

A guideline for public entities on cost-efficient procurement of PV assets

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Abstract:

This paper presents a guideline for public entities on cost-efficient procurement of PV assets. Traditionally, screening of the responses to the request for proposal for the Engineering, Procurement and Construction (EPC) of a photovoltaic asset for a public entity is done using evaluation criteria based on installed capacity in kW, quality criteria and other user-defined specifications, while the final decision is based on total EPC price. This forces contractors to offer the minimum-required installed capacity at the minimum-required quality. In this study, however, a lifetime view is taken and Levelised Cost of Electricity (LCOE) are used to screen proposals, evaluate and determine the price ranking. LCOE of different proposals are determined using the comparison matrices of the projected installed size in kW, EPC price, Operation & Maintenance (O&M) fee and guaranteed performance ratio for an initial period. In this approach, contractors are issued with the financial model and they are required providing these inputs. Then the model calculates the LCOE. This approach requires all contractors to optimize their design towards lowest LCOE. The goal is to provide the best value on risk-adjusted, least-lifetime-cost basis.

Keywords: PV assets, public procurement, LCOE, lifetime cost