

Green Evaluation

Greenalia Biomass Power Curtis Teixeira

€125 Million Senior Secured Loan

Transaction Overview

Greenalia Biomass Power Curtis Teixeira, S.L.U. is seeking to borrow up to €125 million to build, start up, and operate a 49.9 MW biomass plant, along with the feed-in lines, substations, and other installations necessary to connect the plant to the distribution network of Teixeira, a town in the municipality of Curtis in the province of La Coruña, Spain. The company was awarded the right to build this power capacity in a Spanish auction conducted by the Ministry of Energy in January 2016. Once operational in 2020, the project will generate 324 GWh per year using approximately 498,000 tons of forest biomass. Greenalia S.A., the ultimate parent company, comprises a group of companies with over 40 years of experience in providing raw forest products in a variety of sectors such as pulp, power, heating, pellets, wood panels, and timber.

Entity: Greenalia Biomass Power Curtis Teixeira, S.L.U.
Subsector: Alternative Energy (7537)
Location (HQ): Spain
Financing value: €125 million
Amount evaluated: 100%
Evaluation date: July 23, 2018
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Green Evaluation Overview

Transaction's Transparency

- Use of proceeds reporting
- Reporting comprehensiveness

66

Transaction's Governance

- Management of proceeds
- Impact assessment structure

80

Mitigation

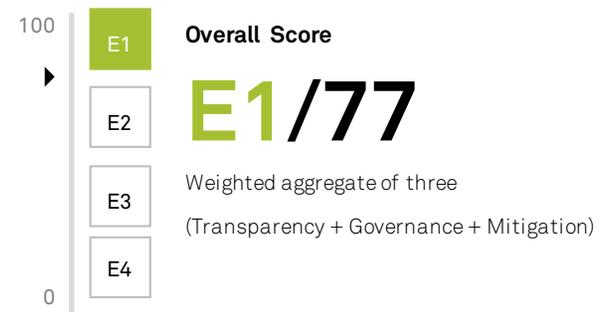
Sector → **Net Benefit Ranking** → **Hierarchy Adjustments**

Renewable energy → Biomass power generation

79

Adaptation

NA



Project Description

Greenalia is developing a 49.9 MW biomass power plant in Curtis, La Coruña, Spain, that will be financed using a project finance structure through bank facilities. The company was awarded the right to build this power capacity in a Spanish auction conducted by the Ministry of Energy in January 2016. The plant will incinerate biomass in a bubbling fluidized bed furnace-boiler, designed to generate superheated steam that will then be used in a steam turbine generator for electricity production. Investment capex is expected to reach €119 million.

Once in operation, the plant will be able to sell 324 GWh per year to the grid using approximately 498,000 tons of forest biomass procured by Greenalia Forest through a long-term fixed-price biomass supply agreement. Construction completion of the main plant is expected in 2020.

Greenalia S.A. (formerly known as Grupo García Forestal) is the ultimate parent company and 100% owner of the biomass plant project. Greenalia comprises a group of companies with over 40 years' experience in providing raw forest products in a variety of sectors such as pulp, power, heating, pellets, wood panels, and timber. Greenalia currently manages 600,000 tons of wood per year, which results in a significant amount of waste wood. The activities of Greenalia take place mainly in the northwest of the Iberian Peninsula, where they trade largely with *Eucalyptus globulus*, *Eucalyptus nitens*, *Pinus radiata*, and *Pinus pinaster*. The project will procure 30% to 40% of its feedstock from the waste wood collected by Greenalia and the remaining volume of biomass will be collected or purchased from other landowners.

Scoring Summary

The transaction achieves a Green Evaluation score of E1 on our scale of E1 (highest) to E4 (lowest) and an overall score of 77. The evaluation reflects a strong Mitigation score of 79 that is supported by proceeds allocated to a biomass renewable energy project in Spain, which has a grid carbon intensity that we consider medium, combined with our hierarchy adjustment that reflects the role green energy plays in systemic decarbonization of the economy. The E1 score also reflects solid Governance (80), given the lender protections inherent in a project financing structure, combined with an above-average score in Transparency (66).

Rationale

- All proceeds are allocated for the construction of a new biomass energy plant in Curtis, La Coruña, Spain, owned by Greenalia.
- The evaluation considers the net environmental benefits associated with the project based on the local grid carbon intensity in Spain, which we consider medium (which is the second-lowest carbon intensity on our scale of low to extremely high). This leads to a Net Benefit Ranking of 15 compared with all renewable energy technologies globally.
- However, renewable energy technology such as biomass power is considered a long-term green solution and is placed at the top end of our carbon hierarchy, which facilitates uplift of the overall mitigation score to 79.
- While this financing is not a labeled green loan, it shares a number of the same structural provisions, in part because it is a project financing, resulting in a strong Governance score.
- The project's Transparency score benefits from the reporting of the proceeds allocation but the transaction lacks a defined project selection criteria based on explicit environmental objectives and a methodology to calculate expected environmental impacts.
- Overall, the strong Governance and Mitigation scores enable the financing to achieve the final score of E1/77.

Key Strengths And Weaknesses

Loan proceeds will be used to fund the construction of a 49.9 MW biomass power plant in in Curtis, La Coruña, Spain. The project achieves a Net Benefit Ranking of 15, which is relatively low due to a number of factors. First, the carbon cost of biomass power plants is relatively high compared to other forms of renewable energy due to the direct emissions generated from the combustion of the feedstock. However, these emissions are partially offset by the roughly equal measure of carbon dioxide that is reabsorbed by growing a subsequent fuel load for the power plant. Second, compared to other renewable peers, biomass ranks lower to, for instance, hydroelectric generation given the much longer life of the assets and hence more carbon displaced. Finally, Spain's grid is already fairly decarbonized compared with the rest of the world's generating grids, so we assume the assets will displace comparatively fewer emissions than in more carbon-intensive grids.

The Net Benefit Ranking is adjusted upward to a final Mitigation score of 79 by means of our carbon hierarchy overlay, which recognizes the significant environmental benefits that all forms of renewable energy provide. Renewable energy technologies fall in the highest rung of our hierarchy reflecting that these technologies are systemic solutions to achieve a low-carbon economy.

The Transparency of the transaction is considered above average due to the expected reporting on the company's website of sulfur dioxide (SO₂), nitrogen oxides (NO_x), and carbon monoxide (CO) among others, once the plant is operational. In addition, the Transparency score benefits from the plant level environmental impact breakdown.

However, the transaction lacks a defined project selection criteria based on explicit environmental objectives and a methodology to calculate expected environmental impacts.

A factor that influences our assessment of both Transparency and Governance is the selection criteria used to identify suitable projects. We note that while tracking of proceeds isn't expressly required by the financing documents, this is a structured loan where we have a high degree of confidence as to the allocation of the funds. The structure is similar to other project-type structures we've analyzed that have prevented leakage of funds. Overall, the transaction achieves score of 77/E1 on our scale.

Sector level scores

Sector	Location	Technology	Use of Proceeds (€ mil.)	Use of Proceeds treatment	Net Benefit Ranking
Green energy	Spain	Biomass power generation	125	Actual	15
			125		

Carbon

Green Evaluation Process

66

Transparency

80

Governance

79

Mitigation

Weighted aggregate of three
(Transparency + Governance + Mitigation)

E1/77

Overall Score

Technology	Baseline Carbon Intensity	Net Benefit Ranking	Carbon Hierarchy Adjustment	Environmental Impact Score	Proceeds (€ mil.)
	<p>High Low</p> <p>Spain</p>				
Wind power					
Solar power					
Small hydro					
Large hydro (excluding tropical areas)					
Energy management and control					
Biomass power generation		15			
Green transport without fossil fuel combustion					
Green buildings – new build					
Unspecified					
Energy efficient projects (industrial and appliance efficiencies)					
Green transport with fossil fuel combustion					
Green buildings refurbishment					
Unspecified					
Nuclear					
Large hydro in tropical areas					
Unspecified					
Coal to natural gas					
Cleaner fuel production					
Cleaner use of coal					
Unspecified					
			Systemic decarbonization	79	125
			Significant decarbonization in sectors already aligned with a green economy		
			Alleviating emissions of existing carbon-intensive industries		
			Decarbonization technologies with significant environmental hazards		
			Improvement of fossil-fueled activities' environmental efficiency		

Increasing Decarbonization Impact

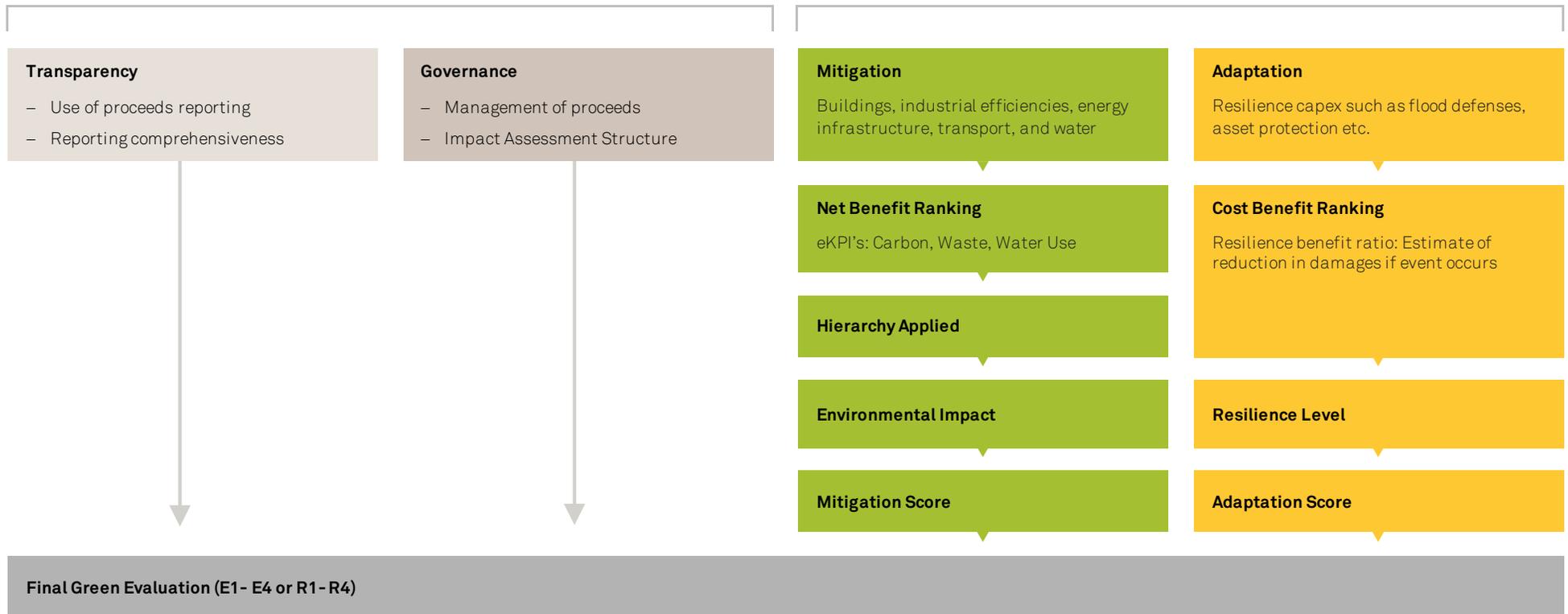
Our Green Evaluation Approach

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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