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# Innovation for Cool Earth Forum

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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**  
Delegate of the Consultative Commission on Industrial Change, Adviser in the EU affairs, Finland



**Reiko Kuroda**  
Professor, Tokyo University of Science, Japan



**Hoesung Lee**  
Chair of the IPCC Endowed Chair Professor, Graduate School of Energy and Environment, Korea University, Korea



**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



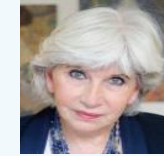
**David Sandalow**  
Inaugural Fellow, Center on Global Energy Policy, Columbia University, United States



**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



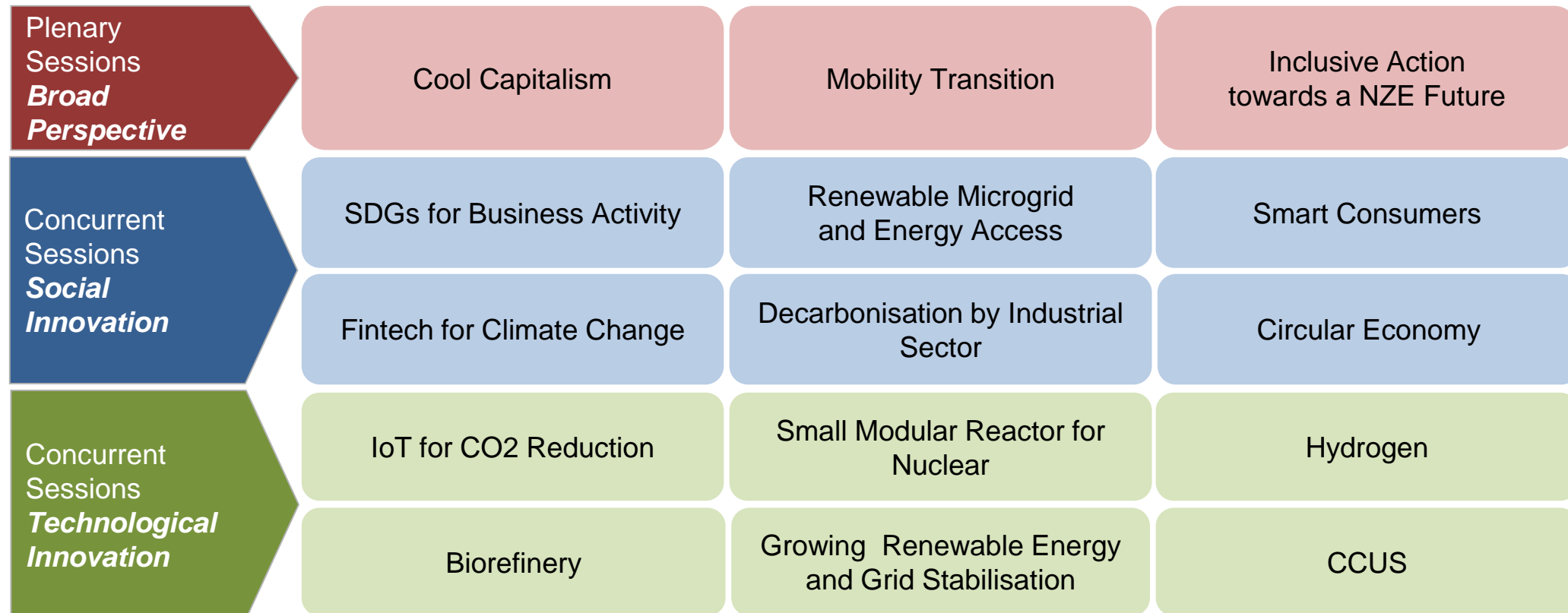
**Kenji Yamaji**  
Director-General, Research Institute of Innovative; Professor Emeritus, The University of TokyoTechnology for the Earth, Japan



**Itaru Yasui**  
Honorary Adviser, National Institute of Technology and Evaluation(NITE); Emeritus Professor, The University of Tokyo, Japan

# ICEF 5th Annual Meeting on 10-11 Oct (ICEF2018)

- ◆ 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**.



# NET ZERO EMISSION

**INNOVATION**

## 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



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

## Inter nationalize



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

# Tipping the energy world off its axis

- 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.

They include ANA, ASKUL, Asset Management One, DaiNippon Printing, Dai-ichi Life H, Daiwa House, Daiwa Securities, DENSO, DBJ, FSA, Fujifilm, Fujitsu, GPIF, Hitachi, Japan Post, JXG, Kao, Keidanren, Kirin H, Komatsu, KonicaMinolta, Lion, LIXIL, MARUI G, METI, Meiji Yasuda Life Insurance, MOE, Mitsubishi Corp, Mitsubishi Chemical, MHI, MUFJ, Mitsui & Co., Mizuho Fin G, Mitsui Chemical, NEC, Nikko Asset M, Nikon, Nomura Asset M, Nippon Life Ins, Nissay Asset M, Nomura H, NYK Line, OMRON, Resona H, Ricoh, Sekisui House, Shin-Etsu Chem, Shiseido, Sojitz Corp, Sompo H, Sophia Univ, Sumitomo Corp, SMFG, Sumitomo Chem, Teijin, Tokio Marine, TEPCO, Tohoku Electric Power, Toshiba, TOTO, Toyota Motor, Yokokawa Elec

# Demand Driven Energy Transformation (2)

## RE100 Corporations

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

**Finance:** Swiss Re Group, alstria, Amalgamated Bank, Aviva, AXA, Bank of America, Bankia, BBVA, British Land, CaixaBank, Canary Wharf Group, Capital One, Citi, Commerzbank, Credit Agricole, Danske Bank, DBS Bank Ltd, DNB, Equinix, Fifth Third Bancorp, **Fuyo General Lease Co.**, Ltd., Goldman Sachs, Helvetia, HSBC, ING Group, Iron Mountain Incorporated, **Johnan Shinkin Bank**, JPMorgan Chase & Co., Jupiter Asset Management, Land Securities, Mace, Morgan Stanley, Nordea, Prudential plc, RBS group, Schrodgers, TD Bank, UBS, Voya Financial, Wells Fargo

**Durable Goods and Services :** IKEA Group, **AEON Co.**, Ltd, BMW, Burberry, **Coop Sapporo**, Crown Estate, **Daiwa House Group**, Decathlon, Dentsu Aegis Network, Etsy, FIA Formula E, General Motors, Gürmen Group, H&M, Interface, Kingspan, LEGO Group, Mahindra Holidays & Resorts India, Marks & Spencer, **Marui Group**, Nike, Inc., Pearson, PVH, **Sekisui House**, Signify, Sky, Starbucks, Tata Motors Limited, Vail Resorts, VF Corporation, **Watami Co.**, Ltd., YOOX Group, **Toda Kensetsu**, **Daidoo-Kentaku**, **Tokyu Fudosan**

**Non-Durables and Services :** Anheuser-Busch InBev, Califia Farms, Carlsberg Group, Clif Bar & Company, Coca-Cola Enterprises, Colruyt Group, Danone, Diageo, Estée Lauder Companies, Grupo Bimbo, Hatsun Agro Products Ltd, International Flavors and Fragrances Inc., Kellogg, L'OCCITANE Group, Mars, Incorporated, Nestle, Organic Valley, Procter & Gamble, Reckitt Benckiser (RB), TCI Co., Ltd, Tesco, TRIDL, Unilever, Walmart

**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**

**Other Services** **ASKUL Corporation**, Bloomberg, BROAD Group, **ENVIPRO HOLDINGS Inc.**, Gatwick Airport Limited, Heathrow Airport, IHS Markit, La Poste, McKinsey & Company, PwC, RELX Group, SAVE S.p.A Group, Schneider Electric, SGS, Steelcase, Swiss Post, Vaisala, **Nomura RI**

**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**



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