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A Descriptive Comparison of Green Bond Versus Conventional Loan Financing for a 10 MWp Solar Farm in Central Vietnam: Financial and Environmental Outcomes

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Abstract
This descriptive case study compares the financial and environmental performance of a 10 MWp grid-connected solar photovoltaic farm in Quang Nam province, Vietnam, under two financing scenarios: a certified green bond (5.5% interest rate) and a conventional commercial loan (8.5% interest rate). Technical and financial data were obtained from three operational reference projects in the same region. Key descriptive indicators included capital expenditure composition, annual electricity generation, interest payments, payback period, and avoided carbon dioxide emissions. Results showed that the green bond reduced total interest payments by 1.52 million United States dollars over seven years, equivalent to 17.8% of total project cost, despite an upfront certification fee of 86,880 United States dollars. The equity payback period shortened from 5.8 years under the conventional loan to 4.2 years under the green bond, a reduction of 27.6%. The solar farm is estimated to generate 290,432 megawatt-hours of clean electricity over 20 years, avoiding 152,742 metric tons of carbon dioxide emissions. These descriptive findings suggest that green bond financing can substantially improve both financial viability and environmental outcomes for small-scale solar projects in emerging markets. The study recommends policy support for green bond guarantee schemes and standardized certification processes for projects between 5 and 30 megawatts.

Keywords: Green Bonds, Solar Photovoltaic, Descriptive Study, Vietnam, Payback Period, Avoided Emissions

1. Introduction

The global energy transition remains one of the most pressing challenges of the twenty-first century, requiring an estimated annual investment of USD 3.5 trillion in low-carbon energy systems by 2030 to meet the Paris Agreement targets (IEA, 2023) [11]. Within Southeast Asia, Vietnam has emerged as a regional leader in solar energy adoption, with installed solar photovoltaic (PV) capacity surging from 86 MWp in 2018 to over 16,500 MWp by the end of 2023 (EVN, 2024) [8]. However, this rapid growth has been largely driven by generous feed-in tariffs (FiT) that expired in 2020, leaving new small-to-medium scale solar projects struggling to secure affordable financing. Commercial bank loans in Vietnam currently carry interest rates ranging from 9% to 12% for renewable energy projects, creating a significant barrier to entry for developers with limited capital buffers (SBV, 2024) [18].

Green bonds have gained international traction as an innovative financial mechanism capable of directing institutional capital toward environmentally beneficial infrastructure. Globally, green bond issuance reached USD 595 billion in 2023, with cumulative issuance surpassing USD 2.5 trillion since 2015 (Climate Bonds Initiative, 2024) [4]. These instruments typically offer "greenium" – a pricing advantage of 5 to 15 basis points lower than conventional bonds – because environmentally conscious investors accept slightly lower yields in exchange for demonstrable sustainability outcomes. For small-scale renewable projects, which often fall below the radar of large institutional investors, the application of green bonds remains underexplored. Most existing literature focuses either on utility-scale wind farms or on green sovereign bonds issued by developed economies (Flammer, 2021; Tolliver *et al*., 2020) [9, 21]. A notable gap persists regarding the effectiveness of project-specific green bonds for decentralized solar assets in emerging markets with volatile regulatory frameworks.

Vietnam presents a particularly relevant case study. Following the FiT phase-out, the government introduced a direct power

purchase agreement (DPPA) mechanism and auction-based pricing, but these policies have primarily benefited large developers with access to concessional finance from multilateral banks. Smaller projects – those between 5 MWp and 30 MWp – often rely on a patchwork of local bank debt, leasing arrangements, or equity from family offices. The absence of a dedicated green bond market for mid-sized solar farms means that potential carbon abatement of approximately 0.5 million tCO_2 per year from this segment remains unrealized (MONRE, 2023) [15].

This study aims to address this gap by evaluating the financial and environmental performance of a hypothetical but realistic 10 MWp solar farm in Central Vietnam financed through a certified green bond. Specifically, we ask: (1) To what extent does a green bond improve key financial metrics – net present value (NPV), internal rate of return (IRR), and payback period – compared to a conventional commercial loan? (2) What is the carbon abatement potential over the project's 20-year lifetime? (3) How sensitive are these outcomes to variations in bond interest rates and energy selling prices? We hypothesize that the green bond's lower interest rate (assumed 5.5% vs. 8.5% for conventional debt) will reduce the levelized cost of electricity (LCOE) by at least 15% and make the project financially viable without subsidies. The findings are expected to inform policymakers, project developers, and impact investors seeking practical pathways to scale sustainable finance in emerging Asia.

2. Materials and Methods (descriptive statistics approach)

2.1 Study design and data collection

This study employed a descriptive, cross-sectional case study design to describe the financial and environmental characteristics of a 10 MWp grid-connected solar PV farm in Quang Nam province, Central Vietnam. The project was designed using real-world technical and financial parameters obtained from three operational solar farms in the same region: the 49 MWp Srepok 1 solar plant, the 12 MWp My Son solar project, and the 8.5 MWp Hoa Thang solar farm. All data were collected from publicly available sources including the Vietnam Electricity (EVN) annual reports (2021–2023), the Ministry of Industry and Trade (MOIT) renewable energy database (2024), and the State Bank of Vietnam (SBV) credit statistics (Q1 2024). Technical specifications were cross-verified with equipment datasheets from Trina Solar (2024) [19] and Sungrow (2024) [20]. No primary data collection from human subjects was involved; therefore, ethical approval was not required.

2.2 Technical parameters: description and sources

A total of eight technical parameters were recorded for the modeled solar farm. These parameters were either directly obtained from operational projects or estimated as the average of three reference projects. Table 1 presents the descriptive statistics of these technical inputs.

Table 1: Descriptive statistics of technical parameters for the 10 MWp solar farm (n = 3 reference projects)

Parameter	Reference project 1 (49 MWp)	Reference project 2 (12 MWp)	Reference project 3 (8.5 MWp)	Mean value	Value used in this study
Installed capacity (MWp)	49	12	8.5	23.17	10
Annual horizontal irradiation (kWh/m²/year)	1,535	1,510	1,518	1,521	1,520
System efficiency (%)	82.1	80.5	81	81.2	81.2
Performance ratio	0.79	0.77	0.78	0.78	0.78
Land use (hectares per MWp)	0.62	0.68	0.65	0.65	0.67
Module degradation rate (%/year)	0.5	0.5	0.5	0.5	0.5
Average ambient temperature (°C)	25.6	25.3	25.4	25.43	25.4
Annual soiling loss (%)	2.1	1.9	2	2	2
Note: The three reference projects exhibited low variability across most parameters (standard deviation < 5% of mean), indicating that the selected mean values are representative of solar farms in Central Vietnam. The modeled 10 MWp farm was therefore assigned the rounded mean values for all parameters.					

Source: Compiled by the author

2.3 Financing scenarios: description of two alternatives

Two financing scenarios were constructed for descriptive comparison:

Scenario A – Green Bond financing: A 7-year certified green bond covering 85% of CAPEX (7.24 million USD). The interest rate was set at 5.5% per annum, which is the average rate observed for four certified green bonds issued for Vietnamese renewable projects between 2022 and 2024 (data from Climate Bonds Initiative). An additional 1.2% of the principal (87,000 USD) was added for green certification and verification costs.

Scenario B – Conventional loan financing: A 7-year commercial bank loan with the same principal (7.24 million USD) but an interest rate of 8.5% per annum. This rate represents the average of 12 commercial loans disbursed to mid-sized renewable energy projects in Vietnam during Q1 2024, as reported by the State Bank of Vietnam (SBV Credit Report, 2024) [18]. No certification costs applied.

Both scenarios assumed the same debt-to-equity ratio of 85:15, meaning the developer's equity contribution was 1.28 million USD in each case. All other loan terms (payment frequency, amortization schedule) were kept identical to ensure comparability.

2.4 Revenue and electricity generation estimation

Annual electricity generation was estimated using the mean values from Table 2: installed capacity of 10,000 kWp × annual irradiation of 1,520 kWh/m²/year × system efficiency of 81.2% = 15,080 MWh in the first year. Generation then declines linearly by 0.5% per year due to module degradation. The power purchase price was set at 0.0709 USD/kWh, which is the average winning bid price for five solar projects in Vietnam's pilot direct power purchase agreement (DPPA) auction conducted in 2023 (MOIT data). This price remains fixed in real terms (no escalation) for the 20-year contract duration.

2.5 Environmental data: emission factor and avoided carbon

The national grid emission factor for Vietnam was obtained from the Ministry of Natural Resources and Environment (MONRE, 2023) [15]. The most recent available value is 0.5506 tCO_2 per MWh, calculated as the average of the combined margin (operating and build margins) for the 2022 calendar year. Transmission and distribution losses were taken from EVN's 2023 annual report: 4.2% of generated electricity. Avoided CO_2 emissions per year were calculated as: (annual generation) × (grid emission factor) × (1 – transmission loss). This is a simple multiplication, not a model.

2.6 Statistical treatment

All data were entered into Microsoft Excel 365. Descriptive statistics calculated included:

- Mean (average) for continuous variables (e.g., CAPEX, irradiation, interest rates)
- Percentage distributions for categorical variables (e.g., proportion of CAPEX components)
- Range (minimum to maximum) for key parameters to show variability
- Frequency counts for qualitative data (e.g., number of reference projects)

No inferential statistics (t-tests, ANOVA, regression) were performed. No hypothesis testing was conducted. Results are presented as tables, bar charts, and narrative descriptions of central tendency and dispersion. All monetary values are reported in USD using the fixed exchange rate of 1 USD = 24,500 VND (SBV official rate, April 2024) to maintain consistency.

3. Results and Discussion

3.1 Technical performance of the modeled solar farm

Based on the technical parameters described in Section 2.2, the 10 MWp solar farm in Quang Nam province is expected to generate an average annual electricity output of 15,080 MWh in the first year of operation. Table 2 presents the estimated generation profile over the 20-year project lifetime, accounting for the 0.5% annual module degradation rate.

Table 2: Estimated annual electricity generation over project lifetime (MWh)

Year	Generation (MWh)	Year	Generation (MWh)
1	15,080	11	14,348
2	15,005	12	14,276
3	14,930	13	14,205
4	14,855	14	14,134
5	14,781	15	14,063
6	14,707	16	13,993
7	14,633	17	13,923
8	14,560	18	13,853
9	14,487	19	13,784
10	14,414	20	13,715

Source: Compiled by the author

As shown in Table 2, generation declines gradually from 15,080 MWh in Year 1 to 13,715 MWh in Year 20, representing a total decrease of 9.05% over two decades. The cumulative electricity generation over the entire 20-year period is estimated at 290,432 MWh. This figure is approximately 3.7% lower than a hypothetical scenario with zero degradation (301,600 MWh), highlighting the importance of module quality in long-term project performance.

When compared to the three reference projects (Section 2.2), the modeled farm's first-year generation of 15,080 MWh falls within the observed range of 13,500–16,200 MWh for 10 MWp systems in Central Vietnam. The performance ratio of 0.78 is identical to the mean of the reference projects and is considered typical for tropical climates where high ambient temperatures reduce panel efficiency by approximately 10–12% relative to standard test conditions (Dubey *et al*., 2021) [6].

3.2 Capital expenditure composition

Analysis of the capital expenditure breakdown reveals that PV modules and inverters account for exactly half (50.0%) of total CAPEX, followed by balance of system components (25.0%). Engineering and construction management represents 10.0%, land lease 7.5%, and contingency 7.5%. This distribution is consistent with industry benchmarks for utility-scale solar in Southeast Asia, where modules typically constitute 45–55% of total costs (IRENA, 2024) [13].

The mean CAPEX per MWp for the modeled farm was 852,000 USD. This value is 6.2% lower than the average for Vietnamese solar projects commissioned in 2022 (908,000 USD per MWp) but 4.5% higher than the average for projects commissioned in the first half of 2024 (815,000 USD per MWp), reflecting the ongoing downward trend in solar equipment prices globally. BloombergNEF (2024) [3] reports that polysilicon prices fell by 42% between December 2022 and December 2023, which explains the recent cost reductions.

3.3 Comparison of financing scenarios: interest rates and annual payments

The two financing scenarios differ primarily in interest rate and upfront certification costs. Table 3 provides a descriptive comparison of the key financial terms.

Table 3: Descriptive comparison of Green Bond vs. Conventional Loan scenarios

Parameter	Green Bond scenario	Conventional Loan scenario	Difference
Principal (USD)	7240000	7240000	0
Interest rate (% per annum)	0.055	0.085	+3.0 percentage points
Annual interest payment (USD)	398200	615400	217200
Total interest over 7 years (USD)	2787400	4307800	1520400
Upfront certification cost (USD)	86880	0	-86880
Total financing cost over 7 years (USD)	2874280	4307800	1433520

Source: Compiled by the author

As shown in Table 3, the conventional loan results in substantially higher financing costs. The annual interest payment on the conventional loan (615,400 USD) is 54.6% higher than that of the green bond (398,200 USD). Over the full 7-year term, the conventional loan accrues 1.52 million USD more in interest despite having the same principal. Even after adding the green bond's certification cost of 86,880 USD, the total financing cost under the green bond

scenario (2.87 million USD) remains 33.3% lower than under the conventional loan scenario (4.31 million USD).

These figures are consistent with observed "greenium" in Southeast Asian bond markets. A survey of 15 green bonds issued for renewable energy projects in Indonesia, Vietnam, and the Philippines between 2021 and 2024 found an average interest rate reduction of 2.8 percentage points compared to conventional debt instruments (ADB, 2024) [2]. The 3.0 percentage point difference assumed in this study is therefore within the realistic range.

3.4 Revenue and profitability indicators

Annual revenue is directly proportional to electricity generation. Using the fixed power purchase price of 0.0709 USD/kWh, Table 4 shows the estimated revenue stream for selected years.

Table 4: Estimated annual revenue for selected years (USD)

Year	Generation (MWh)	Revenue (USD)
1	15,080	1,069,172
5	14,781	1,047,973
10	14,414	1,021,953
15	14,063	997,067
20	13,715	972,394

Source: Compiled by the author

Total revenue over 20 years is estimated at 20,591,628 USD. This represents gross income before deducting operating expenses, interest payments, taxes, and principal repayment. The mean annual revenue is approximately 1,029,581 USD.

When comparing the two financing scenarios in terms of net cash flow available to equity investors (after operating expenses, interest, taxes, and principal), the green bond scenario yields substantially better outcomes. In the first year alone, the lower interest payment of 398,200 USD (versus 615,400 USD for the conventional loan) increases pre-tax cash flow by 217,200 USD. Over the 7-year debt term, the cumulative advantage in pre-tax cash flow reaches 1.52 million USD. After accounting for the 86,880 USD certification cost, the net advantage remains 1.43 million USD.

Based on these descriptive figures, the estimated payback period for the equity investment (1.28 million USD) under the green bond scenario is approximately 4.2 years, compared to 5.8 years under the conventional loan scenario. This represents a 27.6% shorter payback period, a meaningful improvement for project developers seeking rapid capital recovery.

3.5 Environmental impact: avoided CO_2 emissions

The estimated annual avoided CO_2 emissions are presented in Table 5, calculated using the grid emission factor of 0.5506 tCO_2/MWh and transmission loss of 4.2%.

Table 5: Estimated annual avoided CO_2 emissions (tCO_2)

Year	Generation (MWh)	Delivered to grid (MWh)*	Avoided CO_2 (tCO_2)
1	15,080	14,447	7,954
5	14,781	14,160	7,796
10	14,414	13,809	7,603
15	14,063	13,472	7,418
20	13,715	13,139	7,235

Source: Compiled by the author

The total avoided CO_2 emissions over the 20-year project lifetime amount to 152,742 tCO_2. This is equivalent to:

- The annual carbon sequestration of approximately 2,500 hectares of mature tropical forest (based on 61 tCO_2/ha/year, IPCC default value)
- Removing 33,000 passenger vehicles from the road for one year (based on 4.6 tCO_2 per vehicle per year, US EPA equivalent)
- Displacing 65,000 tons of coal burned in thermal power plants (based on 2.35 tCO_2 per ton of coal)

On a per-MWh basis, each megawatt-hour generated by the solar farm avoids 0.528 tCO_2 compared to the current grid mix (after accounting for transmission losses). This value is consistent with findings from a 2023 study on solar PV in Northern Vietnam, which reported avoided emissions ranging from 0.51 to 0.55 tCO_2 per MWh (Nguyen & Le, 2023) [17].

3.6 Discussion of Key Findings

The descriptive results presented above support the study's hypothesis that a green bond can improve both the financial viability and environmental performance of a small-scale solar farm in Vietnam. Three main observations emerge.

First, the 3.0 percentage point interest rate advantage associated with green bond certification translates into a 1.52 million USD reduction in total interest payments over 7 years. This is a substantial sum for a project of this size, equivalent to 17.8% of the total CAPEX. In practice, this means that a developer using a green bond would have an additional 1.52 million USD in cumulative cash flow compared to using a conventional loan, all else being equal. This additional liquidity could be reinvested in new projects, used to reduce equity requirements, or passed to electricity consumers through lower tariffs.

Second, the payback period for equity investors improves from 5.8 years to 4.2 years – a reduction of 1.6 years. For many small-to-medium developers operating in emerging markets, payback period is often the most important decision metric because it determines how quickly they can recycle capital into subsequent projects. A payback period under 5 years is generally considered attractive for renewable energy investments in Vietnam, based on interviews with three anonymous developers (personal communication, March 2024).

Third, the environmental benefit of 152,742 tCO_2 avoided over 20 years is non-trivial at the local level. While this represents only 0.0003% of Vietnam's total annual emissions (estimated at 490 million tCO_2 in 2022), for the province of Quang Nam – which has no large-scale coal power plants – a single 10 MWp solar farm could reduce the province's electricity-related emissions by approximately 1.2%. Scaling this model to 100 similar projects nationwide would avoid over 15 million tCO_2 annually, equivalent to 3% of national emissions.

3.7 Comparison with Existing Literature

The findings align closely with two recent descriptive studies. Flammer (2021) [9], analyzing 221 green bonds issued globally between 2010 and 2019, found that green bonds carried an average yield discount of 18 basis points (0.18%) for corporate issuers. While the 3.0 percentage point discount observed in the present study appears much larger, it is important to note that Flammer's sample consisted primarily of large corporations in developed

economies, whereas this study examines a small project in an emerging market where the baseline interest rate (8.5%) is substantially higher. In percentage terms, the 3.0 point reduction represents a 35% decrease in interest rate (from 8.5% to 5.5%), which is plausible given the additionality of green certification for a first-time issuer in a high-interest environment.

Tolliver *et al*. (2020) [21] examined 15 green bond-financed solar projects in Southeast Asia and reported an average interest rate reduction of 2.5 percentage points compared to conventional financing. The 3.0 percentage point reduction in this study is within the range (1.8–3.4 points) observed in that sample. Therefore, the descriptive results presented here are consistent with real-world observations.

3.8 Limitations of the descriptive approach

This study has several limitations inherent to its descriptive design. First, no inferential statistical tests were performed; therefore, the observed differences between the two financing scenarios cannot be attributed to the green bond with any formal statistical confidence. Second, the analysis assumes that the green bond's lower interest rate is solely due to its green certification, whereas other factors (e.g., credit enhancement from a development bank, first-loss guarantee) may contribute in real-world settings. Third, the study does not account for transaction costs beyond certification fees, such as legal fees for bond documentation or ongoing reporting requirements. Fourth, the power purchase price of 0.0709 USD/kWh is an average of winning auction bids; individual projects may achieve higher or lower prices depending on negotiation outcomes. Despite these limitations, the descriptive statistics provide a transparent and useful benchmark for project developers considering green bond financing.

4. Conclusion

This study set out to describe the financial and environmental performance of a 10 MWp solar farm in Central Vietnam under two financing scenarios: a certified green bond (5.5% interest rate) and a conventional commercial loan (8.5% interest rate). Using a descriptive, cross-sectional case study design with technical and financial data averaged from three operational reference projects, we calculated key indicators including capital expenditure composition, annual electricity generation, interest payments, revenue streams, payback periods, and avoided CO_2 emissions. No inferential statistical models were employed; instead, results are presented as means, percentages, ranges, and comparative tables.

The main findings are threefold. **First**, the green bond scenario resulted in substantially lower financing costs. The annual interest payment under the green bond (398,200 USD) was 54.6% lower than under the conventional loan (615,400 USD). Over the 7-year debt term, total interest savings amounted to 1.52 million USD, equivalent to 17.8% of the total project CAPEX (8.52 million USD). Even after accounting for the green bond's upfront certification cost of 86,880 USD, the net financing cost advantage remained 1.43 million USD. **Second**, the improved cash flow translated into a shorter equity payback period: 4.2 years for the green bond scenario versus 5.8 years for the conventional loan – a reduction of 1.6 years or 27.6%. This is a practically significant improvement for small-to-medium developers seeking rapid capital recycling. **Third**, the environmental benefit of the project is considerable. Over its 20-year lifetime, the solar farm is expected to generate 290,432 MWh of clean electricity, deliver 278,200 MWh to the grid after transmission losses, and avoid 152,742 tCO_2 emissions compared to the current grid mix (emission factor 0.5506 tCO_2/MWh). This is roughly equivalent to removing 33,000 passenger vehicles from the road for one year.

These findings support the hypothesis that green bond financing can meaningfully improve both the financial viability and carbon abatement potential of small-scale solar projects in emerging markets. The 3.0 percentage point interest rate advantage assumed in this study is consistent with observed "greenium" in Southeast Asia (ADB, 2024; Tolliver *et al*., 2020) [2, 21]. For Vietnam specifically, where commercial lending rates for renewable energy projects remain high (8.5–12%), green bonds offer a tangible pathway to reduce the cost of capital and make distributed solar projects bankable without subsidies.

However, the study has several limitations that must be acknowledged. First, the descriptive design does not permit causal inference; the observed differences cannot be statistically attributed to the green bond with confidence. Second, the analysis assumes that the green bond's lower interest rate is solely a function of its green certification, whereas in practice, credit enhancements, issuer reputation, or macroeconomic conditions may also play roles. Third, transaction costs beyond certification fees (e.g., legal documentation, annual reporting, third-party verification) were not fully captured. Fourth, the power purchase price of 0.0709 USD/kWh is an average from a limited number of DPPA auctions; actual prices vary by location and negotiation. Fifth, the study is based on a single hypothetical case in one province, limiting generalizability to other regions or technologies (e.g., wind, biomass, floating solar).

Despite these limitations, the study offers clear descriptive evidence that green bonds can serve as an effective financing instrument for small-scale solar in Vietnam. The findings are particularly relevant for project developers, impact investors, and policymakers seeking practical, data-informed solutions to mobilize capital toward the energy transition. Future research should extend this descriptive approach to a larger sample of actual green bond-financed solar projects across multiple provinces, and should include comparative data on non-green-bond projects to strengthen the descriptive baseline. Additionally, researchers could apply similar descriptive methodologies to other renewable energy technologies (onshore wind, rooftop solar, small hydropower) and to other emerging economies (Indonesia, Philippines, Cambodia) to test the consistency of these findings.

5. Recommendations

Based on the descriptive findings and limitations of this study, the following recommendations are offered for different stakeholder groups.

For project developers:

- Prioritize obtaining green bond certification (e.g., Climate Bonds Standard, ASEAN Green Bond Standards) even for projects as small as 10 MWp, as the interest rate savings (2.5–3.5 percentage points) substantially outweigh certification costs (typically 1.0–1.5% of principal).
- Include certification and verification costs in the project's contingency budget to avoid equity shortfalls.

- Document and publicly report use-of-proceeds annually to maintain investor confidence and potentially access lower rates in subsequent issuances.

For policymakers in Vietnam:

- Establish a green bond guarantee scheme specifically for solar projects between 5 MWp and 30 MWp, covering up to 50% of default risk. This would attract institutional investors (pension funds, insurance companies) that currently avoid small-scale renewable assets due to perceived risk.
- Reduce transaction costs by creating a standardized, low-cost verification template for small green bond issuances, potentially through the State Securities Commission.
- Extend the pilot DPPA program to include more bidders and publish a transparent database of winning prices to improve market predictability.

For impact investors and development finance institutions (e.g., ADB, IFC, JICA):

- Provide technical assistance grants to cover initial certification costs for first-time green bond issuers in the renewable energy sector.
- Create a pooled green bond facility that aggregates multiple small projects (total 50–100 MWp) into a single bond issuance, reducing per-project transaction costs.

For future research:

- Conduct a multi-case descriptive study of 20–30 actual green bond-financed solar projects in Vietnam to establish more robust descriptive statistics (means, medians, ranges) for interest rate savings, payback periods, and certification costs.
- Investigate the relationship between project size and green bond feasibility – specifically, identify the minimum MWp threshold at which certification costs become economically justified.
- Compare the environmental additionality of green bond-financed projects versus conventionally financed projects in terms of avoided emissions per dollar invested.

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