Eskom Grid Access Unit for IPPs and Generators

Overview of the Eskom grid connection process

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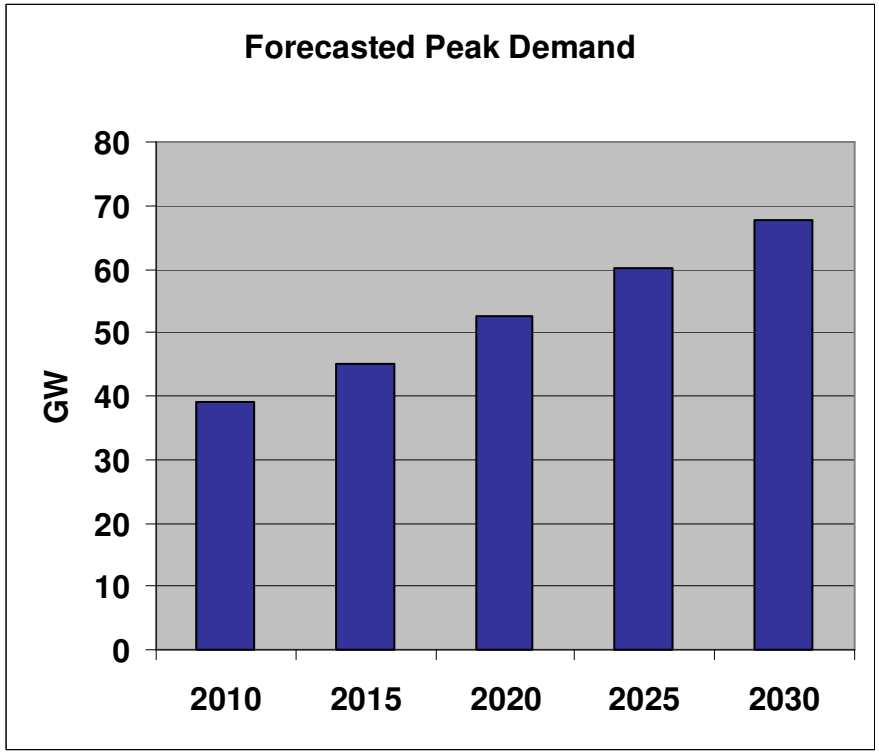
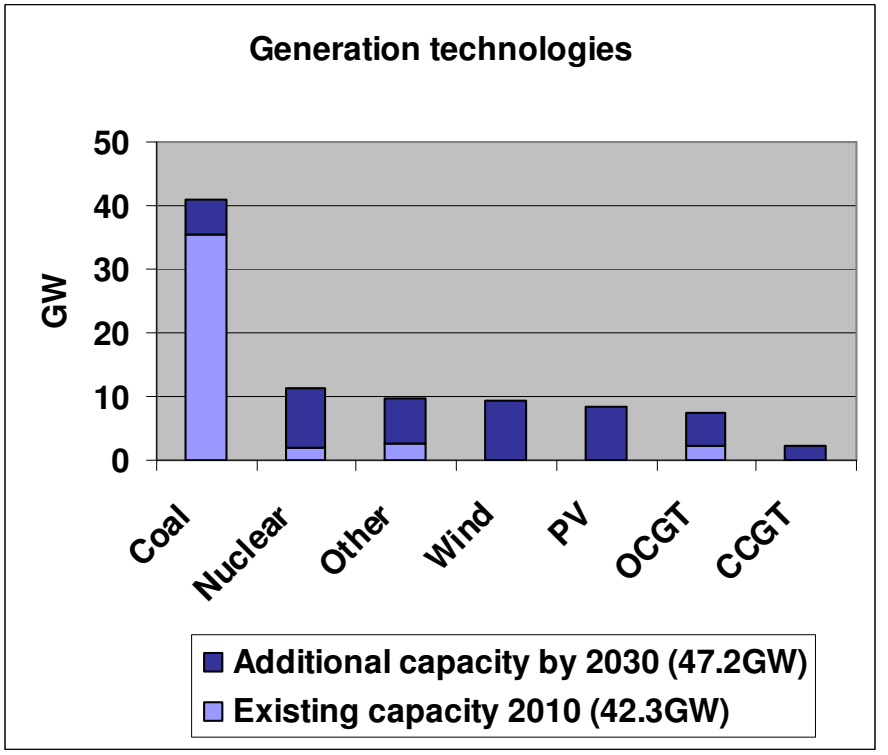
1. The current situation: generation capacity in the country and future demand





- **According to the IRP (2) – Policy Adjusted, forecasted peak demand will grow from 38.9 to 67.8GW (average about 2.8% p.a.) by 2030**
- **Of the total 42.3GW existing fleet in 2010, Eskom's capacity is 40.6GW (about 95%)**
- **89.5GW of generating capacity is required by 2030, mostly from renewables**
- **Ministerial determination will determine the allocation between Eskom and IPPs (ambition of 30% of total generating capacity in 2030 from IPPs).**

2. The current situation and Eskom's role

- Eskom is currently dealing with 387 active applications for connections from IPPs, representing 34GW (November 2011)
- Since 2010, Eskom has connected 295MW of IPPs, generating about 180GWh per month
- As an example, the current RE IPP procurement program of the DoE/NT, targets 3,725MW of renewable energy, over 5 phases
    - 53 bid submissions were received for phase 1
    - of which about 1,000MW is for each of wind and PV
- Other commercial options for IPPs include wheeling, co-generation, self-generation, etc

- The ring-fenced System and Market Operator has been set up in Eskom, with focus on:
    - Energy Planning,
    - Single Buyer Office to facilitate procurement,
    - Feasibility Unit, and
    - the Market Administrator.
- Many IPPs have indicated that there needs to be a holistic approach from Eskom, and a single point of contact (accountability) to manage the service relationship with them.
- Eskom policies and processes are not well co-ordinated.
- There are various financial and technical risks, between Eskom, IPPs and other generators, that need to be defined and managed.
- For Eskom this means that the service relationships to these IPPs needs to be improved, to support long term affiliations that support the same objectives.

3. The need to establish the Eskom Grid Access Unit f IPPs and generators

Mandate of the Grid Access Unit

- Organisation and set up of a new **Unit** that serves as **point of contact/entry** for IPPs and services IPP customer needs
- Set up a Unit with **sufficient autonomy** (relative to load customers) to guarantee non discriminatory grid access for IPPs and generators
- **Create transparency** on pricing policy, network contracts, and operating agreements
- Develop **optimised IPP connection processes** (incl self-build)
- Define **operations processes** for IPPs and generators incl. dispatch and balancing rules for the future after the IPPs have been connected

Aspiration

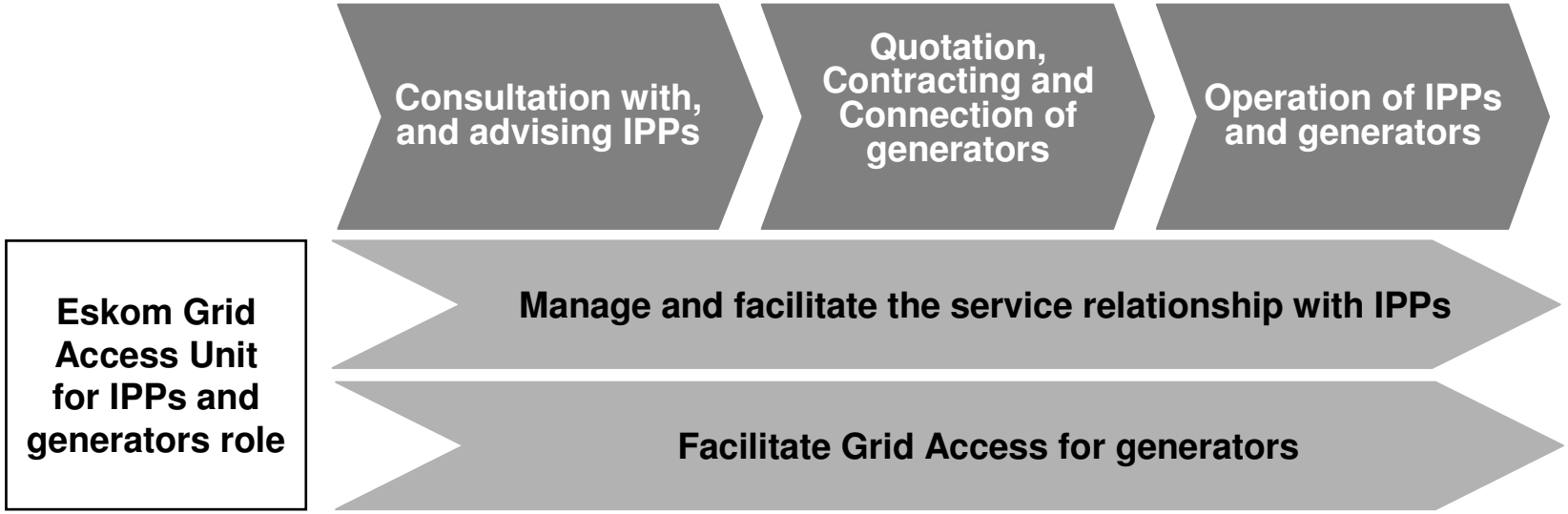
Establish **clear accountability** for IPPs and generators within Eskom

Achieve a **fundamentally improved image** of the way IPPs view the South African electricity market

Non-discriminatory grid access to enable IPPs >30% of overall generation capacity by 2030

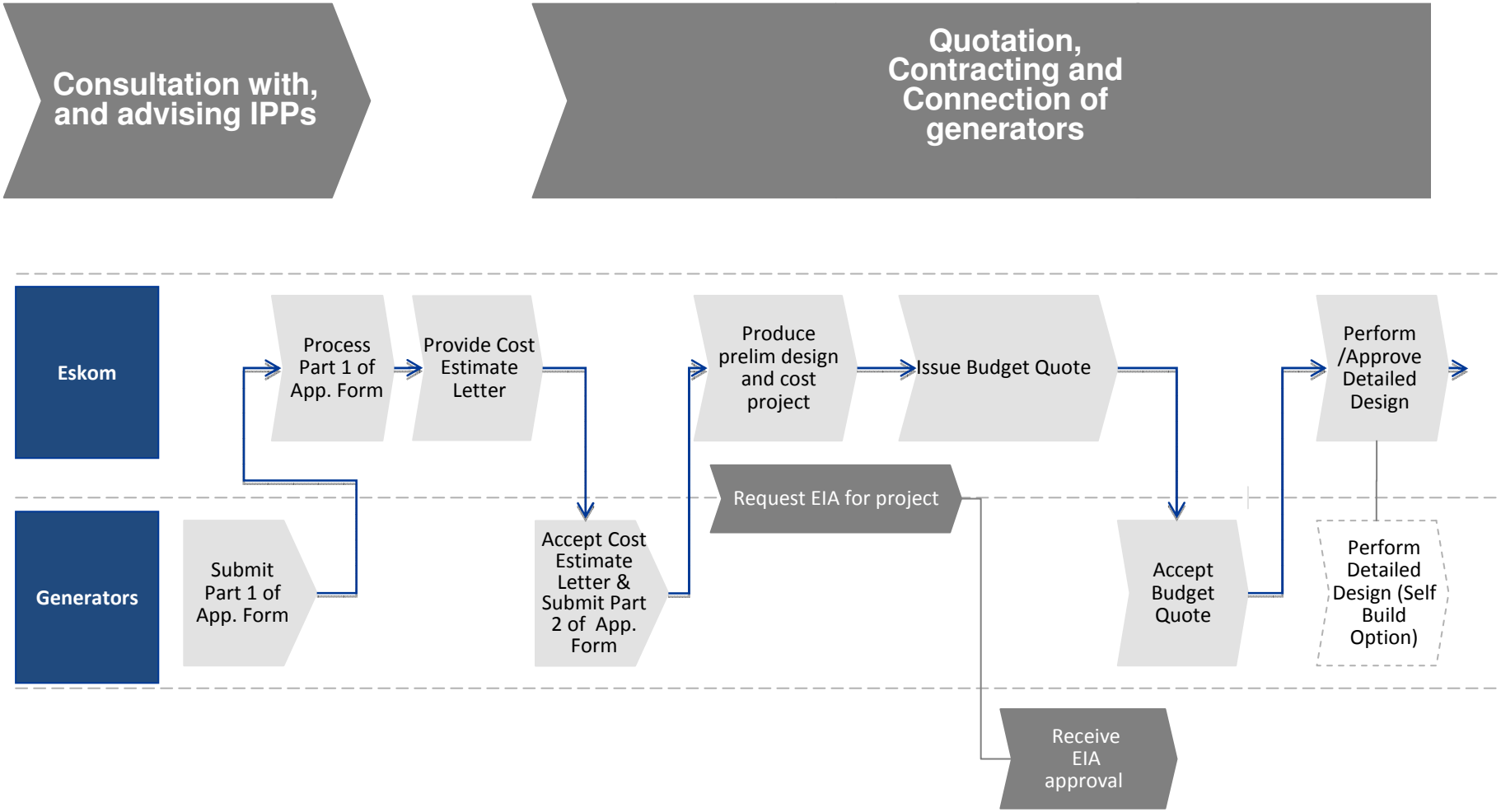
Effective organization with excellence in IPP connection and operations processes

(cont) End-to-end process vs Grid Access Unit role

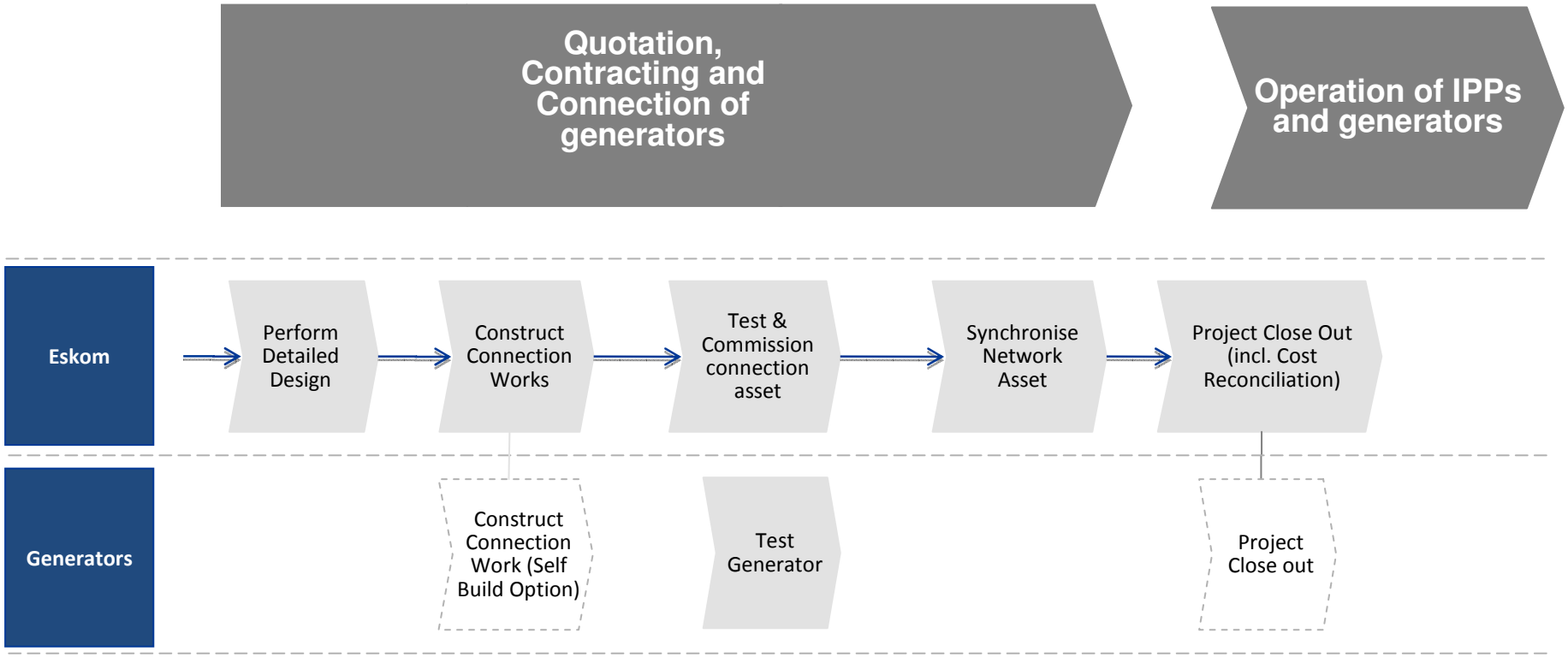


- **Enabling and facilitating generators and IPP grid access, and making commercial options more viable requires service relationship, stakeholder and interface management, communication**
- **Management and integration of the development of relevant and appropriate standards, processes, frameworks**
- **Possibility of various connection, grid access and commercial options**
- **IPP pricing frameworks (costing of connection, network strengthening, and costs to "wheel")**
- **Technical capability for integration of the IPP generators**
- **Process and system capability, and facilitation thereof, to enable grid access**
- **Quotation and Contracting capability and management**
- **Sufficient data and information, to effectively facilitate, enable, plan and support**
- **Requirement for long-term viability, while dealing with current challenges**

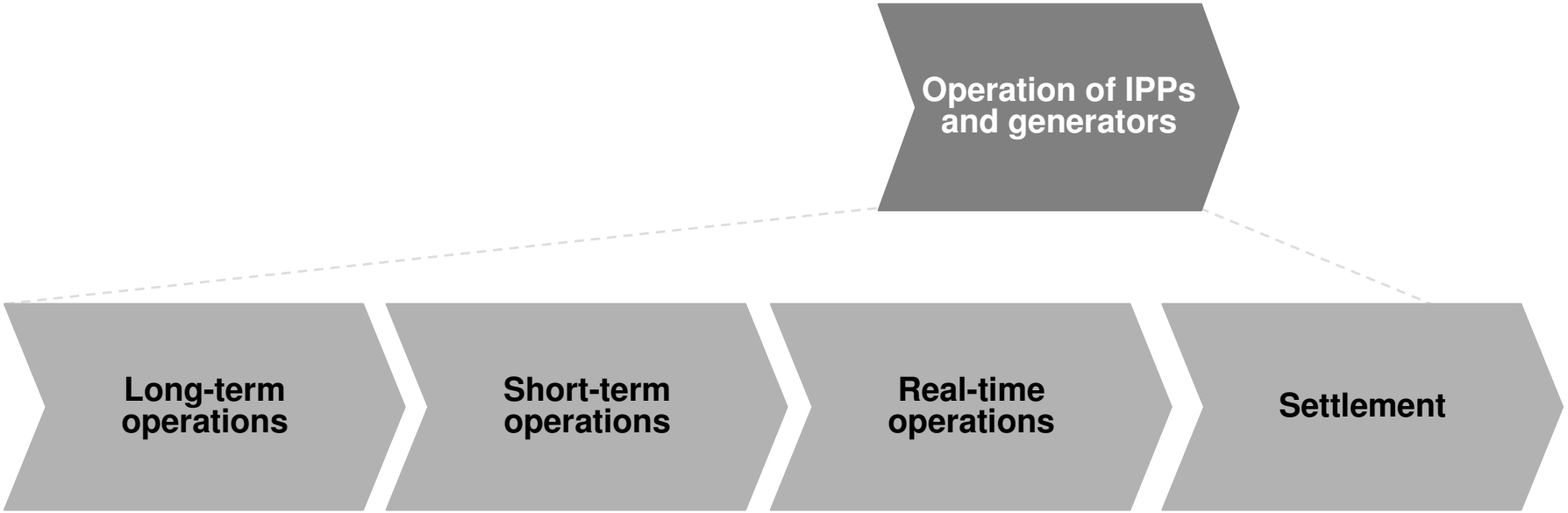
4. Grid Connection Process for Generators including IPPs



(cont) Grid Connection Process for Generators including IPPs



(cont) detailed view on Operations processes and activities



5. Conclusion

- **Eskom welcomes IPPs in the electricity supply industry and is committed to facilitate efficient and non-discriminatory access to its networks, and facilitating PPAs where appropriate.**
- **This supports the DoE endeavours to establish new (including independent) power generation, as well as renewable and co-generation capacity.**
- **Benefits that IPPs can bring include the following, and which Eskom supports:**
  - **Generators are distributed on the network – reduced network losses**
  - **Contribution to supply/demand balancing, reserves and ancillary services.**
- **Eskom is committed to facilitate the entry of IPPs and will collaborate with the National Energy Regulator of South Africa (NERSA) to ensure this happens.**

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