



# **SMART GRID MISSION TO THE UK**

**11 – 15 FEBRUARY, 2019**



Department for  
International Trade



Foreign &  
Commonwealth  
Office

**Monday, 11 February 2019**

**London**

8:00 Leave hotel to BEIS

**UK Government Overview – Regulation (BEIS)**

9:00 Arrival at BEIS

09:15 Tea, Coffee and Introductions (Carol Hinchley and Azeema Farooq, FCO).

09:30 Overview of the UK's electricity sector (James Veaney, Ofgem).

10:00 System Operations (Simon Rickenbach, BEIS).

10:30 Smart Meters (Harriet Caruana, BEIS).

11:00 Smart Systems (Doerte Schneeman, BEIS).

11:30 Low Emission Vehicles (TBC - BEIS).

12:00 Lunch break & transfer to next venue

**UK Power Business Sector Overview (St. Ermin's Hotel)**

13:00 How UK Export Finance can support partnerships with the UK (Julian Lynn and Carla Senatore, UKEF)

14:00 DIT Introduction (Phil Nicholson DIT Electrical Networks Specialist)

14:30 UK Power Policy Session (Phil Nicholson DIT Electrical Networks Specialist)

16:30 Q&A (Phil Nicholson DIT Electrical Networks Specialist)

19:00 Welcome Dinner (Venue tbc)

**Tuesday, 12 February 2019**

**London**

7:45 Leave hotel to Imperial College

8:30 **Visit to Imperial College**

12:00 Lunch

13:00 Transfer to National Physical Laboratory

**Visit to NPL Facilities**

13:30 Introductions and Overview of NPL (Ben Rowton)

14:00 Overview of Smart Grid in Brazil (Brazilian Delegation)

14:30 Big Data of Power Networks (Data Science department)

15:00 Magnetic losses in electrical steels (Stuart Harmon)

15:30 Smart Grids and Power Measurements (Paul Clarkson)

16:00 Battery Metrology (Gareth Hinds)

16:30 Discussion and next steps (Ben Rowton)

Free evening

**Wednesday, 13 February 2019**

**London**

7:50 Leave hotel to Reactive Technologies

**Meeting with Reactive Technologies**

8:30 Introduction and Overview of Reactive Technologies (Bob Stonehouse, Senior Originator)

9:00 Overview of Systems

9:30 Discussions and Q&A

10:30 Transfer to Kiwi Power

**Meeting with Kiwi Power**

11:00 Introduction and Overview of Kiwi Power (Nima Tabatabai, Intl Market)

11:30 Visit to Operation Centre

12:00 Discussions and Q&A

12:30 Transfer to B&B LLP

**Meeting with National Grid Ventures at Bird & Bird LLP Office**

13:00 Introductions

13:10 Overview of Brazilian Market

13:20 Overview of UK Operations

14:00 Q&A

## **Roundtable with UK technology providers at Bird & Bird LLP Office**

14:30 Welcome (Paul Williams, Santander Intl)

14:40 Introduction (Bird and Bird LLP)

15:00 Overview of the Power sector in Brazil (Abradee/Aneel)

15:30 Brazilian Delegation Introduction

16:00 UK companies introduction

17:30 Q&A

18:00 Closing Remarks

Free evening

**Thursday, 14 February 2019**

**Birmingham**

9:00 Leave hotel to Train Station

10:23 Train to Birmingham

11:45 Arrival and Transfer to Catapult

**12:30 Visit to Catapult Electricity Networks (Andrew Stokes, Business Dev Manager)**

14:30 Transfer to Birmingham University

**15:00 Visit to Birmingham University and Energy Storage Centre**

17:00 Transfer to Train Station

18:00 Train to London

Free evening

**Friday, 15 February 2019**

**London**

8:00 Leave hotel to EIC

**Roundtable at Energy Industries Council**

09:00 Registration

09:30 Welcome and EIC Overview - Neil Golding , EIC

09:40 Brazilian delegation introductions - Ana Terra, DIT

09:50 How to do business in Brazil - Ana Terra, DIT

10:10 Overview of the Brazilian Power sector – Aneel or Abradee

10:30 Networking break

10:40 Attendees introductions

10:50 Round table discussion

11:20 Closing remarks – Neil Golding, EIC

11:30 Close

12:00 Lunch

13:00 Transfer to UKPN

**14:00 UK Power Network (Ian Cameron, Innovation Department)**

**16:00 Wrap up session (DIT/FCO and delegates)**

Free evening

## Company Profile

C



An independent authority working with researchers, industry and government, Energy Systems Catapult aims to eliminate barriers that prevent innovators from bringing new products, services and business models to the market. They offer innovative features and unique assets, including:

- System modeling and analysis - to understand how innovations can best contribute to the energy transition and provide most of the economic value;
- system integration - to align innovation activities, products and services with regulators, industrial operators, local authorities, investors and future architectures of potential systems and business models, while helping to assess the potential risks, benefits and economic impacts of innovations and develops associated business cases;
- Testing and demonstration - to help innovators develop new technologies, products, services and business models and
- Stakeholder services - to provide targeted knowledge to support innovators in navigation in the complex energy market.

E



Established in 1943, the EIC is a not-for-profit organization with a membership of over 650 UK-registered companies who deliver goods and services to the energy industries worldwide. They provide one of the most comprehensive sources of energy projects and business intelligence in the energy sector today.

I

**Imperial College**  
London



Imperial College London is a British institution with the main campus located in London. With a strong focus on science, engineering and medicine, it shares ideas, knowledge and technology to find answers to the major scientific issues, addressing global challenges.

## K



KiWi Power is the UK's leading demand response aggregator and has been a key player in the UK energy market since 2009. They are passionate about driving innovation in technology to create efficiencies, generate commercial opportunities and promote a green agenda. They work confidently with policy makers, System Operators and network operators to help evolve the energy landscape.

## N



In the UK electricity sector, National Grid is the high voltage electricity transmission network that covers Great Britain. National Grid Ventures (NGV) operates in competitive markets outside of National Grid's core regulated activities in the UK and US. It has a diverse portfolio of energy businesses that deliver competitive products and services for a broad range of customers. NGV is focused on developing, operating and investing in energy projects, technologies and partnerships to help accelerate the development of a clean energy future for consumers.



The National Physics Laboratory is the UK's National Weights and Measures Laboratory, based in Bushy Park in Teddington, Richmond upon Thames. It is the largest institution of applied Physics of the country, and has a similar role to the Brazilian National Institute of Metrology, Quality and Technology (Inmetro).

## O



The Office of Gas and Electricity Markets (Ofgem), supporting the Gas and Electricity Markets Authority (GEMA), is the government regulator for the electricity and natural gas markets in Great Britain.

## R



Reactive Technologies goal is to lead the transition to a smarter, lower carbon energy system by empowering all system players to become active participants through our ultra-fast, cloud-based technology combined with our deep technical understanding. They deliver value to businesses, generators and grid operators by unlocking energy revenue streams, optimising asset flexibility, delivering ultra-fast responses and providing future-proof solutions.

## S



Santander UK is a large retail and commercial bank based in the UK and a wholly owned subsidiary of the major global bank Banco Santander. They are a large customer-focused bank that creates value by serving their customers with financial products and services. Most of their customers are individuals but they also serve a growing number of small, medium and large UK companies.

## U



### UK Export Finance

UK Export Finance is the operational name of the Export Credits Guarantee Department, the UK Export Credit Agency and a UK government ministerial department.

It supports exporters and project developers who receive exports from the UK to manage the environmental, social and human rights risks and impacts related to the project.



UK Power Networks is an electricity distribution network operator that covers the southeast and east of England, covering London. It manages three licensed distribution networks that together cover an area of 30,000 square kilometers and approximately eight million customers.



### UNIVERSITY OF BIRMINGHAM

The University of Birmingham was established by Queen Victoria by Royal Charter in 1900 and was the UK's first civic or 'redbrick' university. Characterized by a tradition of innovation, research at the University has broken new ground, pushed forward the boundaries of knowledge and made an impact on people's lives. The University is constantly developing and evolving in its desire to become a leading global university. **Contacts & Addresses**

## Addresses and Contacts

London	London	Birmingham	London
Day 2 - 12	Day 3 - 13	Day 4 - 14	Day 5 - 15
<p>8:30 - 11:30   <b>Imperial College, Electrical Engineering Department</b> Exhibition Road, South Kensington Campus- London SW7 2AZ</p> <p>- Victoria Ebo v.ebo@imperial.ac.uk 020 7594 2620</p>	<p>8:30 - 10:30   <b>Reactive Technologies</b> 33 Holborn, EC1N 2HT, London UK</p> <p>- Bob Stonehouse 44 (0)7881 290474 bobs@reactive-technologies.com</p> <p>11:00 - 12:30   <b>Kiwi Power</b> 3 London Wall Buildings, Floor 3, London Wall, London, EC2M 5PD</p> <p>-Nima Tabatabai 44 (0) 7427 434 507 ntabatabai@kiwipowered.com</p>	<p>12:30 - 14:30   <b>Catapult</b> 7th Floor, Cannon House, The Priory Queensway, Birmingham, B4 6BS</p> <p>- Andrew Stokes 44(0)7816 144704/ 44 (0)121 203 3700 Andrew.Stokes@es.catapult.org.uk</p> <p>15:00 - 16:30   <b>Energy Storage Center/Birmingham University</b>  Edgbaston Birmingham B15 2TT (exact address tbc).</p>	<p>9:00 - 11:30   <b>EIC</b>  89 Albert Embankment, London, SE1 7TP</p> <p>- Jo Campbell 44 (0) 1224 628 250 / 44 (0) 7718 479 185 jo.campbell@the-eic.com</p> <p>- Amisha Patel 44 (0)20 70918612 amisha.patel@the-eic.com</p>
<p>13:30- 17:30   <b>NPL</b> Hampton Road, TW11 0LW</p> <p>- Fawzi Abou-Chahine fawzi.abou-chahine@npl.co.uk</p> <p>- Ben Rowton 020 8943 6385 / 07890 612 905 ben.rowton@npl.co.uk</p>	<p>13:00 - 14:15   <b>Nation Grid Ventures</b> Bird and Bird LLP 12 New Fetter Ln, London EC4A 1JP</p> <p>14:30 - 16:45   <b>Bird and Bird</b> LLP 12 New Fetter Ln, London EC4A 1JP</p> <p>- Paul Williams 44 (0)7803 376971 paul.williams1@santander.co.uk</p> <p>- Sasha Collins Sasha.Collins@twobirds.com</p>		<p>14:00 - 16:00   <b>UKPN</b> Newington House, 237 Southwark Bridge Road, London, SE1 6NP</p> <p>- Ian Cameron 07812262469 Ian.Cameron@ukpowernetworks.co.uk</p>

## Useful Information

- Valid passport and Immigration letter issued by the Consulate or Embassy
- Air ticket with round trip flights and travel insurance voucher
- Business cards
- 220 V power socket adapter (for non bivolt 110V devices)
- UK power socket adapter (different from other countries in Europe)
  
- Time zone: The UK will be **2 hours ahead of Brazil** during the period of the mission.
- Weather: Average temperature in London in January is **5 - 7°C**, with partly cloudy skies.
- Reverse charge call: Look for public phones to make reverse charge calls, once the hotel may charge for those. You can ask for a call through any phone dialling 001, in English.
- Emergencies: The official UK number for emergencies is **999**.
- Outfit – Formal attire is recommended in any business environment, but not necessary for site visits.
- Heathrow Airport: The airport is located outside London (1h car ride). Delegates should arrive 3 hours prior to international boarding

### Contacts:

Ana Terra Fernandes – 55 21 97666 6610 – [Ana.Terra@fco.gov.uk](mailto:Ana.Terra@fco.gov.uk)

Louise Hill – 55 21 996060136 – [Louise.Hill@fco.gov.uk](mailto:Louise.Hill@fco.gov.uk)

Valmir Dias – 55 21 2555 9656 – [Valmir.Dias@fco.gov.uk](mailto:Valmir.Dias@fco.gov.uk)

### Hotel - London (suggested hotel)

#### **Strand Palace Hotel**

<https://www.strandpalacehotel.co.uk/>

Address: 372 Strand, London, WC2R 0JJ

OBS: Any minibar items and or services not included in the mission guide will be charged from the delegate.

### Tips:

- The hotel in London is located at Covent Garden, home of the city's finest stores, restaurants and architecture. Please check the website for shopping discounts, live concerts and cultural events: <https://www.coventgarden.london/news-events>