Japan-U.S. Economic Cooperation on Clean Energy and Others

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I. Japan-U.S. Clean Energy Technology Cooperation

✓ Agreement on Clean Energy Technologies at Japan-U.S. Leaders’ Meeting (Nov.2009)
✓ Hawaii-Okinawa Clean Energy Cooperation
✓ The new initiatives at Japan-U.S. Leaders’ Meeting (Nov.2010)

II. APEC 2010/2011

III. U.S.-Japan Cooperation to Promote Innovation, Entrepreneurship and Job Creation

✓ Cooperation between Japan-U.S. private Sector
Japan-U.S. Clean Energy Technology Cooperation (Concept)

**Similiarities in Direction and Concept**

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<th>Japan</th>
<th>U.S.</th>
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<td>Green Innovation</td>
<td>Increased Investment in Clean Technology</td>
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**Complementing Strengths**

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<th>Japan</th>
<th>U.S.</th>
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<td>Applied Technology, Manufacturing Technology</td>
<td>Basic Research, System Engineering</td>
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*Japan and the U.S. can lead the world by combining strengths of both countries*

1. An integrated solution to Energy Security and Climate Change Challenges
2. A new core of Japan-U.S. Partnership
- Prime Minister Hatoyama and President Obama met in November 2009
- The two leaders agreed to clean energy technologies cooperation and issued the Fact Sheet

METI and DOE identified the initial areas for the joint activities concluded as "Clean Energy Technologies Action Plan".
Agreement on Clean Energy Technologies at Japan-U.S. Leaders’ Meeting

Themes for Partnership

- Cooperation between National Labs
- CCS (Carbon Capture and Storage)
- Energy Efficiency
- Okinawa-Hawaii Cooperation
- Smart Grid
- Electric Vehicles
- Nuclear Energy

Fact Sheet (extract)

Establishment of a task force that will evaluate the achievements of existing clean energy projects in Okinawa and Hawaii to enable the islands to be energy independent, including micro-grid projects, and develop activities to help the two islands share experiences and knowledge with each other.
Significance of cooperation

Okinawa and Hawaii shares many similarities including:
- geographical conditions (island)
- climate condition (subtropical to tropical)
- energy structure (highly dependent to fossil fuel)
- proactive approach to renewable energy

Example of activities in Okinawa

- Bioethanol fuel
- Hydro power plant
- Waste power generation
- Digestive gas power generation

Example of activities in Hawaii

- 400 MW Wind power facility
- 680kW Solar power facility
- 30MW wind power facility
- Maui Smart Grid Project
- 30MW Geothermal power facility
- Ocean temperature differential power conversion project
Maximum synergy is expected by sharing best practices of two environmentally similar areas.

By installing renewable energy and promoting energy efficiency, as a model for remote islands, this cooperation could become a show case for the world.

Okinawa –Hawaii cooperation as a tangible Japan-U.S. cooperation
MOC for Hawaii-Okinawa Cooperation was signed by Economy, Trade and Industry Minister Naoshima, U.S. Ambassador to Japan John V. Roos (on behalf of the U.S. Department of Energy), Governor of Okinawa Nakaima and Governor of Hawaii Lingle, on June 17, 2010 at METI.
Hawaii-Okinawa Clean Energy Cooperation: Elements of MOC

Scope

✓ Renewable energy
✓ Energy efficiency
✓ Energy policy
✓ Smart Grid and/or Smart City

MEMORANDUM OF COOPERATION
AMONG
THE UNITED STATES DEPARTMENT OF ENERGY
AND
THE MINISTRY OF ECONOMY, TRADE AND INDUSTRY OF JAPAN
AND
THE STATE OF HAWAII
AND
THE PREFECTURE OF OKINAWA

CREATING
THE HAWAII-Okinawa PARTNERSHIP ON CLEAN AND EFFICIENT ENERGY
DEVELOPMENT AND DEPLOYMENT

United States President Obama and Japanese Prime Minister Hatoyama November 2009 discussed the advantages of the United States of America + Japan, the two largest funders of science and technology research, joining forces work toward development and deployment of the transformative technologies needed to solve global energy security and climate change challenges. The leaders affirmed their intent to expand already strong cooperative activities technology research and development to provide these solutions as mentioned in the Fact Sheet: Japan-U.S. Cooperation on Clean Energy Technologies November 2009. Working together, the United States and Japan have potential to increase the likelihood that commercially viable technologies will developed and their deployment accelerated.

The expansion of activities is reflected in the U.S-Japan Clean Energy Action Plan developed by the U.S. Department of Energy and the Japanese Ministry Economy, Trade and Industry. As part of the Action Plan, both sides are initiat

Signed at Tokyo, in quadruplicate, this 17 day of June, 2010.

FOR THE UNITED STATES DEPARTMENT OF ENERGY:

John V. Roos
Ambassador Extraordinary and Plenipotentiary of the United States of America to Japan

FOR THE MINISTRY OF ECONOMY, TRADE AND INDUSTRY OF JAPAN:

Masayuki Naoshima
Minister

FOR THE STATE OF HAWAII:

Linda Lingle
Governor

FOR THE PREFECTURE OF OKINAWA:

Hirokazu Nakaima
Governor
Hawaii-Okinawa Clean Energy Cooperation: Elements of MOC

Forms of Cooperative Activities

- Exchanges of information on lessons learned in policy development and implementation
- Investigation into the potential for joint research into technology issues
- Demonstration projects focused on proving the technical and economic viability of technologies relevant to both island economies
- Exchanges of information on legislative best practices
- Academic exchanges
To identify areas of cooperation and joint projects, an expert mission was send to Hawaii and Okinawa in August 2010.
Second Task Force Meeting was held in Honolulu on September 3rd to identify tangible cooperative activities in different areas.

**TASKFORCE**

(DoE • METI • State of Hawaii • Prefecture of Okinawa, MOFA, NEDO etc.)

**Energy Efficient Buildings WG**
- ZEB
- Tropical Code(P)
- Energy audit

**Smart Grid WG**
- Remote islands microgrid model
- Expanding model to other areas

**Renewables WG**
- OTEC
- Biomass(P)

**People-to-People Exchange WG**
- Local government
- Academics
- Students
- Utilities

**Project Scoping Tour to Hawaii**
- (27th-29th Oct.)

**ZEB workshop in Okinawa**
- (20th-21st Oct)

**Ocean Energy Workshop in Kumejima**
- (17th Nov)

**People-to-People Exchange Roundtable in Okinawa**
- (20th Oct)

**Second Roundtable in Honolulu**
- (3rd Dec)
New cooperative projects under Okinawa–Hawaii Cooperation

Showcase of the new energy model for isolated islands and remote areas

Innovation for world Global Environmental Energy Technology
On the occasion of Yokohama APEC Economic Leaders Meeting, Prime Minister Kan and President Obama met and launched new initiatives related to Clean Energy on the basis of the ongoing cooperation on the clean energy technology.

1. Energy-Smart Communities Initiatives (ESCI)
New initiatives became more concrete at the bilateral meeting between METI Minister Ohata and DOE Secretary Chu on 18th November in Tokyo.
Energy–Smart Communities Initiatives (ESCI)

Initiative led by Japan and US establishes comprehensive package of project which will be open to other APEC economies.

【Smart Power Grids】
✓ Evaluating the clean energy potential of smart grid technologies
✓ Setting forth a technology road map

【Smart Transport】
✓ Documenting and disseminating practical approaches for energy-efficient Low Carbon Model Towns
✓ Sharing best practices for fuel efficient freight transport and promoting EVs.

【Smart Buildings】
✓ Documenting and demonstrating the Cost effectiveness and energy savings of cool roofs technologies
✓ Sharing best practices for new and retrofitted low-energy buildings.

【Smart Jobs & Consumers】
✓ Developing clean energy education programs and sister school projects
Bilateral Meeting between METI Minister Ohata and DOE Secretary Chu

U.S.–Japan Clean Energy Dialogue

Transformative Clean Energy Technologies

EV and Plug-in Hybrid Vehicles

Rare earth mining and alternative to rare earth elements

Okinawa–Hawaii Cooperation

Global Nuclear Energy Cooperation
1. Leaders’ Declaration: “THE YOKOHAMA VISION – BOGOR AND BEYOND”

APEC’s Road Thus Far

Current Opportunities and Challenges

The Way Forward for APEC

1. APEC community
   ‘Economically-integrated community’, ‘Robust community’, ‘Secure community’

2. Paths toward our vision of an APEC community

2. Statement on 2010 Bogor Goals Assessment

3. APEC Leaders’ Growth Strategy

4. Pathways to FTAAP
   (Free Trade Area of the Asia-Pacific)
APEC (Asia Pacific Economic Cooperation)

2010 APEC (YOKOHAMA, JAPAN)

Theme: Change and Action

APEC’s New Vision for Action

I. Regional Economic Integration

II. Growth Strategy
   1. Balanced Growth
   2. Inclusive Growth
   3. Sustainable Growth (Green Growth)
   4. Innovative Growth
   5. Secure Growth

Shift to green economy

• Promoting energy efficiency and low-carbon energy
• Improving access for environmental goods and services (EGS)
• Promoting energy conservation activities through green ICT

APEC Low-Carbon Model Town Project
Former METI Minister Naoshima proposed the Low-Carbon Model Town Project at APEC Energy Ministers’ Meeting (EMM9) held in Fukui, Japan and was agreed by APEC Energy Ministers (Japan will contribute 1 billion yen in three years).

It was agreed to implement Tianjin City Project proposed by China at the EMM9 as the first case of the Project.
● METI and DOS (Department of State) established a dialogue which aims to support innovation, entrepreneurship, investment and to create new job through partnership between US and Japan. The first meeting was held on May 27th.

● Clean energy is considered to be a high potential area of cooperation. As such, both sides are planning the second meeting and a symposium focusing on Clean Tech to be held in February 2011 in Silicon Valley.
Thank you very much for your attention!!