



CalCharge

Energy Storage in California and the Role of CalCharge

A Presentation for LBL Industry Day

April 29, 2015

CA: Critical Mass and Global Impact

- More than **128** energy storage companies and **13** academic and research institutions are located in CA
- **43%** of deployed US energy storage capacity is in California (excluding pumped hydro)
- California leads the nation in energy storage patent filings with **219** in 2013, which is more than the next four states combined
- California energy storage startups received nearly **\$73 million** in venture capital in 2013, the most of any other state
- As of 2012, California had over **2,500** jobs in the core energy storage sector



California has one the largest and most dynamic concentrations of the energy storage sector in the world.

The Opportunity/Challenge

Opportunity

- California has one of the largest and most dynamic concentrations of the energy storage industry in the world
- The California cluster has an outsized impact on industry and market development globally

Challenge

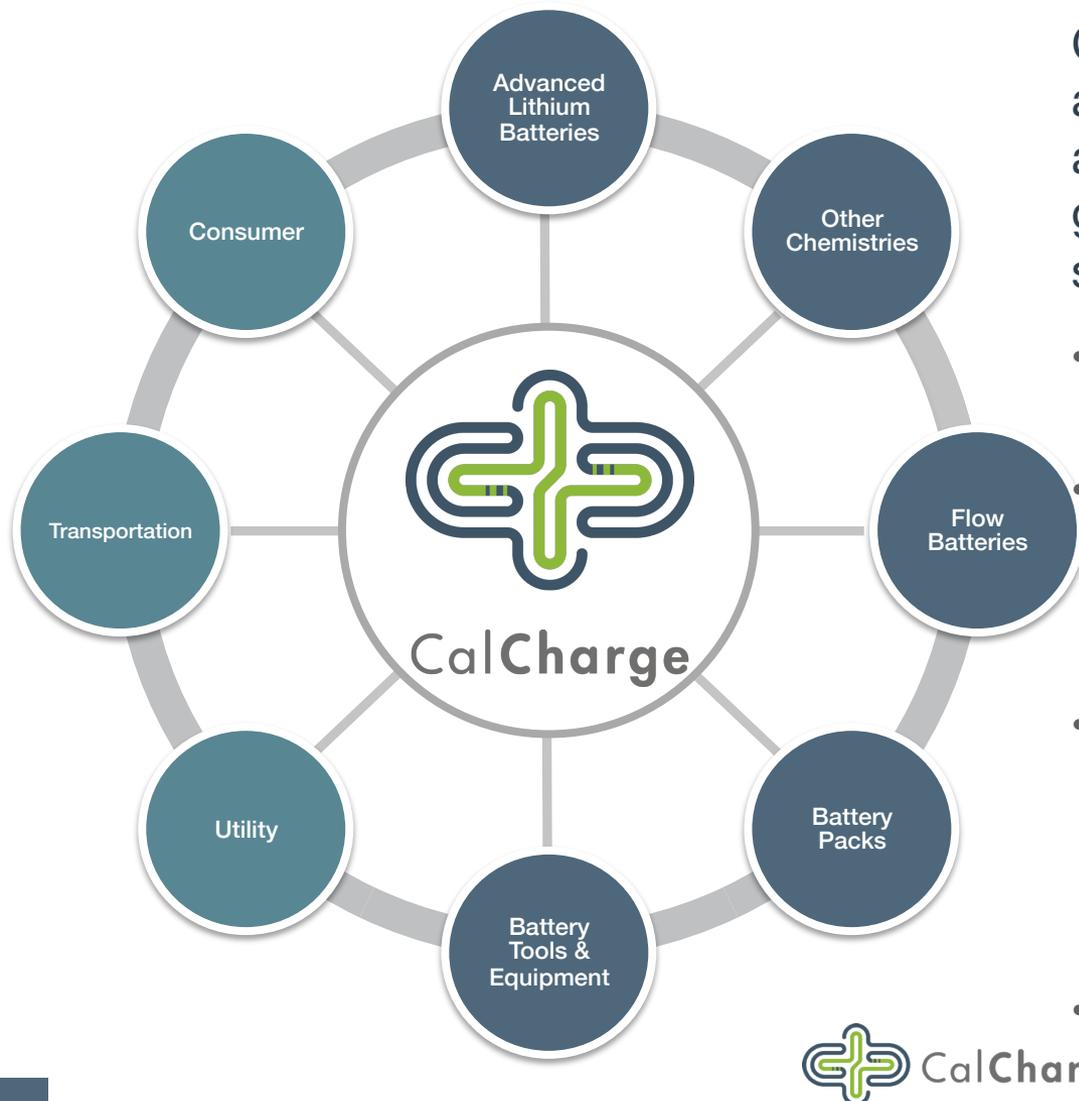
- Critical gaps in the existing ecosystem
- Impairing development
- Highly fragmented cluster
- Corporate and government end users have few connections to emerging technology developers
- Critical gaps in education and certification programs
- R&D centers are generally not located near manufacturing facilities

The background features a dark blue field with large, stylized, wavy lines in a lighter blue and a vibrant green. These lines meander across the frame, creating a sense of movement and flow. Some segments of the green lines are accented with thin, dark blue horizontal stripes.

CalCharge

An Innovation Ecosystem Accelerator

A Public Private Consortium



CalCharge brings together emerging and established companies, academic and research institutions, government agencies, and other key stakeholders to:

- Everyone brings real resources to the table.
- **Provide access to the resources and expertise needed to accelerate innovation and market impact for member companies**
- Accelerate the development, commercialization, and adoption of new energy storage technologies for the consumer, transportation, and grid markets.
- Spur advanced manufacturing

Program Areas

Technology Acceleration

- CRADA with Berkeley Lab
- CRADA with SLAC
- IP Checkups

Pre-Commercialization Support

- Advanced Manufacturing Roadmap
- Member Driven Initiatives

Professional Development

- First MSE in Batteries with SJSU
- Conferences & Seminars

Ecosystem Facilitation

- IBEW-NECA Energy Storage Standard and Certification Development and Training
- White papers & market analysis

Membership Types & Benefits

GENERAL Entities of all sizes	CHARTER Entities seeking a leadership role	PARTNER Institutions providing expertise and resources for CalCharge programs
<p>General Member Benefits:</p> <ul style="list-style-type: none"> • Access to all CalCharge programs • Recognition on CalCharge materials • Special discounts for CalCharge events and activities • Use of the CalCharge name and logo for marketing and promotional activities 	<p>In addition to the General Member benefits, Charter Members will also receive:</p> <ul style="list-style-type: none"> • A reserved seat on the CalCharge Leadership Council • Annual meeting sponsorship • Lead sponsorship of one seminar or webinar • Preferential Cooperative Research Project services including ability to locate up to 2 employees at Berkeley Lab <ul style="list-style-type: none"> - 10 spaces available - Berkeley Lab approval is required 	<p>Partner Memberships are structured on a case-by-case basis and are formed at the sole discretion of CalCharge</p>

Current Members



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CalCharge

*Accelerating the Movement from
“Innovation to Installation”*