JAPAN ON THE MOVE:
Japan’s Innovative Technologies for
Tackling Climate Change

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First I would like to address the current state of Japan’s emissions of greenhouse gases.

Under the Kyoto Protocol, Japan has committed to reducing greenhouse gas emissions in the first commitment period by 6% below base year level.

As you can see from this slide, our most recent data is that for fiscal year 2004. Emissions in 2004 stood at approximately 1.33 billion tons, which was 0.8% lower than previous year.

However, this figure still represents a 7.4% increase over base year level.

Although it is not an easy task for Japan to attain its Kyoto target, we are making our utmost by promoting our measures in every sector.
In order to implement policies and measures to achieve our Kyoto target, Japanese government has formulated the “Kyoto Protocol Target Achievement Plan” in April this year.

Under this plan, targets have been established for each sector, such as industry, transportation, and the household and commercial sector, and over 60 concrete measures have been set forth with numerical reduction targets.

### Kyoto Protocol Target Achievement Plan

<table>
<thead>
<tr>
<th>Classification</th>
<th>Year 2010 projections</th>
<th>Additional measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. CO₂ emissions from energy sources</td>
<td>+ 5.4%</td>
<td>- 4.8%</td>
</tr>
<tr>
<td>ii. CO₂, methane, and N₂O emissions from non-energy sources</td>
<td>- 0.8%</td>
<td>- 0.4%</td>
</tr>
<tr>
<td>iii. 3 gases including CFC alternatives (HFC, PFC, SF₆)</td>
<td>+ 1.4%</td>
<td>- 1.3%</td>
</tr>
<tr>
<td>iv. Securing sinks via forest management</td>
<td>-</td>
<td>- 3.9%</td>
</tr>
<tr>
<td>v. Kyoto Mechanisms</td>
<td>-</td>
<td>- 1.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>+ 6%</td>
<td>- 12%</td>
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</tbody>
</table>

(Total emissions as a percentage of Base Year)
Policies and measures are based on two major key points for ensuring the achievement of the 6% reduction commitment.

One is a national campaign which contributes to making every citizen and business entity to take part in the actions to combat global warming.

Another is the dissemination of low emission technologies such as clean energy vehicles, photovoltaic power generations and light-emitting diodes.
Various laws and regulations are reinforced.
This year, the government introduced the system to calculate and publish GHG emissions from plants and offices, and revised the law in order to strengthen energy saving measures in plant, building and transportation sector.
We will revise some laws to reinforce the recovery and destruction of Fluorocarbons and to acquire Kyoto Mechanism credits next year.
Especially, concerning Kyoto Mechanisms, Japan is planning to get 0.1 billion t-CO$_2$ credits during the first commitment period.
Therefore, we are making a point of the issue about CDM improvement discussed here at COP/MOP1.
In April 2005, the government launched a campaign called “Team -6%” to help mitigate global warming, encouraging companies and individuals to take specific actions to help achieve the goal.

Prime Minister Junichiro Koizumi is the leader of this Team.

I work with him as the sub-leader, and more than 150,000 people have joined as individual members of the Team.
To disseminate the Team -6% campaign more widely, “Cool Biz” was introduced this summer under Prime Minister Koizumi’s initiative.

Because of the high temperature and high humidity of the Japanese summer, “Cool Biz” encourages business people to wear cool and comfortable clothes that are appropriate for business occasions, shedding ties and jackets.

This “Cool Biz” campaign resulted in some favorable effects.

It was widely accepted by the majority of companies and people, and it reduced electricity demand during the summer months.

It also reduced emissions by 460,000t-CO₂, which is the same as monthly emissions from 1 million households.
And now, we are in the middle of another campaign, called “Warm Biz,” which promotes office-appropriate business wear for winter, with the mindset of “wear more clothes if you are cold, don’t depend on the heater”.

In Japan, energy demand for heating is 2.5 times more than that for air conditioning.
Toyota

- Hybrid Vehicle (Prius)

- Target under Kyoto Protocol Target Achievement Plan (KPTAP)
  - Dissemination of clean energy automobiles by 2010
    - Total: 2.33 million units
    - Emissions reduction estimate: 3Mt-CO\textsubscript{2}

In addressing the dissemination of low-emission technologies today, I would like to show you three examples from Japanese corporations.

Toyota Motor Corporation developed the “Prius,” which is the world’s first practical hybrid vehicle, as you are already well aware.

Under the Kyoto Protocol Target Achievement Plan, by 2010 we are aiming to introduce 2.33 million hybrid vehicles, reducing emissions by 3Mt-CO\textsubscript{2}.
For my professional responsibilities, I used to need to use two cars, a CNG Century and a Hybrid Prius, because I am always with 4 people, including 2 secretaries.

However, this March I decided that we should change this to having only one highly-efficient car, an Estima Hybrid, which 7 people are able to ride in together.

We could reduce CO\textsubscript{2} emissions from 326g/km to 123g/km as well as NOx emissions.
Target under KPTAP
- Dissemination of fuel cells by 2010
  Total: 1 million units for residential use
  Emissions reduction estimate: 3Mt-CO₂
  (for residential and commercial use)

Tokyo Gas Company Limited, which is a company producing, supplying, and selling city gas, developed Residential Fuel Cell Cogeneration Systems, which are the first in the world.

Under the Kyoto Protocol Target Achievement Plan, we are aiming to introduce 1 million such systems for residential use by 2010, and its estimated effect will be a reduction of 3Mt-CO₂.
Asahi Kasei Homes Corporation, an operating company related to housing, has developed ground source heat pump systems.

The systems are small and used for both heating and cooling, and are thus different from conventional ones which are large and used for heating only.

Under the Kyoto Protocol Target Achievement Plan, we will try to introduce 5.2 million such systems by 2010, resulting in an emissions reduction of 3Mt-CO$_2$. 

Target under KPTAP

- Dissemination of heat pump systems by 2010
  - Total: 5.2 million units
  - Emissions reduction estimate: 3.1Mt-CO$_2$
The buildings of government offices have already introduced these technologies in order to set a good model for the general public.

At the official residence of the Japanese Prime Minister, fuel cell systems, solar panels on the roof, and small-scale wind power generation have been installed.
In closing this evening, let me thank you for your kind attention and assure you that Japan is doing its utmost to generate a virtuous circle for the environment and the economy by promoting this national campaign and the dissemination of relevant technologies, and we are confident that this will lead to Japan achieving its 6% reduction target.

Moreover, I hope that for developing countries this represents a model of a virtuous circle for the environment and the economy.