

# A Proposal of a Renewable Energy Promotion Policy for Achieving a Low-carbon Society (Outline)

## 1. Increased production of renewable energy will contribute to fight against global warming; Japan's targets too low

### ○ Significance of increased production of renewable energy ○ Japan's present level and future targets far behind other major countries

- Contributes to Japan's effort to build low-carbon systems.
  - Contributes to the construction of low-carbon electricity system in other countries, including developing nations
  - Ensures energy security
  - Creates jobs, increases domestic demand, enhances international competitiveness of the Japanese industry
  - Creates high-quality social capital to be handed down to the next generation
- Since 1990 Japan's renewable energy output has been low and flat(2005 : about 5% of annual primary energy output (about 2%, excluding large-scale water power generation); about 9% of annual electricity output (2%, excluding large-scale water power generation)
  - Japan is among the countries having the **lowest targets**, compared with European countries, which set aggressive targets

## 2. High production targets indispensable for renewable energy

- By 2020, output can be **nearly doubled** from the present level based on technologically and economically practicable estimate (**10 to 11%** of annual primary energy output (**6 to 7%**, excluding large-scale water power generation); **16 to 18%** annual electricity output (**9 to 10%**, excluding large-scale water power generation))

## 3. Installation incentives indispensable to achieve the targets

### ○ Policy for renewable energy

- Appropriate combination of subsidy programs, the RPS program, and the Fit program, depending on the technology level and market size, is indispensable
- The existing RPS program has an excessively low target (1.6% for 2014). The target must be raised

### ○ Policy for renewable heat and fuels

- The heat policy should include the mandatory use of solar heat in households and buildings for hot water supply and heating needs. The fuel policy should promote E10 fuels (90% gasoline, 10% ethanol)

## 4. To acquire top position in global photovoltaic power generation

### ○ Target for photovoltaic power generation and target achievement plan

- Cost target to equate the cost of photovoltaic power generation with retail electricity charges  
2020: 14 yen/kWh, 2030: 7 yen/kWh
- Output of photovoltaic electricity required to achieve the cost target  
2020: 37 million kW (**25 times** the present level)  
2030: 79 million kW (**55 times** the present level)
- Achievable by the public sector initiative in introduction, shortening of the payback period to 10 years, and encouragement of technology development
- Specifically, the feed-in tariff (FIT) program is an effective measure to shorten the payback period to 10 years
- With increased production, Japanese businesses will grab **30% or more** of the global market in 2020

## 5. Overcoming barriers to enjoy benefits

### ○ Barriers (voltage rises, frequency fluctuations, unstable supply-demand balance, installation costs) can be overcome

- By using IT, it is possible to build a supply-demand control function (smart grids) on a power system that integrates large-scale power supplies, decentralized power supplies, and storage cells, without excessively depending on the use of storage cells.
- Taxes and electricity costs might be shouldered widely and evenly by the governments, the public, and the industry.
- An ordinary household might pay a monthly electricity charge of 260 yen (no surcharge might be imposed on the minimum necessary monthly consumption of 120 kWh, or a tax benefit might be given to large electricity consumers).
- A total of 25 trillion yen is required to the year 2030 to increase energy production.

- Increased production of renewable energy will bring about far-reaching benefits
  - Economic benefits will total over **30 trillion yen** to the year 2020, and over **64 trillion yen** to the year 2030
  - CO2 emissions will have been reduced by **50 million tons** as of 2020, and by **1,000 million tons** as of 2030.
  - **600,000 and 700,000 jobs** will have been created in 2020 and 2030, respectively.