

‘Second Opinion’ on Örebro Kommun’s Green Bond framework

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Summary

Overall, Örebro Kommun's (Örebro municipality's) green bond framework and environmental policies provide a progressive, clear and sound framework for climate-friendly investments. Örebro Kommun takes a broad view of climate change impacts in its environmental policies, incorporating life-cycle analysis and a consumption perspective on greenhouse gas emissions. The green bond framework lists eligible projects that are supportive of the objective of promoting a transition to low-carbon and climate-resilient growth. Örebro Kommun's policies support regular and transparent updates to investors and the public.

Strategies and plans supporting low carbon and climate resilient growth in particular, and development towards a sustainable municipality in general, are well developed by Örebro Kommun both at a general and a more detailed level. Procedures for monitoring and measurement of activities are well documented. Results will be published on an annual basis and will be publically available.

1. Introduction and background

As an independent, not-for-profit, research institute, CICERO (Center for International Climate and Environmental Research - Oslo) provides second opinions on institutions' framework and guidance for assessing and selecting eligible projects for green bond investments, and assesses the framework's robustness in meeting the institutions' environmental objectives. The second opinion is based on documentation of rules and frameworks provided by the institutions themselves (the client) and information gathered during meetings, teleconferences and e-mail correspondence with the client.

CICERO's Second Opinions are normally restricted to an evaluation of the mechanisms or framework for selecting eligible projects at a general level. CICERO does not validate or certify the climate effects of single projects, and, thus, has no conflict of interest in regard to single projects. CICERO is neither responsible for how the framework or mechanisms are implemented and followed up by the institutions, nor for the outcome of investments in eligible projects.

This note provides a Second Opinion of Örebro Kommun's Green Bond Framework and policies for considering the environmental impacts of their projects. The aim is to assess Örebro Kommun's Green Bond Framework as to its ability to support Örebro Kommun's stated objective of low-carbon and climate resilient growth.

Climate change will have a significant impact on economic development, both from the perspectives of sustainable future development pathways and from the perspective of adapting to changing circumstances.

The recently released Intergovernmental Panel on Climate Change report (IPCC, 2013) on the physical science of climate change highlighted the seriousness of human-induced climate effects. The report can be viewed as an immediate call to action on the challenge of reducing greenhouse gas (GHG) emissions. The 195 countries that have ratified the United Nations Framework Convention on Climate Change (UNFCCC) have agreed to reduce GHG emissions to limit global temperature increase to below 2°C above pre-industrial level. Reaching this target requires shifting development pathways towards low- or zero-emitting economies without delay, and avoiding locking-in high-emitting capital.

CICERO takes a long-term view on activities that support a low-carbon climate resilient society. In some cases, activities or technologies that reduce near-term emissions result in net emissions or prolonged use of high-emitting infrastructure in the long-run. CICERO strives to avoid locking-in of emissions through careful infrastructure investments, and moving towards low- or zero-emitting infrastructure in the long run.

2. Brief description of Örebro's Green Bond framework and environmental policies

Örebro kommun (municipality) is located in Örebro County in central Sweden. It has a population of approximately 140 000 people with a growth rate above the national average. The municipality has a history of excellence in sustainable transport among other green traits.

Örebro's investment framework includes a Green Bond framework lending to Eligible Projects that target:

- a) mitigation of climate change, including investments in low-carbon and clean technologies, such as energy efficiency and renewable energy programs and projects ("Mitigation Projects")
- b) adaptation to climate change, including investments in climate-resilient growth ("Adaptation Projects") or
- c) to a smaller extent (max 20%) projects which are related to a sustainable environment rather than directly climate related.

Examples of Eligible Projects include:

- Renewable Energy (wind, solar and biogas from waste).
- Energy Efficiency
- Sustainable public transportation excluding fossil fuels, as well as promotion of active transportations by bike and pedestrian.
- Waste Management (recycling and re-use, rehabilitation of contaminated areas).
- Water Management (quality and efficiency, reduced eutrophication and richer biodiversity).

- Sustainable buildings with energy use in new constructions at or below 55 kWh/m² per year in buildings, e.g. schools, nursery schools, nursing homes. In residence buildings e.g. apartment blocks the main housing corporation (ÖBO) requires 65 kWh/m² per year or below in new constructions and a reduction of energy use of at least 20% in connection to major rehabilitation or renovations.
- Nature conservation – protecting, restoring, and creating valuable milieus and rich diversity of plant and animal life.
- Development of non-toxic environments (reduced use of harmful material, dangerous chemicals, toxic pollution).
- Sustainable buildings with densification, health promoting accommodation and surroundings, increasing green values

The projects are supported by comprehensive environmental and climate plans with quantified targets (document 3 and 5 respectively in Table 1) that are monitored and followed up on an annual basis. Document 6 and 7 in Table 1 are examples of such audit reports. The most important documents that can impact the environmental soundness of the municipality's investments are described briefly in this section. See Table 1 for an overview of all documents/references on which this second opinion is based.

Örebro's environmental program (document 3) is structured around five key focus areas: climate change, biological diversity, water, chemicals and the build environment. For each area, a long-term vision has been defined, as well as a set of shorter term milestones. Most importantly, it has been decided that a life cycle perspective shall be applied when calculating cost effectiveness of projects. Furthermore, climate impacts shall be assessed from a consumption perspective, (as opposed to a production perspective), implying that all climate impacts due to activities (e.g. consumption) within the Örebro area shall be counted regardless of where the emission of greenhouse gases actually takes place.

The Climate Plan of Örebro (document 5) has specified three focus areas: Energy, transport and consumption of food. The long term target for the year 2050 is that the Örebro area should be nearly entirely based on renewable energy and the climate burden in the area measured per capita should be reduced by at least 90%. The shorter term target for 2020 is a reduction of 40% measured per capita compared to the 1990 level. The climate burden of the municipality as an organisation should be reduced by 50% measured per capita by the same time (2020).

Table 1 Documents received from Örebro Kommun.

Ref. nr.	File name	Content
1.	Örebro Kommun Green Bond Framework.doc	Brief memo on the Green Bond framework
2.	Miljöbalken.pdf	The Swedish environmental law.
3.	Miljöprogram för Örebro kommun.pdf	The Environmental Program of the municipality of Örebro. A comprehensive overview and summary of the environmental targets and procedures in Örebro within five focus areas.
4.	Övergripande strategier och budget för 2014 med plan för 2015-2016.pdf	Strategies and budgets for Örebro for 2014 with plans for 2015-2016. Lifecycle perspectives in the supply chain emphasised.
5.	Klimatplan.pdf	A comprehensive and detailed climate plan for Örebro with focus on energy, transport and food as seen from a consumption perspective.
6.	Bokslut för hållbar utveckling.pdf	Report on sustainability in Örebro in 2012 covering ecological/environmental, social and economic issues.
7.	Årsredovisning Örebro kommun.pdf	A broader annual report from Örebro municipality for the year 2013.
8.	Riktlinjer för energi - Örebro bostäder (ÖBO).doc	A one-page list of guidelines for energy related matters in Örebro Bostäder AB (ÖBO). An upper limit of 65 kWh per m ² and year for new buildings. Energy use should be reduced by at least 20% in connection with larger rehabilitation or renovation projects on old buildings.
9.	Riktlinjer för miljö - Örebro bostäder (ÖBO).doc	A one-page list of guidelines/intentions with regard to environmental issues for ÖBO.
10.	Örebro kommuns miljöarbete – Underlag till förarbetet kring en grön obligation för Örebro kommun.doc	A background note to the Green Bond issuance. Gives a good overview of references to relevant plans, strategy and audit documents.
11.	Örebro's förtydligande till CICEROs second opinion 2014 08 18.docx	A further note clarifying quantitative target with respect to water management and sustainable environment and describing relations to building certificate systems.

As mentioned, Örebro's Green Bond framework includes a list of eligible mitigation and adaptation projects that promote the transition to low-carbon and climate resilient growth (see Table 2).

Selection of Eligible projects

Eligible projects for Örebro's green bond are selected by the Finance Committee. The proposal for decision will be co-created and processed jointly by the Treasury department together with the Department for Sustainable Development. The foundation for the proposal is based on Örebro Kommun's Environmental Program together with the Investment Program (document 3 and 4, respectively). The environmental program is companioned by the following plans: the Climate plan, the Water management plan and the Nature conservation plan and the upcoming Waste management plan and the Transport management plan.

Table 2: Eligible project categories

Primary objective	Examples of eligible project types
Mitigation including investments in low-carbon and clean technologies, such as energy efficiency and renewable energy programs and projects	<ul style="list-style-type: none"> • Renewable Energy (wind, solar and biogas) • Energy Efficiency • Sustainable public transportation excluding fossil fuels as well as promotion of active transportations by bike and pedestrian • Sustainable buildings with energy use in new constructions at or below 55 kWh/m² per year in buildings, e. g. schools, nursery schools, nursing homes. In residence buildings e.g. apartment blocks the main housing corporation (ÖBO) requires 65 kWh/m² per year or below in new constructions and a reduction of energy use of at least 20% in connection to major rehabilitation or renovations. • Waste Management (recycling and re-use, rehabilitation of contaminated areas)
Adaptation including investments in climate-resilient growth	<ul style="list-style-type: none"> • Water Management (quality and efficiency, reduced eutrophication, and richer diversity)
Miscellaneous, projects which are related to sustainable environment	<ul style="list-style-type: none"> • Nature conservation – protecting, restoring, and create valuable milieus and rich diversity of plant and animal life • Development of non-toxic environments (reduced use of harmful material, dangerous chemicals, toxic pollution) • Sustainable buildings with densification, health promoting accommodation and surroundings, increasing green values

Transparency

To enable investors to follow the development and provide insight to prioritised areas, Örebro Kommun will provide an annual investor letter to investors including 1) a list of projects financed 2) a selection of project examples and 3) a summary of Örebro Kommun's Green Bond development. The investor letter will be made publically available on Örebro Kommun's web page. Furthermore, the principle of free access to public records is applied.

3. Assessment of Örebro’s Green Bond framework and environmental policies

Overall, Örebro’s green bond framework and environmental policies provide a progressive, clear and sound framework for climate-friendly investments. The framework and procedures for Örebro’s environmental investments are assessed according to both the micro or project level impacts and the wider (macro-level) impacts in this section.

Municipal environmental policies

The vision of Örebro’s environmental work is to solve current environmental problems and not leave them to the next generation based on a life cycle and consumer oriented perspective (document 3). The work is grounded in national targets applied in a local setting. Örebro’s work on environmental sustainability focuses on areas such as climate, biodiversity, water, chemicals and the build environment. Ambitious targets are set for the climate impacts of all activities with the municipality.

Eligible projects under the Green Bond framework

The eligible projects listed in the Green Bonds framework are generally supportive of Örebro’s identified objective of promoting a transition to low-carbon and climate-resilient growth, see Table 3. The longer term vision is of a near total phase out of fossil fuels with quantified milestones towards the long term target in 2050.

Table 3. Likelihood of meeting objectives.

Primary objective	Examples of eligible project types	Likelihood of meeting objective
Mitigation including investments in low-carbon and clean technologies, such as energy efficiency and renewable energy programs and projects	<ul style="list-style-type: none"> Renewable Energy (wind, solar and biogas) Energy Efficiency Sustainable public transportation excluding fossil fuels as well as promotion of active transportations by bike and pedestrian Sustainable buildings with energy use in new constructions at or below 55 kWh/m² per year in buildings, e. g. schools, nursery schools, nursing homes. In residence buildings e.g. apartment blocks the main housing corporation (ÖBO) requires 65 kWh/m² per year or below in new constructions and a reduction of energy use of at least 20% in connection to major rehabilitation or renovations. Waste Management (recycling and re-use, rehabilitation of contaminated areas) 	<ul style="list-style-type: none"> Good. In particular we welcome the use of a life cycle perspective combined with a consumer perspective on climate impacts. We also note with satisfaction the exclusion of fossil fuels in transport projects. The building criteria are very good. Waste management likely to reduce methane emissions.

Adaptation including investments in climate-resilient growth	<ul style="list-style-type: none"> • Water Management (quality and efficiency, reduced eutrophication, and richer diversity) 	<ul style="list-style-type: none"> • Good.
Miscellaneous, projects which are related to sustainable environment	<ul style="list-style-type: none"> • Nature conservation – protecting, restoring, and create valuable milieus and rich diversity of plant and animal life • Development of non-toxic environments (reduced use of harmful material, dangerous chemicals, toxic pollution) • Sustainable buildings with densification, health promoting accommodation and surroundings, increasing green values 	<ul style="list-style-type: none"> • Good.

Environmental certification systems for buildings

Several voluntary environmental certification systems provide some level of measurement of the environmental footprint of a building, including energy efficiency measures. One of the most widely used certification system is Leadership in Energy and Environmental Design (LEED), although many other country-specific systems exist. See LEED (2009a, b, c) for a description. Another similar system originating in the United Kingdom is the BREEAM ratings. BREEAM SE (BREEAM, 2013) is the Swedish adaptation of this system. BREEAM also includes a comprehensive consideration of environmental and energy issues associated with buildings, including a category on land use and site selection. A rating is issued based on points earned, similar to LEED, with minimum requirements for some environmental issues.

Finally, the Miljöbyggnad certification system is specific to Sweden. The system involves a preliminary rating which is then verified in the finished building. This system is more detailed than LEED or BREEAM SE in some aspects such as the calculation of energy efficiency. See Miljöbyggnad (2012a, b, c) for elaboration on this framework.

Örebro Kommun is not applying any of these more or less standardized frameworks, but has a kWh per m² and year target for new buildings and an improvement target for rehabilitation projects. We find these targets to be very good energy wise compared to the highest levels in the standardized frameworks, e.g. Miljöbyggnad Gold.

Strengths

- Örebro's strategies and procedures are wide-spanning, comprehensive and ambitious with clear and quantified target for the long and shorter term.
- Örebro has a comprehensive system for monitoring and assessing progress on an annual basis.
- Örebro employs a life cycle perspective in the cost efficiency evaluation of projects, and uses a consumer perspective when assessing the climate change impacts of its activities.

- Fossil fuel use is excluded from eligible transport projects.
- A component of Örebro's Green Bond framework is energy efficiency projects in the buildings sector. The buildings sector consumes the most energy globally, accounting for over 40% of primary energy consumption in most International Energy Agency (IEA) member countries (IEA/UNDP, 2011). Energy efficiency improvements in buildings are thus important building blocks towards reaching the 2°C goal. Örebro will apply stringent criteria for both new buildings and in rehabilitation of existing buildings.
- Reporting and transparency is at a very high level.

Weaknesses

- We find no weaknesses in Örebro kommun's Green Bonds Framework.

Pitfalls

Beyond the consideration of specific project types, it is important to evaluate the potential for macro-level impacts of climate activities.

Impacts beyond the project boundary

Due to the complexity of how socio-economic activities impact the climate a specific project is likely to have interactions with the broader community beyond the project borders. These interactions may or may not be climate-friendly, and thus need to be considered with regards to the net impact of climate-related investments.

Örebro uses a life-cycle approach in assessing the cost efficiency of projects. It also considers the environmental impacts of its activities outside of the Örebro area, by using a consumption perspective. Both of these factors are likely to internalize a fair share of any external impacts and as such a positive characteristic of Örebro's Green Bond Framework.

Rebound effects

Another macro-level concern is the potential for rebound effects. This can occur when GHG reductions result in a net increase in emitting activities. For example, energy efficiency improvements that lower energy costs, inducing more energy use and partially offsetting energy savings. This can have the end result of lower reduction in GHG emissions than anticipated. While these effects can never be entirely avoided, it is recommended to be aware of possible rebound effects and avoid investing in projects where the risk of such effects is particularly high. We cannot see that the risk for substantial rebound effects is high in the case of Örebro's Green Bond framework.

Transparency and monitoring, reporting and verification

The reporting and validation procedures are described well in the Green Bond framework and other documents. Örebro's policies support regular and transparent updates to investors and the public. Annual reports on green bond investments, a selection of project examples, and a summary of Örebro's Green Bond development will be made public on their website. Örebro Kommun is a public institution, and documentation and information related to the county's activities is publicly available.

References

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IEA/UNDP (2011). Modernizing Building Energy Codes, International Energy Agency and United Nations Development Programme.

IPCC (2013). Climate Change 2013: The Physical Science Basis, Fifth Assessment Report, Intergovernmental Panel on Climate Change.

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LEED (2009b). LEED 2009 for Existing Buildings Operation and Maintenance, US Green Building Council.

LEED (2009c). LEED 2009 for New Construction and Major Renovations, US Green Building Council.

Miljöbyggnad (2012a). Miljöbyggnad Certification Process, Swedish Green Building Council.

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Miljöbyggnad (2012c). Miljöbyggnad New Buildings, Manual 2.1, Swedish Green Building Council.