Assessing the Future of Hybrid and Electric Vehicles:

The xEV Industry Insider Report

Based on private onsite interviews with leading technologists and executives

**Key Topics**

- How fast will the PHEV market expand?
- Vehicle market projections to 2025
- Battery-market projections to 2025
- Cost of xEV batteries
- 48V mild-hybrid challenges, opportunities, and energy-storage selection
- Tesla’s success to-date and impact on the EV
- Status and future of Lead-Acid and Nickel-Metal Hydride batteries and ultracapacitors
- Performance, durability, and safety factors for automotive Lithium-Ion batteries
Assessing the Future of Hybrid and Electric Vehicles

A comprehensive analysis of the plans of major auto-makers and regional market conditions worldwide, set against the cost-benefit ratios of emerging vehicles and battery technologies

Key issues addressed by the xEV Reports

**xEV Technology & Market Direction:**

**EVs**
- What are the lessons for the industry from Tesla’s success?
- What is the ideal electric range?
- How far will battery costs come down without impacting safety and durability?
- Where are the business opportunities for existing and new players?

**PHEVs**
- The impact of Chinese and European regulations
- What is the ideal electric range?
- Will cost come down fast enough to make up for reduction in subsidies?
- Which vehicles and battery makers will take significant market share?

**HEVs**
- Will low-voltage systems stay at 14V or trend up to 48V, and when?
- What are the crucial challenges for Lead-Acid batteries?
- Will ultracapacitors finally find an automotive mass market (in micro-2 hybrids)?
- Does the Nickel-Metal Hydride technology have lasting potential?
- Which battery producers and designs will win in the marketplace?

**Benefits**

**Automakers:**
Benefit from the Report’s balanced analysis of the future cost, performance, and durability of advanced automotive batteries

**Battery producers:**
Gain insights into the direction of both the advanced automotive market and individual carmakers

**Material producers:**
Learn about the prospects of battery materials in the xEV market

**Energy providers:**
Stay abreast of the technology and trends behind vehicle electrification

**Corporate and financial investors:**
Profit from this comprehensive assessment of the technology and market challenges to better guide your investment decisions

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- Valeo
- Volkswagen
- ZF Sachs

**Battery Producers:**
- A123 Systems
- AESC
- Deutsche Accumotive
- Dow Kokam
- Exide
- GS Yuasa
- Hitachi
- Johnson Controls
- LG Chem
- Li Energy Japan
- Primearth EV Energy
- Robert Bosch
- Samsung
- SK Innovation
- Toshiba
- CATL

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- Hitachi Chemical
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Menahem Anderman has directed development programs for high-power nickel-based and Li-Ion batteries as well as electrochemical capacitors. His corporate experience ranges from materials research, cell design, and product development, to battery-system application, market development, technology and business assessment and general management. He holds a PhD with honors in Physical Chemistry from the University of California, and founded Total Battery Consulting in 1996 to offer consulting services in lithium- and nickel-based battery development and application, intellectual property issues in battery-related markets, and investment assessment. Dr. Anderman provides technology and market assessments consulting to international clients including major automakers, battery makers, material producers, financial institutions, and government agencies. Dr. Anderman is routinely quoted in news and business journals, including The Wall Street Journal, The Washington Post and Bloomberg News.

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