

Clean Energy Solutions Center and International Smart Grid Action Network

Unlocking Markets and Supporting Innovation in Smart Grids

November 29, 2012

Mackay Miller - Moderator

Jennifer Hiscock - Presenter

Ken Nakahara - Presenter

Reji Kumar Pillai - Presenter

Richard Wunderlich - Presenter



Clean Energy Solutions Center Disclaimer

2

- The Clean Energy Solutions Center does not endorse or recommend specific products or services. Information provided in this webinar is featured in the Solutions Center's resource library as one of many best practices resources reviewed and selected by technical experts*

Some Housekeeping items

3

Two Options for Audio (select audio mode):

1. *Listen through your computer.*

- Please select the “mic and speakers” radio button on the right hand audio pane display

2. *Listen by telephone.*

- Please select the “telephone” option in the right-hand display, and a phone number and PIN will display.

3. *Please mute your audio device*

4. *Technical Difficulties:*

- *Contact the GoToWebinars Help Desk: 888.259.3826*

Some housekeeping Items (continued)

4

Download Fact Sheet

- http://cleanenergysolutions.org/webfm_send/505

We invite you to introduce yourself

- Select & type into the “chat” pane on your screen

To ask a question

- Select the ‘questions’ pane on your screen and type in your question

Having trouble viewing the webinar

- PDFs of the presentations can be accessed at <http://cleanenergysolutions.org/training>

A recording of this Webinar and the PowerPoint slide deck will be made available at:

- <http://cleanenergysolutions.org/training/webinars/unlocking-markets-supporting-innovation-smart-grids-webinar>

Agenda

5

- ✓ Welcome and Introductory Remarks
- ✓ Overview of the [Clean Energy Solutions Center](#) and the [International Smart Grid Action Network \(ISGAN\)](#)
 - **Mackay Miller**: Research Analyst, National Renewable Energy Laboratory
- ✓ Presentations: ISGAN Panelists
 - **Ken Nakahara**: Senior Manager, Smart Grid and Network Policy at Ministry of Energy Canada
 - **Reji Kumar Pillai**: President of India Smart Grid Forum
 - **Richard Wunderlich**: Director, Smart Grid Activities of Siemens Canada, Energy Sector
- ✓ Question & Answer
- ✓ Discussion and Closing Remarks



Clean Energy Ministerial & UN Partnership Supporting the Solutions Center

- Clean Energy Ministerial (CEM) launched the Clean Energy Solutions Center in April, 2011 for major economy countries
 - One of eleven CEM Initiatives
 - Led by Australia and U.S. with other CEM partners
- Partnership with UN-Energy is extending scope to support all developing countries
 - Enhance resources on policies relating to energy access, small to medium enterprises (SMEs), and financing programs
 - Offer expert policy assistance to all countries
 - Expand peer to peer learning and training



Clean Energy Solutions Center

<http://www.CleanEnergySolutions.org>

Goals

- Serve as a first-stop clearinghouse of clean energy policy resources.
- Share policy best practices, data, and analysis tools across countries.
- Deliver dynamic services that will enable expert assistance, learning, and peer to peer sharing of experiences
- Foster dialogue on emerging policy issues and innovation across the globe.

Target Audiences

- Primary:
 - Energy policy makers and advisors
 - Analysts
- Secondary:
 - Private sector companies,
 - Energy entrepreneurs and investors
 - Non Governmental Organizations
 - Civil society
 - Others engaged in clean energy



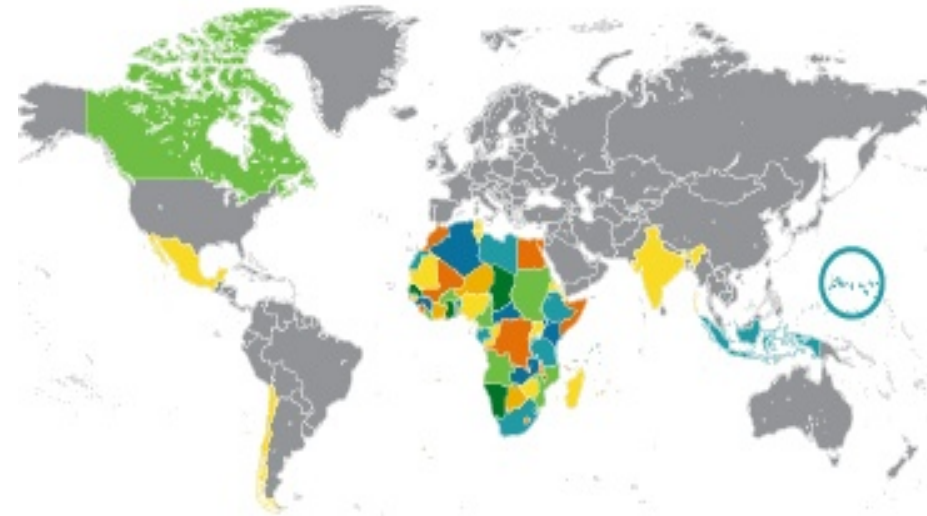
Ask an Expert: Our Experts in Action

8



We connect you to a global network of energy experts for personalized attention and quick response technical assistance on **strategies, regulations, standards, financial incentives, and deployment programs** for a broad range of clean energy sectors and technologies including:

- Energy Access
- Energy Efficiency
- Renewable Energy
- Smart Grid
- Transportation
- Utilities



Requesting Assistance:

Register on <http://cleanenergysolutions.org/expert>

How You Can Get Involved

9

- Request expert assistance or tailored technical resources for your country
- Participate in webinars, training activities, and policy networks
- Offer advice and suggest resources to share
- Sign up for the newsletter



- Join conversations on the Policy Forum

- ✓ <http://cleanenergysolutions.org/blogs>

Morgan Bazilian, Joint Institute for Strategic Energy Analysis

Return on Investment from Industrial Energy Efficiency: Evidence from Developing Countries

Posted: November 2012

Morgan Bazilian, Ludovico Alcorta, Giuseppe De Simone, and Ascha Pedersen

Energy efficiency investments in developing countries offer attractive returns



Energy efficiency (EE) is a foundational aspect of any good energy policy. The economic, security, and environmental benefits of EE have been recognized for decades. In this blog, we briefly consider the economic rationale for industry to invest in EE, and present results from financial analysis of 119 projects which were surveyed across nine manufacturing sub-sectors. While a large body of EE investment-related literature exists, the empirical results we present here focus solely on developing countries.

Contextualizing Electricity Access in Sub-Saharan Africa

Posted: November 2012

Ijeoma Oneyji and Morgan Bazilian

The populations of sub-Saharan African (SSA) countries have the least access to modern electricity services compared to emerging countries from other regions. Yet Africa's long-term economic growth and competitiveness fundamentally depends on reliable access to energy services.

Open Source Software and Crowdsourcing for Energy Analysis

Posted: September 2012

In a mid-July article in Energy Policy, my colleagues and I discussed issues around refining and augmenting energy planning model through innovative new tools and methods. This short blog draws from that piece.

Others We're Following

The [REEEP Energy Blog](#) from the Renewable Energy & Energy Efficiency Partnership provides reports from the world's leading events and commentary on key clean energy issues and informed debate on related subjects.

- 5 September 2012: [Clean Energy Events Listing: Canada, India, UK & US + REEEP's 9th Call for Proposals](#)

The [Leonardo Energy blogs](#) cover subjects from science to sustainable energy and electricity, and they include editors' blog as well as photo posts.

- 23 August 2012: [A Low-energy Building Policy Starts with Clear Definitions](#)

The [Bloomberg New Energy Finance podcasts](#) discuss the latest week's news on clean energy.



A mechanism for bringing high-level government attention and action to accelerate the development and deployment of smarter electricity grids around the world.

ISGAN...

- Sponsors activities that build a **global understanding** of smart grids, **address gaps** in knowledge and tools, and **accelerate Smart Grid deployment**
- Builds on the momentum of and knowledge created by the **substantial global investments** being made in smart grids
- Was launched as an initiative of the **Clean Energy Ministerial** (2010)
- Is organized as a task-shared **IEA Implementing Agreement** (2011)
- Fulfills a key recommendation in the **Smart Grids Technology Action Plan** (released by Major Economies Forum Global Partnership, 2009)
- **Leverages cooperation** with other initiatives and Implementing Agreements



Contracting Parties (22)

**In Progress of Joining Officially:
European Commission (EC)**

Forschungszentrum Jülich GmbH

Norwegian Ministry of Petroleum and Energy

Government of Belgium

Swedish Energy Agency

Government of United Kingdom

Tekes (Finnish Funding Agency for Technology and Innovation)

Sustainable Energy Authority of Ireland

Russian Energy Agency

Government of Korea

*Government of the Netherlands,
Ministry of Economic Affairs,
Agriculture and Innovation*

Government of France

*New Energy and Industrial
Technology Development
Organization (NEDO)*

Union Fenosa Distribucion

*Swiss Federal
Office of
Energy*

*Ministry of Science and
Technology
Department of High and
New Technology
Development and
Industrialization*

Government of Canada

U.S. Department of Energy

Government of Mexico

Ricerca sul Sistema Energetico (RSE S.p.A.)

Government of Austria

Government of India

Government of Australia

Moderator

13



Mackay Miller
National Renewable Energy Laboratory
Golden, Colorado, USA
Mackay.Miller@nrel.gov

Ken Nakahara, Senior Manager, Smart Grid and Network Policy at Ontario Ministry of Energy

14



Ken Nakahara, Senior Manager, Smart Grid and Network Policy at Ontario Ministry of Energy

Mr. Nakahara is currently the senior manager responsible for smart grid and network policy at the Ministry of Energy where he oversees the Ministry's \$50 million Smart Grid Fund and manages a policy group focused on smart grid and the electricity distribution sector. His career spans both the energy and environmental sectors, having worked at Toronto Hydro, the Ministry of Environment and the Ministry of Energy. Over the last ten years, Ken has been active in key energy and environmental issues such as the electricity market deregulation, cap and trade regulations for regional air pollutants, and the Green Energy and Green Economy Act. Ken has an MBA from the Schulich School of Business focused on sustainability issues and a B.Sc. in environmental science from the University of Toronto.

Reji Kumar Pillai, President of India Smart Grid Forum

15



Reji Kumar Pillai, President of the India Smart Grid Forum is a renowned expert in the electric power sector with 30-plus years of international experience in the electricity industry in diverse functions across the entire value chain. He has been a key member of many multidisciplinary teams that were engaged in reform and restructuring of power and water utilities in Asia, Middle East and Africa. In Oct 2011, Mr Pillai was unanimously elected as the President of India Smart Grid Forum, a public-private partnership initiative of the government of India for accelerated development of smart grid technologies in the Indian power sector for a two-year term. As an entrepreneur, Mr Pillai has built successful enterprises in India and UAE and exited them. Presently he is the Founder and Managing Director with Magnetar Venture, a 100 million USD India focused Fund to foster innovation in clean technologies with a mission to build globally successful enterprises out of India in the emerging Clentech revolution. He is also an active member of the Indian Angel Network. He has advanced education in Engineering, Finance, Management and Law, and has worked with NTPC and IBM and been a senior consultant with ADB, World Bank and USAID.

Richard Wunderlich, Director, Smart Grid Activities of Siemens Canada, Energy Sector

16



Richard Wunderlich was appointed Director, Smart Grid Initiatives of Siemens in Canada, October 1st, 2010 as part of a broader Siemens program. His responsibilities today reside in the Siemens Infrastructure and Cities (IC) Sector and include oversight of strategic initiatives that specifically include Energy Automation, Communication, Car & Rail Electrification, Building Automation, emerging Smart Grid Applications along with the facilitation of the Siemens Smart Grid Partner eco-system. Prior to October 2010 Richard was responsible for North American market development in the Energy Sector with Siemens IT Solutions and Services. He had over the previous 10 years played a key role in extending Siemens IT capability into the Energy Sector by leveraging the global domain knowledge of Siemens and its R&D to develop and launch unique offerings for the market including solutions for Customer Care, Smart Meter Integration & Enablement (SMIE), Strategic Grid Management and Generation Fleet Optimization. Richard has been with Siemens since 1988. and is a graduate of the University of McMaster, holding a Bachelors of Commerce degree focused on Marketing and Economics.

Time for Q&A

17

Questions



Your participation is appreciated!

18

Thank you!

An audio recording of this Webinar and the PowerPoint presentations will be available following the webinar

Please visit:

<http://cleanenergysolutions.org/training/webinars/unlocking-markets-supporting-innovation-smart-grids-webinar>