Workshop

Co-Organised by
International Energy Agency Experts' Group on Research & Development Priority Setting & Evaluation,
The Faraday Institution,
&
The Birmingham Centre for Strategic Elements & Critical Materials

Scaling Battery Ecosystems: Evaluating R,D & E Priorities to Overcome Gigafactory Build-Out Bottlenecks

Dates: Wednesday 4th - Thursday 5th November, 2026
Venue: Day 1: Meeting Room - Birmingham Energy Innovation Centre
TEP Birmingham, (formerly Tyseley Energy Park), Hay Mills, Birmingham B25 8DW
Day 2: Meeting Room - Birmingham Energy Innovation Centre
TEP Birmingham, (formerly Tyseley Energy Park), Hay Mills, Birmingham B25 8DW

Workshop Overview and Background

The transition to clean energy technologies has elevated automotive battery production to a core pillar of national economic resilience and energy sovereignty. Globally, lithium-ion manufacturing capacity has expanded rapidly, yet its geographical concentration reveals profound structural imbalances. While China dominates the entire value chain—controlling over 80% of cathode active materials (CAM), 90% of anode active materials (AAM), and a vast share of mineral processing—the West faces a challenging landscape marked by capital bottlenecks, permitting delays, and operational friction.

As detailed in the Faraday Institution's UK Gigafactory Commission analysis, the Western approach to battery manufacturing has frequently been fragmented. Standalone projects lack the systemic de-risking that comes from integrated tripartite structures, which tie together vehicle original equipment manufacturers (OEMs) as demand anchors, cell manufacturers as operators, and active material producers as domestic anchors. Simultaneously, high industrial energy tariffs, extended grid connection timelines, severe process engineering skills shortages, and shifting policy environments create major headwinds for nascent Western developers. High-profile structural delays and liquidations across Europe and North America underscore the immense challenges of replicating highly vertically integrated, automated Asian manufacturing models without equivalent ecosystem coordination. Indeed, many of the projects that are progressing rapidly in the West, are those sponsored by battery makers from China.

This workshop, organized under the analytical framework of the IEA Experts' Group on R&D Priority Setting and Evaluation (EGRD), brings together global economists, policy architects, raw material

analysts, and industrial strategists. The goal is to perform a rigorous evaluation of the R&D priority-setting frameworks and policy interventions required to accelerate Western manufacturing capabilities. Over two days, delegates will dissect the economic and physical constraints of gigafactory build-outs, examine the implications of impending Rules of Origin (RoO) and battery passport tracing regimes, and evaluate standard methodologies to close the global competitiveness gap.

Workshop Focus

The sessions will systematically analyze why Western gigafactories are struggling to transition from pipeline announcements to active, cost-competitive commercial production. The scope focuses on the operational levers available to government and industry: aggregating OEM demand, establishing resilient localized supply routes for active materials, modernizing energy intensive industry (EII) support frameworks, and building scalable circular lifecycles. The ultimate objective is to provide the IEA network with actionable, evidence-based criteria to guide public funding toward high-yield manufacturing scales, process automation, and next-generation chemical commercialization.

Key Questions for the Experts' Group

- What are the primary macroeconomic, regulatory, and infrastructural variables driving the cost competitiveness gap between Western gigafactory developments and dominant East Asian production clusters?
- How can public research and development funding be structured to support early-stage scale-up facilities ('first-of-a-kind' pilots) transitioning between low-TRL laboratories and high-volume commercial lines?
- In what ways do impending regulatory thresholds—such as the 2027 UK-EU Rules of Origin mandates and EU recycled content declarations—impact investment risks and site design for Western battery producers?
- What role must international collaborative networks and standardized technology transfer frameworks play in overcoming the acute shortages in process engineering and automated cell assembly skills currently stalling Western capacity build-outs?

Registration of Interest

We invite you to register your interest in attending this workshop, either online or in person. In-person attendance is subject to formal confirmation by the organizing committee.

- **Registration Link:** https://www.eventbrite.co.uk/e/iea-egrd-meeting-on-scaling-battery-ecosystems-tickets-2003915374830?aff=oddtdtcreator

Day 1 Agenda: Wednesday 4th November 2026

Location (Hybrid): Meeting Room - Birmingham Energy Innovation Centre, TEP Birmingham, (formerly Tyseley Energy Park), Hay Mills, Birmingham B25 8DW

Microsoft Teams meeting
Join: https://teams.microsoft.com/meet/367891887918738?p=eiXivuIsEv3xOaWIy7
Meeting ID: 367 891 887 918 738
Passcode: dc9QZ92c

Time	Session Item / Topic	Presenter / Institutional Lead
12:00 - 13:00	**Registration and Lunch**	Common Room Area, Tyseley Energy Park, Birmingham Energy Innovation Centre
13:00 - 13:10	**Opening of the Meeting and Welcome to the BEIC**	**Professor Martin Freer** Chief Executive Officer, The Faraday Institution, formerly Director, Birmingham Energy Institute
13:10 - 13:20	**About EGRD and the Workshop Scope**	**Atsushi Kurosawa** IEA EGRD Chair
13:20 - 15:00	**Session 1: Macroeconomics, Geopolitical Industrial Policy, and Inward Investment Strategies**	**Chair: Dr. Gavin Harper**
13:20 - 14:00 *(40 min)*	**Keynote:** Mapping Global Battery Supply Chains: Identifying Bottlenecks in the Transition to Localized Manufacturing	**Teo Lombardo** *Transport Analyst & Modeller,* **Shobhan Dhir** *Critical Minerals Analyst & Modeller* *International Energy Agency*
14:00 - 14:30 *(30 min)*	Why missions fail. Nested innovation systems and the Northvolt case	**Professor David Bailey** *Birmingham Business School*
14:30 - 15:00 *(30 min)*	The Global Competitiveness Gap	**Stephen Gifford** *Chief Economist, The Faraday Institution*
15:00 - 15:10	**Coffee / Tea Break**	Networking Break
15:10 - 17:10	**Session 2: Frontline Industrial Realities – Operational Scaling, Financing Gaps, Execution Risks, Supply Chains & Materials Resourcing**	**Chair: Birte Holst Jørgensen**
15:10 - 15:40 *(30 min)*	United States Solid State Battery Strategy –Supply Chains, Stakeholders and Supply Chains – Towards a pathway for emerging battery technologies.	**Erik Spoerke** *Energy Storage Materials Thrust Lead in Sandia National Laboratories Grid Energy Storage Program.* **Principal R&D Materials Scientist**

Time	Session Item / Topic	Presenter / Institutional Lead
15:40 - 16:10 *(30 min)* *Hybrid (Presumed) CET 16:40 - 17:10*	Resourcing European Gigafactories: Materials Resilience in the Scale Up of European Gigafactories	**Ben Sprecher** *Assistant Professor, TU Delft* *Director, Centre for Materials & Resilience CMR*
16:10 - 16:40 *(30 min)* *Hybrid (Presumed) CET 17:10 - 17:40*	EU battery strategy and what should be the priority and challenges in scaling up gigafactories	**Ron Stoop** *Research Fellow, Climate & Energy Economics, Centre for European Reform* *Strategic Adviser Geo-Economics, The Hague Centre for Strategic Studies*
16:40 - 17:10 *(30 min)*	Future Gigafactories, Recycled Content Standards for New Batteries and the Circular Economy of Lithium Ion Batteries.	**Professor Paul Anderson** *Principal Investigator – ReLiB Project, University of Birmingham*
Arrive and be seated by 19:00	**Networking Workshop Dinner** *Generously funded by The Faraday Institution* The Physician, Harborne Rd, Birmingham B15 3DH	Organizing Committee Delegates

Day 2 Agenda: Thursday 5th November 2026

Location (Hybrid): Meeting Room - Birmingham Energy Innovation Centre, TEP Birmingham, (formerly Tyseley Energy Park), Hay Mills, Birmingham B25 8DW

Microsoft Teams meeting
Join: https://teams.microsoft.com/meet/3627508245830889?p=lbLsOcCvrkhg1uKvKJ
Meeting ID: 362 750 824 583 088 9
Passcode: 8R5xP6DN

Time	Session Item / Topic	Presenter / Institutional Lead
09:00 - 11:00	**Session 3: Global Case Studies & International Comparisons**	**Chair: Atsushi Kurosawa**
09:00 - 09:30 *(30 min)*	Battery and Power Industry Strategy of Japan	**Atsushi Kurosawa** Institute of Applied Energy Japan
09:30 - 10:00 *(30 min)*	The economics of the electric vehicle transition: Gigafactories, demand, supply chains, and innovation	**Dr. Viet Tien Nguyen** *Centre for Economic Performance* *London School of Economics (LSE)*
10:00 - 10:30 *(30 min)* *Hybrid* *CET 11:00 - 11:30*	Europe's Emerging EV Battery Industry: The Interplay Between Firm Strategies and Government Industrial Policies	**Dr Felix Maile** *University of Vienna* *Department of Development Studies*
10:30 - 11:00 *(30 min)* *Hybrid* *CET 11:30 - 12:00*	BatWoMan - European Research on Energy-Efficient Battery Cell Manufacturing	**Bernd Eschelmüller** Center for Transport Technologies Austrian Institute of Technology
11:00 - 11:30	Closing Address and Future Directions for Scaling Battery Ecosystems	**Professor Martin Freer** Chief Executive Officer, The Faraday Institution, formerly Director, Birmingham Energy Institute
11:30 - 11:45	**Coffee / Tea Break**	Networking Break
11:45 - 12:30	**Concluding Session: Discussion, Policy Syntheses, and Key Messages**	**Chair: Birte Holst Jørgensen** Open floor panel discussion with all session chairs
12:30 - 13:30	**Lunch**	Delegates Networking at Tyseley Energy Park
13:30 - 15:30	**EGRD ExCo Meeting**	Closed session for EGRD Executive Committee Members Only

Remote Link for IEA EGRD ExCo Meeting

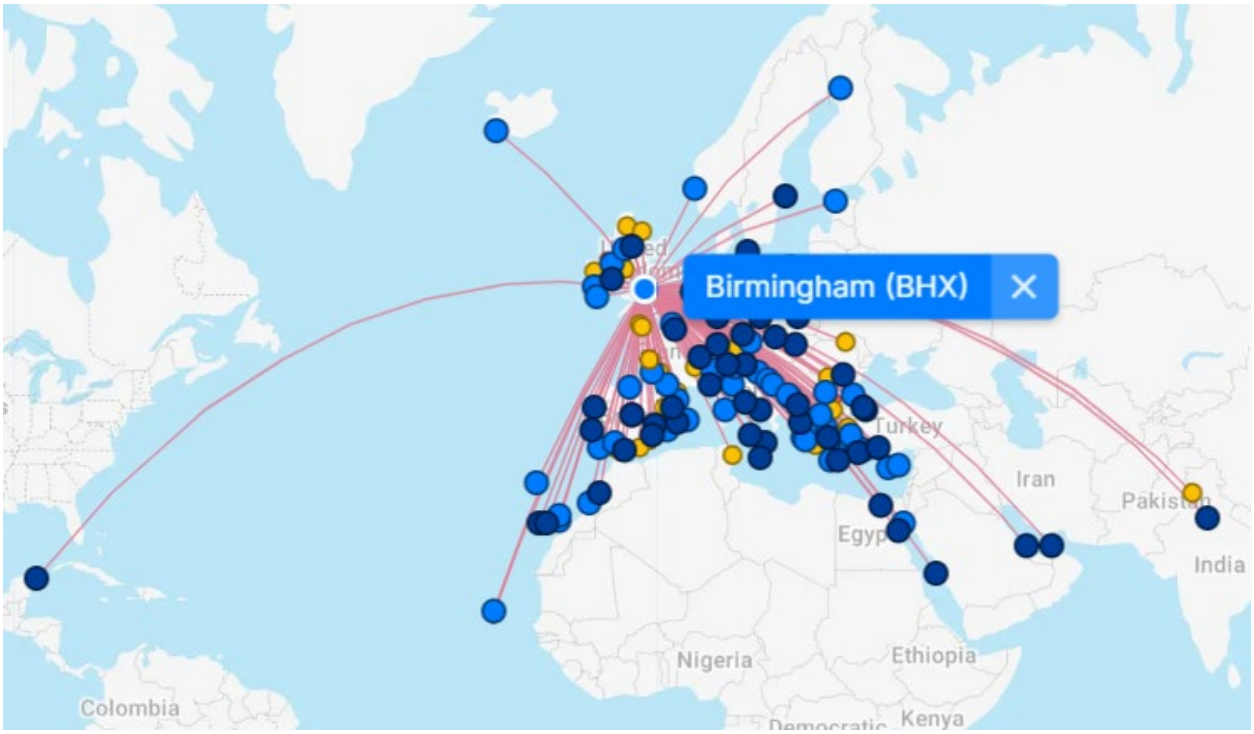
Microsoft Teams meeting
Join: https://teams.microsoft.com/meet/390681271048709?p=vFKGKfrnAFfBxGLhVu
Meeting ID: 390 681 271 048 709
Passcode: 9yY2EU9Q

Travel Directions and Local Logistics

Birmingham Airport

Whilst some participants may wish to travel from London Airports, Birmingham Airport (BHX) serves as a convenient international gateway for overseas attendees. BHX provides extensive global connectivity through direct flights and seamless one-stop routes via major international airline hubs—including Dubai (Emirates), Doha (Qatar Airways), Istanbul (Turkish Airlines), Amsterdam (KLM), Frankfurt (Lufthansa), Paris (Air France), and Dublin (Aer Lingus)—making travel straightforward from the Americas, Asia, Africa, Europe, and the Middle East. Once you land, reaching the city center is effortless: the terminal connects via a free, two-minute Air-Rail Link directly to Birmingham International Station, where frequent rail services arrive at Birmingham New Street in just 10 to 15 minutes**.**

https://www.flightconnections.com/flights-from-birmingham-bhx



Venue Location

Day 1 & 2 Sessions - 4th November 2026

Tyseley Energy Park, Birmingham Energy Innovation Centre

what3words: ///secure.tribe.invite

Tyseley Energy Park, Hay Mills, Birmingham
B25 8DW, West Midlands,
United Kingdom

Directions to Birmingham Energy Innovation Centre (Tyseley & Hay Mills) with public transport

The following transport lines have routes that pass near Birmingham Energy Innovation Centre

By Train

The closest train stations are Tyseley Station and Small Heath Station.
Both are on the Snow Hill to Stratford-upon-Avon line.
From either station, TEP is a short 15 to 20-minute walk.
Check exact timetables and routes on the National Rail website.

By Bus

Several bus routes operate near the site, mostly along the A45 (Coventry Road) or Reddings Lane.
Key bus services include the Bus: 60, X1, X2, 41.
From the bus stops on the Coventry Road, TEP is roughly a 10 to 15-minute walk.

Cycling & Driving

- The area is largely flat and has main arterial roads (A45) connecting to the city centre.
- If you are driving from outside Birmingham, check if your vehicle complies with the Birmingham Clean Air Zone requirements. [1]