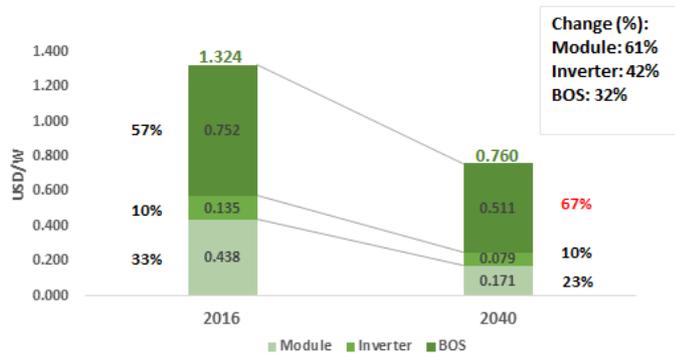


Outlook of PV cost assessment

Issue

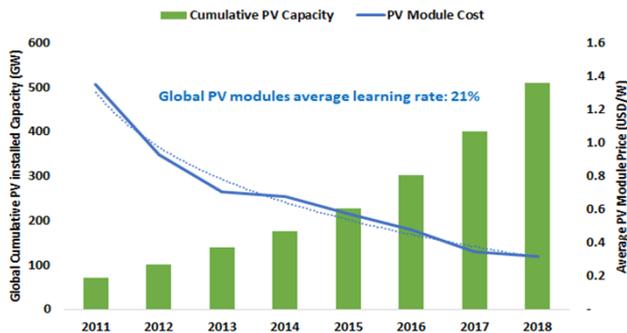
The cost of solar photovoltaic (PV) technology has been rapidly falling, allowing for a significant increase in installations in both, residential and commercial as well as large-scale utilities. Understanding the dynamics of technology cost variations and influencing factors are important for stakeholders worldwide to identify a solid investment plan and technology selection. As the components differ depending on whether it is for residential, commercial or utility, as well as different countries adhere to different local standards and this substantially influences the overall system cost, analysing the cost progress for each scale independently is preferred as results then are more relevant for the different markets.

The cost for residential PV systems will rapidly fall the coming years.



Solution

A generic market-based cost prediction methodology for PV systems has been developed and tested as a result. The methodology takes advantage of the fact that most PV system components are technology based, and therefore follow cost declination learning rates. These rates, are for some system components, country dependent, promoting the market-based adopted scheme. The model requires input such as market indicators and uses global trends refinements using statistical and qualitative tools. The model has been tested on the distributed Australian PV market. The case study outcome predicted a cost decline around 40% in distributed PV market by 2040, compared to 2016.



The installed capacity of PV in the world has grown at the same rate at the PV panel price has decreased.

Impact

The model can easily be tailored to any PV market given relevant data availability. It can be applied to different market such as the local Qatari market as well as different European markets, taking into account their local regulations, PV adoption incentives and standards. This tool provides policymakers and stakeholder with a cost outlook that helps them in defining investment timeframes for utility-scale projects, while simultaneously assisting residential and commercial consumers in foreseeing their investment impact.

