

‘Second Opinion’ on Vasakronan’s Green Finance Framework

September 4th, 2018

Summary

Vasakronan's Green Finance Framework sets high and progressive standards that exceed legal requirements for its project categories, and features examples of thought leadership and industry best practices. It aligns with the ICMA's 2018 Green Bond Principles as well as ICMA's Green Loan Principles, and provides a strong, forward-thinking approach to green financing for emissions reduction and climate resilience initiatives within the company's operations. Projects cover new constructions and major renovation with excellent classifications in addition to requirement of energy performance at least 25% below Swedish building regulations. Furthermore, existing buildings (operation and management) with good energy and environmental performance are included. This also covers transport infrastructure, waste and water management. Environmental and social implications across the life cycle of building design, construction, management, and demolition are carefully considered, including across the supply chain. Vasakronan focuses on shifting to 100 percent renewable energy to power its entire portfolio of properties. The company is already climate neutral (in scope 1 and 2), having reduced its emissions by 97 percent since 2006. The company's ambition is to have a 100 percent certified portfolio, to reach LEED Platinum for all new construction and major renovation projects, and to reach at least LEED Gold for all existing buildings. The long-term goal is to have 100 percent green funding with high requirements for eligibility. According to the issuer, proceeds generated under this framework will in a majority of cases be allocated to existing buildings. No fossil or nuclear fuel related projects will be funded.

Vasakronan is an experienced green bond issuer, being the world's first company to issue a green bond in November 2013. This "Green Finance Framework", dated 3. September 2018 is an update to Vasakronan's Green Bond Framework dated 15 March 2017. It includes green bonds in addition to other financing instruments for eligible assets such as Green Commercial Papers, Green Private Placements, Green Loans, and other types of debt instruments.

Vasakronan has well-established governance procedures that ensure transparency and accountability. Annual impact reports will include a full list of projects, amounts allocated by project category, emissions reduced, and waste diverted, among other indicators. Progress against baselines is provided where possible. The reports will be made available to both investors and the public and are verified externally every year. Impact reporting of short-term (one year or shorter) green finance instruments will be a challenge. Vasakronan will report quarterly on some issues, but only at the company level.

Based on CICERO's assessment of the climate implications of project categories, governance procedures, and goals and reporting requirements outlined, Vasakronan's Green Finance Framework is given a Dark Green shading. It is very challenging to get a dark green shading in the building sector, but Vasakronan makes it not least due to its strong and consistent governance system and structure.



°CICERO
Dark Green

Contents

Summary	2
1 Introduction and background	4
Expressing risk and impact with ‘shades of green’	5
2 Brief Description of Vasakronan’s Green Finance Framework and rules and procedures for climate-related activities	6
Use of proceeds:	7
Selection and Evaluation:	7
Management of proceeds:	7
Transparency and Accountability	8
3 Assessment of Vasakronan’s Green Financing Framework and environmental policies	11
Overall shading	11
Eligible projects under the Green Finance Framework	11
Strengths	13
Weaknesses	13
Potential risks and pitfalls	14
Appendix: About CICERO	15

1 Introduction and background

As an independent, not-for-profit, research institute, CICERO Center for International Climate Research provides independent Second Opinions on institutions' green finance frameworks. These includes a focused overview of selection and evaluation criteria for eligible projects as well as an assessment of the framework's alignment with the institutions' environmental objectives and a low-carbon, climate resilient economy. 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 has established the global Expert Network on Second Opinions (ENSO), a network of independent non-profit research institutions on climate change and other environmental issues, to expand the technical and geographic breadth and depth for Second Opinions reviews. CICERO works confidentially with other members in the network to enhance the links to climate and environmental science, building upon the CICERO model for Second Opinions. In addition to CICERO, ENSO members currently include Basque Center for Climate Change (BC3), International Institute for Sustainable Development (IISD), Stockholm Environment Institute (SEI), and Tsinghua University's Institute of Energy, Environment and Economy. A more detailed description of CICERO can be found at the end of this report. ENSO encourages the client to make this Second Opinion publicly available. If any part of the Second Opinion is quoted, the full report must be made available.

CICERO's Second Opinions are normally restricted to an evaluation of the mechanisms or framework for selecting eligible projects at a general level. ENSO network members do not validate or certify the climate effects of single projects, and thus, have no conflict of interest with regard to single projects. Network members are neither responsible for how the framework or mechanisms are implemented and followed up by the institutions, nor the outcome of investments in eligible projects. CICERO is independent of the entity issuing the bond, its directors, senior management and advisers, and is remunerated in a way that prevents any conflicts of interests arising as a result of the fee structure.

This note provides a Second Opinion of Vasakronan's Green Finance Framework and policies for considering the environmental impacts of their projects. The aim is to assess the Vasakronan's Green Finance Framework as to its ability to support their stated objective supporting the transition to a low carbon and climate resilient society.

This Second Opinion is based on the green finance framework presented to CICERO by the issuer. Any amendments or updates to the framework require that CICERO undertake a new assessment.

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 long-term emissions with short-term solutions and encourages careful infrastructure investments that will move economies towards low- or zero-emitting, climate resilient infrastructure and activities in the long run. Proceeds from green instruments may be used for financing, including refinancing, new or existing green projects as defined under the mechanisms or framework. In this Second Opinion, CICERO assesses the alignment of issuer's proposed project categories with a smooth transition to a low-carbon and climate resilient future.

Expressing risk and impact with ‘shades of green’

CICERO Second Opinions award a dark green, medium green or light green shading, reflecting both the climate and environmental ambitions and the governance structure of the green finance framework, as well as the resulting investments’ short and long-term exposure to carbon risk. The shading is based on a broad qualitative assessment of each project type, in addition to the governance structures that support implementation of the framework, according to what extent it contributes to a low-carbon and climate resilient society. The shading is also intended to translate climate science into investment risk for investors: a dark green project is less exposed to climate risks than a lighter green investment. Investments in all shades of green projects are necessary in order to successfully implement the ambition of the Paris agreement.

The ‘shades of green’ indicate the following:

- **Dark green** for projects and solutions that are present-day realizations of the long-term vision of a low carbon and climate resilient future. Typically, this will entail net-zero or net-negative emissions investments and governance structures that transparently integrate environmental concerns into project design and implementation.
- **Medium green** for projects and solutions that represent steps towards the long-term vision by reducing emissions in the short- to medium- term and actively facilitating the transition to a low carbon, climate resilient.
- **Light green** for quick fix projects and solutions that reduce the environmental impact of existing technologies and begin the transition to the long-term vision, but are not expected to be part of medium or long-term solutions (e.g. energy efficiency in fossil-based processes).
- **Brown** for projects that do not improve or enhance the detrimental environmental effects of an activity or technology, in opposition of the long-term vision of a low carbon and climate resilient future.

The overall rating is defined primarily by the project types that will be financed by the green finance instruments, with additional consideration of the issuer’s governance and transparency measures. The latter demonstrates the issuing institutions systems and capacity to identify, deliver, and report on the framework objectives. The overall shading reflects an ambition of having the majority of the project types well represented in the future portfolio, unless otherwise expressed by the issuer.

2 Brief Description of Vasakronan's Green Finance Framework and rules and procedures for climate-related activities

Vasakronan is the leading property company in The Nordics with 180 properties across four major regions – Stockholm, Uppsala, Gothenburg and Öresund, with a total area of 2.4 million square meters, valued at SEK 134 billion (June 30, 2018). Vasakronan is jointly owned by the First, Second, Third and Fourth Swedish National Pension Funds.

Vasakronan is an experienced green bond issuer, being the world's first company to issue a green bond in November 2013. This "Green Finance Framework" has been developed in alignment with the Green Bond Principles 2018 and is an update to Vasakronan's Green Bond Framework dated 15 March 2017. It includes green bonds in addition to other financing instruments for eligible assets such as Green Commercial Papers, Green Private Placements, Green Loans, and other types of debt instruments where the use of proceeds are applied exclusively to finance or refinance, in part or in full, new and/or existing assets with environmental benefits.

According to the issuer, environmental and social implications across the life cycle of building design, construction, management, and demolition are carefully considered, including across the supply chain: the issuer includes environmental requirements in 100 percent of agreements with its 2800 direct suppliers. Recognizing that the building sector is responsible for approximately 40 percent of anthropogenic greenhouse gas emissions, Vasakronan focuses on lowering energy consumption and shifting to 100 percent renewable energy to power its entire portfolio of properties. The company is already climate neutral (in scope 1 and 2), having reduced its emissions by 97 percent since 2006 and bridging the difference with carbon offsets. Buildings in the company's portfolio are required to achieve environmental certifications to demonstrate improved performance. The company's ambition is to have a 100 percent certified portfolio, to reach LEED Platinum for all new construction and major renovation projects, and to reach at least LEED Gold for all existing buildings. The long-term goal is to have 100 percent green funding with high requirements for eligibility.

According to Vasakronan's 2017 Sustainability Report, the company's 2017 environmental goals include quantitative targets, such as 100 percent renewable fuel for transportation, 10 percent reduction in emissions from commuting and business travel, and 5 percent reduced waste generation from project development activities relative to 2016 levels. The longer-term targets are zero emissions (scope 1 and 2) and better identification of emissions related to the construction phase of building in order to be able to secure climate neutrality. The sustainability report also includes a full stakeholder engagement and materiality analysis.

Environmental initiatives are based on the Precautionary Principle and are carried out in compliance with company's environmental management system, which has been structured in accordance with the ISO 14001 standard. The environmental management system has been integrated into the company's overall quality system and coordinated with the business planning process, demonstrating a high-level commitment to sustainability targets. Both internal and external audits are performed to ensure compliance with the environmental management system.

The results of Vasakronan's sustainability work are reported annually, using the Global Reporting Initiative's Standards, and are available as part of the company's Annual Report and on the company's website,

www.vasakronan.se. Energy performance, water intensity and quantity of certified properties are reported quarterly. Since 2012, Vasakronan has also reported sustainability performance to GRESB, which has rated Vasakronan “Green star” every year since 2013. The company is also a UN Global Compact signatory, reports annual on greenhouse gas emissions according to the GHG Protocol, has made a commitment to set science based targets, and is developing a strategy to incorporate Sustainable Development Goals into processes and policies.

Use of proceeds:

Under this framework, Vasakronan green finance instruments will raise funds to finance or refinance, in whole or in part, new and/or existing eligible assets with environmental benefits. Eligible assets include sustainable property, new construction of sustainable properties, and major renovations or maintenance that improve environmental performance. Based on history, the majority of finance will go to the last category. The focus is on lowering energy consumption of buildings, shifting to renewable energy sources, and combating emissions from the construction phase as well as transportation and travel to and from buildings from Vasakronan’s own operations and that of its direct suppliers.

The issuer has identified three major project categories that further its mitigation and adaptation goals; they include the following: 1. New construction and major renovation of buildings; 2. existing buildings retrofits and improvements; and 3. renewable energy projects. In all three cases, the framework specifies that buildings or assets must be owned and managed by Vasakronan and/or its subsidiaries. Assets in new construction and renewable energy projects will correspond to the invested amount. Assets in existing buildings will correspond to market value, less debts from other sources, if applicable. Accredited appraisers determine the market value twice per year.

Vasakronan’s Green Financing Framework explicitly excludes fossil fuel and nuclear power projects.

Selection and Evaluation:

CICERO considers effective and transparent governance processes a key function of an issuer’s ability to deliver climate impact through its green financing portfolio; the selection process is the first, and potentially most important, step of any governance procedure because it defines the portfolio. CICERO carefully considers how climate and environmental considerations are taken into account when identifying, screening, and approving potential eligible projects for green financing; this includes both the process and the personnel involved. The broader the project categories, the more importance CICERO places on the governance process.

Eligible assets are selected by Vasakronan’s Green Finance Committee. The decisions are documented, and the Head of Sustainability, who is responsible for environmental issues, has a veto in every decision. The Head of Sustainability has more than 10 years of experience in sustainability issues, is well versed in reporting, standardization and certification systems and has a solid background in environmental questions related to buildings.

To ensure legitimacy in the selection process, the Treasury department keeps an updated list of the Eligible Assets in the Green Asset Pool. The list will be used as a work tool to track allocation of proceeds and indicate whether there are enough proceeds to fund new projects. Such issuance will require that there is an existing capacity to utilize the net proceeds in accordance to the Green Finance Framework and Vasakronan’s financial policy.

Management of proceeds:

According to this framework, the Treasury department will manage the net proceeds from Green Finance Instruments and allocation on a portfolio basis to ensure traceability. Proceeds from issued Green Finance

Instruments are kept separate from other bank accounts to make sure they can be transparently and effectively monitored. Any transfers to or from the account will be documented and tracked. Net proceeds not yet allocated and/or held in the form of cash or time deposit in banks will be disclosed.

If the nominal outstanding amount of Green Finance Instruments at any time exceeds the Green Asset Pool, an amount equal to the net proceeds of the issue of the Green Finance Instruments will be credited to a special account (“Special Account”). A transfer is allowed from the Special Account if the value of the Green Asset Pool exceeds the nominal amount of outstanding Green Finance Instruments.

If, in connection to the issuance of new Green Finance Instruments, the Green Asset Pool exceeds the total nominal amount of outstanding plus new Green Finance Instruments, the balance of the account will be zero and no net proceeds will be credited to the Special Account upon issuance.

According to the framework, any property that does not reach the anticipated certification level for any reason will be removed from the Green Asset Pool and replaced by another eligible asset. If Vasakronan sells a property, that asset will also be removed from the Green Asset Pool and replaced by an eligible asset.

The internal tracking method, the allocation of proceeds from Green Finance Instruments and the balance of the Special Account will be audited by an external auditor on an annual basis. The opinion of the external auditor will be made publicly available on Vasakronan’s website, www.vasakronan.se.

Transparency and Accountability

Transparency and accountability in reporting and verification of impacts are key factors that enable investors to track impact of green portfolios and protect the integrity of the market. CICERO looks for and encourages clear baselines for performance measurement, quantitative targets and indicators – where possible, as well as regular reporting and external verification of the data.

To enable investors to track portfolio development and provide targeted insight, Vasakronan will provide an annual Green Finance Impact Report which will be made publicly available on the company website. The report includes a list of eligible assets in the green assets pool along with, to the extent data is available per asset, the following:

1. A list of Eligible Assets in the Green Asset Pool together with, to the extent data is available per asset;
 - a. type of certification and level
 - b. energy performance (kWh per sqm)
 - c. energy generated (kWh per year)
 - d. CO₂ emissions (Scope 1 and 2, kg per sqm)
 - e. waste data (waste diverted from landfill) from the construction phase (for new construction and major renovation projects) or diversion rate for waste collected from tenants (for existing buildings)
 - f. water intensity (m³ per sqm and year)
 - g. material consumption (for new construction and major renovation projects, kg per produced sqm)
2. A selection of project examples
3. A summary of Vasakronan’s Green Finance Instruments’ development and an estimate of the share of financing versus re-financing of Green Assets.
4. The amounts outstanding for each category of Green Finance Instruments.
5. In addition to Green Finance Instruments issued by Vasakronan in the capital market, the company may have Green Loans provided by lending institutions. The same criteria for Eligible Assets specified in the

framework applies for Green Loans. Green Loans taken by Vasakronan may be provided by lending institutions that finance these by issuing Green Bonds. In order to prevent double counting, Vasakronan will report the aggregate amount of Green Loans taken and specify each Eligible Asset that has been financed by a Green Loan in a separate section of the Green Finance Impact Report.

6. Balance of the Special Account and the available green value headroom (if any).
7. A list of relevant, key sustainability figures for the company as a whole, such as energy performance, CO₂ emissions, waste data and water intensity.

The Green Finance Impact Report is a part of Vasakronan's annual report and will be reviewed and verified by Vasakronan's auditor. The report, together with the Green Finance Framework, assurance from the auditor and this second opinion, will be available on Vasakronan's website, www.vasakronan.se.

If an Eligible Asset is not fully financed or refinanced with net proceeds from Vasakronan's Green Finance Instruments, Vasakronan will disclose the entire project and highlight the part financed/refinanced by net proceeds from Vasakronan's Green Finance Instruments. Vasakronan will only account for the net proceeds and impact in relation to the amount financed/refinanced by Vasakronan's Green Finance Instruments in its impact reporting.

On a quarterly basis, Vasakronan will report:

Financial figures such as: Total approved investment amount; volume outstanding Green Bonds; volume outstanding Green Commercial Paper; total volume Green Finance Instruments and remaining approved investment amount.

Quarterly environmental information will be reported at the company level and will include: Energy performance and Certification as share of total area in percentage.

The table below lists the documents that formed the basis for this Second Opinion:

Document Number	Document Name	Description
1	Vasakronan Green Finance Framework dated 27. August 2018	Update of the Green Bond framework
2	Vasakronan Summary of Sustainability Data 2016	A review of Vasakronan's sustainability report in the GRI Standards format, including targets, indicators, and performance metrics on material environmental issues.
3	Supplier code of conduct	https://en.vasakronan.se/files/2018/07/English-version-code-of-conduct-suppliers-uppförandekod-för-leverantörer.pdf

4	Environmental Management System overview	A short document and a ppt file describing the management system. Will be updated in accordance with the updated Green Finance Framework
5	Info on Green Leases	A description on how green aspects now are part of the standard leasing contracts of Vasakronan
6	Miljöpolicy – Environmental policy	https://vasakronan.se/wp-content/uploads/Miljöpolicy-rev-webb.pdf
7	Miljöaspektregister	A comprehensive table of environmental aspects associated with Vasakronan’s activities and how Vasakronan is positioned on these issues relative to the building sector in Sweden
8	Rapportering GFF	A short description on how Vasakronan will report on impacts at an annual and quarterly basis
9	ISO-certifikat	https://vasakronan.se/wp-content/uploads/ISO14001_2015_certifikat_Vasakronan_170510.pdf
10	Fossil fuel related equipment	A document declaring that Vasakronan does not own any buildings with fossil fuel dependent equipment. Furthermore, should Vasakronan acquire a building with that kind of equipment, one of the first priorities would be to convert the equipment/heating system to renewable energy sources, some kind of heat pumps or district heating.

Table 1 Documents reviewed

3 Assessment of Vasakronan’s Green Financing Framework and environmental policies

The framework and procedures for Green Financing Framework are assessed and their strengths and weaknesses are discussed in this section. The strengths of an investment framework with respect to environmental impact are areas where it clearly supports low-carbon and resilience projects, whereas the weaknesses are typically areas that are unclear or too general. Pitfalls are also raised in this section to note areas where issuers should be aware of potential macro-level impacts of investment projects.

Overall shading

Based on the project category shadings detailed below, and consideration of the issuer’s systematic sustainability work and governance structure of Vasakronan’s Green Financing Framework in terms of management and use of proceeds, we rate the framework **CICERO Dark Green**.

Eligible projects under the Green Finance Framework

At the basic level, the selection of eligible project categories is the primary mechanism to ensure that projects deliver environmental benefits. Through selection of project categories with clear environmental benefits, green finance instruments aim to provide certainty to investors that their investments deliver environmental returns as well as financial returns. The Green Bonds Principles (GBP) state that the “overall environmental profile” of a project should be assessed and that the selection process should be “well defined”.

Category	Eligible project types	Green Shading and some concerns
New Construction and major renovation	<ul style="list-style-type: none"> ✓ Buildings that have an energy performance at least 25% below building regulation (Swedish BBR code) valid at time of approval by Green Finance Committee. Buildings have or will receive: <ul style="list-style-type: none"> ✓ LEED New Construction or Core and Shell, minimum certification level “Platinum” ✓ BREEAM New Construction, minimum certification level “Outstanding” 	<p>Medium to Dark Green</p> <ul style="list-style-type: none"> ✓ This category receives a medium to dark green shading because of its high ambitions on energy efficiency (LEED Platinum, BREEAM Outstanding). ✓ In a low-carbon, climate resilient 2050 scenario, the energy performance of buildings is expected to be carbon neutral with passive and energy-contributing housing technologies becoming more mainstream and the energy performance of existing buildings greatly improved through refurbishments.

- ✓ Voluntary certifications, such as those selected by Vasakronan, provide effective and varying levels of measurement for environmental performance of a building. However, these certification levels alone do not necessarily ensure passive or plus housing, however the 25% requirement is a step in this direction.

**Existing buildings, not more than ten years old, with an energy performance less than 100 kWh/sqm with certification Gold level LEED existing buildings:
Operations and Maintenance**

Example activities include:

- ✓ Building energy retrofits – equipment upgrades, lighting/HVAC or deep retrofits – systems/envelope.

Medium to Dark Green

- ✓ This category receives a medium to dark green shading because of its high ambitions on energy efficiency and renewables, in addition to progressive waste and water management.
- ✓ Retrofits introduces the possibility of rebound effects; we encourage the issuer to manage for these risks. No fossil fuel dependent equipment will be included, so lock-in effects are not an issue.

- ✓ Onsite renewable energy generation powering the building and/or distributed to the grid (solar, wind, geothermal – from rock)

- ✓ Offsite renewable energy purchase

- ✓ Peak load demand reduction (thermal energy storage, batteries, and demand responses systems)

- ✓ Waste management in place to ensure better recycling rates

- ✓ Minimize potable water consumption /disposal (storm water capture and recycling, green or vegetated roofs, no potable water in

	landscaping, water metering / monitoring systems.	
	✓ Clean transportation infrastructure (EV charging stations, bike facilities)	
	✓ Climate risk analysis and adaptation of buildings to cope with estimated climate change within the coming 50 years (greater snow loads on roofs, on-site storm water capacity)	
Renewable energy projects	• Solar energy projects developed and owned by Vasakronan	Dark Green

Table 2. Eligible project categories

Strengths

Vasakronan has a very solid Environmental Management system in place well integrated into the company's main activities. The environmental management strategies are in accordance with ISO 140001 Certification. Vasakronan has integrated "green concerns" in its leasing contracts and uses the highest certifications as a baseline requirement for project categories (BREEAM Outstanding, LEED Platinum) and also includes additional emissions reduction requirements. The Swedish building regulation is stringent, so the baseline compliance is already indicative of high environmental performance. Vasakronan's explicit exclusion of fossil fuel projects is a clear strength.

Vasakronan includes climate risk analysis in its project categories – this analysis will help identify and avoid future climate risk that can be damaging to investors. The 2017 environmental goals from the 2016 Sustainability Report include quantitative targets and explicit baselines, such as 100 percent renewable fuel for transportation, 10 percent reduction in emissions from commuting and business travel, and 5 percent reduced waste generation from project development activities. The report includes a full stakeholder engagement and materiality analysis, and tracks volume of waste streams by type. It also includes historical Scope 3 emissions data (commuting, suppliers, transportation, waste), with a long-term ambition of being climate neutral without carbon offsets.

The issuer issues sustainability reports annually in accordance with GRI Standards and is a signatory of the UN Global Compact, using its ten principles to guide its sustainability strategy. It is also incorporating material sustainable development goals and has made a commitment to set science based targets. Vasakronan has a much shorter quarterly reporting on financial and a few environmental topics. Vasakronan includes emissions from supply chain and applies environmental requirements to all 2800 supplier agreements, which are also subject to audit.

Weaknesses

No significant weakness perceived in the Vasakronan's Green Finance Framework.

Potential risks and pitfalls

Some of the eligible project categories relies on equipment such as solar panels and batteries. Vasakronan should consider developing procedures that secure environmentally friendly disposal of equipment at their end of life.

Impact reporting of short-term (one year or shorter) green finance instruments will be a challenge. Vasakronan will report quarterly on some issues, but only at the company level.

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.

Rebound effects

Efficiency improvements may lead to rebound effects. When the cost of an activity is reduced, there will be incentives to do more of the same activity. From the project categories in Table 2 an example is improved energy efficiency, which in part may lead to more energy use. Vasakronan should be aware of such effects and possibly avoid Green funding of projects where the risk of rebound effects is particularly high. Their program to work with tenants to help reduce energy use will counter such rebound effects.

Appendix: About CICERO

CICERO Center for International Climate Research is Norway's foremost institute for interdisciplinary climate research. We deliver new insight that helps solve the climate challenge and strengthen inter-national climate cooperation. We collaborate with top researchers from around the world and publish in recognized international journals, reports, books and periodicals. CICERO has garnered particular attention for its work on the effects of manmade emissions on the climate and the formulation of inter-national agreements and has played an active role in the UN's IPCC since 1995.

CICERO is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO received a Green Bond Award from Climate Bonds Initiative for being the biggest second opinion provider in 2016 and from Environmental Finance for being the best external review provider (2017).

CICERO Second Opinions are graded dark green, medium green and light green to offer investors better insight in the environmental quality of green bonds. The shading, introduced in spring 2015, reflects the climate and environmental ambitions of the bonds in the light of the transition to a low-car-bon society.

CICERO works with both international and domestic issuers, drawing on the global expertise of the Expert Network on Second Opinions. Led by CICERO, ENSO is comprised of trusted research institutions and reputable experts on climate change and other environmental issues, including the Basque Center for Climate Change (BC3), the Stockholm Environment Institute, the Institute of Energy, Environment and Economy at Tsinghua University and the International Institute for Sustainable Development (IISD). ENSO operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

