WEBINAR AGENDA

1. Program Overview and Team Introduction
2. Recap of Previous Battery Challenge
3. EV and Battery Challenge Program Details
4. Q&A
Previous Battery Challenge: 120+ Applications from 27 countries (2018-2019)

North America
- Canada: 6
- The Caribbean: 1
- USA: 56

Europe
- Bulgaria: 1
- Finland: 1
- France: 2
- Germany: 7
- Italy: 1
- Latvia: 1
- Lithuania: 1
- Netherlands: 4
- Poland: 1
- Russia: 1
- Sweden: 1
- Switzerland: 5
- United Kingdom: 9

Asia
- China: 6
- China (HK): 1
- China (Taiwan): 1
- India: 4
- Iran: 4
- Israel: 7
- Lebanon: 1
- Malaysia: 1
- Singapore: 2
- South Korea: 1

Africa
- Sierra Leone: 1

Oceania
- Australia: 6
Battery Challenge 2018-2019 Recap

The Battery Challenge by LG Chem is a startup innovation competition designed to accelerate the adoption of new battery technologies around the world.

- 129 applications, 27 countries
- Technology focus areas include: Design, Manufacturing and Processing, Materials, Management and Control, Recycle and Regeneration
The EV and Battery Challenge (EVBC) is a global startup innovation program focused on accelerating battery and EV technologies through strategic partnerships with LG Chem (LGC) and Hyundai and Kia Motors (HKMC). New Energy Nexus is the program manager and execution partner and facilitator of this program.

The program is an unprecedented opportunity for early stage startups to

- Conduct paid proof of concept projects
- Validate and advance their technology
- Build strategic partnership leading to investment and commercialization
LG Chem
• Employs approximately 40,000 people and generated sales of KRW 28.6 trillion (about US$24 billion) in 2019

Hyundai Motor Company
• Established in 1967, Hyundai Motor Company offers a range of world-class vehicles and mobility services in more than 200 countries. Hyundai Motor sold more than 4.4 million vehicles globally in 2019, and currently employs some 120,000 personnel worldwide.

Kia Motors Corporation
• Founded in 1944, Kia today sells around 3 million vehicles a year in over 190 countries, with 52,000 employees worldwide, annual revenues of over KRW 58 trillion (about US$50 billion) and manufacturing facilities in six countries.
New Energy Nexus (NEX) is a global platform organization that support entrepreneurs with funds, programs and connections to drive innovation in the clean energy economy.

We started in California, and also operate programs in New York, China, India, Southeast Asia, and East Africa.

**Mission:** We support diverse entrepreneurs to drive innovation and build equity into the global clean energy economy.

**Vision:** New Energy Nexus strives towards an abundant world with a 100% clean energy economy for 100% of the population in the shortest time possible.
New Energy Nexus

Ken Alston
Director

Yi Ke
Program Manager

LG Chem

Sungrok Bang, Ph.D
Head of Department

Jim Kim
Open Innovation Director

Hakjin Jang
Senior Manager

Jiyoung Kim, Ph.D
Senior Manager

Yujong Kim, Ph.D
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Hyundai and Kia

Andrew Chang
Program Support

Keith Noh
Lead of Startup Incubation Team

Wooram Yang
Open Innovation Manager

Henry Chen
Lead of Open Innovation Team

Seungwan Kim, Ph.D
Open Innovation

Michelle Zhou
Senior Investment Associate
CONNECTIONS THAT MATTER

Access to two leading mobility and energy storage companies—simplify the process to set up your initial collaboration, then interact with the open innovation and research teams every step of the way.

CONSTRUCTIVE COLLABORATIONS

Fabricate at our facilities with on-ground support from our skilled teams. Test with our technologies or products—we will even go as far as merging our technologies with yours, or install your devices on our pilot lines.
**SOLID SUPPORT**

Roll out your Proof of Concept project with no cost to you. Receive validation from LG Chem and Hyundai Kia Motor Company — both have the know-how and expertise to validate your technology.

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**PARTNERSHIPS AND FUNDING**

Potential for strategic and future collaboration from experienced stewards with proven track records in mentoring and financing startups, from Joint Development Agreements to licensing.
Global Program. We welcome you. Wherever you're from, based or plan to launch

• Pre-commercial companies with a working prototype

• Technology Readiness Level (3-6) preferred

• Desire to work with LG Chem and/or Hyundai Kia Motor Company
Applicants should clearly lay out your product description, value proposition, business model, and technology expertise.

1. Ideal candidates should have a validated concept and a working prototype.
2. Team should present strong expertise in the battery and mobility sector.
3. Clearly differentiate from existing solutions with plans to scale globally.
4. The business model is based on credible commercial and economic assumptions.
BATTERIES

Materials
I. Solid electrolyte
II. Lithium metal anode
III. Silicon anode
IV. Low cobalt or cobalt free

Manufacture & Quality Control
I. Electrode coating technologies
II. Quality inspection technologies

BMS
I. Active cell balancing
II. SOC/SoH/sudden death/thermal runaway predictions
III. Wireless BMS

Maintenance
I. Battery performance diagnostics and analytics
II. Prevention of battery performance fade
III. Performance optimization regarding usage patterns

Reuse
I. Diagnostics technologies for used batteries
II. Capacity balancing technologies for used battery modules
III. EV businesses employing used cells

Recycling
I. Low cost battery recycling technologies
II. Battery recycling businesses

Please note that the sub-categories are only examples.
ELECTRIC VEHICLES

Power Electronics Components For EV

I. Motor components (e.g. stator, rotor)
II. Controller components (e.g. power module)
III. Battery system components (e.g. high voltage relay, PU pad)

EV Charging and Battery Management System

I. Active cell balancing
II. SOC/SOH/sudden death/thermal runaway predictions
III. Wireless BMS
IV. Fast charging

EV Personalization Service

I. Services based on energy usage patterns

Please note that the sub-categories are only examples.
Program Timeline

- Launch: June 22, 2020
- Application Deadline: Aug 28, 2020
- Application Review: Aug-Sep
- Video Interview: Oct-Nov
- Workshop: Nov

Please visit our website for FAQ and Terms and Conditions.
www.evbatterychallenge.com
Ready to meet LG Chem, Hyundai and Kia through the EV and Battery Challenge?

Apply at evbatterychallenge.com
Questions on the EV and Battery Challenge?

We are here for you.

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