



Essential

Lead batteries are an irreplaceable link to connect, transport, power and protect our way of life. Without this essential battery technology, modern life would come to a halt.

Connecting Our World

Lead batteries safeguard the vital communication and data systems that keep us connected and our economy stable.

- + Lead is the dominant battery chemistry **used to support a U.S. communications infrastructure** worth more than \$1 trillion.
- + When the power goes out, lead batteries **ensure that the internet stays on.**
- + Google and many other large technology companies rely on lead battery backup power **to protect massive online data repositories.**
- + **The New York Stock Exchange** relies on lead battery backup power **to protect its critical online data.**¹
- + Lead battery energy storage systems manage the variability of electric grids **to keep online communication** consistently accessible.

Transporting Our Economy

Lead batteries reliably power the transportation and logistic networks that move the people and materials that fuel our economy.

- + **Every U.S. mass-produced car and truck (over 270 million),**³ including every electric vehicle and **more than 65 percent of all forklifts,**⁴ contains and relies on lead batteries.
- + The global automotive industry produces **more than 85 million new vehicles** annually. On average, **each vehicle will use three to four lead batteries** over its lifespan.⁵
- + Lead batteries help to safely **transport Americans via public transportation 35 million times** each weekday.⁶

Protecting Our Lives

Lead batteries support the backup recovery systems that protect lives, investments and data in an emergency.

- + In times of crisis, lead batteries **provide critical backup power for emergency response teams.** This includes energy for emergency lighting, and powering helicopters and other life-saving vehicles.



Lead batteries provide **over 75 percent** of the world's rechargeable energy storage needs.²

continued on back

Protecting Our Lives continued from front

- + The U.S. military relies on lead batteries to help keep our troops safe by powering vehicles used for bomb detection and disposal.



In hospitals around the globe, lead batteries save lives by **providing emergency power** for life-saving equipment during temporary power outages.

Powering Our Energy Future

Lead batteries are an established, economical battery technology. It can meet our growing energy storage needs today – and tomorrow, via an industry that is uniquely poised to scale-up for future demands.

- + The U.S. lead battery industry has a **robust, coast-to-coast network** for efficient manufacturing, collection and recycling.
- + Lead batteries are **highly cost effective**. They provide superior cost-benefit value in comparison to other energy storage chemistries.
- + The lead battery industry's firm foundation in the marketplace equips it for the **responsiveness and scalability** needed to meet our country's renewable energy storage needs.

Vital Power: Advanced Lead Batteries



Essential



Innovative



Sustainable



Safe

Learn more at EssentialEnergyEveryday.com



Essential Energy Everyday exists to increase awareness of the critical importance of lead batteries in powering our daily lives. We encourage continued investment in sustainable lead battery technology to store and provide energy on demand. Our initiative is supported by the two global trade associations that represent the lead battery and lead industries, **Battery Council International** and the **International Lead Association**.

¹ Berks a Major Player in Worldwide Battery Production, *Reading Eagle*, July 2017

² *The Rechargeable Battery Market and Main Trends 2014-2025*, Avicenne Energy, March 2015

³ *Vehicles-in-Operation*, IHS Markit, July 2017

⁴ "Top 20 Industrial Lift Truck Suppliers," *Modern Materials Handling*, 2017

⁵ *Success of the Circular Economy of Automotive Battery Recycling*, Johnson Controls, 2017

⁶ apta.com/mediacenter/ptbenefits/pages/factsheet.aspx, American Public Transportation Association, 2017