





CONFERENCE

# ENERGY TRANSITIONS AND A GLOBALIZED ARCTIC The Role of Science, Technology and Governance

### 19 August 2016, Singapore

#### **Guest-of-Honour**

Mr Sam Tan Chin Siong Minister of State Prime Minister's Office and Ministry of Manpower

#### **Keynote Speaker**

### His Excellency Kirk Wagar United States Ambassador to Singapore

This conference brings together relevant experts from within and outside the Arctic region to discuss a range of issues related to the Arctic, which are also of relevance to the wider world – from the governance of sustainable energy transition, to access to energy in remote locations, to maritime infrastructures and shipping, to issues related to innovation, resilience and capacity-building.

In an increasingly globalized Arctic, human activity is expected to increase as the region becomes more accessible, and with this comes rising energy demand. At the basic level, the sustainable energy transition challenges surrounding remote communities and operations are common around the world. For example, many remote communities in Southeast Asia are cut off from the main grid and researchers in both Southeast Asia and the Arctic are similarly developing sustainable off-grid energy systems that can be clean, affordable, easy to manage and resilient. Besides the technological system itself, a proper governance framework has to be in place for the system to function effectively. Pooling relevant expertise from within and outside the Arctic to support science and technological collaboration, and in sharing the best practices of energy governance, is one way to address common energy challenges.

#### Topics to be covered include:

Comparing the Arctic and Southeast Asian Energy Transition Landscapes • Energy Access in Remote Locations • Renewable Energy for Maritime Infrastructures and Shipping • Sustainable Development of Remote Communities and Operations • The Role of Science and Technology

This event is made possible with the generous support of the Ministry of Foreign Affairs, Singapore.

#### When

Friday, 19 August 2016 9.00 am to 12.30 pm

(Lunch will be served after the event.)

#### Where

Temasek Room Hotel Jen Tanglin 1A Cuscaden Road, Singapore 249716

Dress Code Business Casual

#### Admission

Free and open to public but advanced registration is required. Click here to register: <u>http://esi.nus.edu.sg/e-</u> registration

#### Enquiries

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#### **CONFERENCE AGENDA**

8.30-9.00 am	Registration
9.00-9.30 am	Welcome Remarks Professor CHOU Siaw Kiang Executive Director Energy Studies Institute Guest-of-Honour Address
	Mr Sam TAN Chin Siong Minister of State in the Prime Minister's Office and Ministry of Manpower
	<b>Keynote Address</b> His Excellency Kirk WAGAR United States Ambassador to Singapore
9.30-10.15 am	<ul> <li>Session 1: Energy Transitions in a Globalized Arctic: Key Findings</li> <li>At the basic level, the energy transition challenges surrounding remote and islanded communities and operations are common across the world, including the Arctic and Southeast Asia. In this session, the panelists will provide the key findings from the one-and-a-half day workshop scheduled earlier in the same week on this issue. They will talk about the following: <ul> <li>Comparing the Arctic and Southeast Asian Energy Transition Landscapes;</li> <li>Energy Access in Remote Locations;</li> <li>Renewable Energy for Maritime Infrastructures and Shipping;</li> <li>Sustainable Development of Remote Communities and Operations.</li> </ul> </li> </ul>
	Q&A will take place in Session 2 after the coffee break. Moderator: Christopher LEN Panelists: Rasmus BERTELSEN Gwen HOLDMANN Matt GANLEY Philip ANDREWS-SPEED
10.15-10.45 am	Coffee Break

10.45 am-12.25 pm	Session 2: Panel Discussion and Q&A	
	In this panel, participants will engage in further discussions on the issues	
	raised in the previous session. Additionally, they will share their thoughts	
	on the role of science and technology in energy transitions, the	
	importance of research and development, lessons to be drawn from both	
	the Arctic and Southeast Asia experiences, issues related to risk, resilience and innovation, as well as discuss research gaps, complementary interests and collaboration opportunities. They will also take questions from the	
		audience.
		Panel:
Rasmus BERTELSEN		
Gwen HOLDMANN		
Maxensius SAMBODO		
Matt GANLEY		
	Mikhail POGODAEV	
12.25-12.30 pm	Closing Remarks	
p	Professor CHOU Siaw Kiang	
12.30 pm	Closing Lunch	

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## **Contact Person**

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#### PARTICIPANTS

#### Philip ANDREWS-SPEED, PhD

#### Senior Principal Research Fellow and Head of Energy Security Division, Energy Studies Institute, National University of Singapore, Singapore

Dr. Philip Andrews-Speed has 35 years in the field of energy and resources, starting his career as a mineral and oil exploration geologist before moving into the field of energy and resource governance. Until 2010 he was Professor of Energy Policy at the University of Dundee and Director of the Centre of Energy, Petroleum and Mineral Law and Policy. His main research interest is the political economy of energy and resource governance, at national, regional and global scales.

#### Rasmus Gjedssø BERTELSEN, PhD

# Professor of Northern Studies, Barents Chair in Politics, University of Tromsø-The Arctic University of Norway, Norway

Professor Rasmus Gjedssø BERTELSEN is Danish and grew up in Iceland. He is Professor and Barents Chair in Politics at UiT-The Arctic University of Norway. Rasmus subscribes to the Icelandic tradition of "að sigla" ("to sail") and the Chinese saying 读万卷书,行万里路 ("it is better to travel 10,000 miles than read 10,000 books"). So, he studied in Copenhagen, Reykjavik, Geneva, Lausanne, Amsterdam, Cambridge (PhD) and Sciences Po. He was a postdoc at Harvard and United Nations University (Yokohama) and taught at Aalborg University.

#### Matt GANLEY

#### Board of Directors, Institute of the North, United States;

#### Vice President of Media and External Affairs, Bering Straits Native Corporation, United States

Mr. Matt Ganley has worked for Bering Straits Native Corporation (BSNC) and Bering Straits Foundation (BSF) since 1993. He now serves as Vice President, Media and External Affairs after working as Staff Anthropologist, Land Manager and Vice President of Land and Resources. Since 2003 Mr. Ganley has been working on regional issues related to land management, resource development, cultural preservation and external affairs affecting western Alaska. He has been involved in a broad range of projects while working with tribes, Native Corporations, and federal and State agencies. He is on the Board of Directors of the Institute of the North.

#### **Gwen HOLDMANN**

# Director, Alaska Center for Energy and Power (ACEP), University of Alaska Fairbanks, United States

Ms. Gwen Holdmann is the founder & director of the Alaska Center for Energy and Power (ACEP), University of Alaska Fairbanks. Prior to joining the University of Alaska, she served as Vice President of New Development at Chena Hot Springs Resort and was responsible for implementing world's lowest temperature geothermal power system. Gwen graduated from Bradley University with a Physics and Mechanical Engineering degree and moved to Alaska with her husband and 3 children living off-grid in a house they built themselves, powered by solar PV, wind, and diesel generator, and heated by wood stove. Gwen has been awarded: R&D 100 award, Project of the Year from Power Engineering Magazine, Alaska Top 40 Under 40. She is currently a Fulbright Arctic Initiative Scholar.

#### Christopher LEN, PhD

#### Senior Research Fellow, Energy Studies Institute, National University of Singapore, Singapore

Dr. Christopher Len obtained his PhD from the Centre for Energy, Petroleum and Mineral Law and Policy (CEPMLP) at the University of Dundee in Scotland. He also has degrees from the

University of Edinburgh, Scotland, UK and Uppsala University, Sweden. He was previously a Research Fellow at the Stockholm-based Institute for Security and Development Policy (ISDP) where he was responsible for the Energy and Security in Asia Project. Len was also a Visiting Associate under the Energy Programme of the Institute of Southeast Asian Studies (ISEAS) in Singapore between 2006 –2012. His research interests include Asia energy and maritime security, Arctic energy security and sustainable development, and the growing political and economic linkages between the various Asian sub-regions.

#### Mikhail POGODAEV, PhD

#### Executive Director, Secretariat of the Northern Forum, Republic of Sakha (Yakutia); Chair of the Association of World Reindeer Herders

Dr. Mikhail Pogodaev is Executive Director of the Northern Forum, a non-profit, international organization composed of sub-national or regional governments from eight northern countries. He is also Executive Chair of the Association of World Reindeer Herders, an NGO that unites more than 20 different indigenous peoples from 10 countries across the Circumpolar North. Dr. Pogodaev is also the President of the University of the Arctic Institute for Circumpolar Reindeer Husbandry. He was born in 1978 in a reindeer herding village Topolinoe in Tomponsly district of Sakha Republic (Yakutia). Dr. Pogodaev graduated from the Saint-Petersburg State University of Economics and Finance and has a PhD in Economics.

#### Maxensius Tri SAMBODO, PhD

#### Researcher, Indonesian Institute of Sciences (LIPI), Indonesia

Dr. Maxensius Tri Samboda is a researcher at the Indonesian Institute of Sciences (LIPI) — Economic Research Center, which is a leading organization for science and research in Indonesia. Between 2013 and 2015, he was a visiting fellow at the Institute of Southeast Asian Studies (ISEAS), Singapore. His research interests are on energy, environment, natural resources and economic development. He obtained a PhD from Japan's National Graduate Institute for Policy Studies (GRIPS); a master's degree in International and Development Studies from the Australian National University; and a bachelor's degree in Economics and Development Studies from Padjadjaran University. He currently leads studies on the rural electrification programme in Indonesia, energy security, and small scale renewable energy in the context of the ASEAN Energy Market Integration.

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