

‘Second Opinion’ on Quantum Solar Park’s Green Bonds Framework

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Summary

Quantum Solar Park (Semenanjung) Sdn Bhd (hereafter: Quantum Solar) has developed a Green Bonds Framework. The aim is to issue the Green Bond in Malaysia. Under the local Islamic banking rules, these instruments are called Sukuks. Overall, the Green Bonds Framework established by Quantum Solar provides a sound framework for investments in the already selected projects. The framework lists three utility scale solar power projects in Malaysia that are to be partially financed by issuing the Sukuk. The three solar photovoltaic plants of 50MW (AC - alternating current) each are located in Peninsular Malaysia, with one plant in the northern town of Gurun in Kedah, one in the eastern coast town of Merchang in Terengganu and another in the southern town of Jasin in Melaka. Solar power is key in supporting the transition to a low-carbon society.

Quantum Solar is a Holding Company (HoldCo.), which has been established for the purpose of developing and owning the three PV solar power projects. According to the framework, one of the stakeholders in the company, Scatec Solar ASA (hereafter: Scatec Solar), will provide several services in this undertaking. Scatec Solar is a Norwegian independent solar power producer. The company develops, builds, owns, operates and maintains solar power plants worldwide. In this project, Scatec Solar's responsibilities encompass engineering, procurement, construction, asset management and reporting. In all of these responsibilities, Scatec Solar's work will be guided by its own "Sustainability Framework". This framework is based on the UN Sustainable Development Goals. Among other items, the framework states that social and environmental impacts of all projects are assessed and managed according to international best practice. CICERO is encouraged by Scatec Solar's ambitions to keep the total carbon footprint of all projects low by applying lifecycle calculations to the process of choosing suppliers.

Impact reporting is an important tool to enhance transparency in regard to the projects economic risk from climate change and the environmental effectiveness of the projects. According to the Green Bonds Framework, once the solar PV plants are operational, the HoldCo. will report on energy production and CO2 emission reduction on an annual basis (including the share of energy production and emission reduction which is equivalent to the Green Sukuk's share of total project costs). These annual reports will be available to CIMB Bank, the Sukuk Trustee and the rating agency that issued a financial rating of the Sukuk in full length and in abstracts to bond holders. Transparency is key in order to build trust in the Green Bond/Sukuk market and CICERO therefore encourages the issuer to follow best practice which is to make these reports publicly available.

Based on the overall assessment of project type, the policies guiding the implementation, and transparency considerations, Quantum Solar's Green Bonds 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 publically 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 Quantum Solar Park's (hereafter: Quantum Solar) Green Bonds Framework and policies for considering the environmental impacts of their projects. The aim is to assess the Quantum Solar Green Bonds Framework as to its ability to support Quantum Solar'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. This framework has been specifically designed for the three PV solar power projects. 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.

This Second Opinion will allocate a 'shade of green' to the green bond framework of Quantum Solar:

- 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.

2 Brief Description of Quantum Solar's Green Bond Framework and rules and procedures for climate-related activities

Brief description of issuer

Quantum Solar is the issuer of the Green Sukuk. The proceeds of the issue are intended to partly finance three utility scale solar PV power plants. Quantum Solar is a holding company (HoldCo.) that was established for this purpose. The Malayan owners of Quantum Solar are ItraMAS Technology Sdn Bhd, an engineering company in green technology and public works, Maltech Pro Bhd, a producer of mobile applications, devices and equipment, and Cam Lite Sdn Bhd, a provider of electronic and related products and services.

Quantum Solar has awarded the Norwegian solar power company Scatec Solar several roles in this undertaking. Besides being an investor in the HoldCo., Scatec Solar will also be the engineering, procurement and construction (EPC) contractor. Scatec Solar will further provide asset management services to the HoldCo., among others in connection to the Green Sukuk issue and related reporting. Finally, Scatec Solar will be the contractor responsible for operation and maintenance (O&M) of the three power plants. According to Scatec Solar, its partner company ItraMAS has been appointed as a sub-contractor under the EPC and O&M responsibilities.

Given that Quantum Solar is a newly established HoldCo. and in light of the extensive role Scatec Solar has been awarded, Quantum Solar's framework for the issuance of Green Sukuks strongly reflects and refers to Scatec Solar's sustainability framework, which therefor will be central to this second opinion. Scatec Solar was founded in Norway in 2007 and is organized as a Public Limited Stock Company listed on the Oslo stock exchange under the ticker SSO. Scatec Solar is an independent solar power producer. The company develops, builds, owns, operates and maintains photovoltaic solar power plants worldwide.

Selection

The selection of projects and the choice of project sites was done prior to Scatec Solar joining Quantum Solar. The three companies had formed Quantum Solar as a consortium and signed power purchase agreements (PPA) for three solar PV projects in 2016 with Tenaga Nasional Berhad.

Scatec Solar has done an assessment of the three project partners with focus on governance related risks. This sort of assessment is part of Scatec Solar's sustainability framework. Scatec Solar is currently finalizing the environmental and social impact assessments of the three projects, conducted by a third party using the IFC performance standards and the Equator Principles as a baseline. According to its sustainability framework, Scatec Solar develops all projects in accordance with these standards.

Scatec Solar has informed CICERO that no findings have emerged during the due diligence process so far that would alter its intention to go ahead with the projects. According to the issuer there is no opposition to the projects on grounds of environmental concerns from NGO's or other civil society actors.

The choice of suppliers and sub-contractors has been guided by Scatec Solar's policy for "responsible procurement". This policy aims to ensure that suppliers and sub-contractors commit to, and abide by, standards focusing on social, environmental, and labor-rights criteria as well as on transparency.

Quantum Solar's Green Bonds framework does not refer to any other project categories or projects than the three utility scale solar PV plants. Scatec Solar has informed CICERO that the Green Sukuk issue is directly connected to the financing of specifically these three projects and that it will cover a majority share of total costs.

Management of proceeds

Scatec Solar has informed CICERO that the HoldCo. has appointed CIMB Investment Bank as Principal advisor and both CIMB Investment Bank and Maybank Investment Bank as Joint Lead Arrangers and Joint Lead Managers for the issuance of the Green Sukuk. According to Scatec Solar, all Sukuk proceeds and main accounts of the HoldCo. will be jointly managed by Scatec Solar's local subsidiary "Scatec Solar Solutions Malaysia Sdn Bhd" (hereafter: SSSM) and the Security Agent. This subsidiary company has an asset management agreement with the HoldCo. and the three project companies. Scatec Solar informed CICERO that proceeds from the Sukuk will be transferred to the account of the HoldCo. and flow to the accounts of the project companies. Scatec Solar has informed that payments from the account will be made in accordance with milestones defined under the engineering, procurement and construction contract upon certification by the Lenders' Technical Advisor, and have to be in accordance with the Sukuk agreement between the bank and the HoldCo. Scatec Solar informed CICERO that SSSM has been granted authority by the board of the HoldCo. to activate payments from the HoldCo.'s project companies' accounts once milestones are reached, based on an authorized budget. Deviations from this budget require the involvement of the board. Scatec Solar has confirmed that unallocated proceeds will remain in the HoldCo.'s project companies' accounts and will not be temporarily invested in any financial products.

Transparency and Accountability

During construction SSSM will issue monthly reports and provide them to the arranging banks. These reports will include information on allocation of proceeds per project until completion, as well as information on potentially unallocated proceeds after completion. These reports will be accessible to CIMB Bank only.

According to the Green Bonds Framework, once the solar PV plants are operational, the HoldCo. will report on energy production and CO2 emission reduction on an annual basis. Scatec Solar informed CICERO further that these indicators will be reported both per project and as a total for all three projects combined. Since the Green Sukuk will not cover the total project costs, Scatec Solar informs that reporting will also show the share of energy production and emission reduction which is equivalent to the Green Sukuk's share of total project costs. These annual reports will be available to CIMB Bank, the Sukuk Trustee and the rating agency that issued a financial rating of the Sukuk in full length and in abstracts to bond holders. Scatec Solar's local asset management subsidiary SSSM will be responsible for reporting on behalf of the HoldCo. as part of SSSM's asset management services. SSSM will apply Scatec Solar's methodology for such reporting. The emission abatement will be calculated using the baseline emission factor according to the *Sustainable Energy Development Authority Malaysia*.

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

Document Number	Document Name	Description
1.	Quantum Solar Green Bonds Framework	Green Bonds Framework of the Holding Corporation
2.	Scatec Solar – Sustainability Framework	Sustainability Framework of EPC, O&M, asset management contractor & stakeholder
3.	Estimated production incl. COs	Scatec Solar power production and CO2 abatement calculation
4.	Scatec Solar Annual Report 2016	Annual report by EPC, O&M, asset management contractor & stakeholder
5.	Malaysia Introduction & Structure	Scatec Solar PPT slides, project overview
6.	Environmental and social matters – Introduction and workshop	Scatec ESIA Workshop PPT slides

3 Assessment of Quantum Solar’s Green Bonds framework and environmental policies

Overall, the Green Bonds Framework established by Quantum Solar provides a sound framework for investments in the three already selected projects.

The framework and procedures for Quantum Solar’s Green Sukuk 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.

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	Utility scale solar PV	Dark Green ✓ Lifecycle CO2 footprint of all projects is measured. Through “responsible procurement”, the issuer aims to keep the footprint light.

Table 2 Eligible project categories

Strengths

Scatec Solar’s “Sustainability Framework”

Quantum Solar will be the owner of the three solar power plants but Scatec Solar will have wide-ranging responsibilities. It will be responsible for the engineering, procurement, construction, operation, maintenance,

and reporting on the three projects. Scatec Solar's work in all of these activities will be guided by its own sustainability framework. This also applies to Scatec Solar's sub-contractors. Scatec Solar describes the main pillars of this framework as being "1. Delivering competitive renewable energy, 2. Contributing to local value creation, 3. Being a trusted business partner". On a more detailed level the framework aims to establish six of the UN's Sustainable Development Goals, encompassing education, clean energy, economic development, sustainable land use, sustainable cities and cooperation, as "a solid tool to frame, define and materialize" all of Scatec Solar's activities.

Further, the framework aims to integrate environmental, social and governance (ESG) considerations into the project development phase. One example of this approach is that all projects are supposed to be developed in accordance with the IFC Performance Standards and the Equator Principles, considered to be international best practice. In this regards, Scatec Solar conducts Environmental and Social Impact Assessments for all its projects, even if, as in this case, this is not required under local law.

Responsible procurement

Another element of the framework is aimed at what is referred to as "responsible procurement". This policy is based on a life-cycle approach, which takes into account the "total energy footprint from raw-materials to decommissioning" of all utility scale power plants. Scatec Solar takes thus into consideration their suppliers' performance on transparency, environment and health & safety. Scatec Solar has developed its own "Supplier Conduct Principles" and requires suppliers to commit to them. Compliance is monitored through audits of the most relevant suppliers and those that are at a high risk of breaching the principles. According to the information CICERO received, life-cycle metrics of the three projects will not be part of the annual reporting.

Reporting

Scatec Solar will follow the recommendations of the Green Bond Principles regarding reporting of quantitative performance measures. The produced electricity and abated CO₂ will be reported per project, for all projects combined, and as a share equivalent to the Sukuk's share of total project costs on an annual basis to bondholders and on a monthly basis to the banks arranging the issue. This cannot be seen as an external review, as the Green Bond Principles recommend, since reporting will be done by Scatec Solar under its asset management function. However, the metrics and method are in line with relevant recommendations. CICERO encourages the issuer to make these reports publicly available to increase transparency in the Green Sukuk market. Quantum Solar will also report to the arranging banks on the allocation of proceeds during the construction period on a monthly basis.

Weaknesses

We found no obvious weaknesses in Quantum Solar Park's Green Bonds Framework. However CICERO encourages the issuer to make the impact reports publicly available to increase transparency in the Green Sukuk market.

Pitfalls

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.

References

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

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

