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Norrköping



# Green bond

## INVESTOR LETTER

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NORRKÖPING

# Green bond investor letter

In October 2016 the municipality of Norrköping issued its first Green Bond supporting the transition to a low-carbon and climate resilient society. This first Green Bond transaction amounted 600 million SEK and the funds are earmarked and dedicated to finance green projects defined within the municipality's framework for Green Bonds.

## Green Bond eligible projects

**The municipality of Norrköping's first Green Bond portfolio will finance four projects, as follows:**

### PROJECT KOPPARHAMMAREN 2

Hysesbostäder, the municipal real estate company, in co-operation with Klöver real estate company, develops rental housing blocks containing university student apartments, standard apartments for university employees, offices and business premises on the ground floor. The apartments will be distributed in two different buildings. One consisting of 72 student housings while the second consists of 43 traditional rental apartments. In the third building, Klöver will have office space and commercial premises on the ground floor. The estimated BTA, the gross area, for the whole project is about 17.100 m<sup>2</sup> and BOA/LOA, living area/local area about 11.700 m<sup>2</sup>. The goal is to meet the criteria of the Miljöbyggnad Silver which means reduced energy use by 25% compared with the BBR 21. Estimated investment 320 million SEK



### PROJECT STREET LIGHTNING

During the period 2011-2017 the technical office conducted an exchange of all luminaire in street lighting to LED lighting. Through the change was achieved both an energy efficient lighting, but also an improvement in lighting performance and color reproduction and reduced the service requirements of the luminaire. In 2011 the energy consumption was 12,000 MWh, and when the whole luminaire was replaced in 2017 the energy consumption was decreased to 7331 MWh. In parallel with the change of the luminaire the number of spots increased with over 3000 pieces, which means that the

project resulted in an energy efficiency of about 46%. Project investment 60 million SEK.



### PROJECT INTRODUCTION OF MULTI-COMPARTMENT CONTAINERS

In the autumn of 2016 the municipality of Norrköping introduced multi-compartment container for all households in detached houses and vacation homes. The system is voluntary and contains sorting out the normal household waste (food waste and combustible waste) as well as newspapers, packaging waste, batteries and light sources, a total of 10 fractions collected directly at the property. The acceptance rate is at almost 80%.

The fundamental benefit of recycling is improving the management of energy and natural resources compared with manufacturing based on new raw materials. The improvement differ between the different materials. Experience from an initial follow-up but also from an earlier pilot project in Svärtinge, 2014, shows that the amounts of recycled materials per household increases by 2-3 times compared to the amounts received through the recycling stations. This means that the positive effects of material-recycling also increases to the same extent. Through the increased recycling, we expect to reduce carbon dioxide emissions by about 2,500 CO<sub>2</sub> equivalent/year. In addition, the household collecting also has a positive effect on the traffic-related emissions.

Counted as CO2 equivalents the municipal collection via multiple compartment containers cause about 50 tons per year while private car traffic with the same purpose cause about 300 tons. This is calculated from a scenario of visiting the recycling station once a month. Would you rather go to the recycling station twice per month which is more realistic, it will cause emissions in the order of 600 tons/year. Estimated investment 70 million SEK.



## PROJECT RÖJNINGEN 3:1

Norrevo properties is constructing a new home for the elderly in the district of Åby. The building is on four floors with an attic and contains 60 apartments, a kitchen and an office. The BOA/LOA, living area/local area is estimated to 7650 m<sup>2</sup> where 3963 m<sup>2</sup> are classified as office space and 3687 m<sup>2</sup> for housing. Energy consumption is estimated to 56,6 kWh/m<sup>2</sup> per year, which means around 33% less energy use compared to BBR 21. The building will be ready in springtime 2017. Estimated investment 150 million SEK.





During the winter of 2020, the municipality of Norrköping issued a portfolio of green projects worth SEK 600 million. The portfolio includes a total of six projects which will be implemented by the municipal companies.

## Green Bond eligible projects

**The municipality of Norrköping's first Green Bond portfolio will finance four projects, as follows:**

### AKTERN

New production of 54 rental apartments in varying sizes divided into two buildings. The project is located in Lindö, in a development area near the water. The project has been developed to provide Lindö with a range of rental apartments as it is lacking there for those looking for an alternative to the villas that are otherwise available. The developer is Hyresbostäder i Norrköping AB. The project is expected to start Q3-21 and the estimated completion is Q3-23.

We expect to carry out the project according to Miljöbyggnad Silvers 15 criteria / indicators. A follow-up takes place according to the requirements placed on the respective criteria / indicator. As our knowledge increases requirements regarding waste management and CO<sub>2</sub>-emissions can later also be put on the project, but that is not something we know today. Estimated cost approx. SEK 135 million.



### INNER HARBOR PLOT G2

New production of 35 rental apartments in varying sizes distributed in one house body. The project is located in the Inner Harbor, a development project with building developer collaboration with the municipality. The project is part of a large urban development project with the transformation of the entire Inner Harbor in central Norrköping. The goal is to create a varied active district with diversity and urbanity.

Connected to the Inner Harbor, is a quality program with requirements for a number of basic levels and a number of tips, a program developed together with the partners. We are working on what the project will have,

but it is not yet done and established with the municipality. But the basic level will be Miljöbyggnad Silver and follow-up takes place according to the requirements set on each criteria / indicator. The developer is Hyresbostäder i Norrköping AB. The project is expected to start Q4-21 and the estimated completion is Q4-23. Estimated cost approx. SEK 135 million.



### NEW RECYCLING CENTER FOR NORRKÖPING

The purpose of a new recycling center for the city center is to focus on recycling and reuse of products and materials. The budget is SEK 95 million and it is expected to be ready in 2022. The proportion of recycled waste will increase. A good parameter to follow up is how many tonnes of waste are recycled before and after the plant is put into operation. The total amount of waste collected per year is measured per fraction and can be followed up. The buildings will probably be equipped with solar panels for electricity.

## NEW SLUDGE HANDLING SLOTTSHAGEN'S TREATMENT PLANT

By 2022, a new sludge treatment is estimated to be completed at a cost of SEK 60 million. The purpose is to improve the handling of 11,000 tonnes per year of sludge produced at the treatment plant and to reduce the noise and odor impact in the city as well as meet future requirements for environmental management of sludge.

The project's greatest environmental benefit is that the local environment is improved through a sharp reduction in odor. Odor is difficult to measure and model, but the models run show that the odor will be significantly reduced after the project has been completed. In order for nearby new residential areas to have a good outdoor environment, implementation is central. The amount of sludge produced may decrease as the project includes new drainage equipment that can produce a drier sludge and thus a smaller amount of sludge that needs to be deposited. If this is to be measured, it should be put in relation to the number of connected customers who are constantly increasing in Norrköping.

## RENEWAL OF PIPELINE NETWORK VA

The purpose is to reduce the leakage of drinking water to save resources and reduce customer impact and to reduce the leakage into the sewer system to reduce emissions of eutrophication substances in the recipient. The project is estimated to run between the years 2021-2025 and cost SEK 80-90 million per year, a total of SEK 436 million.

How much water is saved is very difficult to measure, unfortunately, as the leakage from the pipe network is large. Instead a parameter called the rate of renewal is used in the water and sewerage industry to measure this type of investments.



## RENOVATIONS AT THE WATEWORKS

The purpose is to maintain and expand the production capacity at our waterworks in the municipality. The environmental benefit is that we can purify water in the coming decades despite a change in raw water, which is the water we use to produce drinking water. The raw water will be warmer and will probably also contain more algae and other organic substances in a changed climate. We can also provide a growing population with clean drinking water. The budget is SEK 100 million in 2021.



**In december 2021 the municipality of Norrköping issued its third portfolio of green bonds.**

The portfolio consists of three projects.

## **SMEDBYSKOLAN**

New production of a school in the area called Smedby for children in preschool class to year 6, special school section and sports hall. Roof construction in wood with a solar cell system that during the first 4 years will produce an average of 30 MWh / year. The building has at least 20% lower energy use per square meter and year compared to current regulations (Boverkets byggregler, BBR) The school has a budget of 250 million and is expected to be ready by the autumn of 2024.



## **LJURA BÄCK**

The purpose and goal with the project is to develop the stream area between Arkösundsvägen and Packaregatan so that the stream can handle a 100-year flow from both natural land and extreme rain. The biological diversity in the stream must increase and prepare for a future walking and recreational cycle path can in the long run be built along Ljura stream. The project is estimated to cost SEK 100 million.



## **STYRSTAD SKOLA**

A new primary school is being built at Kungsängsleden. The new school will be an F-6 school with two classes in each year with a special school part and it will be built with a full-size sports hall. Hybrid frame in wood and steel. Exterior walls and roof construction in wood, including wooden facade, which is advantageous from a climate point of view.

The building has at least 20% lower energy use per square meter and year compared with current regulations (Boverkets byggregler, BBR).

The school has a budget of 250 million and is expected to be ready by the autumn of 2024.



# Vision 2035

## OPTIMISM IN A COLOURFUL NORRKÖPING

In the year 2035, Norrköping is one of the country's leading environmental municipalities with 175 000 inhabitants. All children and young people believe in the future. Entrepreneurship and businesses are stimulated in an innovative environment that attracts talents and students with breadth and excellence. Simply a place with top-class university and businesses.

This is where we create quality of life through experiences and wonderful environments. Norrköping is a leading city of culture and Sweden's music capital.

With respect for the city's soul and with courage and creativity we create our colourful Norrköping together.

INTERNBANKEN

**Address:** Rådhuset, 601 81 Norrköping

**Tel:** 011-15 00 00

**E-post:** [internbanken@norrkoping.se](mailto:internbanken@norrkoping.se)

[www.norrkoping.se](http://www.norrkoping.se)



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