

# DET-CVPP RFI Vendor Clarification Session

3 Aug-22



The Distribution Energy Trader (DET) was formulated under the DSMO to develop a **commercial trading solution** that supports the South African energy market (**localized, regional and national needs**) that is semi-autonomous aligned with the existing and future regulation and principles.

## Eskom Distribution System Operations: New capability for National energy management

### Distribution System Operator

The Mandate of the Distribution System operator is to securely operate and develop an active distribution system comprising of networks, demand, generation and other flexible distributed energy resources (DER's).

### Distribution Energy Trader

To be a neutral facilitator of an open and accessible market which will enable competitive access to markets for both producers and consumers together with the ISO. To deliver security, reliability and affordability and the optimal use of DER's in support of whole system optimization

## Role of DSO-DET

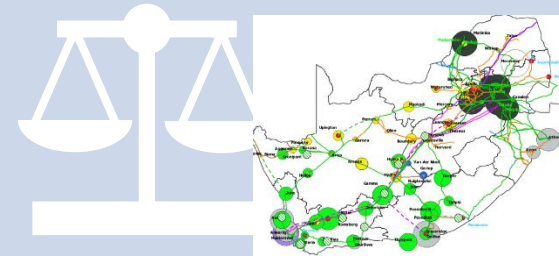
- To provide liquid, efficient and secure power markets to our customers
- To provide accurate information to the whole market, ensuring transparency
- To provide equal access to market for everyone wanting to trade power
- To be the counterparty for all trades; guaranteeing settlement and delivery

# DSO/DET/Network Operator & Retail Services Functions



## DSO

- Balance supply demand for distribution
- Scheduling/ dispatching of DER's
- Voltage & or frequency control



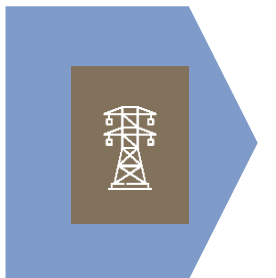
## DET & Retail services

- Energy Trading and arbitrage (Settlements)
- Energy aggregation (virtual power plant)
- Electric vehicle to grid – aggregated storage



## Retail services

- Wholesale & Retail sales
- Revenue management and billing
- Product services -smart home
- Point of sales – electric vehicles

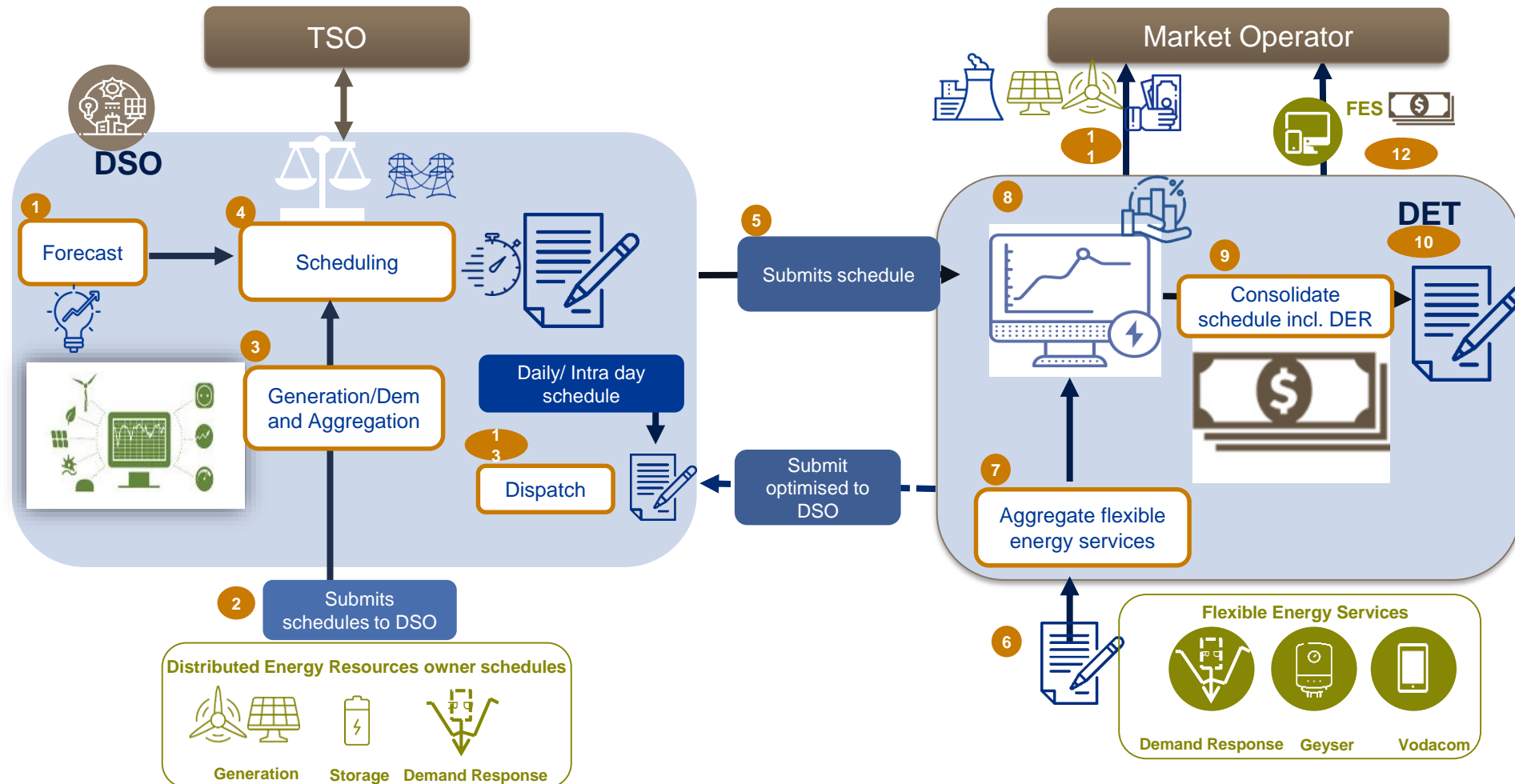


## Network Operator

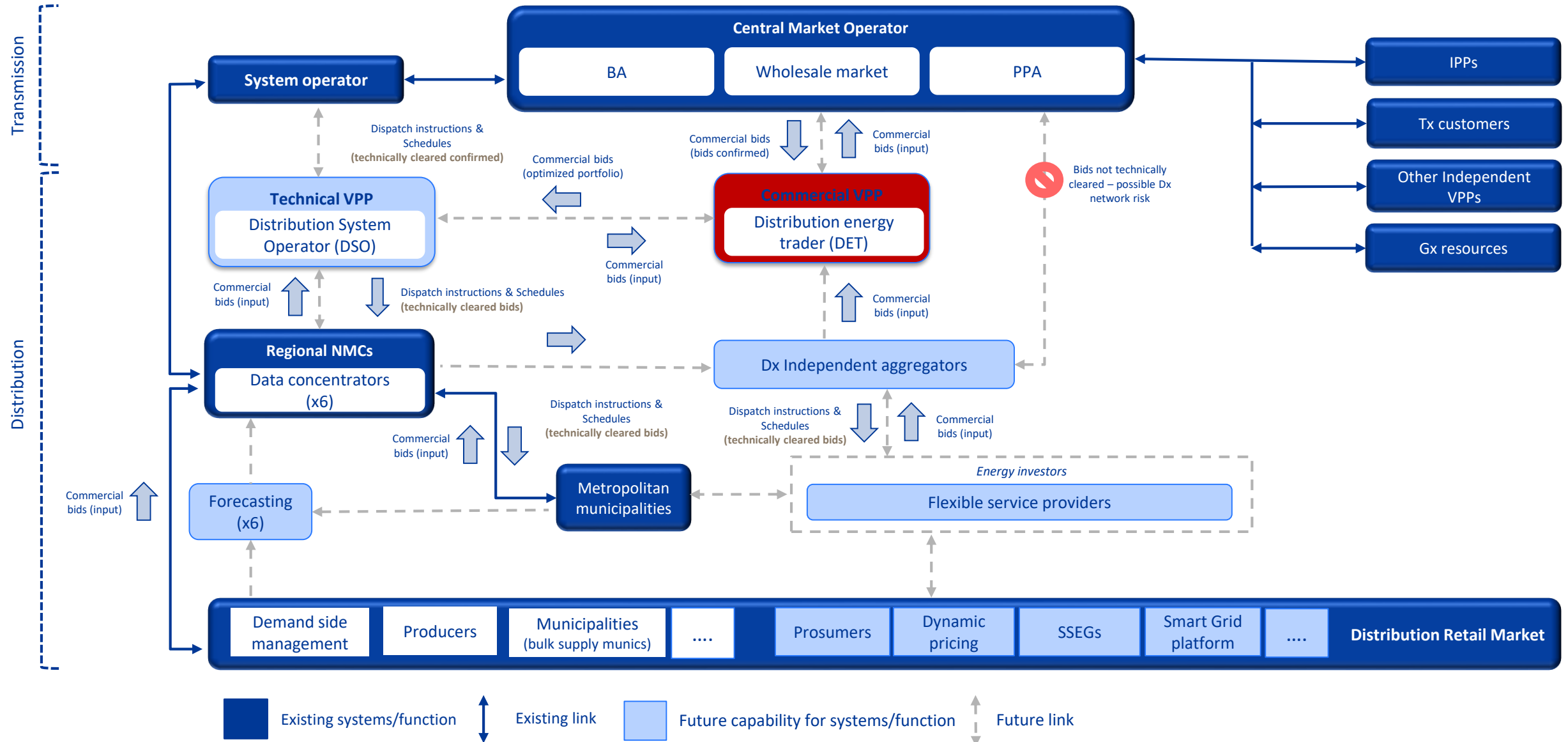
- Operating of the power system safe and reliably
- Maintenance, Refurbishment, Commissioning, faults
- Lpp Curtailment
- Load shedding



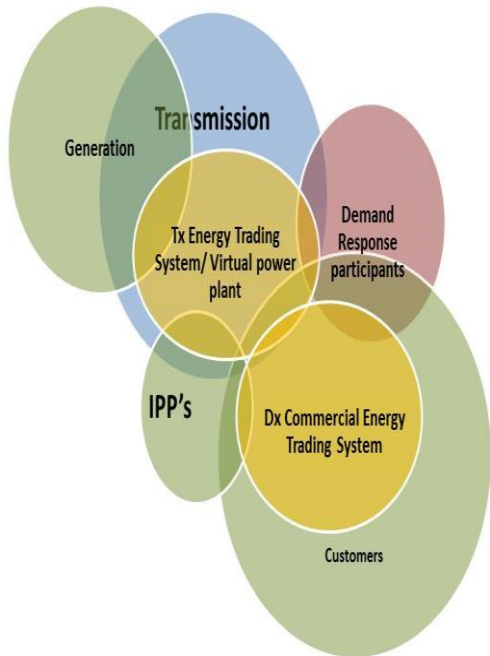
# Example of DSO/DET operation



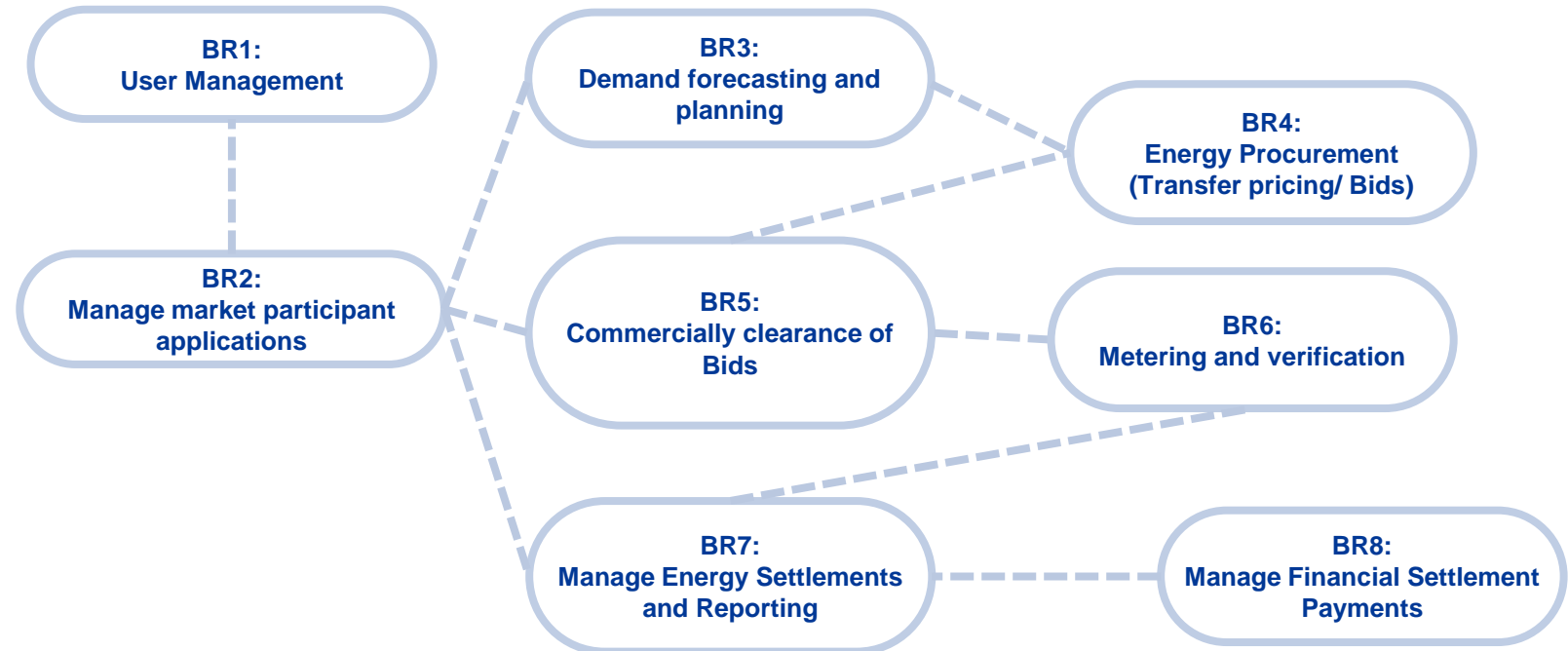
# Framework - Detailed interconnections (Proposed)



Energy players pool in the Dx Commercial Energy Trading System



*Dx Commercial Energy Trader*



## System Administration

- Security - access control (role based)
- Contract and master data management , participant trading accounts , security management
- Workflow automation with customizable user approvals and controls
- Participant communication

## Operations

- Platform must support all energy trading, scheduling, and settlement workflows (both physical & financial)
- Multi-area and multi-commodity capabilities for arbitrage decisions and operations
- Input functionality for “bid” and “ask” (buy & sell) volumes & prices .. cater for hourly “block prices” for the day-ahead (DAM), intra –day (IDM) market and forward trading (weekly, monthly, etc)
- System should have a **match & clear** algorithm/capability and info should be treated confidentially save for authorised personnel participants may see other participants bids (maintain anonymity)
- Bid-to-bill workflows and automation (unit commitment- kW, kWh,etc & economic despatch)
- Bid-to-settlement incl validation of pre-settlement values, quick identification of settlement discrepancies to allow for timeous dispute submission, tracking, and resolution)

# Some of the System capability should include...

## **Risk Management**

- Defined parameters

## **Reporting**

- Business intelligence (dashboards- interactive graphs, trend analysis, etc )and reporting
- Generate a profit and loss for each position, as well as the entire portfolio
- data export and copy/paste functionality with other applications (e.g., Microsoft Excel, etc.)
- Record all data records for auditing
- Automate month-end reconciliation

## **System Interfaces**

- System interface eg SAP , SCADA, banks , etc)

**Thank you.**  
**Questions**

