

‘Second Opinion’ on UiTM Solar Power’s Green SRI Sukuk Framework

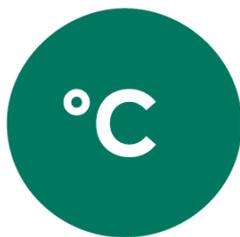
2nd January 2018

Summary

Overall, UiTM Solar Power Green SRI Sukuk Framework provides a clear and sound framework for climate-friendly investments. UiTM Solar Power seeks to take a leading role in Malaysia in supporting the transition to a low carbon future by issuing a Green SRI Sukuk in line with the Green Bond Principles and the ASEAN Green Bond Standards.

The SRI Sukuk proceeds will fund a solar PV power plant, a key technology for the low-carbon transition. UiTM Solar Power has in place robust environmental policies. CICERO is encouraged by the issuers' inclusion of clear environmental considerations in both supplier and site selection. UiTM Solar Power also has in place a process for transparent management of proceeds and impact reporting. The energy generated and the potential avoided CO₂-emissions per year, compared to the carbon intensity of electricity generation in Malaysia, will be reported as soon as the project is in operation. The report will be made available on the issuer's website. The issuer confirms that there is no publicly voiced opposition to the awarding of licenses.

Based on the overall assessment of the project that will be financed by the green sukuk, governance and transparency considerations, UiTM Solar Power's Green SRI Sukuk Framework is awarded 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 UiTM Solar Power’s Green SRI Sukuk Framework and rules and procedures for climate-related activities	6
Policies:	6
Definition:	7
Selection:	7
Management of proceeds:	7
Transparency and Accountability:	7
3 Assessment of UiTM Solar Power Green SRI Sukuk framework and environmental policies	9
Eligible projects under the Green SRI Sukuk Framework	9
Strength	10
Weaknesses	10
Pitfalls	10
<i>Impacts beyond the project boundary</i>	10
Appendix: About CICERO	11

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 or sukuk 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 sukuk, 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 UiTM Solar Power Green SRI Sukuk Framework and policies for considering the environmental impacts of their projects. The aim is to assess the UiTM Solar Power Green SRI Sukuk Framework as to its ability to support UiTM Solar Power's stated objective of promoting the transition to low-carbon and climate resilient growth.

This Second Opinion is based on the green sukuk 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 and sukuk 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/ENSO Second Opinions are graded dark green, medium green or light green, reflecting the climate and environmental ambitions of the bonds and sukuk and the robustness of the governance structure of the Green SRI Sukuk 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 and sukuk 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 sukuk framework of UiTM Solar Power:

- **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 sukuk 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 sukuk 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 UiTM Solar Power's Green SRI Sukuk Framework and rules and procedures for climate-related activities

Universiti Teknologi MARA (UiTM) is the largest university in Malaysia and is wholly owned by the Malaysian government. Due to budget constraints, the university has decided to enter into the solar energy generation business with the aim of securing a stable long-term income stream through a Power Purchase Agreement (PPA).

For this purpose, UiTM Solar Power was set up by a consortium of three private companies, namely, UiTM Property Management, PACE and BJ Power Ltd. UiTM Property Management is the majority shareholder with a 98% equity stake in UiTM Solar Power. UiTM Property Management is a Malaysian company focusing in the Renewable Energy, Energy Efficiency and Integrated Facilities Management business sectors. UiTM Property Management's ultimate parent is UiTM. PACE is a Malaysian company specializing in the provision of Civil, Structural, Mechanical and Electrical engineering consultancy services. BJ Power Ltd. is a Korean solar photovoltaic (PV) modules manufacturing company and specializes in off-grid solar PV installation around the globe.

Policies:

UiTM Solar Power will develop, finance, build, own, operate and maintain a utility scale solar photovoltaic power plant in Malaysia. The solar PV power plant is under construction and expected to start its operation 1st November 2018. UiTM Solar Power seeks to take a leading role in Malaysia in supporting the transition to a low carbon future by issuing a Green SRI Sukuk in line with the Green Bond Principles and the ASEAN Green Bond Standards¹. By providing CO₂-reduction reporting of the utility scale solar PV power plant to be financed by Green SRI Sukuk, UiTM Solar Power aims to offer investors the possibility to demonstrate a reduction of their carbon exposure. The sukuk will follow Islamic banking and financing principles, specifically the concepts endorsed by the Shariah Advisory Council of the Securities Commission Malaysia. UiTM Holdings is in the process of developing its Sustainability Framework for group-wide adoption by 2018.

The issuer's environmental consultant, AMR Environmental Sdn. Bhd., has produced an Environmental Management Plan that outlines the environmental impact of the solar PV power plant development and a comprehensive plan on the control measures to reduce or eliminate the impact on the environment.

In addition to the revenue from the PPA, UiTM plans to exploit the solar power plant development to further its academic purpose and promote research on renewable technology. Once completed, the solar PV power plant will house the UiTM Solar Research Centre. The research center will focus on the innovation, development and commercialization of renewable energy & energy efficiency products & technology.

¹ http://www.theacmf.org/ACMF/upload/ASEAN_Green_Bond_Standards.pdf

Definition:

The proceeds of the Green SRI Sukuk to be issued by UiTM Solar Power will be utilized exclusively for the development and construction of a 50MW Large Scale solar PV power plant and the transmission infrastructure from the solar PV power plant to the national electricity grid.

A PPA has been entered into with the national utility company, Tenaga Nasional Berhad (TNB). Under the terms of the PPA, TNB will be the sole off-taker of the electricity generated from the solar PV power plant.

Selection:

The solar PV power plant is to be located on a 290 acres plot of land owned by UiTM, UiTM Solar Power's ultimate parent organization. The location was chosen for the area's relatively good solar radiation, good accessibility and close proximity to the grid injection point (less than 6km). The issuer has informed us that they have considered environmental criteria during the site selection process. The issuer developed an environmental management plan after choosing the project site to detail out the implementation of erosion and sediment control, water pollution control, air and noise pollution and control, and waste management.

The issuer has appointed contractors on a turnkey basis and is not directly involved in supplier selection. ET Energy (Malaysia) Sdn Bhd is the main EPC contractor for the Solar Power Plant and Northwest Electric Power Design Institute (NWEPTDI) is the main components supplier. The issuer's contractor selection involved an evaluation of financial strength, expertise, track record, and a verification of the contractors' Health, Safety & Environmental (HSE) management plan.

The issuer confirms that there is no publicly voiced opposition to the awarding of licenses.

Management of proceeds:

In line with the Green Bond Principles, the Green SRI Sukuk proceeds will be tracked and placed in designated accounts. UiTM Solar Power has appointed Maybank Investment Bank as Principal advisor and Lead Arranger for the issuance of the Green SRI Sukuk. UiTM Solar Power and the Security Agent will manage all Sukuk proceeds and main project accounts to be set up, namely the Disbursement Account, Revenue Account, Finance Service Reserve Account, Maintenance Reserve Account, Compensation Account, Takaful/Insurance Proceeds Account and Operating Account. All 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 UiTM Solar Power. Upon the completion of the construction of the solar PV power plant and the fulfilment of all payment obligations to the Contractor, the Disbursement Account will be closed and balances will be transferred to the Revenue Account.

Transparency and Accountability:

The issuer will provide annual reporting on the original amount earmarked for the project, amount utilized, unutilized amount and where it is deposited, and the impact objective from the project. Use of proceeds of the Sukuk will be reported by the issuer to investors through the Facility Agent subsequent to the commercial operations of the Project.

The issuer has defined seven sustainability criteria in the Green SRI Sukuk framework. Using these criteria, the issuer plans to identify and verify the sustainability performance of the Green SRI Sukuk. The sustainability criteria are complemented by specific indicators, which make it possible to quantitatively measure the

sustainability performance of the Green SRI Sukuk issue and can be used for comprehensive reporting. The issuer has committed to reporting annually on energy generated and potential avoided CO² emissions.

Impact reporting will be made publically available on the issuer's website.

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

Document Number	Document Name	Description
1	Green SRI Sukuk framework (08.12.2017)	
2	Project brief	Pdf document that describes the 50MW utility Scale Solar PV Project in Gambang, Pahang
3	SRI Sukuk Environmental criteria	Site selection criteria etc.
4	UHSB Sustainability Framework Summary	Brief sustainability overview
5	Safety Plan UiTM Solar Project	Plan to focus on health and safety
6	Environmental Management Plan	Plan to address environmental issues such as air, water and noise pollution

Table 1. Documents reviewed

3 Assessment of UiTM Solar Power Green SRI Sukuk framework and environmental policies

Overall, the UiTM Solar Power Green SRI Sukuk framework provides a detailed and sound framework for climate-friendly investments.

The framework and procedures for UiTM Solar Power's Green SRI 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 SRI Sukuk 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 sukuk 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	Solar power <ul style="list-style-type: none"> Development and construction of a 50MW large scale solar PV power plant and the transmission infrastructure from the solar PV power plant to the national electricity grid. 	Dark green <ul style="list-style-type: none"> ✓ Solar power is key to a low-carbon transition. ✓ Potential concerns regarding supply-chain emissions ✓ All construction projects can have adverse local environmental impacts

Table 2. Eligible project categories

Strength

UiTM Solar Power seeks to take a leading role in Malaysia in supporting the transition to a low carbon future. UiTM Solar Power has in place robust environmental policies and CICERO is encouraged by the issuer's claim to include environmental considerations in supplier selection. According to the issuer, ET Energy (Malaysia) Sdn Bhd was appointed as the main sub-contractor after an extensive evaluation process.

The Green SRI Sukuk proceeds will fund solar power, a key technology for the low-carbon transition. The issuer has also taken steps towards climate resilience, a flood risk study was performed and 25 acres of land is to be set aside for flood resilience.

The issuer also has a process for site selection that includes clear environmental considerations. During the site selection and assessment process for the 50MW solar PV power plant, the issuer avoided primary forest and high vegetation area (> 70%). The site selected further had to be located more than 5 km from forest reserve area and shoreline. A significant part of the land that has been selected was an abandoned tin mine that stopped operation in the 1970s. As a result, about 50% of the land is barren and 15% of the land is the tin mine lakes. 10% of the land is a secondary forest, 5% is palm oil plantation and the balance is made up of shrubs.

The potential avoidance of CO₂-emissions per year compared to the carbon intensity of electricity generation in Malaysia will be reported as soon as the project is in operation. The report will be made available on the issuer's website. The issuer will report the amount of electricity produced per annum. The issuer will use this as input to estimate the amount of avoided CO₂ emissions applying a conversion factor. The current conversion factor is 0.7kg of CO₂ emission per kWh generated. This conversion factor is based on the Malaysian Energy Mix of Coal and Gas powered power plants and determined by the Malaysian Energy Commission. The conversion factor may change on a year-to-year basis. The issuer will report the CO₂ emissions avoided by the Solar Power Plant at the end of each operating year.

Weaknesses

There are no obvious weaknesses in UiTM Solar Power's Green SRI Sukuk Framework.

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.

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

