
Preliminary Announcement

Call for Papers

The 23rd IERE General Meeting and Singapore Forum

**Accelerating the Carbon-Neutral Energy Transition
for Industry and Territories**

In-Person Event



Marina Bay, Singapore

**November 21–24, 2023
Singapore**

Organized by ENGIE and IERE



Accelerating the Carbon-Neutral Energy Transition for Industry and Territories

About the theme

Energy enables a high quality of life and if properly done, makes humans healthy, wealthy and free. In fact, it enables our access to clean water, healthy food and transport as well.

Today, the global energy sector is strongly relying on fossil-based energy. But energy transition is a pathway toward transformation to net zero-carbon emissions by the second half of this century. At its heart is the need to reduce energy-related CO₂ emissions to limit climate change. Renewable energy and energy efficiency measures can potentially achieve 90% of the required carbon reductions (IRENA, 2020).

However not only do these renewable solutions have to answer 3 effectiveness requirements: economical, social and environmental; there is also a discrepancy between where people live and where cheap abundant renewable energy is available. In addition, the intermittency of renewables has to be taken into account.

It is therefore without a doubt that when switching to a net zero-carbon emission world, enormous amounts of renewable energy will need to be transported. High Voltage Direct Current (HVDC) electricity transmission lines will be a part of the solution but as distance increases, other transport modes will come in play. Converting the electricity into an energy carrier such as hydrogen, ammonia or synthetic hydrocarbons will be required.

As for the intermittency, the development of information and data management technologies should ensure that the ensemble operates in a stable and reliable manner. Demand side management systems must ensure that the supply and demand of energy match and storage solutions will play in crucial role in this.

Who should attend?

The Forum is intended for experts involved in the selected themes, from IERE members and non-members, as well as all those interested in the evolution of the energy transition and the technology development and business development opportunities associated to this evolution. ENGIE & IERE will invite prominent speakers for keynote speeches.

Schedule Outline:

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|-----------|-------------------|--|
| Tuesday | November 21, 2023 | Registration and Welcome Reception (In the evening) |
| Wednesday | November 22, 2023 | The 23rd IERE GM & Singapore Forum (Day 1), Official Dinner |
| Thursday | November 23, 2023 | The 23rd IERE GM & Singapore Forum (Day 2), Social Event (Optional) |
| Friday | November 24, 2023 | Technical Tour (Optional) |

Program and Session themes

Session structure and speakers may be subject to change according to the submission of contributions.

November 21, 2023

Registration and Welcome Reception

November 22, 2023

Plenary Session - WHAT

| | |
|-------------------|-------------------------|
| Opening Address: | IERE Chair |
| Welcome Speech: | ENGIE |
| Keynote Speeches: | Details to be announced |

Plenary Session - HOW in APAC

Government's point of view for Singapore
Other APAC approach
ENGIE's Ambition in APAC

Break-out Parallel Sessions - SHARE & PULL Workshops

Session 1 (in parallel with Session 2)

Theme: How to Accelerate Learning by Doing?

Derisking of new technologies (from Renewables to e-fuels) through piloting and demonstrating is crucial for the acceleration of our carbon neutral Energy Transition

Potential topics include:

- Technologies overviews/panoramas/roadmaps
- Carbon neutral projects (low/medium TRLs)
- Industrial Carbon Neutral projects
- Co-development of technology / technology de-risking (with or without technology developers)
- ...

+ Debate

Session 2 (in parallel with Session 1)

Theme: Making Business Out of It

Entering new segmenting markets can be complex especially in a moving and accelerating context, how does one bring the different actors together?

Potential topics include:

- Multi-OEMs projects and REX (Return of Experience)
- Venturing projects and REX
- Industrial symbiosis set-up and approach
- R&D funded projects (National, Regional, , ...) and approach
- Entering new segmenting markets (Asian, African, European, Residential, Centralized, Decentralized, Aggregation...)
- ...

+ Debate

Session 3 (in parallel with Session 4)

Theme: Transversal Enablers

On top of the technology itself there is a growing need for transversal enablers.

Potential topics include:

- Critical materials, recycling, etc. in Projects
- Digital and/or Data mining in Projects
- Management of expertise within companies
- Smart-Grid / Energy Management systems in Projects
- Management of expertise in Projects
- REX Methods establishment in Projects
- Risk management & appetite in Projects
- ...

+ Debate

Session 4 (in parallel with Session 3)

Theme: Regulatory & Public Acceptance

By-in of Regulatory and Public are becoming crucial to winning projects.

Potential topics include:

- The evolution of regulatory issues
- Integration of public dialogue in new projects (REX)
- Projects involving grid autonomy : Local Energy Communities, Community ventures, etc. (REX)
- Projects with Crowd funding (REX)
- Projects with new requirements and constraints : e.g. LCA, hand-print etc.
- Best practices to enable co-funded projects (national, regional, etc.)
- ...

+ Debate

November 23, 2023

Plenary Session - IERE General Meeting

The report of IERE activities by IERE Chair and IERE Central Office

The report of IERE R&D Projects

Plenary Session – Technologies of the Future

The report of IERE Technology Foresight 2023

Keynote Speeches: Details to be announced

Break-out Parallel Sessions - SHARE & PULL Workshops

Session 5 (in parallel with Session 6)

Theme: Green Molecules

Technologies overview or specific projects case studies.

Potential topics include:

- Direct Air Capture
- CCU
- CCS
- E-fuels
- Hydrogen production
- CO2 logistics

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- Long distance transport of Energy (using molecules such as H₂, NH₃, Methanol, Methane, ...)
 - Green mobility (electric, green molecules, ...) for personal mobility but also for shipping, aviation, heavy duty,
 - ...

+ Debate

Session 6 (in parallel with Session 5)

Theme: Circularity & Energy Efficiency

Technologies overview or specific projects case studies.

Potential topics include:

- Circularity of assets (wind/solar/other...)
- Circularity in industrial processes
- Heating & Cooling technologies
- District Heating & Cooling
- Heat pumps
- SWAC
- Retrofit with Led-lighting
- ...

+ Debate

Session 7 (in parallel with Session 8)

Theme: Renewable Energy & Electrification

Technologies overview or specific projects case studies.

Potential topics include:

- Green mobility (electric, green molecules, ...) for personal mobility but also for shipping, aviation, heavy duty, ...
- Floating PV
- Floating Wind
- Agri-PV
- Industrial heat
- ...

+ Debate

Session 8 (in parallel with Session 7)

Theme: Flexibility of the Energy System

Technologies overview or specific projects case studies.

Potential topics include:

- Grid Scale Electricity Storage including and beyond Lithium Ion
- New storage technologies including heat/cold
- EMS
- Green fuel combustion in thermal units
- Thermal storage
- Virtual Power Plant
- Hybridization
- ...

+ Debate

Closing Remarks

Poster Session

Details to be announced

Social Event (optional)

Details to be announced

November 24, 2023

Technical Tour (optional)

Details to be announced



Call for Papers

<<Abstract Submission: No later than ~~June 30, 2023~~ **July 23, 2023**>>

You are kindly invited to submit abstracts for the Oral Session or Poster Session for the Singapore Forum by e-mail.

to: **register (at) iere.jp** [Please substitute “ (at) ” with “@”]

As for the **format of the abstract**, please refer to “Events” page on IERE website.

<https://www.iere.jp/events/forum/2023-singapore/forspeakers.html>

- There is a possibility we ask you to change from Oral Session to Poster Session in accordance with the number of submission of abstracts.
- Abstract will be posted the IERE website and open to the public.
- The official language of the IERE Forum is English.

Registration

Detailed information on Registration will be announced in the First and Second Announcements, which will be delivered later.

Registration Fee

The Registration fee will be informed later. It will cover attendance for the conference, reception/cocktail, Lunch, Official Dinner, and conference package.

Accommodation and travel costs will be borne by the participants.

Details including cancellation policy will be announced in the First and Second Announcements.

Conference Venue & Accommodations

Conference Venue

PARKROYAL COLLECTIONS Pickering, Singapore

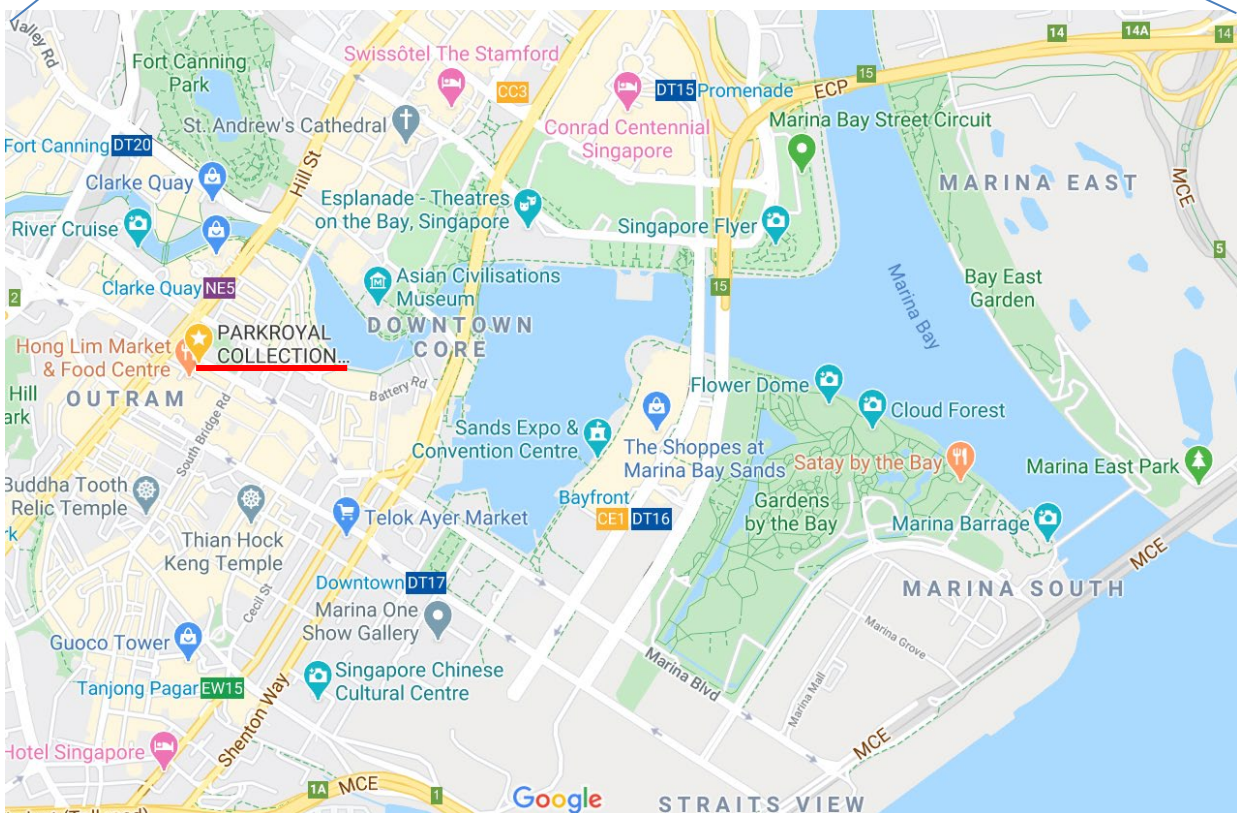
Location: 3 Upper Pickering St, Singapore 058289

Website: <https://www.panpacific.com/en/hotels-and-resorts/pr-pickering.html>



Location of the Park Royal Collections Pickering

<https://goo.gl/maps/1WjAFBduAJghqPpb6>



Accommodations

PARKROYAL COLLECTION Pickering, Singapore

Location: 3 Upper Pickering St, Singapore 058289

Website: <https://www.panpacific.com/en/hotels-and-resorts/pr-pickering.html>

Rooms at special rates will be prepared for conference participants by the Hotel. These will be allocated on a first come first served basis. For further information please contact the IERE Central Office.

Details to be announced.





About ENGIE

Our group is a global reference in low-carbon energy and services. In response to the urgency of climate change, our ambition is to become the world leader in the zero carbon transition "as a service" for our customers, in particular global companies and local authorities. We rely on our key activities (renewable energy, gas, services) to offer competitive turnkey solutions.

With our 170,000 employees, our customers, partners and stakeholders, we are a community of Imaginative Builders, committed every day to more harmonious progress.

Turnover in 2019: 60.1 billion Euros. The Group is listed on the Paris and Brussels stock exchanges (ENGI) and is represented in the main financial indices (CAC 40, DJ Euro Stoxx 50, Euronext 100, FTSE Eurotop 100, MSCI Europe) and non-financial indices (DJSI World, DJSI Europe and Euronext Vigeo Eiris - World 120, Eurozone 120, Europe 120, France 20, CAC 40 Governance).

Please visit: www.engie.com

About IERE

IERE is an organization for exchanging electricity and energy related cutting-edge technologies and R&D information among its members from the electricity & energy supply industry, equipment provider businesses, academic research, government, etc. This unique platform is of great help for executives, senior managers, engineers, and researchers who are responsible for R&D and solutions. It is a worldwide, non-profit organization, established as "International Electric Research Exchange" in 1968.

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