

Date: August 04, 2022.

#### **Registered Office**

A-2, 12th Floor Palladium, Opposite Vodafone House, Corporate Road, Prahalad Nagar, Ahmedabad – 380015 +91 79 40068235

CIN.: L74210GJ2012PLC129176

To,
General Manager
Listing Department **BSE Limited**PJ Towers, 25<sup>th</sup> Floor,
Dalal Street, Mumbai – 400 001.

Company Scrip Code: 542851

Dear Sir/Madam,

# Sub.: Presentation for Analyst/ Institutional Investor meeting under SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015

In furtherance to our Intimation Letter regarding the Schedule of Analyst/ Institutional Investor meeting dated August 03, 2022, please find enclosed the Presentation which would be made at the meeting.

The details of the said meeting and presentation is also made available on Company's Website at <a href="http://gensol.in/investors/investor-meet">www.gensol.in</a> at <a href="http://gensol.in/investors/investor-meet">http://gensol.in/investors/investor-meet</a>.

Thanking You, Yours Faithfully,

For, Gensol Engineering Limited

Anmol Singh Jaggi

Managing Director

DIN: 01293305





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# SE GENSOL

#### **About Gensol**

Gensol is world's leading solar solution provider and India's largest renewable energy engineering business group.

- Gensol was incorporated in 2012, & since then driven by experienced team of Management and Engineers.
- **Provides Integrated Engineering** Procurement and Commissioning Services across Solar Value Chain in India.
- Demonstrating strong financial performance with Elite Clientele - Astral, SRF, Shree cement, ReNew Power, Adani Group, Greenko, Tata Power, BPCL, Soft Bank Energy, Shapoorji, SBI, Edelweiss, etc.

Market Overview



33,693+ MW Technical Expertise

200+ **Employees** 

150+ Clients

#### **Introduction to Management**



#### **Promoters**



**Anmol Singh Jaggi, Chairman & Managing Director** 

- Building India's largest & most responsible B2C electric mobility business at BluSmart Electric Mobility
- Leading a team of 800 technocrats in the Renewable Energy services domain at Gensol Engineering Ltd.

Market Overview

Business World Young Entrepreneur Award - 2010



**Puneet Singh Jaggi, Whole Time Director** 

- First Generation Entrepreneur & Clean Energy Enthusiast
- Have been an advisor to 30 GW of Renewable Energy Projects, Digitized 10 GW and operate 3 GW of Renewable Energy Projects.
- Connected 300+ Renewable Energy Plants and 1000+ engineers processing a billion signals daily.

#### **Key Management**



Pranay Mundra, **President** 



Ali Imran Naqvi, **Chief Operating Officer** 



Rajesh Parmar, **CS & Compliance Officer** 



Jabir Mehendi Aga, **Chief Financial Officer** 

# Services offered by Gensol

**Engineering** and EPC



**Solar EPC Services** 

350 MW

Market Overview

- Ground Based Projects
- Rooftops
- Superstructures
- Transmission Line
- Project Management

**EV Leasing Business** 

- Electric Car Leasing to Mobility platform
- EV cargo leasing for delivery
- Generating Margin of ~15%
- Net Cash flows of ~Rs. 70 Cr is expected in next three years.
- Depreciation on leased cars to result in **Rs. 100 Cr Tax savings** in next three years.

**Gensol EV** Manufacturing

- Products offered Car (Passenger Vehicle/Fleet) and Cargo
- Car Personal mobility vehicle with claimed range of 200 Kms
- Cargo Urban cargo vehicle for last mile connectivity

# 1. Engineering and EPC

Market Overview





#### **Solar EPC Credentials**

Market Overview







40 MW Golden Hatcheries, Karnataka

- → Golden Hatcheries
- → Shree Cement
- → Central Electronics Limited
- → Smritivan Society, GSDMA

**197** M₩



#### **Roof Mounted**



4.7 MW across 60 roofs, Rattan India, MP

→ 9 MW, Astral Pipes

- → 3 MW, Knack Packaging
- → 3.5 Arisudana Industries
- → 1 MW, Hero
- → 1 MW. Samsonite

**≠ 150** MW



#### Superstructure



2 MW Two Rivers Mall -Carport Solar, Kenya

- → Medanta Hospital, Delhi
- → Two Rivers Mall Carport, Kenya
- → Mundra Solar Pvt. Ltd.
- → Shankus Waterpark & Resort

**43** MW

















# 2. Leasing Business





**EV** Cars to reputed ride hailing company, earns lease rental income on it.

Market Overview

700+

Cars as on Jun'22

3000+

Cars on lease expected by FY23

**INR 267** cr

Loan Sanctioned by **IREDA** 

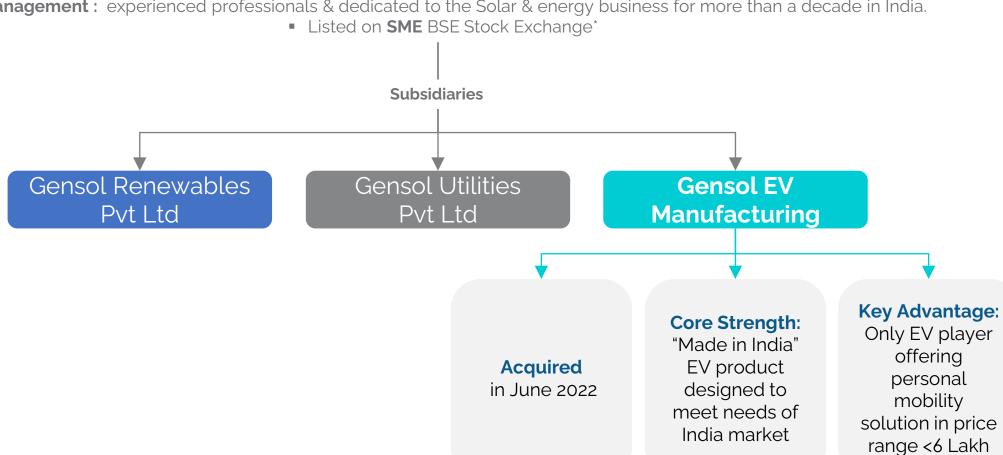
# **Group Structure**



### Gensol Engineering Limited Holding Company

#### **Holding company**

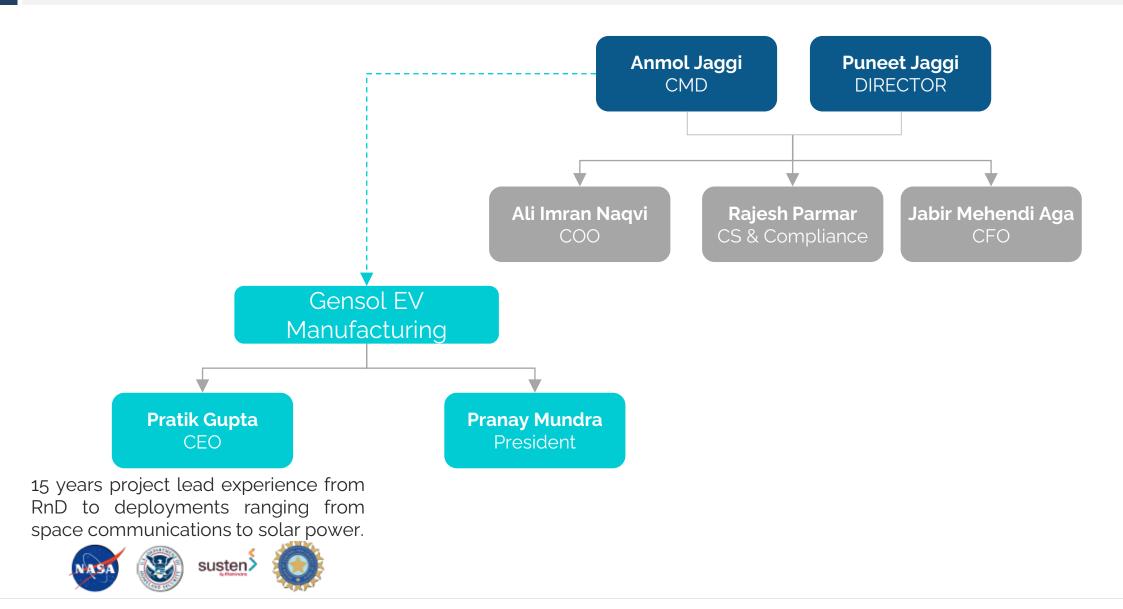
• Management: experienced professionals & dedicated to the Solar & energy business for more than a decade in India.



#### **Corporate Structure**

Market Overview





# SE GENSOL

### Gensol EV Manufacturing, at a glance

Market Overview

# Gensol is involved in manufacturing of 3- wheeler Personal & Cargo mobility EVs.



- Offers urban mobility solutions.
- Car (Passenger Vehicle/Fleet): A fully airconditioned, two-seater reverse trike with a compact design, premium interiors and a high-torque electric drive-train.
- Cargo: Urban cargo vehicle for last mile connectivity with an expected capacity of 800 KGs.

Precision engineering and state-of-the art technology to redefine urban personal mobility

**Head Office Ahmedabad**  **Production Unit** Pune

Planned manufacturing Capacity 1200 units per month





# **Market Overview**

Marketing without market research is like driving with your eyes closed – Dan Zarrella













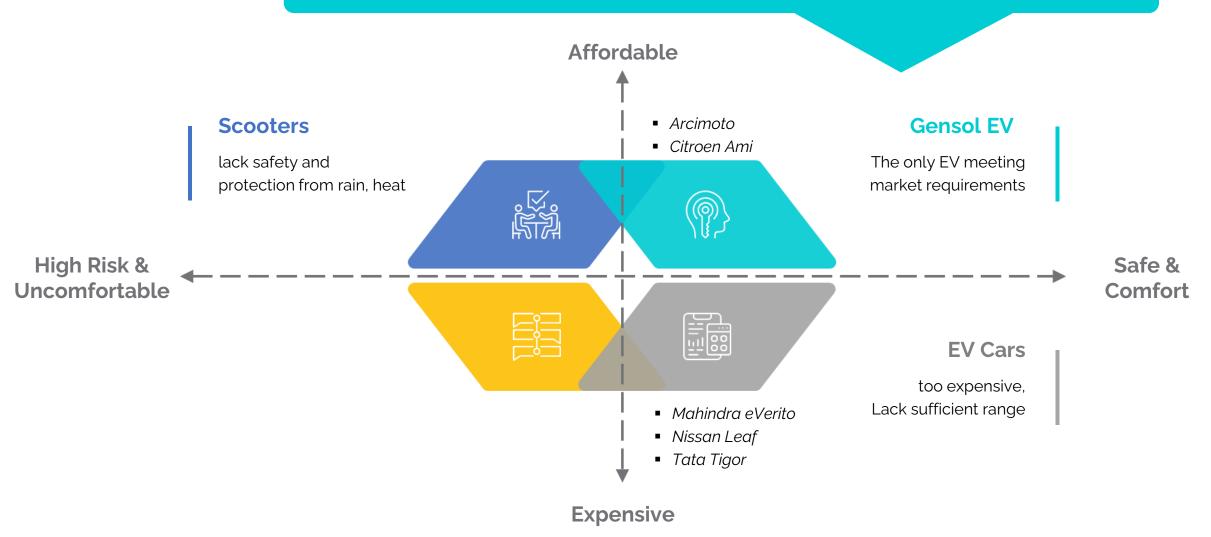




### No EV option available for Indian Middle Class



# EV hatchbacks in the <6 lakhs range is a white space

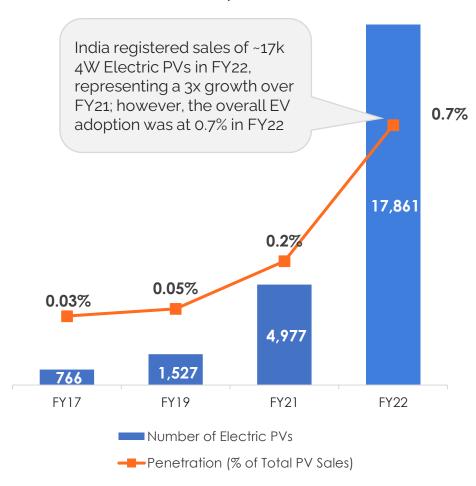


# EV Market (both Passenger & Cargo EV) has penetration of ~1% in India



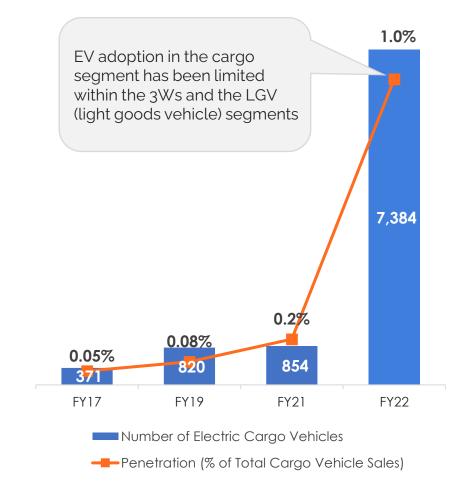
#### **4W Passenger EV Market in India**

Units, % of total sales, FY17-22



#### **Light Cargo EV Market in India**

Units, % of total sales, FY17-22



# SE GENSOL

#### **Growth Drivers for EV market in India**

# Favourable TCO

Introduction to Company



- EVs TCO lower than their ICE counterparts for the sub-10L market segment
- As the daily run increases, EVs have become favourable
- Running cost per km are 15-18x lower in EVs compared to ICF vehicles

#### Government Policy Push



- Demand side incentives under FAME II policy and state EV policies
- Supply side incentives through PLI ACC, PLI Auto schemes and state EV policies

# Charging Infrastructure Growth



- Growth in public charging stations as OEMs take lead
- Concerns
   regarding low
   utilisation of
   charging stations to
   fade away with
   increase in EV
   sales

#### Battery Manufacturing Advancements



- Production linked Incentives (PLI) in the Advanced Chemical Cell (ACC) battery storage to drive investments in EV batteries
- It aims at localisation of battery technologies, thus leading to lowering battery costs

#### EV – Priority Sector Lending

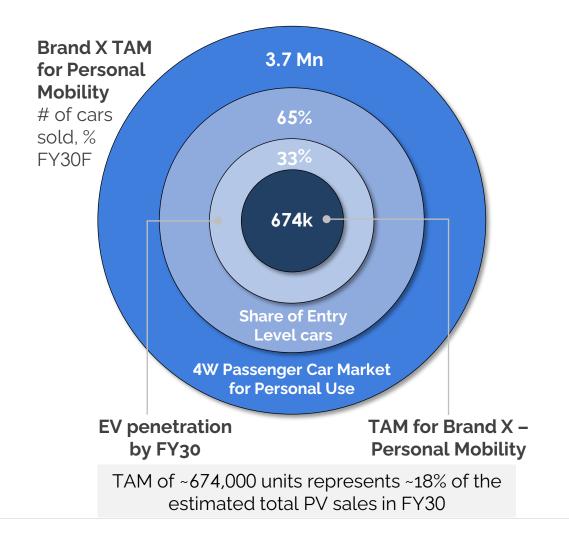


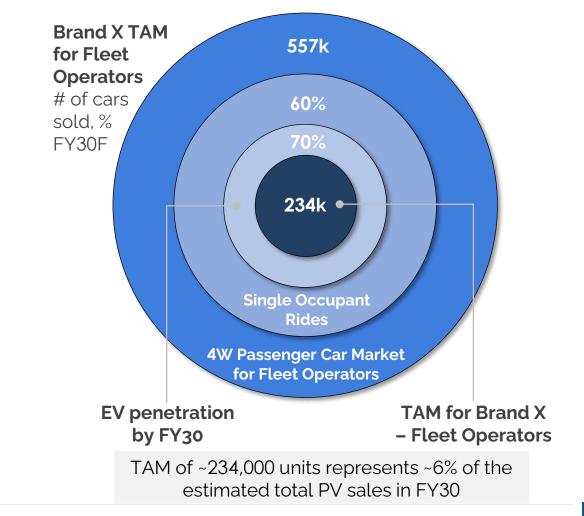
 A policy to include retail lending for EV purchase as priority sector lending for banks is proposed

# **Market Opportunity for Brand X**



We estimate the TAM for Brand X to be ~900k units per annum, by FY30 across personal mobility (~670k units) and fleet operator (~230k units) segments





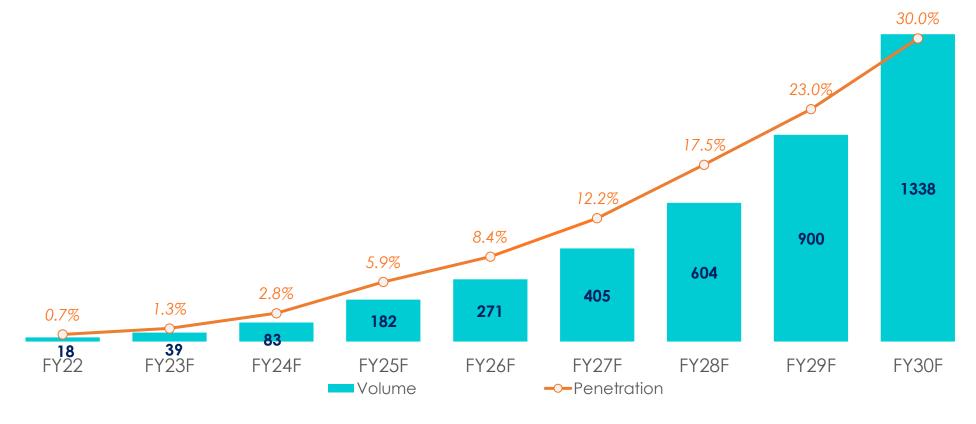
# 4W PV (EV) market estimated growth by 2030



With a ~30% penetration, Total 4W PV (EV) sales in India are estimated to be ~1.3 Mn cars per year by FY30.

#### **Total Passenger EV Sales**

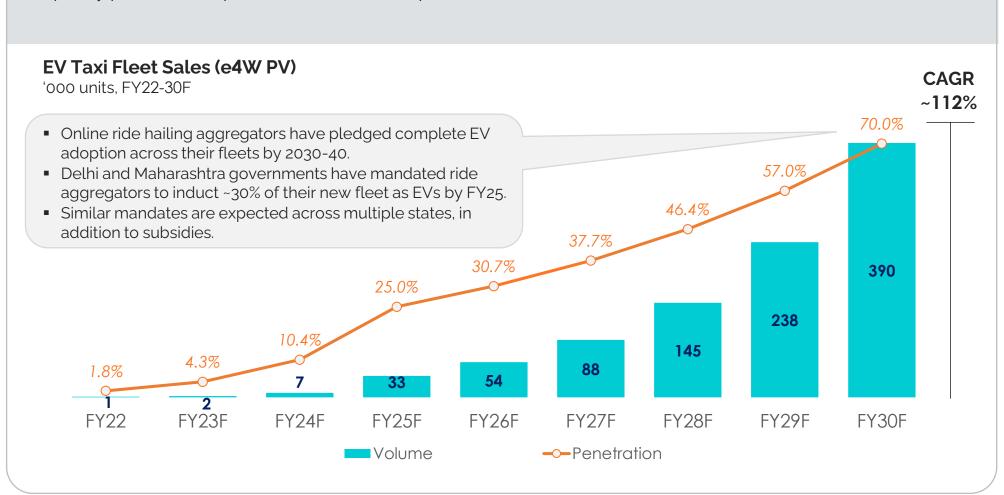
'000 units, % of Total Sales, FY22-30F



# **Estimated EV adoption by Fleet Operators**



EV Adoption by fleet operators is estimated to reach 50-70% by FY30 on the back of reducing TCOs, policy push and corporate carbon-neutral plans.



# Penetration transition: Mass adoption is expected from FY26



#### 4W EV penetration trend in India

%, FY17-30F

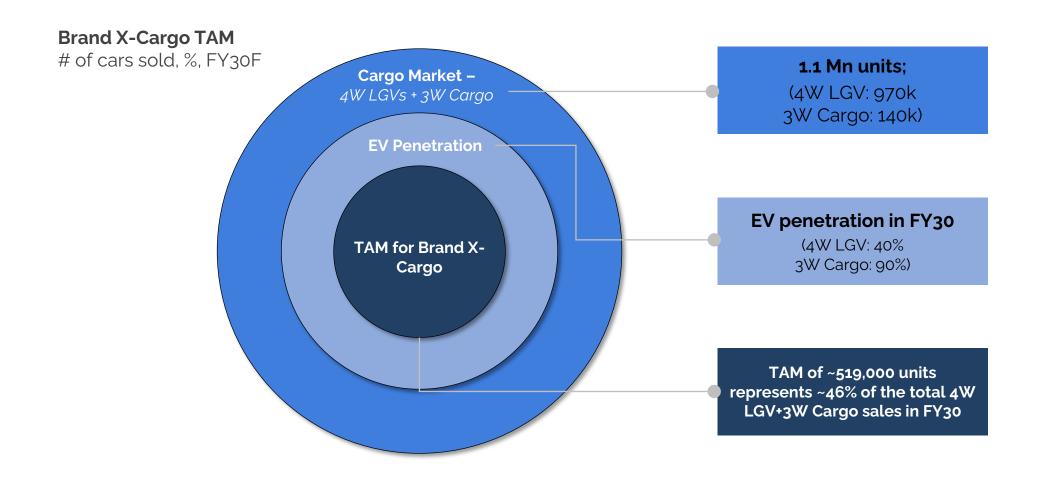


Factor	Innovation	Early Adoption	Early Majority	Mass adoption
тсо	TCO much lower for ICE vehicles		EVs have lower TCO for personal use due to lower battery prices and government subsidies	EV TCOs continue to decrease, driven by lower insurance, maintenance cost and domestic manufacturing of packs/ cells.
Supply Factors	Dependent upon select few models	Launch of SUVs by limited players	Launch of long range SUVs with larger battery sizes by many players	Launch of hatchbacks and sedans below the 10L price point
Charging Infra	Undeveloped	Players entry into charging space	Proliferation of highway and city charging points	Development of charging points in homes and offices
Customer Perception	Social status vehicle		A viable economic alternative to ICE vehicles for daily use	Mass adoption as a primary vehicle, including inter city travels

#### **Market Opportunity for Brand X Cargo**

**Market Overview** 

We estimate the TAM for Brand X-Cargo to be ~519k units per annum, by FY30 across 3W Cargo (~388k units) and 4W LGV (~131k units) segments



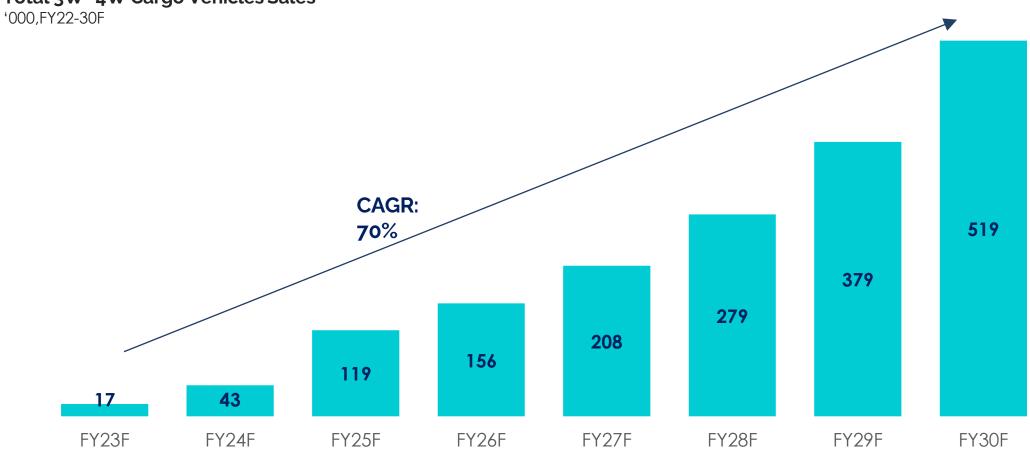
# Introduction to Company

# TAM for Brand X Cargo (3W Cargo and 4W Light Goods Vehicle(LGV) by FY 30



TAM of ~5,19,000 units represents ~46% of the total cargo sales in FY30









# **Our Solution**

The intelligent, smart, cute and quirky little electric car the 9 year old in you will love.

















#### **Our Product**



GEL is a holistic renewable energy solution provider entering the EV market with a 3-wheeler personal mobility and cargo electric vehicle

#### **Products offered**



- Price INR 5-6 lacs
- Range 100-200 Kms

Market Overview

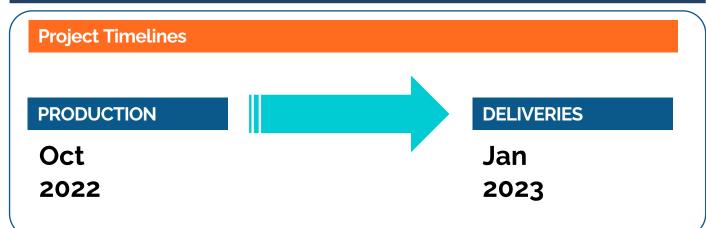
- Speed 80 Kmph
- Charging Time 3 hrs.

#### **Brand X**

#### **Personal Mobility Vehicle**

- Remote access and Geo-fencing
- 4G cloud connectivity
- Air conditioned/heated cabin
- Al-Powered insights and over the air updates

# **Project Particulars**





- Price INR 5-6 lacs
- Range 100-200 Kms
- Payload 800 Kgs
- Charging Time 3 Hrs.

#### **Brand X Cargo**

#### **Urban Cargo Vehicle**

- Low ingress height
- Swappable batteries
- Modular interior design
- Customization for Indian road conditions



#### **Product Features and End Use Cases**



Gensol offers a personal mobility vehicle, targeting customers planning to shift to or add an EV to their current fleet, and a cargo variant for last mile delivery.

#### **Key Product Features**



#### **Brand X**

#### **Personal Mobility Vehicle**

- Remote access and Geo-fencing
- 4G cloud connectivity
- Air conditioned/heated cabin
- Al-Powered insights and over the air updates

# **Use Case and Target Customers**

Use Case: Personal mobility primarily in Tier 1 cities

#### B<sub>2</sub>C

- New or Used Car buyers
- Young Family
- University student
- Working Professional/Small business owner
- Additional Car

#### B<sub>2</sub>B

Fleet operators







Corporates with large campuses









#### **Brand X Cargo**

#### **Urban Cargo Vehicle**

- Low ingress height
- Swappable batteries
- Modular interior design
- Customization for Indian road conditions

Use Case: B2B last mile connectivity and iner-city/ hyper local deliveries

Last Mile Firms / Courier & Delivery Companies



















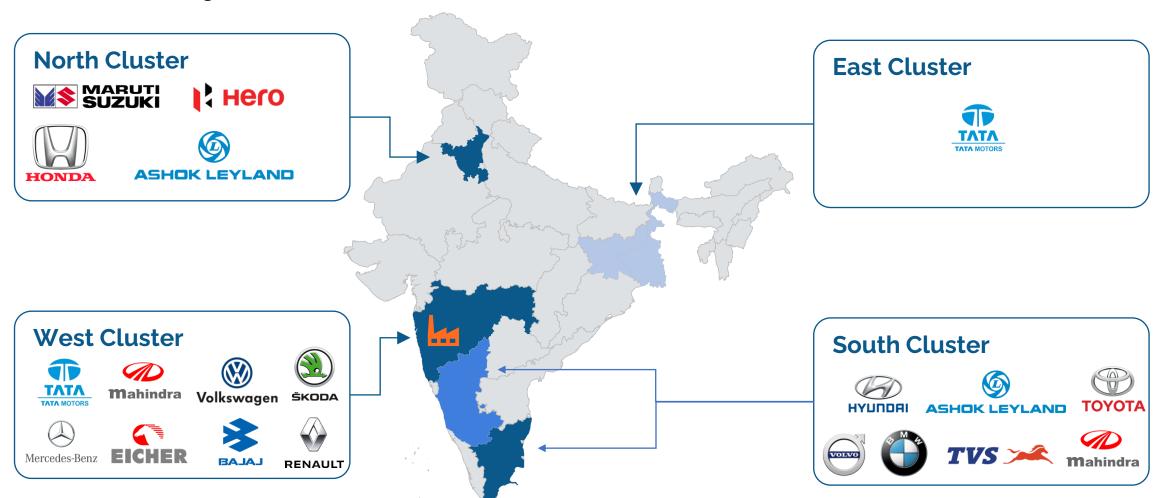
Introduction to Company Market Overview **Our Solution** Competitive Benchmarking

# **GEL Proposed Plant Location**



Financials

GEL plans to establish it's manufacturing facility in the Chakan, Pune; largest of the 4 Auto manufacturing clusters in India







# **Competitive Benchmarking**

It is nice to have valid competition; it pushes you to do better.

- Gianni Versace

















### **Competition for Brand X and Brand X-Cargo**



Brand X is expected to compete with entry level EV 4W cars while Brand X-Cargo is expected to compete with EV 3Ws and entry level electric 4Ws cargo vehicles

#### **Products offered**



**Brand X Personal Mobility Vehicle** 

#### **Expected Competition**









Alto

#### EV 4Ws priced up to INR 10 Lacs



**Tata Tiago** 



ORA R1

Potential Chinese entrants such as BYD. Wuling, Chery, Dongfeng Fengguang



**Brand X Cargo Urban Cargo Vehicle** 

#### ICE LCVs and 3W Cargo vehicles priced up to INR 10 lacs

Redi Go



Supro

**Jeeto** 

**RE 60** 



**Super Carry** 



**Bolero** 



Eeco

#### EV LCVs and 3W Cargo vehicles priced up to INR 10 lacs



**Treo Zor** 

**Shakti** 





Ape E Xtra

Rage+





Hi Load





### Existing players are focused on the price range of INR 10 lakh & above



**Key Players: EV Personal Mobility** 

Models expected to launch uptil 2025









ORA R1



**OLA Electric Car** INR 7 Lacs **INR 8 Lacs** 



Mahindra eKUV 100 INR 8.25 Lacs



ORA R2 INR 10 Lacs



Maruti WagonR Electric INR 10 Lacs



TATA Sieraa INR 14 Lacs



INR 14 Lacs

Tata Nexon EV

INR 15 Lacs



Mahindra XUV300 Electric INR 15 Lacs



Maruti Futuro-e INR 20 Lacs



TATA Curw INR 20 Lacs



Nissan Leaf INR 30 Lacs



Mercedes Benz EQA INR 60 Lacs



Ford Mustang Mach-E INR 70 Lacs



Tesla Model S INR 1.50 Cr



INR 2.50 Cr





INR 9.2 Lacs



Tata Tigor EV INR 13 Lacs









Hyundai Kona INR 23.7 Lacs



BYD E6 INR 25 Lacs



Mini Cooper SE INR 47.2 Lacs



Mercedes Benz EQC INR 1.0 Cr.



BMW iX INR 1.16 Cr



Audi e-Tron

INR 1.0 Cr.





INR 2.0 Cr.

Entry (< INR 6 Lacs)

Value (INR 6 -10 Lacs)

Mid (INR 10-15 lacs)

Premium (INR 15 - 50 Lacs)

Luxury (> INR 50 Lacs)

Brand X is expected to cater to a whitespace in the Entry level segment of <INR 6 lacs where currently no EV is offered</p>

### Brand X-Cargo offers a differentiated offering



**Key Players: EV Personal Mobility** FY22

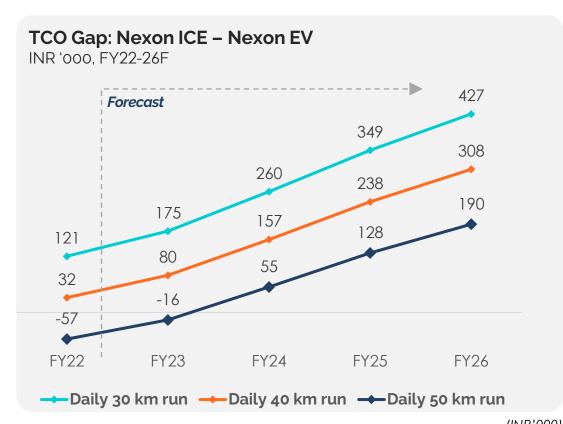
Typical range of these vehicles 8.5 lacs is 120 - 150 kms, thus they are ideal for intra-city deliveries Tata Ace EV Mahindra E-Supro Typical range of these vehicles INR 5 is 100 - 120 kms, thus they are suitable for hyperlocal deliveries Croyance Electro 1 Omega M1KA 5 lacs Piaggio Ape E Mahindra Treo Kinetic Jumbo 2 **Brand X-Cargo** INR Typical range of these vehicles Higher payload capacity is 80 - 100 kms, thus they are (>600 kgs) at a competitive used for inhouse movement of price (<INR 5 lacs) goods Euler Hi Load OSM Range+ Altigreen NEEV INR 2 lacs Gkon Veer Atul Elite+ Mahindra e-Alfa Kinetic Safar SN Solar E-Loader Mini Metro Loader

Payload: 200 - 400 kgs Volume: 80-100 ft<sup>3</sup> Payload: 400 - 700 kgs; Volume: 120-150 ft<sup>3</sup> Payload: 700 - 1,000 kgs Volume: 180-200 ft<sup>3</sup>

### TCO Gap: ICE Vs EV



#### For a daily use of 30km/day, EV TCOs are more favourable than ICE



Market Overview

					(INR 000)
40 km Daily Run	FY22	FY23	FY24	FY25	FY26
TCO for Petrol(A)	1448	1511	1576	1645	1718
TCO for EV X (B)	1416	1431	1419	1407	1410
TCO Savings (A-B)	32	80	157	238	308

Salvage value of an EV car is likely to be dependent on various factors like-

- Availability of second life for the EV car batteries
- Forecasted decrease of battery prices
- GST rates of the government on the EV cars

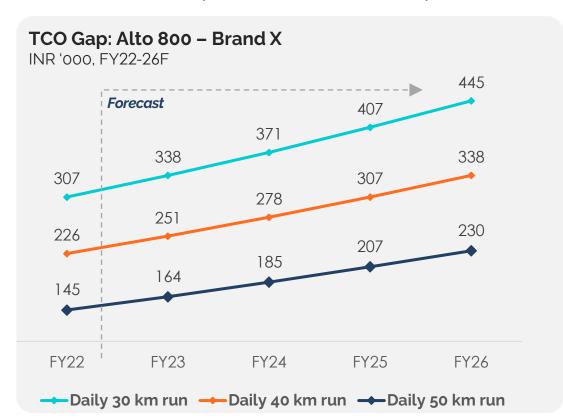
Salvage value for an EV might be better compared to ICE considering the growing fuel prices, higher battery life (warranty for 8 years v/s lifetime of 5 years considered in TCO estimates)

Area	Parameter	Assumption
	Vehicle Ownership Period	5 years
	Calvaga Valua after E vegra	EV- 40%
General	Salvage Value after 5 years	ICE - 35%
	Distance covered per day	30-50 km
	Discount Rate	10%
	Range	200 Km
	Miloggo	EV: 6.7 km/kWh
Battery	Mileage	ICE: 16 km/l
	Capacity	32.2 kWh
	Battery pack price per kWh, (FY26E)	USD 110
	Fuel Price Inflation	Petrol - 7%
Cost of Operation	Electricity Price Inflation	4%
Cost of Operation	Avg. Servicing and Spare Cos/year (INR)	EV – INR 5k
	Avg. Servicing and Spare Cost year (IIVR)	Petrol – INR 8k

# **Brand X – TCO comparison**



#### Even when compared to the lowest priced ICE vehicles, Brand X is estimated to have a better TCO



Market Overview

					(INR'000)
40 km Daily Run	FY22	FY23	FY24	FY25	FY26
TCO for Petrol(A)	764	796	830	867	905
TCO for EV X (B)	537	546	554	563	572
TCO Savings (A-B)	227	250	276	304	333

Salvage value of an EV car is likely to be dependent on various factors like-

- Availability of second life for the EV car batteries
- Forecasted decrease of battery prices
- GST rates of the government on the EV cars

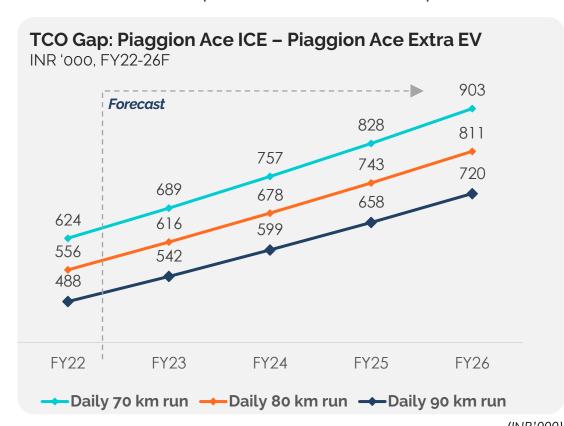
Salvage value for an EV might be better compared to ICE considering the growing fuel prices, higher battery life (warranty for 8 years v/s lifetime of 5 years considered in TCO estimates)

Area	Parameter	Assumption
	Vehicle Ownership Period	5 years
	Calugae Value after 5 years	EV- 40%
General	Salvage Value after 5 years	ICE - 35%
	Distance covered per day	30-50 km
	Discount Rate	10%
	Range	170 Km
Darkham	Milagrap	Petrol: 20 km/l
Battery	Mileage	EV: 11 km/kWh
	Capacity	16 kWh
	Fuel Price Inflation	Petrol - 7%
Coot of Operation	Electricity Price Inflation	4%
Cost of Operation	Aug Company and Chara Con (1994 (INID)	Brand X – 18k
	Avg. Servicing and Spare Cos/year (INR)	Alto 800 – 7.5k

# **Brand X Cargo – TCO comparison**



Even when compared to the lowest priced ICE vehicles, Brand X is estimated to have a better TCO



Market Overview

					(INR 000)
40 km Daily Run	FY22	FY23	FY24	FY25	FY26
TCO for Petrol(A)	848	874	901	928	957
TCO for EV X (B)	362	350	340	330	321
TCO Savings (A-B)	486	523	561	598	636

Salvage value of an EV car is likely to be dependent on various factors like-

- Availability of second life for the EV car batteries
- Forecasted decrease of battery prices
- GST rates of the government on the EV cars

Salvage value for an EV might be better compared to ICE considering the growing fuel prices, higher battery life (warranty for 8 years v/s lifetime of 5 years considered in TCO estimates)

Area	Parameter	Assumption
	Vehicle Ownership Period	5 years
	Calugae Value after Eugare	EV- 40%
General	Salvage Value after 5 years	ICE - 35%
	Distance covered per day	70-90 km
	Discount Rate	10%
	Range	85 - 95 Km
	Milagga	EV: 11.3 km/kWh
Battery	Mileage	ICE: 36 km/l
	Capacity	8 kWh
	Battery pack price per kWh, (FY26E)	USD 110
	Fuel Price Inflation	Petrol - 7%
Cost of Operation	Electricity Price Inflation	4%
Cost of Operation	Ava Consising and Chara Cas (vage (IND)	EV – INR 4k
	Avg. Servicing and Spare Cos/year (INR)	Petrol – INR 3.2k





## **Unique Business Model in the Sector**

Only player in the market backed by renewable energy business group

Only player in the market within price range of INR 6 Lakh

Multifold financial growth capability

Efficient management with domain expertise

Offering cost-effective pricing model, Market fit solution



#### **ADDRESS**

2, 12th Floor, Palladium, Opposite Vodafone House, orporate Road, Prahladnagar, Ahmedabad - 380051



Empowering **Future**Exploring **Energy Alternatives** 

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Basis crash testing as part of the technical due diligence conducted by Hestocon Certification Services, Gensol EV has a more than adequate safety factor ...

Impact	Safety Factor	Description
Front Impact	1.24	It highlights that the frame will maintain its integrity even under an extreme car crash condition
Rear Impact	2.096	It ensures that the rear side of vehicle will absorb the rear impact and will maintain safety of occupants
Side Impact	3.79	The calculated safety factor for side impact is 3.79. It is more than adequate

## **Chassis & Vehicle Frame Strengths**



...this is achieved through a vehicle frame made of high strength steel alloy and tubular chassis design which allow for greater torsional rigidity.

#### **Chassis Strength Particulars**

#### Chassis design

- Gensol EV's chassis is a tubular, space frame chassis
- The key component of a space frame chassis is that its members are always in tension or compression

#### Chassis material

 It employs a mixture of ladder chassis and a monocoque, with sheet metal fixed to chassis elements to provide additional strength

#### Use case

 Space frame chassis are often employed in race car vehicles as they provide the best weight to rigidity ratio.

From the above analysis, we can conclude the Gensol EV's chassis is very robust, designed to withstand very high loads and keep the occupants safe in the event of a frontal collision.

#### **Vehicle Frame Strength Particulars**

#### Frame material

- Gensol EV's frame is made of a high strength steel alloy called 4130 alloy steel
- It is used in a wide range of industries including automotive and aerospace

#### **Torsional rigidity**

- Gensol EV's torsional rigidity of the frame is 5219.62 Nm/deg
- When compared to similar tubular frame chassis:
  - BMW E36 Z3 has a torsional rigidity of 5,600 Nm/deg
  - Lotus Espirit SE Turbo has a torsional stiffness of 5,850 Nm/deg
  - Chrysler Durango has a torsional stiffness of 6,800 Nm/deg

From the above analysis, we can conclude that cabin area of the vehicle retains its structural integrity and the front structure collapses to absorb most of the impact in case of a crash.











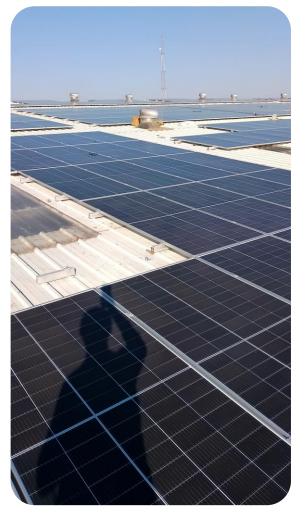






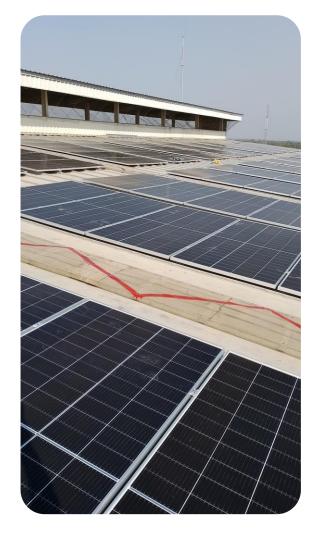


















# 12,400 kWp I KP GROUP, Ranada, Gujarat

KP Energy is a focused energy company with a strong profile in renewable. We have activities primarily in Gujarat (India). We aim to create value for our customers, shareholders and the communities in which we operate. Our strategy focuses on identifying and growing areas of activity where we have key competences and value propositions differentiating us from our competitors. Gensol has executed their 12.4 MWp Ground mounted Solar PV plant installed in 37 Acre of land area located in Ranada, Gujarat.











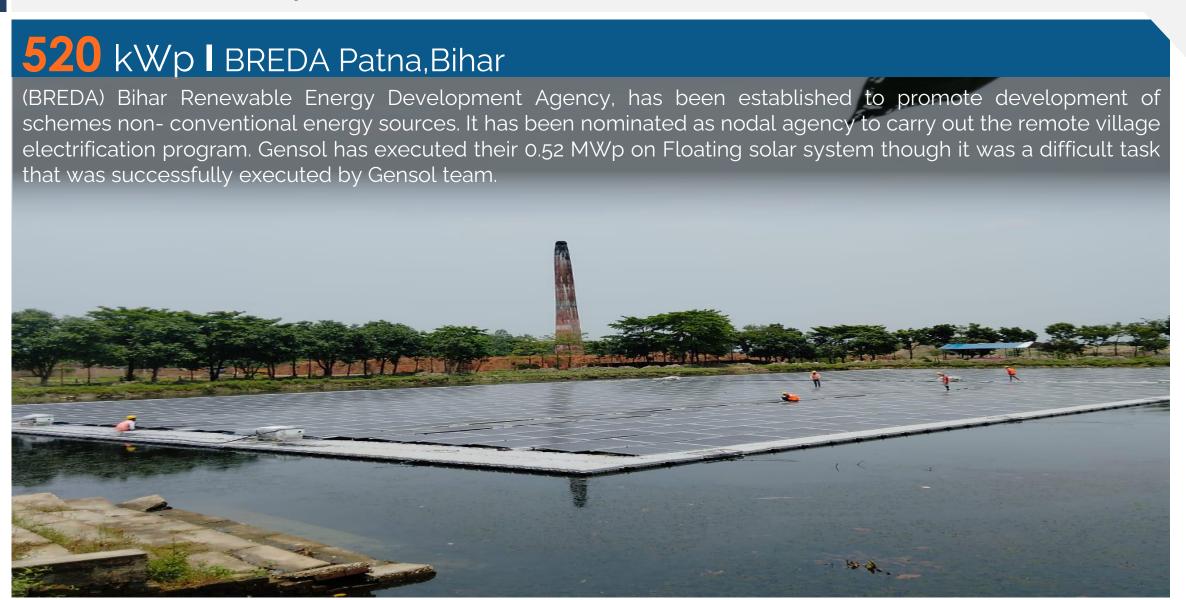




# 8,468 kWp I SRF LTD, Tamil Nadu, Chennai

SRF Ltd in Manali & Gummidipoondi, Chennai & Viralimalai, Trichy, Malanpur Gwalior is known to its customer base. The business came into existence in 1976 and has, since then, been a known name in its field. The business strives to make for a positive experience through its offering. Gensol Team has made a great efforts to execute their 8.468 MWP solar plant on the ground mounted which is now successfully implemented.







# 1,756 kWp | Mundra Solar PV Limited, Mundra, Gujarat

Mundra Solar PV Limited has appointed Gensol for EPC service for their emphasized solar PV plants at their manufacturing plant. This project is a multi component project which has shown the expertise of Gensol's rooftop, ground mounted and Carport (Superstructure MMS with Bifacial Solar PV modules) engineering & execution skills.