# EKURHULENI JUST ENERGY/TRANSITION

Hendrick Raedani CoE Alternative & Renewable Energy Division Boksburg Corporate office hendrick.raedani@ekurhuleni.gov.za 073 380 2747





#### 2

### Background

- CoE is a category A Municipality
- One of the country's largest Metros, as well as one of the largest electricity distributors.



- CoE is reliant on Eskom for power requirements with a total of 2500MVA demand (7% contribution to SA demand)
- The city approved an Energy and Climate Change Strategy and one of the objectives is to transition to low carbon operations with a target of 30% renewable/clean energy by 2030



## **Key Drivers of CoE JET**



- Need to contribute towards lowering carbon footprint 30% supply from renewable/cleaner sources by 2030
- 2. Energy security
- **3.** Rising energy cost
- 4. Economic development and job creation

### **CoE JET Green Initiatives**



#### 1. Green initiatives in Council owned properties:

- Retrofitting old inefficient lamps with energy efficient electronic compact florescent lamps
- Installation of occupancy sensors to switch off lights when office spaces are not occupied
- Installation of Solar Water Heating (SWH)
- Installation of solar rooftop



### Continued.....

- 2. Green initiatives on electricity infrastructure:
- Retrofitting of streetlight lamps with energy efficient LED luminaires
- Retrofitting traffic lights with LED fittings
- Installation of Solar home light systems at Informal settlements and solar high masts
- Integration of embedded generation 200MW registered systems
- Wheeling framework
- Biogas generator 1MW
- Appointment of 47 IPPs to procure 683MW of renewable/cleaner energy





Technology	Number of service providers	Total Propos Capacity (MW)
Solar PV	31	298
Waste to Energy	6	139
Landfill Gas	1	5
Gas	7	195
Fine Coal Gasification	1	36
Kinetic Power Production	1	10
Total	47	683

### Challenges



- Land availability in Metropolitan area for utility scale generation projects and loading challenges
- PPA funding waste to electricity projects
- Raising price of LNG affecting gas projects viability
- Balancing act in integration of wheeling IPPs and Munic IPPs
- Need for re-skilling generator integration

### **JET Business Case for Local Government**



#### Recent amendments to the regulatory framework also supports JET at LG

- 1. Development of generation capacity by LG
- Procuring power directly from IPP at discounted rates compared to Eskom Megaflex (R13.9 billion savings)
- Procuring excess power from SSEG at cheaper rates reduction of technical losses
- Injection of renewable energy into the local grid through wheeling leveraging on our greatest asset, the grid, wheeling presents a new revenue stream for the Munics through **DUoS charges**:

Based on Eskom DUoS rates at 4.35% CoE Technical loss DUoS rates (CoE) All Seasons G.2.1 Energy charge (R/kWh) R 0.07,8

#### SSEG + Wheeling = Grid defection – Trade off (Data Centre)

#### 2. Socio economic benefits

- Job creation through development of renewable plants in the local economy (PPA obligation)
- Local content obligation





