



Environment, Climate Change and Clean Energy Collaboration

Makoto Watanabe

Executive Director

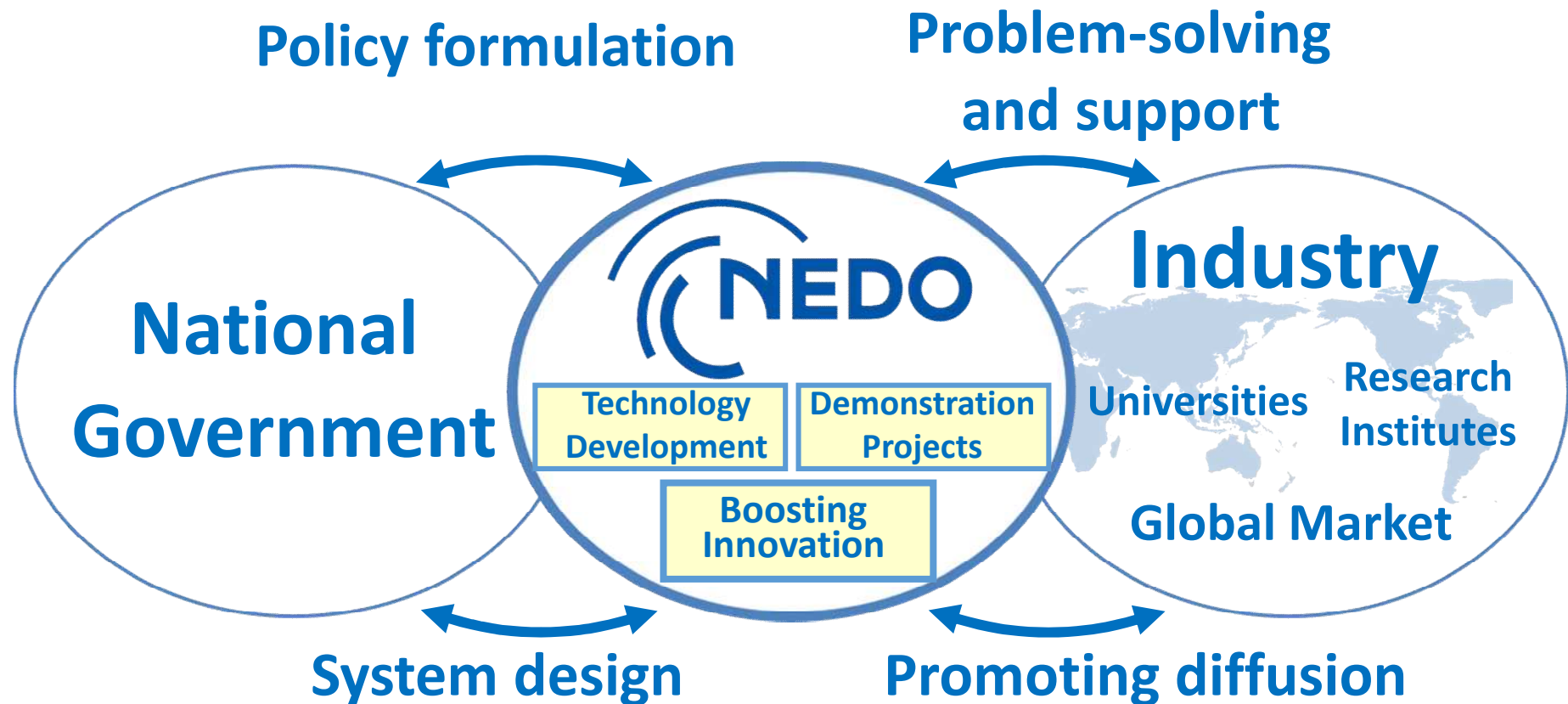
New Energy and Industrial Technology Development Organization

March 14, 2016

About NEDO



- Addressing energy and global environmental problems
- Enhancement of the level of industrial technology



NEDO's Technology Development Activities



Energy Efficiency and Conservation



Renewable Energy



Storage Batteries



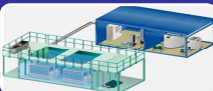
Smart Grids & Smart Community



Robots



High-efficiency Clean Coal



Water Treatment

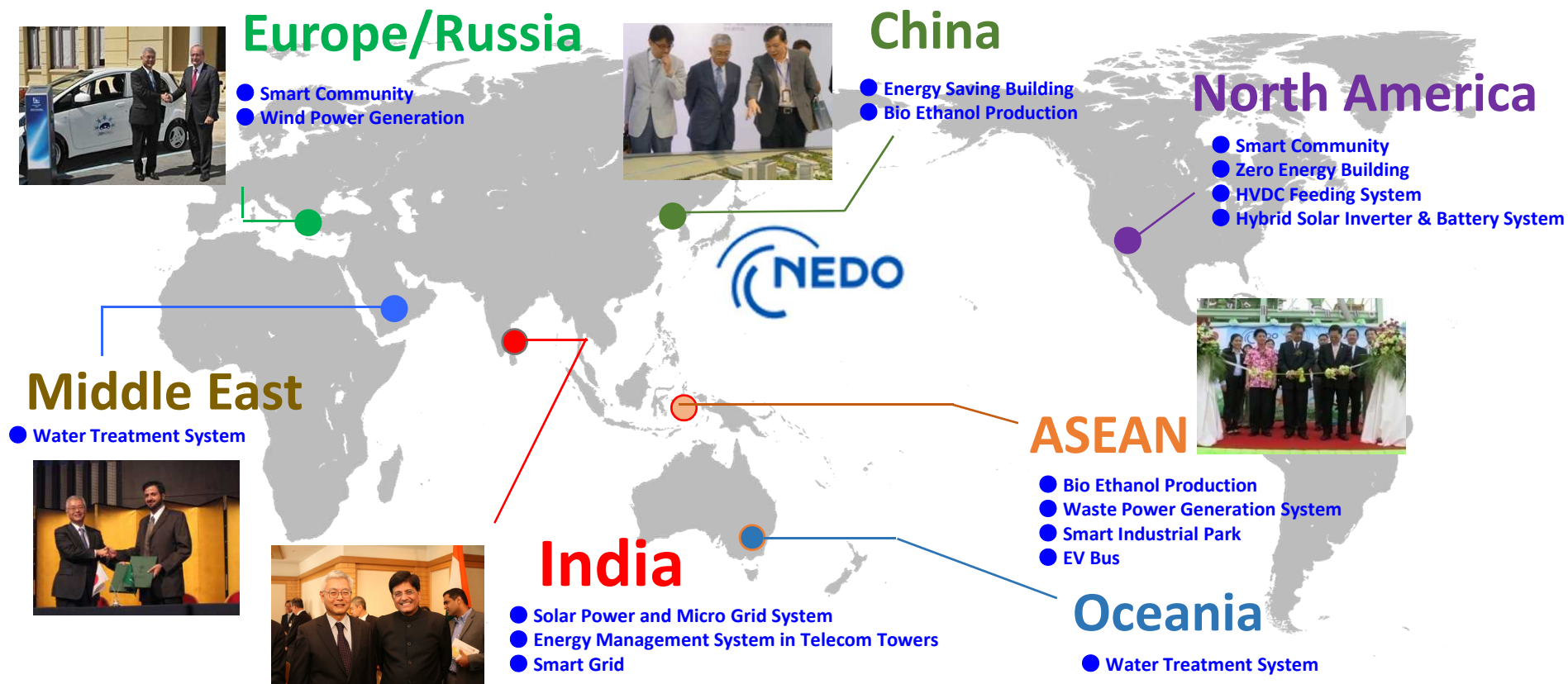


Electronics



Materials & Nanotechnology

NEDO's Activity (International)



Collaboration with International Agency



Asian Development Bank (ADB)
Collaboration for Dissemination
on Renewable Energy Technologies



International Renewable Energy Agency (IRENA)
Collaboration for Dissemination
on Renewable Energy Technologies



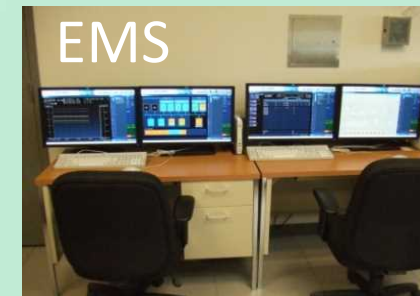
United Nations Industrial Development Organization (UNIDO)
Collaboration for information sharing

Control energy flow efficiently by connecting the supply side and demand side with IT

- ✓ Stabilization of electricity supply with demand side management
- ✓ Promotion of energy saving
- ✓ Creation of disaster resistant communities



Sendai microgrid demonstration site in Japan



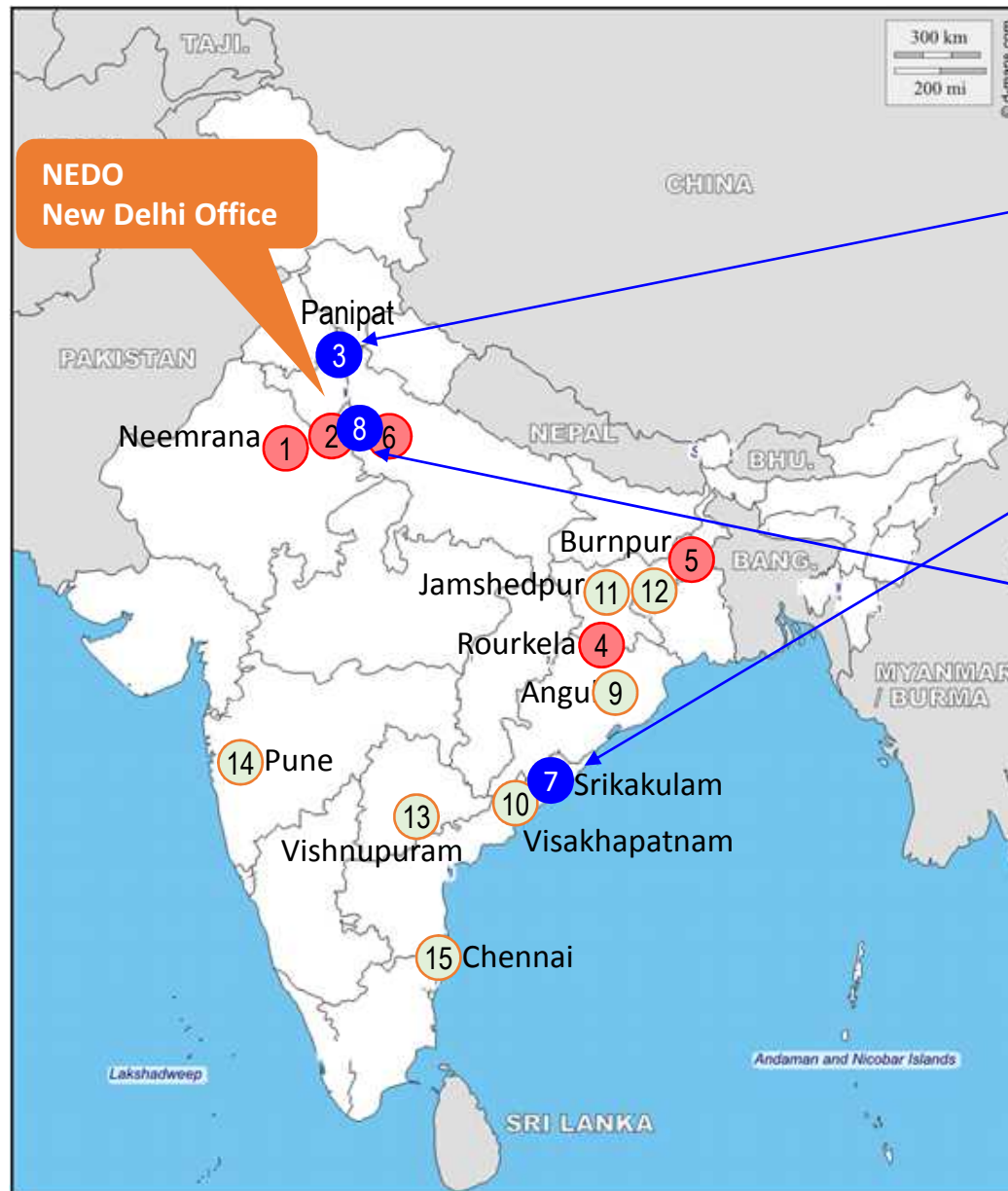
Lead-acid batteries



NAS batteries

Smart grid demonstration in New Mexico, USA

NEDO Projects in India



Ongoing Projects

- ① Solar Power and Micro-grid System
- ② Green Telecom Tower Project
- ③ **Smart Grid Project [Panipat]**
- ④ High-Performance Industrial Furnace (FS)
- ⑤ Energy Center for Steel Plant (FS)
- ⑥ ICT-Based Green Hospital (FS)
- ⑦ **Feasibility Study for USC Coal-Fired Power Plant [Srikakulam]**
- ⑧ **Feasibility Study for USC Coal-Fired Power Plant [Badarpur Thermal Power Plant]**

Completed Projects

- ⑨ Highly Efficient Coal Preparation System
- ⑩ Sinter Cooler Waste Heat Recovery System
- ⑪ Coke Dry Quenching System
- ⑫ Waste Heat Recovery System of Steel Plant
- ⑬ Waste Heat Recovery System of Cement Plant
- ⑭ Dual-Fuel Generation System
- ⑮ Capacity Building Project

Solutions to India's Challenges



Coexistence of economic growth and solutions to energy and environmental problems

✓ Establishment of a smart infrastructure

(1) Energy consumer side: **Smart community systems**

⇒ **Effective use of energy utilizing IT**

(2) Energy supply side: **Cutting-edge power generation technology**

⇒ **Using high efficiency and environmentally-friendly thermal power generation as a baseload electricity source**

Smart Grid Pilot Project in Panipat



Contribution to development of Indian distribution network

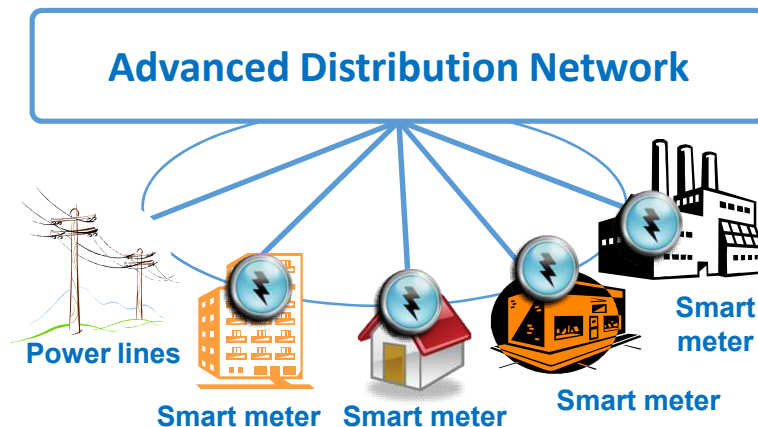
- ✓ Reducing distribution loss
- ✓ Improving supply reliability
- ✓ Providing operational know-how

India Smart Grid Pilot Project



NEDO Smart Community Project

Smart Community Demonstration



Providing Operational Know-how

Operational Know-How of Japanese Power Distribution System

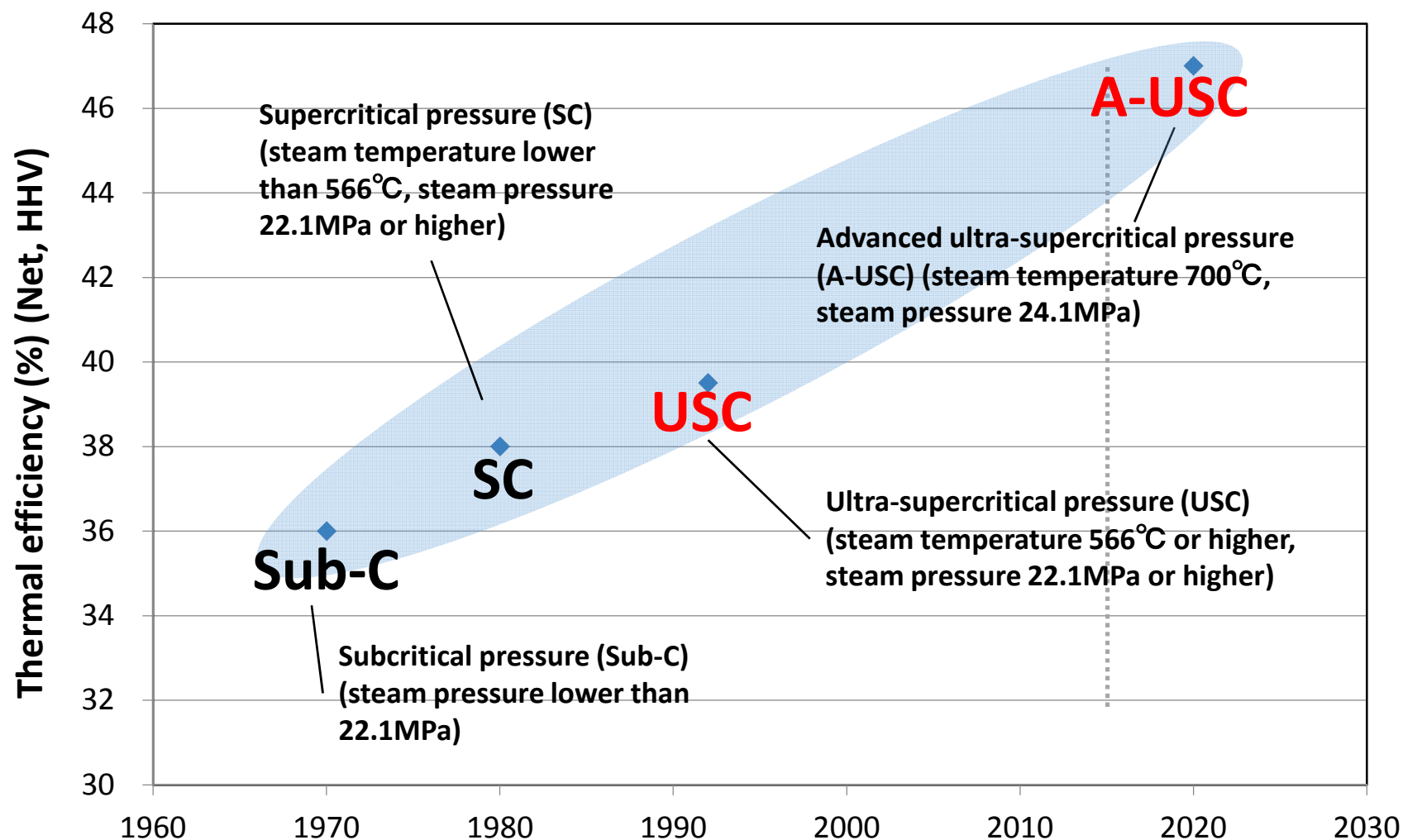
Before



After

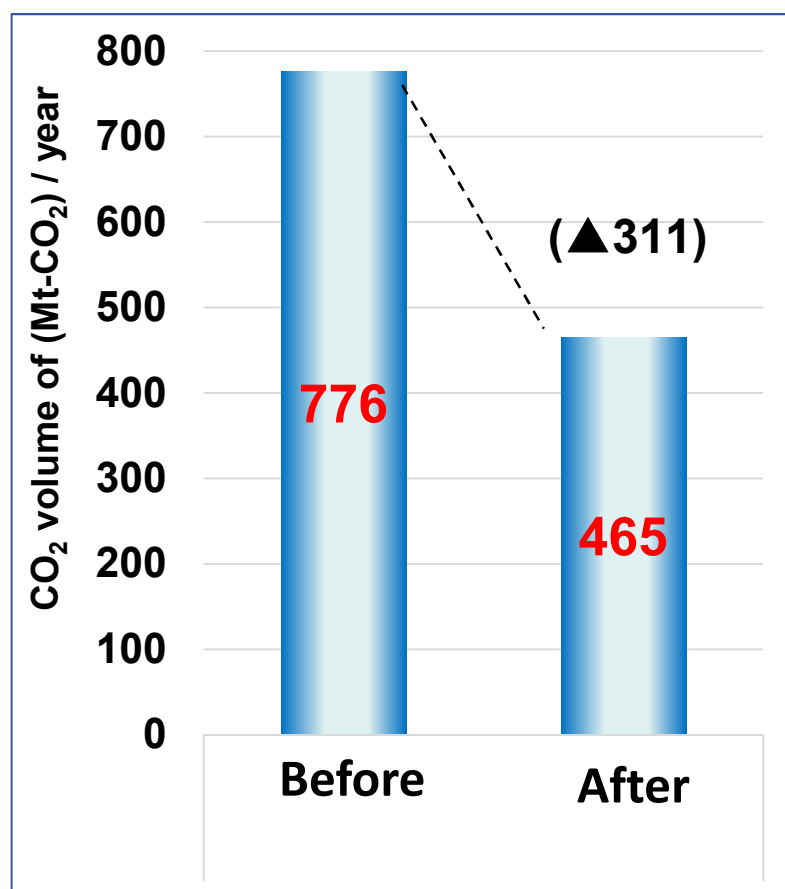


Efficiency Improvement of Coal-Fired Power Generation Technologies



Environmental Improvement by USC Technology

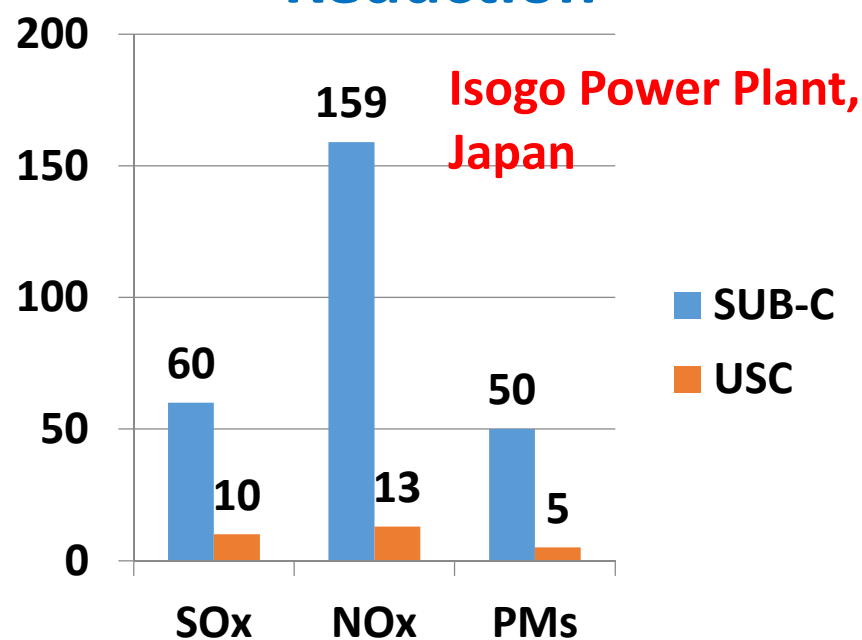
Impact of CO₂ Reduction in India



Source: IEA World Energy Outlook 2012 and Ecofys International
Comparison of Fossil Power Efficiency and CO₂ Intensity 2013



Impacts of SO_x, NO_x, PMs Reduction



India-Japan Energy Forum since 2006



Ongoing Collaboration with India



A collaboration with Andhra Pradesh since 2014



**A collaboration with
Confederation of Indian Industry
since 2013**



**Japan-India Innovation Seminar
in 2015**



**Make in India Week
in 2016**

The Energy and Environmental Technology Version of the “Davos”



- **Innovation for Cool Earth Forum (ICEF)**



Prime Minister Shinzo Abe announced that the Government of Japan will host an annual global conference, the ICEF, every year in October in Tokyo.



Dr. Ajay Mathur
Director General
The Energy and Resources Institute (TERI)

Steering Committee of the last year's



Hosts



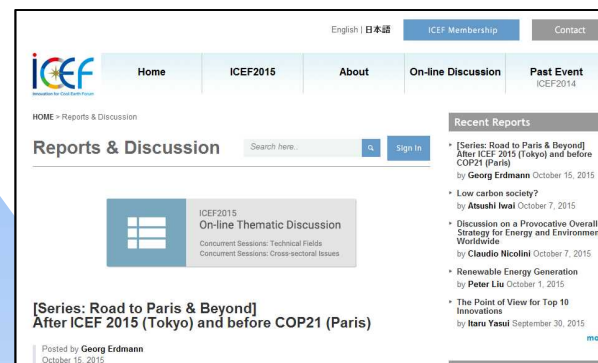
About ICEF



ICEF provides a global platform to promote discussions and collaboration.



Annual Meeting



On-line Discussion



TOP10 Innovations



Networking

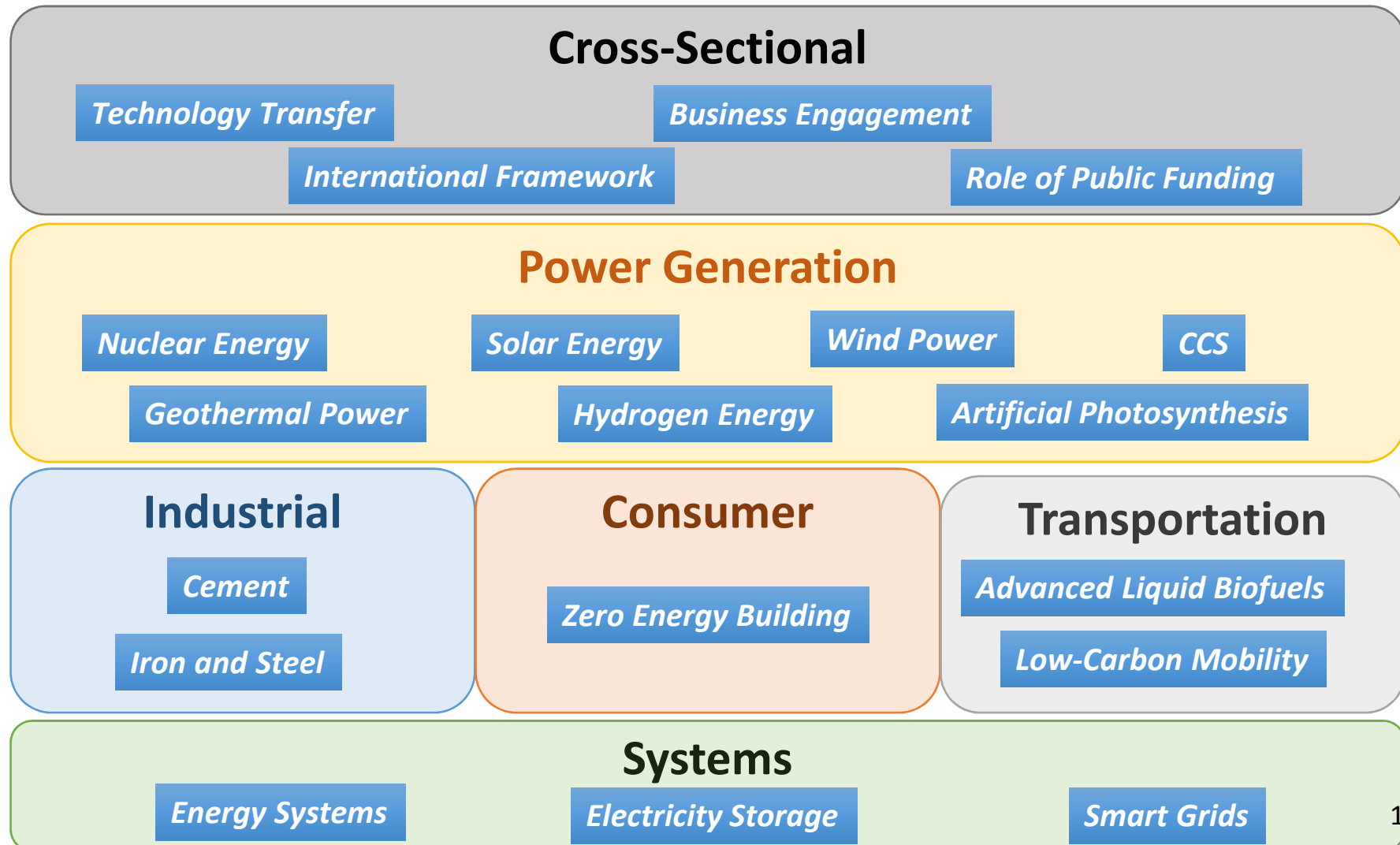


Statement

About ICEF



- ICEF 2015 Concurrent Sessions



NEDO Representative in India



- NEDO Overseas offices



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Thank you!

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