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INDEPENDENT POWER PRODUCERS OFFICE

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RENEWABLE ENERGY INDEPENDENT POWER PRODUCER PROCUREMENT PROGRAMME (REIPPPP)

BID WINDOW 6 BIDDERS' CONFERENCE 7 JULY 2022

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Tshifhiwa Bernard Magoro
Head of IPP Office

REIPPP BID WINDOW 6 OVERVIEW



The Renewable Energy IPP Procurement Programme has been a flagship public-private initiative since 2011



	Bid Window 1	Bid Window 2	Bid Window 3	Bid Window 3.5	Bid Window 4	Total Procured To-date	Bid Window 5	Bid Window 6
Number of Projects	28	19	17	2	26	92	25	-
MW	1 425	1 040	1 452	200	2 205	5 826	2 583	-
RFP to Market	Aug-11	Aug-11	May-13	-	May-14		Apr 21	Apr 22
Bid Window Preferred Bidder Announcement	Dec-11	May-12	Oct-13	Dec-14	Apr-15		Oct-21	TBC
PPA Signed (FC)	Nov-12	May-13	Dec-14	Jul-19	Dec-18		Planned 2022	TBC

Key REIPPPP achievements to date



92 IPPs selected as preferred bidders

6323 MW electricity capacity procured

5826 MW already operational from 87 IPPs

74 805 GWh energy generated by Renewable Energy sources

R209.6 billion investment attracted for energy infrastructure in all bid windows

All data as at **30 March 2022**, after 7 bid rounds (Bid Windows 1, 2, 3, 3.5, and 4)

Key Economic and Socio-Economic Achievements



64590

job years

Employment opportunities for South African citizens during construction and operations



1.9

Rand billion

(actual) contribution realised for socio-economic development



0.6

Rand billion

(actual) contribution realised for enterprise development



75.9

Mton CO₂ offset

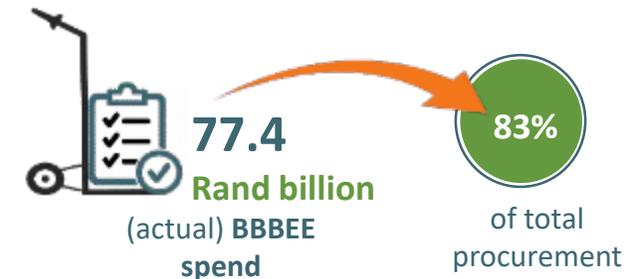
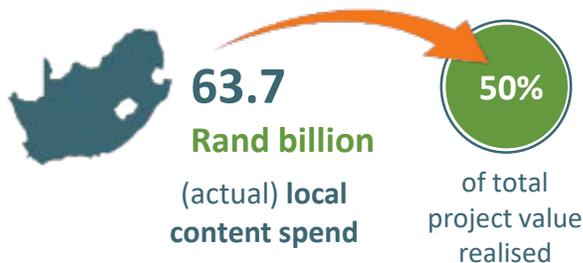
By electricity generated by these projects



89.8

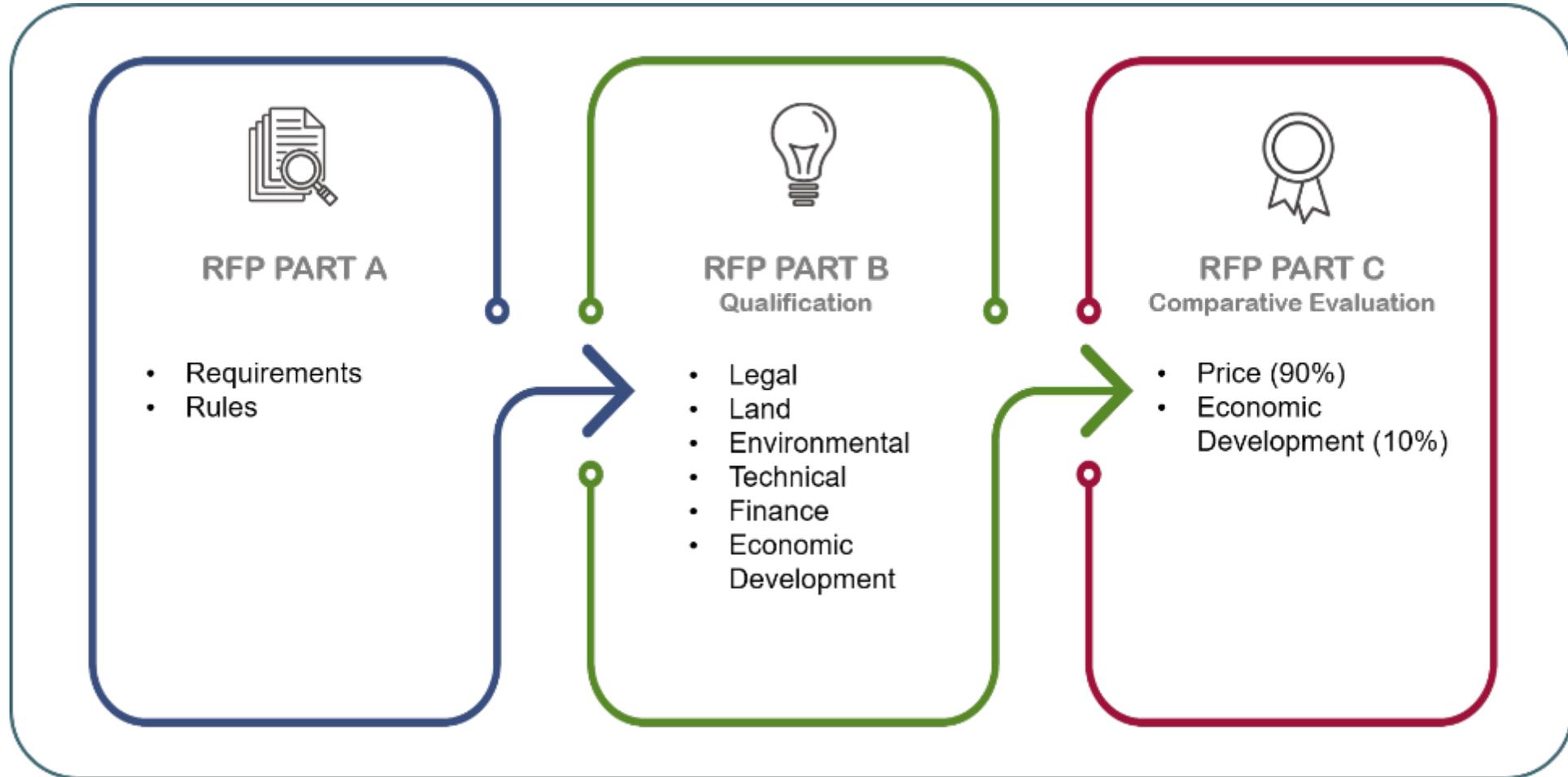
Million kiloliters

Water savings since programme inception



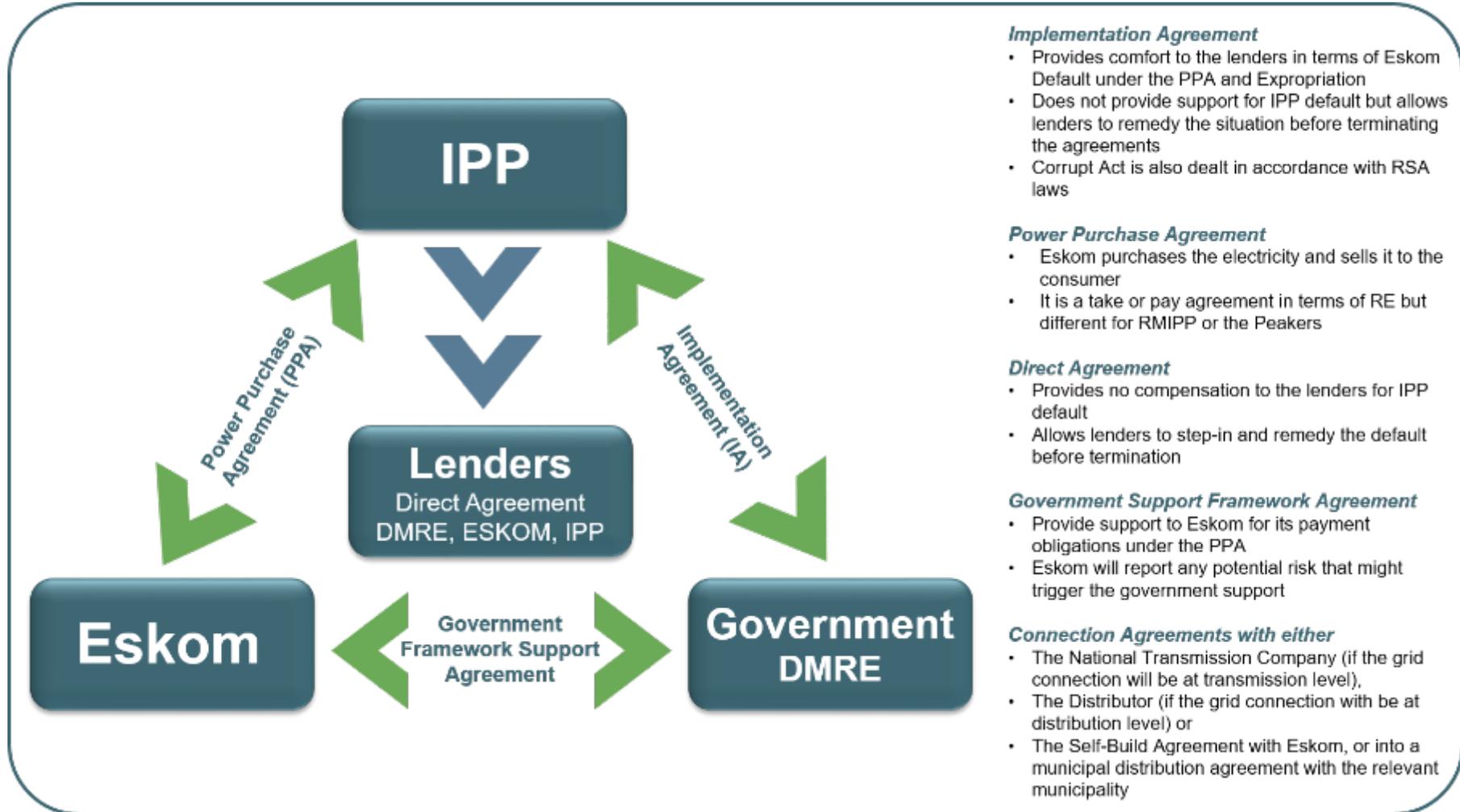
All data as at 30 March 2022

The REIPPPP Bid Window 6 RFP is made up of three parts



IPPs enter into non-negotiable agreements that are included in the RFP

Providing full transparency of the terms and conditions



Implementation Agreement

- Provides comfort to the lenders in terms of Eskom Default under the PPA and Expropriation
- Does not provide support for IPP default but allows lenders to remedy the situation before terminating the agreements
- Corrupt Act is also dealt in accordance with RSA laws

Power Purchase Agreement

- Eskom purchases the electricity and sells it to the consumer
- It is a take or pay agreement in terms of RE but different for RMIPP or the Peakers

Direct Agreement

- Provides no compensation to the lenders for IPP default
- Allows lenders to step-in and remedy the default before termination

Government Support Framework Agreement

- Provide support to Eskom for its payment obligations under the PPA
- Eskom will report any potential risk that might trigger the government support

Connection Agreements with either

- The National Transmission Company (if the grid connection will be at transmission level),
- The Distributor (if the grid connection will be at distribution level) or
- The Self-Build Agreement with Eskom, or into a municipal distribution agreement with the relevant municipality

Defining Features of the REIPPPP Bid Window 6



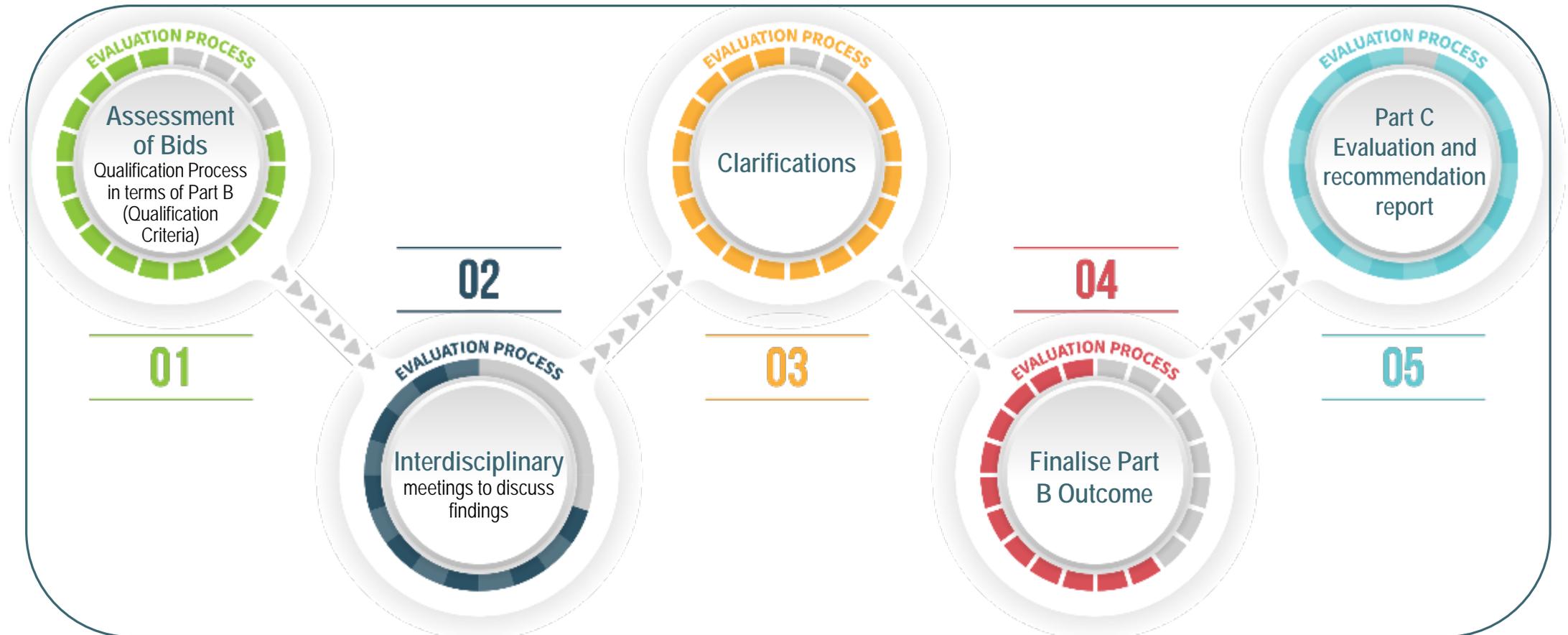
- Procuring a total of **2 600MW** - 1 600MW from wind resources and 1 000 MW from Solar PV
- Building on lessons learnt from REIPPPP BW5 and other procurement rounds as well as additional design criteria
- **Introduces for the first time in REIPPPP a requirement for Ancillary Services**, which also introduces a new **payment mechanism to include payments for Energy, as well as Ancillary Services**. Performance parameters have been developed with Eskom technical team. Payments will be paid to Seller for all ancillary services provided, as per instruction issued by System Operator, less any penalties payable due to performance issues
- **Project Contracted Capacity range for both PV and Wind increased to 50MW minimum and maximum of 240 MW** – these changes are made in line with recent lifting of cap allowing Private Sector projects up to 100MW without licensing requirements

Defining Features of the REIPPPP Bid Window 6 (...2)



- **RFP mitigates Concentration Risk** - marked increase in Round 5 in similar participants across large number of bids. Measures are included in the RFP to ensure that participants are able to meet obligations of ultimate provider of equity finance, and limit participations across sister bids to participation within the same sister bids.
- **RFP based on Preferential Procurement Policy Framework Agreement (PPPFA) exemption as confirmed by National Treasury** - exemption permits DMRE to apply Economic Development criteria as an aspect of the functionality evaluation during Part B, including key components part of Local Industrialisation under the Infrastructure Development Act has been incorporated as a part of the DMRE Procurement Policy for IPP Procurement Programmes.
- **Economic Development Criteria** thresholds must be met in order for a Bid to be considered as Compliant, and evaluation of Part C is now in respect of price and forward-looking Economic Development commitments, **and not Contributor Status Level**
- **Proof of compliance with South African Entity Participation in Community Trusts** must now be demonstrated by submission of reports by auditors and chartered accountants and B-BBEE verification agents

Procurement evaluation process will be conducted in a highly secured environment by an independent evaluation team



Key factors impacting on REIPPPP BW6



- **Grid availability for new IPPPP projects in highly productive areas such as Northern, Eastern and Western Cape** - Unlike during BW 5, Eskom released the Generation Connection Capacity Assessment of the 2024 Transmission Network (GCCA – 2024) prior to the release of round 6, providing more certainty to the market
- **Global supply chain for components (manufacturing capacity, price volatility and supply chain logistics)**. The IPP Office is prioritising ongoing engagements with the dtic, local suppliers, associations, Developers, Lenders, the IDC, ISA and The Presidency to ensure that a balance is reached between competing interests, whilst also ensuring that we continue to kick-start local manufacturing capacity across the value chain
- Concerted **inter-Governmental effort to avoid delays in governance and regulatory approvals**

Other IPPPP developments to look out for in 2022/23



- The **513MW Storage Bid Window** in the final drafting stages before governance approval
- The **3000 MW Gas Bid Window** concept has also been consulted extensively amongst government's LNG Infrastructure Technical Team stakeholders. The Concept has been submitted for final sign-off before RFP drafting is undertaken
- **REIPPPP Bid Window 7** round concept under development
- The Minister has recently confirmed that further determinations will be made in order to reach the current 14 400 MW total target for wind generation and 6 000 MW target for Solar PV generation by 2030 - **expect a clear line of site on future bid rounds to attract interest and competitive prices going forward**
- Minister also announced **review and update of IRP2019**



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Lena Mangondo
Head of Legal

LEGAL OVERVIEW



Participation in Affiliated Bids



Background

- Previous BWs allowed Members, advisors and Lenders to participate in more than one bid submission;
- Participation by Members across bids was seen largely in sister bids and at times across sister bids;
- Recent experiences has shown significant appetite by certain entities to participate in a large number of bids across sister bids;
- certain entities, have been investing in the development of projects and participating in the programme from the early BWs and in aggregate through the evolution of the BWs have secured substantial portfolio of projects and participation in the programme (“Lead Member Investors”)

Participation in Affiliated Bids



Considerations

- Competition Act on prohibited practices, being:
 - Restrictive horizontal practices;
 - Restrictive Vertical Practices; and
 - Abuse of dominant position.
- Procurement law competition prescripts:
 - accounting officer of a department to ensure that the institution maintains an appropriate procurement and provisioning system which is fair, equitable, transparent, **competitive** and **cost effective**

Participation in Affiliated Bids



Concerns Arising

- Ability to raise required funding for the participating members;
- Auditor General concerns about participation in more than one bid, perceived to be participating between competing bids;
- Does not allow other participants to participate in the REIPPP in particular the trend seen with certain equity participants over the last few bid windows and hence restricts new entrants from participating in the market;
- Potential Competition law issues; and
- Potential Procurement law competition issues

Participation in Affiliated Bids



Concerns Arising

- With regard to procurement consideration:
 - the declarations that each Member has to make relating to bids that it is participating on, notably in Volume 4, exposes the process to one participant making known the price and other sensitive information bearing on the competitiveness of one competing bid to the other bidders or influencing the price of one bidder and thereby compromising other bidders and the bidding process;
 - it is undeniable that the participation of an equity participant across sister bids, places such participant in close proximity with commercial issues relating to the bids that they are involved in, which are essentially in competition and carrying a direct interest in each of such bids - the participation of an equity provider across sister bids is a matter of serious concern in the context of the expected standards of competitive bidding process;

Participation in Affiliated Bids



Amendments to Address Concerns

- Clause 9.7 (PART A OF THE RFP)
 - A person, Contractor, Member, Supplier, other participant in a Bid Response, Lender or Advisor may participate in, advise or be involved (either directly or indirectly) with more than 1 (one) Bidder at any stage during the REIPP Procurement Programme without the prior written consent of the Department; and
 - in the case of a Member of the Bidder or consortium submitting a Bid Response ("Participant") such a Participant may only participate in 2 (two) or more Bidders in the case where such Bidders, that a Participant is participating in, are comprised substantially of the same entities or consortium members ("Affiliated Bids"). A Participant may not participate across different groups of Affiliated Bids or in 2 (two) or more Bidders who are not Affiliated Bids.
 - It shall be the responsibility of each Bidder that involves or utilises the services of the same Contractor, Member, Lenders, Supplier or Advisor as another Bidder, to manage the process and any conflicts of interest that may arise.

Participation in Affiliated Bids



Amendments to Address Concerns

- Clause 9.8 (PART A OF THE RFP)
 - Bidders must ensure that no anti-competitive or collusive behaviour is displayed or engaged in by any person, Contractor, Member, Lender, Supplier or Advisor participating in or involved with more than 1 (one) Bidder.
- Failure to comply with either clause 9.7 or 9.8 entitles the Department in its sole discretion to disqualify any Bid Response submitted by a Member or a Bidder, as contemplated in clause 32 (Disqualification) of Part A.
- In order to mitigate the risk of Bidders' inability to raise the required Equity Funding, requirements have now been developed in the RFP for BW6 for fairly extensive assessment of the Member's ability to meet their commitments in relation to required Equity finance from the Member, with reference not just to the Project that the Bidder has submitted for but all other Projects that the Member is participating in not only in BW6 but other IPP Procurement Programmes;

Participation in Affiliated Bids



Mitigation of Financing Risk

- In order to mitigate the risk of Bidders' inability to raise the required Equity Funding, requirements have now been developed in the RFP for BW6 for fairly extensive assessment of the Member's ability to meet their commitments in relation to required Equity finance from the Member (either in the form of the Ultimate Provider of Corporate Finance or Equity Finance), with reference not just to the Project that the Bidder has submitted for but all other Projects that the Member is participating in not only in BW6 but other IPP Procurement Programmes (clause 18.1 Part A of the RFP);
- Prior to appointment of Preferred Bidder the Department will have consideration to the following (clause 3.19 Part C of the RFP):
 - clauses 18.1 to 18.3 of Part A (General Requirements, Rules and Provisions) of the RFP regarding the assessment that may be performed by the Department in the circumstances provided for therein; and
 - clauses 18.5 and 18.6 of Part A (General Requirements, Rules and Provisions) of the RFP regarding new information regarding a Bid Response which affects a Project and which must be notified to the Department.



Conclusions

- Requirements have changed to restrict a Member from participating across sister bids but allowing participation in more than one bid within the same group of sister bids.
- Limit does not apply to participants such as local communities, whose participation in bids is intended to achieve local community involvement in the programme



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FINANCIAL OVERVIEW

Elsa Strydom
Head of Infrastructure Finance



Financial Qualification Criteria

Part B Clause 2.5



- Three key criteria are assessed in the **financial qualification**, namely:
 - Criterion 1 – **Price**;
 - Criterion 2 – **Financial standing and robustness of the funding proposal**; and
 - Criterion 3 – **Robustness of the Financial Model(s)**.
- Each financial criterion has a pass threshold.
- **Bidders must pass all the threshold requirements for the three (3) financial criteria, in order to pass the Financial Qualification part and progress to being evaluated under Part C (Evaluation Criteria Requirements).**

Financial Qualification Criteria

Financial Criterion 1 - Price



- It is a requirement for a Compliant Bid that a Bidder must provide its proposed **Price per MWh** based on full CPI indexation for the Commercial Energy and **Ancillary Services** to be delivered through the applicable Technology. **Inflation rate of 4.5% to be used.**
- The Price must include the Bidder's costs for grid connection of the Facility to the Transmission System or the Distribution System, as the case may be.
- For each Project, the Bidder is required to provide a completed Schedule 1 (*Details of the Project and Facility*) Part 3 (Energy Rates) to the PPA, to reflect its proposed Price.
- The Department will communicate in a Briefing Note with Bidders regarding the foreign exchange rate assumptions to be used for the purposes of preparing their Financial Model(s).



Financial Qualification Criteria

Financial Criterion 1 - Price

- The Price offered in a Bid Response of a Preferred Bidder will be adjusted at Commercial Close to take account of:
 - movement in foreign exchange rates, and
 - movement in interest rates.
- **After Commercial Close, there will be no adjustment to the Commercial Energy Rate (CER) of the PPA that is entered into between the Buyer and the Seller, other than for CPI adjustments annually on 1 April.**

Financial Qualification Criteria

Financial Criterion 2 – Financial standing and robustness of the funding proposal



Equity Finance Requirements

- Bidders are required to submit a letter of support from **each Member** and from **each ultimate provider of Equity Finance** (if different from the Member) in the form set out in Appendix R2 (*Letter of Support from Provider(s) of Equity Finance*) and where the ultimate provider of Equity Finance is a Financial Institution, Appendix R9 (*Letter of Support Template from ultimate Provider(s) of Equity / Corporate Finance from a Financial Institution*).
- Ultimate provider(s) of Equity Finance (**other than Financial Institutions**) must submit a letter in the form of Appendix R7 (*Letter of confirmation from an Independent Financial Advisor or Auditor*) provided by an independent Financial Advisor to the Bidder or the auditor of the Member or ultimate provider of Equity Finance, as the case may be that confirms that there is sufficient funds to meet the obligations of the ultimate provider of Equity Finance and that such funds are ring-fenced for the Project.

Financial Qualification Criteria

Financial Criterion 2 – Financial standing and robustness of the funding proposal



Equity Finance Requirements

- Where Equity is provided through a **Fund**, Bidders are further required to submit a letter in the form set out in Appendix R6 (*Letter of Commitment from General Partners and/or Investors of the Fund*).
- Where an **individual** is providing Equity Finance, the Bidder is also required to over and above Appendix R2 to provide evidence of the funds by providing a letter, substantially in the form set out Appendix R5 (*Letter of Confirmation relating to Equity Finance to be provided by an Individual*) from the bankers or registered accountant of the provider of Equity.

Financial Qualification Criteria

Financial Criterion 2 – Financial standing and robustness of the funding proposal



Debt Finance Requirements

- Where Debt is provided by a **Financial Institution (External Debt)**, a Bidder is required to provide a Letter in support of preliminary credit approved term sheets, substantially in the form set out in Appendix R3 (***Letter of Support from Lender***) and Preliminary credit committee approved **term sheet**.
- Where Debt is provided by a **Non Financial Institutions/Corporate Finance** the Bidder must provide the completed Appendix R1 (***Letter of Support from provider(s) of Corporate Finance***) and a letter in the form of Appendix R7 (***Letter of confirmation from an Independent Financial Advisor or Auditor***) provided by an independent Financial Advisor to the Bidder or Auditor as the case may be that confirms that there is sufficient funds available to support this investment and that such funds are ring-fenced for the Project.
- With respect to the quantum of External Debt to be provided by the **Fund**, the Bidder is required to provide a letter in the form set out in Appendix R6 (***Letter of Commitment from General Partners of and or Investors to the Fund***).

Financial Qualification Criteria

Financial Criterion 2 – Financial standing and robustness of the funding proposal



Sources and Uses of Funds

Bidders are required to provide a breakdown of the sources and uses of the funds in accordance with **Appendix JB** (*Front Sheet Template for Financial Model and Technical Information*) (**Part 1-5 Financial Information**) in Volume 1 Part 2 (*Form of Bid and Returnable Schedules*) of the RFP.

Bidder's final due diligence plan

The Bidder is required to provide a plan, including a final due diligence plan, setting out the key activities and indicative dates for the achievement of Financial Close within the timeframes indicated in clause 8.4 (*Timetable for the Sixth Bid Submission Phase of the REIPP Procurement Programme*) of Part A (*General Requirements, Rules and Provisions*) of the RFP.

Financial Qualification Criteria

Financial Criterion 3 – Robustness of the financial model(s)



Financial Model

- Bidders are required to prepare the Financial Models in accordance with the requirements set out in **Appendix R4 (*Financial Model(s) Structure and Assumptions*)** and to include in the Financial Model(s), as linked sheets, to Appendix JB (*Front Sheet Template for Financial Model and Technical Information*) (*Part 1-5 Financial Information*).
- The Financial Model should be prepared on a monthly basis for the construction and development period and a semi-annual basis for the Operating Period.
- Bidders are required to use the foreign exchange rates and interest rates that will be provided by the Department.
- Bidders are required to satisfy the Department that the amount required to cover the Decommissioning Costs will be fully funded with effect from the Commercial Operation Date, either by a bank (or insurance) guarantee (the Decommissioning Cost Bank Guarantee), or as cash reserves in the trust account of the Rehabilitation Trust, or a combination of these.

Financial Qualification Criteria

Financial Criterion 3 – Robustness of the financial model(s)



Financial Model Audit Opinion

- Bidders are required to provide a model audit opinion letter in respect of the Financial Model(s), prepared and signed by a **suitably qualified and independent professional firm**. Bidders must also attach as Annexure to the opinion, the Table in **Appendix R4A (*Financial Model Audit Opinion*)**.
- For avoidance of doubt, **the model auditor must be independent of the Bidder, model preparer and other contractors in the Project**.
- If the organisation who prepares the Financial Model is independent from the Bidder then this organisation can be the Model Auditor if it can demonstrate independence by confirming that separate teams undertake the preparing and auditing functions. This must be clearly stated in the Financial Model Audit Letter.

Financial Qualification Criteria

Value for Money in BW6



In order for a Bidder to comply with the Value for Money requirements contemplated in clause 2.8 (*Value for Money*) of Part B of the RFP, its Bid Response must, in the opinion of the Department, demonstrate Value for Money to the Buyer or the Government.

In this regard, the Department will assess the **price and affordability of the tariffs** as well as the costs and rates, as provided by the Bidder in Appendix JB (*Front Sheet Template for Financial Model and Technical Information*) (Parts JB 1-5 *Financial Information*) in Volume 1 Part 2 (*Form of Bid and Returnable Schedules*) of the RFP against **local and international benchmark costs and rates**, other Bid Responses, as well as any other relevant data available to the Department.

Financial Qualification Criteria

Part C Evaluation



- The Department will only consider a Bidder's Bid Response in terms of this Part C (*Evaluation Criteria Requirements*) if that Bidder fulfils all of the requirements of Part B (*Functional and Qualification Criteria Requirements*) of the RFP to the Department's satisfaction.
- The evaluation in terms of this Part C will be undertaken in accordance with the **90:10** points system. The maximum score for Price will be 90 points, and the maximum score for **Economic Development** will be 10 points
- For each Compliant Bid received, the points for its **Price** shall be calculated in respect of its Price , provided in accordance with clause 2.5.3 (*Price*) as set out in Part B of this RFP.
- Compliant Bids will be scored for **Economic Development**, in accordance with the scoring methodology detailed in Volume 5 (*Economic Development Requirements*) of the RFP.

Compensation under the PPA



- The Buyer shall pay to the Seller the **Commercial Energy Payment** for all Commercial Energy sold by the Seller and purchased by the Buyer during each Billing Period at the Commercial Energy Rate (**CER**) **less** any **Forecast Penalty**, subject to clause 5.1 of Schedule 3 (*Scheduled and Unscheduled Outages*) .
- The Buyer shall pay to the Seller the **Early Operating Energy Payment** in respect of Early Operating Energy delivered during that Billing Period at the Early Operating Energy Rate which is equal to **60% of the Commercial Energy Rate and after Forecast Penalty deducted for forecast inaccuracies** as set out in Part 3 Energy Rates of the PPA.
- **Forecast Penalties** will apply in the event that the Actual Energy Output in any hour varies by more than **10%** from the Forecasted Energy Output and will be calculated in terms of Schedule 1 (*Details of the Project and Facility*) Part 3 (*Energy Rates*) of the PPA.
- The Buyer shall pay to the Seller the **Deemed Energy Payment** for all Deemed Energy accruing in each Billing Period calculated in terms of clause 14 (*Consequences of a System Event*), clause 15 (*Consequences of a Compensation Event*) and Schedule 6 (*Deemed Energy Payment*), subject to clause 5.2 of Schedule 3 (*Scheduled and Unscheduled Outages*)

Compensation under the PPA



- The Buyer shall, subject to clause 1.3 (*Alternative Distributor*), **reimburse to the Seller the Use of System Charges.**
- The Buyer shall **not make any payments to the Seller for Commissioning Energy Output**
- ***Payment mechanism under Bid Window 6 has been expanded to include Ancillary Services and performance measures.***
 - The Buyer shall pay to the Seller the **Ancillary Service Payments** for all Ancillary Services provided by the Seller during each Billing Period, less any penalties payable due to performance issues as calculated in accordance with Schedule 1 (*Details of the Project and Facility*) Part 3 (*Energy Rates*) clause 5 (*Ancillary Service Payment and Penalties*) and Schedule 12 (*Ancillary Services*).
 - Where Ancillary Services are not or are unable to be performed, there will be **no deemed Ancillary Service Payments.**
 - The IPP will bill as per the Ancillary Service schedule, **it will be paid for making the Ancillary Service available whether called on or not.**



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Louis Moyse
**Acting Head of Contract Management
and Economic Development**

ECONOMIC DEVELOPMENT OVERVIEW



Local Content under the Sixth Bid Submission Phase of REIPPP



- Historically, the IPP Programme has been a catalyst for large investments in manufacturing and indirect job creation, however, nearly all these achievements were reversed due to historic delays in the procurement roll-out, and global post-COVID-19 economic downturn and supply factors.
- Local manufacturing and production capacity must be addressed in order to revitalise growth in the energy sector and our economy which is a Government objective.
- The mandate to issue designations on Local Content was held by the dtic and published by the National Treasury. This mandate is held in terms of the Preferential Procurement Regulations. There was uncertainty regarding the Regulations at the time of the publishing of the RFP.

Local Industrialisation



- The Infrastructure Development Act, 23 of 2014 ("**Infrastructure Development Act**") provides among other that the object of the Infrastructure Development Act is to provide for, generally, practices and procedures which seek to ensure that infrastructure development is not undertaken merely in a transactional manner, but in a manner which seeks to advance national development goals, including local industrialisation, skills development, job creation, youth employment, small businesses and cooperatives development, broad-based economic empowerment and regional economic integration. These objectives have been, as far as possible, incorporated in Appendix 5 A (*Economic Development Scorecard*).
- The REIPP Procurement Programme was declared as a strategic integrated project which existed when the Infrastructure Development Act commenced in terms of Schedule 3 of the Infrastructure Development Act. As such the Department is obliged to pursue the objectives of the Infrastructure Development Act which includes, but not limited to, local industrialisation.
- DMRE procurement policy for the IPP Procurement Programmes has been adapted to promote the Government Objectives as set out in the Infrastructure Development Act.

Deviation from Local Industrialisation



- The RFP allows for a mechanism to request a deviation from the local industrialisation which can be assessed and addressed by the DMRE. This is done after consultation with the **dtic**.
- We are constantly engaging all stakeholders including the dtic, ISA under the Presidency and Project Vulindlela to assess the market and to address any issues which may affect the procurement programmes.
- Bidders are required to comply with the thresholds set in respect of Local Industrialisation Sectors, Components and Products (Appendix 5I). A failure to comply with the thresholds in respect of the Local Industrialisation Sectors, Components and Products (Appendix 5I) will result in the disqualification of the Bidder's Bid Response.

Local Community Participation



- As with previous bid windows, it is a qualification criteria to ensure Local Community participation in the Project.
- The Local Community participation can be an ownership vehicle that benefits one or more communities within the confines of the definition of Local Community as set out in the RFP.
- The vehicle through which Local Communities can participate must be compliant with the B-BBEE Codes to be recognised as Ownership as defined in the RFP and the IA.



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Povelan Govender
Head of Technical

TECHNICAL OVERVIEW



Programme Size, Contracted Capacity Limits per Technology and Timelines



Technology	Maximum MW to be allocated in the Sixth Bid Submission Phase
Onshore Wind	1600MW
Solar Photovoltaic	1000MW
BW6 Programme Total	2600MW

Technology	Minimum Contracted Capacity	Maximum Contracted Capacity
Onshore Wind	50MW	240MW
Solar Photovoltaic	50MW	240MW

- Projects must connect to the grid at a single connection point
- Announcement of Preferred Bidders Approximately 2 (two) months post the Sixth Bid Submission Date
- Commercial Close approximately 6 (six) months post Preferred Bidder announcement
- Long stop date of 24 (twenty four) months post Commercial Close

Generation Forecasts



- Every preceding day by 10:00 hours the Seller shall provide to the Buyer, with the 7 Day forecasted generated Energy for each day in the week starting at 00:00 hours on the day and ending at 24:00 hours on day 7.
- The Seller may, provide a revised Daily Generation Forecast Profile. The revised forecast must be provided at least twelve (12) hours ahead of the revised hour(s).
- if the Seller's Daily Forecast Generation Profile deviates from the actual Energy Output delivered, in any hour, by more than 10% (ten percent), then for each such hour the difference between the forecasted Energy Output and the actual Energy Output, whether over or under, will be subject to the Forecast Penalty.
- The Forecast Penalty regime shall not apply to that portion of the forecasted Energy Output which would have been delivered but for a System Event .In circumstances of a System Event affecting the delivery of Energy Output, the Seller will be deemed to have delivered that portion of the forecast Energy Output, for each hour that the System Event continues.

Ancillary Services Requirement



Ancillary Service	Max Activation Time	Minimum Sustained Time	Max Utilisation per annum	Min Percentage Required Relative to Contracted Capacity	Possible Max Percentage Capacity Relative to Contracted Capacity (Not a Qualification criteria)
Instantaneous Reserve	10 seconds	10 minutes	155 events or 1855 hours scheduled	3%	40%
Regulating Reserve	10 minutes	1 hour	1855 hours scheduled	10%	40%

Ancillary Services Requirement cont/...



- System Operator AS instruction can only be issued if the Facility plans to generate the next day using the forecast information provided by the Seller.
- $P_{available} > P_{min} + 3\%CC$ for IR and $P_{available} > P_{min} + 10\%CC$ for RR. Therefore if the forecasted $P_{available} < P_{min} + 13\%CC$ the Facility **must not declare availability** prior to the start of the dispatch hour. *The bidder will provide a P_{min} at which its inverter/turbine can control active power **at bid submission***
- Max percentage for each AS that could be required relative to contracted capacity is not a qualification criterion however the bidder must state this max percentage as part of its bid response. Min percentage for each AS stipulated in the previous slide however is a qualification criteria.
- Buyer shall pay to the Seller the AS payments for all AS provided by the Seller during each billing period (less penalties)

Ancillary Services Requirement cont/...



- Different Grid code services such as AS and Reactive Power are not mutually exclusive that Facility may need to provide both service simultaneously.
- The AS Testing guideline/procedure to prove compliance to the Ancillary Services requirement is in Appendix 2, of Schedule 12 Ancillary Services in the PPA and **Certification-and-performance-monitoring-of-generation-reserves-procedure.pdf** on the Eskom Website
- AGC high limit is to be set at Pavailable as this is the max that AGC would pulse the facility up to and the Seller is responsible for maintaining the declared Regulation Range (AGC_high - AGC_low) over the hour even if Pavailable changes
- The AGC functional and communication (gateway, protocols) requirements are specified in the information exchange code. Appendix 5 (A5.5) describes all required AGC signals in the South African Grid Code - Information Exchange Code.

Ancillary Services Requirement cont/...



- The **IR equivalent energy** is not taken into account in the AS formula as the MWh value for the IR incident is negligible considering the period of dispatch is typically from 10 seconds to at most 10 minutes after which a contracted facility should reduce its output to make IR capacity available for the next contingency.
- SCADA data (high resolution as per Info exchange code) will be used to assess AS performance against contracted capacities. The Main and check meters will be used for energy billing.
- Sellers are compensated for dispatched power on a self-dispatch basis and according to the Ancillary Service Instruction by the System Operator. The Seller is not allowed to export excess energy to another load when the available ancillary service energy has not been made available to Eskom.



GRID CONNECTIONS

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Eskom General Manager Operations
Enablement & Technology
(Grid Access Unit)

Eskom Grid Access Unit Strategy to alleviate grid constraints

- July 2022

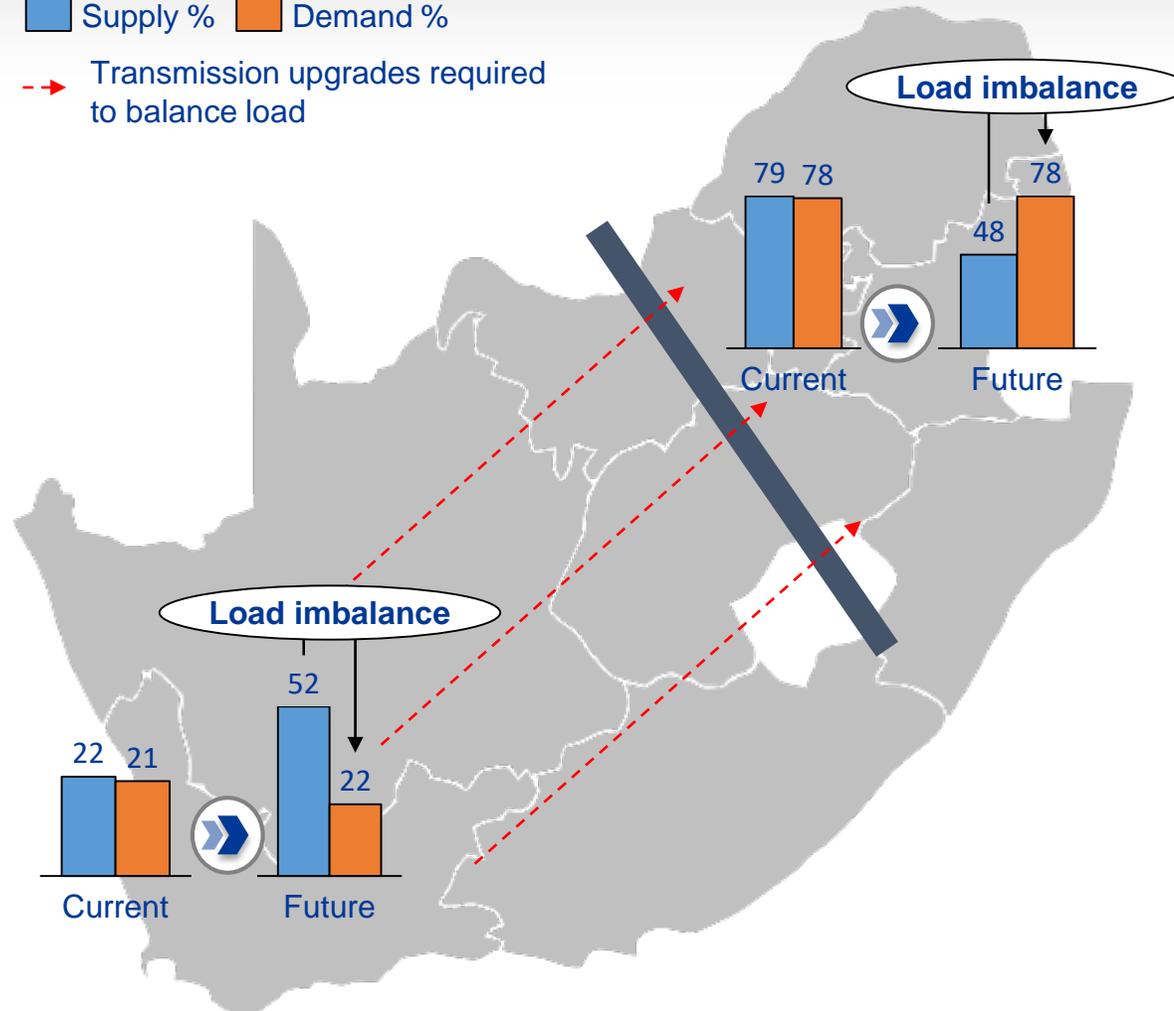


Grid capacity presents challenges as a result of economical, technological and political reasons

Future load vs. generation patterns requires transmission infrastructure upgrades

Supply % Demand %

→ Transmission upgrades required to balance load



Challenges

- Due to the proposed location of new non-dispatchable energy (driven by available resources and environmental constraints), the existing transmission infrastructure in South Africa will not be able to accommodate the anticipated new connections and load evacuation requirements associated with it
- Significant transmission infrastructure upgrades are required in the short and medium term at a cost of ~R141bn between 2022 and 2031*:
 - **2598km** of lines by **FY2026** (73% more than constructed in previous 5 years) and **5808km** by **FY2031**
 - **13GVA** transformers by **FY2026** (94% more than installed in previous 5 years) and **45GVA** by **FY2031**
- The **transmission infrastructure upgrades** will enable **security of supply, enable lower cost renewables in optimal resource areas and contribute to job creation and local industry stimulation**
- Transmission infrastructure typically takes 8-10 years to complete (in line with international standards) and poses a significant risk to SA's energy transition. The key challenges of implementing the above minimum transmission requirements are:
 - **Ensuring sufficient capital for the required strengthening and expansion projects**
 - **Delays in servitude acquisitions**
 - **Limited capability and capacity across engineering, supplier and construction**

Transmission has conducted a grid access assessment using the renewable survey 2022 Qtr. 1 and has identified existing grid capacity that can be used in Mpumalanga



Identified initiatives to enable Grid access

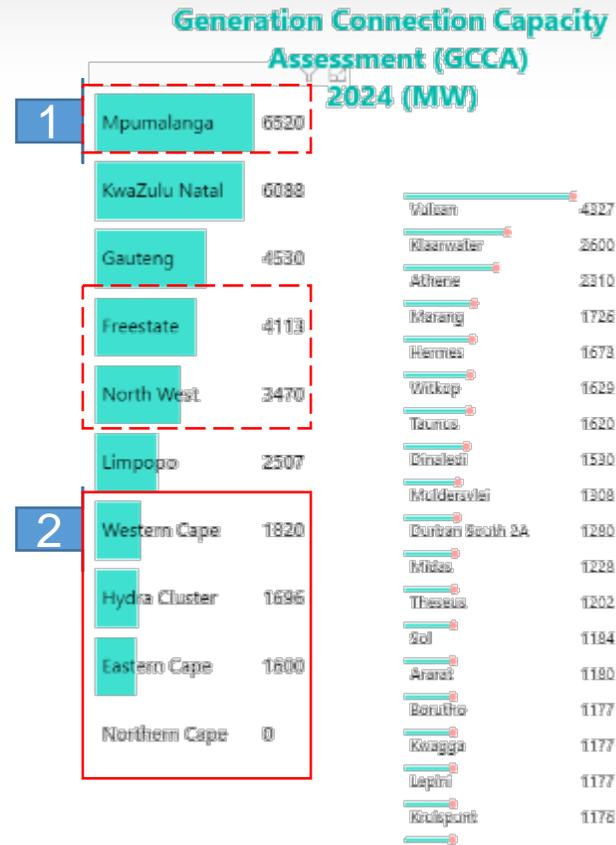
1. Eskom grid unlocking - **Mpumalanga initiative** to encourage use of grid capacity

2. Enable additional capacity for renewables in the Western Cape by dispatching management of OCGT

3. 242 contributions of the renewable survey were considered ~64GW Wind and Solar. These **contributions are critical as they directly influence the TDP** spatial assumptions

4. Access to grid capacity though local grid expansions identified

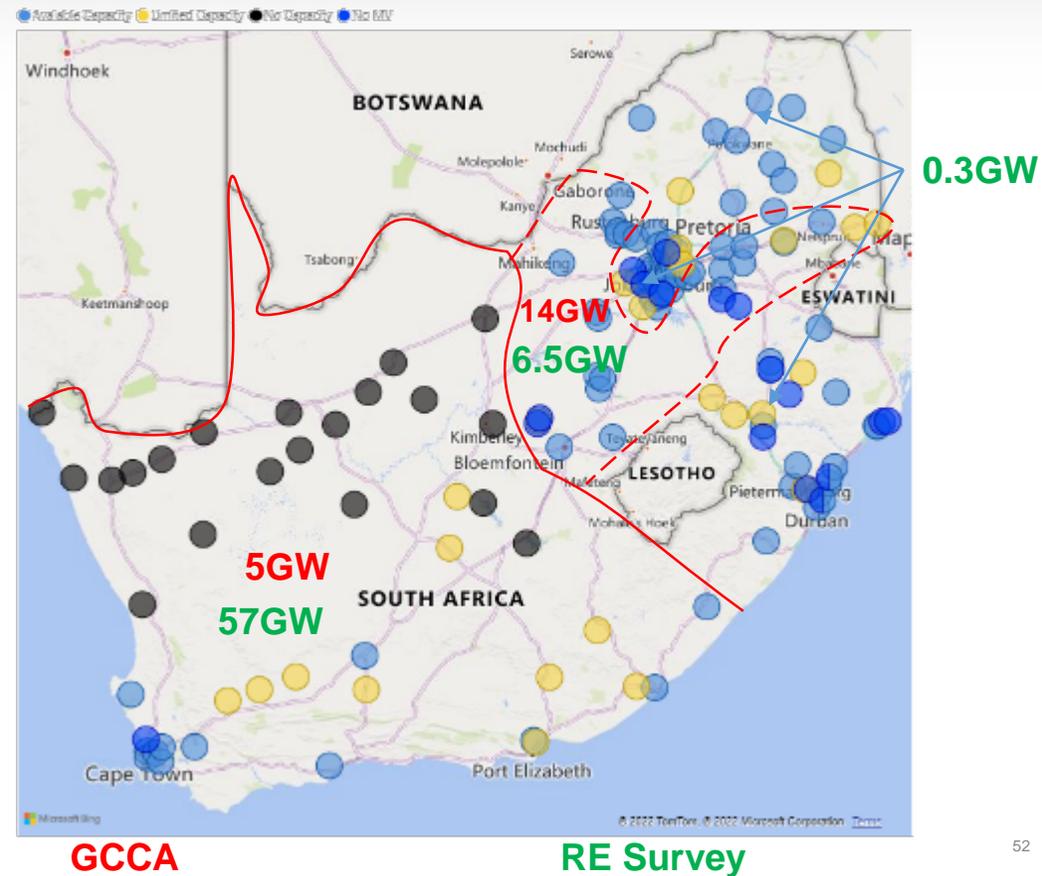
5. Initiated major corridor strengthening



32 GW of Existing Tx Grid Supply Area Capacity

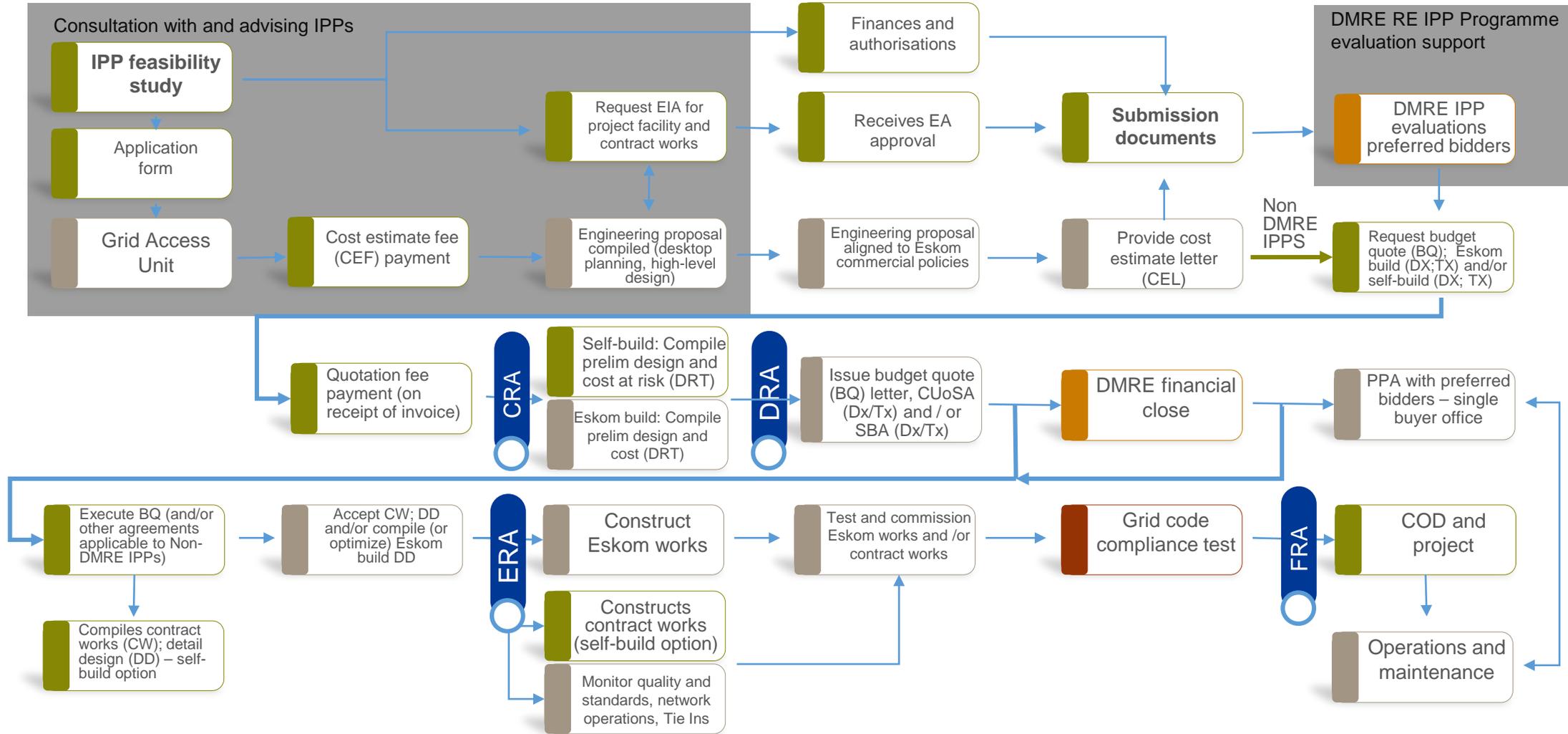


Max ~19 GW likely for Utility Scale Renewable Grid Capacity



Eskom High Level Renewable Energy Grid Integration Process

- Overview and Interfaces to address grid connections



Acronyms EIA / EA Environmental Impact Assessment / Authorization; SBA: Self-Build Agreement; CUoSA: Connection and Use of System Agreement; DRT: Design Review Team; CRA: Concept Release Approval; DRA: Definition Release Approval; ERA: Execution Release Approval; FRA: Final Release Approval; COD: Commercial Operation Date.

Department of Mineral Resources and Energy (DMRE)

Independent Power Producer (IPP)

Eskom Grid Access Unit (GAU)

Renewable Energy Technical Evaluation (RETEC)

In line with the Transmission plans to enable grid access Distribution has developed a Grid access Recovery Strategy



Grid Access Unit (GAU) perceived as stumbling block due to late CELs & BQs and unfair capacity allocation



Grid Access Unit decided to craft a Recovery Plan focusing on people, processes and reporting systems

People

Human Resources

- Beefing up Head Office: chief engineer recruitments ongoing in lines, transformers, switchgear, designs who are going to assist across all Clusters.
- Utilizing Clusters and adding more skilled personnel: NED
- TxDx –integration at design, CPA

Processes

Processes

- Ensure following of processes: GAU/IPP and new Queueing one being finalized
- Review and align processes to new way of working to accommodate <100MW, Wheeling and Additional MW. |

Reporting systems

Active participation on Presidential projects acceleration committee

- Challenges and solutions on selected projects from industry are shared – SB, NERSA, DMRE, DPE, Eskom and industry deal with the issues together to expedite execution.

Maintain and open channel of Stakeholder Management

- Ensure transparency, single message packaged for particular audiences, GRAD assisting - Massive improvements and positive responses, clearer to Stakeholders that GAU is not the bottleneck
- Grid Constraints are:
 - DMRE IPPO- Weekly Dashboard feedback
 - SAPVEA, SAWEA, Minerals Council
 - EIUG, Farming



There has been some progress made on the Regulated Procurement Programme (DMRE/ IPPO) and non-DMRE IPPs to assist with grid access constraints

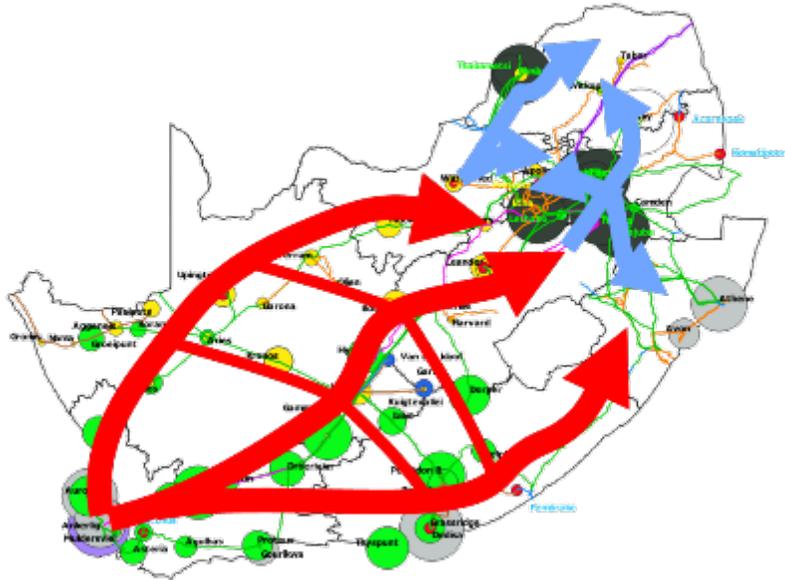


DMRE projects Non - DMRE projects

Programme	Progress update
1. RMIPPPP	<ul style="list-style-type: none"> 11 preferred bidders were announced by the DMRE/IPPO (with a total of 13 project connections). All 13 projects were issued with Budget Quotes, all Applicants have selected the “self-build” process, in order to share development, procurement and construction risks with Eskom. 03 projects have reached Financial Close and the remaining ones are to follow.
2. REIPPP Bid Window 5	<ul style="list-style-type: none"> A total of 25 preferred bidders were announced; DMRE has announced a staggered signing approach (July, and September 2022) (therefore allowing for a later date for both Financial and then Commercial Close): 05 Budget Quotations have been issued. All Applicants have selected the “self-build” process, in order to share development, procurement and construction risks with Eskom.
3. REIPPP Bid Window 6	<ul style="list-style-type: none"> The RFP was announced on 6 April 2022. A total of 219 grid access applications have been received already; to date 179 applicants have paid the application fees for the CELs; 53 CELs have been issued. The DMRE/IPPO has announced a closing date for applications of 11 May 2022. Bid submission has been scheduled for 11 August 2022, after which the DMRE/IPPO will announce the preferred bidders for BW 6. As a consequence, no Budget Quotation work has started yet, as no preferred bidders have been announced yet.
4. “Additional MW” Procurement Programme	<ul style="list-style-type: none"> 7 existing IPPs did respond by expressing interest in the DMRE Programme; 3 projects have available capacity, for a total of 38.3MW additionally (and related grid access agreements and the PPA’s need to be updated, following application by the IPPs).
5. “100MW reform” projects, wheeling, own-use and self-generation	<ul style="list-style-type: none"> Currently, 217 applications for grid access have been received and are open; 182 application fee’s have been paid by IPPs, and 119 CEL’s have been issued. 35 BQ’s are currently under development.

Eskom is already making strides in driving energy transition and enabling additional capacity

Transmission network expansion



- Accurate and formalized **capacity expansion planning** through the Transmission Development Plan
- Need to **augment the strategic environmental assessments** power corridors in order to cater for **future RE and gas generation**
- **Major Corridor** strengthening
- **Increase** the number of corridors

Leverage existing land



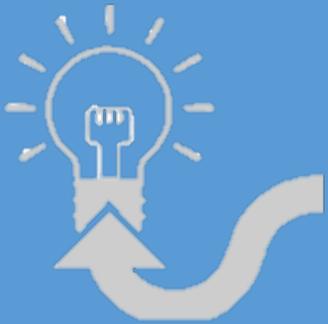
- Facilitate **additional generation capacity** quickly
- **Optimising and mitigating impact** of network expansion & strengthening
- **Deferment of network strengthening** by providing capacitated grid connectivity

Accelerate grid connections



- Reviewing queuing processes and capacitating Eskom grid access unit to respond to **<100 MW connections**
- Coordinating with **DMRE and IPPs** to improve **planning and connection** of new capacity projects

Recommendations and proactive actions



- ✓ IPPs are encouraged to pay Quotation Fee's **without delay** (when accepting the respective CELs) and do design submission (as part of the self-build process) without delays. Dx Clusters have been capacitated to assist with designs (with support from Head Office CoE).
- ✓ In almost all the cases, IPP applicants select the “**self-build**” process, in order to share development, procurement and construction risks with Eskom.
- ✓ **Dx/Tx Alignment activities** assist to ensure processes are efficiently executed.
- ✓ A number of projects are already in the “post-connection” and operations phase, connected to both the Tx grid and the Dx network.
- ✓ Grid Access Unit has developed a **Stakeholder Engagement Strategy** and is engaging with Dexco, Minerals Council, IPPs, Renewable Energy Industry Associations, SAPVIA, SAWEA, DPE, DMRE/IPPO, EIUG, etc. on a regular basis to align and apprise stakeholders on GAU activities.

THANK YOU

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INDEPENDENT POWER PRODUCERS OFFICE