

STRENGTHENING EMERGING ASIA’S POWER SECTOR: NEEDS, REQUIREMENTS, AND POTENTIAL ROLES FOR EAST ASIA SUMMIT ENGAGEMENT

Virtual Workshop

January 20, 2021 | 11:00 a.m.–1:30 p.m. Japan Standard Time
January 22, 2021 | 11:00 a.m. – 1:00 p.m. Japan Standard Time

Growth in electricity demand in South and Southeast Asia is among the fastest in the world. Yet questions remain about how countries across this region might be able to individually or collectively meet their demand requirements while navigating complex economic, environmental, and energy security considerations. Major market shifts, such as the shale revolution in the United States and the effects of the Covid-19 pandemic, have had a profound impact on the availability and affordability of a range of energy supply options. However, capitalizing on these opportunities is often deeply constrained by rigid, opaque, and uncompetitive energy markets (particularly for natural gas and LNG); unresponsive energy pricing arrangements; weak and inadequate transmission infrastructure; and the need to broadly strengthen energy sector policymaking, governance, and technical and local capacity. How might stakeholders from across the region come together to address these issues, and what specific facilitating roles can fora such as the EAS play in this process?

Day One | Wednesday, January 20, 2021

11:00–11:10 Welcome and Introduction

Alison SZALWINSKI
The National Bureau of Asian Research

Clara GILLISPIE
The National Bureau of Asian Research

11:10–12:25 *Powering Emerging Asia: Supply and Demand Outlooks and Paths Forward*

This panel will outline the current outlook for rising power demand and supply prospects across this region and potential scenarios for how the next 20 years of energy development might proceed. What are the region's energy development trajectories under business as usual and pandemic-adjusted scenarios? How are stakeholders and policymakers across the region seeking to reshape power markets to balance the need to boost supplies while moving towards a cleaner energy mix? Where do initiatives like the Indo-Pacific Strategy, the Japan-U.S.-Mekong Power Partnership, and the Belt and Road Initiative fit into this picture? How might innovative partnership strategies help to better jumpstart any necessary sector reforms? What role does the East Asia Summit currently play in these processes, and what new roles might it be able to take on?

Setting the Scene: Shigeru KIMURA
Economic Research Institute for ASEAN and East Asia

Moderator: Ashley JOHNSON
The National Bureau of Asian Research

Speakers: Weerawat CHANTANAKOME
Ministry of Energy, Thailand

Hiroshi HASHIMOTO
Institute of Energy Economics, Japan

Courtney WEATHERBY
Stimson Center

12:30-1:30 *Resourcing the Toolkit: Building Technical and Human Capacities for Power Sector Transformation*

Strengthening local- and national-level capacities in power-sector management – whether via skill trainings, improved access to data or technical resources, or other people-people exchanges – is critical to how South and Southeast Asia might be able to navigate (and ultimately, take advantage of) recent market and technological breakthroughs. Meanwhile, the World Bank estimates that distortions in South Asia's power sector are already decreasing the sub-region's GDP by 4-7%, and weak governance in generation and delivery of electricity is a key factor in these losses. This panel will discuss ongoing efforts, emerging best practices, and potential new recommendations for strengthening technical and human capacity at a national-, sub-regional, and regional-level. How have longstanding international efforts driven by Japan's METI, USAID, or sub-regional fora such as ASEAN approached these challenges? What gaps remain? Where might efforts be more effective or better amplified via the East Asia Summit? How could a range of stakeholders contribute to a truly regional framework for knowledge sharing, and what might this look like?

Moderator: Tom CUTLER
Cutler International

Speakers: Mandira ADHIKARI
Nepal Electricity Authority

Nofri DAHLAN
Solar Research Institute, Universiti Teknologi MARA

HAN Phoumin
Economic Research Institute for ASEAN and East Asia

Day Two | Friday, January 22, 2021

11:00-11:05 Welcome and Opening Remarks

11:05-12:30 *Mobilizing Energy Sector Investments*

As recently noted by the IEA, slowing global economic growth, the collapse in oil and gas prices, combined with disruptions brought on by Covid-19 have resulted in a historic drop in energy investment. At the same time, the Asian Development Bank estimates that Asia and the Pacific will require \$1.7 trillion per year in infrastructure investments through 2030, with more than half of the total need in the power sector. Moreover, energy industries and markets in emerging Asia were already straining to meet demand and mobilize investment before the pandemic. Nevertheless, global financial markets are awash with cheap capital looking for investment opportunities in a near-zero interest rate world. Pension funds, insurance companies, large investment funds, sovereign wealth funds, and global energy companies are looking for “bankable” energy infrastructure investment opportunities. What might it take to seize on the opportunity to “reset” approaches? This session will examine the potential to mobilize capital and investment partnerships to help fully unlock the potential of public and private financing for power sector and infrastructure investments. What does it look like to ‘leverage development finance and export credit to catalyze private investment’ under Asia’s new normal? What are the necessary financial, contractual, and policy preconditions to ensure that energy projects currently proposed or under construction are financially viable?

Moderator: Mikkal E. HERBERG
The National Bureau of Asian Research; University of California-San Diego

Speakers: Saleh ABDURRAHMAN
Ministry of Energy and Mineral Resources, Indonesia

Venkatachalam ANBUMOZHI
Economic Research Institute for ASEAN and East Asia

Nao KAWAKAMI
Japan Bank for International Cooperation

Twarath SUTABUTR
Ministry of Energy, Thailand,

12:35–1:00 *Crafting the Call to Action*

This session will kick-off with the sharing of a draft ‘call to action’ that aims to synthesize preliminary workshop findings and identify opportunities for greater EAS engagement to play a positive role in strengthening Emerging Asia’s power sector. All participants will then

be invited to join in a facilitated discussion designed to further refine, test, and strengthen recommendations.

Moderator & Presenter: Clara GILLISPIE
The National Bureau of Asian Research

SPEAKER BIOGRAPHIES

Saleh ABDURRAHMAN is currently the Senior Advisor of the Ministry of Energy and Mineral Resources (MEMR) on Environment and Spatial Planning. From 2017-2019, Dr. Ir. Saleh, MSc served as Secretary General of National Energy Council, a permanent body chaired by the President of the Republic of Indonesia, comprised of 7 ministries and 8 stakeholders' representatives with the main task to formulate national energy policy, conduct supervision on energy policy implementation, and determine energy crisis response measures. During his period, the National Energy General Plan was enacted and a number of local energy general plan were also enacted by local government. In 2017, Dr. Saleh served as Senior Advisor of the Ministry of Energy and Mineral Resources on Economic and Natural Resources. Dr. Saleh was also involved in various energy and climate mitigation policy formulation. Dr. Saleh is also an expert board of Indonesia Renewable Energy Society and Indonesia Biomass Energy Society.

Mandira ADHIKARI has been working as a Mechanical Engineer in the Power Trade Department of Nepal Electricity Authority since 2014. Her major task is to facilitate the signing of power purchase agreements with independent power producers (IPPs) and to monitor IPPs' hydropower projects under construction to check for standard/legal/contractual compliances. Prior to this, she worked on the Nepal Energy Efficiency Program with the German Corporation for International Cooperation (GmbH), where she gained experiences on energy efficiency in grid-connected and rural households. Her interests in energy sector mostly stemmed from having witnessed an ongoing paradigm shift in the Nepalese power sector, which includes major policy changes, unbundling of the power sector, and initiation of power markets. Ms. Adhikari earned an MSc in mechanical systems design and engineering from Tribhuvan University and an MBA from Pokhara University.

Venkatachalam ANBUMOZHI is a Senior Energy Economist at the Economic Research Institute for ASEAN and East Asia (ERIA). In this role, he focuses on low-carbon energy systems, financing green growth, natural resource management, and climate change adaptation. Dr. Anbumozhi has published several books, authored numerous research articles and produced many project reports on resource management policies, energy infrastructure design, and private sector participation in Green Growth. He was invited as a member of the APEC Expert Panel on Green Climate Finance and the ASEAN Panel for promoting climate-resilient growth. He has taught resource management, international cooperation and development finance at the University of Tokyo and has had speaking engagements at some of the leading international organizations. He obtained his PhD from the University of Tokyo.

Weerawat CHANTANAKOME is a Counselor on International Energy Affairs and Senior Policy Advisor to the Ministry of Energy, Thailand. Prior to this role, Dr. Chantanakome was the Chief Executive Officer and founder of the Brunei National Energy Research Institute, a policy research think-tank for Brunei Darussalam. Dr. Chantanakome is a former Senior Team Leader of the Asia-Pacific Energy Research Centre and former executive director of the ASEAN Centre for Energy. He has over 25 years of experience in the energy and environmental sectors, both locally and internationally, in program development and implementation. Dr. Chantanakome has also held roles with the Intergovernmental Panel on Climate Change, the drafting committee of the ASEAN Plan of Action for Energy Cooperation, the Thai Senate Working Group Committee for Science, Technology and Energy, and the Federation of Thai Industry.

Tom CUTLER is President of Cutler International, an energy consulting firm specializing in Asia and Europe. Previously, he was the director of the Office of European and Asia Pacific Affairs at the U.S. Department of Energy (DOE). Over his 36-year career at the DOE, Mr. Cutler served two terms as Chairman

of NATO's Petroleum Planning Committee; managed DOE energy policy dialogues and programs with a number of countries including Indonesia, India, China, Japan, Korea, Australia, Pakistan, Bangladesh, APEC, ASEAN, Norway, the UK, and the EU; managed DOE's participation in all-source oil tanker tracking programs with the U.S. Navy; and worked in DOE's Office of Intelligence. His expertise has been featured in numerous journals and periodicals, including *Petroleum Economist*, *Petromin*, *World Affairs*, *NATO Review*, *Armed Forces Journal*, *Journal of Asian Studies*, *Journal of Energy & Development*, *Journal of International Affairs* and *Business Times*. He is also the author of *The Military Demand for Oil* (1989). From 1988 to 1991 he was a guest lecturer on military jet fuels at the College of Energy Studies in Oxford and received the NATO Outstanding Service Award in 1987. Mr. Cutler has a B.A. in Government from Lawrence University and a M.A. in International Affairs from George Washington University. He was President of the Maryland Racquetball Association from 1979-1981 and is currently a member of the Screen Actors Guild (SAG).

Nofri Yenita DAHLAN is an Associate Professor in the Faculty of Electrical Engineering at the Universiti Teknologi MARA (UiTM) Shah Alam, Malaysia. Currently, she serves as the Deputy Director of UiTM Solar Research Institute (SRI). Dr. Ir. Dahlan's research interests have focused on power generation investment, energy economics and policy, electricity market, energy modelling, energy savings and efficiency. In recognition for her achievements in the fields, she has been awarded a Certified Measurement and Verification Professional (CMVP) in 2014 from the Efficiency Valuation Organization (EVO) and Association of Energy Engineers (AEE), U.S. She is also a trainer for Certified Professional in Measurement and Verification (CPMV) and a technical expert for Greentech Malaysia. Under these capacities she has trained more than 400 measurement and verification (M&V) practitioners and involved in M&V audit for more than 30 Energy Performance Contracts (EPC) and green technology projects in Malaysia. She is also currently involved in developing an energy benchmarking formula for government hospitals in Malaysia and serves as policy consultant for UNIDO Malaysia Energy Efficiency and Solar Thermal Application (MAEESTA) Project. Dr. Dahlan received an electrical engineering degree, from Universiti Tenaga Nasional (UNITEN) Malaysia, an M.Sc. degree from the University of Manchester Institute of Science and Technology, and Ph.D. degree in the field of Energy Economics from the University of Manchester. She is also an alumna of the ASEAN-US Science and Technology (S&T) Fellowship Program focusing on energy security area.

Clara GILLISPIE is a Senior Advisor to NBR and serves as the official U.S. delegate to the Energy Research Institute Network. Ms. Gillispie's expertise covers topics ranging from technology policymaking, energy security, and geopolitical trends in Asia-Pacific. She is the author of numerous policy essays and reports and is regularly called on to directly brief her research and analysis to U.S. and Asian government officials, senior industry representatives, and the media, including the *New York Times*, *Washington Post*, and NPR's *Marketplace*. Previously, Ms. Gillispie served as a Senior Director for Trade, Economic, and Energy Affairs at NBR. She was also a 2020 CFR International Affairs Fellow at Carnegie India and 2017–18 SAFE Energy Security Fellow, and has worked for the U.S. House Committee on Science, Technology, and Space; Detica Federal Inc. (now a part of BAE Systems); and the American Chamber of Commerce in China.

HAN Phoumin serves as a Senior Energy Economist at the Economic Research Institute for ASEAN and East Asia. He has worked at various international and intergovernmental organizations and multidisciplinary research consortiums related to energy markets and technologies, environment, integrated water resource management, governance, and economic development. Much of his career in the past twelve years has revolved around the power sector, especially in the areas of electricity market integration, waste to energy, sustainable hydropower development, renewable energy policy research, energy efficiency and

conservation, clean coal technology, energy security, and energy demand and supply forecasting. Dr. Han earned his PhD in economic development and policies from Kobe University, where he also specialized in applied econometrics.

Hiroshi HASHIMOTO is a Senior Analyst and Head of the Gas Group, Fossil Energies and International Cooperation Unit at the Institute of Energy Economics, Japan (IEEJ), where he specializes in global LNG and gas markets. Prior to this role, Mr. Hashimoto was a senior researcher in the gas group at IEEJ, a natural gas analyst at the International Energy Agency, and held several leadership positions at Tokyo Gas. His expertise has been featured at major international conferences, including LNG X Series, Gastech, the World Gas Conference, the Pacific Energy Summit, and the CERI Natural Gas Conference, among many others. Mr. Hashimoto received a bachelor's degree in political science from the University of Tokyo Faculty of Law.

Mikkal E. HERBERG is a Senior Advisor to the National Bureau of Asian Research and Research Director of NBR's Energy Security Program. He is also a senior lecturer on international and Asian energy at the Graduate School of International Relations and Pacific Studies, University of California, San Diego. Previously, Mr. Herberg spent 20 years in the oil industry in Strategic Planning roles for ARCO, where from 1997 to 2000 was Director for Global Energy and Economics, responsible for worldwide energy, economic, and political analysis. He also headed country risk analysis, responsible for advising the executive management on risk conditions and investment strategies in countries and regions where ARCO had major investments. His previous positions with ARCO included Director of Portfolio Risk Management and Director for Emerging Markets. Mr. Herberg writes and speaks extensively on Asian energy issues to the energy industry, governments, and major research institutions in the Asia-Pacific region and Europe, including the U.S., China, and Japan. He is cited frequently in the media, including The Wall Street Journal, The Washington Post, South China Morning Post, Asahi Shimbun, Reuters, NIKKEI News, Caijing, and National Public Radio.

Ashley JOHNSON is the Director of the Energy and Environmental Affairs group at NBR. In this role, Ms. Johnson manages and oversees NBR's initiatives on energy security, environmental sustainability, climate change, and economic development. Her research interests include environmental sustainability in China and South Asia, energy security, and development trends in the Asia-Pacific. Ms. Johnson's expertise has been featured in various media outlets, including Nikkei Asian Review, the Guardian, the Associated Press, and BBC World News. Prior to joining NBR, she interned in the Consular Section of the Consulate General of the United States in Shanghai, China.

Nao KAWAKAMI has been Chief Representative of the Washington D.C. office of the Japan Bank for International Cooperation since July 2018. In this capacity, he has a wide range of project financing experience, including in the energy (oil and natural gas) and power sectors. Mr. Kawakami was Country Director of Indonesia and other ASEAN countries from 2013 to 2016. He was in charge of overall corporate planning, including coordination with the Japanese Government as Director in Corporate Planning Department from 2016 to 2018.

Shigeru KIMURA is a Special Advisor on energy affairs at the Economic Research Institute for ASEAN and East Asia (ERIA), a role he has been in since 2013. Mr. Kimura's research at ERIA has focused on capacity building on energy statistics and energy outlook modeling in ASEAN and he has also led the Working Group for the Preparation of the Energy Outlook and Analysis of Energy Saving Potential in East Asia. Prior to his work at ERIA, Mr. Kimura was head of the Statistics Information Office and a senior research fellow at the Institute of Energy Economics, Japan, where he was engaged in preparation of energy

statistics in the APEC region and applied econometric and input-output approaches for energy modeling. Mr. Kimura also worked as the manager of the Economic Group, Research Institute of the Century Research Center, Co. Mr. Kimura graduated from the Faculty of Computer and Information Sciences at Hosoi University.

Twarath SUTABUTR is the Chief Inspector General at the Ministry of Energy, Thailand. He also holds leadership positions with the PTT Exploration and Production Public Company Ltd., Renewable Energy and Energy Efficiency Partnership, the Asian Institute of Technology, Dhanarak Asset Development Co., Chulalongkorn University Alumni Association, and the Civil Service Sub-Commission of the Office of the Civil Service Commission. Dr. Sutabutr received a B.E. in civil engineering from Chulalongkorn University, an M.S. in soil mechanics from the Asian Institute of Technology, and a PhD in civil and environmental engineering from the Massachusetts Institute of Technology.

Alison SZALWINSKI is Vice President of Research at NBR. In this role, Ms. Szalwinski provides executive leadership to NBR's policy research agenda and oversees research teams in Seattle and Washington, D.C. Ms. Szalwinski is the author of numerous articles and reports and co-editor of the *Strategic Asia* series, along with Ashley J. Tellis and Michael Wills. Prior to joining NBR, Ms. Szalwinski spent time at the U.S. Department of State and the Center for Strategic and International Studies. Her research interests include U.S. policy toward Asia, especially U.S.-China relations and the importance of great-power competition for U.S. alliances in the region.

Courtney WEATHERBY is a Research Analyst with the Stimson Center's Southeast Asia and Energy, Water, & Sustainability programs. Her research focuses on sustainable infrastructure and energy development challenges in Southeast Asia and the Indo-Pacific, particularly food-water-energy nexus issues in the Greater Mekong Subregion. Ms. Weatherby was lead author on the Stimson Center Mekong Power Shift report, the TRENDS Institution UAE Energy Diplomacy report, wrote a chapter "China Invests in Myanmar: The Political Fallout of 'Going Out' Next Door" in the 2014 book *China's Great Leap Outward*, and has authored and co-authored numerous short pieces a range of online publications including East by Southeast, The Bangkok Post, Nikkei Asian Review, and China Dialogue. Ms. Weatherby served as a U.S.-Japan-Southeast Asia Fellow at the East-West Center in Washington in early 2019, focusing her fellowship research on US-Japan collaboration on energy infrastructure in Southeast Asia. She has spoken publicly on panels at a variety of institutions including the Greater Mekong Forum on Water, Food, and Energy, the US-Asia Institute, and Chulalongkorn University. Before joining Stimson in 2014, Ms. Weatherby interned with the Center for Strategic International Studies, the State Department, and Human Rights Watch.