

Policy Brief

Understanding cost of capital drivers facilitates more effective energy policymaking

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The policy problem

The cost of capital (CoC), i.e., the rate of return required to compensate the financiers of an investment, is critical for the competitiveness of renewable energy technologies and electricity system costs. Policymaking influences the CoC in various ways, but a holistic understanding of these channels is missing.

The findings

There are drivers of electricity sector CoC on six levels (see chart). At the *macroeconomic & country level*, country risk, business cycles and monetary policy determine overall financing conditions. On the *energy sector level*, market structure and regulation affect the CoC, together with energy policy design and credibility. In addition, the maturity and competitiveness of the *financial sector* can reduce the CoC, along with financiers' experience with energy technologies and the availability of subsidized finance. More granular CoC drivers are located at the *technology*, *company*, and *project/asset level*, depending on if projects are financed independently in project finance structures, or on a company's balance sheet.

Importantly, we find that these levels often interact with each other. For instance, macroeconomic crises can undermine the fiscal resources required for renewable energy support policies – whose withdrawal can limit the maturity that those technologies reach. Therefore, decision-makers should consider such interactions when assessing how a policy measure could affect the CoC. Our framework should motivate stakeholders to see CoC as levers that public policy can affect, and not as a purely external parameter.

Our study

We conduct a systematic literature review of academic papers that investigate CoC drivers in the electricity sector. By classifying 43 papers based on their geographic and topical scope as well as their underlying methods, we combine the extant literature into a synthesized framework and identify policy implications and avenues for future research.

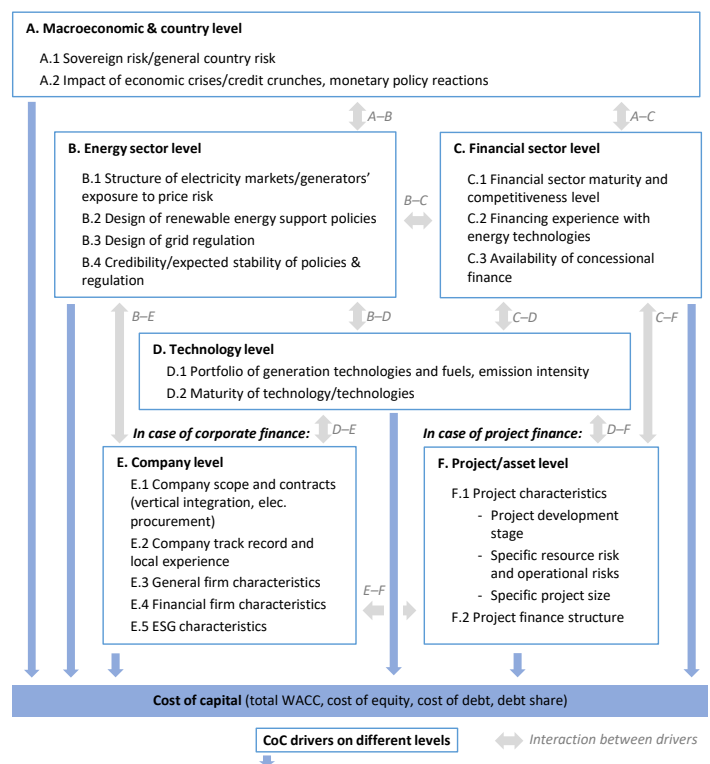


Figure: Framework of cost of capital drivers in the electricity sector

Link to the full article (free download), and related work at www.cfp.ethz.ch

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