SUBSIDIES AND INCENTIVE BY GOVERNMENT

1. Union Budget 20192020

- **Focus on EV Adoption:**
  - **Income Tax Deduction (Section 80EEB):**
    - **Details:** A tax deduction of up to ₹1.5 lakhs on the interest paid on loans taken for purchasing electric vehicles was introduced. This was aimed at encouraging the adoption of EVs by making them more affordable.
    - **Impact:** This initiative directly reduced the cost burden on EV buyers, particularly for personal vehicles, making EV ownership more financially attractive.
- **GST Rate Reduction Proposal:**
  - **Details:** The government proposed reducing the Goods and Services Tax (GST) on electric vehicles from 12% to 5%. This proposal was later implemented from August 1, 2019.
  - **Impact:** This reduction significantly lowered the overall cost of EVs, helping to make them more competitive with traditional internal combustion engine vehicles.
- **Customs Duty Exemptions:**
  - **Details:** The budget proposed customs duty exemptions on certain EV components, particularly lithium-ion cells, which are crucial for manufacturing EV batteries.
  - **Impact:** This move was intended to encourage domestic manufacturing of EV components, thereby reducing reliance on imports and lowering production costs.
- **FAME II Scheme:**
  - **Details:** The budget highlighted the continuation of the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME II) scheme, which had already been launched in April 2019. The scheme allocated ₹10,000 crores for a period of three years.
  - **Focus:** The emphasis was on electrifying public transport (e-buses, e-rickshaws) and creating a robust EV charging infrastructure.

2. Union Budget 20202021

- **Battery Manufacturing Support:**
  - **Details:** The government emphasized the need for a robust battery manufacturing ecosystem in India. It proposed measures to support the setting up of largescale battery manufacturing plants.
  - **Impact:** This was seen as a strategic move to reduce dependence on imports and develop a domestic supply chain for EV batteries, which is critical for the EV market.
- **Custom Duty Adjustments:**
  - **Details:** Continued reduction in customs duties for certain components of EVs, particularly lithium-ion batteries and related parts.
  - **Impact:** These adjustments were aimed at further lowering the cost of EV manufacturing and making India an attractive destination for EV production.
- **Public Sector Involvement:**

- **Details:** The budget encouraged public sector units (PSUs) to actively participate in the development of EV charging infrastructure across the country.
- **Impact:** This involvement was expected to accelerate the expansion of charging stations, which is crucial for the widespread adoption of EVs.

3. Union Budget 20212022

- **Production Linked Incentive (PLI) Scheme for ACC Batteries:**
  - **Details:** The budget announced the launch of the PLI scheme specifically for Advanced Chemistry Cell (ACC) battery manufacturing. An allocation of ₹18,100 crores was made to incentivize the establishment of battery manufacturing facilities in India.
  - **Impact:** The scheme was designed to attract investments in domestic battery manufacturing, crucial for reducing the cost of EVs and boosting their adoption.
- **Voluntary Vehicle Scrappage Policy:**
  - **Details:** The introduction of a scrappage policy was announced to phase out old and unfit vehicles. It incentivized the scrapping of older vehicles, which could be replaced with new, more efficient, and less polluting EVs.
  - **Impact:** This policy was expected to create a demand for new vehicles, including EVs, while also reducing environmental pollution from older, more polluting vehicles.
- **Customs Duty Changes:**
  - **Details:** The government increased customs duties on certain imported EV components to promote domestic manufacturing, while continuing to provide concessions for components critical to local production.
  - **Impact:** This move aligned with the broader strategy of developing a self-reliant EV industry in India.

4. Union Budget 20222023

- **Battery Swapping Policy:**
  - **Details:** The budget announced the introduction of a battery swapping policy, especially targeting electric two-wheelers and three-wheelers. This policy was aimed at reducing the time and infrastructure required for charging by allowing EV users to swap their depleted batteries with fully charged ones.
  - **Impact:** Battery swapping was expected to address the range anxiety issue and make EVs more practical for daily use, particularly in urban areas.
- **Support for Charging Infrastructure:**
  - **Details:** Emphasis was placed on developing EV charging infrastructure, with a focus on public-private partnerships (PPPs) to accelerate the rollout of charging stations across the country.
  - **Impact:** The development of a robust charging infrastructure was recognized as critical for the mass adoption of EVs.
- **Promotion of Clean Energy and Mobility:**
  - **Details:** The budget reinforced the government's commitment to promoting clean energy and sustainable mobility, including the adoption of EVs. The focus was on transitioning to greener alternatives in the transportation sector.
  - **Impact:** This alignment with broader environmental goals was intended to ensure that India's transportation sector moves towards sustainability.

5. Union Budget 20232024

- **Continued Support for EVs under FAME II:**
    - **Details:** The budget continued to support the FAME II scheme, emphasizing the need to increase the penetration of electric buses, electric three-wheelers, and electric two-wheelers in the market.
    - **Impact:** Ongoing financial support under FAME II was crucial for maintaining the momentum in EV adoption, especially in the public transport sector.
- **Reduction of Import Duties on Certain EV Components:**
    - **Details:** To further support the EV industry, the budget announced a reduction in import duties on specific EV components that are not yet manufactured in India.
    - **Impact:** This was aimed at reducing the production costs of EVs, making them more affordable for consumers.
- **Green Hydrogen Mission:**
    - **Details:** The budget highlighted the government's focus on the Green Hydrogen Mission, which, while primarily targeting industrial use, also had implications for the EV sector, particularly for heavy vehicles that might benefit from hydrogen fuel cells.
    - **Impact:** The mission was expected to diversify the clean energy options available for the transportation sector, potentially complementing battery electric vehicles.

6. Union Budget 20242025

- **National Electric Vehicle Policy (Expected):**
    - **Details:** The budget hinted at the upcoming National Electric Vehicle Policy, expected to be unveiled later in the year. This policy is anticipated to provide a comprehensive framework for the EV sector, covering aspects like battery recycling, local manufacturing incentives, and long-term EV adoption targets.
    - **Impact:** The policy is expected to unify and streamline various existing initiatives, creating a cohesive roadmap for the future of electric mobility in India.
- **Expansion of EV Charging Network:**
    - **Details:** The budget announced new incentives and funding for expanding the EV charging network, particularly along highways and in Tier2 and Tier3 cities.
    - **Impact:** This move was aimed at addressing the infrastructure gap in smaller cities and rural areas, thus promoting EV adoption beyond the major urban centers.
- **Support for R&D in Battery Technology:**
    - **Details:** Increased funding was allocated for research and development in advanced battery technologies, including solid-state batteries and battery recycling techniques.
    - **Impact:** Advancements in battery technology are crucial for improving the efficiency, safety, and sustainability of EVs, making them more attractive to consumers.

These budgetary measures reflect the Indian government’s commitment to building a robust EV ecosystem, reducing carbon emissions, and promoting sustainable mobility. Each budget has progressively added to the framework that supports the transition to electric vehicles, from direct incentives for buyers to infrastructure development and support for domestic manufacturing.

Comparison Between Gujarat, Andhra Pradesh, and Maharashtra

When considering the establishment of an EV (Electric Vehicle) factory, several factors come into play, including infrastructure, government policies, market access, availability of raw materials, skilled labor, and overall business environment. Here's a comparison of Gujarat, Andhra Pradesh, and Maharashtra in these aspects:

1. Infrastructure and Connectivity

- Gujarat: Gujarat boasts excellent infrastructure, with well-developed ports (e.g., Mundra, Kandla) and a robust road and rail network. The state has numerous industrial parks and special economic zones (SEZs) that provide essential infrastructure for manufacturing.
- Andhra Pradesh: Andhra Pradesh has been developing its infrastructure rapidly, particularly with projects like the Visakhapatnam Chennai Industrial Corridor. The state has decent port facilities (e.g., Visakhapatnam, Krishnapatnam) and improving road and rail connectivity.
- Maharashtra: Maharashtra is India's most industrialized state, with top tier infrastructure, including the Jawaharlal Nehru Port Trust (JNPT), excellent road networks, and rail connectivity. The Mumbai Pune industrial belt is particularly noteworthy.

2. Government Policies and Incentives

- Gujarat: Gujarat has a probusiness government that has rolled out specific policies to attract EV manufacturers. The state offers significant incentives, including capital subsidies, reduced electricity tariffs, and tax benefits. The Gujarat Electric Vehicle Policy 2021 aims to make the state a hub for EV and component manufacturing.
- Andhra Pradesh: The Andhra Pradesh government has been aggressive in attracting investments, with policies focused on ease of doing business. The state offers incentives under its Industrial Development Policy and has plans for a dedicated EV policy.
- Maharashtra: Maharashtra has a robust EV policy, offering substantial subsidies for EV manufacturing, including land at concessional rates, capital subsidies, and tax exemptions. The state is also focusing on developing charging infrastructure across urban areas.

3. Market Access

- Gujarat: Gujarat's proximity to key automotive markets in North and West India provides excellent market access. The state’s location on the western coast also facilitates easy export opportunities to the Middle East, Africa, and Europe.
- Andhra Pradesh: Andhra Pradesh’s strategic location on the southeastern coast allows easy access to markets in southern and eastern India. The proximity to Chennai, a major automotive hub, is also advantageous.
- Maharashtra: Maharashtra, especially around Mumbai and Pune, offers access to one of the largest consumer markets in India. The state’s central location allows efficient distribution to both northern and southern markets.

4. Availability of Raw Materials and Supply Chain

- Gujarat: Gujarat has access to critical raw materials, particularly chemicals and components needed for battery manufacturing. The state also has a well-established supply chain for automotive manufacturing, with several auto ancillary units.
- Andhra Pradesh: The state has emerging capabilities in electronics and battery manufacturing. However, it is still developing its supply chain ecosystem for automotive components.
- Maharashtra: Maharashtra has a well-established automotive supply chain, with a strong presence of auto component manufacturers. The state also has access to raw materials required for EV manufacturing.

5. Skilled Labor and R&D Facilities

- Gujarat: Gujarat has a large pool of skilled labor, particularly in engineering and manufacturing. The state's educational institutions are increasingly focusing on EV related courses and training. Gujarat is also home to several R&D centers for automobile companies.
- Andhra Pradesh: The state is developing its talent pool, with initiatives to skill workers in EV technology. Andhra Pradesh has a growing number of technical institutions focusing on automotive engineering.
- Maharashtra: Maharashtra has a vast pool of skilled labor, particularly in the automotive sector, given its long history with automobile manufacturing. The state is also home to numerous R&D centers and automotive research institutions.

6. Ease of Doing Business

- Gujarat: Gujarat consistently ranks high in ease of doing business due to its investor-friendly policies, quick approval processes, and minimal bureaucratic hurdles. The state government actively facilitates investments and offers a single-window clearance system.
- Andhra Pradesh: Andhra Pradesh has made significant strides in improving ease of doing business, with a focus on reducing regulatory burdens and offering fast-track approvals. The state has also implemented a single-window clearance system.
- Maharashtra: Maharashtra offers a conducive environment for business, though it has more regulatory requirements compared to Gujarat. The state has been improving its processes to attract more investments in the EV sector.

Why Gujarat is the Most Ideal State for Setting Up an EV Factory?

1. Strategic Location and Infrastructure: Gujarat's strategic location with access to major ports facilitates both import of raw materials and export of finished products, making it ideal for both domestic and international markets. The state's infrastructure, particularly in industrial parks and SEZs, is well-suited for largescale manufacturing.

2. Pro-Business Government Policies: The Gujarat government is known for its proactive approach to attracting investments, especially in emerging sectors like EVs. The state offers significant incentives and has a stable policy environment that encourages long-term investment.

3. Established Automotive Ecosystem: Gujarat has an established automotive manufacturing ecosystem with a strong supply chain for components, which is critical for EV manufacturing. The presence of existing automotive giants further adds to the state's appeal.

4. Skilled Workforce: Gujarat's large pool of skilled labor in manufacturing and engineering, coupled with the state's focus on developing technical skills related to EV technology, ensures that companies have access to the human resources they need.

5. Ease of Doing Business: Gujarat’s consistently high rankings in ease of doing business reflect its investor-friendly environment, streamlined processes, and efficient governance. This minimizes the time and cost involved in setting up and running a factory.

In summary, Gujarat's combination of strategic location, government support, existing infrastructure, and business-friendly environment makes it the most ideal state for setting up an EV factory.