

Summary of New Low Carbon Technology Plan

September 13th, 2013

- In January 2013, Prime Minister Abe issued the following instruction: “Establish proactive diplomatic strategy against global warming in order to contribute to the world with Japan’s technologies.”
- Japan is to contribute toward addressing global issues such as global warming and energy scarcity by steadily developing and diffusing innovative technologies. The aims are to reduce the world’s greenhouse gas emissions by half by 2050 (80% reduction for developed countries) and to contribute to overcoming environmental and energy issues hindering the economic growth of developing countries.
- The revision of the present strategy detailed the following:
 - (1) Identification of innovative technologies that require development both over the short-to-medium and medium-to-long term.
 - (2) Strengthening of policies for promoting technology development, and
 - (3) Measures required for global expansion and diffusion of innovative technologies, in order to expedite steady development and diffusion of innovative technologies.

(1) Identification of Innovative Technologies

A total of 37 technologies were identified as “innovative technologies”. It is important to globally expand the technologies through technology development according to the needs of target countries, product optimization, and combination of various technologies.

Technologies for Short/Medium-term Development (To Be Developed by ~2030)

- Production • Supply sector
 - High-efficiency coal-fired power generation, high-efficiency natural gas-fired power generation, wind power generation, solar energy, geothermal power generation, ocean energy, nuclear power, etc.
- Consumption • Demand sector
 - Next-generation automobiles, innovative structural materials, innovative devices, energy management, energy efficient houses/buildings, etc.
- Distribution • Supply/Demand Integration sector
 - Fuel cells, high-performance electricity storage, heat storage and insulation technologies, etc.

Technologies for Medium/Long-term Development (To Be Put into Practical Use after ~2030)

- CO₂ Capture and Storage (CCS), artificial photosynthesis, biomass utilization, Hydrogen production/transport/storage, etc.

(2) Strengthening of Policies for Promoting Technology Development

Promotion of Investment in R&D Cultivation of Innovative Technology Seeds

Improve investment environment for the private sector through utilization and promotion of R&D tax systems. Develop high-risk high-return technologies under the leadership of the government.

(3) Measures Required for Global Expansion and Diffusion of Innovative Technologies

Promotion of the Joint Crediting Mechanism

Promote the development of projects through cooperation among relevant ministries, agencies and organizations including JICA and JBIC.

*JICA: Japan International Cooperation Agency

*JBIC: Japan Bank for International Cooperation

Promotion of Utilizing International Standardization

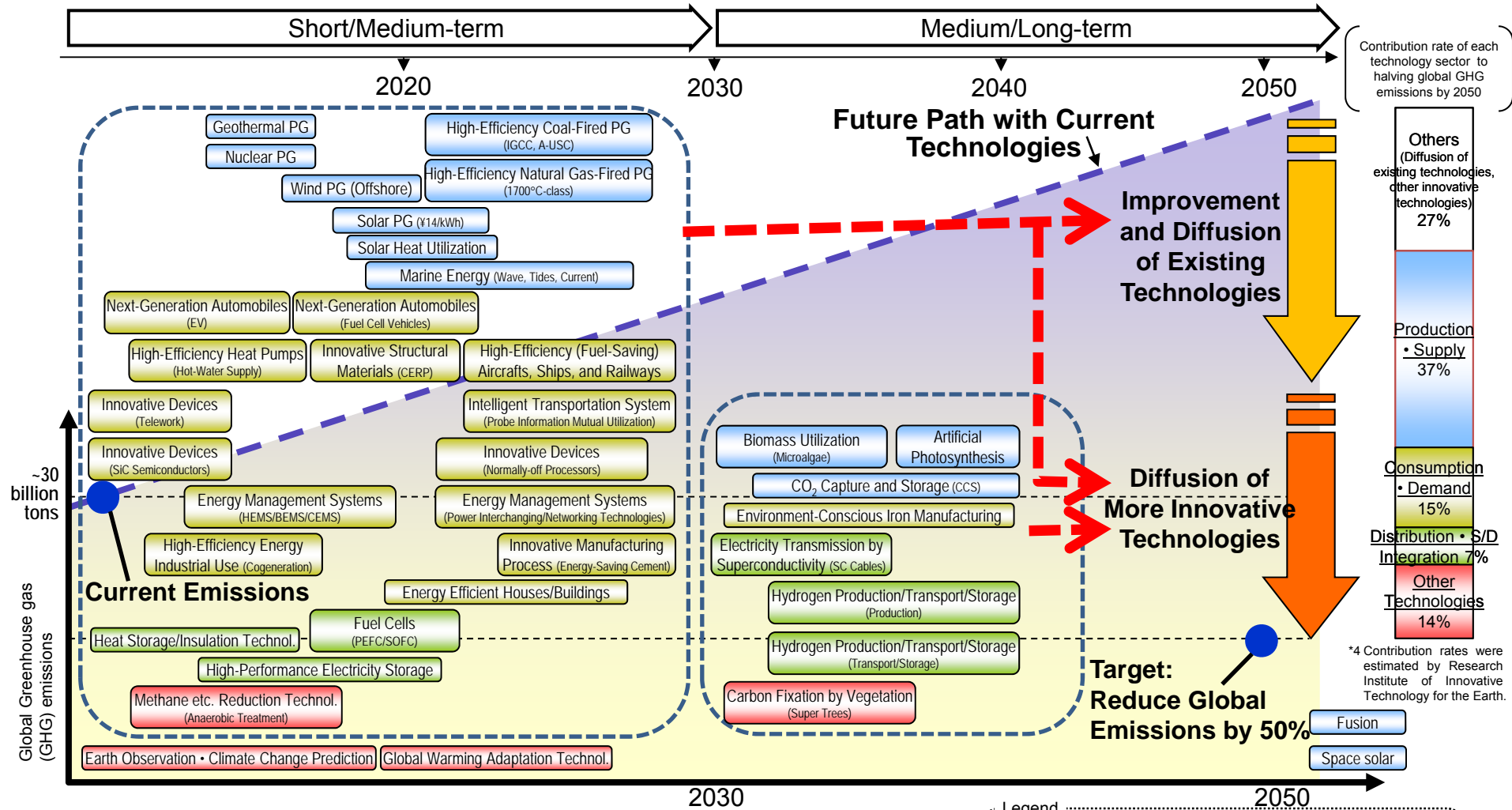
Assist establishment of systems for energy-saving measures, renewable energy application, HRD, etc., in emerging countries.

Strategic Utilization of Public Funds

Utilize public financing to promote global expansion of high-efficiency thermal and nuclear power generation, low-carbon society, etc.

Global Contribution of Japan's Environmental and Energy Technologies

Japan will continue to develop advanced environmental and energy technologies in the short/medium-term to medium/long-term, and will contribute to halving global greenhouse gas emissions by 2050 through global diffusion of such technologies. It is necessary to promote developing more innovative technologies over a medium-to-long-term, due to difficulties in achieving this emission reduction target by improvement and diffusion of existing technologies.



*1 The horizontal position of environmental and energy technologies indicates approximate time of practical diffusion based on the roadmap of each technology.
 *2 "Future path with current technologies" indicates approximate transition of global GHG emissions assuming no change in efficiencies for existing technologies (e.g., generating efficiency of coal-fired generation)
 *3 The downward arrows for "Improvement and diffusion of existing technologies" and "Diffusion of innovative technologies" indicate both contributions are required to reduce global GHG emissions; they do not specify the amount of reduction by each contribution.

Legend

Production • Supply	Consumption • Demand
Distribution • S/D Integration	Other Technologies

*1 Center of bars indicates approximate time of practical diffusion.
 *2 Parentheses show technology examples. Refer to the full text for details.