



## The South African Renewable Energy Independent Power Producer Procurement Programme (REIPPPP)

The Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) was initiated in 2011 with the first Bid Window (BW1). The first power from BW1 was supplied to the grid in 2013. From that point forward, there has been a steady reduction in tariffs for both Wind and Photovoltaic (PV) projects. Specifically, there has been a 49.7% tariff reduction for Wind projects and a 74.9% tariff reduction for PV projects from BW1 to BW4. The main contributing factors to such significant drops in the tariff are attributable to:

- Continued innovation in the Wind and PV technologies.
- Increasing global installations in both technologies.
- Proven track record in the procurement process.
- Increased competitiveness between bidders resulting in low tariffs.

However, the most recent Bid Windows have seen a turn from the decline in costs of renewable energy projects. This is largely due to the impact Covid-19 had on raw materials and transportation costs which increased significantly, and while these costs have since come down, they remain above pre-Covid-19 levels.

The bidders seemingly prefer locations with wind- and solar-rich resources in the Eastern, Northern and Western Cape. However, due to insufficient grid development and the amendment to the Electricity Regulations Act that allows privately-owned distributed generators to attain grid access without a licence, the REIPPPP has been impacted by grid unavailability in these areas. The REIPP BW6 procurement programme attracted 56 bids, out of which 53 were compliant. Of these, a total of 6 solar PV projects were awarded Preferred Bidder<sup>1</sup> status while the other 27 earmarked for the Cape could not be procured. Similarly, none of the Compliant Bids for wind were awarded Preferred Bidder status.

Data extracted from various Bid Windows is tabulated below and is presented in the form of average cost per program, in January 2024 terms. All solar PV are of a tracking technology and Battery Energy Storage System (BESS) has 4-hour storage capability.

Description	BW6 Solar PV Preferred	BW6 Solar PV Compliant Bidders	BW6 Wind Compliant Bids only	BESS BW 1 Preferred Bidders	BESS BW 1 Compliant Bidders	RMIPPPP (Solar PV with BESS) Preferred Bidders
Rated capacity, MW Net	166.67	175.86	178.83	90.00	95.73	PV 245,5 & BESS 131.25
Total overnight cost (including augmentation costs <sup>2</sup> ), ZAR/kW	15 715.17	19 756.22	26 647.47	27 887.77	39 901.69	19 016.41
Variable O&M Cost ZAR/MWh	18.93	18.04	24.31	9.74	24.73	1.31
Fixed O&M Cost ZAR/kW/year	269.04	256.27	366.95	678.22	602.78	1 215.96
Procurement time (months)	26.00	26.00	26.00	16.17	16.17	27.53
Construction time (months)	22.33	21.50	23.12	23.25	21.95	15.25
Phasing of capital based on construction times (% per year) 1st year	51.51%	49.29%	47.61%	57.10%	64.96%	62.95%
Phasing of capital based on construction times (% per year) 2nd year	48.49%	50.71%	52.39%	42.90%	35.04%	37.05%

<sup>1</sup> A compliant bid refers to one that meets the specifications of the issued request for proposals (RFP).

<sup>2</sup> Augmentation cost for battery storage is 6% of the total overnight cost.

Project (PPA) life (years)	20.00	20.00	20.00	15.00	15.00	20.00
Typical capacity factor	30.13%	31.07%	37.24%	NA	N/A	72.11%
Cycle efficiency (%) / Number of cycles per year	N/A	N/A	N/A	89.00/730	89.00/730	N/A

The minimum and maximum overnight cost from the submitted bids is reported below, to reflect the variance from the average, rounded off to the nearest thousand in order to honour confidentiality of projects.

Solar PV BW6		Wind BW6		Storage BW1	
Min	Max	Min	Max	Min	Max
14000	23000	19000	36000	23000	43000