



## Highlights from ERM

**POWER-GEN Asia  
ASIA Power Week  
20 – 22 September 2016  
Seoul, South Korea**

# Introduction

POWER-GEN Asia 2016, as part of the ASIA Power Week, was held in Seoul on September 20-22, 2016. The event had over 8,300 participants attending the exhibition hall and over 740 delegates attending the conference proceedings, making POWER-GEN Asia the most attended POWER-GEN event in Asia Pacific.

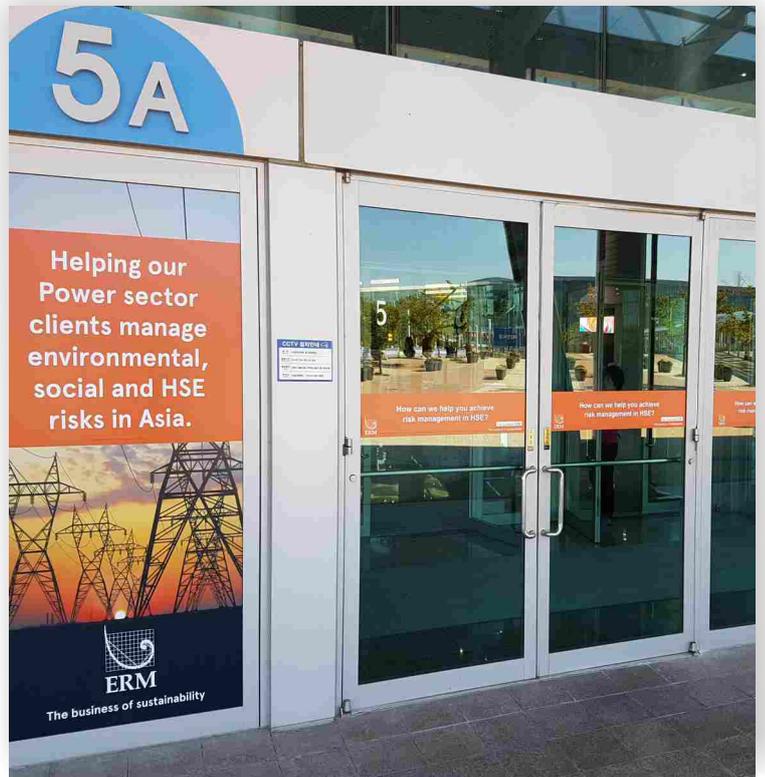
The next few pages summarise ERM's thoughts and insights from the conference. We hope they stimulate or reinforce some of your own thinking and we would welcome the chance to discuss them with you.

Asia Pacific's primary energy demand is projected to double by 2030 according to the Asian Development Bank (ADB). One of the greatest challenges for the Asian power sector is to diversify and increase its supply capacity to meet the needs of the 21st Century in a sustainable manner against an agenda of a changing climate.

ERM has extensive project experience across all power generation sources including thermal, hydro, wind, solar and geothermal in Asia and internationally. The services ERM provides support our clients at all stages of the project life cycle including: initial site searches and feasibility assessments; baseline environmental monitoring; environmental and social impact assessment for project permitting and financing; environmental and safety plans for construction; development of environmental and safety systems for operations; environmental, safety and process safety audits of generating plants; contaminated land assessment and end of life decontamination and demolition.

For the Power Sector, ERM considers the following issues to be particularly relevant today:

- Plant Safety – accidents/incidents prevention, behavioral safety, safety culture development, and improved safety performance;
- The increasing commercial competitiveness of renewable and alternative energy technologies;
- Emergence of integrated CCGT/FSRU projects and associated environmental social and process risks;
- Permitting of new development projects and approvals of environmental, social and health impact assessments in Asia and their potential impact on project development timeframes;
- Stakeholder engagement, land acquisition and resettlement implications for project financing; and
- Climate change developments - implications of the latest OECD guidelines / COP 21 outcomes and potential impacts on new project financial returns.



**ERM was Sustainability Sponsor of POWER-GEN Asia 2016**



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**Sean Purdie, ERM Managing Partner - Power Sector, Asia Pacific and Seungcheon Baek, ERM Partner, Korea were interviewed by several industry magazines during POWER-GEN Asia 2016**

POWER-GEN Asia offers ERM the opportunity to have direct dialogue with clients such as utilities, independent power producers (IPPs), government agencies and engineering, procurement and construction companies (EPCs), and to assess challenges and solutions in both domestic and international markets and advancing Asia's energy future.

Continuing with the theme from last year, ERM attended the conference as the Sustainability Sponsor for the conference. The ERM booth was located in a prime position in the central crossroads of the exhibition hall. Delegates were able to collect the Conference Proceedings from ERM's booth. Client attendance at the ERM booth was split amongst the following:

- Korean companies working in the power sector and the integrated gas & power sector, primarily on international projects;
- IPPs, including renewable sector specialists; and
- International EPC contractors

ERM leaders from offices across Asia chaired sessions and delivered keynote presentations, including insights to potential investors and developers of disruptions and risks to power projects in Asia; the implications of the recent outcomes of COP21 for the power sector; and challenges and opportunities presented by the new OECD rules restricting export credit financing for New Coal Fired Power Plants.

**ERM Korea is working with engineering and construction enterprises such as KEPCO, Samsung, Hyundai and Doosan to provide consultancy services for their international construction projects**

*Seungcheon Baek,  
ERM Partner, Korea*



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## COP21 Implications for the Asian Power Sector

Dr Robin Kennish, Managing Partner of ERM's Hong Kong operations, presented in the "Climate Policy – Implications for Fuel Choices" session.

Dr Kennish gave an overview of the timeline for implementation of the COP21 Nationally Determined

Commitments (NDCs), and how progress to achieve NDCs will be reported. COP21 has strengthened a movement in public and private financing away from coal and increasingly in favour of supporting renewables through clean energy finance. Private sector coalitions, and financial sector momentum is growing as a force for change on this issue. However, the changes across Asia's varied geographies and markets as a result of COP21 will vary markedly both in terms of fuel sources and adoption of alternatives to coal.

There will be a need: (i) for multinational firms to comply with widely varying approaches to Greenhouse Gas (GHG) mitigation and climate adaptation put forth in NDCs, and (ii) to reduce the carbon intensity of fuels, power, commodities, feedstocks, operations and in value chains to deliver lower carbon economies.

In the short to medium term, businesses will need to:

- Assess the risks and opportunities across the value chain resulting from NDCs and private sector responses;
- Develop and implement practical GHG emissions reduction plans and actions;
- Engage with stakeholders, including public disclosure of policies, programs, targets and performance; and
- Understand, manage and adapt to physical risks from extreme weather and climate change.

For more information, please contact Robin Kennish ([robin.kennish@erm.com](mailto:robin.kennish@erm.com)).



**Dr Robin Kennish, ERM Managing Partner, Hong Kong discussed the implications of COP21 outcomes to the power sector**

**There was significant interest and discussion amongst attendees on how Governments in developing Asia would balance COP21 commitments with the need for low cost reliable electricity to support GDP growth**

*Dr Andrew Jackson,  
ERM Regional CEO, Asia Pacific*



## New OECD Rules: Export Credit Agencies are Backing Restrictions for New Coal Fired Power Plants

Oliver Warner, Sustainable Finance Lead for Asia Pacific at ERM, spoke in the "Regulatory Impact" session. He provided some background to the triggers of the changing OECD rules for Export Credit Agencies (ECAs), including alignment with climate change objectives, and the timeline for their implementation, on 1 January 2017, and review.

Oliver outlined that export credit finance for coal fired power plant is distinguished based on three categories: (i) the plant capacity, (ii) technology type, and (iii) level of development of the project country. Discussing the impacts of the new OECD rules it has been observed that two thirds of new coal fired power plant projects between 2003-2013 that received support from OECD ECAs would not have been eligible for financing under the new rules. It yet remains to be seen how many planned projects will not go ahead or will use a more efficient technology as a result of the new OECD Rules, or use alternatives for funding (e.g. nonparticipating ECAs).

Importantly, prior to these rules coming into force, some transition criteria have been established where applications for export credit finance will be considered taking account of the status of the project, including the completion of a technical feasibility study and environmental and social impact assessment.

The extent to which development plans will change e.g. to use cleaner coal technology and alternative sources of power generation, such as wind, solar, geothermal and hydro, is yet to be seen. There is also a potential for a "ripple effect" as other financial institutions look to align their policies with the new OECD rules; with some uncertainty in project developments, with the new OECD rules becoming a driver to move projects forward ahead of the new OECD rules becoming "live".

For more information, please contact Oliver Warner ([oliver.warner@erm.com](mailto:oliver.warner@erm.com)).

**Increasingly coal-fired power generation will face pressures from reduced sources of financing, more capital competitive alternative energy technologies, and accelerating public resistance particularly to low efficiency coal plants**

*Sean Purdie, ERM Managing Partner  
- Power Sector, Asia Pacific*



**Oliver Warner, ERM Principal Consultant, Singapore, presenting the challenges and opportunities by the new OECD rules**



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**Sean Purdie, ERM Managing Partner – Power Sector, Asia Pacific chairing a conference session on Risks & Disruptions**



**Sean Purdie discussing ERM's experience with media at POWER-GEN Asia 2016**

## **Risk & Disruptions – Chaired by Sean Purdie**

Sean Purdie, ERM's Power Lead in Asia Pacific chaired a technical session focusing on the many risks and threats that have to be managed when planning, constructing and operating power plant projects. Topics included:

- **Developing a Sustainable Cyber Security Policy for Power Plants**
- **Smart Benefits vs Dumb Benefits: Disrupting the Disrupters**
- **Project Delivery - Risks and Resolutions, Lessons from the Front**

Given that there is an ever increasing need for power supply in the APAC region, it is essential that lessons are learnt and secure technology is utilized to support the demand for power.

ERM has seen that by managing social and environmental aspects early in a Project's development timeline, it is possible to reduce the scheduling and permitting risks to new power infrastructure.

For more information, please contact Sean Purdie ([sean.purdie@erm.com](mailto:sean.purdie@erm.com)).

**The emergence of integrated Combined Cycle Gas Turbine/Floating Storage Regasification Unit (CCGT/FSRU) projects is evidence that gas fired power operators are moving their investments further upstream to better manage their fuel supply risks**

*David Wills,  
ERM Regional Commercial Director,  
Asia Pacific*



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# About ERM

ERM's 40 years of experience of developing tailored client solutions has placed ERM as a market leader in sustainability consulting for the power sector. More than 5,000 advisors in over 160 offices in 45 countries provide the global reach needed to support clients in their home countries/regions and wherever investment opportunities may be found. In Asia, ERM is working for regional clients investing in projects in Asia and for Asian clients developing projects or working as an EPC in Asia, the Middle East, Africa, Europe, US and South America.

The range of work we do for our clients gives us a broad-based and hands-on perspective to many of the more pressing issues facing the power sector and hence a wealth of insights and advice we are happy to share.

Find out more by visiting [www.erm.com](http://www.erm.com) or contact the following people:

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ERM Team at POWER-GEN Asia 2016

## ERM's Network of Offices in Asia Pacific



ERM has been operating in the Asia Pacific region for over 25 years and has established offices in over 20 major cities, including Seoul, Jakarta, Hong Kong, Tokyo, Singapore, Beijing, Shanghai, Sydney, Bangkok and Kuala Lumpur.

We currently retain close to 1,000 full time members of staff to deliver the full spectrum of ERM's services. It is widely acknowledged that our network of offices in this region is the most developed within our business.

## New Myanmar Office

ERM has been providing solutions to Energy Sector Clients in Myanmar for over 20 years. In order to further expand our operations in Myanmar we opened a new office in Yangon in early 2016. If you would like to know more about our work in Myanmar please contact the Country Manager, Craig Reid ([craig.reid@erm.com](mailto:craig.reid@erm.com)).

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