

Green Evaluation

# Parampujya Solar Energy Private Ltd. Restricted Group Proposed US\$500 Million Green Bonds

**Transaction Overview**

On May 15, 2019, Adani Green Energy (UP) Ltd. (AGEUPL), Parampujya Solar Energy Private Ltd. (PSEPL), and Prayatna Developers Private Ltd (PDPL, collectively Parampujya Solar Energy Private Ltd. Restricted Group, or the issuers) are seeking to issue US\$500 million in green bonds to finance and refinance solar power plants and related transmission infrastructure in India.

The issuers comprise three wholly owned subsidiaries of Adani Green Energy Ltd. (AGEL), an independent power producer in India. The issuers own and operate a portfolio of 25 utility-scale solar energy projects, with 930 megawatts (MW) of total installed capacity.

In our opinion, this transaction is aligned with the Green Bond Principles 2018 (GBP).

**Entity:** Adani Green Energy (UP) Ltd., Parampujya Solar Energy Private Ltd., and Prayatna Developers Private Ltd.

**Subsector:** Alternative Energy

**Location (HQ):** India

**Financing value:** US\$500 million

**Amount evaluated:** 100%

**Evaluation date:** May 15, 2019

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**Green Evaluation Overview**

**Transaction's Transparency**

- Use of proceeds reporting
- Reporting comprehensiveness

**89**

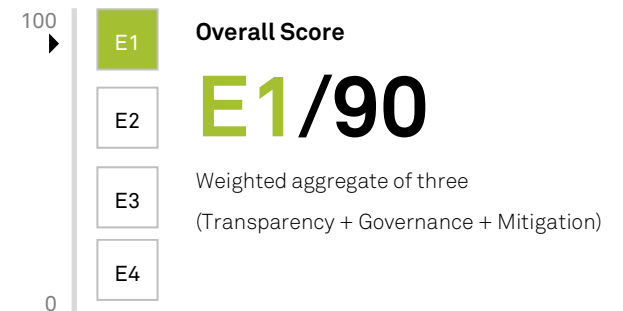
**Transaction's Governance**

- Management of proceeds
- Impact assessment structure

**93**

**Mitigation**

<b>Sector</b>	→	<b>Net Benefit Ranking</b>	→	<b>Hierarchy Adjustments</b>	<b>90</b>
Green Energy		Solar PV Generation		Carbon	



## Project Description

The issuers are wholly owned subsidiaries of AGEL. Their asset portfolio consists of 24 utility-scale solar power projects with 880 MW of total installed capacity, spread across eight states in India:

- Karnataka (47.3% of total capacity)
- Telangana (10.8%)
- Chhattisgarh (10.8%)
- Uttar Pradesh (10.8%)
- Punjab (10.8%)
- Andhra Pradesh (5.4%)
- Rajasthan (2.2%)
- Maharashtra (2.2%)

The issuers sell solar power on long-term, fixed-price power purchase agreements (PPAs) to central government agencies and state-owned distributions companies (DISCOMs). Over 57% of their total capacity is subject to long-term PPAs with Solar Energy Corp. of India and the NTPC Ltd., with the remaining 43% subject to long-term PPAs with state DISCOMs.

The issuers will use bond proceeds to refinance existing borrowings at the issuers' level, and to finance new "eligible green projects" as defined by the issuers. Existing borrowings were previously used to purchase property, plants, and equipment for their solar electricity generation facilities and their dedicated transmission infrastructure. Eligible green projects will comprise exclusively 100% solar energy-powered plants and dedicated transmission infrastructure for them.

## Scoring Summary

This transaction achieves an overall score of 90 out of 100, equivalent to a Green Evaluation score of E1, on our scale from E1 (highest) to E4 (lowest). We determined the E1/90 score by taking a weighted aggregate of the transaction's robust Transparency (89) and Governance (93)

scores, as well as its favorable environmental impact and resultant excellent Mitigation score (90). Our view of the position of solar-based technologies at the top of our carbon hierarchy and the associated avoided carbon emissions contribute to the overall score. We allocate 100% of the proceeds toward solar power generation and related transmission infrastructure, which is used exclusively to connect solar power plants to power grids.

The Governance score of 93 benefits from the issuers' green bond framework, which is subject to independent assurance and has a clear project selection criteria. Bond proceeds will be transferred into an escrow account, and funds will only be disbursed for projects that meet the framework's criteria. The issuers also commit to using bond proceeds exclusively for refinancing existing debt from or for financing solar power generation projects.

In our opinion, this transaction is aligned with the GBP.

## Rationale

- The excellent Mitigation score (90) primarily reflects our view of the contribution of solar-based power generation to systematic decarbonization. This score is also supported by the significant amount of carbon emissions that will be cut from the Indian grid, which relies heavily on coal. This score is somewhat offset by the limited capacity of solar photovoltaics (PV) compared to other renewable technologies.
- The Transparency score (89) benefits from the issuers' commitment to report its allocation of proceeds after issuance, as well as the project's environmental impact, which will be reported semiannually. However, the issuers are not planning to disclose the methodology used to calculate the avoided greenhouse gas emissions.
- The Governance score (93) benefits from the issuers' green bond framework, which has independent assurance and a clear project selection criteria. Bond proceeds will be transferred into an escrow account, and funds will only be disbursed for projects that meet the framework's criteria. The issuers also commit to use bond proceeds exclusively for refinancing existing debt from or for financing solar power generation projects.

## Key Strengths And Weaknesses

All bond proceeds are allocated to solar power generation and transmission projects in India, which in our view will lead to significant potential carbon savings; India's high carbon-intensive grid relies on fossil fuels for most of its generation. We also believe solar PV electricity generates less waste than hydro or wind power due to its lower capacity factor. That said, we rank solar PV power generation lower in terms of environmental benefit compared to small hydro projects and wind power given its typically shorter asset life and lower capacity factor. All of the above factors result in a Net Benefit Ranking of 58.

In our view, solar technology is a systemic decarbonization solution and therefore sits at the top of our carbon hierarchy which contributes to an uplift of the Net Benefit ranking, resulting in a Mitigation score of 90.

We consider the transaction's Transparency as above average. Within one year of the bond issuance, the issuers will disclose the use of proceeds, total allocated amount, and confirm compliance with the green bond framework. The use of proceeds disclosure will be comprehensive, including information such as the location, installed capacity, and asset type of each project. The issuers will also provide ongoing disclosure of the expected reduction of carbon emissions from its solar power projects. The issuers disclosed their general framework and methodology for project selection, and the framework and methodology have been verified by KPMG. That said, the Transparency score is constrained by lack of detailed measurement methods for carbon emission reduction. In addition, the carbon emissions calculation only measures them during the operating phase of these projects, but does not consider emissions data from the construction or decommissioning phases.

The high Governance score reflects the robust framework that ensures bond proceeds are allocated to green projects. In our view, there is a strict mechanism in place to ensure the proceeds will be used exclusively for solar power generation. There is no comingling of funds between bond proceeds and the issuers' funds that may be used for other general corporate purposes. Bond proceeds will be deposited into an escrow account, where the trustee will ensure funds are deployed for projects meeting the requirements under the green bond framework. Under the framework, the bond proceeds may only be used exclusively for solar electricity generation facilities where 100% of

electricity generated is derived from solar energy resources, as well as wholly dedicated transmission infrastructure for solar electricity generation facilities. Because the transmission infrastructure also aids in India's decarbonization, we treat it as a renewable energy project in our analysis.

Furthermore, we believe the funds will be deployed quickly to eligible projects, as over 70% of the proceeds will be used immediately to repay existing debt. Most debt was incurred at AGEUPL (about US\$100 million) and PSEPL (US\$212 million) and was used to fund projects that met the framework's requirements.

The issuers will vet prospective projects based on the assessed environmental and social impacts, in addition to commercial feasibilities. The Environmental and Social Impact Assessment will be conducted according to International Finance Corp.'s performance standard, and will be externally verified by KPMG. The issuers also partner with their local communities on new projects and hire from local communities. The issuers also purchase private land with limited alternative uses by means of outright purchase or long-term lease, avoiding any issues related to rehabilitation and resettlement.

Based on our Transparency score of 89 and Governance score of 93, and that 100% of proceeds have or will be allocated to green projects, we expect this bond to meet the basics of the four pillars of the voluntary GBP given the issuer has committed to:

- Allocating the full amount of the net bond proceeds to eligible green projects, as defined by the issuer;
- Using clear "green" criteria (as defined by the issuer) to select projects for funding;
- Managing and tracking proceeds (potentially by using sub accounts); and
- Regular reporting on the environmental impact and use of proceeds.

A Green Evaluation is a point in time assessment and is not monitored.

## Sector level scores

Sector	Location	Technology	Use Of Proceeds (mil. US\$)	Use Of Proceeds Treatment	Net Benefit Ranking
Green Energy	India	Solar PV Power	500	Estimated	58
			<b>500</b>		

# Carbon

## Green Evaluation Process

89

Transparency

93

Governance

90

Mitigation

Weighted aggregate of three  
(Transparency + Governance + Mitigation)

**E1/90**

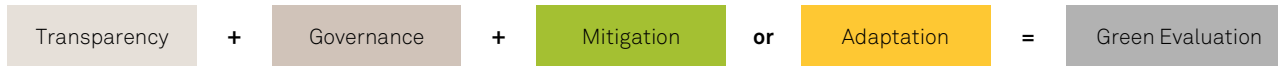
Overall Score

Technology	Baseline Carbon Intensity	Net Benefit Ranking	→ Carbon Hierarchy Adjustment	Environmental Impact Score	Proceeds (mil. US\$)
	<p>High ● Low India</p>				
Wind power					
<b>Solar power</b>		<b>58</b>	<b>Systemic Decarbonization</b>	<b>90</b>	<b>500</b>
Small hydro					
Large hydro (excluding tropical areas)					
Energy management and control					
Unspecified					
Green transport without fossil fuel combustion					
Green buildings – new build			Significant decarbonization in sectors already aligned with a green economy		
Unspecified					
Energy efficient projects (industrial and appliance efficiencies)					
Green transport with fossil fuel combustion					
Green buildings refurbishment			Alleviating emissions of existing carbon-intensive industries		
Unspecified					
Nuclear					
Large hydro in tropical areas			Decarbonization technologies with significant environmental hazards		
Unspecified					
Coal to natural gas					
Cleaner fuel production					
Cleaner use of coal			Improvement of fossil-fueled activities' environmental efficiency		
Unspecified					

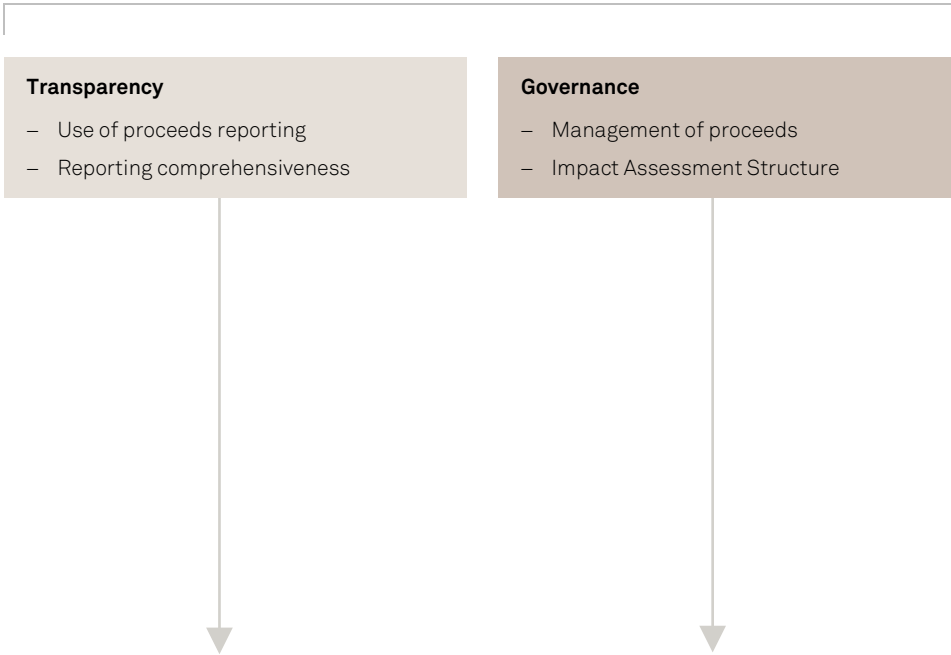
Increasing Decarbonization Impact

## Our Green Evaluation Approach

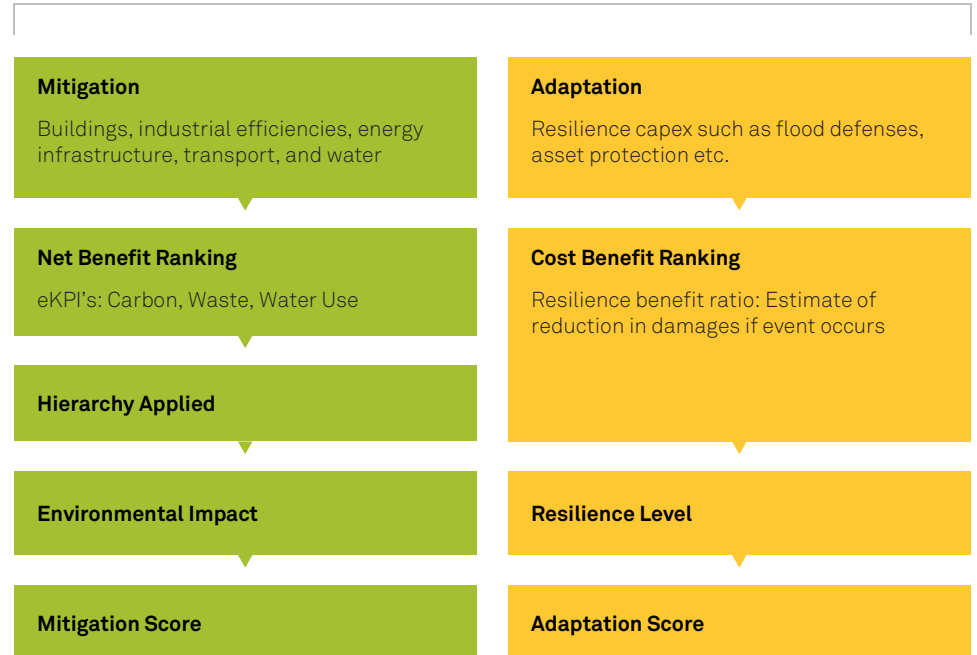
Weighted aggregate of three:



Common approach used amongst opinion providers



Unique to S&P Global Ratings



eKPI – Environmental Key Performance Indicator

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