

HYDROPOWER ENGINEERING: TECHNOLOGIES, PROJECTS AND FUTURE DEVELOPMENTS

Institution of
**MECHANICAL
ENGINEERS**

Fluid Machinery Group
Seminar

14 June 2018
One Birdcage Walk, London

SEMINAR SPEAKERS INCLUDE:

Richard Taylor, Chief Executive Officer
International Hydropower Association

Mike McWilliams, Senior Hydropower Advisor
Mott MacDonald

Sean Kelly, Project Manager
SSE Generation Development

Alan Robinson, Research & Development
Manager
Gilbert Gilkes & Gordon Ltd

Alois Lechner, Lead Engineer for Variable
Speed
Andritz Hydro

Lars Meier, Head of Proposal Management
Voith Hydro

SAVE 20%
OFFER ENDS
27 APRIL 2018



Save 20% before 27 April 2018 www.imeche.org/hydropower

SUPPORTING ORGANISATIONS:



EVENT PARTNERS:



HYDROPOWER ENGINEERING: TECHNOLOGIES, PROJECTS AND FUTURE DEVELOPMENTS

14 June 2018, One Birdcage Walk, London

THIS EVENT FEATURES TECHNICAL PRESENTATIONS ABOUT KEY PROJECTS AND THE LATEST DEVELOPMENTS IN HYDROPOWER, INCLUDING PUMPED STORAGE, TIDAL POWER, TECHNOLOGICAL INNOVATIONS AND ASSET MANAGEMENT.

Attend this event to hear from the **International Hydropower Association, Andritz Hydro, Voith Hydro, Gilbert Gilkes & Gordon Ltd, SSE Generation Development, First Hydro Company, Tidal Lagoon Power** and other industry leaders. Find out more about engineering challenges and cutting-edge solutions. By having the most up-to-date knowledge, delegates and employers can ensure they have the best information in order to realise market opportunities.

Maintain and boost your professional network and join the conversation during interactive sessions. Meet developers, consultants, manufacturers and other key players in hydropower and discover invaluable insights to shape your strategies.

KEY PROGRAMME HIGHLIGHTS:

- **First Hydro Company** and **Voith Hydro** discuss the Ffestiniog pump storage refurbishment and modernisation project
- **SSE Generation Development** share a case study about the Coire Glas Pumped Storage scheme
- **Tidal Lagoon Power** share an update on the Swansea Bay Tidal Lagoon project
- **Tidal Electric Ltd** discusses the feasibility of building an offshore tidal lagoon power plant in the Solway
- **Andritz Hydro** talk about adding flywheel function to pumped storage
- **Mott MacDonald** share insights on the future of Hydropower

ATTEND THIS SEMINAR TO:

- Hear from hydropower industry leaders including **International Hydropower Association, SSE Generation Development, First Hydro Company, Andritz Hydro, Voith Hydro** and **Gilbert Gilkes & Gordon Ltd**
- Learn about key projects in **pumped storage and tidal energy**
- Gain valuable insights into **technological challenges and solutions**
- Ensure your **continued professional development** keeping up-to-date with the latest innovations and networking with thought-leaders
- Take full advantage of **interactive sessions** to further discuss current issues
- Find out more about the **challenges of grid network** with increasing amounts of intermittent renewables

ORGANISING COMMITTEE:

Fluid Machinery Group
Institution of Mechanical Engineers

MEMBERS CREDITS:

Tom Pendrey, Project Manager, **Buccleuch** and Member of the Fluid Machinery Group
Institution of Mechanical Engineers

George Aggidis, Professor and Head of Energy Engineering, **Lancaster University** and Board Member of the Fluid Machinery Group
Institution of Mechanical Engineers

Matthew MacLeod, Rotating Plant Engineer
SSE

Jonathan Herbert, Projects Manager
Torishima Europe Limited

Nilla Karlsen-Davies, Chief Technical Analyst
haleys business advisers

BOOK EARLY AND SAVE UP TO 20%
OFFER ENDS 27 APRIL 2018

TERMS AND
CONDITIONS
APPLY

PROGRAMME

THURSDAY, 14 JUNE 2018	
08:30	REGISTRATION AND REFRESHMENTS
09:00	CHAIR'S OPENING REMARKS George Aggidis, Professor and Head of Energy Engineering, Lancaster University and Board Member of the Fluid Machinery Group, Institution of Mechanical Engineers
09:10	KEYNOTE: HYDROPOWER'S CHALLENGES AND OPPORTUNITIES WORLDWIDE Richard Taylor, Chief Executive Officer, International Hydropower Association
PUMPED-STORAGE PROJECTS	
09:40	FFESTINIOG PUMP STORAGE REFURBISHMENT Arwel Williams, Lead Mechanical Turbine Engineer - Ffestiniog Refurbishment Project, First Hydro Company
09:55	SUCCESSFUL START OF FFEISTINIOW MODERNIZATION PROJECT Lars Meier, Head of Proposal Management, Voith Hydro
10:15	COIRE GLAS: FLEXIBLE AND FAST, BULK ENERGY STORAGE FOR THE FUTURE Sean Kelly, Project Manager, SSE Generation Development
10:40	NETWORKING REFRESHMENT BREAK
11:10	GLENMUCKLOCH PUMPED STORAGE HYDRO Alan Wilson, Energy Director, Buccleuch
TIDAL PROJECTS	
11:35	TIDAL LAGOONS – A UK AND EXPORT INDUSTRIAL-SCALE OPPORTUNITY FOR HYDROPOWER TECHNOLOGY Mike Unsworth, Director of Engineering & Construction, Tidal Lagoon Power
12:00	THE DIFFICULT JOURNEY TO DELIVERING A LOW HEAD HYDRO PROJECT Bob Long, Managing Director, Britain's First Tidal Gateway
12:25	FEASIBILITY OF BUILDING AN OFFSHORE TIDAL LAGOON POWER PLANT IN THE SOLWAY Amir Eilon, Director, Tidal Electric Ltd
12:50	NETWORKING LUNCH
13:50	NORTHERN TIDAL POWER GATEWAYS. A MULTI-FACETED INFRASTRUCTURE PROJECT Alan Torevell, Chairman, NWE2 (Parent company of NTPG)
MANAGING ASSETS AND INNOVATING	
14:15	IMPROVING TIDAL TURBINE DESIGN THROUGH CONSIDERATION OF DEVICE AND SITE INTERACTIONS Lorna Bennet, Mechanical Engineer, ORE Catapult
14:40	THE TURGO TURBINE AND ITS VALUE IN THE HYDROELECTRIC SECTOR Alan Robinson, Research & Development Manager, Gilbert Gilkes & Gordon Ltd
15:05	NETWORKING REFRESHMENT BREAK
15:35	ENERGY SYNERGY: ADDING FLYWHEEL FUNCTION TO PUMPED STORAGE Alois Lechner, Lead Engineer for Variable Speed, Andritz Hydro
16:00	THE FUTURE OF HYDROPOWER Mike McWilliams, Senior Hydropower Advisor, Mott MacDonald
16:25	PANEL DISCUSSION: HOW TO REALISE THE FULL POTENTIAL OF HYDROPOWER IN THE UK Chair: George Aggidis, Professor and Head of Energy Engineering, Lancaster University and Board Member of the Fluid Machinery Group, Institution of Mechanical Engineers Mike McWilliams, Senior Hydropower Advisor, Mott MacDonald John McDonald, Head of Hydro Generation, SSE Lorna Bennet, Mechanical Engineer, ORE Catapult <ul style="list-style-type: none"> • How is the UK market changing? • What lessons can be learnt from other countries? • What is the role of hydropower in the UK energy strategy?
17:05	CHAIR'S CLOSING REMARKS
17:10	END OF SEMINAR

For the most up-to-date and detailed programme for the event, please visit www.imeche.org/hydropower

- This programme is subject to change.
- The Institution is not responsible for the views or opinions expressed by individual speakers.

HOW TO BOOK YOUR PLACE

FEES AND CHARGES

Registration fees include entry to the sessions, refreshments and a copy of the conference proceedings.

Seminar	Early Bird Rate Until 27 April 2018	Standard Rate
Member, Institution of Mechanical Engineers / Supporting Organisation	£230 + VAT = £276	£290 + VAT = £348
Non-member	£320 + VAT = £384	£390 + VAT = £468
Student/Retired	£90 + VAT = £108	£100 + VAT = £120

Group booking discounts are available. Contact us for more information.

THREE WAYS TO BOOK

1 Online:
www.imeche.org/hydropower

2 Email:
eventenquiries@imeche.org

3 Phone:
+44 (0)20 7973 1251

Please read the information listed below as each booking is subject to the Institution's standard terms and conditions.

CONDITIONS OF BOOKING

Completed application forms should be returned to the address above, along with the correct payment. Attendance at the event will be confirmed on receipt of the full balance. All participants are advised to bring a copy of their confirmation with them on the day, to ensure the fastest possible entry.

SPECIAL REQUIREMENTS

Please inform us of any special requirements, ie dietary or access, on the relevant section of this form.

CANCELLATION

For a refund (minus £25+VAT admin charge), cancellations must be received at least 30 days prior to the event. Replacement delegates are welcome at any time. The Institution reserves the right to cancel any event. In this case, the full fee will be refunded unless a mutually convenient transfer can be arranged. In the event that the Institution postpones an event for any reason and the delegate is unable or unwilling to attend on the rescheduled date, they will receive a full

refund of the fee paid. The Institution is not responsible for any loss or damage as a result of a substitution, alteration or cancellation/postponement of an event. The Institution shall assume no liability whatsoever if this event is cancelled, rescheduled or postponed due to a fortuitous event, Act of God, unforeseen occurrence or any other event that renders performance of this conference impracticable, illegal or impossible. For the purposes of this clause, a fortuitous event shall include, but not be limited to: war, fire, labour strike, extreme weather or other emergency.

Please note that while speakers and topics were confirmed at the time of publishing, circumstances beyond the control of the organisers may necessitate substitutions, alterations or cancellations of the speakers and/or topics. The Institution reserves the right to alter or modify the advertised speakers and/or topics if necessary without any liability to you whatsoever. Any substitutions or alterations will be updated on the event's webpage as soon as possible.

LIABILITY

The organisers do not accept liability for any injuries or losses of any nature incurred by delegates and/or accompanying persons, nor for loss or damage to their luggage and/or personal belongings.

CONFERENCE VENUE

Institution of Mechanical Engineers
One Birdcage Walk
Westminster
London
SW1H 9JJ

SPONSORSHIP & EXHIBITION OPPORTUNITIES

GET INVOLVED

Attending this event as either an exhibitor or sponsor will give you the opportunity to display your solutions, services and products to the right people at the right time.

BENEFITS OF SPONSORING

- **Showcase** new products
- **Raise** awareness of your operation
- **Improve** perception of your brand
- **Influence** other organisations' spending plans

This is an excellent way to enhance your company profile and communicate effectively with your target audience.

For more information please call
+44 (0)20 7304 6853
or email d_anglin@imeche.org

PE

DOWNLOAD
THE PE APP

Access
the latest
engineering
news

www.imeche.org/peapp



Institution of MECHANICAL ENGINEERS

The Institution of Mechanical Engineers
is a registered charity (no 206882)
VAT No GB299930493.

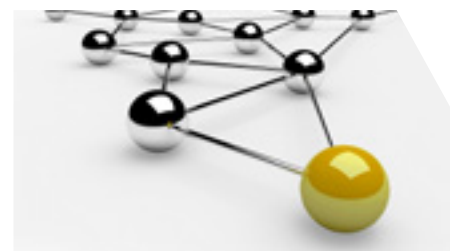
1 Birdcage Walk
Westminster
London
SW1H 9JJ

T +44 (0)20 7222 7899
www.imeche.org

FORWARD THINKING

We are the market leader among professional engineering bodies. We've been supporting engineers since 1847 and have 120,000 members in over 140 countries, working in the world's most dynamic and important industries. Our comprehensive events programme brings you the latest research and best practice from industry and academia.

OTHER EVENTS TO LOOK FOR



ESSENTIAL MANAGEMENT SKILLS 2018

18–20 April 2018, Coventry

Gain the skills required for success within line and project management roles. Choose from a variety of training workshops which will develop key skills in areas such as leadership, communication, conflict management, project management, career planning and legal awareness.

www.imeche.org/ems



ONSHORE AND OFFSHORE WIND ENGINEERING 2018

23–24 May 2018, Manchester

Attend this event to gain best practice in reducing the cost in your operations and maintenance. Hear experts in onshore and offshore wind share operational experiences to take back best practice to your organisation. Improve your condition monitoring and resource assessments by hearing about the latest technologies and techniques from leaders in the sector.

www.imeche.org/windengineering

The Institution of Mechanical Engineers organises over 120 events a year, including free-to-attend lectures as well as conferences, seminars, annual luncheons and dinners. Please visit www.imeche.org/events for the complete list of events.

Follow us on Twitter



twitter.com/imecheevents