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Effect of the environment change from REFIT to REBID programmes by the South African government on the economic viability of solar PV projects

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Abstract

South Africa is amongst the world's top emitters of GHG but this is set to change as the government has taken steps to address the dependence on fossil fuels. The first step was when a Renewable Energy White Paper (REWP) was published in November 2003 intended to give much needed thrust to renewable energy. Based on the REWP, the National Energy Regulator of South Africa (NERSA) in 2009 announced Renewable Feed-In Tariffs (REFITs) for various technologies including solar PV that was designed to attract investors. However, in 2011, before the first REFIT projects were implemented or approved for implementation, the Department of Energy (DoE) announced that the procurement of new generation capacity, in this case renewable energy, was to be procured through a competitive bidding process in order to reduce the price of supplying renewable energy. The programme is now termed "Renewable Energy Bidding Programme (REBID)". This change was not well received by project developers who had been attracted by the REFITs in the first place. The research report presents an analysis of the two methods of procuring solar PV to determine if the South African made the right decision by abandoning the REFIT model in favour of the REBID model. A theoretical evaluation with established solar PV markets and benchmarks is carried out, as well as a calculation of the cost of producing electricity using an Excel model. These are compared with the average REBID prices as announced by the DoE. The analysis done in this report concludes that the South African government took the right decision of abandoning the REFIT model in favour of the REBID model. It is further concluded that the REBID model adopted is well designed and will ensure that solar PV projects are viable in South Africa.