2020-03-13

Green Bond Developments

ANNUAL REPORT 2020
SAMHÄLLSBYGGNADSBOLAGET I NORDEN AB

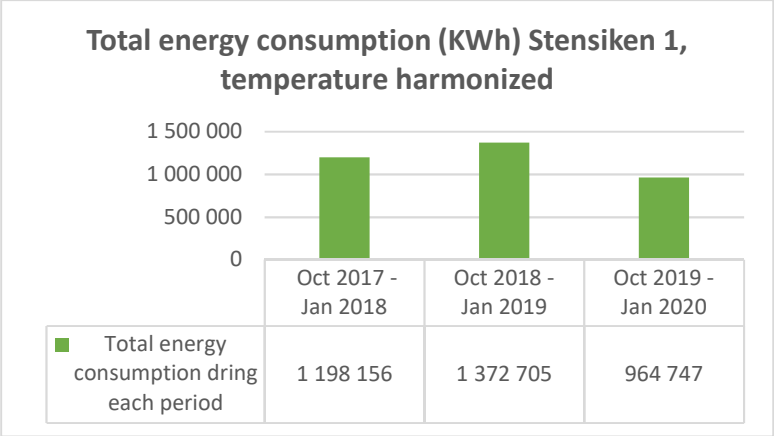
1. Summary of Green Bond Developments

During 2018 and 2019 SBB implemented five energy efficiency projects financed by our green bonds. The projects, three of which were deployed at year end 2019/2020, are at the properties Stensiken 1 (Tidaholm), Yggdrasil 1&2 (Skara), Valhall 5 (Skara), Hermod 1-4 (Skara) and Tellus 1 (Motala). For the first two projects, we have actual savings figures from four autumn and winter months, see the tables below. The reported savings in Valhall 5 are based on the actual savings figures from Yggdrasil and Stensiken as the properties and projects are of an equivalent nature. For the Hermod property, we can only present estimated figures as the project is ongoing and for Tellus 1 we will report on the outcome in the Green Bond Developments Annual Report 2021. The projects include the following measures: additional insulation, recycling of heat from exhaust air and wastewater and the installation of heat pumps applying recycled energy to generate heat for the buildings. In addition to energy saving projects, apartment renovations have also been carried out in parallel in all these properties. During the renovations, the apartments were decontaminated from asbestos and other environmentally hazardous waste. Energy efficient water mixers were installed, and bathtubs were replaced with showers.

2. Actual Savings Outcome in Implemented Projects

The tables below show how energy consumption has been affected by our energy efficiency investments compared to the same period in 2017/2018 and 2018/2019. Total energy means the sum of purchased district heating and purchased building electricity. Purchased district heating includes energy for domestic hot water. The values are adjusted for an average year, implying that we have taken into account that the figures are different for cold and warm periods, respectively. Average year data is sourced from SMHI. We have assumed that 75 per cent of district heating is attributable to heating and 25 per cent to hot water. We have therefore adjusted for an average year for 75 per cent of district heating as tap water consumption is not affected by the outdoor temperature. It is worth noting that in all properties additional insulation has been carried out with completion by the end of 2019/2020, the effect of which can be seen in January 2020 and therefore is only partially included here. Against this background, we believe that our target of 30 per cent reduction in energy consumption has been achieved.

In Stensiken 1, in 2017, we did not have approved ventilation in the property due to incorrect window valves and low ventilation flow, which was an existing problem that the property had prior to SBB owning it. This meant an abnormally low energy consumption because the property lacked proper ventilation. This problem is now fixed, but it also means that energy consumption has increased significantly compared to 2017 when the property partially lacked ventilation.



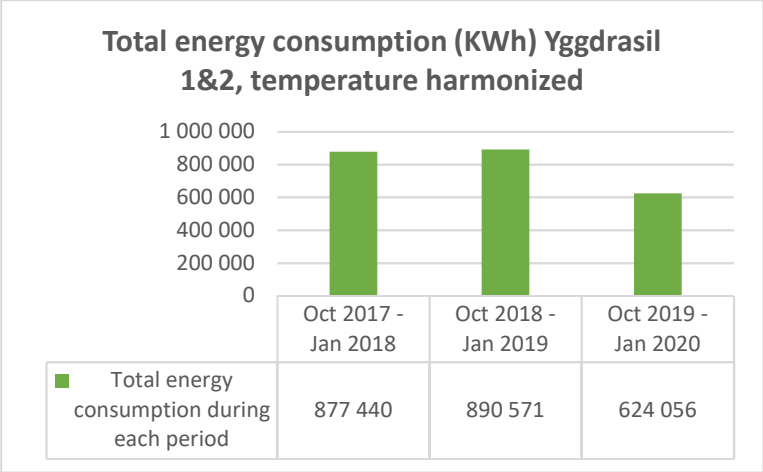
Stensiken 1,

Savings compared to Oct 2017- Jan 2018= 20 per cent or 233409 KWh *, **

Savings compared to Oct 2018- Jan 2019= 30 per cent or 407958 KWh **

*Refers to a period in which the property did not have an approved ventilation due to low flows and thus an abnormally low energy consumption. Non-comparable period.

** The property has been additionally insulated at the end of 2019/ beginning of 2020 and the effect is thus not visible until January 2020.



Yggdrasil 1&2

Savings compared to Oct 2017- Jan 2018= 29 per cent or 253384 KWh*

Savings compared to Oct 2018- Jan 2019= 30 per cent or 266514 KWh*

* The property has been additionally insulated at the end of 2019/ beginning of 2020 and the effect is only included in one of the four months (January 2020)

Based on the actual outcome from Stensiken 1 and Yggdrasil 1&2, it can be noted that, after the projects were implemented, the electricity consumption has increased to 17 per cent and 13 per cent respectively, of total energy consumption. This is due to the transition to heat pumps (powered by electricity). Based on this, it is assumed that, in relation to total energy consumption on a full-year basis, the electricity consumption is approximately 15 per cent on average. In the Green Bond framework building electricity was assumed to correspond to 10 percent of the district heating consumption. Based on the above, the table below identifies the properties Stensiken 1, Yggdrasil 1&2 and Valhall 5 where identical projects in equivalent properties have been implemented.

As set out below, we have saved 1696MWh of energy, which corresponds to a reduction of CO_2 emissions by 146 tonnes / year (this is based on the actual CO_2 emissions from the district heating companies and the European electricity mix, including Norway).

Property name	Energy consumption (MWh)		Energy consumption (kWh/Atemp)		Energy reduction	CO2 emissions reduced/avoided based on Swedish avarage emission factor 25g/KWh		CO2 emissions reduced/avoided based on Euroean baseland mix including Norway 380g/KWh		Share of renewable energy from electricity	Share of renewable energy from districtheating
	Pre renovation	*Post renovation*	*Pre renovation*	*Post renovation*		*Tonnes*	*Grams/Atemp*	*Tonnes*	*Grams/Atemp*		
Tellus 1	5 811		128								
Härsta 9:3	4 249		177								
Gångsta 1:2	1 910		149								
Västland 26:39	2 736		163								
Häggesta 4:21	108		220								
Säversta 7:75	389		196								
Häggesta 7:101+1:102	4 032		174								
Ren 30:204-351	2 684		154								
Ren 30:353+30:352	1 013		159								
Annexet 2	219		126								
Balder 2, 3 och 4	223		196								
Gnistan 2	242		117								
Korsnäs 2:26, 7:1, 8:1, 2:13	741		151								
Lilla Näs 3:41	628		183								
Lilla Näs 3:42-3:43	644		165								
Fålnäs 4:4 och 4:8	369		137								
Brunnsbacken 1	1 257		162								
Siskan 3 och 4	1 875		167								
Klövervallen 1	1 710		135								
Ärtskidan 1	612		143								
Veteaxet 1	124		147								
Kvarnsveden 3:196 & 3:19	2 043		179								
Yggdrasil 1&2	1 823	1 276	147	103	547	14,6	1 181	47,0	36 826	100%	95%
Valhall 5	511	434	281	197	77	2,1	1 130	6,6	15 230	100%	95%
Hermod 1-4	1 860	1 581	122	104	279	7,1	466	24,1	15 212	100%	95%
Stensiken 1	2 642	1 849	120	84	793	25,9	1 177	68,1	36 842	100%	95%
Leten 1,2	2 380		132								
Total	42 835	5 140	4 330	488	1 696	49,7	3 954	146	104 110		

3. Outstanding amount of issued Green Bonds

ISIN SE0012256741 SEK 500m
ISIN XS2021634675 SEK 500m
ISIN XS2050862262 SEK 500m
ISIN XS2111589219 SEK 500m

4. Balance on the Separate Account

Property	Invested Amount (SEK)	Ongoing (SEK)	Remaining (SEK)
Yggdrasil 1&2	81 250 000		
Stensiken 1	133 250 000		
Tellus 1	304 850 000		
Hermod 1	24 635 000		
Hermod 2	28 925 000		
Hermod 3	19 240 000		
Hermod 4	25 805 000		
Valhall 5	21 255 000		
Veteaxet 1		6 279 000	
Klövervallen 1		107 250 000	
Ärtskidan 1		38 090 000	
Västland 26:39		144 950 000	
Härsta 9:3			7 345 000 (JV)
Gångsta 1:2			81 250 000 (JV)
Häggesta 4:21			2 275 000 (JV)
Säversta 7:75			7 540 000 (JV)
Häggesta 7:101+7:102			118 950 000 (JV)
Ren 30:204- 30:351			95 550 000 (JV)
Ren 30:353+352			46 540 000 (JV)
Annexet 2			13 130 000 (JV)
Balder 2, 3 och 4			21 710 000 (JV)
Gnistan 2			11 245 000 (JV)
Korsnäs 2:26, 7:1, 8:1, 2:13			31 733 000
Lilla Näs 3:41-3:43			50 050 000
Fålnäs 4:4 och 4:8			16 250 000
Brunnsbacken 1			47 060 000
Siskan 3&4			65 650 000
Kvarnsveden 3:196 och 3:197			9 750 000 (JV)
Letten 1,2			246 090 000

External Consultant Confirmation

Review of energy saving measures for annual reporting 2020

In general
I have taken part in and reviewed the accounting of energy savings made in the projects Stensiken 1 and Yaggdrasil 1&2.

Stensiken 1
1. Savings towards 2017-2018=20% or 233409 kWh. Refers to a period when the property did not have an approved ventilation due to low flows and thus an abnormally low energy consumption. Not comparable period.

Comment: A well-functioning mechanical exhaust ventilation without heat recovery and with air flows 25-35 l/s,lgh, accounts for about 30-40 % v a building's heat loss in 60-, 70's residential buildings. Against this background, it is reasonable to calculate lower energy consumption before cleaning with very low airflows.

The additional insulation of the attics is estimated to reduce energy consumption by about 30,000kWh during the reported period.
2. Savings against 2018-2019=30%, or 407958 kWh, refer to saving with correct airflows and after energy saving measures.

Comment: The additional insulation of the winds is expected to reduce energy consumption by about 50,000kWh during the reported period. I support the accuracy of the calculation.

Yaggdrasil 1&2
1. Savings against 2017-2018= 29% or 253384 KWh
2. Savings towards 2018-2019=30% or 266514 KWh

Comment: The additional insulation of the attics reduces energy consumption just over 50,000kWh during the reported period.

I support the accuracy of the calculation.

Jukka Kauppinen

INEX Management AB 2020-03-10