

Nano Science, Technology and Industry Scoreboard

Log9 Launches Li-ion Cell Manufacturing Unit to Secure a Significant Market Share in the EV Battery Industry

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Log9, a battery startup, has fulfilled its promise to its stakeholders by inaugurating the first commercial lithium-ion (Li-ion) cell manufacturing line in India, a year after the pledge. The plant, situated in Bengaluru's Jakkur, will produce batteries for electric vehicles (EVs) and energy storage, with a primary focus on lithium-titanium-oxide (LTO) and lithium iron phosphate (LFP) cell production. With an initial capacity of 50 MWh (megawatt-hour), the facility is expected to serve the burgeoning EV market in the country.

Log9 has introduced a commercial lithium-ion (Li-ion) cell manufacturing line in Bengaluru's Jakkur, which will produce large form factor cylindrical cells with a capacity of 22 Series to 66 Series, in addition to lithium-titanium-oxide (LTO) and lithium iron phosphate (LFP) cells. At the launch event, Log9 also revealed its in-house battery management system (BMS) called Charvik, which features power control mechanisms and SoX algorithms for safer and more reliable applications. The startup also highlighted its tech stack strategy for fast charging LFP batteries on public charging networks while preserving battery cycle life, as well as its cutting-edge cooling technologies, cell design, and control mechanisms.

Log9's CEO and co-founder, Akshay Singhal, expressed his pride in inaugurating India's first commercial lithium-ion (Li-ion) cell manufacturing line on the 2nd edition of Day Zero and commended the Log9 team for their contributions. Alongside the launch, the deeptech startup introduced its academic engagement initiative, Log9 Rise, which aims to foster a talent pool in India's battery tech ecosystem. Since its inception in 2015 by Singhal, Kartik Hajela, and Pankaj Sharma, Log9 has been producing EV and energy storage batteries, including the RapidX range for two-wheeler EVs. With the country's surging demand for clean energy and a thriving EV market, Log9 has ramped up its operations, starting as an IIT-Roorkee incubatee to building a full-fledged plant in the outskirts of Bengaluru.

Log9 has strengthened its expansion plans with the \$40 million funding raised earlier this

year, led by Petronas Ventures and Amara Raja Batteries Ltd. The startup has deployed over 3,000 EV batteries in more than 20 cities in India, including Delhi, Bengaluru, and Chennai. Log9's products, including Nanocaps, use state-of-the-art 3-volt ultracapacitors, which are powered by 16 patents for graphene synthesis and graphene products. The batteries offer superior energy and power density while minimizing current leakage. Additionally, Log9's aluminium fuel cells run on air and water and pack 8,000 Whr/kg of energy, making them a viable energy source for various applications.

Log9 collaborates with businesses across three tiers, including charging partners, fleet solution partners, and OEMs for battery-related solutions. With the Indian government's goal of EV30@30, Log9 is well-positioned to take advantage of the growing EV market, which has been supported by government incentives and the emergence of EV startups. Despite the challenges of raw material availability and a shortage of skilled labor, the outlook for the lithium-ion battery market in India looks promising. The domestic lithium-ion battery market is projected to generate \$4.29 billion in revenue in 2022 and is expected to reach \$25.3 billion by 2031 due to the increasing demand for EV batteries and higher EV adoption. However, environmental compliance is a major challenge for the operation of such startups.

Read the original article on Startup Story.