
Cost of Capital Observatory Survey

Introduction

We are conducting a survey to understand how energy industry stakeholders, such as institutional investors, project developers, consultants, advisors, analysts, and financiers, estimate the cost of capital of renewable energy and fossil-fuel projects in emerging and developing economies. The objective of the survey is to enhance the visibility and accessibility of data regarding financing costs in the energy sector. By doing so, we aim to boost investor confidence in emerging and developing economies.

Please note that your answers will be aggregated, and no respondents will be identified. Your email address will be used to collect your responses and is protected consistent with the [IEA Data Protection Rules](#). The online survey tool (Alchemer) will not store any e-mail address and personal information. Your e-mail address will only be used if we need to contact you for a follow up call or questions. Your responses will be disassociated from your organization name. The survey results will be analyzed by the supporting organizations of the Cost of Capital Observatory workstream: the World Economic Forum (WEF), Imperial College London, ETH Zurich, The Oxford Smith School, and the International Energy Agency.

The survey focuses on emerging and developing economies. Even if you are not currently investing in these countries, we encourage you to make estimates based on your perception of the market. The survey has 15 questions and will approximately take 15-20 minutes to fill out.

We would be grateful if you could kindly take a few minutes to complete this short survey, by answering the questions below. We would be happy to give you a first look at the aggregated results once we've received and analyzed the responses.

The survey

In this survey, we are considering four project types, and would like your responses on those projects that apply to you. Similar sized project can be included each with a 20-year tenure (8-10 years for battery).

- Project 1: 100 MW solar PV power plant
- Project 2: 250 MW gas-fired power plant
- Project 3: 250 MW offshore wind plant
- Project 4: 40 MW battery (3 hours/ 120 MWh)

Please base your answers on the countries listed below in which these hypothetical projects are based. Even if you are not currently investing in these countries, we encourage you to make estimates based on your perception of the market.

- Brazil
- India
- Indonesia
- South Africa
- Mexico
- (Please indicate country name if you have information from other emerging or developing economies)

Questions

1. Please indicate the name of company/organization?
2. Please indicate which option best describes your organization?

- Project Developer
- Institutional Investor
- Private Equity/Infrastructure Fund Managers
- Development Financial Institution
- Utility
- Commercial bank
- Advisor/analyst/consultant
- Other

If you selected “Other”, please state the type of organization here:

3. What is total market value of your investments (assets owned/managed by your organization) as of 31 December 2022?
.....
4. How many projects has your organization developed/financed? (Assets Under Management as of 31 December 2022).

	Number of projects
Solar PV project	
Gas Fired Project	
Offshore wind project	
Utility-scale batteries	

5. Based on the list below, please select a contractual structure for each project and input your choices into the table:

- Merchant (i.e. selling generation on wholesale markets)
- PPA (Power Purchase Agreement) with a utility/governmental counter party
- PPA with a private corporation
- FiT (Feed-in-Tariff)

- CfD (Contract for Difference)
- Other

If you selected "Other", please specify:

Project	Brazil	India	Indonesia	South Africa	Mexico	Other (...)
100 MW Solar PV Project						
250 MW Gas Fired Project						
250 MW Offshore Wind Project						
40 MW battery						

6. Please provide an estimate of the overall (weighted average) cost of capital (in %) you would apply to each project (provide estimates for each country). If you are not comfortable providing a point estimate, then please indicate a range

	Year of Investment Decision
100 MW Solar PV	2022
Brazil	
India	
Indonesia	
South Africa	
Mexico	
Other (...)	

	Year of Investment Decision
250 MW Gas Fired	2022
Brazil	
India	
Indonesia	
South Africa	
Mexico	
Other (...)	

	Year of Investment Decision
250 MW Offshore Wind	2022
Brazil	
India	
Indonesia	
South Africa	
Mexico	
Other (...)	

	Year of Investment Decision
40 MW battery (3 hours/ 120 MWh)	2022
Brazil	
India	
Indonesia	
South Africa	
Mexico	
Other (...)	

7. Is your answer to question 6 based in real terms or nominal terms?
8. Is your cost of capital in local or foreign currency? In case of both please indicate the share of local currency (both debt and equity). Please enter currency (eg. USD, EUR, INR etc.)?
9. Does your answer to question 6 incorporate taxes? If yes please specify.
10. If possible, please break down the estimate provided in question 6 into the following components:

100 MW Solar PV Project						
Metric	Brazil	India	Indonesia	South Africa	Mexico	Other (...)
Share of debt (i.e. leverage), %						
Minimum Equity IRR, %						
All-in cost of debt, %						
Debt tenor, years						

250 MW Gas Fired Project						
Metric	Brazil	India	Indonesia	South Africa	Mexico	Other (...)
Share of debt (i.e. leverage), %						
Minimum Equity IRR, %						
All-in cost of debt, %						
Debt tenor, years						

250 MW Offshore Wind Project						
Metric	Brazil	India	Indonesia	South Africa	Mexico	Other (...)
Share of debt (i.e. leverage), %						
Minimum Equity IRR, %						
All-in cost of debt, %						
Debt tenor, years						

40 MW battery (3 hours/ 120MWh)						
Metric	Brazil	India	Indonesia	South Africa	Mexico	Other (...)
Share of debt (i.e. leverage), %						
Minimum Equity IRR, %						
All-in cost of debt, %						
Debt tenor, years						

11. For all the debt financing to be raised for each project, what would the maximum tenor be on any given debt instrument?

12. What benchmark rate would you use to estimate the all-in cost of debt?

13. Which top 3 [risks](#)¹ should be addressed first to achieve the highest reduction in cost of capital?

Select country	Select risk	Rank
Choose an item.	Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.
Choose an item.	Choose an item.	Choose an item.

1. Please see "Main risks associated with renewable energy power projects" from <https://www.iea.org/reports/cost-of-capital-observatory/tools-and-analysis>

14. How do you expect capital costs to move in 2023 compared to 2022? it increases/decreases/no change?

15. Please check this tick box if you would be available to have a follow-up call (max. 1- hr) with us to discuss these issues further.

16. If you have any additional comments or remarks, please do not hesitate to share them.