

‘Second Opinion’ on Småkraft AS’ Green Bond Framework

29th August 2018

Summary

Småkraft's Green Bond Framework provides a clear and sound framework for investments in projects that align well with the Green Bond Principles.

Småkraft invests, develops, and operates small-scale hydropower plants in Norway. At the end of 2017, the Småkraft Group had 100 power plants in operation, with an annual mean production exceeding 1TWh. The proceeds from the green bond will help it expand further.

Proceeds raised under this green bond framework will fund eligible small-scale hydropower projects. Both acquisition and refinancing are permitted under the green bond framework.

Småkraft has an ESG policy which includes a mapping of risks, safeguards and mitigation strategies. It operates in a sector that is heavily regulated by Norwegian law and supervised by independent government bodies. Småkraft only invests in small-scale hydropower plants. These tend to have small and manageable environmental consequences.

The company has specified the process by which projects eligible for green bond financing will be selected. Moreover, Småkraft will report on the green bond in an annual newsletter to investors. Småkraft does not currently undertake lifecycle analysis of its operations nor does it include Scope 3 emissions in its calculations of GHG emissions. This is something Småkraft could consider strengthening in the future.

Based on the overall assessment of the project type that will be financed by the green bonds as well as governance and transparency considerations, Småkraft's Green Bond Framework receives a Dark Green shading.



°CICERO
Dark Green

Contents

Summary	2
1 Introduction and background	4
Expressing concerns with 'shades of green'	5
2 Brief Description of Småkraft AS' Green Bond Framework and rules and procedures for climate-related activities	6
Policies	6
Use of Proceeds:	7
Selection:	7
Management of proceeds:	8
Transparency and Accountability:	8
3 Assessment of Småkraft's Green Bond framework and environmental policies	10
Overall shading	10
Eligible projects under the Green Bond Framework	10
Strengths	11
Weaknesses	12
Pitfalls	12
Appendix: About CICERO	13

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 Småkraft's Green Bond Framework and environmental policies. The aim is to assess the Green Bond Framework as to its ability to support Småkraft's stated objective of supporting the global transition from a fossil-based economy towards a low-carbon economy.

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 Småkraft:

- **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 are also important because they 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 Småkraft AS' Green Bond Framework and rules and procedures for climate-related activities

Småkraft invests, develops, and operates small-scale hydropower plants in Norway. At the end of 2017, the Småkraft Group had 100 power plants in operation, with an annual mean production exceeding 1TWh. The company was established in Norway in 2002 and develops projects in cooperation with local landowners. By relying on small run-of-river hydropower installations, the company's power plants use natural topography to create renewable power in a sustainable way. The company sees itself as sharing the values they create between its owners, local landowners, local communities and society.

“Småkraft AS” refers to the parent company Småkraft AS, while “Småkraft Group” refers to the consolidated group of companies controlled by Småkraft AS. Småkraft Utbygging AS was established in 2017 to construct and develop power plants, as a separate company outside of the Småkraft Group. Following the demerger of the construction business, the Småkraft Group's focus is on operating the fleet of hydro power plants. In 2017, Småkraft AS merged with Norsk Grønnkraft AS. As a result, the merged Småkraft Group is the largest owner and operator of small hydro power plants in Norway. Småkraft AS is owned by funds managed by Aquila Capital, a German asset management firm. APG, the Dutch state pension provider, is the majority shareholder in these funds.

Småkraft AS has an ambition to grow its small-scale hydropower plants portfolio significantly over the next four years. To achieve this ambition, the company intends to acquire environmentally sound small-scale hydro power plants in Norway that are both technically and economically efficient.

Proceeds raised under this green bond framework will fund eligible projects – including the acquisition and development of new eligible projects, the renovation and upgrading of existing eligible projects and the refinancing existing eligible projects.

Policies

Småkraft has an ESG policy which includes a mapping of risks, safeguards and mitigation strategies. The company points out that it operates in a sector that is heavily regulated and supervised by independent government bodies. As a result, many risk and safeguard issues are mandated and monitored independently, leaving the company with a reduced need for own initiatives. Småkraft also points out that its business development model is based on collaboration with land owners and other local stakeholders, resulting in many ESG issues being internalised and resolved in its day-to-day activities.

In order to obtain a permit to construct a power plant in Norway, a developer must document that the social economic benefits exceed the negative impacts of the powerplant. In some cases, where potential negative impacts may be significant, the permit will require the implementation of safeguarding or mitigating actions. These could include the requirement to downscale the powerplant, mechanisms to maintain the biodiversity in some way or other similar safeguards. The most important way of reducing potential damage to local biodiversity is the maintenance of minimum water flow – a parameter which is regulated through the concession given to the power plant.

The company's operations may in the future be affected by climate change. The largest risk is increased volatility of precipitation and likelihood of flooding. As a result, the company constructs its powerplants, dams and intakes to resist floods happening more seldom than once every 1000 years. The company may also benefit from climate change: recent research indicates that climate change will lead to warmer and wetter winters in the Nordic Region. This will have a positive impact on the hydrology, leading to higher production of power.

Småkraft is a small company (it had 19 FTE at the end of 2017) and as such has fewer formalized procedures and policies compared to companies of a larger size. Its ESG policy was formalized and documented only in 2017. However, it was updated in May 2018, indicating that the company is now actively engaging in and revisiting governance issues. Plans to make its ESG policy more robust include the creation of better and more reliable KPIs, automated data gathering and the increased use of reporting standards. The goal is to implement these steps by year-end 2018.

Its ESG policy refers to the UN Sustainable Development Goals and points out that the company's activities contribute to goals 7 "Clean Energy for all" and Goal 13 "Stop climate change".

Småkraft has an internal control system which focuses on the operation of power plants. The system sets the requirements for own employees, subcontractors, and entrepreneurs with regards to health, safety and the environment. By government regulation, the company is mandated to provide training courses in environmental safeguarding for all its operations personnel

Småkraft recycles its waste. The main waste is operational equipment which no longer works properly. Such waste is always in some way recycled at the end of its lifetime. However, out of cost- benefit considerations, Småkraft does not monitor or track its waste. Likewise, Småkraft does not currently undertake lifecycle analysis of its operations. The company tracks emissions on an asset basis, but these do not include emissions from the investment (construction) phase (so not scope 3).

Use of Proceeds:

Proceeds raised under this green bond framework will finance or refinance of small hydropower projects – including acquisition and development of new projects, the renovation and upgrading of existing projects and refinancing existing projects.

The division of the allocation of Green Bond proceeds between new projects and refinancing will be made clear in an annual Green Bond Investor Letter.

Småkraft's Green Bond framework explicitly excludes nuclear power and fossil fuel-based projects.

Selection:

Projects will be selected by company staff from the Business Development, Operations and Finance departments. Currently, the selection committee is envisaged to consist of the CFO, COO and the Director of Business Development.

In addition to the Green Bond Framework, eligible projects will comply with Norwegian law and align with the Småkraft's goals, plans and policies. All power projects in Norway must obtain a concession from the Norwegian Government (NVE) in order to operate. The concessions are based on a holistic assessment of costs and benefits, including the rights of indigenous peoples, environmental sustainability and biodiversity.

Projects will be selected based on consensus. If consensus is not reached, the project will not be selected. This is only likely to apply to those projects that meet regulatory requirements and therefore have obtained a concession but that may be viewed as controversial by some (for instance local opposition groups). In those instances, the staff selecting projects for green bond financing will give due consideration to these concerns and may decide that the project is ineligible for green bond financing.

Management of proceeds:

The framework states that an amount equal to the net proceeds of the issue of the Green Bonds will be credited to a separate account that will support Småkraft's funding of eligible projects. As long as the Green Bonds are outstanding and the special account has a positive balance, at the end of every fiscal quarter, funds will be deducted from the special account in an amount equal to all disbursements made during such quarter in respect of financing and/or refinancing of Eligible Projects.

Until the disbursement to Eligible Projects, the special account balance will be placed in liquidity reserves and managed accordingly (as restricted cash).

If, for any reason, a financed Eligible Project no longer meets the eligibility criteria, it will be removed from the Green Project Portfolio.

Transparency and Accountability:

The issuer will annually report on the use of proceeds in a Green Bond Investor Newsletter. The newsletter will include:

- a) a list of all the projects financed and include allocated amounts, a brief description of the projects and their expected environmental impacts. The environmental indicators will include the expected/actual amount of renewable energy capacity added/restored/connected/distributed as well as avoided emissions. The emissions avoided will be calculated using the Greenhouse Gas Protocol Emission Factor for Norway (currently 8.06 CO₂ tones per GWh) and presented as cumulative historic CO₂ savings since the allocation of green bond proceeds and the last 12-months CO₂ savings.

- a) information about the division of the allocation of Green Bond proceeds between new projects and refinancing.

The investor newsletter, second opinion and green bond framework will be made publicly available on Småkraft's website.

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

Document Number	Document Name	Description
1	Småkraft Draft Framework 06JULY18 Clean	The green bond framework
2	Småkraft Byggeskikk Pris	Architectural award for Oftedal power station from the local municipality
3	Småkraft ESG policy 2017 (updated 2018)	Småkraft's ESG Policy
5	Konsesjon Valken Kraftverk	Concession from Norwegian Authorities (NVE) to build Valken Power station
6	Konsesjon Grytendal Kraftverk	Concession from Norwegian Authorities (OED) to build Grytendal Power station
7	Green Bond Yearly Report – Draft	Draft template for annual report on Småkraft's Green Bond
8	Environmental Training Course 2017_Sunndal	Course material for environmental training of staff
9	201204964-25 Jordalen kraftverk i Voss kommune i Hordaland - NVEs vedtak med vedlegg	Concession from Norwegian Authorities (NVE) to build Jordalen Power station
10	2018-06-25 - BP2022 -Smaakraft AS - Our story	Småkraft's business plan for 2018-22
11	2017 Annual Report - Småkraft - Norwegian Official Version - Fully Signed	2017 Annual Report (Norwegian)
12	2017 Annual Report - Smaakraft_English Translation_unofficial signed version	2017 Annual Report (English - unofficial)

Table 1. Documents reviewed

3 Assessment of Småkraft's Green Bond framework and environmental policies

Overall, Småkraft's green bond framework provides a sound framework for climate-friendly investments.

The framework and procedures for Småkraft'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 impacts of investment projects.

Overall shading

Based on the project category shading detailed below, and consideration of the issuer's sustainability work and green bond framework more broadly, we rate the framework CICERO Dark Green.

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 some concerns
Renewable Energy	<ul style="list-style-type: none"> • Small scale hydropower • Related infrastructure (penstock, access roads, local grid) 	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ Småkraft only invests in run-of-the-river hydropower projects in Norway. Small scale hydropower is defined by Norwegian Authorities to be below 10 MW. Småkraft defines small scale hydro power as run-of-the-river hydropower plants, i.e. also including plants larger than 10 MW, if they are based on run-of-the-river without reservoirs. ✓ No major environmental concerns have been identified in connection with the company's activities, and the risks that may arise appear to be

-
- managed appropriately through Norwegian laws and regulations
 - ✓ In general, however, care should be taken to minimize any negative impacts on wildlife, biodiversity and landscapes
 - ✓ Moreover, to the extent that this is under the company's control, Småkraft should try to minimize emissions and other negative impacts from the construction phase of new projects
 - ✓ Construction or upgrading of access roads should be kept to a level that ensures the proper functioning of the project but that does not encourage increased car use by the local population.
-

Table 2. Eligible project categories

Strengths

Småkraft's Green Bond Framework is a robust framework for financing the company's continued activities in the renewable energy sphere. The green bond proceeds will go towards projects selected to reduce greenhouse gas emissions ('mitigation').

CICERO takes a long-term view on climate change, and thus recommends excluding projects that support prolonged use of fossil fuel-based infrastructure that will contribute to emissions in the long run. Småkraft only invests in hydropower assets and has explicitly stated in their green bond framework that green bond proceeds will not be used to finance nuclear power or fossil fuel-based projects.

Småkraft only invests in small-scale hydropower plants. These tend to have manageable environmental consequences, compared with large-scale hydropower dams which can have significant impacts on the natural environment and surroundings.

Småkraft only operates in Norway, where infrastructure interventions are managed robustly by laws and regulations. The process for obtaining a concession to build or amend power plants involves consultations with the local population – including indigenous populations, land owners, and relevant local authorities. The decision is made public and provides transparency on the process.

Småkraft goes above regulatory requirements when it comes to managing some of its impacts on the local environment, such as undertaking proactive management of fish populations and minimally intrusive plant designs. The company's website provides real-time data on minimum water flow for all its power plants– a key parameter regulating environmental impacts.

The company has specified the process by which projects eligible for green bond financing will be selected. There is also a plan for how Småkraft intends to report on the green bond. Both aspects are in alignment with the recommendations of the Green Bond Principles.

Weaknesses

There are no apparent weaknesses in Småkraft's green bond framework.

Pitfalls

Småkraft should be aware of the following:

-The construction and upgrading of hydropower assets and related infrastructure are currently considered to be activities that are consistent with a transition towards a low-carbon world. However, as technologies continue to evolve in the energy sector, it is important to consider potential lock-in of obsolete technologies. Run-of-river hydropower projects are often located in pristine environments and any unnecessary interventions should be avoided.

-The issuer has informed us that for small hydro power plants there is a need for transport and communication lines with and to the power station and/ or intake. When constructing new small hydro power plants, you typically upgrade existing small roads or construct new private roads to the powerplant. Some powerplants are also roadless. In most cases, these roads are blocked for the public out of safety reasons. In some rare cases, one also needs to do upgrade on public roads. In one case, the issuer did upgrades on a public tunnel. Construction or upgrading of access roads should in CICERO's view be kept to a level that ensures the proper functioning of the project, but that does not encourage increased car use by the local population. In the case that the power plant leads to larger upgrades or construction work on public roads that will lead to changes in traffic, the issuer has informed us that this will be evaluated by the Investment Committee.

-Småkraft does not currently undertake lifecycle analysis of its operations nor does it include Scope 3 emissions in its calculations of GHG emissions. We encourage the issuer to record also these emissions and to work towards zero emissions in both the operation and construction phase (such as electrification of transportation).

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

