

Energy Storage for Low Carbon Grids



Energy Storage for Low Carbon Grids and Integrated, Market-fit and Affordable Grid-scale Energy Storage (IMAGES) **DISSEMINATION EVENT**

Thursday 25th January 2018
Institution of Engineering and Technology (IET)
<https://savoyplace.theiet.org/>
2 Savoy Place, London, WC2R 0BL

09:30	<i>Arrivals – light breakfast with tea & coffee</i>
10:00	Introductions, Objectives of the meeting
Session 1: Review of Progress and Key Achievements	
	Energy Storage for Low Carbon Grids
10:15	<i>Overview: the Road to Flexibility</i> , Goran Strbac (Imperial College London)
10:30	<i>Technology Breakthroughs, Technology Innovation, Materials and Manufacturing for Grid Applications</i> , Clare Grey (University of Cambridge)
10:45	<i>Operational Management of Storage Systems and Grid Control</i> , Phil Taylor (Newcastle University)
11:00	<i>Whole System Analysis, Value Proposition, Market and Regulatory Framework</i> , Richard Green (Imperial College London)
	Integrated Market-fit and Affordable Grid-scale Energy Storage (IMAGES)
11:15	<i>Overview: Our Journey and Highlights</i> , Jihong Wang (University of Warwick)
11:30	<i>UK Potentials for Compressed Air Energy Storage (CAES)</i> , David Evans (BGS) & Seamus Garvey (University of Nottingham)
11:45	<i>Thermal Power Plant Flexible Operation with Thermal Storage Integration</i> , Phil Eames (Loughborough University) & Jacek Wojcik (University of Warwick)
12:00	<i>Economic Value of Energy Storage: Techno-Economic Study and Whole System Analysis</i> , Michael Waterson (University of Warwick) & John Barton (Loughborough University)
12:15	Open discussion
12:45	<i>Lunch – posters</i>

<i>Session 2: Parallel Sessions</i>		
	Session 2.1: Advances in Storage Technologies and Manufacturing	Session 2.2: Control and System Value of Energy Storage
14:00	<i>Sodium-ion Batteries: the Cathode Challenge</i> , Peter Bruce (University of Oxford)	<i>Energy Storage: a Game Changer for the Energy Market</i> , Goran Strbac (Imperial College London)
14:20	<i>Progress in Redox Flow Battery Development</i> , Nigel Brandon (Imperial College London)	<i>Optimal Use of Energy Stores</i> , Robert Mackay & Lisa Flatley (University of Warwick)
14:35	<i>High Temperature Thermal Energy Storage: an Option for Increasing the Flexibility in Nuclear Power Generation</i> , Phil Eames (Loughborough University)	<i>New Power Electronic Interfaces for Grid-Scale Energy Storage</i> , Dan Rogers (University of Oxford)
14:50	<i>Thermal Energy Storage: from Materials Formulation to System Integration</i> , Yulong Ding (University of Birmingham)	<i>A Time-Step Analysis of the UK Power System Used to Determine the Optimal Amount and Mix of Energy Storage Technologies</i> , John Barton (Loughborough University)
15:05	<i>A Summary of BGS Studies During the IMAGES Project</i> , David Evans (British Geological Survey)	<i>Incorporating Energy Storage in Capacity Markets</i> , Chris Dent (University of Edinburgh)
15:20	<i>Manufacturing and Materials Processing</i> , Chun Huang (University of Oxford)	<i>Energy Storage Dynamic Modelling and Simulation Tool Development</i> , Mark Dooner (University of Warwick)
15:35	<i>Cost-Effective Oxygen Catalysts for Rechargeable Metal-Air and Flow Batteries</i> , Zhenxiao Guo (UCL)	<i>Integrating Energy Storage with Generation (esp. with Wind)</i> , Seamus Garvey (University of Nottingham)
15:50	<i>Tea/coffee break – posters</i>	
Session 3: Future Work		
16:20	Panel Discussion with Industry and Government chaired by Goran Strbac and Jihong Wang <i>GiW Zanganeh, Alacaes</i> <i>Emma Gibson, Highview Power Storage</i>	

	<i>Peter Bingham, Ofgem</i> <i>Cathy McClay, National Grid</i> <i>Adrien LeBrun, Green-hedge</i> <i>Ian Cameron, UK Power Networks</i> <i>(name TBC), BEIS</i>
17:30	Next steps
18:00	<i>Poster and networking session with drinks reception and buffet dinner</i>