S&P Global Ratings

Green Evaluation

Brookfield Power New York Finance LP's $305 Million Senior Secured Notes

Transaction Overview

Brookfield Power New York Finance LP (BPNY), indirectly owned by Brookfield Renewable Partners LP (Brookfield Renewable), is issuing US$305 million of senior secured notes in December 2017. Proceeds of the offering will be used to refinance its existing indebtedness at Erie Boulevard, a portfolio of 78 hydroelectric facilities with an installed capacity of 872 MW located in New York, Pennsylvania, Maryland, and West Virginia. The notes have a 13-year bullet maturity in 2030. The notes are callable at any time in whole or part. Given that Erie Boulevard generates 100% of its electricity through hydro resources, we consider the entire offering to be applied to green energy projects.

Entity:	Brookfield Power New York Finance LP
ICB subsector:	Alternative Electricity (7537)
Location (HQ):	U.S.
Financing value:	US$ 305 million
Amount evaluated:	100%
Evaluation date:	Oct. 4, 2017
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Green Evaluation Overview

Transaction's Transparency — 83

- Use of proceeds reporting
- Reporting comprehensiveness

Transaction's Governance — 83

- Management of proceeds
- Impact assessment structure

Mitigation — 96

Sector	→	Net Benefit Ranking	→	Hierarchy Adjustments
Green Energy		Supplying the grid with low-carbon electricity		Carbon

Adaptation — NA

100

E1

E2

E3

E4

0

Overall Score

E1/91

Weighted aggregate of three (Transparency + Governance + Mitigation)

Project Description

BPNY will use proceeds of the bond to refinance its existing indebtedness. BPNY will lend proceeds to Erie Boulevard, which owns 78 hydroelectric facilities with an installed capacity of 872 MW located in New York, Pennsylvania, Maryland, and West Virginia.

Scoring Summary

This transaction achieves an overall Green Evaluation score of E1 on our scale of E1 (highest) to E4 (lowest). The strong score reflects the excellent mitigation score of 96, which largely reflects that all proceeds are associated with renewable electricity generation (hydro, both large and small). The E1 score also reflects the Transparency and Governance scores, both of which are strong at 83, in part due to this issuance being a labelled green bond. The transparency score is assisted in part from the intended reporting with respect to the proceeds of the issuance, as project documents require. The Governance score reflects the corporate commitment to renewable generation and environmental stewardship, as well as the pure play nature of the entity.

Rationale

- The excellent Mitigation score is supported by a focus on renewable energy contributing to systemic decarbonization and located in areas of moderate carbon intensity. US$305 million will be used to refinance existing debt for green energy (large and small hydroelectric facilities) located primarily in New York State.
- The strong Transparency score reflects the intention of Brookfield Renewable to annually report on annual greenhouse gas (GHG) emissions reduced or avoided for the overall BPNY portfolio.
- The robust Governance score reflects the certainty of the sector in which the funds will be spent supported by Brookfield Renewable's strategic commitment to renewable power and the intention of the company to track the proceeds via annual financial reporting; this is partially based on its project finance structure.

Key Strengths And Weaknesses

Proceeds of the debt offering will be used to refinance existing debt for BPNY, which lends the proceeds to Erie Boulevard. We believe a key strength is that about 80% of the proceeds are associated with hydro in New York with a net benefit ranking of 86 for small hydro and 77 for large hydro and the remainder are associated with either large or small hydro in Pennsylvania, West Virginia, and Maryland with a net benefit ranking between 86 and 96, based on higher baseline carbon levels in those states. Hydro assets tend to achieve a higher net benefit ranking than other renewables such as wind and solar given, on average, that they operate at a higher capacity factor and have a longer asset life and therefore displace more carbon.

Further supporting the excellent Mitigation score is the allocation of all proceeds to green energy projects, which sit at the top of our carbon hierarchy because they contribute to the systemic decarbonization of the economy.

The transaction's Governance score of 83 reflects a strong commitment to monitoring environmental impacts but is modestly tempered by the lack of separate subaccounts for tracking the proceeds as well as a lack of external assurance of environmental benefits. Furthermore, environmental impact assessments reported by Brookfield Renewable will not take into account the full life cycle of the projects, but merely the avoided greenhouse gas emissions from generation.

However, overall we believe Brookfield Renewable demonstrates a strong commitment to environmental governance. The company's core strategy is the ownership and development of renewable power with a strong commitment to efficient, sustainable, and responsible use of natural resources with policies intended to consider the socioeconomic and environmental expectations of a broad range of stakeholders. This is evidenced by its ownership of 212 hydroelectric facilities across 82 river systems.

Furthermore, there are 52 hydro facilities owned by Brookfield Renewable across the U.S. that have attained certification by the Low Impact Hydropower Institute (LIHI). The LIHI is a nonprofit organization focused on reducing the environmental impacts of hydropower generation on fish and wildlife. It provides certification to hydropower projects that have eliminated or reduced their environmental impact as defined by LIHI's criteria.

In addition, the strong Transparency score of 83 is supported by BPNY's intention to report the use of proceeds from this bond in its annual financial statements. The company has also indicated its intention to report on annual GHG emissions reduced or avoided at the aggregate Erie Boulevard portfolio level, which we view as positive, even if it does not consider each individual asset.

In the green evaluation process table we blended the various U.S. states' baseline carbon grid intensity resulting in medium weighted average carbon intensity. The blending approach tracks the proportion of spending in the various geographies of the BPNY portfolio.

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Sector level scores

Sector	Location	Technology	Use of Proceeds (US$ mil.)	Use of Proceeds treatment	Net Benefit Ranking (%)
Green Energy	New York, U.S.	Small hydro	188.88	Actual	86
Green Energy	New York, U.S.	Large hydro	59.76	Actual	77
Green Energy	West Virginia, U.S.	Large hydro	35.68	Actual	96
Green Energy	West Virginia, U.S.	Small hydro	2.05	Actual	96
Green Energy	Pennsylvania, U.S.	Large hydro	11.63	Actual	86
Green Energy	Maryland, U.S.	Small hydro	7.00	Actual	96
			305.00		

Carbon

Green Evaluation Process

83	83	96		
Transparency	Governance	Mitigation	Weighted aggregate of three (Transparency + Governance + Mitigation)	E1/91 Overall Score

Technology	Baseline Carbon Intensity	Net Benefit Ranking →	Carbon Hierarchy Adjustment	Environmental Impact Score	Proceeds (US$ mil.)
	High — Low: Various U.S. States				
Wind power			Systemic decarbonization		
Solar Power					
Small hydro		87		97	197.93
Large hydro (excluding tropical areas)		84		96	107.07
Energy management and control					
Unspecified					
Green transport without fossil fuel combustion			Significant decarbonization in sectors already aligned with a green economy		
Green buildings–new build					
Unspecified					
Energy efficient projects (industrial and appliance efficiencies)			Alleviating emissions of existing carbon-intense industries		
Green transport with fossil fuel combustion					
Green buildings refurbishment					
Unspecified					
Nuclear			Decarbonization technologies with significant environmental hazards		
Large hydro in tropical areas					
Unspecified					
Coal to natural gas			Improvement of fossil-fueled activities' environmental efficiency		
Cleaner fuel production					
Cleaner use of coal					
Unspecified					

Increasing Decarbonization Impact

Our Green Evaluation Approach

Weighted aggregate of three:

Transparency + Governance + Mitigation or Adaptation = Green Evaluation

Common approach used among opinion providers

Unique to S&P Global Ratings

Transparency

- Use of proceeds reporting
- Reporting comprehensiveness

Governance

- Management of proceeds
- Impact assessment structure

Mitigation

Buildings, industrial efficiencies, energy infrastructure, transport, and water

Net Benefit Ranking

eKPIs: Carbon, waste, water use

Hierarchy Applied

Environmental Impact

Mitigation Score

Adaptation

Resilience capex such as flood defenses, asset protection, etc.

Cost Benefit Ranking

Resilience benefit ratio: estimate of reduction in damages if event occurs

Resilience Level

Adaptation Score

Final Green Evaluation (E1-E4 or R1-R4)

eKPI–Environmental key performance indicator.

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