

‘Second Opinion’ on Sogn Fjordane Energi’s (SFE) Green Bond Framework

15. mai 2018

Summary

Overall, Sogn Fjordane Energi's (SFE) Green Bond Framework, combined with its environmental management strategy for hydro and wind power generation, provides a sound framework for climate friendly investments. SFE's Green Bond Framework is in line with the recommendations of the Green Bond Principles. The framework promotes climate mitigation measures through investments in renewable energy and energy efficiency projects, as well as related infrastructure, which will result in a more distributed and efficient grid with a smoother demand curve. Given Norway's largely renewable-based electricity mix, investments in transmission and distribution grids are unlikely to lock-in or provide incentives for the use of fossil fuels.

According to the issuer, proceeds generated under this framework will be used to finance – in whole or in part – the acquisition and development of new renewable energy and energy efficiency projects in Norway, to renovate and upgrade existing eligible projects, and to refinancing existing eligible projects.

SFE complies with and, according to the company, in some instances exceeds Norwegian environmental regulations for routine project management practices. The issuer shared examples of this, which include: using biodegradable oil on all new transformers in the distribution network since 2008, conducting assessments on making a switch to synthetic oils in turbines and hydraulic systems for new power plants to reduce impact of potential spills on fragile fjord ecosystems; and implementing best practice water management strategies. SFE is certified as "Miljøfyrtårn," a Norwegian environmental certification scheme.

SFE intends to make public its reports on the expected amount of renewable electricity capacity added or restored and on the expected and achieved efficiency gains, as well as CO₂ emitted or abated. Notably, SFE voluntarily monitors, manages, and reports on waste generated and proactively seeks to repurpose waste materials, where possible.

The issuer does include construction of large-scale hydropower plants and roads in eligible project categories, which introduces a risk of negative environmental impacts in the form of emissions, disrupted ecosystems, and contaminated water sources. SFE does not currently measure, manage, or report on emissions from construction at a corporate or supply chain level. Measurement and reporting of these risks would further improve the framework. It is the responsibility of the issuer to actively manage the risk of local environmental impacts and GHG emissions associated with the construction phase of large hydro projects.

Based on the assessment of the proposed project categories and governance structures for environmental impacts, SFE's Green Bond Framework receives a Dark Green shading.



°CICERO
Dark Green

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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 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. 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 broaden the technical expertise and regional experience for Second Opinions. 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. 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 the outcome of investments in eligible projects.

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

This Second Opinion is based on the green bond 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 of emissions through careful infrastructure investments, and moving towards low- or zero-emitting infrastructure in the long run. Proceeds from green bonds may be used for financing, including refinancing, new or existing green projects as defined under the mechanisms or framework. CICERO assesses in this Second Opinion the likeliness that the issuer's categories of projects will meet expectations for a low carbon and climate resilient future.

Expressing concerns with 'shades of green'

CICERO Second Opinions are graded dark green, medium green or light green, reflecting the climate and environmental ambitions of the bonds and the robustness of the governance structure of the Green Bond Framework. The grading is based on a broad qualitative assessment of each project type, according to what extent

it contributes to building a low-carbon and climate resilient society. The shading methodology also aims at providing transparency to investors when comparing green bond frameworks exposure to climate risks. A dark green project is less exposed to climate risks than a lighter green investment.

This Second Opinion will allocate a ‘shade of green’ to the green bond framework of SFE:

- **Dark green** for projects and solutions that are realizations today of the long-term vision of a low carbon and climate resilient future. Typically, this will entail zero emission solutions and governance structures that integrate environmental concerns into all activities.
- **Medium green** for projects and solutions that represent steps towards the long-term vision, but are not quite there yet.
- **Light green** for projects and solutions that are environmentally friendly but do not by themselves represent or is part of the long-term vision (e.g. energy efficiency in fossil-based processes).
- **Brown** for projects that are irrelevant or in opposition to the long-term vision of a low carbon and climate resilient future.

The project types that will be financed by the green bond primarily define the overall grading. However, governance and transparency considerations also factor in, as they can give an indication whether the institution that issues the green bond will be able to fulfil the climate and environmental ambitions of the investment framework. Investments in all shades of green projects are necessary in order to successfully implement the ambition of the Paris agreement. 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 SFE's Green Bond Framework and rules and procedures for climate-related activities

Sogn og Fjordane Energy AS (SFE) is a regional power company located in the county of Sogn og Fjordane in Norway that provides three main services: renewable electricity generation, distribution networks, and electricity retail. The company aims to develop and maintain renewable electricity and to deliver power that is generated taking an environmentally and technically sound and cost-efficient approach. SFE is certified as "Miljøfyrtårn," a Norwegian environmental certification scheme.

SFE is the 12th largest power producer in Norway. The Company owns 22 hydro power plants and operates an additional five. The portfolio has a total installed capacity of 423 MW. Services include operation, maintenance, and rehabilitation of existing production facilities, as well as the development of new power plants. It is owned by the county of Sogn og Fjordane (49.56%), BKK (36.83%), and seven local municipalities. Its' annual turnover is approximately 1.3 billion NOK, the total number of employees is 258 and the energy production is 1.9TWh. SFE Nett, the associated distribution grid company, has a customer base of 24 000, and the extension of the grid is 4 000 km. SFE Nett does not own or operate any interconnectors to other countries.

Use of Proceeds:

According to the issuer, proceeds generated under this framework will be used to finance – in whole or in part – the acquisition and development of new renewable energy and energy efficiency projects in Norway, to renovate and upgrade existing eligible projects, and to refinancing existing eligible projects. Eligible projects will include construction, connection to distribution networks, and operation of hydro and wind power, and related infrastructure, as well as energy efficiency upgrades to distribution networks and smart grids. Although the balance of proceeds between renewable energy and energy efficiency projects isn't set, SFE expects to use over 50% of funds on renewable energy.

SFE will use the first issuance to finance the Østerbø hydropower plant (166GWh expected annual generation); the company owns 58% of the project and expects to invest a total of approximately MNOK 400 (out of 700 MNOK total expected investment); 100 MNOK are already invested. The issuer is also considering financing for the Bremangerlandet wind power plant, refinancing for hydropower plants acquired in 2010, and potential new investments in grid projects under this green bond framework. Nuclear and fossil fuel energy generation projects are excluded.

Project Evaluation and Selection:

Projects proposed under this green bond framework will be reviewed by a committee consisting of representatives from the treasury, finance, and environmental departments. The latter may have a veto or the selection may be contingent on consensus. The committee is yet to be established, therefore at the time of review, we have not been able to fully and accurately assess the governance structure of the committee.

Management of proceeds:

An amount equal to the net proceeds of the issue of the green bonds will be credited to an earmarked account that will support financing of eligible projects. As long as the green bonds are outstanding and the earmarked account has a positive balance, funds may be deducted from the earmarked account and added to SFE's Green Project portfolio in an amount up to all disbursements made during the relevant period with respect to financing and/or refinancing of eligible projects. SFE expects funds generated from issuance of this green bond to be allocated by the end of 2019, at the latest.

Proceeds yet to be allocated towards eligible assets will be placed in the liquidity reserves and managed as such. SFE does not invest liquidity reserves and therefore does not have investor exposure to fossil fuel or nuclear power.

Reporting:

SFE will provide an annual investor letter to allow investors to follow development and provide feedback to prioritized areas; the letter will be made available to the public via SFA's website.

The investor letter will include the following:

- a list of projects fully or partially financed, including a brief description and expected or actual impact, where feasible. SFE intends to report on the expected amount of renewable energy capacity installed or restored, on the expected or achieved energy efficiency gains, and on CO₂ emissions abated according to the Norwegian grid factor;
- information on the balance of funding allocation between project categories, and between new and refinanced projects, as well as any unallocated balance outstanding;
- a summary of SFE's green bond development.

The internal tracking method, the allocation of funds from the Green Bond proceeds and the Investor Letter will be verified by SFE's internal compliance function. The Investor Letter and the opinion of the internal compliance function will be made publicly available on SFE's website.

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

Document Number	Document Name	Description
1.	SFE draft framework April 2018 16	A description of the proposed green bond framework per GBP procedure.
2.	Vedlegg til Sogn og Fjordane Energi sitt Grønne Rammeverket	Attachment to Sogn og Fjordane Energy's Green Framework
3.	Visjon verdi og etikkplattform	Vision, Values, and Ethics Platform

4.	Miljøfyrtårn Sertifikat SFE Strandtun 21.12.2017	Environmental Lighthouse Certificate SFE
5.	Kvalitetspolitikk og strategidokument I SFE 2016 – 2018	Quality policy and strategy paper
6.	Kopi av Konsernstyret si årsmelding 2017	Copy of the Board of Directors Annual Report
7.	Consesjonssøknad Bremangerlandet vindkraftverk	License application wind power plant
8.	Innkjøpsstrategi	Procurement strategy
9.	HR strategi 2016 – 2018	HR Strategy
10.	HMS – politikk og strategiar SFE 2016 – 2018	Policies and Strategies 2016 - 2018
11.	2017-06-06 OED konsesjonsvedtak Bremangerlandet vindkraftverk	Licensing decision for wind power plant
12.	2017-06-06 Anleggskonsesjon Bremangerlandet vindkraftverk	Construction license for wind power plant
13.	2015-12-02 – Vassdragskonsesjon 1307 Østerbø OED – BEKREFTET tillatelse til planendring for bygging av Østerbø kraftverk	Water treatment license – permission for planning change for construction of Østerbø power plant
14.	2015-03-15 KRAV internkontroll etter vassdragslovgjevinga SFE Produksjon Svelgen Kraft	Internal control after water management legislation
15.	2015-03-06 Internkontroll for vassdragsanlegg VTA sikkerhet miljø SFE Produksjon Svelgen Kraft	Internal control for water treatment plant

16.	2014-08-22 Miljøpolitikk for ytre miljø vassdrag – POLICY – SFE Produksjon – Kvalitet Kvalitetsstyring Styrande dokument	Environmental Policy for External Environment Water Resources – Quality Management Steering Document
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Table 1. Documents reviewed

3 Assessment of SFE’s Green Bond framework and environmental policies

The framework and procedures for SFE’s green bond investments 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 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 risks or impacts of investment projects.

Overall shading

Based on the project category shading detailed below and consideration of the issuer’s proactive environmental management policies, we award SFE’s Green Bond Framework with CICERO Dark Green. The framework targets two clearly defined dark green categories: renewable energy and energy efficiency. SFE complies with and exceeds Norwegian environmental regulations for routine project management practices; proactively seeks out and implements initiatives to measure, report on, and repurpose waste from construction sites; using biodegradable oil on all new transformers in the distribution network since 2008.

Eligible projects under the Green Bond 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 bonds 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 potential concerns
Renewable energy	<ul style="list-style-type: none"> Hydropower, and related infrastructure Wind power and related infrastructure 	<p>Dark Green</p> <p>✓ SFE has confirmed that large hydro and roads are included in this framework. Large-scale hydro risks negative local environmental impacts such as deforestation and disruption of fragile ecosystems; research suggests that there could be significant GHG emissions associated</p>

from the construction phase and land use change.

Energy efficiency

Dark Green

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| <ul style="list-style-type: none"> • Connection of renewable energy to distribution networks • Upgrading of national distribution networks; no international interconnectors • smart grids. | <ul style="list-style-type: none"> ✓ Consider the environmental impacts of grid infrastructure ✓ Given Norway's largely renewable-based electricity mix (98% renewables, 97% hydro¹), investments in transmission- and distribution grids are unlikely to lock-in or incentivize the use of fossil fuels. |
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Table 2. Eligible project categories

Strengths

Focus a clean, efficient, cost effective grid. The issuer has an organizational focus on connecting renewable energy to the grid and reducing grid losses, resulting in a more efficient grid and a smoother demand curve. Because of the aforementioned energy mix of 98% renewables in the Norwegian grid, these investments are not expected to lock in or promote the use of fossil fuels for power generation.

Investments in smart grids and other updates to distribution networks will replace faulty or outdated meters to improve monitoring and reporting of energy use; the issuer has indicated that a reduction of grid losses by an estimated 5 to 10 percent is a reasonable approximation.

Strong governance procedure for advanced environmental management. SFE has described a proactive approach to complying with and exceeding Norwegian laws and regulations on potential environmental impacts from power generation through careful planning, integration, and implementation of cost-effective, sound environmental best practices in all work assignments. The Company has developed and implemented policies on water management and habitat protection. For example, SFE is currently assessing a voluntary switch to synthetic oils in turbines and hydraulic systems in new power plants in fragile fjord ecosystems to protect them from potential oil spills.

Strong monitoring, management, and reporting of waste. SFE has a strong waste management system: the company takes detailed inventory of and reports on waste generated and recovered, by material. According to the issuer, mass deposits are repurposed as agricultural grounds or construction materials, in new projects where

¹ <https://www.iea.org/media/countries/Norway.pdf>

possible. The company informed CICERO that it goes beyond what is required by law by voluntarily cleaning up remaining dump sites from past construction activities since 2013.

Weaknesses

No significant weaknesses perceived

Potential pitfalls or risk drivers

Large hydro and road construction are included in eligible project categories. SFE has confirmed that they will use proceeds from the green bond framework to fund large hydropower plants as well as road construction as part of “related infrastructure.” Large-scale hydro risks negative environmental impacts in the form of flooded or disrupted ecosystems, deforestation, and emissions from construction and changes in land use. However, according to the issuer, SFE complies with and exceeds Norwegian regulations for active flood control upstream and downstream, as determined by relevant concessions and licenses, and voluntarily monitors and reports on waste.

Governance procedures haven’t been finalized. The committee tasked with reviewing and approving projects proposed under this green bond framework is yet to be established. At the time of review, we have not been able to fully and accurately assess the governance structure of the committee, which raises potential future questions about governance procedure and implementation of policies.

Emissions management along the supply chain is not required. The issuer has confirmed that they do not require emissions as part of the procurement policies for potential subcontractors and suppliers. Including subcontractor GHG data and reports into the policies and selection requirements for subcontractors, as well as reporting on these emissions annually, would further strengthen the framework.

Environmental impact reporting does not include emissions from construction vehicles and machinery. Road construction typically involves the use of heavy fossil-fuel powered machinery and emissions-intensive materials like cement, and can introduce risks of soil or water contamination from construction materials. The issuer has confirmed that it does not measure or report emissions from construction of power plants or related infrastructure, nor are lifecycle analyses conducted in the decision-making process. We encourage SFE to measure, monitor, and report this data to further strengthen the framework.

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 international 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 international 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-carbon 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.

cicero.oslo.no/greenbonds

