

SAVE \$200

If you book
3 persons
or more

Electric Vehicles & the Grid

The essential guide to opportunity and risk within emerging EV charging value chains

LIVE ONLINE COURSE OVER 3 SESSIONS

Commences: 29th September 2020

Course Sessions

1. The EV market and its bulk impact on electricity systems
2. Charging challenges, smart charging and EVs as grid assets
3. Value chain convergence and technology disruption

Benefits of Attending

- Quantify the variables which will determine the impact of EVs on electricity supply
- Identify the key barriers to widespread EV integration and growth, from a power system perspective
- Assess where and how EVs can help the grid, through smart charging and Vehicle-to-Grid (V2G) solutions
- Get up-to-date on the most significant value chain activities and pilot study findings
- Analyse and segment the competitive landscape for EV charging
- Understand and discuss which future technologies, behavioural trends and policy influences will be crucial to creating long-term, sustainable business models



Online Course at a Glance



The online course will be delivered in 3 live interactive sessions. Each session will be 3 hours, including a 15-minute break. The live online course is powered by Zoom, which can be accessed via laptops, desktops or mobile devices. Please refer to page 4 for more details.

COURSE OVERVIEW

Even without the rapid growth of EVs, our current power systems are in the midst of a disruptive transition towards cleaner, diversified and more flexible structures. If a transition from internal combustion engines (ICE) to electric vehicles (EVs) is to be achieved, what will be the impact on these systems? What are the barriers to scale and which solutions (and hence market opportunities) will be essential? This course provides a comprehensive introduction to the multi-sector issues that must be understood and integrated, plus the competitive battles ahead, including: technology status and trends, management of electricity demand & supply, charging network players and competitors, consumer behaviour influences.



YOUR EXPERT COURSE DIRECTOR

A respected energy business analyst & trainer with over 25 years' commercial experience, focusing on the impacts of clean energy technologies on power systems and their associated value chains.

His business experience has spanned both the energy and telecoms/IT industries, providing an informed perspective on how convergence of the two into a smarter system will bring major change to the way electricity is generated, distributed and consumed.

By focusing on the interconnection of multiple business variables within energy and technology markets, he has helped senior business-people in **over 25 countries across 5 continents**. He helps energy investors, product innovators, project developers, policymakers and others to navigate the opportunities and threats created in the transition to cleaner, "smarter" and more connected power systems. He also delivers training on a global basis.

He has an outstanding academic background, including a 1st Class honours degree in Natural Sciences from the University of Cambridge, a PhD in Earth Sciences and further Diplomas in Economics & Sustainability.

WHO HAVE ATTENDED

ABB • Alstom • Bangkok Cogeneration • BNP Paribas • BP • Canadian Solar • Danish Energy Agency • Dept. Trade & Industry South Africa • EDF • Electricity and Cogeneration Regulatory Authority of Saudi Arabia • Energy Commission of Malaysia • Eskom • European Investment Bank • GE • GIZ • Hawaiian Electric Co. • HSBC • Indonesia Investment • Japan Bank • K-Green • Lightsource • Malaysian Green Technology Corporation • Ministry of Economic Affairs (Netherlands) • Munich Re • Ontario Power Generation • OPIC • Qatar Petroleum • Saudi Aramco • Schneider Electric • Siemens • Singapore Power • Statkraft • The World Bank • Total • US Dept. of Energy • Willis Group

Testimonials

"This was one of my best spent weeks on training all year! I found him very knowledgeable and enthusiastic in presenting the material, also enabling knowledge exchange between participants in the group. Thanks."

- Hanne Marit Bjørk, Vice President, Statkraft Development AS

"The course was well researched, interesting and on point."

- Dan Thompson, Head of Environmental Products, Tullett Prebon

"Very well-organised class with excellent trainer. Impressive!"

- Past participant, Bangkok Cogeneration Co.

"He is a professional trainer with excellent presentation skills. He is able to make simple presentation of complex issues and has a very good knowledge of the renewable energy matters. I highly recommend him as a trainer!"

- Olivier Bontems, Directeur, IDETA

Teaching Methodology

The course combines presented materials with plenty of opportunity for Q&A, interactive discussions, and the use of quantitative models to illustrate key learning points. Current market examples and data are utilised wherever helpful.

In House Training (Save up to 40%)

Interested in this course for a group of at least 15 people? Contact Edwin Faith on +65 6325 0250 or email edwin@infocusinternational.com

Programme Schedule (GMT+1)

Applicable to all 3 sessions

07:00	Session starts
08:30-08:45	Break
10:00	End of session

THE ADVANTAGES OF LIVE ONLINE LEARNING

Until now if you wanted to experience one of Infocus International's world leading courses, you would either have to travel to the training location, or your organisation would sponsor an in-house training programme. Now, regardless of your geographical location, you can experience the same level of quality as a public or in-house course and learn from office, home or even on the move. There's also the huge savings of cost and time by not having to travel to the training location.

We all face more pressure in our business lives. Finding time to attend courses can prove very difficult and plans are too often put aside. If you've had to put training on the back burner due to other commitments, our online learning course is what you've been waiting for.

Through live online learning you can enjoy the full benefits whilst minimising disruption to your professional commitments. The course is accessed online, giving you the flexibility and freedom to participate from anywhere in the world as long as internet access is available.

If you miss out a session or two, you can access the playback video recording available up to a week after the live session.

ABOUT ORGANISER

Infocus International is a global business intelligence provider of strategic information and professional services. We provide worldwide participants with intensive technical training programmes designed to help them succeed on the global stage.

Our ever-expanding portfolio of 1 to 5-day physical courses, conferences, and live online courses range in complexity from introductory programmes for new market entrants, through to the most complex subjects in the industry.

SESSION 1 29 September 2020, 7 - 10am GMT+1 (London time)

The EV Market and Its Bulk Impact on Electricity Systems

EV market drivers & charging trends

- Policy environments and drivers for EV uptake, including recent trends
- Quantifying the key metrics for EVs which matter to electricity systems, including: efficiencies, ranges and charging rates
- A review of key technology issues and value chain players, including charging types, locations and networks
- Segmenting the EV and charging market (current and future)

The macro impact of EVs on transitioning power systems

- Quantifying the impacts of EVs on bulk energy demand and system power
- EVs in the context of typical (and example) patterns of electricity demand
- A critical analysis of the key variables in "well-to-wheel" emissions debates and disagreements: examining the numbers
- Integrating EV charging with renewable power
- Charging deployment challenges, including the uncertainties evident in different forecasts and scenarios

SESSION 2 6 October 2020, 7 - 10am GMT+1 (London time)

Charging Challenges, Smart Charging and EVs as Grid Assets

Charging networks, smart charging and grid distribution systems

- Can local grids support home charging on a mass scale? (Examining the numbers)
- What do recent trials and charging data tell us about the impacts of EV charging on demand?
- How to incentivise smart charging? (policies, pricing and new business models)
- Smart charging and smart home examples
- New opportunities and threats for the business models of system operators, electricity utilities, aggregators and emerging value-chain disruptors

Electric vehicles as grid assets

- Assessing the case for vehicle-to-grid (V2G): what problems can it realistically solve?
- How much are grid services worth, how are they monetised and how is this changing?
- Examples of vehicle-to-grid (V2G) case studies and pilots: target sectors and early lessons
- Evaluating the barriers to V2G development (including competition, business model and EV owner concerns)
- 2nd life EV battery applications: early examples, long-term scalability, growth barriers

SESSION 3 8 October 2020, 7 - 10am GMT+1 (London time)

Value Chain Convergence and Technology Disruption

New players, new strategies and new business opportunities

- What strategies are key players pursuing? (oil companies, fuel retailers, electricity utilities, automakers, newcomers and more)
- Location, location, location: homes, workplaces, forecourts, leisure destinations and the issues in developing sustainable business models
- Integrating stationary storage and EV charging
- Integrating distributed power generation and EV charging
- Electrification in heavy-duty vehicle segments: the state of play

Evaluating the impacts of technology, behavioural change and potential competition

- The importance of different outcomes of hybrid vs “pure” EV uptake
- Battery evolution: chemistry, resource limitations and future tech
- Vehicle autonomy: its status and potential impacts on electricity demand and charging requirements
- A rational perspective on the battery vs. hydrogen debate: efficiencies, economics, end-users

Closing summary

- Are today’s assumptions appropriate for the long-term, sustainable charging networks and business models of tomorrow?

WHAT EQUIPMENT DO I NEED?

- A laptop / desktop PC / Tablet / Mobile Phone
- Internet connection – broadband wired or wireless
- Speaker and microphone
- Webcam

HOW DOES IT WORK?

A unique meeting ID and password will be provided to the participants to enter Zoom virtual meeting room and to take part in the interactive live course. You can choose to download the Zoom software, or simply access via web browser. Ask live questions or utilise Chat feature to interact with the trainer and fellow participants. You can also use Whiteboard and Screen Sharing features. Just like in a physical workshop, Whiteboard allows trainer and all participants to write on a blank screen for everyone to see. Our event coordinator will be there to guide you if you need any assistance.

WHAT IF I MISSED A SESSION?

Participants who miss a session may contact our dedicated course coordinator to request the video recording, which is available up to one week after each session. Note that the video will not be downloadable.

WHO WILL BENEFIT?

- Policymakers and policy advisors
- Investors, including commercial and development banks, venture capital and private equity
- Power generators (utilities and IPPs)
- Renewable energy developers
- Transmission/Distribution system operators
- Vendors & EPC contractors
- Large energy users and vehicle fleet operator
- Commercial services suppliers (law, insurance etc.)
- Oil companies and fuel distributors
- Automotive manufacturers



Electric Vehicles & the Grid

LIVE ONLINE COURSE OVER 3 SESSIONS

Commences: 29th September 2020

DELEGATE DETAILS

1 Full Name Mr/Ms _____

Job Title _____

Tel/Mob _____

Email _____

2 Full Name Mr/Ms _____

Job Title _____

Tel/Mob _____

Email _____

3 Full Name Mr/Ms _____

Job Title _____

Tel/Mob _____

Email _____

4 Full Name Mr/Ms _____

Job Title _____

Tel/Mob _____

Email _____

ORGANISATION DETAILS

Company _____

Address _____

Tel _____

AUTHORISATION

Registration is not valid without authorisation

Full Name Mr/Ms _____

Job Title _____

Email _____

Signature _____

Registration & Enquiries

Infocus International Group Pte Ltd
143 Cecil Street #25-02, Singapore 069542
Contact : Edwin Faith
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Main : (65) 6325 0210
Fax : (65) 6224 5090
Email : edwin@infocusinternational.com
Web : www.infocusinternational.com/ev

YOUR INVESTMENT

	For 1 or 2 persons	For 3 persons or more
FEE PER PERSON	USD 1,590	USD 1,390

PAYMENT METHOD

Payment is required within 5 working days upon receipt of invoice.

By Credit Card: VISA MasterCard American Express

Note that the credit card will be charged in Singapore Dollar currency (SGD). We will quote the SGD amount and send credit card payment instruction prior to the charge.

By Telegraphic Transfer (USD)

Account name: Infocus International Group Pte Ltd
Account number (USD): 017-025866-1
Swift code: SCBLSG22
Bank name: Standard Chartered Bank
Bank address: 6 Battery Road, #01-01, Singapore 049909

OTHER ONLINE COURSES

Energy Storage
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Mastering Wind Power
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LNG: Supply, Demand, Pricing and Trading

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CANCELLATION POLICY

Should you be unable to attend, a substitute delegate is welcome at no extra charge. If this is not suitable, cancellations must be made in writing (letter or fax) at least 30 days before the program commences. A full refund less an administration charge of 10% will be given. Registrations cancelled less than 30 days before the event must be paid in full and a credit voucher equivalent to the full amount will be issued for you to attend any Infocus International Group events for up to 18 months. Credit vouchers will not be issued for no-shows without cancellation. Infocus International Group will provide full course documentation to a delegate who has paid, but is unable to attend. Infocus International Group reserves the right to change the content of the program without notice including the substitution, alteration or cancellation of speakers and/or topics and/or the alteration of the dates of the event. Infocus International Group is not responsible for any loss or damage as a result of a substitution, alteration, postponement or cancellation of an event under any circumstances.