

# 68<sup>TH</sup> AMEU CONVENTION 2022

Durban International Convention Centre

2 – 5 October 2022

A JUST ENERGY TRANSITION (“JET”) FOR SOUTH AFRICA

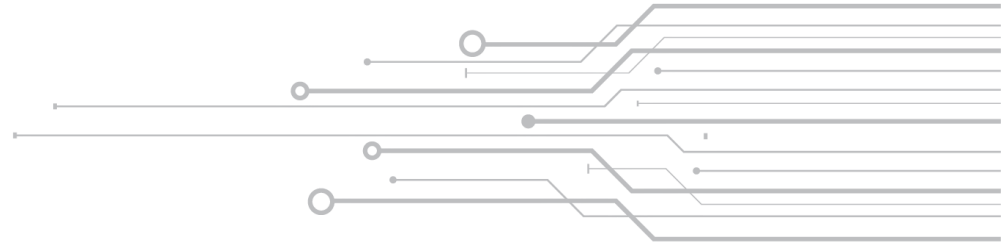
## The Role of South African Distribution Utilities in a Just Transition to Electric Vehicles

Presented by Joel Nana,  
Project Manager  
Sustainable Energy Africa

*Hosted by*



# What is a Just Transition?



- Securing people’s livelihoods when economies are shifting to sustainable production...
- South Africa’s Just Transition plans include **incentivising new green sectors of the economy** such as electric mobility - utilities will play a pivotal role in this.

68TH AMEU CONVENTION 2022

**A JUST ENERGY TRANSITION (“JET”) FOR SOUTH AFRICA**



# The Transition to Electric Vehicles



**10% all new vehicles sold in 2022 are electric.**



**SA's export markets banning ICE vehicles by 2035.**



EV uptake in South Africa is growing rapidly



Municipalities have a significant role to play in ensuring that this transition is **just and supports mass transit plans of our cities**

68TH AMEU CONVENTION 2022

**A JUST ENERGY TRANSITION (“JET”) FOR SOUTH AFRICA**



# The role of utilities in the transition to electric vehicles

- Manage the local distribution grid
- Set appropriate EV charging electricity tariffs;
- Enable non-discriminatory access to the grid for charging electric vehicles

**Ensuring all groups are not unfairly impacted.**

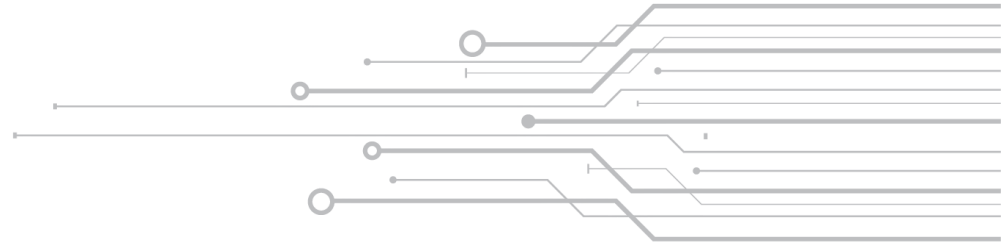
68TH AMEU CONVENTION 2022

**A JUST ENERGY TRANSITION (“JET”) FOR SOUTH AFRICA**





# Grid Management



South Africa's grid is one of the largest mechanisms of **redistributive social protection**.

**Protecting technical integrity** of the grid and financial viability of distributors is **critical** to ensuring low income households continue to receive high-quality affordable electricity.

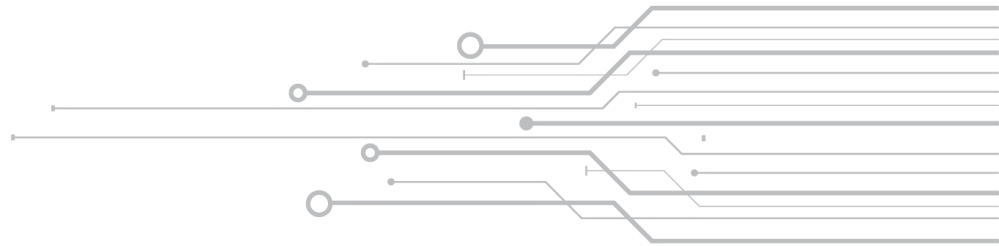
68TH AMEU CONVENTION 2022

**A JUST ENERGY TRANSITION ("JET") FOR SOUTH AFRICA**



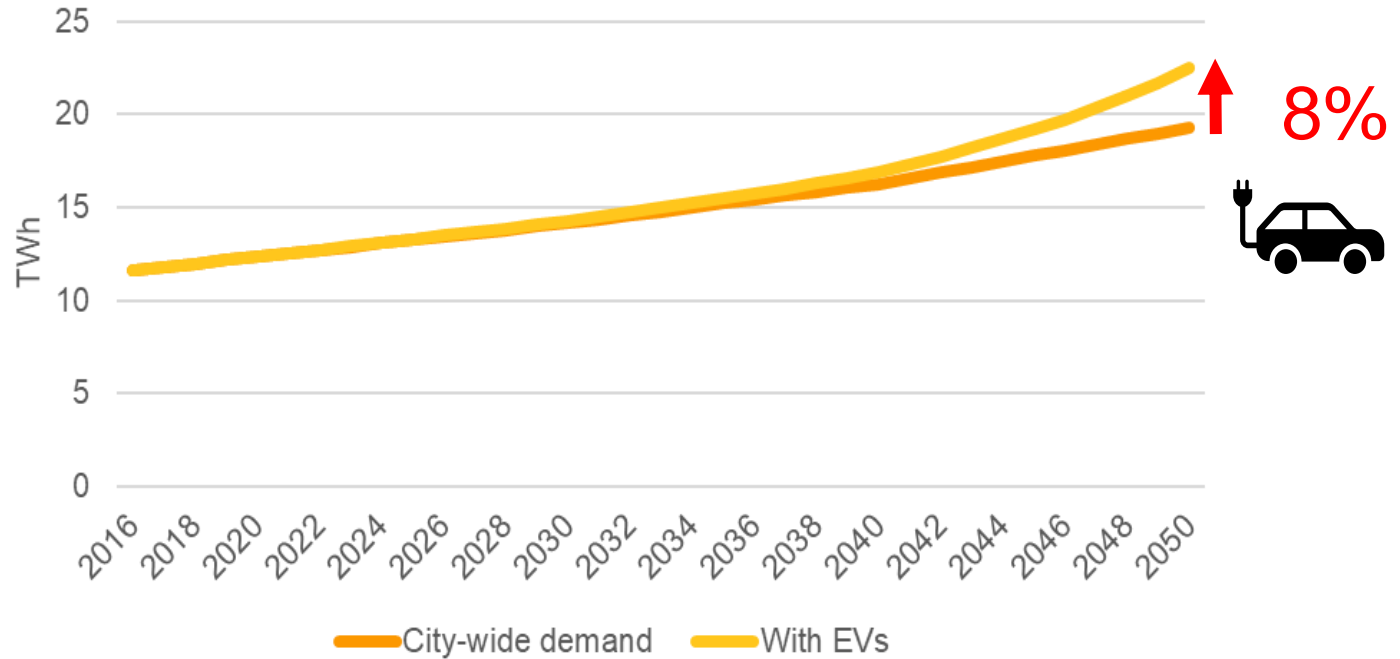


# Grid Management



By 2050, EVs drive a **3 TWh** increase in City Power's electricity consumption.

Are EVs therefore a concern for utilities?



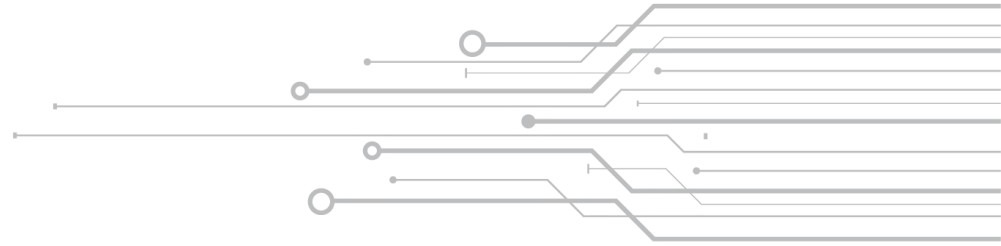
68TH AMEU CONVENTION 2022

## A JUST ENERGY TRANSITION (“JET”) FOR SOUTH AFRICA





# Grid Management



## CHALLENGES

### 1. It is a Where and When issue

**Where**: Electrification of vehicles will increase electricity demand on networks where they charge.

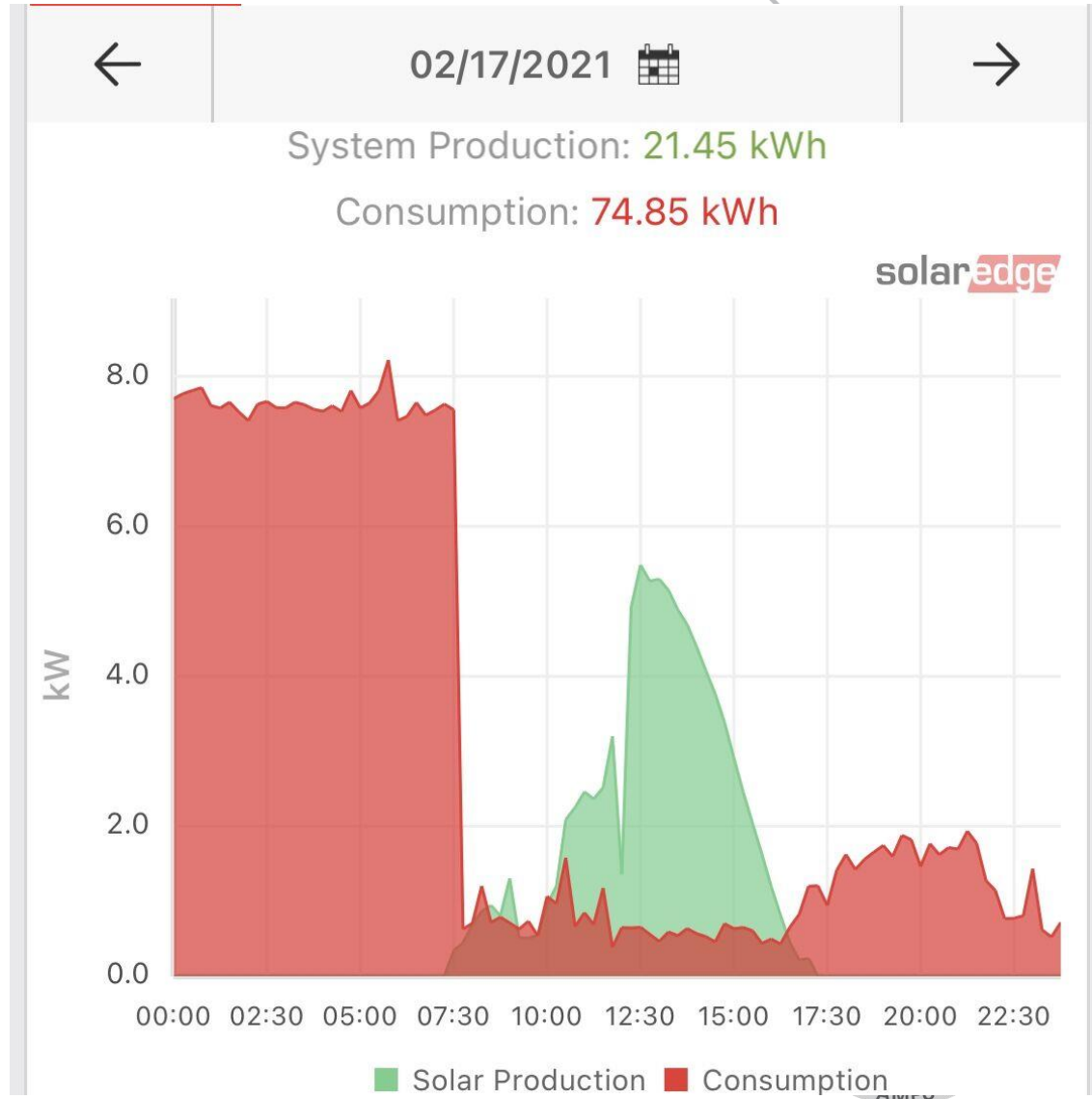


# Grid Management



## CHALLENGES

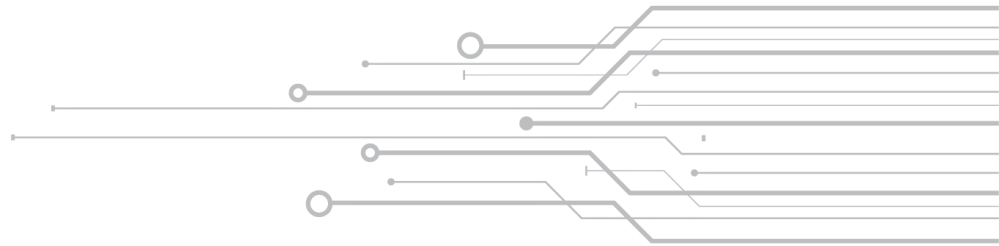
When:



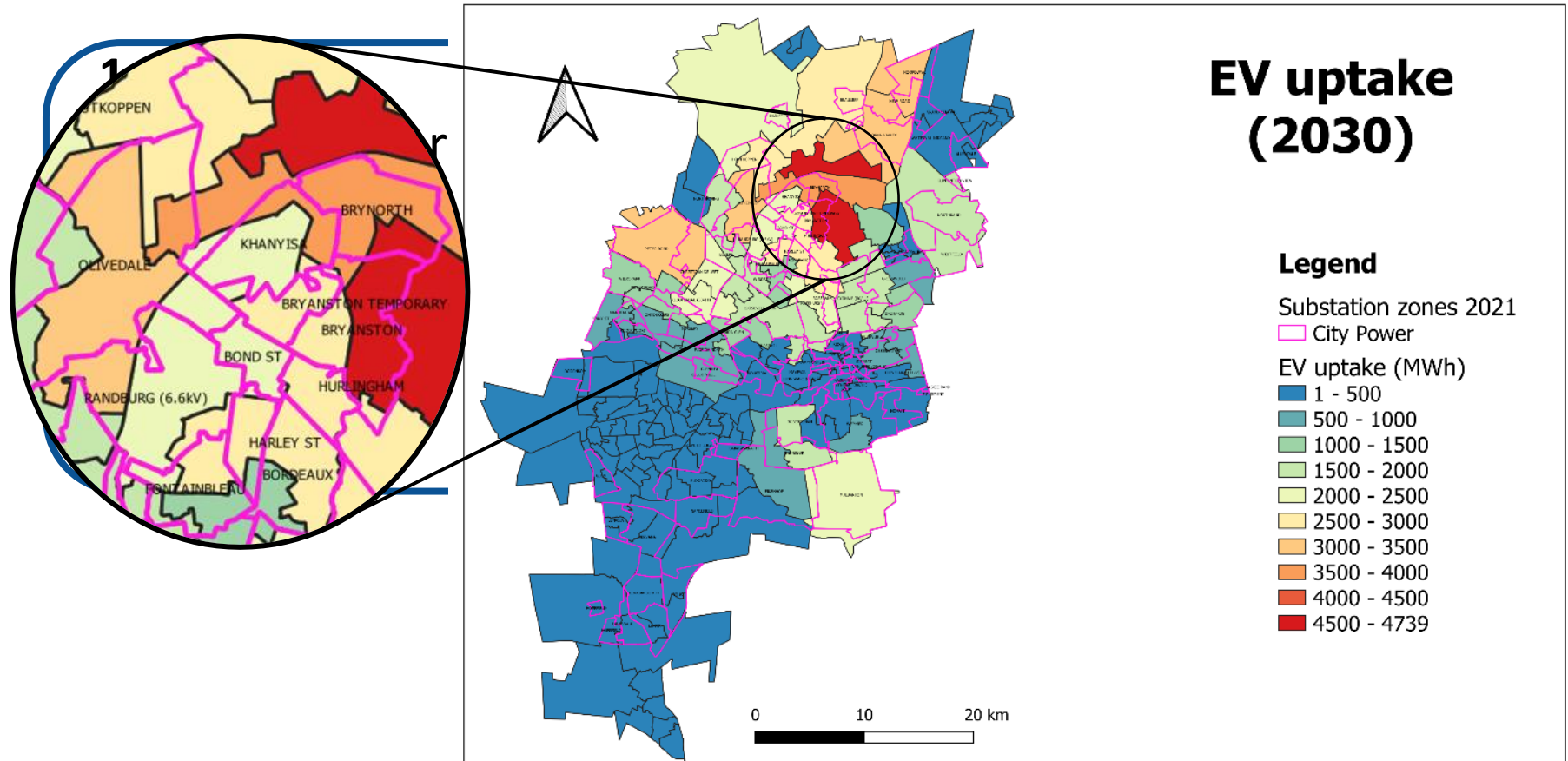




# Grid Management

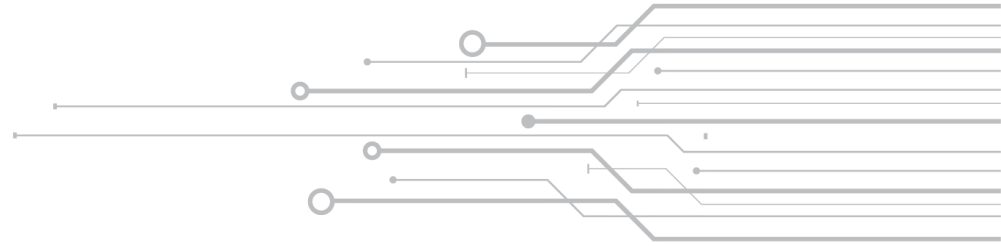


## SOLUTIONS





# Grid Management



## SOLUTIONS

### 2. When

Effective management of EV charging – incentivising charging during off-peak hours (chargers will have this smart functionality built in).

Developing TOU tariffs to encourage off-peak charging

Incentivise public charging by offering reduced tariffs to public charge station owners – offered to customers.



## Access to public chargers



South African utilities have a **mandate to facilitate and coordinate** the development of public infrastructure.

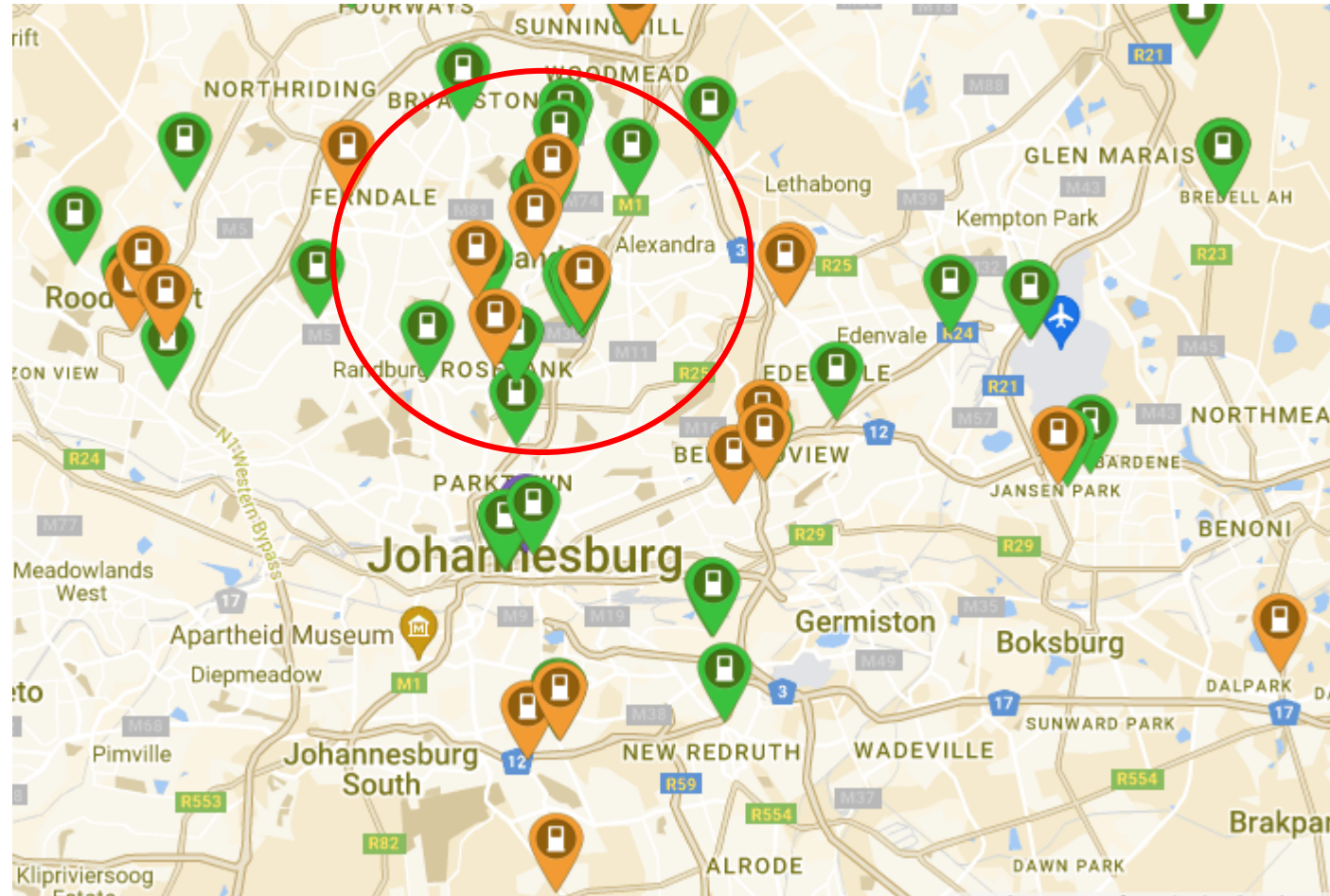
68TH AMEUCONVENTION 2022

**A JUST ENERGY TRANSITION (“JET”) FOR SOUTH AFRICA**





# Access to public chargers





## Access to public chargers



### CHALLENGES

#### **Insufficient public chargers**

Few public chargers, particularly in low income areas.

No chargers available for public and mass transport.

Addition of municipal owned public chargers in high income areas could go against MFMA.



## Access to public chargers



### SOLUTIONS

#### Access to chargers for low income communities

A just transition to electric vehicles will only be realised if there is an effort to provide EV charging facilities **for mass transit** and to those who will face greatest barriers to adoption

# Conclusion

01

## Engage and Learn

- Establish EV working groups
- Engage in municipal/provincial led EV Task Teams

02

## Develop a Just Municipal EV Framework

- Guide the roll out of EV chargers which is a key driver of EV uptake (“range anxiety”)

03

## Develop Smart Charging Architecture

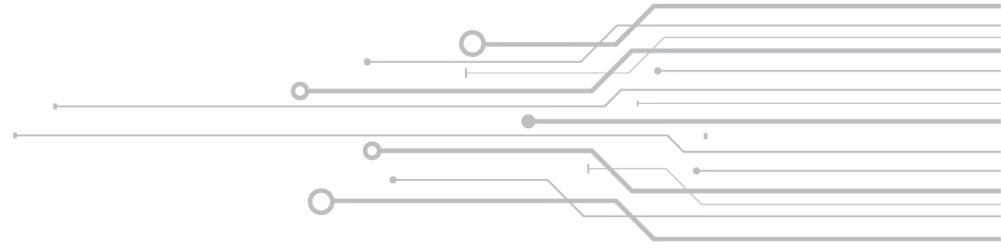
- When and where people charge

68TH AMEUCONVENTION 2022

**A JUST ENERGY TRANSITION (“JET”) FOR SOUTH AFRICA**



# Conclusion



South African distribution utilities have a **clear role** in ensuring a just transition to taking up electric vehicles.

68TH AMEUCONVENTION 2022

**A JUST ENERGY TRANSITION (“JET”) FOR SOUTH AFRICA**







68TH AMEUCONVENTION 2022

**A JUST ENERGY TRANSITION (“JET”) FOR SOUTH AFRICA**

**Thank you**

