are carried out in a scale that allows the solutions to be implemented in full scale. To show citizens that this new purification method can turn waste water into clean water of the highest quality SWIC together with a local brewery, Carnegie, produced a beer with water that had been treated with the new MBR combined with some polishing steps. SWIC is jointly operated by IVL Swedish Environmental Research Institute and KTH Royal Institute of Technology.



Mobility: Electrification – all the way from Busses to Private Cars

Electrification of the transport system in the Stockholm Green Innovation District is well under way. The light rail (Tvärbanan) extends throughout the district. The underground extension from Stockholm to Nacka is expected to be ready by 2030. By then, all buses and taxicabs will be electrified.

In Hammarby Sjöstad, housing associations have taken the

lead in installing charging equipment through the "Charge at Home" program, aiming for 100 percent coverage of all parking places by 2030. The next generation of charging facilities, equipped with digital surveillance to reduce power needs, is already in operation.



Innovation for the Consumer Challenge: My Climate Contract

Consumption-based CO₂ emissions represent a major part of the climate challenge. Stockholm Green Innovation District is taking the Hammarby model for a circular economy forward by engaging citizens in "nudging" activities, i.e., step-by-step changes in consumer behavior. This includes correctly sorting

waste, buying climate-smart food, reducing food waste, increasing reuse and sharing of products, and initiating urban gardening with local production of greens in the neighborhood. To strengthen this process, a new concept, "My Climate Contract," has been developed and will be tested in full scale.



Leisure: A New Concept for Sustainable Sport Facility

In the center of Stockholm's Green Innovation District is Hammarbybacken – a ski slope that has gradually been raised and developed by Skistar into what it is today: one of Stockholm's easy-to-spot landmarks and a sports center. Hammarbybacken has hosted Alpine World Cup competitions that are televised all over the world.

Skistar has launched a new concept and an investment plan to develop Hammarbybacken into a year-round activity center for the benefit of Greater Stockholm. It is very easily accessible from the Tvärbanan light rail, which runs just a few hundred meters from the facility. Climate change has inspired Skistar to offer alpine skiing all year round on new and innovative surfaces.





Innovative Transition Process – From the Hammarby Model to Climate City Contract 2030

Stockholm Green Innovation District is a testbed for a new form of governance for sustainability and climate transition. The City of Stockholm introduced "eco-governance" for the construction of Hammarby Sjöstad and a new model for recycling energy, water, and waste, known as "the Hammarby model" (see picture 1, planning of Hammarby Sjöstad).

Later, citizens of Sjöstaden took the initiative to "renew a new city" with the aim of making the district climate neutral by

2030, using Hammarby Sjöstad 2.0 as a trademark. These new forms of citizen-driven climate transition are now included in the Climate City Contract 2030, a deal between the City of Stockholm and the national government, and in the Stockholm Climate Action Plan 2030. This will engage all stakeholders from the city, business, housing associations, NGOs, and citizens to work together in a holistic way to reach a common goal (see picture 2, the energy team).



I am Östen Ekengren, CEO of Stockholm Green Innovation District. Are you interested in our green innovation portfolio? Interested in investing in our district or starting a business? Please contact me. I will connect you to our innovation partners in the district, Stockholm Business Region, and our Brussels office.

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PARTNERS AND MEMBERS



**STOCKHOLM
GREEN INNOVATION
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