



Green Finance



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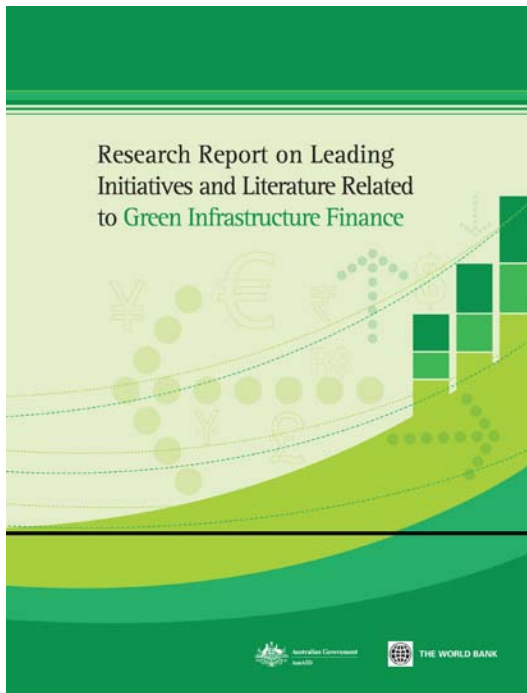
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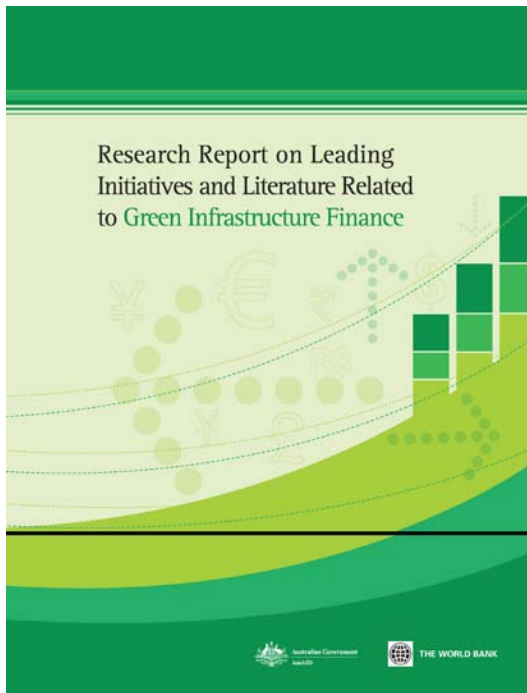
- **Research Evidence** *(Research Report on Leading Initiatives and Literature Related to Green Infrastructure Finance)*
 - Background
- **Green Finance Framework** *(Green Infrastructure Finance Framework Report)*
 - Key similarities and differences between conventional infrastructure and low emissions finance
 - Understanding why green investments projects don't get financed
 - Making green finance work
 - Combining instruments for effective financing solutions
 - Green investment climate
- **Next Steps**

Research Findings



- Green investment demands are significant:
 - IEA estimates that in order to halve CO₂ emissions by 2050, investments should be increased by US\$46 trillion over the BAU scenario
 - Up to US\$80 billion a year of green investments is needed in order to bend the carbon emission curve
- Green investment shortfalls are staggering:
 - By 2020, investments will be at least US\$150 billion a year short of the required levels

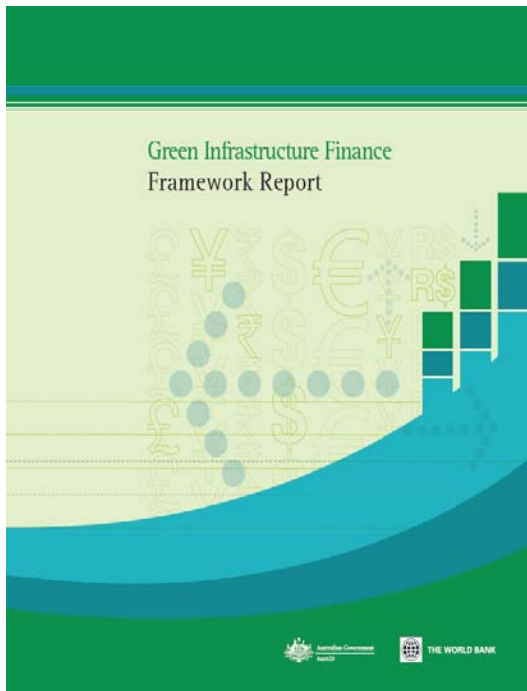
Research Findings



- Attracting private financing is essential to close the funding gap.
- Public instruments and concessional funding are required to leverage private flows.
- Unfortunately, many green investments are less financially attractive when compared against traditional but less eco-friendly alternatives.

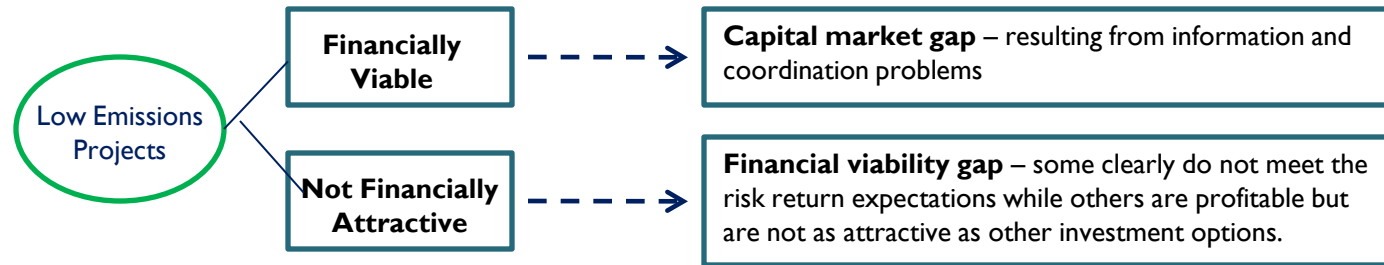
Green Finance Framework

- **Key similarities and differences between conventional infrastructure and low emissions finance**

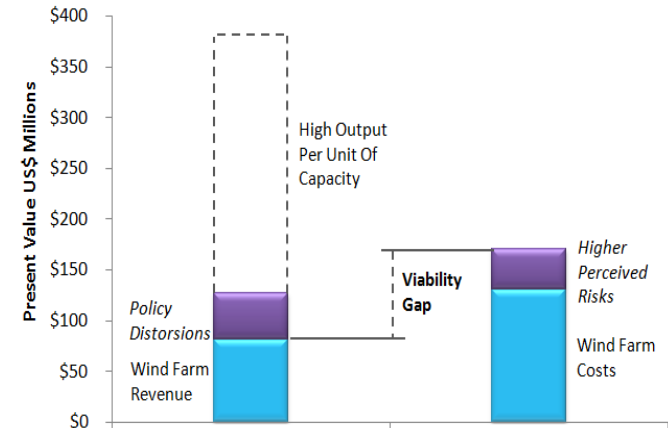


- **Similarities:**
 - Both are capital intensive and recover their capital over many years
 - Both sell their output under a long-term contract with an off-taker
 - Both are subject to similar permitting risks
- **Differences:**
 - Low emission projects have higher upfront capital costs, and higher whole-of-life costs than their high emissions alternative.
 - Low emissions RE projects produce less output per unit of capacity than their high emissions alternative.
 - Low emissions projects have higher perceived risks than conventional infrastructure projects

Why Green Investments Don't Get Financed

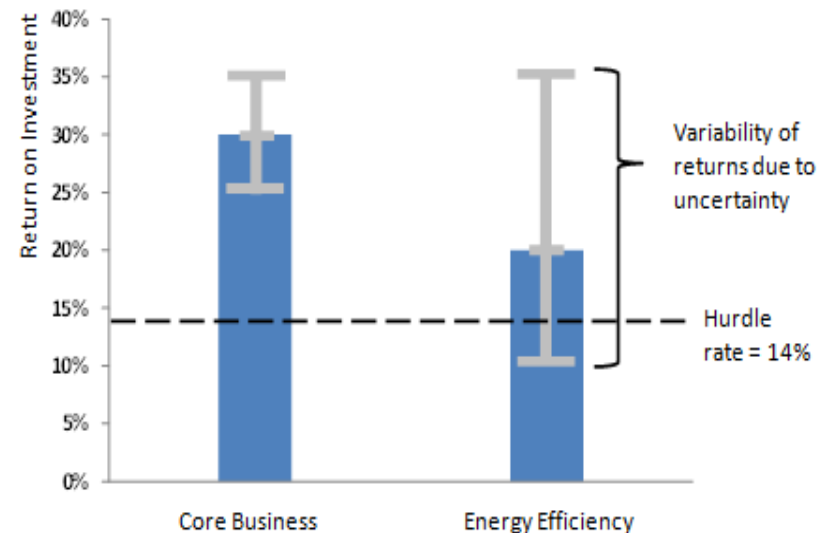


- Intrinsic characteristics of low emission projects negatively influence their investment profiles.
- A 'financial viability gap' occurs, thus preventing investments in low emission projects from getting financed.
- Perceived risks and distortions of different nature can widen the gap.



EE Investments Face Unique Financing Challenges

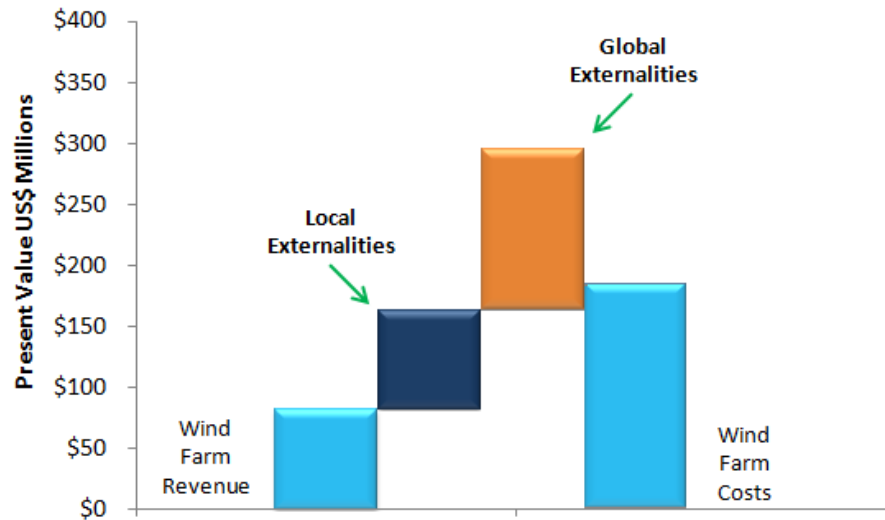
- The financial viability of EE investments are also affected by the number and extent of distortions in a given economy.
- Other financing difficulties might exist as EE are typically financed on the strength of the entity's balance sheet and companies have real financing limits.
- Also , the difference between the depreciated value and the salvage value of an existing asset that would be replaced must be fully incorporated in the analysis.
- And, even if an EE investment produces a positive rate of return that beats the entity's hurdle rate, the sponsor may still decide against it for a number of reasons.



Making Green Finance Work

The goal of Green Finance's is to bridge the financing gap and improve the attractiveness of low emission investments

- Rebalancing distortions
- Monetizing the externalities benefits



Combining Instruments for Effective Financing Solutions

- The roles of various stakeholders
 - Contributions of the international community
 - Contribution of national governments
- Public sector policies and instruments
 - A number of instruments are readily available for stakeholder
 - Need to improve their effectiveness
 - Need to develop new instruments

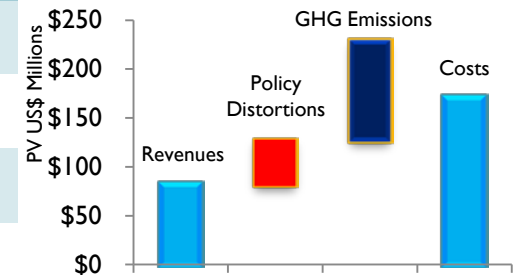
	CDM	CTF Loans Risk-sharing Facilities	GEF Grants	ODA Concessional Loans	FiT	Capital Grants	Tax Credits and Other Tax Incentives	Financial and Other Incentives
Green Finance	√	√	√					
Government				√	√	√	√	√

Example Financing Structure

- **Wind Energy Project**

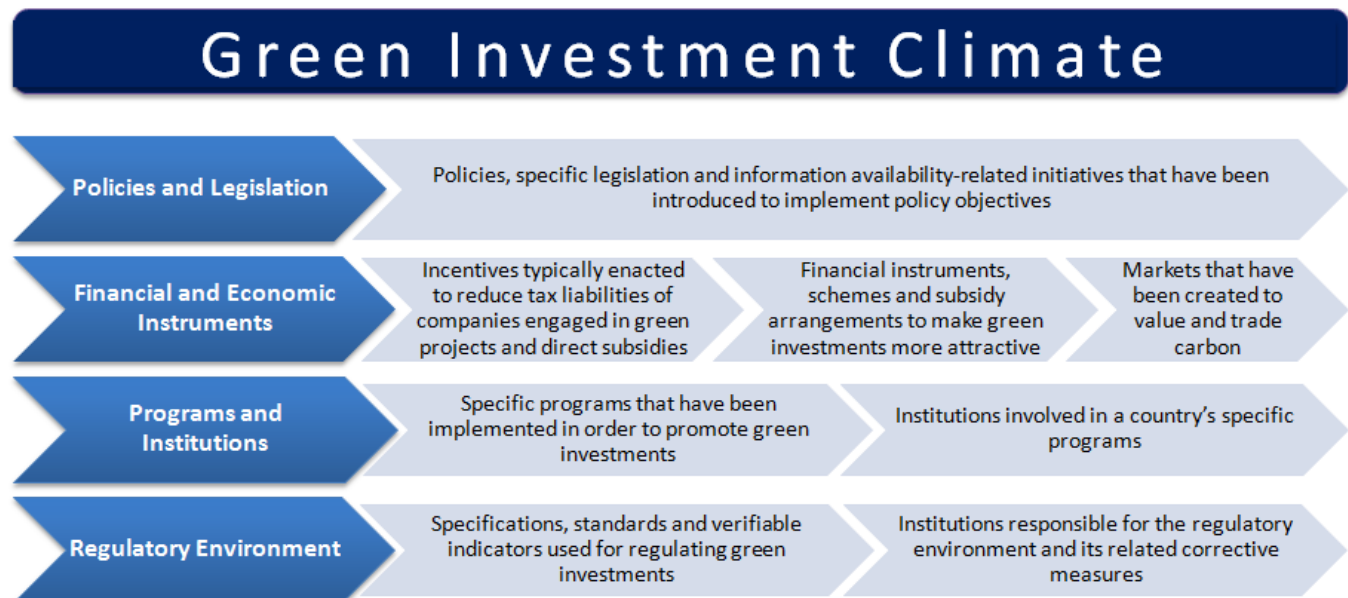
- The present value of the viability gap is US\$88 million
- One of the reasons why the project is not financially viable is because the price of coal is subsidized. To rebalance this policy distortion, the government introduces a feed-in tariff of US\$47 per MWh
- Even with this feed-in tariff, the project is still not financially viable. The present value of the financial viability gap is still US\$43 million
- The avoided cost of GHG emissions is calculated to be US\$102 million. This would be enough to close the remaining viability gap.
- CTF could also extend a concessional loan with an implicit subsidy to project sponsor with a present value of US\$43 million.

Financial Instrument	Amount	Maturity	Grace Period	Interest Rate	Subsidy (millions)
Feed-in Tariff	US\$47 per MWh	-	-	-	US\$45
Concessional Loan	US\$53 million	35 years	8 years	2.6%	US\$43
Sponsor's Equity	US\$48 million	-	-	22%	-
Commercial Debt	US\$14 million	15 years	-	11%	-
Total					US\$88



Green Investment Climate

- The development of effective financing solutions requires a country to have thorough understanding of its own Green Investment Climate



Next Step

- **Develop Policy Notes**
- **Identifying New Innovative Financing Approaches for Financing Externalities**
- **Develop More Efficient Monitoring and Verification**
- **Carry Out Pilot Country Assessments**
- **Identify a Few Cases for Pilot Implementation**



Thank You