Inside India’s Production Linked Incentive Schemes: Advance Chemistry Cell (ACC) Battery
Introduction

India, the world’s largest democracy as well as one of its biggest economies, has been on an upward growth trajectory over the recent decades. Our consistent growth rates have also been among the highest in the world and have attracted some of the most prominent foreign companies and investors. Growing economic clout has contributed to a widespread global consensus about a larger role and place for India, both in economic and geopolitical terms. While India’s service industry has time and again demonstrated its strength and innovation, the nation’s domestic manufacturing has been somewhat unable to keep pace.

The rapidly changing dynamics of the 21st century global economy have impacted several countries including India, due to which, there have been increasing calls for India to strengthen its domestic manufacturing capacities if it were to acquire a significant place in the global value chains. To this end, the government of India has been proactively implementing policies to promote domestic industries, the most concrete instance of which took the form of the “AatmaNirbhar Bharat Abhiyan” (Self-Reliant India), launched by Prime Minister Narendra Modi a few months ago. This one-of-its-kind campaign envisions stronger domestic industrial capacity for India while also positioning it as a major manufacturing and export hub at the world stage.

Since its launch last year, the “AatmaNirbhar Bharat” scheme has witnessed significant government push towards enhancing domestic industries through a slew of measures like incentives, subsidies and funding support. Among the most significant of these measures was the recent approval by the country’s Cabinet headed by Prime Minister Modi to extend the Production Linked Incentive (PLI) scheme to 10 crucial sectors of the economy.

The scheme, centered on incremental outputs, aims to strengthen manufacturing and export capacities of domestic firms and industries so as to put them at the heart of global supply chains. The main objectives of extending the PLI across different sectors are to develop the core competencies of Indian industries, encourage innovative technologies, create economies of scale through efficient processes and boost their global presence through exports. As envisioned by our Prime Minister, an efficient, dynamic and resilient domestic manufacturing ecosystem is of utmost importance for India to emerge as a global manufacturing hub. By detailing the PLI scheme for the advance chemistry cell (ACC) battery sector, this paper aims to provide a comprehensive picture of what the scheme entails for every specific sub-sector in terms of implementation, funding and benefits.

A recent tweet put out by our Prime Minister sums up the PLI story rather well:
Cabinet decision of PLI scheme for 10 sectors will boost manufacturing, give opportunities to youth while making India a preferred investment destination. This is an important step towards improving our competitiveness and realising an Aatmanirbhar Bharat.

- Hon’ble Prime Minister
  Narendra Modi
Production Linked Incentive (PLI) Scheme

Strengthening the vision of Aatmanirbhar Bharat, the government approves Production Linked Incentive (PLI) scheme for 10 sectors. Revolutionising Make in India, this will help create jobs, promote exports & make India the factory of the world.

Minister of Commerce & Industry, Consumer Affairs & Food & Public Distribution and Textiles, Government of India
Piyush Goyal

Benefits of Production Linked Incentive (PLI) Scheme

Tipping point for India’s manufacturing sector
- Strengthen our vision of Make in India and Aatmanirbhar Bharat
- Make India a globally competitive nation
- Ensure economies of scale in manufacturing sector
- Help Leapfrog in manufacturing sector with cutting edge technology

Driving Exports
- Attract investments, scale up domestic capacity and boost exports
- Key driver in India’s growth story
- Make India a part of global value chain
- Boost to skill India and create jobs

Towards strengthening our vision for ‘Vocal for Local’
- Provide a level playing field to domestic sector
- Reduce import dependence
- Boost to MSME sectors
- Unprecedented boost to employment generation
Large-Scale Electronics Manufacturing: A PLI Success Story

A significant increase in global demand for consumer electronics has given India an opportunity to attract foreign investments as well as encourage domestic manufacturers to focus on manufacturing consumer electronics in India under the flagship ‘Make in India’ initiative of the government.

Under the National Policy on Electronics 2019, which was introduced to position India as a global hub for electronics system design and manufacturing, the Ministry of Electronics and Information Technology (MeitY) introduced a Production Linked Incentive Scheme for large-scale Electronics Manufacturing with effect from April 1, 2020.

PLI scheme extends an incentive of 4 per cent to 6 per cent on incremental sales (over base year) of goods under target segments that are manufactured in India to eligible companies, for a period of five years subsequent to the base year (FY2019-20). The scheme was open for filing applications till 31.07.2020.

Over the next five years, the approved companies under the PLI scheme are expected to lead to total production of more than INR 10,50,000 crore (USD 140.6 Bn). Out of the total production in the next five years, around 60 per cent will be contributed by exports of the order of INR 6,50,000 crore (USD 87 Bn).

While the PLI schemes have been recently launched by the government in several crucial sectors of the economy, it is important to note the impact they are creating on the ground. The most
shining example of the PLI scheme’s success in transforming the domestic manufacturing landscape of a specific sector can be seen in the large-scale electronics manufacturing domain, in which, within some months of the scheme’s launch, there has been a significant rise in investments leading to higher job creation in the sector.

The success of the PLI in large-scale manufacturing sets the perfect precedent for the advance chemistry cell (ACC) battery sector to witness similar growth and leverage the impetus provided by the PLI scheme and expand its domestic manufacturing capacities.
Sectoral Boost Provided by Government of India

Below is the list of ten sectors chosen for PLI schemes in India, from which, the **advance chemistry cell (ACC) battery** sector is the focus area of this paper.

1. **Advance Chemistry Cell (ACC) Battery**
2. Electronic/Technology Products
3. Automobiles & Auto Components
4. Pharmaceuticals drugs
5. Telecom & Networking Products
6. Textile Products: MMF segment and technical textiles
7. Food Products
8. High Efficiency Solar PV Modules
9. White Goods (Air Conditioners and LED Lights)
10. Specialty Steel
Electric Vehicle (EV) Industry

1. BRIEF ABOUT THE SECTOR

The Indian automobile industry is a dynamic industry that has grown to contribute in a big way to mobility, Indian economy, manufacturing, exports, employment, and investment. India is the 5th largest market for vehicles and expected to be 3rd largest in terms of volume by 2026. The Indian automotive industry is expected to reach USD 300 Bn by 2026.

According to an independent study, the EV market in India will be a USD 206 Bn opportunity by 2030. With battery costs declining faster than anticipated, EV economics become favourable; the five-year Total Cost of Ownership (TCO) becomes favourable over any alternative in most markets. Additionally, consumers benefit from financial (like subsidies) and non-financial incentives (like road access, registration privileges).

Increased EV adoption is likely to create an unprecedented demand for batteries. The need for batteries will be driven by both new sales of electric vehicles and the demand for replacement batteries in existing electric vehicles. Realising India’s EV targets would require an estimated annual battery capacity of 158 GWh by FY30.

2. MARKET OPPORTUNITY

<table>
<thead>
<tr>
<th>Electric Vehicles</th>
<th>EV Components</th>
<th>Charging infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>● The elective vehicle market in India is expected to be valued at USD 206 Bn by 2030.</td>
<td>● The EV component market is expected to grow to ~USD 12 Bn by 2025.</td>
<td>● To meet the charging requirement for 20 lakh electric cars, India needs about 4 lakh charging stations installed by 2026.</td>
</tr>
<tr>
<td>○ E-two-wheeler market would hit 4.5 Mn-5 Mn by 2025, accounting for 25 per cent to 30 per cent of the market.</td>
<td>○ Within components, India’s Lithium battery packs market to be valued at ~USD 6 Bn by 2025.</td>
<td>● The charging infrastructure market in India is expected to grow at a CAGR of 40 per cent in the next five to six years. 40-</td>
</tr>
<tr>
<td>○ Three-wheeler segment: valued at USD 1.1 Bn by 2030 and penetration</td>
<td>○ The battery capacity in 2018 was 2.9 GWh and is growing at CAGR of 35.5 per cent and is</td>
<td></td>
</tr>
<tr>
<td>of 65-70 per cent by 2025.</td>
<td>expected to reach 158 GwH by 2030.</td>
<td>45 per cent electric conversion by 2030 is a realistic expectation, provided that the infrastructure is created for it.</td>
</tr>
<tr>
<td>--------------------------</td>
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<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Four-wheeler: valued at <strong>USD 1.5 Bn</strong> by 2025 and penetration of <strong>30 per cent</strong> by 2030.</td>
<td></td>
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</tr>
</tbody>
</table>

### 3. GROWTH DRIVERS

#### i. Low penetration of electric vehicles:
- Indian automobile market is highly under-penetrated with electric vehicles.
- Under the FAME scheme Phase-1, about 2.8 lakh xEVs were supported with a total demand incentive of INR 359 crores.

#### ii. Demand:
- **Increased affordability and product variants:** Decline in average selling prices (ASP) across product categories results in improved affordability. Consumers are provided with a wide range of products with variants around features/technology and price. Consistent fall in battery prices, the price of battery cells fell 16.5 per cent per annum between 2014-2017 and dropped further 5.8 per cent annually between 2017 and 2020.
- E-Commerce / Grocery delivery is growing by leaps and bounds since the pandemic struck. This segment is committed to go green, understands the economics of electric vehicles, has their fleets for first and last mile delivery and will be one the big off taker of electric vehicles going forward.
- Shared mobility players including Uber and Ola have indicated increased investments in the segment of ride hailing.

#### iii. Expanding R&D Hub:
- India’s Engineering and Research & Development (ER&D) sector is estimated to grow to **USD 42 Bn** by 2022.
- In 2018, the automotive industry spent USD 130 Bn on R&D, marking a growth of 6-7 per cent from 2017.
- Development of cutting-edge R&D centers and Centers of Excellence: Centre of Battery Engineering (IIT Madras).
iv. Key Trends

- Due to the realignment of global supply chains, there has been an increased push for localization as well as reducing dependence in the energy sector. This has seen increased investments in the Southeast Asia region.

- As the world moves towards electric vehicles, countries have realized the inequitable allocation of Lithium, Nickel and Cobalt reserves. Countries such as Japan and Germany have increased R&D spending on battery technologies. With newer technologies, there will be a redistribution of energy power.

- Push towards sustainable transportation.

- Increasing foreign investments in manufacturing, charging infrastructure, component production and innovation.

- Increasing manufacturing capacity.
4. KEY CLUSTERS FOR ELECTRIC VEHICLES

GUJARAT (6&7)

Industrial Areas:
- Sanand
- Vithalapur
- Mandal-Becharaji
- GIFT City
- Mahindra World City
- Dahej
- Saykha
- Halol
- Karjan
- Ankleshwar

Key players:
- Maruti Suzuki
- Toshiba
- Denso
- Exide Lechlanche- NexChange
- TATA Chemicals

DELHI NCR REGION (8&9)

Industrial Areas:
- UTTAR PRADESH:
  - Noida
  - Greater Noida
  - Ghaziabad etc.
- HARYANA:
  - Gurugram
  - Sohna
  - Faridabad
  - Manesar
  - Bawal
  - Hisar

Key players:
- IGR Phenx
- NVT
- TDK
- Exicom
- Okaya Power
- Amptek
- Inverted

KARNATAKA (3)

Industrial Areas:
- Peenya
- Narsapura
- Tumkur Road
- Bellary Road
- Electronic City
- Bidadi
- Harohalli

Key players:
- SUN Mobility
- Mahindra

MAHARASHTRA (4&5)

Industrial Areas:
- Shendra-Bidkin
- Waunj
- Nashik – Additional Dindori
- MIDC Taleja
- MIDC Tarapur
- Palaganga
- Chakan
- Talegaon
- Ranjangaon
- JNPT SEZ
- Khed City
- Khopoli
- Thane

Key players:
- Oscillion Power Systems

TAMIL NADU (2)

Industrial Areas:
- Oragadam
- Sipperumbudur
- Vellam Vadakkal
- Ambattur
- Krishnagiri
- Originis-Mahindra World City
- Ascendas One Hub
- Sricity
- Tirupati

Key players:
- RAASI Solar Power Ltd.

ANDHRA PRADESH (1)

Industrial Areas:
- Anantapuram
- Chittoor
- Sricity
- Tirupati

Key players:
- Amar Raja

Sources: Data mining of Secretariat of Industrial Assistance; Projects Today; Author’s analysis
5. POLICIES AND GOVERNMENT INITIATIVES

- 100 per cent FDI through automatic route in the Indian Automobile and Electric Mobility sectors.

- Production Linked Incentive Scheme for ACC (Advance Chemistry Cell) battery will incentivize large domestic and international players in establishing a competitive ACC battery set-up in the country. The approved financial outlay for the same for a 5-year period is INR 18,000 crore (~USD 2.5 Bn). MHI, Government of India has released the RFP for inviting bidders on 22nd October 2021 under the PLI Scheme for setting up manufacturing facilities for National Programme on ACC Battery Storage in India.

- National Electric Mobility Mission Plan (NEMMP) 2020 was created in 2013 to encourage reliable, affordable and efficient xEVs that meet consumer performance and price expectations through government-industry collaboration for promotion and development of indigenous manufacturing capabilities, required infrastructure, consumer awareness and technology; thereby, helping India to emerge as a leader in the xEV two-wheeler and four-wheeler market in the world by 2020, with total xEV sales of 6-7 Mn units thus, enabling Indian automotive industry to achieve global xEV manufacturing leadership and contributing towards national fuel security. Under the NEMMP, the government has launched the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME) scheme. In the phase 1 of the scheme, which started in 2015 and completed on 31 March 2019, about 2.8 lakh hybrid and electric vehicles were supported by way of demand incentive amounting to about INR 359 crore resulting in saving of about 50 Mn liters of fuel and reduction of about 124 Mn kilograms of carbon dioxide.

- National Mission on Transformative Mobility and Battery Storage was set up in 2019 to drive clean, connected, shared, sustainable and holistic mobility initiatives. An Inter-Ministerial Committee is executing this mission, chaired by CEO NITI Aayog. The Mission will recommend and drive the strategies for transformative mobility and Phased Manufacturing Programmes for EVs, EV Components, Cells and Batteries. A phased roadmap to implement battery manufacturing at giga-scale will be considered with initial focus on large-scale module and pack assembly plants by 2019-20, followed by integrated cell manufacturing by 2021-22.
• **FAME India Phase II**, a demand incentives scheme, has been approved by the nodal ministry responsible for automobiles, the Department of Heavy Industries. With a budget of INR 10,000 crores (USD 1.4 Bn), the policy was implemented on 1st April 2019, for faster adoption of electric mobility and development of its manufacturing eco-system in the country. The policy is essentially applicable for promotion and adoption of public transportation (Buses), Commercial vehicles (3W, 4W), and 2W (considered to be mass mobility). The end-users are eligible for (USD 145)/INR 10,000 subsidy per Kilowatt hour of battery except buses. For buses, the subsidy is (USD 290 per kWh)/INR 20,000 per kWh. Under FAME-II, the government is considering 1,000,000 2-wheelers, 5,00,000 3-e-wheelers, 55,000 4-wheelers, and 7000 e-buses and 2700 stations. Moreover, the scheme also envisages support for setting up of adequate public charging infrastructure to instill confidence amongst EV users, though active participation and involvement of various stakeholders including government agencies, industries, and public sector enterprises. As of September 2020, under Phase-II of FAME India scheme, electric vehicles have been supported by way of demand incentive amounting to about INR 95 crore. Under FAME-II scheme, the demand incentive for e-2W is increased to INR 15,000/KWh from INR 10,000/KWh with an increase in cap from 20per cent to 40per cent of cost of vehicle to increase adoption of e-2W. Further, the phase-II of FAME-India scheme is extended for a period of two years after 31 March, 2022.

• **Phased Manufacturing Programme (PMP)** of electric vehicles has been shared to support setting up of a few large-scale, export-competitive integrated batteries and cell-manufacturing giga plants in India and large-scale electric vehicle facilities in India. The programme would also work towards localization of production across the entire electric vehicle value chain. The government extended the deadline for localization of several components under PMP from 1 October 2020 to 1 April 2021.

### 6. RECENT INITIATIVES

• As part of the government’s bid to make India an electric vehicle nation by 2030, the government has announced setting up infrastructure for **one e-charging kiosk at around 69,000 petrol stations across India**.

• **The Ministry of Road Transport and Highways (MoRTTH)** has allowed registration of electric vehicles without pre-fitted batteries. The ministry has clarified that vehicles without batteries can be sold and registered based on the type of approval
certificate issued by the test agency. Further, there is no need to specify the make/type or any other details of the battery for the purpose of registration. However, the prototype of the electrical vehicle, and the battery (regular battery or the swappable battery) is required to be type approved by the test agencies specified under Rule 126 of the Central Motor Vehicles Rules, 1989.

- Government of India has set up a new joint venture christened Khanij Bidesh India (KABIL) with the participation of three central public sector enterprises namely — National Aluminium Company (NALCO), Hindustan Copper (HCL) and Mineral Exploration Company (MECL). The objective of setting up KABIL is to ensure a consistent supply of critical and strategic minerals to the Indian domestic market. Twelve strategic minerals have been identified and the initial focus will be on lithium and cobalt. While KABIL would ensure mineral security of the nation, it would also help in realising the overall objective of import substitution.

- National Automotive Testing and R&D Infrastructure Project (NATRiP) is a fully Government of India funded project with a total project cost of INR 3727.30 crore. This is the largest and one of the most significant initiatives in automotive sector so far. The project aims at creating core global competencies in automotive sector in India by facilitating seamless integration of Indian automotive industry with the world, through setting up state-of-the-art, four greenfield automotive testing, homologation and R&D infrastructure facilities and up-gradation of two existing facilities with new technology and equipment. On 3rd January 2019, NATRiP’s proposal for “Grant-In-Aid for test facility infrastructure for EV performance Certification from NATRiP Implementation Society” under the FAME scheme was approved by Project Implementation and Sanctioning Committee (PISC).

- PLI Scheme for Automobile & Auto components- The Government has issued notification regarding Production Linked Incentive (PLI) Scheme for Automobile and Auto components. The PLI scheme for the auto sector envisages to overcome the cost disabilities of the industry for manufacture of advanced automotive technology products in India. The incentive structure will encourage industry to make fresh investments for indigenous global supply chain of Advanced Automotive Technology products. It is estimated that over a period of five years, the PLI scheme for Automobile and Auto Components industry will lead to fresh investments of over INR 42,500 crores, incremental production of over INR 2.3 lakh crore and will create additional employment opportunities of over 7.5 lakh jobs. Further this will increase India’s share in global automotive trade.
● The Delhi government launched the Delhi Electric Vehicle Policy under which the government will waive registration fee and road tax and provide incentive of up to INR 30,000 for electric two-wheelers, autos, e-rickshaws and freight vehicles.

● The Telangana government, as part of its new policy to promote electric vehicles, offers 100 per cent exemption of road tax and registration fee for the first two lakh electric two-wheelers purchased and registered within the state. The policy also gives 100 per cent exemption on road tax and registration fee for electric tractors purchased and registered in the state.

● The updated Maharashtra EV Policy aims to capitalise on the recent policy and technology developments and further the state’s EV ambition. The policy suggests strong demand- and supply-side measures to increase the BEV penetration in the state. The policy plans to aggressively target the state’s five Urban Agglomerations (UAs) (with a high share of PM2.5 emissions) to become lighthouse regions in EV adoption.

● Karnataka government has made two amendments in its 2017 EV policy. The cabinet decided to give 15 per cent capital subsidy to investors in the electric vehicle (EV) sector on value of fixed assets over five equal annual payments, with maximum land covered under this incentive being 50 acres. The second incentive is a production linked subsidy of 1 per cent on turnover, which will be provided for a period of five years starting from the first year of commercial operations for large, mega, ultra, super mega EV assembly and manufacturing units.

7. KEY PLAYERS
8. DETAILS ABOUT THE PLI SCHEME

The PLI scheme will attract large investment in the sector to further boost domestic manufacturing.

- **Production Linked Incentive Scheme for ACC (Advance Chemistry Cell) battery** will incentivize large domestic and international players in establishing a competitive ACC battery set-up in the country. As of November 2020, Niti Aayog, which is facilitating the government to carry out the bidding process, has floated draft model bid documents for setting up ACC units. The approved financial outlay for the same for a 5-year period is INR 18,000 crore (~USD 2.5 Bn).

- One of the biggest roadblocks in India’s electrification is dependence on imported batteries. By introducing the PLI at this crucial stage, India is converting this challenge into an opportunity.

- The PLI will allow a greater level of backward integration in the cell and battery value-chain for India.

- The scheme also includes elements of export promotion, wherein investors can manufacture batteries in India for the world.

- Cash Subsidy (Cap of INR 2000/ kWh) disbursement linked to per kWh of ACC sold.

- The base-subsidy amount pertains to hundred percent (100 per cent) value addition in India for production of ACCs.

- To avail the complete benefits of the base-subsidy, beneficiary firms are being incentivized to invest into R&D of newer technologies, whereby greater value addition can take place in India.

- Cash subsidy capped at 20 per cent of effective ACC price (Net of GST) or the effective ACC sales turnover.

**Priority assigned: 1**

**Implementing Ministry/ Department:** Niti Aayog, Ministry of Heavy Industry

**Approved financial outlay over a five-year period:** INR 18,100 crores/ USD 2.5 Bn

**Aim**

- Increased EV adoption is likely to create an unprecedented demand for batteries. The need for batteries will be driven by both new sales of electric vehicles and the demand for replacement batteries in existing electric vehicles.
• India’s EV targets would require an estimated annual battery capacity of 158 GWh by FY30. To meet this potential demand, battery manufacturers need to expand production requiring huge investments.
• Keeping this in mind, the Government of India and the Department of Heavy Industries & Public Enterprises have approved and released the Production Linked Incentive (PLI) scheme for the National Programme on Advance Chemistry Cell (ACC) battery storage.
• Advance Chemistry Cells (ACCs) are the new generation advance energy storage technologies that can store electric energy either as electrochemical or as chemical energy and convert it back to electric energy as and when required.
• A large boom in electric vehicles (EVs), solar energy, power generation, and consumer electronics is expected in the future, which are likely to utilize this set of ACCs for powering these new products/services.
• The PLI scheme aims to build storage for ACCs to the manufacturing capacity of 50 GWh with a total financial outlay of USD 2.4 Bn.

Impact
• Through this scheme, the Government of India intends to optimally incentivize potential investors, both domestic and overseas, to set-up giga-scale ACC manufacturing facilities with emphasis on maximum value addition and quality output and achieving pre committed capacity level within a pre-defined time-period.
• The scheme envisages setting up of a cumulative ACC manufacturing capacity of 50 GWh for ACCs and an additional cumulative capacity of (5) GWh for niche ACC technologies.
• Since India currently imports these batteries, with this new incentive, an import substitution of USD 2.67 Bn is expected every year.

Budgetary outlay
The total incentive pay out over the period of 5 years of the scheme will be INR 18,100 crore/ USD 2.4 Bn.

The breakup of fund allocation year wise, for the scheme’s duration is tabulated below:

<table>
<thead>
<tr>
<th>FY</th>
<th>22-23</th>
<th>23-24</th>
<th>24-25</th>
<th>25-26</th>
<th>26-27</th>
<th>27-28</th>
<th>28-29</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsidy (INR crore)</td>
<td>Setting up of manufacturing facility</td>
<td>2700</td>
<td>3800</td>
<td>4500</td>
<td>4300</td>
<td>2800</td>
<td>18100</td>
<td></td>
</tr>
</tbody>
</table>
Eligibility parameters:

Technology parameters: The scheme covers ACCs and integrated advanced batteries (Single Units) that suffice the minimum performance specifications as provided hereunder (Shaded).

<table>
<thead>
<tr>
<th>Cycle Life</th>
<th>ACCs</th>
<th>Energy Density (Wh/Kg) ~ (Specific Density)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 1000</td>
<td>NA</td>
<td>≥ 50</td>
</tr>
<tr>
<td>≥ 2000</td>
<td>NA</td>
<td>≥ 125</td>
</tr>
<tr>
<td>≥ 4000</td>
<td>ACC</td>
<td>≥ 200</td>
</tr>
<tr>
<td>≥ 10000</td>
<td>ACC</td>
<td>≥ 275</td>
</tr>
<tr>
<td></td>
<td>ACC</td>
<td>≥ 350</td>
</tr>
</tbody>
</table>

Other Eligibility parameters:
- Manufacturing facility to be commissioned within a period of 2 years.
- Domestic value addition of at least 25 per cent in 2 years and minimum investment of INR 225 crore (~USD 31 Mn) / GWh, to be raised to 60 per cent over 5 years.
- Net worth:
  - (In case the Bidder is not an Alternative Investment Fund (AIF) or Foreign Investment Fund: The Bidder shall have a minimum Net Worth of INR 225 crore per GWh.
  - In case the Bidder is an AIF or Foreign Investment Fund: The Bidder shall have a minimum ACI at the close of the preceding financial year of INR 225 crore per GWh.
  - Notwithstanding the foregoing, a bidder may bid for any capacity if such bidder has a net worth of at least INR 1500,00,00,000.

Subsidy disbursement
- Applicable for cell pack manufacturing facilities.
- Subsidy applicable for minimum 5 GWh, capped at 20 GWh.
- Additional 5 GWh allocated for high performance, ‘niche’ ACC technologies.
- The amount of subsidy to be disbursed would be calculated as following:
Applicable subsidy amount per kilowatt hour \( X \) (multiplied) percentage of value addition achieved during the period \( X \) (multiplied) actual sale of Advanced Chemistry Cells (in KWh).

- Incentive disbursement shall commence once the committed domestic value addition and actual sale of the ACCs begins.
- The amount of cash subsidy to be distributed to the beneficiary firm shall be disbursed quarterly.
- The actual subsidy disbursement to the beneficiary firm shall be capped at 20 per cent of the ACC sale price (Net of GST) i.e., of the effective total turnover (Net of GST).

**Tenure/ Schedule:**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Event Description</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Release of RFP</td>
<td>22-10-2021</td>
</tr>
<tr>
<td>2</td>
<td>Pre-Bid Conference</td>
<td>12-11-2021</td>
</tr>
<tr>
<td>3</td>
<td>Last date for receiving queries from Bidders</td>
<td>30-11-2021</td>
</tr>
<tr>
<td>4</td>
<td>Government response to queries</td>
<td>17-12-2021</td>
</tr>
<tr>
<td>5</td>
<td>Bid Due Date</td>
<td>31-12-2021</td>
</tr>
<tr>
<td>6</td>
<td>Opening of Technical Bid</td>
<td>03-01-2022</td>
</tr>
<tr>
<td>7</td>
<td>Opening of Financial Bid</td>
<td>21-01-2022</td>
</tr>
<tr>
<td>8</td>
<td>Letter of Award (LOA)</td>
<td>04-02-2022</td>
</tr>
<tr>
<td>9</td>
<td>Validity of Bid</td>
<td>29-06-2022</td>
</tr>
<tr>
<td>10</td>
<td>Signing of the Programme Agreement</td>
<td>04-06-2022</td>
</tr>
</tbody>
</table>

**Pre-bid Conference:**
The date, time and venue of the Pre-bid Conference is:

Date: 12 November 2021 Time: 11:30 AM
Venue: Room No. 172, Kaustubham, Udyog Bhawan, New Delhi

**Bidding process (technical/financial bid)**

1. **Evaluation of technical bid:**
   - Only those Bidders who commit value addition of at least 25 per cent within 2 years from the appointed date and minimum 60 per cent value addition within 5 years from the appointed date, and installation of ACC manufacturing capacity between 5
GWh to 20 GWh, within 5 years from the appointed date, shall qualify for further consideration and shall be ranked from highest to the lowest on the basis of their technical score.

- The total score is calculated by weighting the scores and adding them as per the formula and instructions specified in the RFP.
- The Bidder achieving the highest combined score will be allocated capacity first.

2. **Evaluation of financial bid:**
   - The qualified bidders shall be short-listed for financial evaluation in the second stage.
   - The financial bid shall comprise a subsidy to be quoted by the bidder in accordance with the provisions of the Programme Agreement. It is clarified that the amount of subsidy quoted by the bidder, shall be subject to a ceiling of INR 2000 per KWh. Any bid that has quoted subsidy over INR 2000 shall be rejected.

The bids will finally be ranked according to their combined technical (ST) and financial (SF) scores as follows: \[ S = ST \times Tw + SF \times Fw \]

Where \( S \) is the combined score, and \( Tw \) and \( Fw \) are weights assigned to technical bid and financial bid, which shall be 0.80 and 0.20, respectively. The Bidders shall be ranked on the basis of their bids and the advance chemistry cell capacities shall be allocated in order of their ranking, with the bidder ranked 1st (first) being allocated the capacity first, followed by the bidder ranked 2nd (Second), so on and so forth till a cumulative capacity of 50 GWh per year has been allocated.

For more information, please visit:
https://www.investindia.gov.in/sector/automobile/electric-mobility
Conclusion

This paper described the PLI scheme for the advanced chemistry cell (ACC) battery sector which was approved by the Union Cabinet on May 12th, 2021 while its Request for Proposal (RFP) was released on October 22nd, 2021. The assessed benefit of introducing PLI in this sector will mean that a number of global and domestic companies, including numerous MSMEs are likely to benefit from the scheme. It is expected to be instrumental in achieving growth rates that are much higher than existing ones for the ACC battery-producing industries, develop complete component eco-systems in India and create global champions manufacturing in India. They will have to meet the applicable standards for global markets. The PLI schemes will also lead to investments in innovation, research and development and upgradation of technologies developed and deployed by this sector.

This is in addition to PLI schemes for 10 other major sectors of the Indian economy chosen to spearhead the step towards the vision of “AatmaNirbhar Bharat Abhiyan”. This scheme has been announced as part of the larger, ongoing campaign by the Indian government to promote resilience in domestic industries and strengthen their export capacities to ensure that India becomes an integral pillar in the global value chains.

The “AatmaNirbhar Bharat Abhiyan” was launched last year by Prime Minister Narendra Modi in the context of the global coronavirus pandemic that continues to significantly affect lives and livelihoods. It further led to a growing consensus about reducing over-dependence on a handful of countries for global supplies and promoting better capacities in domestic industries so they can cushion against future external shocks like disasters and pandemics. As a part of the “AatmaNirbhar Bharat Abhiyan,” the widening of PLI scheme to a vast array of sectors provides immense scope for Indian manufacturing to bolster and prosper.

As the world continues to grapple with the pandemic while economies reorient themselves to the new reality, it is clear that the learnings from this pandemic will play an important role in deciding the future role of many major countries, particularly those like India, having both vast potential and populations.
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