The South African Renewable Energy Independent Power Producers Procurement Programme (REIPPPP) – Lessons Learned

17 March 2016

…”it (REIPPPP) has already established a flagship public-private partnership model for South Africa, and indeed the rest of Africa, and in the process is helping alleviate Eskom’s current power crisis while also reducing greenhouse gas emissions.”

- Enabling Renewable Energy in South Africa: Assessing the REIPPPP, WWF, August 2014
Outline

• Context of South Africa
• Key design features of REIPPPP
• Outcome of the first bid windows
• Programme successes
• IPPPP key challenges and lessons learnt
OVERVIEW OF THE PROGRAMME & PROCUREMENT APPROACH
The National Development Plan (NDP) identifies the need for South Africa to invest in a strong network of economic infrastructure. Energy infrastructure is a critical component.

The NDP requires the development of 10 000 MWs additional electricity capacity to be established by 2025 against the 2013 baseline of 44 000 MWs.

The Integrated Resource Plan (IRP) 2010 developed the preferred energy mix with which to meet the electricity needs over a 20 year planning horizon to 2030.

In May 2011, the DoE gazetted the New Generation Regulations under the Electricity Regulation Act (ERA) and made the following determinations:

- 13 225 MW RE
- 2 500 MW designated from coal-fired plants
- 1 800 MW of cogeneration under the MTRM plan
- 3 126 MW of Gas-fired power plants (2 652 MW base load + 474 MW MTRM)
- 2 609 MW of imported hydro

The Independent Power Producer Procurement Programme (IPPPP) is a key vehicle for securing electricity capacity from the private Sector for renewable and non-renewable energy sources as determined by the Minister of Energy.
Integrated Resources Plan

Before consultation process: Revised Balanced Scenario (RBS)

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<tr>
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<th>Total additional new capacity (without committed) until 2030 in GW</th>
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<tr>
<td></td>
<td>Own build</td>
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<td>Before</td>
<td>6,3</td>
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<td>After</td>
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After consultation process: Policy-Adjusted IRP

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<tr>
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<th>Total additional new capacity (without committed) until 2030 in GW</th>
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<td>Share of total new GV</td>
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<td>Before</td>
<td>6,3</td>
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Committed
Ministerial Determinations for Renewables

The main drivers behind South Africa’s renewables drive are the continued downward price trends, quick deployment & reducing our carbon footprint.

Determination 1 - 2011
3 725 MW

Determination 2 - 2012
3 200 MW

Determination 3 - 2015
6 300 MW

towards sustainable energy
KEY DESIGN FEATURES OF REIPPPP
Key considerations in procurement design

- Facilitate **competitive process** → Allow market to find ‘clearing’ price
- **Qualification criteria** are indicative as to the project bankability → Allow market to filter projects
- **Non-negotiable agreements** → Early engagement with lenders to address key risks in obtaining a bankable PPA
- On-going **engagement with stakeholders** → Provide feedback to identify risk mitigants and amend documents
Procurement approach

• **Multiple bid windows** → to create multiple bidding opportunities to avoid a temptation to rush to meet all qualification criteria

• **Bid-in tariff** → to provide for competition in any bid window with Tariff Caps

• **Capped MW allocation** → in part, to ensure effective competition

• **Objective qualification criteria** → to the extent possible, criteria are objective and are purposefully designed in such a manner so as to elicit a pass or fail result

• **Objective scoring and ranking of qualifying bidders** → the method of scoring and ranking all bidders is clear and transparent
Standard suite of agreements and contractual arrangements

- The bankability of the IPPPP is secured through the terms and conditions of four **non-negotiable** agreements:
  - IA (Implementation agreement)
  - GFSA (Government Support Agreement)
  - PPA (Power Purchase agreement)
  - DA (Direct Agreement)

  **Note 1.** Only applicable for project finance.

The agreements provide bidders with complete transparency in relation to the contractual terms.
OUTCOME OF THE FIRST 5 BID WINDOWS
REIPPPP progress to date

To date there have been 5 Bid Windows (BW) of the REIPPPP...

- **BW 1**
  - Submission date: 4 November 2011
  - 28 preferred bidders
  - 1 425 MW of contracted capacity
  - Signature of the PPAs - 5 November 2012

- **BW 2**
  - Submission date: 5 March 2012
  - 19 preferred bidders
  - 1 040 MW of contracted capacity
  - Signature of the PPAs - 9 May 2013

- **BW 3**
  - Submission date: 19 August 2013
  - 17 preferred bidders
  - 1 457 MW of contracted capacity
  - Signature of the PPAs - From 1 December 2014

- **BW 3.5**
  - Submission date: 31 March 2014
  - 2 preferred bidders
  - 200 MW of contracted capacity
  - Signature of the PPAs - expected end 2015

- **BW 4**
  - Submission date: 18 August 2014
  - 26 preferred bidders
  - 2 205 MW of contracted capacity
  - Announcement of 13 preferred bidders on 16 April 2015
  - 13 additional bidders were announced on 7 June 2015

...contributing 6 327 MW in total
REIPPPP’s contribution to generation capacity

Since November 2011 more than 6 327 MW from 102 renewable energy projects have been awarded – wind projects contribute more than half of total capacity

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<tr>
<th></th>
<th>BW1 Capacity MW</th>
<th>BW1 Number of Projects</th>
<th>BW2 Capacity MW</th>
<th>BW2 Number of Projects</th>
<th>BW3 Capacity MW</th>
<th>BW3 Number of Projects</th>
<th>BW3.5 Capacity MW</th>
<th>BW3.5 Number of Projects</th>
<th>BW 4 Capacity MW</th>
<th>BW 4 Number of Projects</th>
<th>ALL Capacity MW</th>
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<tbody>
<tr>
<td>Onshore Wind</td>
<td>649</td>
<td>8</td>
<td>559</td>
<td>7</td>
<td>787</td>
<td>7</td>
<td>1 362</td>
<td>12</td>
<td>3 357</td>
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<td>Solar PV</td>
<td>627</td>
<td>18</td>
<td>417</td>
<td>9</td>
<td>435</td>
<td>6</td>
<td>813</td>
<td>12</td>
<td>2 292</td>
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<td>Solar CSP</td>
<td>150</td>
<td>2</td>
<td>50</td>
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<td>200</td>
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<td>200</td>
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<td>Small Hydro</td>
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R194 billion invested. Wind & solar PV have attracted the main interest from developers.

- Over 6GW procured since REIPPPPs inception across 102 projects.
- Main investment has come from South Africa but international players continue to play a key role in the programme.
- By the end of 2016, we expect to have nearly 3GW connected to the grid.
An enabling environment is giving South Africa some of the cheapest renewables globally.

Alongside declining equipment costs, due to the competitive nature of the programme, South Africa is benefitting from cheap and sustainable energy.
Renewables contribution to the grid

- Wind & PV contribute approximately 310-350 GWh per month
- In Jan-Jun 2015, wind & PV saved R3.6bn to be spent on fossil fuels
- Often contributed during peak hours & contributing to keeping the lights on.
Benefiting the greater South Africa

- **30%** shareholding by black participants
- **R117 billion** committed to Preferential Procurement in BW 1 – 4.
- **109 443** job years planned for South Africa citizens.
IPPPP KEY CHALLENGES AND LESSONS LEARNT
Lessons Learnt and Key Challenges (1)

• **Enabling Environment**
  – Creating the correct enabling environment with strong policy & government support, a fair and transparent evaluation and a standard suite of documents that is accessible to all (PPA, GSFA, IA & DA)
  – While REIPPPP has been a resounding success, we adopted a similar approach to the Small Projects Programme which was not the right approach. Bidders have found it costly & onerous, so we are embarking on a simplified and light handed approach. Matching requirements with the target audience is key.

• **Investor Confidence**
  – The design of the IPPPPP as a rolling competitive bid window procurement programme established market confidence early on and attracted vibrant investor interest locally and from abroad
  – To maintain market confidence, investors require an enabling investment environment and a line of sight into the roll-out of the procurement programme
Lessons Learnt and Key Challenges (2)

• **Grid Connection and Integration**
  – Grid connection is becoming problematic as low hanging fruits are taken up
  – Alignment between generation and transmission planning and implementation remains an issue requiring a variety of forward planning initiatives
  – Making timely funding available for investment in transmission and distribution infrastructure.
  – Integrating renewables is challenging due to its intermittency and proper planning is imperative

• **Funding of Small Projects**
  – Smaller projects don’t have the same commercial appeal to banks which has made for a challenging environment. To counter this we are working with various development finance institutions to find suitable funding mechanisms to support small developers.
Thank you

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