Innovation for Cool Earth Forum

Nobuo Tanaka
Chair of the ICEF Steering Committee

ICEF Hosts: Ministry of Economy, Trade and Industry (METI), and New Energy and Industrial Technology Development Organization (NEDO)
What’s “Innovation for Cool Earth Forum (ICEF)”?
◆ Under the initiative of Prime Minister Shinzo Abe, the Government of Japan has annually hosted a global conference called “Innovation for Cool Earth Forum (ICEF)” SINCE 2014.
◆ ICEF provides opportunities to raise awareness and promote discussion on the LATEST TREND OF CLIMATE ACTION THROUGH INNOVATION of energy and environmental technologies as well as to EXPAND THE INTERNATIONAL NETWORK of leading figures of industry, academia and government.
◆ ICEF Steering Committee is made up of 17 experts in 12 countries and REFLECTS THE DIVERSE OPINION of the world.

ICEF Steering Committee Members: 2018-2019

Nobuo Tanaka (Chair)
President, The Sasakawa Peace Foundation
Former Executive Director, International Energy Agency (IEA), Japan

Sally M. Benson
Professor, Department of Energy Resources Engineering, School of Earth Energy & Environmental Sciences, Stanford University, United States

Georg Erdmann
Professor, Berlin University of Technology, Germany

Eija-Riitta Korhola
Delegée of the Consultative Commission on Industrial Change, Adviser in the EU affairs, Finland

Reiko Kuroda
Professor, Tokyo University of Science, Japan

Richard K. Lester
Associate Provost, Massachusetts Institute of Technology, United States

Ajay Mathur
Director General, The Energy and Resources Institute (TERI), Member of the Prime Minister’s Council on Climate Change, India

Jon Moore
Chief Executive Officer of Bloomberg New Energy Finance, United Kingdom

Valli Moosa
Former Minister for Environmental Affairs and Tourism, Republic of South Africa

Nebojsa Nakicenovic
Deputy Director General and Deputy CEO, International Institute for Applied Systems Analysis, Austria

David Sandalow
Inaugural Fellow, Center on Global Energy Policy, Columbia University, United States

Ismail Serageldin
Founding Director Emeritus, Library of Alexandria, Egypt

Vaclav Smil
Distinguished Professor Emeritus, University of Manitoba, Canada

Laurence Tubiana
CEO, European Climate Foundation; Chair of the Board of Governors, French Development Agency; Professor, Sciences Po Paris, France

Kenji Yamaji
Director-General, Research Institute of Innovative; Professor Emeritus, The University of Tokyo/Technology for the Earth,University of Tokyo, Japan

Itaru Yasui
Honorary Adviser, National Institute of Technology and Evaluation(NITE); Emeritus Professor, The University of Tokyo
Overall theme of ICEF2018 was “Driving Green Innovation”. More than 1,000 people from 70 countries and regions participated.

ICEF consists of Plenary Sessions where global leaders discuss **LEADING ISSUES AND FUTURE STRATEGIES TO PROMOTE INNOVATION** from a global perspective and Concurrent Sessions where **LEADING GLOBAL EXPERTS DISCUSS SPECIFIC TECHNOLOGY**.

![Concurrent Sessions]  
**Technological Innovation**  
- IoT for CO2 Reduction  
- Biorefinery  

![Concurrent Sessions]  
**Social Innovation**  
- SDGs for Business Activity  
- Fintech for Climate Change  

![Concurrent Sessions]  
**Broad Perspective**  
- Cool Capitalism  
- Mobility Transition  

![Inclusive Action]  
- Inclusive Action towards a NZE Future  
- Renewable Microgrid and Energy Access  
- Decarbonisation by Industrial Sector  
- Small Modular Reactor for Nuclear  
- Growing Renewable Energy and Grid Stabilisation  
- CCUS  
- Smart Consumers  
- Circular Economy  
- Hydrogen
**NET ZERO EMISSION**

**Inspire**
- Visualization of the company climate change countermeasures
- A social mechanism that funds contribution to green growth
- Sustainable business models further promoting the inflow of investors

**Involve**
- CO₂
- Every possibility in terms of decarbonisation technologies and CO₂-free power source
- Utilization of digital technologies and solution of institutional issues such as cyber security
- Products and services that will encourage environmentally friendly consumer

**Internationalize**
- Market scheme for low-carbon society systems and removal of legal barriers
- SDGs framework based on the premise of collaboration with various stakeholders
- A mechanism to disseminate the outcome of corporate-driven green innovations to society
- Processes with less emissions and eco-products, and decarbonisation through the global value chain
- Superior environmental technology developments in consideration of changes in worldwide trend

**INNOVATION**
Four large-scale upheavals/revolutions in global energy set the scene for the new *Outlook*:

- The **United States** is turning into the undisputed global leader for oil & gas
- **Solar PV** is on track to be the cheapest source of new electricity in many countries
- **China** is switching to a new economic model & a cleaner energy mix
- **Electricity** is broadening its horizon, spurred by cooling, electric vehicles & digitalisation

These changes brighten the prospects for affordable, sustainable energy & require a reappraisal of approaches to energy security.

There are many possible pathways ahead & many potential pitfalls if governments or industry misread the signs of transformation.
Demand Driven Energy Transformation?

**ICEF 2018 Statement:** In fact, there has been a change of worldwide trend which reflects recommendation by Task Force on Climate-related Financial Disclosures (TCFD) based on G20's request. As such, financial and investment institutions (as well as various industry sectors) are beginning to promote business-led innovation.

Government should promote the industrial sector in visualizing the contributions and strengths of company climate change countermeasures in consideration of the key metrics to manage climate-related risks and opportunities as well as, if necessary, the internal carbon pricing. This will promote dialogue between manufacturing and service companies and the financial and investment sectors as proposed by TCFD.

More than 580 organizations in the world are supporting the TCFD as of February 2019.

More than 160 Japanese organizations support the TCFD.

Demand Driven Energy Transformation (2)

RE100 Corporations

176 RE100 companies have made a commitment to go '100% renewable’. 18 Japanese corps sign up.


Technology: Adobe, Apple, Autodesk, eBay, Facebook, Fujitsu, Google, Hewlett Packard Enterprise, HP, Inc., Infosys, Lyft, Microsoft, Rackspace, RICOH Company, Ltd., Salesforce, SAP, Sony Corporation, Visa, VMWare, WeWork, Workday, KonicaMinolta


Material: AkzoNobel, Corbion, Dalmia Cement, Elion Resources Group, Elopak, Givaudan, Royal DSM, Tetra Pak

Telecom Services: BT Group, KPN, Proximus, Telefonica S.A., T-Mobile US, Inc., Vodafone Group

Health care: AstraZeneca, Biogen, Johnson & Johnson, Novo Nordisk, Royal Philips

Energy: Vestas
Save the Date

Innovation for Cool Earth Forum
6th Annual Meeting
OCTOBER 9-10, 2019

Website
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