

Discussions toward Composing Framework for Green Development Policy of Japan

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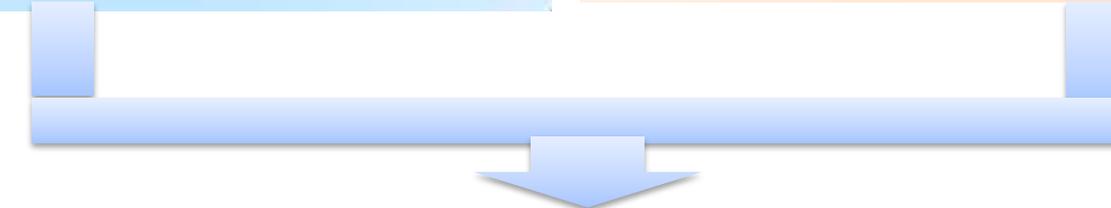
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Innovative Strategy for Energy and the Environment (September 2012)

- Basic Policy is to maximize green energy, reduce dependence on nuclear power and restrain the use of fossil fuel
- Three pillars based on national discussions
 - Realization of a society not dependent on nuclear power
 - Realization of green energy revolution
 - Ensure stable supply of energy

“Green Growth Strategy” on “Comprehensive Strategy for the Rebirth of Japan” (July 2012)

- Green Policy as a part of growth strategy
- “Green” is positioned as one of the key policy areas
- Reduce dependence on nuclear power and replace it by renewable energy or energy saving



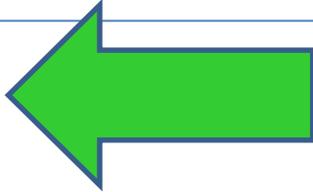
Framework for Green Development Policy
-Roadmap for expanding green energy usage-
(by around the end of this year)

“Green Growth Strategy” on
“Comprehensive Strategy for the Rebirth of Japan”
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- ◆ Japan currently faces a number of challenges: it is in the process of reconstructing areas affected by the earthquake, tsunami and nuclear accident, and is also addressing ongoing socio-demographic and economic challenges.
- ◆ Japan is seeking to meet these challenges head-on, to tackle them in an innovative and forward-thinking manner which will spur growth and allow the revitalization of the Japanese economy.
- ◆ Japan's immediate priority is reconstruction in the disaster-affected areas as well as a comprehensive review of its energy mix.
- ◆ Japan will prioritize four key policy areas in the coming three years: **'Green', 'Life', Agriculture, and SMEs**.
- ◆ In addition, Japan will implement **11 growth strategies** and **one initiative** to enhance its international relations, as well as **38 sets of priority policy actions** towards realizing a **"Country of Co-creation."** Japan will seek to leverage its position as a leader in innovation and technology to develop and share solutions with the world.

Key Policy Areas

- **Green**
- **Life**
- **Agriculture, Forestry and Fisheries Revitalization**
- **Supporting SMEs**



Other Strategies and Initiatives

- **Science, Technology and Innovation and ICT**
- **Financial Strategy**
- **Tourism**
- **Asia-Pacific Economic**
- **Employment and Welfare**
- **Human Resources Development**
- **Strengthening Communities**
- **Enhancing Japan's International Relations**

Green: Policy Package to realize innovative energy and environment society

<2020 Target: Create demand more than 50 trillion yen, employment of more than 1.4 million >

- ✓ Chain of technological innovation (automobile, transportation, housing, urban development, medical equipment, etc.).
- ✓ Smart community (distributed energy system, renewable energy, storage batteries, etc.).
- ✓ Review on regulations and systems, tax incentives.
- ✓ Share with the world green technology, energy systems and possible solutions for energy issues.

Green Growth Strategy (1)

'Green' parts and materials as driving force of Green growth

- ◆ Increase research and development for creating innovative 'Green' parts and materials
- ◆ Create synergies through joint technology development between parts / materials suppliers and assembling companies

Development of next-generation vehicles

- ◆ Improve battery performance and install charging stations
- ◆ Utilize next-generation vehicles, creating "power supplies that can move"
- ◆ Create Micro Mobility Vehicles for all ages include aged citizens

"Micro mobility"

Compact sized single or twin-seater car suitable for regional area transportation (Energy efficiency is 1/6 of traditional car (1/2 of normal sized EV))



Picture : Nissan "New Mobility Concept"

Widespread usage of storage batteries

- ◆ Accelerate innovation and cost reductions in order to expand various battery markets such as storage batteries in buildings and on cars
- ◆ Implement as emergency power sources during natural disasters or electricity stoppage

Development and use of marine and offshore resources

- ◆ Develop floating offshore wind turbines
- ◆ Develop and utilize marine and offshore resources, such as natural gas and algae for bio ethanol



Floating offshore wind power demonstration project

Development of energy management

- ◆ Establish compact or energy efficient cities / communities, utilizing energy supply-demand control technology and energy efficient buildings
- ◆ Export energy management systems

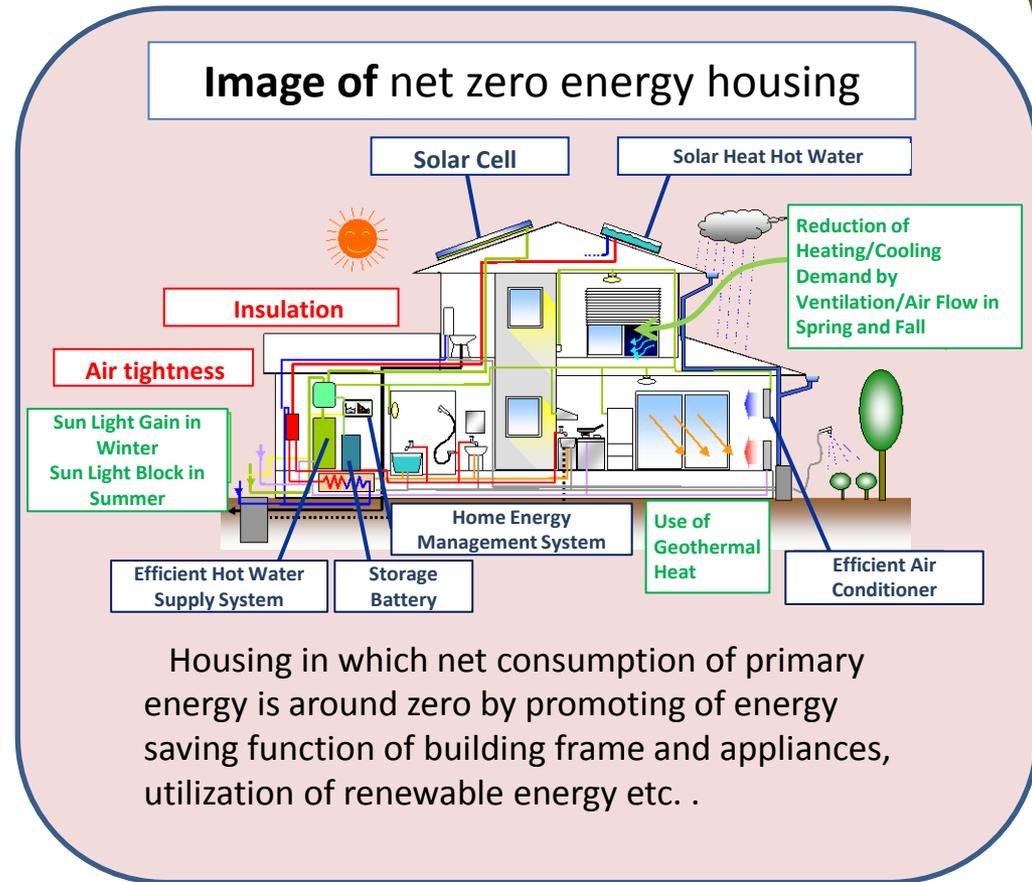
Image of a compact city / community



Green Growth Strategy (Goals)

2020 goals

- ◆ Standardization of net zero energy housing and development of net zero energy commercial buildings
- ◆ Increase percentage of next-generation vehicles in the new car sales to 50%
- ◆ EVs: Installation of 2 million ordinary chargers and 5,000 rapid chargers
- ◆ Achieve 50% (10 trillion yen approx.) market share for Japanese companies in the global storage batteries market
- ◆ Renovation and upgrade of existing building stock
- ◆ 100% compliance rate with energy-saving standards for all new housing
- ◆ Total floor area of environmentally-friendly real estate: 10 million m²



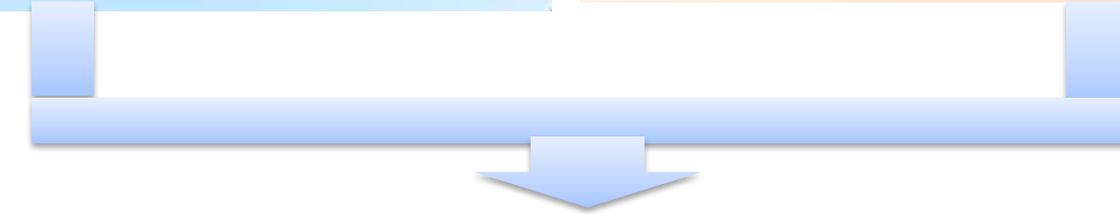
Overview (again)

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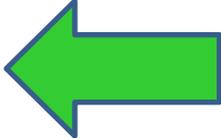
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“Realization of green energy revolution”

on

“Innovative Strategy for Energy and the Environment”
(September 2012)

Innovative Strategy for Energy and the Environment (Outline)

1. Realization of a society not dependent on nuclear power
2. Realization of green energy revolution 
3. For ensuring stable supply of energy
4. Bold implementation of reform of electricity power systems
5. Steady implementation of global warming countermeasures

Goals

◆ Electricity saving

- Reduction of over 110 billion kWh compared to 2010 (1.1 trillion kWh) will be realized by 2030. In doing so, the peak demand (kW) will be significantly restrained by smart meters, HEMS/BEMS, demand response, etc.

◆ Energy saving

- Reduction of over 72 million kl compared to 2010 (approximately 390 million kl) will be realized by 2030 on a final energy consumption basis

◆ Renewable energy

- Development of over 300 billion kWh by 2030 from 110 billion kWh in 2010 (three times) will be realized [if hydroelectric power is excluded, from 25 billion kWh in 2010 to 190 billion kWh (eight times) by 2030].

Policy areas

1. Electricity saving and energy saving

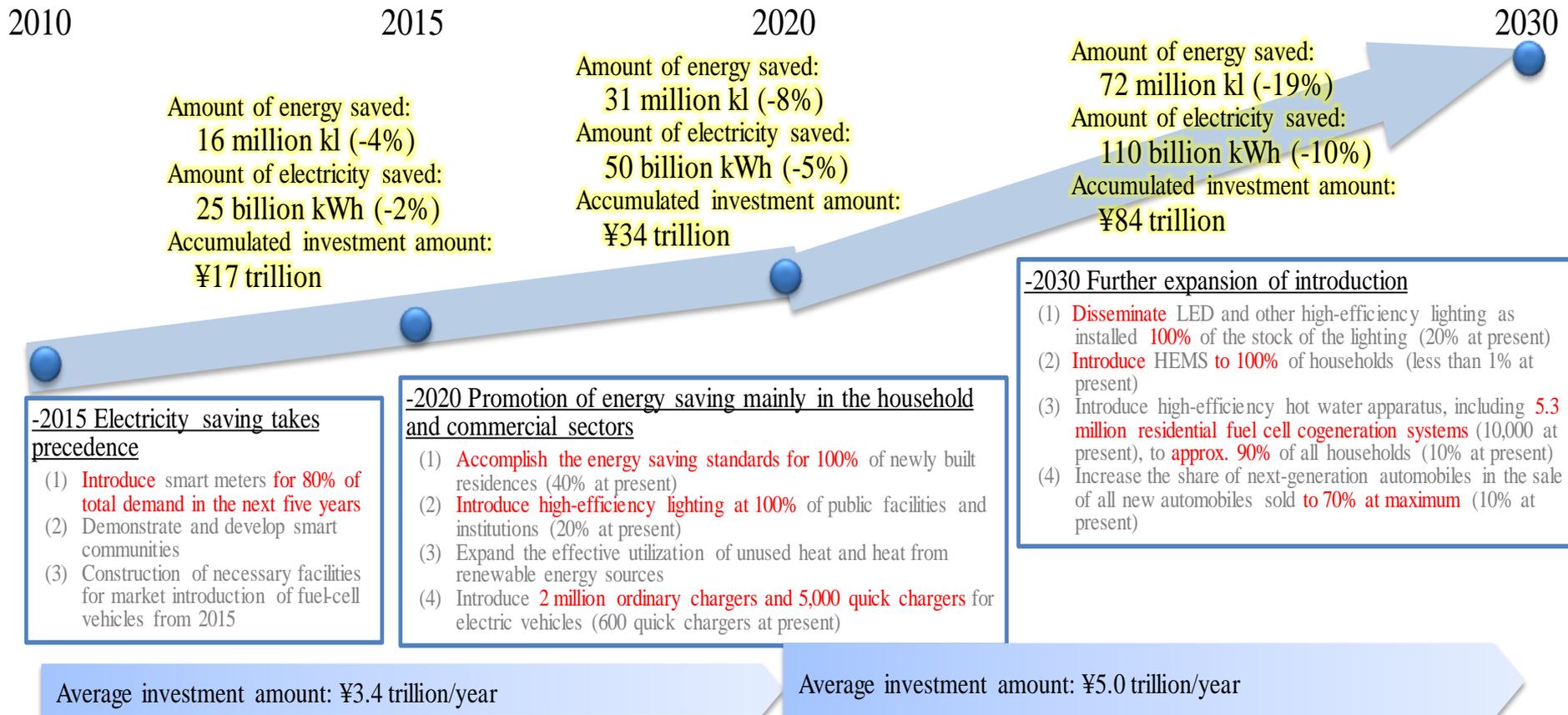
- Energy saving in the household and commercial sectors
- Energy saving in the industrial sector
- Energy saving in residences and buildings
- Energy saving by improving the efficiency of heat utilization
- Next-generation automobiles
- Smart electricity saving
- Energy saving in communities and in urban areas, such as smart communities

2. Renewable energy

- Introduction of private investment by the feed-in tariff system
- Public investment in public facilities, etc.
- Community-led acceleration of introduction
- Reform of land use regulations and simplification and speed-up of environmental impact assessment procedures
- Transmission system reinforcement including construction of wind power grid
- Transmission system stabilization
- Renewable heat
- Research and development and demonstration

Realization of green energy revolution (3)

{Image of expansion of energy saving}



Note: The amount of energy saved/electricity saved is compared to 2010.

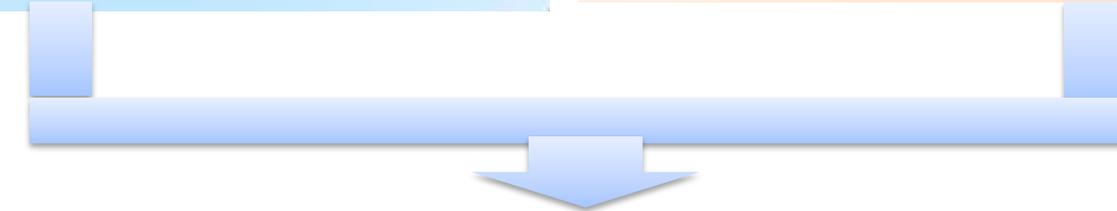
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Working on
“Framework for Green Development Policy”
-the Roadmap for green energy usage-

- Maximize green energy in order to reduce dependence on nuclear energy as well as on fossil fuels
- Utilize all policy resources available and arrange market in order to accelerate energy saving much faster than before and to achieve dramatic spread of renewable energy and enable self-sustaining green growth
- Reform the life, society and industrial structure by green policy, technology and business and bring the growth of the economy and overseas deployment of our industry
- Prioritize 5 leading policy areas;
 - Maximum use of blessings of nature (renewable energy)
 - Further deepening of the world's highest level of energy saving
 - Integrated management of supply-demand
 - Storage battery as an augments of energy utilization
 - World's leading green parts and materials

- Energy savings
 - Cost
 - Lifestyle
 - Regulation
 - Others
- Renewable energy
 - Entrance barrier
 - Sustainability
 - Space
 - Coordination with other stakeholder
 - Others

1. Visualize and share target as well as vision and enhance foreseeability
2. Create competitive market with price-mechanism
3. Promote establishing new public goods / platform
4. Manage and compensate initial risk
5. Elaborate policy deployment to household sector

Thank you.