

JAPAN

1. GOALS FOR EFFICIENCY IMPROVEMENT

1.1. Overall Energy Efficiency Improvement Goals

a) Key indicator

Energy intensity—total primary energy supply (TPES)/GDP

b) Goals

Reduce energy intensity by 30%

c) Base year

2003

d) Goal year

2030

e) Description

Within Japan's May 2006 National Energy Strategy, the Energy Conservation Frontrunner Plan reinforces the economy's strategy to reduce petroleum consumption. Setting a target to improve energy efficiency by 30% relative to 2003 by 2030, the Japanese Government pledges to establish a state-of-the-art energy supply-demand structure within a market of high prices that the government expects to endure for the medium to long term. Beyond a sustained promotion of energy efficiency, the Japanese government pledges to optimise energy use by reducing oil dependence through energy intensity improvements in the oil-intensive transport sector. The Energy Conservation Frontrunner Plan sets a strategy to achieve this energy efficiency target, through strategic planning in both the medium and long term. It establishes a plan to develop energy conservation technology and to develop and disseminate a benchmarking approach, so that the energy conservation effect can be quantitatively verified. For more details see: Energy Conservation Frontrunner Plan by Ministry of Economy, Trade and Industry (METI) at www.nedo.go.jp/informations/other/190423_1/190423_1.html.

1.2. Sectoral Energy Efficiency Improvement Goals

a) Sector

Power (Federation of Electric Power Companies)

b) Goals

Reducing CO₂ emissions intensity (emissions per unit of user-end electricity) by an average of approximately 20% (0.34kg-CO₂/kWh)

c) Base year

FY1990

d) Goal year

FY2008-2012 (average over five years)

e) Description

On 17 December 1996, the Keidanren Voluntary Action Plan on the Environment was presented. Goals of voluntary action plans such as a CO₂ unit goal and energy efficiency goal are individually formulated in 36 industries (represented by 137 organisations) in industrial, commercial, transportation and energy-conversion sectors. For details see: Environmental Action Plan by The Federation of Electric Power Companies of Japan at www.fepec.or.jp/english/library/environmental_action_plan/index.html.

a) Sector

Industry (Petroleum Association of Japan)

b) Goals

Improve energy efficiency by 13%

c) Base year

FY1990

d) Goal year

FY2008-2012 (average over five years)

e) Description

On 17 December 1996, the Keidanren Voluntary Action Plan on the Environment was presented. Goals of voluntary action plans such as CO₂ unit goal and energy efficiency goal are individually formulated in 36 industries (represented by 137 organisations) in the industrial, commercial, transportation and energy-conversion sectors. For details see: Global Environmental Voluntary Action Plan by Petroleum Association of Japan at www.paj.gr.jp/paj_info/topics/2009/20090120.html (Japanese only).

a) Sector

Industry (Japan Iron and Steel Federation)

b) Goals

Improve energy efficiency by 10%

c) Base year

FY1990

d) Goal year

FY2008-2012 (average over five years)

e) Description

On 17 December 1996, the Keidanren Voluntary Action Plan on the Environment was presented. Goals of voluntary action plans such as CO₂ unit goal and energy efficiency goal are individually formulated in 36 industries (represented by 137 organisations) in industrial, commercial, transportation and energy-conversion sectors. For details see: Voluntary Action Plan by Japan Iron and Steel Federation at www.jisf.or.jp/en/activity/warm/commit/index.html.

a) Sector

Industry (Japan Cement Association)

b) Goals

Improve energy efficiency by 3.8%

c) Base year

FY1990

d) Goal year

FY2008-2012 (average over five years)

e) Description

On 17 December 1996, the Keidanren Voluntary Action Plan on the Environment was presented. Goals of voluntary action plans such as CO₂ unit goal and energy efficiency goal are individually formulated in 36 industries (represented by 137 organisations) in industrial, commercial, transportation and energy-conversion sectors. For details see: Voluntary Action Plan by Japan Cement Association at www.jcassoc.or.jp/cement/1jpn/jg1a.html (Japanese only).

a) Sector

Industry (Japan Chemical Industry Association)

b) Goals

Improve energy efficiency by 20%

c) Base year

FY1990

d) Goal year

FY2008-2012 (average over five years)

e) Description

On December 17, 1996, the Keidanren Voluntary Action Plan on the Environment was presented. Goals of voluntary action plans such as CO₂ unit goal and energy efficiency goal are individually formulated in 36 industries (represented by 137 organisations) in industrial, commercial, transportation and energy-conversion sectors. For details see: Voluntary Action Plan by Japan Chemical Industry Association at www.nikkakyo.org/upload/2314_3011.pdf (Japanese only).

a) Sector

Industry (Japan Paper Association)

b) Goals

Improve energy efficiency by 20%

c) Base year

FY1990

d) Goal year

FY2008-2012 (average over five years)

e) Description

On 17 December 1996, the Keidanren Voluntary Action Plan on the Environment was presented. Goals of voluntary action plans such as CO₂ unit goal and energy efficiency goal are individually formulated in 36 industries (represented by 137 organisations) in industrial, commercial, transportation and energy-conversion sectors. For details see: Voluntary Action Plan by Japan Paper Association at www.jpa.gr.jp/file/topics/20090318110739-1.pdf (Japanese only).

1.3. Action Plans for Promoting Energy Efficiency**a) Name**

New National Energy Strategy

b) Objectives

- Establishment of energy security measures that Japanese citizens can trust and rely on
- Establishment of the foundation for sustainable development through a comprehensive approach to energy issues and environmental issues
- Commitment to assist Asian and world economies in addressing energy problems.

c) Applicable sectors

All relevant sectors

d) Outlines

The 'New National Energy Strategy' is composed of various energy-related action plans to achieve the objectives. Detailed information in Japanese can be found at www.enecho.meti.go.jp/topics/energy-strategy/index.htm. Among these the following is closely related to the promotion of energy efficiency.

1) Energy Conservation Frontrunner Plan:

A positive cycle between the innovation in energy conservation technology and the reforms of the social system to actively use the results of such innovations will be established through:

- Formulation of an energy conservation technology strategy that clearly indicates the technical sectors in which a cross-sectoral and mid- to long-term breakthrough is required
- Preparation of pace-setting standards for various sectors, and selectively strengthen support for those who meet the standards
- Development of a business value assessment method with which companies engaged in energy conservation investment are evaluated by the market (investors)
- Medium- and long-term examinations of the efforts necessary to establish energy efficient social systems or urban structures.

2) Transport Energy for the Next Generation Plan:

The necessary environment will be prepared in order to establish a highly efficient transport infrastructure that can respond flexibly to changes in the energy market (e.g., demand-supply pressure in the oil market) through:

- Establishment of new fuel efficiency standards that promote fuel efficiency in passenger vehicles, and examination of the octane value improvement of regular gasoline
- Re-examination of the upper blending limit regulation of oxygenated compounds (including ethanol), improvement in the biomass derived fuel supply infrastructure, and facilitation of the use of diesel cars that have exhaust gas performance equal to gasoline cars
- Promotion of production and supply of new fuels such as biomass derived fuels (including bioethanol) and improvement of economic efficiency by promoting the development of high-efficiency ethanol production technology and GTL (Gas to Liquid) technology
- Promotion and dissemination of electric vehicles and fuel cell vehicles, facilitation of technical development of next-generation batteries and fuel cell vehicles including hydrogen storage technology, and promotion of the development and practical application of next-generation vehicles.

3) New Energy Innovation Plan:

Introduction and application of New Energy—solar, wind-power, biomass—will be enhanced according to the attribute and growth stage of each energy source and technology through:

- Proactive introduction of new energy related facilities in public establishments, application of the RPS (Renewables Portfolio Standard) law, and provision of market expansion support mechanisms such as subsidy and taxation systems
- Strategic and intensive promotion of technological development and experimental proof for innovative technologies that are being prepared for launch (for example, solar batteries made of new materials, secondary cells to control wind power output fluctuation, fuel cells to realise a hydrogen-using society)
- Formation of a substantial industrial structure for the new energy industry by developing a group of solar energy generation industries as well as a group of fuel cell and secondary cell industries, and promotion of regional businesses based on the local production and local consumption of wind power and biomass
- Construction of next-generation energy parks where people can view, touch and understand the new energy supply and use formats such as new energy
- Strategic development of critical technologies that support the new energy economy (for example, high efficiency production technology of bioethanol, next-generation secondary cells, inexpensive fuel cells) using super combustion and energy storing as key technologies
- Development and dissemination of innovative technologies that promote the intensive use of energy which include the effective use of fossil fuels
- Enhancement of support for new energy venture businesses that challenge innovative technologies.

4) Asia Energy and Environment Cooperation Strategy:

Development and implementation of energy-environment cooperation programs including the energy conservation sector in order to establish symbiosis with Asian economies. The program covers the following activities:

- Promotion of Energy Conservation based on the ‘Asia Energy Conservation Program’
- New Energy Cooperation in Asia
- Dissemination of clean use, production and safety technologies of coal in Asia
- Building the stockpiling system in Asia
- Promotion of regional cooperation on nuclear power in Asia
- Formulation of the ‘Energy Technology Strategy’: determine the technological challenges that should be met by 2030, while keeping in mind the mode of technology that would be required from a super long term perspective (i.e., 2050, 2100), and present a development strategy in the form of a roadmap (refer to Q1.6a: Cool Earth Energy Innovative Technology Plan).

e) Financial resources and budget allocation

The ‘New National Energy Strategy’ should be implemented under the cooperation of three bodies, a powerful leading company, a tough and efficient government that supports company activities, and an economy with a profound understanding of energy issues, with their relevant resources. The government will carry out environmental improvements for realising such ties between the three bodies.

f) Method for monitoring and measuring effects of action plans

Each project conducted under the ‘New National Energy Strategy’ is evaluated annually by a responsible division in ANRE/METI to confirm the progress of the project and adjust, if necessary, the resources for the project. The contents of the ‘New National Energy Strategy’ require constant review based on the progress of the activities and the changes in market environment and, furthermore, the result of internal and external considerations related to the reduction of greenhouse gas emissions. In conjunction with the triennial revision of the ‘Basic Energy Plan’ based on the Basic Energy Policy Act, while revising the medium- and long-term energy supply and demand outlook, respective policies will be evaluated and reviewed constantly to confirm the appropriateness of the direction indicated by the ‘New National Energy Strategy’.

g) Expected results

The following five specific targets have been set as common long-term goals to be attained jointly by the government and private entities.

- *Target of energy conservation*: at least another 30% improvement of efficiency will be attained by 2030
- *Target of reducing oil dependence*: the ratio will be reduced to less than 40% by 2030
- *Target of reducing oil dependence in the transport sector*: the percentage will be reduced to around 80% by 2030
- *Target for nuclear power generation*: the ratio of nuclear power to total power production will be maintained or increased to 30-40% or more up to 2030 or later
- *Target of overseas natural resources development*: oil volume ratio of exploration and development by Japanese companies will be increased to around 40% by 2030.

h) Future tasks

See (f), above

1.4. Institutional Structure

Continuous information exchange for necessary coordination is conducted among relevant divisions of energy-related ministries as follows.

a) Name

Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry (ANRE/METI)

b) Status of organisation

Policymaker, regulator, implementer

c) Roles and responsibilities

Policymaker, regulator, implementer

d) Covered sectors

Energy matters in general

e) Established data

No information available

f) Number of staff members

No information available

a) Name

Ministry of Land, Infrastructure, Transport and Tourism (MILT)

b) Status of organisation

Policymaker, regulator, implementer

c) Roles and responsibilities

Policymaker, regulator, implementer

d) Covered sectors

Transport, building

e) Established date

No information available

f) Number of staff members

No information available

1.5. Information Dissemination, Awareness-raising and Capacity-building**a) Information collection and dissemination**

Relevant information is available from websites of ANRE/METI, the Energy Conservation Center, Japan (ECCJ) and major industrial associations.

b) Awareness-raising

Relevant information is available from websites of ANRE/METI, the Energy Conservation Center, Japan (ECCJ) and major industrial associations.

c) Capacity-building

The Energy Conservation Center, Japan (ECCJ) has been providing a training course for energy managers who will be in charge of the management of energy (heat, electricity) at large energy-using businesses.

1.6. Research and Development in Energy Efficiency and Conservation**1.6.1. Policies on Energy Efficiency Research, Development and Demonstrations****a) Level of government**

Central government

b) Name of policy

Cool Earth-Innovative Energy Technology Program

c) Responsible department/agency

Ministry of Economy, Trade and Industry (METI)

d) Applicable sectors

All relevant sectors

e) Financial resources (total amount, unit USD)

21 categories of technology were selected as innovative energy technologies and JPY 73 billion (approximately USD 826 million) in the 2008 fiscal year was allocated for R&D investment.

f) Outputs

Relevant R&D reports of the 21 categories of technology will be published and uploaded to the websites of the responsible organisations.

g) Outcomes

R&D results of the 21 categories of technology are expected to contribute to achieving a 50% reduction in CO₂ emissions throughout the world by 2050.

h) Description

The development of innovative technology is essential in achieving the long-term target of halving global greenhouse gas emissions by 2050 from the current levels under Cool Earth 50, proposed in May 2007. Based on awareness of this issue, an investigative commission comprising key intellectual figures, organised under Akira Amari, Minister of Economy, Trade and Industry, announced the Cool Earth-Innovative Energy Technology Program. The commission selected 21 innovative technologies whose development and deployment should be prioritised to achieve the target. Detailed information can be accessed at www.meti.go.jp/english/newtopics/data/nBackIssue20080305_04.html.

1.6.2. Programs on Energy Efficiency Research, Development and Demonstrations**a) Level of government**

Central government

b) Name of program

Several R&D programs have been conducted based on the ‘Cool Earth-Innovative Energy Technology Program’ by relevant organisations.

c) Responsible department/agency

METI and other relevant ministries, New Energy and Industrial Technology Development Organization (NEDO), National Institute of Advanced Industrial Science and Technology (AIST), relevant companies and universities/colleges.

d) Objectives and period

Each project has its own objective and R&D period.

e) Applicable sectors

All relevant sectors in the 21 categories

f) Financial resources (total amount, unit USD)

A certain portion of these projects is funded by METI or relevant ministries

g) Outputs

Relevant R&D reports of the 21 categories of technology will be published and uploaded to websites of the responsible organisations.

1.6.3. Research, Development and Demonstration as a Driver for Continuous Energy Efficiency Improvement

Each project conducted under the ‘Cool Earth-Innovative Energy Technology Program’ is evaluated annually by a responsible division in METI to confirm the progress of the project and adjust, if necessary, the priorities, modalities and resources for the project.

2. MEASURES FOR ENERGY EFFICIENCY IMPROVEMENTS**2.1. Government laws, decrees, acts****a) Name**

Law Concerning the Rational Use of Energy (Energy Conservation Law)

b) Level

Central

c) Purpose

The law was enacted in 1979 to ensure effective use of fuel resources in response to the economic and social environments surrounding energy issues and to promote rational use of energy by industries, business establishments and others.

d) Applicable sectors

Industry, transport, residential, commercial

e) Outline

See 2.2 below

2.2. Regulatory Measures

To ensure effective use of fuel resources in response to the economic and social environments surrounding energy issues and to promote rational use of energy by industries, business establishments and others, a number of programs have been implemented.

2.2.1. Business Energy Reporting

Business organisations (manufacturers, service companies, etc.) of which the energy usage in each fiscal year amounts to 1500 kilolitres (crude oil equivalent) or more are obliged to report annually on the amounts of energy they actually consume, to prepare and submit medium-term (3–5 year) plans for the rational use of energy, and to assign responsible persons for energy management. The measure aims to reduce business energy consumption intensities by 1% or more a year on average over the medium term.

2.2.2. Minimum Energy Performance Standards (MEPS) and Labelling**a) Name**

Top Runner Program

b) Purpose

To improve energy efficiency of machinery and equipment

c) Applicable sectors

Machinery and equipment

d) Outline

The Top Runner Program sets target standard values for energy using machinery and equipment, calling for manufacturers and importers to be obliged to enhance the energy efficiency of their products. Manufacturers are obliged to exceed a weighted average value for all their products per category for each predetermined target year. This is one way of setting energy efficiency target values for machinery and equipment and is based on the concept that ‘manufacturers should produce/import products that have better energy efficiency performance than all the products in the same category currently available on the market’.

The following 21 categories of products are designated in the program as of 2007: passenger vehicles, freight vehicles, air conditioners, electric refrigerators, electric freezers, electric rice cookers, microwave ovens, fluorescent lights, electric toilet seats, TV sets, video cassette recorders, DVD recorders, computers, magnetic disk units, copying machines, space heaters, gas cooking appliances, gas water heaters, oil water heaters, vending machines, and transformers. Detailed information can be found at www.eccj.or.jp/top_runner/index.html.

e) Financial resources and budget allocation

No information available

f) Expected results

No information available

a) Name

Energy Conservation Labelling Program

b) Purpose

To provide consumers with energy efficiency information

c) Applicable sectors

Machinery and equipment

d) Outline

The Energy Conservation Labelling Program was introduced to provide consumers with necessary information concerning the energy efficiency performance of products covered by the Top Runner Program. The labels affixed to products indicate the achievement ratio of the energy conservation standards in question. The scope of products under the system has been expanded, and currently 16 categories of products are subject to the labelling. Another labelling program also applies to retailers - a uniform label indicates a multi-step rating of energy performance based on the estimated annual power consumption and the achievement ratio of the energy conservation standards. Currently, three categories of products (air conditioners, TV sets and refrigerators) are covered by this program.

e) Financial resources and budget allocation

No information available

f) Expected results

No information available

2.2.3. Building energy codes

Construction business organisations are obliged, when they construct, extend, reconstruct or repair a large house or building with floor area of 2000 square metres or more, to report their energy conservation measures to the relevant authority beforehand and periodically (every three years) report on the state of maintenance of the house or building.

2.2.4. Transport

Transport business organisations (freight transport companies, passenger service companies, consignors) that are larger than a certain size (for example, freight transport companies with 200 trucks or more) are obliged to prepare and submit energy conservation plans as well as an annual report on their energy consumption amounts and other related matters. The measure was introduced in 2006 to expand the energy conservation activities in the transport section.

2.3. Voluntary Measures**a) Name**

Keidanren Voluntary Action Plan

b) Level

Not applicable

c) Purpose

On 17 December 1996, the Keidanren Voluntary Action Plan on the Environment was presented. Goals of voluntary action plans such as the CO₂ unit goal and energy efficiency goal are individually formulated in 36 industries (represented by 137 organisations) in

industrial, commercial, transportation and energy-conversion sectors. (See section 1.2.).

d) Applicable sectors

Not applicable

e) Outline

The Keidanren Voluntary Action Plan set a goal of reducing average CO₂ emissions from targeted businesses in fiscal 2008–12 to below fiscal 1990 levels. The plan also set different goals according to business types, and it encourages voluntary actions by different industries. Today, 60 industrial organisations and companies are participating in the plan.

METI has implemented a follow-up to the implementation of the action plan by industry. To ensure the achievement of the target set by the action plan, monitoring is undertaken for each business category and has been implemented since fiscal 1998. There were 39 targeted business categories in FY 2008 under the administrative jurisdiction of METI. Of those, 28 categories are in the industry and energy conversion sector, and 11 categories are in the commercial sector. Detailed information in Japanese can be found at www.keidanren.or.jp/japanese/policy/vape/index.html.

f) Financial resources and budget allocation

No information available

g) Expected Results

No information available

2.4. Financial Measures Taken by the Government

2.4.1. Tax Scheme

a) Name

- 1) *Tax scheme to promote investments in structural reforms of energy supply and demand*

This tax scheme is available for businesses (industrial and commercial sectors) that acquire the specified energy conservation equipment (for example, highly efficient air-conditioning systems, high insulation window facilities, and light-emitting diodes) for which a special depreciation (an additional 30% of the equipment acquisition cost) will be applied. For small and medium-sized businesses, a tax deduction (7% of the equipment acquisition cost) is available instead of the special depreciation. This tax scheme was introduced to promote investment in the installation of equipment that facilitates the rational use of energy resources in the reform of the energy demand-supply structure.

- 2) *Vehicle greening tax scheme*

The vehicle greening tax scheme is composed of the following taxation measures for automobiles:

- Reductions of automobile taxes based on emission levels and fuel efficiency
- Imposition of heavy taxes on automobiles that have been used for several years since they received their new car registration and are becoming harmful to the environment
- Reductions in automobile acquisition taxes based on the emission levels and fuel efficiency.

In FY2008 and FY2009, the following tax benefits will be granted.

- For automobiles that have achieved a fuel efficiency target of 15% or higher

(target year: FY2010) and have achieved emission reductions of 75% or more over the FY2005 level, the automobile tax is reduced by 25% and JPY 150 000 is deducted from the acquisition price in the calculation of automobile acquisition tax

- Similarly, for automobiles that have achieved a fuel efficiency target of 25% or higher (target year: FY2010) and have achieved emission reductions of 75% or more over the FY2005 level, the automobile tax is reduced by 50% and JPY 300 000 is deducted from the acquisition price in the calculation of automobile acquisition tax
- For heavy vehicles, those that have achieved the FY2015 target level and conform to the FY2009 emission control are granted a 2% reduction in the automobile acquisition tax
- Among clean diesel vehicles, those that conform to the FY2009 emission control and have been placed on the market ahead of the start of enforcement of the emission control are granted a 1% reduction in automobile acquisition tax.

a) Name

A tax scheme to promote investment for housing renovation to improve energy efficiency

b) Level

Central

c) Purpose

To promote investments and various efforts aimed at realising energy conservation in response to the economic and social environments surrounding energy issues and to further promote rational use of energy by relevant sectors.

d) Applicable sectors

Industry, transport, residential, commercial

e) Outline

When renovating a house with improvement of energy efficiency at a certain level (thermal insulation of windows as an essential condition plus thermal insulation of floorings, walls and ceilings, or installation of solar photovoltaic facilities), 10% of the renovation cost (maximum amount of the cost: JPY 2 million or JPY 3 million when installing solar photovoltaic facilities) will be deducted from that year's income tax.

f) Financial resources and budget allocation

No information available

g) Expected Results

No information available

2.4.2. Low-Interest Loans

a) Name

Environment and Energy Measures Loans

b) Level

Central

c) Purpose

To provide low-interest loan to small and medium-sized businesses planning to install energy

conservation equipment or designated pollution control equipment.

d) Applicable sectors

Industry

e) Outline

Low-interest loans to a maximum amount of JPY 270 million are provided to small and medium-sized scale businesses planning to install high-efficiency energy conservation equipment at their facilities.

f) Financial resources and budget allocation

No information available

g) Expected Results

No information available

2.4.3. Subsidies and Budgetary Measures

a) Name

1) *Support for introduction of energy conservation equipment:*

Subsidies are available to businesses (all sectors) for the introduction cost of facilities and related equipment (for example, high-performance industrial furnaces, and waste heat utilisation systems), which are to have high energy conservation efficiency, and of which the cost effectiveness is considered reasonable. Subsidy rates are: (a) one-third for a project to be implemented by a single company (JPY 500 million ceiling, while large-scale work is offered up to JPY 1.5 billion); (b) one-half for a project to be implemented by multiple companies working cooperatively (JPY1.5 billion ceiling). Budget allocation is JPY 35.7 billion (for fiscal 2008).

2) *Support for promotion of the dissemination of high-efficiency water heaters:*

Subsidies are available to the household and commercial sectors for the introduction of high-efficiency water heaters which are recognised as being very energy-efficient (e.g. CO₂ refrigerant heat pump-type water heaters, latent heat recovery-type water heaters) to reduce initial costs and boost demand, thereby promoting efforts for energy conservation in such sectors. Budget allocation is JPY 16.7 billion together with '3' below (for fiscal 2008).

3) *Support for promotion of dissemination of high-efficiency air conditioners:*

Subsidies are available to the household and commercial sectors for the introduction of high-efficiency air conditioners that are recognised as being very energy-efficient to reduce initial costs and boost demand, thereby promoting efforts for energy conservation in such sectors. Budget allocation is JPY 16.7 billion together with '2' above (for fiscal 2008).

4) *Support for high-efficiency houses and buildings (project to promote introduction of high-efficiency energy systems in houses and buildings):*

Subsidies are available to the household and commercial sectors for the introduction of high-efficiency energy systems for residential and non-residential buildings, and to collect and publicise information on the systems' energy-efficiency and cost-effectiveness, thereby raising public awareness of energy-efficient residential and non-residential buildings and achieving great strides in energy conservation for buildings. Subsidy rate is one-third of the cost as the maximum. Budget allocation is JPY 7.4 billion (for fiscal 2008).

5) *Support for promotion of dissemination of ESCO business:*

Subsidy to small and medium-sized businesses to provide support for their energy-conservation projects to be conducted by using energy service companies (so-called ESCOs) which provide comprehensive energy-conservation services. Half of the cost of an energy-conservation project (up to JPY 30 million) would be covered by the subsidy scheme. Free audits for SMEs are also provided to assess the possibility of enhancement of energy efficiency at their facilities. Budget allocation is JPY 1.1 billion (for fiscal 2008).

6) *Support for dissemination and promotion of solar photovoltaic equipment:*

Subsidy to the household sector for the introduction of solar photovoltaic equipment for residential houses and buildings, for which JPY 70 000 per kW is subsidised under the scheme for installation of such equipment. This scheme is revitalised to accelerate dissemination of solar photovoltaic equipment for residential houses and buildings. Budget allocation is JPY 9.0 billion (for fiscal 2008).

7) *Promotion of development of energy conservation technology:*

The Energy Conservation Technology Strategy was formulated as a medium- and long-term strategy for the year 2030 in order to further promote the development of energy-conservation technology with collaborative efforts among various entities towards technology development through the fusion of various essential technologies, thereby creating synergetic effects. This technology development strategy established five priority areas from medium and long-term perspective, namely 'technology for hyper-combustion systems', 'technology for use of energy beyond the space and time', 'technology for creating energy-efficient information-oriented living environments', 'technology for establishing an advanced transportation society', and 'next-generation energy-efficient devices'. The energy conservation technology development program provides financial support in an intensive fashion for the purpose of supporting technology development projects in accordance with the Energy Conservation Technology Strategy, thereby promoting the development of energy-conservation technology in an efficient and effective manner. Budget allocation is JPY 6.9 billion (for fiscal 2008).

8) *Support for dissemination and promotion of eco-driving:*

Budgetary measures support organisations in the transportation sector to conduct activities for dissemination and promotion of eco-drive via leaflets, websites, driving lessons and lectures, and so on. This scheme aims at promoting eco-driving as an economy-wide movement through the concerted efforts of the related government agencies and organisations.

b) Level

Central

c) Purpose

To promote investments and various efforts aimed at realising energy conservation in response to the economic and social environments surrounding energy issues and to further promote rational use of energy by relevant sectors.

d) Applicable sectors

Industry, transport, residential, commercial

e) Outline

See above

f) Financial resources and budget allocation

See above

g) Expected results

No information available

2.4.4. Other Incentives**a) Name**

Support for promotion of dissemination of ESCO business

b) Level

Central

c) Purpose

To promote investments and various efforts aimed at realising energy conservation in response to the economic and social environments surrounding energy issues and to further promote rational use of energy by relevant sectors.

d) Applicable sectors

Industry, transport, residential, commercial

e) Outline

See information in 2.4.3

f) Financial resources and budget allocation

See information in 2.4.3

g) Expected Results

No information available

2.5. Energy Pricing**Outline of electricity prices:**

USD 0.176 per kWh (for residential sector) and USD 0.116 per kWh (for business sector)—averages in 2007.

As for customers in the contract category of 50 kW or larger, their electricity rates are decided freely between the customer and suppliers. As for customers in the contract category of less than 50 kW, it is necessary to receive ‘approval’ of the central government to raise their electricity rates, and submit ‘notification’ to the central government to reduce their electricity rates. Moreover, the ‘fuel cost adjustment system’ is introduced to reflect fossil fuel price fluctuations in electricity rates. While promoting demand levelling by discounting the electricity rates during slow demand hours and periods with ‘optional time-of-use lighting services’, the electricity usage is divided into three tiers by the ‘three-tier rate system’, and energy conservation is promoted by imposing higher rates on customers of large usage.

Outline of gasoline prices:

USD 1.375 per litre—as of December 2007.

Gasoline prices are decided by the oil price (A) that is decided by the price components other than taxes such as crude oil prices and refining and distribution costs, the petroleum tax and coal tax (B = JPY2.04), the gasoline tax (C = JPY53.8) and the tax on transactions of gas oil (D = KPY32.1).

- Gasoline = (A + B + C) x 1.05*
- Gas oil = (A + B) X 1.05 +D

- Kerosene = (A + B) x 1.05

*Consumption tax = 5%

2.6. Other Efforts for Energy Efficiency Improvements

2.6.1. Cooperation with Non-Government Organisations

Information not applicable

2.6.2. Cooperation through Bilateral, Regional and Multilateral Schemes

Information not applicable

2.6.3. Other Cooperation/Efforts for Energy Efficiency Improvements

Information not applicable