Executive workshop 5 February 2018

Innovation in hydropower financing

Programme

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Innovation in hydropower financing
Executive workshop

Monday 5 February 2018
King & Spalding LLP
125 Old Broad St, London EC2N 1AR
United Kingdom
Despite the strong demand for clean energy and an abundance of capital available worldwide, securing favourable financing arrangements for hydropower development is a challenging and complex task which needs to be specifically tailored for each project.

The reasons for this are multidimensional as financing is contingent on a variety of factors such as hydrology and environmental and social considerations, which impacts a project’s risk-reward profile.

However, there are a number of financial instruments, schemes and funding sources available to help manage and mitigate a project’s risk across the different stages of its development. This international workshop is designed to improve the understanding of these solutions, and the sharing of experience among senior executives in the hydropower and finance sectors.

Participants will first explore the common challenges in developing major greenfield projects, particularly using project financing. Panellists will discuss how to evaluate a project’s bankability, build a sustainable business model and best navigate the political, financial and technical risks among multiple stakeholders (i.e. sponsors, lenders, governments and offtakers).

The workshop will also provide an opportunity to discuss how best to facilitate the identification of sustainable hydropower projects by host governments in order to attract private sector investment. Hydropower projects often struggle beyond the concept stage as project preparation is a costly and lengthy undertaking which deters private players, but there are support mechanisms available to aid governments in selecting and preparing the most appropriate projects before they are put out to tender.

Finally, the latest trends in hydropower financing will be examined, including the role of the green bond market, which has experienced tremendous growth over the past few years and will become increasingly important to the sector with the development of hydropower-specific green bond eligibility criteria. Other sources of finance will also be discussed, including the use of sukuk bonds.

There will be a photographer taking pictures throughout the day. Please let a member of IHA staff know if you would rather not be photographed.

All sessions will also be audio-recorded for use by IHA.

Help take the conversation online by using the event hashtag #hydrofinance @iha_org
## Programme

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<td>10:00-10:15</td>
<td>Welcome and introduction to the workshop</td>
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<td>10:15-12:00</td>
<td>Panel I: Developing greenfield hydropower projects: overcoming the big challenges</td>
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<td>12:00-13:00</td>
<td>Lunch break</td>
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<td>13:00-14:30</td>
<td>Panel II: Identification and early promotion of sustainable hydropower projects</td>
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<td>14:30-15:00</td>
<td>Coffee break</td>
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<td>15:00-16:30</td>
<td>Panel III: Green and climate bonds: what do they mean for hydropower?</td>
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<td>16:30-17:00</td>
<td>Conclusions</td>
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Innovation in hydropower financing

Ken Adams, President, International Hydropower Association

Panel:
Gil Maranhão Neto, Chief Strategy Officer, Engie Brasil
Gregory Scopelitis, Senior Associate Director - Power & Advisory, Mizuho Bank
Kelly Malone, Partner and Global Head for Power, King & Spalding LLP
Ole Gran, Senior Vice President, Project Finance & Advisory, DNB Bank
Sean (Seung Myun) Lee, Senior Private Sector Investment Specialist, Asian Infrastructure Investment Bank (AIIB)

Panel:
Jason Lu, Head, Global Infrastructure Facility
Paul Kunert, Chief Executive Officer, Joule Africa
Pravin Karki, Global Lead, Hydropower and Dams, World Bank Group
Richard Taylor, CEO, International Hydropower Association

Panel:
André Abadie, Managing Director and Global Head of Environmental and Social Risk Management, J.P. Morgan
Anna Creed, Head of Standards, Climate Bonds Initiative
Petr Konstantinov, Associate Director & Senior Banker, Energy, EBRD
Yann Coïc, Financial Engineering Manager, EDF Hydro

Richard Taylor, CEO, International Hydropower Association
Participants

In addition to the panellists, the following individuals will be participating:

Ajay Chaudhary, Programme Director, Mott McDonald
Andreas Hutzler, Senior Manager, Voith Financial Services GmbH
Andrew Mullins, Vice President Funding, Brookfield Renewable
Bjorn Brandzaeg, Chief Executive Officer, Clean Energy Group
Christian Pluess, Head of BU Hydro Power Generation, Alpiq Ltd.
Christian Knoph, Senior Vice President, Head of Commercial, SN Power
Christine Cantin, Senior Advisor, Hydro-Québec
Colin Clark, Managing Partner & Chief Technical Officer, Brookfield Renewable
Dalip Dua, Managing Director, Krishna Hydro Projects PVT. Ltd.
Dave Anson, Head of Project Development, New Sparta Energy
Duncan Russell, Technical Director, ERM
Elena Amirkhanova, Partner, Account Director, International Financial Institutions, ERM
Emma Hay, Senior Lawyer, Globeleq
Evgeniy Tikhonov, Strategy and Development Director, EuroSibEnergo
Gustavo Paredes, Consultant, Itaipu Binacional
James Roditi, Business Development Associate, Globeleq
John McLaren, Chief Operating Officer, Hydromine Inc
Juergen Schuel, Head of Sustainability, Voith
Knut Noren, Managing Director, Multiconsult UK
Lamis Aljounaidi, Head of Infrastructure Economics, Financing & PPPs - Hydraulics, Tractebel Engineering SA
Lucas Briger, Director of Business Development, Hydromine Inc
Mike McWilliams, Head of Hydropower, Mott McDonald
Moisés Machava, Executive Director, Hidroeléctrica de Cahora Bassa
Nicholas Troja, Senior Hydropower Sector Analyst, Internation Hydropower Association
Øivind Johansen, Ministry of Petroleum and Energy, Norway
Óli Sveinsson, Executive Vice President of Research & Development, Landsvirkjun
Paul O’Connor, Executive Director, Global Environmental and Social Risk Management, J.P. Morgan
Pierpaolo Avanzi, Assistant Planning Manager, Mace Group
Pierre Levasseur, Sustainability Manager, EDF Hydro
Roger Gill, Managing Director and Principal Consultant, Hydro Focus
Rory Connor, Senior Associate, King & Spalding LLP
Segomoco Scheppers, Senior General Manager, Eskom
Tiziano Zanin, VP International Development Procurement Manager, Hydromine Inc
Tore Eliassen, Head of Energy Advisory, Multiconsult
Ujala Qadir, Climate Standards Manager, Climate Bonds Initiative
Brookfield

Brookfield Renewable operates one of the world’s largest publicly traded, pure-play renewable power platforms. Its portfolio consists of hydroelectric, wind, solar and storage facilities in North America, South America, Europe and Asia, and totals over 16,000 MW of installed capacity.

Over 75 per cent of Brookfield Renewable’s total generation comes from hydropower facilities located on 81 river systems in Canada, the United States, Brazil and Colombia, with approximately 7,900 MW of capacity. Brookfield Renewable’s portfolio also includes approximately 2,700 MW of pumped storage hydropower capacity across three facilities in the U.S. and U.K.

King & Spalding

King & Spalding, a leading international law firm that works in the global hydropower sector, advises sponsors and host governments during the development, construction, financing and/or acquisition of major hydropower projects worldwide.

During the past four years, its lawyers have supported the implementation of 23 major hydropower projects with more than 10,000 MW of aggregate installed capacity, located in Latin America, Africa, the former Soviet Republics, South Asia and Southeast Asia.

The International Hydropower Association is a non-profit membership organisation formed in 1995. Its mission is to advance sustainable hydropower by building and sharing knowledge on its role in renewable energy systems, responsible freshwater management and climate change solutions.

IHA was a pioneer of the Hydropower Sustainability Assessment Protocol and is actively involved with academic, financial, governmental and non-governmental partners in advancing international industry good practice.
André Abadie is Managing Director and head of Global Environmental and Social Risk Management at J.P.Morgan in London, where he is responsible for the bank’s environmental and social risk policy and guides the environmental and social risk assessment of clients and transactions. André was previously Director at Sustainable Finance Ltd., a subsidiary of PricewaterhouseCoopers UK, which focused on the delivery of environmental and social risk management services to the financial sector. Prior to joining Sustainable Finance, André was head of Sustainable Business Advisory within ABN AMRO Bank’s risk management division, where he was responsible for developing ABN AMRO’s environmental and social risk policy framework and the application and implementation of the Equator Principles. André chaired the Hydropower Sustainability Assessment Forum, a multi-stakeholder initiative of the International Hydropower Association, which proposed revisions to the industry’s sustainability protocol. André holds a Masters Degree in Business Administration, a Masters Degree in Corporate Law, and an Advanced Diploma in Sustainability.

Anna Creed is Head of Standards at the Climate Bonds Initiative, where she leads the development of green eligibility criteria for Certified Climate Bonds across all sectors. A strategy specialist, Anna Creed has significant experience advising on green growth and low carbon development, particularly in the land use sector. She has worked with companies, governments and non-governmental organisations (NGOs) advising on national and international policy development, and mechanisms to engage the private sector in sustainable land use. Anna began her career in the private sector, where she worked in consultancy and then in industry. This included working as a strategic planning manager in a large FTSE 100 company, developing company strategies based on economic analyses and market modelling. She holds an MSc in economics and a BSc in economics and philosophy, both from the London School of Economics and has qualified as an accountant with the ACCA.
Gil Maranhão Neto has been working in the Brazilian electricity sector since 1994, and for ENGIE since 1996, where he is responsible for strategy, communications and corporate social responsibility in Brazil. ENGIE controls over 10,000 MW of installed capacity in 29 power plants (mainly big HPPs) in Brazil, what makes the company the largest private electricity producer of the country, with around 7 per cent of the installed capacity. ENGIE has built a reputation of allying professionalism, profitability and social responsibility in implementing and operating big hydro power plants in the country.

Gil has actively participated in the development and implementation of numerous hydropower plants, including Serra da Mesa (1,275 MW), Itá (1,450 MW), Machadinho (1,140 MW), Cana Brava (450 MW), São Salvador (243 MW), Estreito (1,087 MW) and Jirau (3,750 MW). He was elected as an IHA board member in October 2009, and subsequently elected vice president in 2013. He chairs the IHA membership committee.

Gregory Scopelitis has 10 years of experience in energy project finance across Europe, Middle East, Africa, Asia and the Pacific. He has worked across the renewable energy space and in hydropower in particular. He recently joined one of the world’s leading project finance bank, Mizuho, as Senior Associate Director covering EMEA in the Power and Advisory team, and previously worked for emerging and developing market-focused financial institutions such as the World Bank Group, the European Investment Bank (EIB) and Proparco (French Development Agency group). His experience includes greenfield and brownfield financing of public and private projects investing public or commercial debt, providing partial risk guarantees or acting as Financial Advisor. In the hydropower sector, he worked on projects in Lao PDR, Nepal, India, Cameroon, Democratic Republic of Congo and Papua New Guinea.

He has worked with Governments, utilities, commercial banks and sponsors from the early stage of project development up to financial close. His particular area of focus is on issues of risk allocation, bankability assessment, financial structuring, multi-source capital mobilisation, financial analysis and modelling, and transaction execution.
Jason Lu joined the GIF (Global Infrastructure Facility) as lead infrastructure finance specialist after 10 years of working at the World Bank Group’s Multilateral Investment Guarantee Agency (MIGA). While at MIGA, Jason worked on a broad range of complex energy and infrastructure projects worldwide. He has built expertise in managing and closing complex projects and advising clients on infrastructure financing, risk mitigation and credit enhancement to support their investment and financing needs in emerging markets and developing economies. Jason started his banking career with Bank of America in its Global Project Finance Group in 1996 where he was responsible for transaction structuring and execution. He also worked at ABB Energy Capital with responsibilities for renewable energy financing in the United States and State Street Bank and Trust Company in credit and portfolio management.

Kelly Malone is a Partner at King & Spalding LLP. He specialises in the development, financing and construction of large-scale power and infrastructure projects. He heads the firm’s global power team. Kelly represents national governments, state-owned utilities, project sponsors, international consortia and financial development institutions in the establishment, development, privatisation, sale, acquisition and/or financing of independent power projects and other infrastructure projects. With broad experience in the power sector, he has advised on more than 50 projects in 22 countries. In 2016, Kelly was recognised as a leading lawyer in energy and infrastructure, project development, banking and project finance by IFLR 1000. He has also been recognised for projects, energy and natural resources by Chambers Global for 2015 and 2016. In addition, Kelly has been ranked as a top energy, natural resources, projects and infrastructure lawyer in Singapore by Chambers Asia-Pacific for 2015 through 2017, and identified as one of the World’s Leading Energy and Natural Resource Lawyers by Euromoney Institutional Investor.
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Ole Gran is Senior Vice President, Project Finance & Advisory at DNB Bank. He has 25 years’ experience in international export and project financing. In his advisory positions in ABB Financial Services and GE Capital (1997–2004), Ole has participated in structuring of financial solutions for numerous hydropower projects in Asia and Africa. As Head of Treasury and Project Finance with SN Power (2005 – 2014), he structured and closed the financing of hydropower projects in the Philippines, Chile and Peru. Over the past four years Ole has worked as Senior Vice President at DNB Bank with special focus on project finance in renewable projects in Latin America.

Paul Kunert has been working with Joule Africa since May 2016 and was appointed Chief Executive Officer in April 2017. Paul has 20 years’ experience in project finance, of which 17 years is in developing, financing, and managing power generation and distribution projects in Africa, with CDC, Actis and Globeleq. As Head of Business Development for Africa at Globeleq, Paul led its successful six-fold growth from 2009 to 2015, and until 2013 oversaw asset management and operations at all Globeleq’s facilities in Africa.

As chief executive at Songas in Tanzania from 2003 to 2007 he led the business to successful completion of construction, expansion and commercial operations. He also led the acquisition and / or development of various projects in Tanzania, South Africa, Kenya, Uganda, Cote d’Ivoire, Ghana, Cameroon and Nigeria. Prior to joining CDC in 1999, Paul was with Ernst & Young, where he qualified as a chartered accountant and joined its project finance advisory business.
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Petr Konstantinov
is currently Senior Banker/Associate Director with EBRD Energy Group focusing on Russia, Caucasus and Central Asia regions. Petr joined EBRD in 2008 and worked on a variety of transactions in the power utilities and more recently natural resources sectors, including private and sovereign operations, bilateral and syndicated loans, bonds and equity products. Prior to joining EBRD Petr worked for several commercial banks in Moscow where he also graduated with a first degree in mathematics and cybernetics and a second degree in finance.

Pravin Karki
is Global Lead, Hydropower & Dams at World Bank Group. He has over 25 years of professional experience relating to hydropower and water resources, mainly in hydropower engineering, international policy and academic research. He completed his bachelor’s degree in water resources and hydraulic structures from the Czech Technical University followed by an MSc in hydropower engineering from Norway. He graduated with a MPhil in engineering for sustainable development from Darwin College, Cambridge University, UK. He joined the World Bank in 2008 and currently leads the Global Solutions Group on Hydropower & Dams in the Energy and Extractives Practice of the World Bank.
Richard Taylor is the CEO of the International Hydropower Association. He has been involved in the water and energy sectors since 1985. A graduate in Earth Science/Water Resources (University of London, 1981-85), with postgraduate studies in hydropower engineering, renewable energy systems and sustainable development, he has written and edited numerous technical papers and periodicals on hydropower and dams. In 2002, he became a Fellow of the Energy Institute in the United Kingdom. Along with water and energy, his interests include climate and sustainability. He has been engaged in United Nations initiatives on water (WWDR and UNEP), energy (UNIDO and UNDESA) and climate change (UNESCO and IPCC) and participated in the work of the World Bank Group, International Renewable Energy Alliance, REN21, International Energy Agency, World Energy Council, World Water Council, Climate Investment Funds and the Climate Bonds Initiative.

Sean (Seung Myun) Lee has a strong track record of advising on, procuring or delivering, infrastructure projects with 15 years of professional experience throughout Asia and the Middle East, focusing on power & utility and transportation projects.

He currently leads private sector projects in Asian Infrastructure Investment Bank (AIIB) where his most recent assignment was on the Nenskra Hydropower Project in Georgia.

Sean joined AIIB in early 2017 from Macquarie Capital, investment banking division of Macquarie Group, where he worked as Associate Director covering infrastructure and financial advisory teams in Asian countries. Sean is specialised in the development and financing of greenfield assets, with extensive experience in PPP, transport and power and utility projects.

Prior to Macquarie Capital, Sean was a senior associate in the Transaction Service & Financial Advisory Service Team at PricewaterhouseCoopers, providing strategic and commercial advisory services to clients and also acting as an independent auditor for numbers of infrastructure and utilities companies in Korea.
Yann Coïc started his career in credit insurance as a financial analyst at Euler Hermes. He joined EDF in 2001 to set up the cash-pooling system at the financial department. From 2003 to 2007, he was in charge of financing the Group’s subsidiaries, mergers and acquisitions, and sales and renegotiation of debts, particularly in Argentina and Asia. In 2008, he joined the DOAAT (Direction Optimisation Amont/Aval & Trading) to take charge of the development of long-term contracts and the structuring of partnerships, notably in the framework of the Penly 3 (nuclear power station) project. In 2010, he joined EDF Trading in London to develop all of the Group’s trading services. For the past three years, he has been responsible for the financial engineering of DPIH (Division Production Ingénierie Hydraulique) within the Renewable Energies division.

Digital participation

We are offering you the chance to ask more questions and take part in polls throughout the day with Slido.

All you need is your mobile phone, tablet or laptop, and you can start interacting.

Simply go to slido.com and enter the event code (to be announced on the day).

As well as asking questions and voting in polls, you can look at poll results and see all tweets containing the event hashtag #hydrofinance.