
Olectra
(A Group company of meil)
100% Electric
Olectra
meil
400
+ E Buses on roads
Pioneer In Electric Mobility In India
Largest Indian Manufactures & Suppliers of Composite Insulators

Olectra Greentech Limited

Leaders in next generation transportation technology

- Pioneer in identifying and bringing new power and transportation technologies to India
- Crafted strong **Strategic partnership with BYD**, World's largest EV manufacturer
- Part of **MEIL Group**
- Access to entire **BYD Electric Bus product line**.
- Providing complete solution including charging infrastructure and maintenance
- Largest manufacturers of Composite Polymer Insulators in India

Olectra - BYD : 1st to deliver E-buses in India

- ✓ **India's First 9m Type II, 12m Coach Bus** manufactured and tested by Olectra
- ✓ **First ever 7m Electric AC bus** was launched in India by **Olectra** in Delhi
- ✓ **First ever commercially** operated **9m Electric AC bus** was launched in India by Olectra
- ✓ **First ever 12m Electric AC bus** was launched in India by **Olectra** at Hyderabad, Telangana
- ✓ **The largest fleet of 150 Electric buses are operational** by Olectra in Pune
- ✓ Over **400+ electric buses** have been deployed across India by Olectra
- ✓ Homologated **4 Models** and **135 Electric bus variants**

17
Charging Stations (present)

23
Charging Stations (upcoming)

40+ Mn Kms
On Indian Roads

Olectra Product Range

E-Buzz- K6 (7m)

E-Buzz- K7 (9m)

E-Buzz- K9 (12m)

E-Buzz- C9 (12m)

	K6 (7 Meters (Type I))	K7 (9 Meters (Type I & II)	K9 (12 Meters (Type I & II))	C9 (12 Meters (Type III))
Range	Upto 150Km	Upto 200Km	Upto 250Km	Upto 350Km
Charging Time	3 - 4 Hrs	2 - 3 Hrs	4 - 5 Hrs	4 - 5 Hrs
Seating Capacity	25+Driver	35+Driver	48+Driver	45+Driver

Success Story.....

1379
ORDERS UNDER EXECUTION

2015
BYD tie up

6

2016
BEST- 06

25

2017
HRTC- 25

122

2018
BEST- 40
TSRTC - 40
KSRTC-10
Pune-25
TARMAC buses – 2
Export- 5

513

2019
Pune-125
NMC – 6
Nashik-150
SURAT-150
DSCL-30
KTCL-50
Private-2

545

2020
NMC-40
AICTSL-100
BCLL-100
JCTSL-50
UCTSL-50
UTC-30
PMPML-150
SSCL-25

452

2021 (Till Date)
PMPML-350
GSRTC-100
Private-2

Trials & Presence

Agra
Assam
Bangalore
Chandigarh
Delhi
Kolkata
Lucknow
Nainital
Puducherry
Rajkot
Tirupati
Vijayawada

Dehradun
Goa
Hyderabad
Kerala
Manali – Rohtang
Mumbai
Nagpur
Pune
Silvassa
Surat

Trials
Presence

Olectra Fleet in STU's

Olectra Fleet in STU's

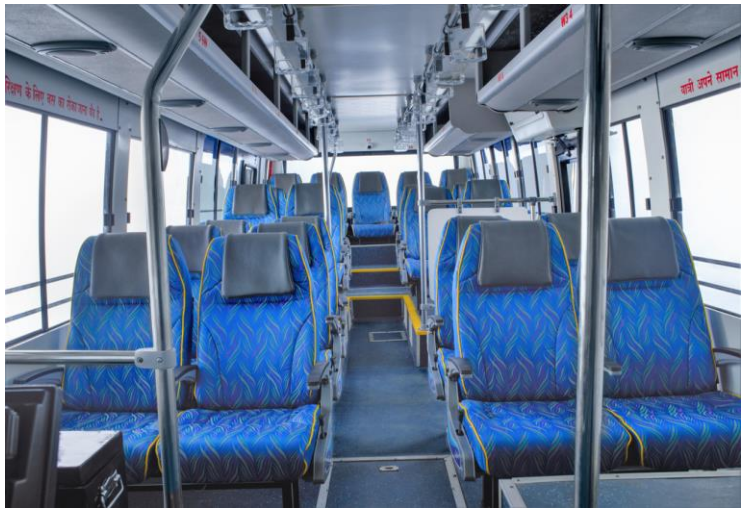
Olectra Fleet in STU's

GSRTC – Ahmedabad

BEST - Mumbai

KTCL – Goa

Olectra Buses Interior



Charger & Charging Infrastructure

Depot & Charging Infrastructure

Depot

Charger and Package Sub-station

Olectra Electric Bus Plant

Olectra Market Share in INDIA

FAME I Electric Bus Tenders	
FAME-I Total Tenders Floated	310 no's
Olectra Order in FAME-I Tender	80 no's
Olectra Market share (%)	**26%**
FAME II Electric Bus Tenders	
FAME-II Total Tenders Floated	2880 no's
Olectra Order in FAME-II Tender	925 no's
Olectra Market share (%)	**32%**
Tenders finalized and under LOA issuance	
Tot. no. of LOAs under issuance	900 no's
Olectra LOAs to be received	435 no's
Olectra Market share (%)	**48%**
NON FAME Electric Bus Tenders	
TIV of Non FAME tenders in India	1087 no's
Olectra volumes	657 no's
Olectra Market share (%)	**60%**

Total

41%

LIVE Tenders and under evaluation 1050 no's

Electric Mobility : Policies & Adaptation worldwide

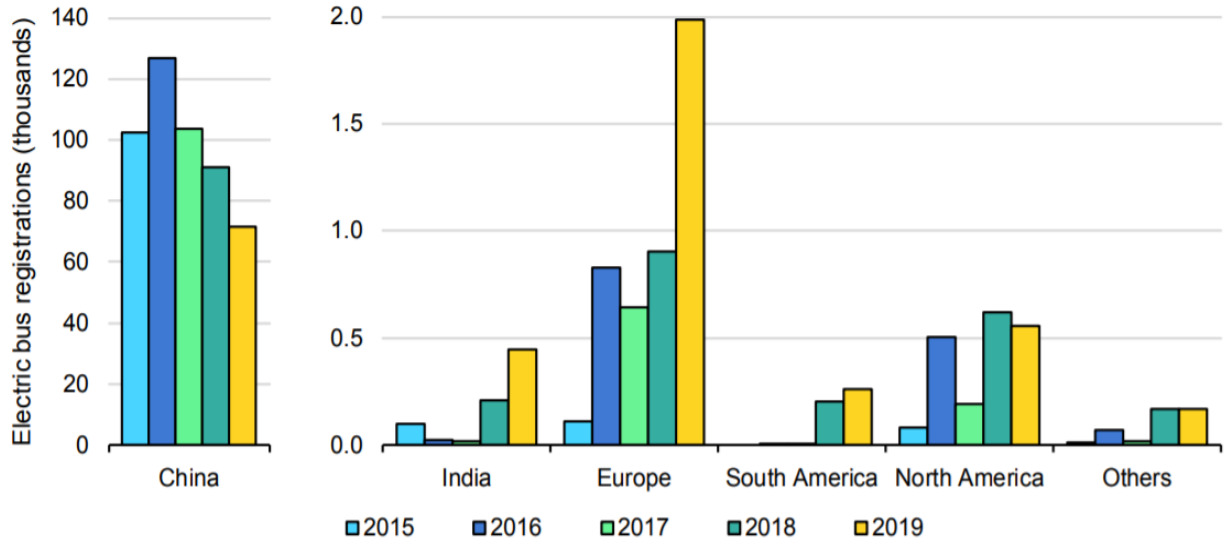
- ✓ To date, **17 countries** have announced 100% zero-emission vehicle by **2050**
- ✓ UN Environment's Electric Mobility Program supports countries in introducing **Electric Mobility**
- ✓ UN Environment is supporting **over 50 countries** and cities to introduce electric buses, cars and two and three wheelers
- ✓ The **Electric Vehicles Initiative (EVI)** is a multi-government policy forum dedicated to accelerating the introduction and adoption of electric vehicles worldwide.

EV TARGETS ANNOUNCED BY CITIES

CITY	TARGET
Amsterdam	Zero-emissions transport within the city by 2025
London	Procure only zero emission buses from 2025
Los Angeles	10% of vehicle stock electric by 2025; 25% electric by 2035
New York City	20% vehicles sold in the city by 2025 to be EVs Municipal vehicle fleet of 2,000 EVs by 2025
Oslo	Zero-emissions transport within the city by 2030
Shenzhen	120,000 new energy vehicles sold by 2020
Tianjin	30,000 new energy vehicles sold by 2020

Source: ICCT (2017), SLOCAT (2018)

New electric bus registrations by country/region, 2015-19



Electric Mobility : Policies (initiatives) in India

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2013

With the objective to support ybrid/electric vehicles market development and Manufacturing eco-system

EV Mission

Government of India launched the National Electric Mobility Mission Plan (NEMMP) 2020 in 2013. It aims to achieve national fuel security by promoting hybrid and electric vehicles in the country. There is an ambitious target to achieve 6-7 million sales of hybrid and electric vehicles year on year from 2020 onwards. Government aims to provide fiscal and monetary incentives to kick start this nascent technology.

2015

FAME I

FAME India Scheme [Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India] for implementation with effect from 1st April 2015.

2019

FAME II

Government has approved Phase-II of FAME Scheme with an outlay of Rs. 10,000 Crore for a period of 3 years commencing from 1st April 2019.

2020

NEMP

It aims to achieve **national** fuel security by promoting hybrid and **electric** vehicles in the country. It has set ambitious target of 6-7 million sales of hybrid and **electric** vehicles year on year from **2020** onwards.

2022

BEYOND

Future plan

Key Highlights of States EV Policy

1 Andhra Pradesh

1,000,000 EVs by 2024

Celebrate "green days" to create awareness among public

100% electrification of buses by 2029 (first phase in four targeted cities to be completed by 2024)

2 Bihar

Electrification of rickshaws a priority

Convert all paddle rickshaws to e-rickshaws by 2022

3 Delhi

Pollution cess on existing diesel cars and sale of new petrol/diesel vehicles

Prioritize 2Ws, 3Ws, buses and cabs

50% e-bus in public transport by 2023

Scrappage and deregistration incentives for high-polluting vehicle categories

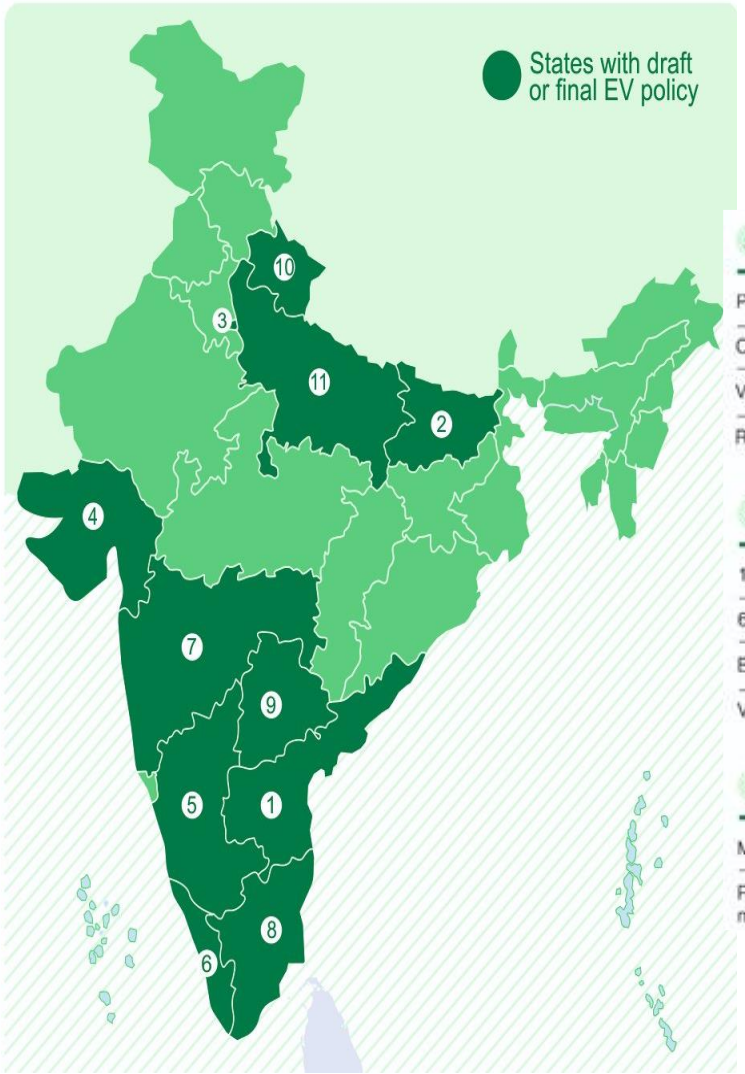
Common mobility card payment system for energy operators and battery-swapping operators

4 Gujarat

Subsidy of INR 12,000 & 48,000 for a battery-operated e2W and e-rickshaw (3W)

Government aims to provide subsidy support to students studying above Class 9 to purchase two-wheelers

Financial assistance of INR 50 lakh to set up charging infrastructure



5 Karnataka

Policies focused on manufacturing and battery storage

Create a secondary market for batteries

Venture capital fund for e-mobility start-ups

Retrofitment for existing 3Ws

6 Kerala

1 million EVs on road by 2022

6,000 e-buses in public transport by 2025

EV component manufacturing a priority

Viability gap funding for e-buses and government fleets

7 Maharashtra

Manufacturing hub for EV and EV components

Package schemes of incentives for MSMEs and large manufacturing units

8 Tamil Nadu

Manufacturing-focused: aims to attract INR 50,000 Cr ($7 billion) of investment in EV manufacturing and create 1.5 lakh new jobs

50% capital subsidy on land if the investment is in southern districts (15% for other regions)

Priority vehicle categories: e-2Ws, e-3Ws, taxis, public transport (e-bus), e-commerce and logistics fleets and institutional vehicles

One-time reskilling allowance for every employee working with EV manufacturing units

Special number plate for EVs

9 Telangana

Priority vehicle categories: shared mobility, public transport, institutional transport vehicles

Retrofitment for passenger vehicles, auto rickshaws, e-rickshaws

10 Uttarakhand

Manufacturing-focused policy

500 e-buses by 2030

11 Uttar Pradesh

Focused on manufacturing of EV, EV components and batteries

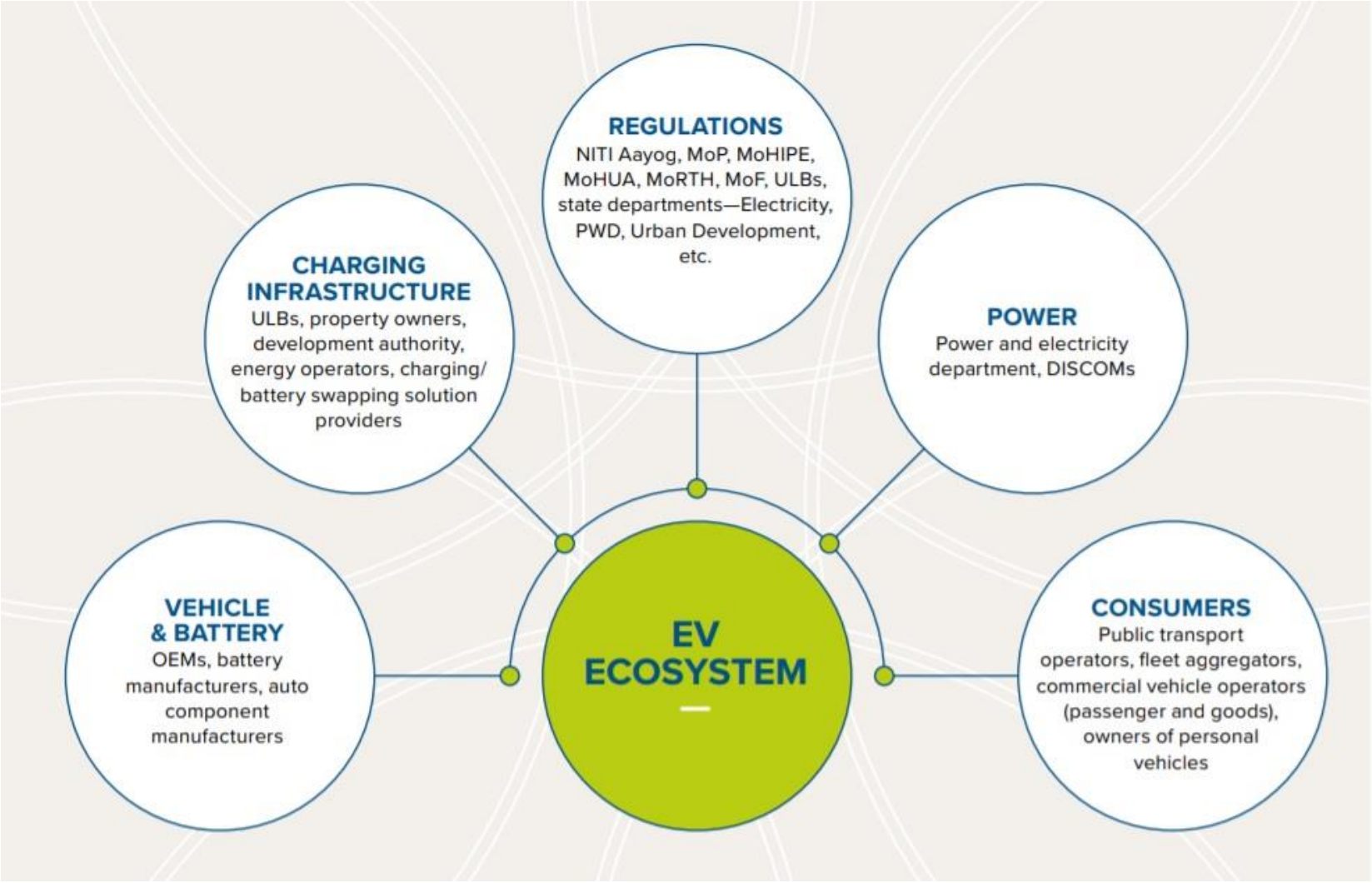
Target 2024: 2 lakh charging (fast, slow and swapping) stations;

Target 2030: 10 lakh EVs on road across all categories and 70% of public transport to be electric

Start-up and innovation programmes

Source: Federation of Automobile Dealers Associations (FADA)

Key stakeholders and components of an EV ecosystem



Source: Electric Mobility Policy Framework, Ministry of Housing and Urban Affairs

Electric Buses Outperform Fossil Fueled Buses

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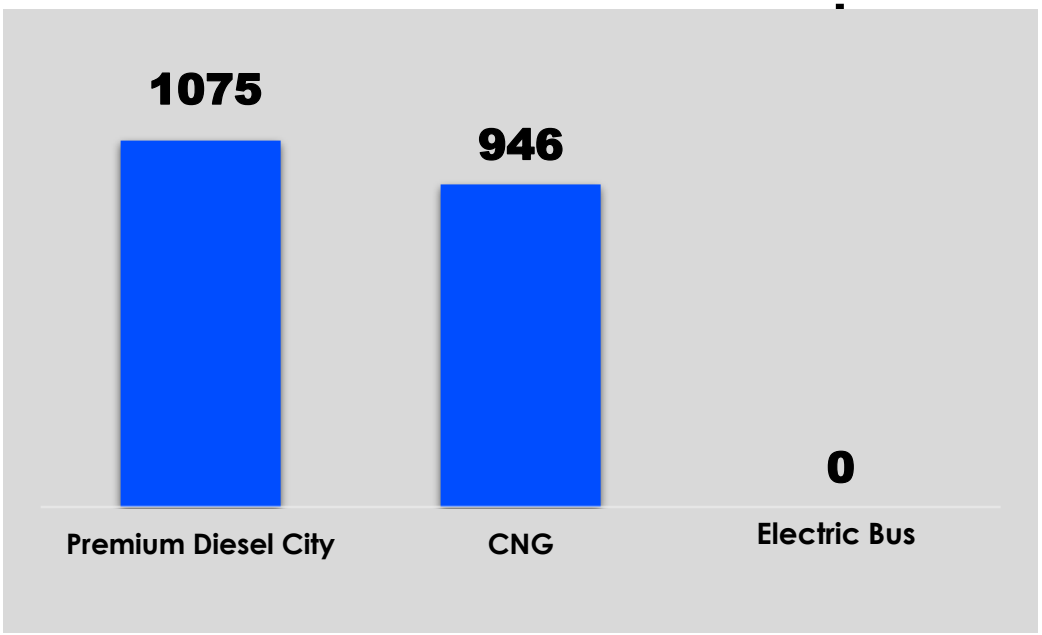
+ ∞%

Clean

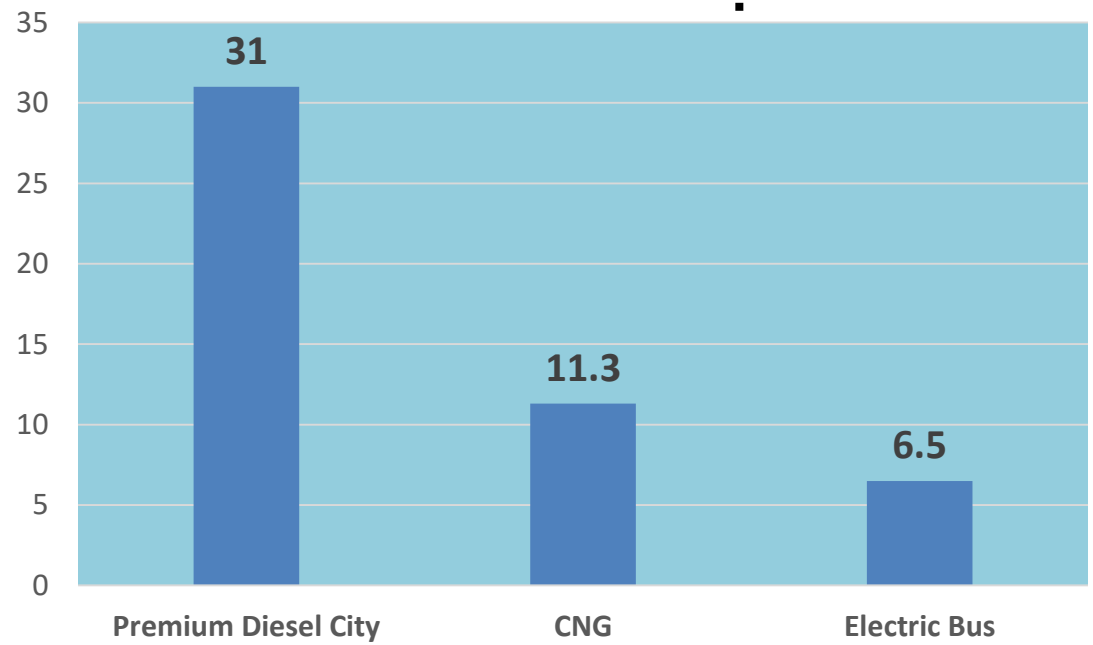
Tailpipe Emissions gCO2/km



+ 5 X

Affordable

Annual Fuel Costs



Source: CSE Study

Diesel Price trend

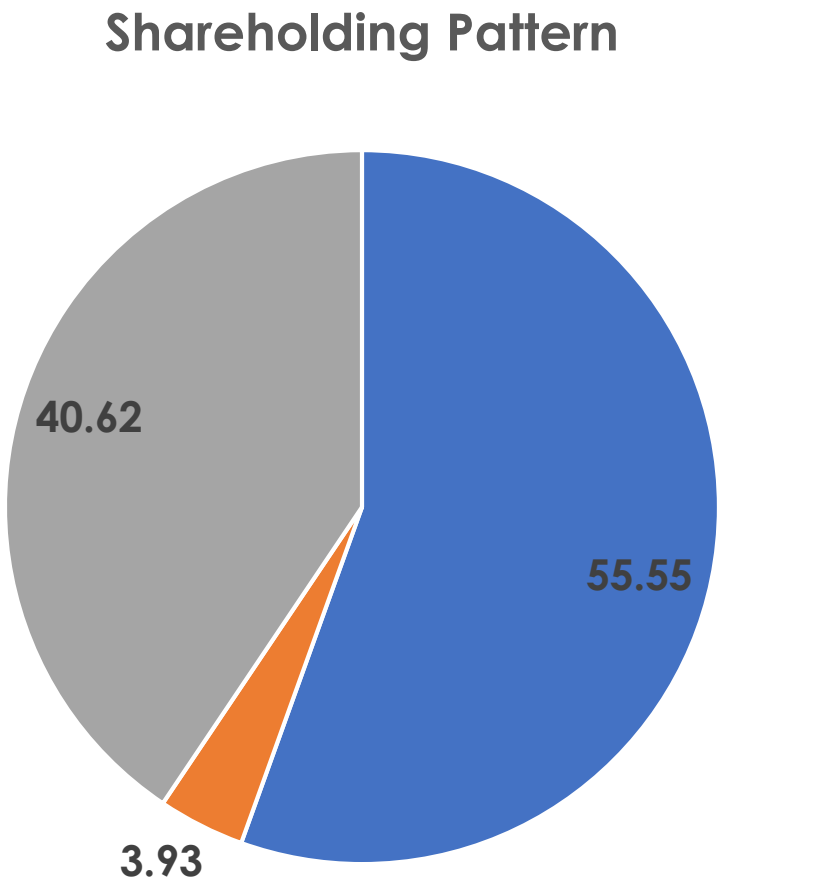
Saving with Olectra electric buses

	Clocked over 40+ Million clean kms
	13+ Million Liters of diesel avoided
	1040+ Millions of fuel cost saved
	1.86+ Millions of trees required to achieve same co2 reduced

Business Model : Gross Cost Contracts (GCC)

- Contract period is usually for 12 years with average daily running of 200km - 300km. The contract can be extendible on the basis of mutual agreement.
- Authority/STU commits and guarantees Minimum Operating Mileage per day and Contract Period
- Bidder finances, owns, operate buses and charge per km rate for guaranteed Operating Mileage, Contract Period.
- Olectra is focusing on manufacturing and supply of buses to bidder. In some cases olectra may participate as consortium member.
- Olectra provides after sales service with an agreed price per km which brings additional revenues YoY.
- This GCC model is also operational for premium diesel buses in India.

Shareholding Pattern



Future Plans

- ✓ Olectra signed an **MoU** committing to an investment of **Rs 3000 Million** and generating employment of **3,500 people**.
- ✓ With Expanded Capacity of **10,000** buses per year
- ✓ Entry into **Inter-city / Inter-state Private Transport Segment**
- ✓ Entry into **Staff Transport** private segment
- ✓ Establishing **TARMAC** buses in Airports
- ✓ Olectra is Localising the components to the maximum in coming 6-8 months time.

Olectra Greentech Limited - Insulators

- ✓ **Largest Indian Manufacturer & Suppliers Of Composite Insulators**.
- ✓ An **ISO-9001:2015** and **ISO -14001:2015** certified company.
- ✓ Department of Scientific and Industrial Research, **R & D Centre** recognized by Govt. of India.
- ✓ Product Range : **11kV to 1200kV**, **±800kV HVDC** & Mechanical Strength up to **525kN.**
- ✓ OGL through its R&D efforts have developed **High Performance silicon rubber Polymer** Insulators for application in Distribution and Transmission System. The **Silicone Rubber Polymer Insulators** Confirms IEC: 61109 and have been tested at **CPRI, Hyderabad & Bangalore, ERDA**. Also completed 5000Hrs Multi Stress ageing test in CESI, Italy.
- ✓ Completed more than **5 million installations** across the globe

Product Range

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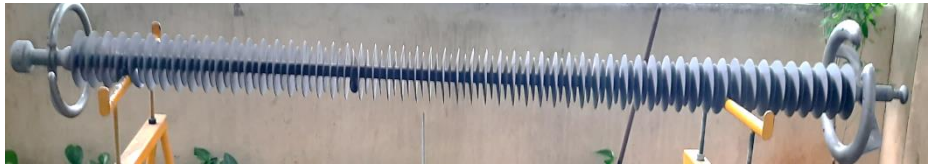
800kV-
420kN

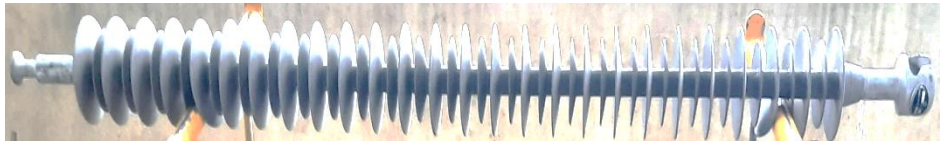
765kV-
210kN



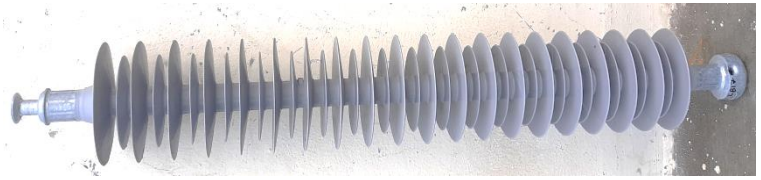
400kV-
160kN

220kV-
120kN

132kV-
120kN

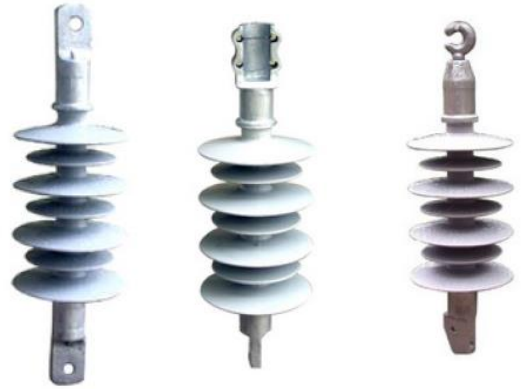


66kV-
90kN



33kV-
70kN

Post Insulators



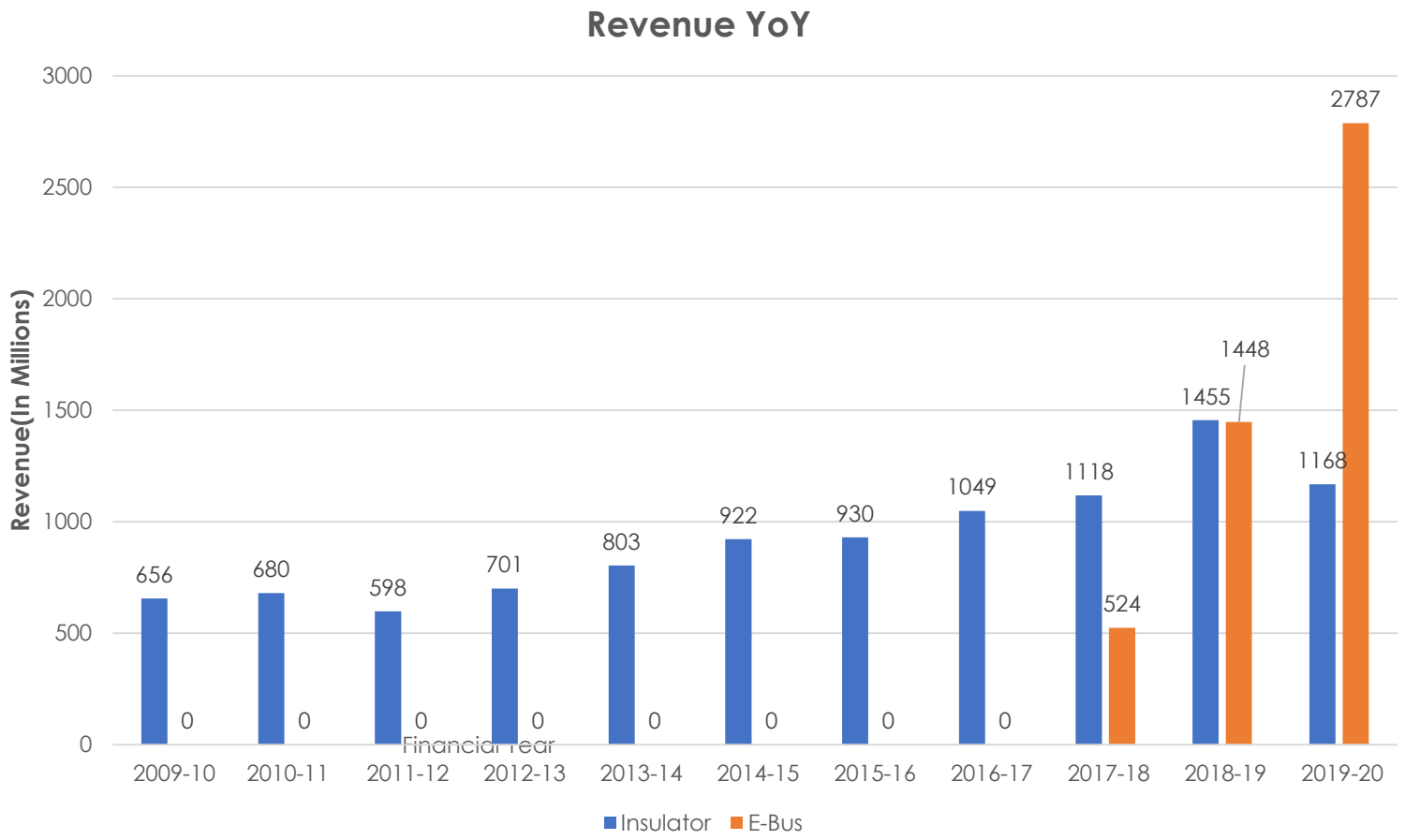
Railway Insulators

Distribution Insulators

Development Achievements

- ✓ Composite 25kV Railway Insulators - 2002
- ✓ Composite 66kV Insulators - 2004
- ✓ Composite 132/220kV Insulators - 2006
- ✓ Composite 400kV Insulator - 2008
- ✓ Composite 765kV Insulator - 2011
- ✓ Composite 800kV Insulators - 2014
- ✓ 66kV Composite Post Insulators - 2016
- ✓ 132kV to 400kV Composite Post Insulators - 2018
- ✓ Online Condition monitoring technique for Composite insulator - 2018
- ✓ New Compound development for Market competitive ness in 2020
- ✓ 765KV and 400 KV – New Designs developed in 2020 for Market competitiveness

Revenue Growth : Insulators & E-Bus



"Growth of **5.3X** in 4 years for **E-Bus** Division"

"Growth of **1.8X** in 11 years for **Insulators** Division"

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THANK YOU