those of Japan. There is a possibility that China, Thailand, Malaysia and Singapore have high affinity to Japanese consumption trends.
(3) There is a possibility of the presence of a trend-creating layer (or innovator layer) in each country, which should be used as a gate leading to the spread of trends.
(4) Certain developmental stages are identified in fashion trends, which are applicable to any country.

4. Future outlook

Using this report as a spring board, METI will exchange views on consumption trends in Asia with experts. It will also examine the mechanism of consumption trend diffusion in Asian countries (as well as worldwide) and the promotional measures and distribution and advertisement strategies for trend diffusion of fashion and animation content from Japan.

3. Global development of the low carbon revolution

As environmental and resource restrictions tighten on a global scale, it is important for Japan to present a social model by taking initiatives in shifting to a low carbon society and leading the world in solving global issues. At the same time, it is also necessary to build a framework of global cooperation in the energy conservation and environmental areas and strengthen the global foundation for the creation of a low carbon society. The transition of the world to such social structure not only contributes to solving global issues in the age of increasing demand for energy and global warming, but also leads to the creation of new demand, and can also be a new source of growth for Japan's economy by expanding business in regards to energy conservation, new energy technologies and other industries in which Japan has strength. In addition, increased awareness of the value of a low carbon society and the realization of a low carbon society in every part of the world would mean an increase in the relative competitiveness of Japan's wisdom, technology, industry and soft power. From these points of view, Japan needs to actively contribute to global efforts, such as G8, for the realization of a low carbon society and promote cooperation in energy conservation environmental technologies in Asia where demand for energy is rapidly increasing along with economic growth. Furthermore, it is also important to promote Japan-U.S. cooperation in the area of advanced environmental technology, including fuel cells, solar cells and electric vehicles, etc.

(1) Promotion of international cooperation for energy conservation

Environmental restraints and resources restraints are common issues worldwide and it is important that the entire global community makes concerted efforts to solve these issues. At the G8 Gleneagles Summit in 2005, leaders of the developed world agreed to connect the issue of climate change with energy policy in an integrated manner and agreed to make efforts in improving energy efficiency in each individual sector. At the G8 Toyako Summit in 2008, consensus was reached on the goal of achieving at least 50% reduction of global emissions by 2050, as advocated by then Prime Minister Yasuo Fukuda. In addition to drawing a shared blueprint for the solution of global warming, its vision

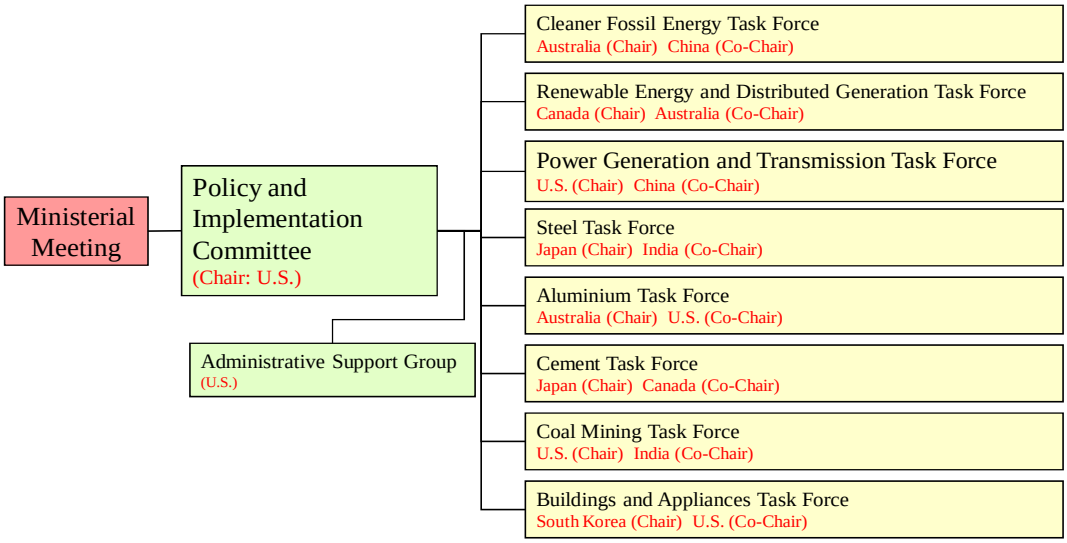
is starting to take shape. At the G8+3 Energy Ministers' Meeting[58] that took place in Aomori in 2008, a joint statement was released in which concerned countries reached consensus on: (i) the promotion of low-carbon energies, including renewable energies, cleaner use of coal and nuclear energy; (ii) setting voluntary goals and developing action plans by individual countries; (iii) collaboration on the practical development of sectoral approaches; and, (iv) the importance of developing innovative energy technology, in addition to the establishment of the International Partnership for Energy Efficiency Cooperation (IPEEC). The IPEEC is designed for sharing information on energy conservation measures between member countries in order to improve their energy efficiency. Led by Japan, discussions were conducted with the participation of G8 countries (Japan, U.S., Canada, U.K., France, Germany, Italy, and Russia) along with China, Brazil, Mexico, South Korea, India and the EC (observer). The IPPEC was officially established at the G8 Energy Ministers' Meeting in Italy in May 2009. In addition to such efforts within the G8 framework, the APEC and East Asia Summit frameworks are also active. It is important to strategically utilize various frameworks and promote international cooperation for effective energy conservation in order to remove environmental restraints and resource restraints.

(2) Promotion of sectoral, regional cooperation for energy conservation environment through public-private partnership

In order to combat global warming issues, it is important to make practical efforts in addressing sectoral issues by sharing knowledge and experience through public-private partnership, in addition to inter-government cooperation. The Asia-Pacific Partnership for Clean Development and Climate (APP) is a partnership launched in the Asia-Pacific region in July 2005 aiming to address increasing demand for energy, energy security and climate change, etc., and is currently composed of seven member states: Japan, Australia, China, India, South Korea, U.S., and Canada[59], and the task forces have been established in 8 sectors, which covers about 60% of CO_2 emissions of the seven member states of the APP (see Figure 3-2-3-1). Within the APP, over 100 projects are now in progress under the respective task forces. For example, efforts are being undertaken by the Steel Task Force as described in Figure 3-2-3-2 and the sectoral efforts (development of common calculation method, collection of data on energy consumption/CO_2 emissions, evaluation of reduction potential, identification of best practices, human resources development, technology development/transfer, and demonstration, etc.) will be further promoted in the future. The effectiveness of such APP activities was reaffirmed at the 7th Policy Implementation Committee (PIC) held in Australia in May 2009. China, not included in any numerical limitation of the Kyoto Protocol, announced its intention to host the 3rd Ministerial Meeting in the fall of 2009, and the activities of the APP which complement the Kyoto Protocol will continue to be effectively carried out.

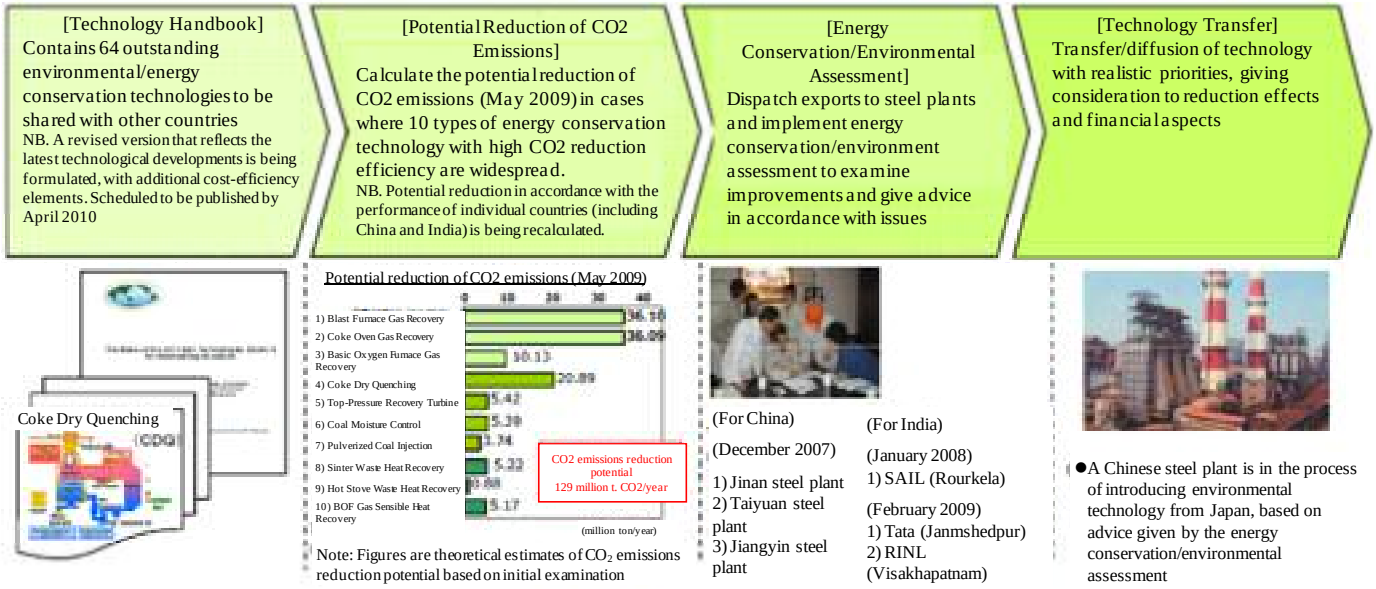
[58] Energy ministers' meeting of G8 countries (U.S., U.K., Japan, France, Germany, Italy, Canada, Russia) plus China, India and South Korea, which account for 65% of the world's energy consumption.
[59] Canada officially participated in the APP since the 2nd Ministerial Meeting, which was held in India in October 2007.

Figure 3-2-3-1 APP task forces



Source: Ministry of Economy, Trade and Industry, Japan

Figure 3-2-3-2 Efforts of APP Steel Task Force



Source: Ministry of Economy, Trade and Industry, Japan

(3) Global development of Japan's energy conservation/new energy business

As the issue of global warming increases in severity, the promotion of energy conservation and the introduction of renewable energy has become a global challenge. Japanese-owned companies boast the world's leading energy conservation/renewable energy products/technologies and are in a position to contribute greatly to the world through such products and technologies. The Japanese Business

Alliance for Smart Energy Worldwide (Chairman: Fujio Mitarai, Chairman of Nippon Keidanren) was established in October 2008 with the aim of spreading Japan's outstanding energy conservation products and technologies overseas on a commercial bases in joint efforts by the government and the private sector. The Japanese Business Alliance for Smart Energy Worldwide has published Japanese State-of-the-art Smart Energy Products & Technologies which is a compilation of 162 of Japan's latest energy efficient products and technologies, including energy saving home electronics appliances, heat pumps, solar cells and NAS batteries, in an attempt to promote active worldwide dissemination.[60] The worldwide spread of Japanese technologies will contribute to the solution of global warming issues and lead to the provision of business opportunities for Japanese-owned companies in an environment where efforts for energy saving/new energy by individual counties are gaining momentum and the environment-related business market of the world is further expanding.

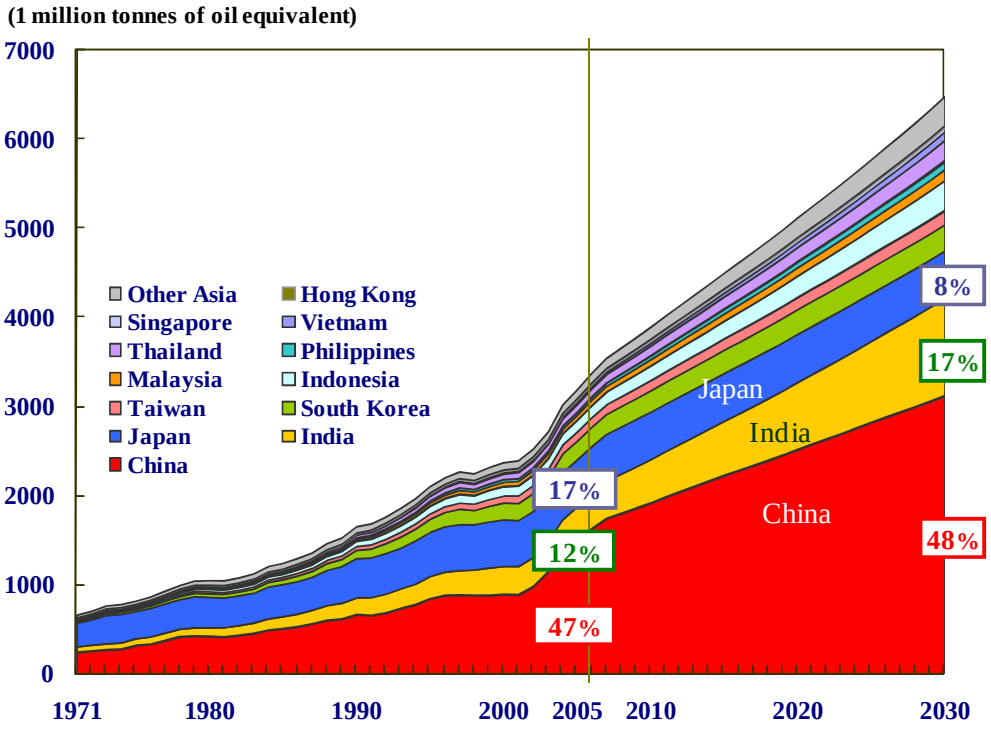
(4) Cooperation for energy conservation environmental technology in Asia

The world's demand for energy is expected to grow rapidly by almost 60% by 2030 (relative to 2005). Asia accounts for as much as 50% of the increment and Asian demand for energy is expected to double by 2030. In particular, the demand for energy in China and India, with huge populations and rapid economic growth as a background, is expected to increase drastically. In 2030, the percentage of China and India in primary energy consumption is estimated to be approximately 65%.

Overcoming two oil shocks, Japan boasts the world's highest level of energy efficiency by conserving energy at factories though energy manager systems and by developing energy conserving devices in industries through the top-runner system. The energy consumption per GDP unit in Japan is about one ninth of China and one eighth of India. Moreover, Japan pioneered in the promotion of the introduction of photovoltaic generation and its production volume accounts for about 17.6% of the world, claiming itself as a leading photovoltaic generation producer. Since Japan has the energy conservation/new energy policy and world-leading energy saving/renewable energy products and technologies necessary to materialize the national policy, the world's expectations on Japan are ever increasing. In order to meet those expectations, Japan is making an active contribution through energy conservation/new energy cooperation and through human resources development and technology transfer, etc. (see Figures 3-2-3-3 and 3-2-3-4).

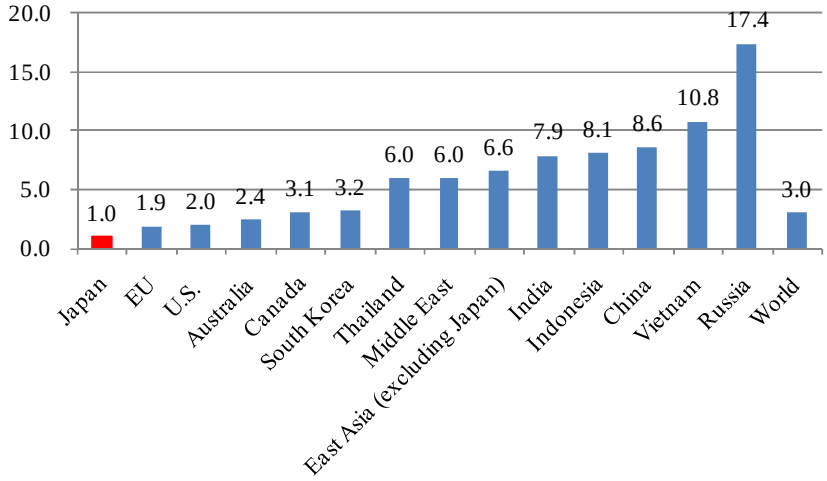
[60] Japanese State-of-the-art Smart Energy Products & Technologies is available on the website: http://www.jase-w.eccj.or.jp/

Figure 3-2-3-3 Primary energy consumption: Asia



Source: *Asia/World Energy Outlook* (Institute of Energy Economics, Japan)

Figure 3-2-3-4 International comparison of energy efficiency



Source: *Key World Energy Statistics 2007* (IEA)

(A) Efforts in China

Today, China accounts for about 15% of the world's energy demand – the second largest consumption country. In order to maintain growth in the future, it is vital to ensure resources and reduce energy demand as much as possible. Thus, China actively promotes energy conservation policy. In the 11th Five-Year Plan, China set the goal of reducing the energy consumption per GDP unit by

around 20% in the five year period from 2006 to 2010. Efforts are currently underway to achieve this goal: for example, the National 10 Key-stone Energy Saving Projects in the "11th 5-Year Plan" and the Energy Saving Action Plan targeting the 1000 highest energy-consuming companies, which enhances energy saving measures, such as requiring the top 1000 energy consuming companies to formulate energy conservation plans and to submit periodical reports.

Through leaders level and ministerial level dialogues, Japan has been consulting with China about policies and the direction of cooperation, and it has been promoting cooperation focusing on the following three pillars: (i) support for the establishment of a system to promote energy conservation through human resources development, (ii) demonstration of facilities using the advanced energy conservation technologies of Japan, and (iii) hosting a forum backing up energy saving cooperation amongst private companies. For example, in the case of human resources development, energy conservation policy training sessions were offered to 256 people in the past three years, contributing to the formulation of the Energy Conservation Law of China. Also, NADO conducts demonstrations of Japan's advanced energy conservation technology mainly for heavy energy consumption industries, such as steel and cement, as model projects. These model projects widely contribute to the promotion of energy conservation in China through the subsequent secondary dissemination. For instance, the Coke Dry Quenching (CDQ) System for the steel industry has been introduced to more than 20 sites and the Waste Heat Recovery System for the cement industry has been introduced to more than 40 sites in China, which led to the reduction of 9 million CO_2 tons (equivalent to 1.5 nuclear power plants).

Meanwhile, in order to promote energy conservation/environmental cooperation between Japan and China, Japan has hosted the Japan-China Energy Conservation and Environmental Protection Forum since 2006, a public-private forum participated in by ministerial level officials, to exchange views on a wide range of areas concerning policies, experiences and technologies related to energy conservation and the environment. The 3rd Forum held in November 2008 was participated in by around 1000 representatives from the government and the private sector and the topics expanded to cover energy conservation for private buildings and improvement of the water quality of lakes and ponds. At the 4th Forum to be held in China in 2009, energy conservation/environmental cooperation will be expanded to the local level in China, in an attempt to provide business opportunities for Japanese-owned companies and to deepen cooperation between Japan and China in the area of energy conservation/environment through exchanges between local governments/companies and business matching sessions.

(B) Efforts in India

Demand for energy in India is rapidly increasing and it is expected to become the third largest energy consuming country in the world by 2030, after the U.S. and China. Due to these circumstances the Indian government has started to make energy saving efforts, for example, with the designation of 15 priority industrial sectors in 2002, the establishment of energy conservation law including the introduction of the labeling system and the setting up of an energy efficiency bureau.

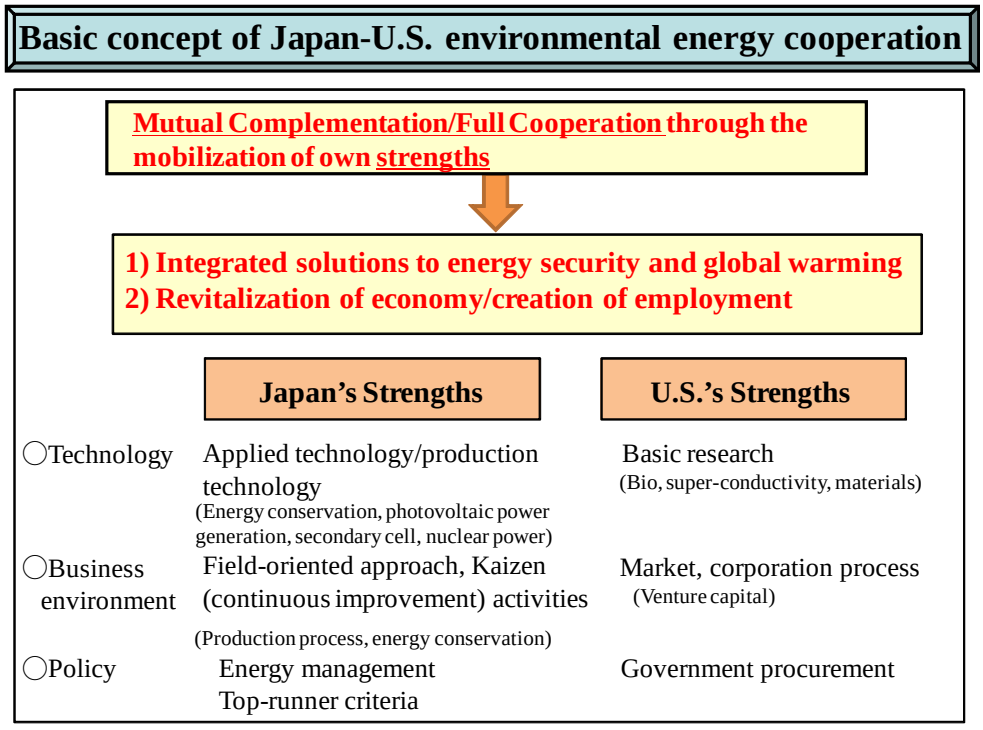
In order to deepen the efforts at the government level, Japan has hosted the Japan-India Energy

Dialogue as a framework for ministerial-level conferences since 2007 and also hosts the Japan-India Energy Forum, a public-private forum participated in by ministerial-level officials, demonstrating the efforts involving business circles. In the future, Japan will further promote Indian efforts in the areas of energy conservation and new energy through the dispatch of experts and the implementation of model projects, etc.

(5) Promotion of Japan-U.S. cooperation in the advanced environmental technology area, such as fuel cells, photovoltaic cells and electric vehicles, etc.

As the international community faces difficult issues, such as the financial crisis and climate change, cooperation between U.S. and Japan, the countries with the world's largest and second largest economies, is essential. Particularly, the Obama administration, which took office in January 2009, takes a strong approach to the issue of climate change, announcing the enhancement of automobile fuel standards and taking the stance of emphasizing the introduction of renewable energy, by utilizing a Smart Grid as part of economic revitalization measures. This demonstrates that the U.S. and Japan share the same direction in regards to the low carbon revolution. Thus, it can be expected that energy security and global warming issues will be solved in an integrated manner. The two countries will work together in mutually-complementary cooperation toward economic revitalization and the creation of employment. This will be pursed by Japan, which has strength in the application and production of technologies such as secondary cells and photovoltaic power generation, and the U.S., which has strength in basic research, such as in superconductivity (see Figure 3-2-3-5).

Figure 3-2-3-5 Basic concept of Japan-U.S. environmental energy cooperation



Source: Ministry of Economy, Trade and Industry, Japan

In response to the affirmation of the importance of Japan-U.S. cooperation through energy/environmental technologies at the first meeting between Prime Minister Aso and President Obama in February 2009, Minister Nikai of the Ministry of Economy, Trade and Industry, at the time of his official visit to the United States in May 2009, exchanged views with U.S. Secretary of Energy Chu on cooperation in the area of low carbon technologies, such as Smart Grid, energy saving buildings, photovoltaic energy and fuel cells. A joint statement was issued to promote these technologies. In line with the joint statement, Japan will actively work to realize Japan-U.S. cooperative relationships.

4. Multi-layer cooperation including industrial cooperation with resource rich countries

As global competition over acquisition of resources is becoming more fierce, it is important to build mutual relationships based on the needs of resource rich countries in order for Japan to ensure a stable supply of resources. Also, incorporation of the vitality of resource rich countries into Japan, including oil money, would contribute to the strengthening of medium-to-long-term competitiveness of Japan's economy. To that end, Japan will conduct strategic resource diplomacy, which incorporates multi-layer industrial cooperation, by taking wide and detailed support measures for resource rich countries, including technical cooperation, exchange/contribution in education and culture and by supporting Japanese-owned companies expanding their business in resource-rich countries and companies in resource-rich countries expanding their business in Japan.

(1) Promotion of resource diplomacy and economic partnership

(A) Deployment of resource diplomacy at both the leaders' and ministerial level

Japan, being a resource poor country, needs to deploy comprehensive and strategic resource diplomacy to ensure critical resources. Strengthening relationships with resource rich countries requires concerted efforts by the government through resource diplomacy at both the leaders' and ministerial level (see Figure 3-2-4-1).