



## **MEDIA RELEASE**

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### **IPPs critical to South Africa's energy security**

Aurecon power systems expert Dr Clinton Carter-Brown provides a perspective on the role of Independent Power Producers (IPPs) in solving South Africa's energy crisis.

Energy infrastructure is a critical component that underpins economic activity and growth in South Africa. Electricity needs to be reliable, affordable and sustainable to meet the energy needs of the industrial, commercial and domestic sectors.

### **Independent Power Producers, a solution to meeting South Africa's growing electricity needs**

Present power generation constraints in South Africa are severe and debilitating. Independent Power Producers (IPPs), in partnership with Eskom, provide a sustainable and complementary solution to our electricity generation requirements. This offers multiple benefits, including; diversifying both the supply and nature of energy production, introducing of new skills and in new investment into the industry, and benchmarking of performance and pricing.

A significant share of South Africa's electricity generation is already produced by IPPs. The Independent Power Producer Procurement Programme (IPPPP) is a key vehicle for securing electricity capacity from the private sector for both renewable and non-renewable energy sources, as aligned with national policy.

In 2014 approximately 2.2 TWh of renewable energy was generated from IPPs in South Africa, avoiding the release of 2.3 million tons of carbon dioxide, and powering the equivalent of 700 000 typical South African homes. Furthermore this sustainable renewable energy saved South Africa an estimated R800 million in coal and diesel fuel costs and economic savings due to reduced load shedding.

IPP Procurement in South Africa is managed by the "IPP Office", a specialised procurement office as established under the leadership of the South African Department of Energy, National Treasury and the Development Bank of South Africa.

The IPP procurement programme, as developed by the IPP Office, has been designed with a rolling bid-window programme format whereby procurement of energy from IPPs is done in a cyclic manner, with a procurement cycle typically being completed in a year. The bid-window format; attracts continued market interest, induces increased competitive pressure amongst bidders to offer reduced pricing, allows for improvements and lessons learnt with each bid window to be incorporated in the refinement of procurement documentation in the following bid-windows, and uses standard contracts that avoid negotiations and enables consistency.

The design of the programme aligns with the South African National Development Plan to set in motion a virtuous cycle of development growth by recognising the inter-dependency between the desired Vision 2030 outcomes and the socio-economic commitments made by the IPPs in relation to; job creation and skills development, economic interest participation by previously disadvantaged persons and local communities, localised spend and procurement, and the general improvement of the lives of people, for example through access to health and education.

As of March 2015, a total of 4.1 GW of renewable energy (66 projects) has been contracted by the IPP Office, and 1.5 GW (32 projects) are already in commercial operation. The capital cost of this investment is R145.5 billion, with R45.6 billion being procured from local suppliers. The construction phase of the procured generation is creating more than 60 000 job years, with significant benefits flowing to the local communities where these projects are located.

## Renewable energy plays a key role in the energy mix

The South African Renewable Independent Power Producer Procurement (REIPPP) programme is a delivery mechanism for the Government's 2010 Integrated Resource Plan (IRP2010), which calls for the development of approximately 17.8 GW of renewable energy capacity by 2030.

To date there have been five bid windows (BW) of the REIPPP programme.

BW 1	BW 2	BW 3	BW 3.5	BW 4
<ul style="list-style-type: none"><li>• Submission date: 4 November 2011</li><li>• 28 preferred bidders</li><li>• 1425 MW of contracted capacity</li></ul>	<ul style="list-style-type: none"><li>• Submission date: 5 March 2012</li><li>• 19 preferred bidders</li><li>• 1040 MW of contracted capacity</li></ul>	<ul style="list-style-type: none"><li>• Submission date: 19 August 2013</li><li>• 17 preferred bidders</li><li>• 1456 MW of contracted capacity</li></ul>	<ul style="list-style-type: none"><li>• Submission date: 31 March 2014</li><li>• 2 preferred bidders</li><li>• 200 MW of contracted capacity</li></ul>	<ul style="list-style-type: none"><li>• Submission date: 18 August 2014</li><li>• Announcement of the preferred bidders is expected shortly</li></ul>

The rolling IPP procurement programme has been extremely effective in driving down tariffs for renewable energy through competitive bidding. The average price (April 2013 Rands) for the first Bid Window was R2.15 per kWh. This dropped by 34% to R1.42 per kWh in Bid Window 2, and dropped by a further 19% to R1.14 per kWh in Bid Window 3. This equates to an almost halving in prices over a three year period, as driven by reducing renewable energy equipment costs and the market forces induced by the highly competitive bidding process.

Renewable energy already provides a cost competitive solution to traditional fossil fuel based generation. Given that prices are anticipated to fall even further, it is clear that renewable energy will form a significant part of South Africa's future energy mix.

## Non-renewable IPPs

In addition to the procurement of renewable energy from IPPs, the May 2011 New Generation Regulations also capacitate a role for IPPs in the traditional thermal generation technologies, whereby 2.5 GW of coal fired power, 800 MW of cogeneration based power, and 3.1 GW of gas fired power stations will be procured from the private sector. Pending the successful implementation of these programmes it is anticipated that there will be further determinations for additional IPP procurement.

The IPP base-load coal programme was released in December 2014, and follows the successful bid window approach implemented in the Renewable Programme. The Co-generation and Gas Programmes are under development, and are expected to be released shortly.

## Aurecon's role in supporting the procurement of IPPs

Aurecon is making a significant contribution in the procurement of energy from IPPs in South Africa via the provision of transactional advisory services and support to the IPP Office. Aurecon is proud to be associated with this world class and internationally recognised project office and its associated programmes. Aurecon has a number of technical specialists working in the multi-disciplinary teams

that conceive, design, create and implement IPP procurement that drives efficiency, reduces electricity cost and makes a meaningful contribution to social economic development, whilst helping to keep the lights burning and create a sustainable energy mix. Aurecon's extensive experience in and understanding of the South African Transmission and Distribution grid is being leveraged by assisting the IPP Office in understanding and addressing the grid constraints and upgrades for IPP connection. Aurecon is working closely with Eskom in this regard. Furthermore Aurecon has dramatically grown its local generation business, drawing on its international experts and building South African capacity in this fast growing local industry.

## **Contact details**

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### **About Aurecon**

Aurecon provides engineering, management and specialist technical services for public and private sector clients globally.

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With an office network extending across 27 countries, Aurecon has been involved in projects in over 80 countries across Africa, Asia Pacific, the Middle East and the Americas and throughout 12 industry groups:

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- Defence
- Energy
- Government
- International Development Assistance
- Manufacturing
- Property
- Resources
- Transport
- Water
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