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An Analysis of Korean Legislative Development in Relation with Economic Growth

- Energy Policy and Law -

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Researcher : Lee, Jun-Seo(Research Fellow)

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Abstract

Ⅰ. Background and objectives

□ The purpose of this study is to discuss how South Korea's legal system has economically evolved to developing or transitional countries.

□ It is expected that the analysis and evaluation of the country's developmental process through its energy-related legislation will help formulate relevant policies and laws for the said countries, stably and economically, in the face of insufficient resources as was the case of South Korea.

Ⅱ. Main contents

□ Chapter 2 outlines the development of energy-related legislation and analyzes South Korea's development through economic and the energy-related legislation, with the energy-related legislation divided into three periods as follows:

○ Period 1: the late 1970s through the late 1980s (focusing on overseas resources development and energy use rationalization)

○ Period 2: the late 1980s through the early 1990s (focusing on the transformation to alternative energy and expansion of a community energy supply)

○ Period 3: the mid-2000s, when The Framework Act on Energy was enacted, through the present

□ Chapter 3 intends to explore the international trend of energy policies and legal systems and offers policy suggestions for the said countries based on the comparison of the cases to South Korea. To the said end, the chapter makes an overall assessment about energy-related legislation in comparison with the development process of South Korea's relevant system, along with its merits and demerits.

□ Chapter 4 summarizes features of South's Korea energy-related legislation.

Ⅲ. Expected effects

□ The said countries will be able to find options suited to them based on merits and demerits of the energy-related legislation that South Korea has adopted in conjunction with the need to set up their own system for a stable energy supply and security.

Key Words : legal collaboration, economic growth, legislative development, Korean energy law or legislation

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Chapter 1. Foreword

Section 1. Purpose of Study

Energy-related academic research and experts' views expressed thus far have several things in common : they point out fossil fuel depletion,[1] an increase in energy demand,[2] and the danger of climate change.[3] The three factors are translated into energy insufficiency, problems concerning stable energy supply and energy security, and issues about energy consumption and the environment. That is, they are an expression of crisis based on the knowledge that energy sources are limited, energy consumption continues to increase, it is getting harder to secure energy, and the continuation of energy consumption at a current rate will cause serious problems for humankind.

Such a sense of crisis is shared by South Korea, whose dependence on imports for energy sources is at 97%.[4] The percentage of fossil energy sources stands at 84%, which means there is considerable greenhouse gases

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1) Concerning alternatives to oil depletion, refer to : Kenneth S. Deffeyes, Hubbert's Peak : The Impending World Oil Shortage (Princeton University Press, 2001); Beyond Oil : The View from Hubbert's Peak (Hill and Wang, 2005); Jean-Luc Wingert, La Via après le Petrole (Editions Autrement, 2005); Paul Roberts, The End of Oil : On the Edge of a Perilous New World (Houghton Mifflin Company, 2005); Jeremy Rifkin, The Hydrogen Economy (Tarcher, 2003).

2) According to the basic scenario about the 2007-2030 period contained in the IEA's World Energy Outlook 2009, the world's primary energy demand will increase by an annual average of 1.5%, with the result that by 2030 it will increase by 40% from 2007

3) Lee Jun-seo, *A Study of How to Rearrange Energy-related Legal System for Realization of Green Growth*, Korea Legislation Research Institute (KLRI), 2010, p. 18.

4) South Korea ranks the world's 11th in terms of energy consumption, 5th in crude oil imports, 2nd and 3rd in import of LNG and coal, respectively. KEEI, Energy Economy, CeoMedia, 2013, p. 17.

emission.[5] South Korea has strived to find a solution to the problems, such as the energy security and how to cope with climate change. The country achieved condensed economic growth since the 1960s in face of insufficient resources and has joined the ranks of the world's 10th largest economies, a noticeable result.[6] For this reason, it appears that many Asian countries consider the possibility of applying a South Korean-type development model to their local situation.[7]

This study attempts to analyze how the South Korean government solved energy-related issues in the course of the country's economic growth process, in addition to exploration of its SME-related legislation[8] and environment-related legislation.[9] My intention to look into energy-related legislation[10] in this study is based on the assumption that developing countries will be able to benchmark their growth and development in the same ways that South Korea has dealt with the problems associated with energy security and an increase in energy demand amid industrialization and economic growth.

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5) Yu Dong-heon, *Expected Challenges in Energy Security*, Energy & Climate Change, Vol. 409 (June 2010), p. 32

6) South Korea has achieved an average of 7.6% in economic growth over the past 60 years. The country's per-capita GNI has jumped from a paltry figure of $69 in 1953 to be higher than $20,000 by 2010. Jo Yun-je, Park Chang-gwi, Kang Jong-gu, *South Korea's Economic Growth and Changes in Social Indexes*, Financial and Economic Research, January 2012, The Economic Research Institute of the Bank of Korea, p.1.

7) In 2009, South Korea became the 24th member country of the Development Assistance Committee (DAC) of the OECD. The change of the country's status from an aid recipient to an aid donor makes the country the envy of many developing countries. Lee Jun-seo, *Analysis of South Korea's Economic Growth and Its Legislative Development - Environment-related legislations*, KLRI, 2012, p. 13.

8) *See* Lee Jun-seo, *Establishment of Legislative Models for Rearrangement of Legislative System - Economic development and changes in SME-related legislations*, KLRI, 2011.

9) *See* Lee Jun-seo, (*supra* note 3).

10) To avoid confusion with The Energy Act of Korea, the term "energy-related legislation" will be used in this study to refer to energy-related laws.

It is thought that developing countries will be able to find the analysis and assessment about the development process of South Korea's energy-related legislation contained in this study helpful in conjunction with efforts to solve their energy problems and establish a system for stable energy development and exploration. As in my existing study, "An Analysis of Korean Legislative Development in relation to Economic Growth" this study will not only stress the merits of South Korea's policies and legislation without delving into the specificity of the country's prevalent situation and will keep in mind that South Korea's experience can be considered as one of the cases that can present solutions to energy-related problems faced by developing countries. This study also intends to provide developing countries with an opportunity to consider selecting policies and laws based on the analysis of features of South Korea's energy-related legislations. Though this study is mainly to act as a reference for developing countries, the author intends to take this opportunity to also review the history of South Korea energy-related legislation.

Section 2. Scope of Study

This study will focus on exploration of the country's energy policies and laws in general rather than on those concerning specific energy sources, such as coal, petroleum or gas. That is because energy-related laws are associated with basic directions and contents of the country's policy, although a study of a law relating to the use and management of energy sources requires concrete and substantial understanding of the attributes of specific energy sources (such as petroleum, coal, and gas) and the relevant industry. In other words, as all of the stages (i.e., production, distribution, and con-

sumption) of energy issues are carried out within a given social system,[11] the issue concerning energy production and consumption should be approached from a perspective of the country's energy system rather than simply from an issue of some energy sources. Accordingly, the issue of energy should not be reduced to a problem relating to some specific energy sources and it is necessary to examine whether the socially established energy system maintains a sustainable structure in addition to considering what structural change is required to realize sustainability.[12]

This study has selected the following five laws for research on energy-related legislation in South Korea : The Energy Act, The Energy Use Rationalization Act, The Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy, The Integrated Energy Supply Act, The Overseas Resources Development Business Act. Details about classification and selection of the energy-related legislation will be dealt with in Chapter 3.

Section 3. Methods of Research Adopted

In regard to the development of South Korea's energy-related legislation in terms of both quantity and quality, it is convenient to explore them chronologically, i.e., dividing the past into decades like the 1970s, the 1980s, and the 1990s, with a focus on important policies and legislation adopted during the period, which can be used for comparison with each other. This study will review the relevant legislation chronologically with the purpose

11) Winner, Langdon, *Energy Regimes and the Ideology of Efficiency*, in Danielsand Rose (eds.). Energy and Transport 9 (Sage Publication, 1982).

12) Yun Sun-jin, *South Korea's Energy System and Its Sustainability – with a focus on continuance of unsustainability*, Economy and Society, Vol. 78, June, 2008, p. 13.

of introducing and analyzing the development process of legislation in diverse sectors in accordance with the subject of the study, An Analysis of Korean Legislative Development in relation to Economic Growth. In addition, this study will employ methodological analysis of the concrete structure and contents of the relevant laws where chronological flow cannot explain things or where careful review is required due to its being a water-shed in a development stage or where special emphasis is required aside from the flow of the period. The direction of analysis will be basically getting the grasp of the contents of the relevant regulation and the development of the system contained in the regulation. Critical review will also be made concerning enactments or amendments that are thought to have been unnecessary or insignificant from the perspective of overall flows of energy-related legislation.

This study will use mostly literature-based surveys and focus on South Korea's energy policies and legislation. It will employ realistic approaches, such as workshops and meetings containing expert participation, where technical, economic, and policy-related judgments are required in consideration of the characteristics of energy-related legislation.

Chapter 2. South Korea's Economic Growth and Changes in Energy-related Legislation

Section 1. Relationship between Economic Growth and Energy

The two oil shocks which occurred in the 1970s were events that reminded people of the importance of energy in the country's economic growth. In the ensuing period, much economic research work was carried out to shed light on the relationship between energy and economic growth. The work was generally divided into two parts : one focusing on the inter-substitutable or inter-complementary relationship between energy and capital/labor in the production process, and the other on the causal relationship between energy consumption and economic growth.[13] One study reported that the causal relationship between energy consumption and economic growth is connoted by whether energy and capital are in an inter-substitutable or inter-complementary relationship with each other in the production process. According to this study, a long-term balance relationship exists between energy consumption and economic growth, and a bidirectional causal relationship exists between them particularly in South Korea.[14]

The results stated in the foregoing become the basis for the following statements, depending on the causal relationship between energy consumption

13) Kim Cheol-hwan, *Causal Relationship between Energy Consumption and Economic Growth in South Korea : Error Correlation Models*, The Study of the South Korean Economy 1, AKES, November 1998, pp. 129-130.

14) Kim Cheol-hwan, Ibid, p. 130; Lee Gi-hun, Oh Wan-geun, *Analysis of Causal Relationship between Energy Consumption and Economic Growth : application of Divisia energy index and carbon dioxide emission*, a thesis presented to the 9th international seminar hosted by AKES, July 2000, p. 16.

and GNP : (ⅰ) In South Korea, excessive restriction over energy consumption is likely to impose a burden on economic growth, (ⅱ) South Korea needs to reserve a proper quantity of energy as a country depending totally on imported energy sources, (ⅲ) The impact of economic growth on energy consumption is larger than, (ⅳ) In South Korea, energy and capital are inter-complementary.[15]

Section 2. Changes in South Korea's Energy-related Legislations

1. Mining

Coal used to be a major energy source in South Korea. The government enacted The Korea Coal Corporation Act in 1950 for operation and management of government-designated coal mines, production, processing, and distribution of coal, and operation of an ancillary business. The said law had stipulations concerning employees, business guidance and supervision, accounting, and punitive provisions.

In the ensuing period, the following laws were enacted for establishment of a basic mining-related system for the development of the country's industry through proper development of underground resources : The Mining Industry Act (1952); The Mining Safety Act (1963), which was designed to prevent hazard to miners and avoid mining damage, and; The Korean Mining Promotion Corporation Act (1967) (now replaced by The Korea Resources Corporation Act) for promotion of the development privately-run. The foregoing laws had stipulations as follows : The Mining Industry Act - matters concerning designation of mining rights and their period, state-run

15) Kim Cheol-hwan, *Ibid*, pp. 149-150.

mining, use and expropriation of land, and compensation for mining damage; The Mining Safety Act – matters concerning prevention of damage to people, protection of underground resources, preservation of mining facilities, prevention of mining damage, obligations of those with mining rights and their employees, supervision and penalty.

In 1986, The Coal Industry Act was enacted after years of dormancy in enactment of laws concerning coal and mining. This law was designed for the development of the coal industry and the stable supply and distribution of coal and relevant processed goods. It had stipulations concerning the designation of coal fields, establishment of coal field companies, purchases of mining rights, permits concerning coal-processing business, measures for coal supply and demand, assistance project costs, the Coal Fund, the Coal Industry Safety Fund, special assessments, etc.

The coal mining industry started declining rapidly in the mid-1980s. In 1995, The Special Act on the Assistance to the Development of Abandoned Mine Areas was enacted for the balanced development of regions and improvement in the livelihood of residents in abandoned mine areas through a revitalization of the economy of such areas. The said law provides a basis for exceptional treatment of abandoned mine areas concerning green area preservation, environmental impact assessment, The Forestry Act, and The Tourism Promotion Act. The said law also provides a basis for a provision of support for residents in the said areas, attraction of private businesses to the said areas, agricultural and manufacturing industries in the said areas, and alternative industries in the said areas.

In 2005, The Mining Damage Prevention and Restoration Act was enacted to prevent and restore mining damage. Clauses concerning mining damage still remain in The Mining Industry Act or The Mining Safety Act despite

the enactment of The Mining Damage Prevention and Restoration Act. Thus, it is right to understand that the purpose of the said law was to stipulate matters concerning the establishment of a plan for more systematic execution of mining damage prevention programs, expropriation of land, the raising of the mining damage prevention program fund, and the fixing of the nature of the key actors (the Mine Reclamation Corporation) of the programs, rather than covering everything about mining damage.

2. Power supply

The Electric Utility Act (1961) was the country's first law enacted to establish a basic system for electrical businesses. The said law stipulates matters concerning permits for electrical businesses, approval for electrical contractual work, permits for the use of electrical facilities and power supply, permits for power supply conditions, including supply charge, damage compensation, etc. The Electrical Construction Business Act was enacted in 1963 to stipulate matters concerning electrical construction businesses and the technical management of and contracting for electrical construction.

In 1965, The Act on the Promotion of Electrification in Agricultural and Fishing Villages was enacted to promote power supplies to agricultural and fishing villages. The law stipulates matters concerning business plans, fund supplies, financial loans and the repayment of construction expenses. The Act was amended in 2005 to add provisions on in-house power generation.

Other relevant laws enacted include : The Act on Special Cases concerning Electric Source Development (1978) (replaced by The Electric Source Development Promotion Act (2003); The Korea Electric Power Corporation Act (1980) concerning promotion of the development of power supply

sources and operation of electrical businesses; The Electrical Construction Mutual Aid Association Act (1982); The Electric Technology Management Act (1995); The Act on the Creation and Facilitation of Use of Smart Grids (2011).

3. Petroleum

The Petroleum Business Act (1970) aims to secure stable and inexpensive supply of petroleum by developing the petroleum refining business. The law stipulates matters concerning petroleum supply and demand plan, permits for petroleum refining business, and coordination concerning petroleum import, petroleum product sales, crude oil purchases, etc. The Act was replaced by The Petroleum and Petroleum Substitute Fuel Business Act in 2004 to reinforce overall provisions concerning petroleum businesses, petroleum storage, dues on import and sales of petroleum, coordination of supply and demand of petroleum in emergencies, quality control of petroleum, petroleum substitute fuel businesses, etc.

In 1978, The Korea Oil Development Corporation Act (replaced by The Korea National Oil Corporation Act in 1998) was enacted to carry out business concerning the development of petroleum resources, petroleum storage, and improvement of the petroleum distribution structure. In 1990, The Oil Pipeline Business Act (replaced by The Oil Pipeline Safety Control Act focusing on the safeguarding of oil pipelines in 1999) was enacted. It stipulated matters concerning a basic plan for oil pipeline construction, permits for oil pipeline businesses, approval of relevant construction work and petroleum transportation regulations, and safety management regulations for stable petroleum transportation.

4. Gas

The development in enactment and content of gas-related laws are generally similar to those of petroleum. Noticeably, The High-Pressure Gas Safety Control Act (1973) was enacted prior to The Gas Business Act. The purpose of the said law is to stipulate matters concerning the production, storage, sale, transportation, and use of high-pressure gas as well as the manufacture and inspection of containers and specific equipment for high-pressure gas, etc in order to prevent hazards due to high-pressure gas and to secure public safety. Thus, it contains provisions concerning permission for production of high-pressure gas, suppliers' obligations, completion inspection and safety inspection, prevention of hazards, usage reports, permission for and inspection of containers and equipment manufacture, and high-pressure gas safety associations. Through ensuing amendments, the following matters were added : the establishment of the Korea Gas Safety Corporation (KGS), the launch of the Gas Technology Criteria Committee, and imposition of safety control charges.

In 1978, The Gas Business Act was enacted to adjust and foster urban gas businesses and devise the sound development of urban gas businesses. The law stipulates matters concerning business permission, responsibility for supply, supply regulations, supply conditions, supply facilities, inspection, maintenance of gas supply facilities and calories of gas, and permission for gas-related goods. This law was replaced by The Urban Gas Business Act in 1983. Through ensuing amendments, the following provisions were adde d : natural gas import/export businesses, gas supply facilities installers other than urban gas business operators, protection of urban gas piping, and safety management.

In 1982, The Korea Gas Corporation Act was enacted as the basis for the establishment of the Korea Gas Corporation for a stable long-term supply of gas. In 1983, The Safety Control and Business Regulation of Liquefied Petroleum Gas Act was enacted to ensure the proper supply and use of liquefied petroleum by prescribing matters on the filling, storage, sale, and use thereof and the safety control of gas appliances.

5. Energy policy

General or comprehensive energy policies (not those for specific energy sources) were adopted rather belatedly in South Korea. It was not until 1978, when the second oil shock occurred, that The Overseas Resources Development Promotion Act (replaced by The Overseas Resources Development Business Act in 1982) was enacted to secure overseas resources stably on a long-term basis through promotion of its development. In 1979, The Energy Use Rationalization Act was enacted to encourage people to use energy more rationally and enhance the efficiency of heat-using devices and equipment within the country in tandem with the development of overseas resources.

In 1987, The Act on the Promotion of the Development and Use of Alternative Energy was enacted to pay attention to energy other than petroleum, coal, atomic power or natural gas, such as solar energy, bio energy, wind power, small hydro power, fuel cell, coal liquefaction/gasification, marine energy, waste energy, and alternative energy. With the enactment of the said law, the country raised funds for technological development. In 2004, the law was replaced by The Act on the Promotion of the Develop-

ment, Use and Diffusion of New and Renewable Energy. Under the new law, the scope of energy development was expanded to large-scale hydroelectric power, geothermal, hydrogen energy, etc. The new law added provisions, such as the obligation of the use and supply of new/renewable energy and certification of buildings using new/renewable energy.

In 1991, The Integrated Energy Supply Act was enacted for expansion of the supply of integrated energy, rational operation of integrated energy businesses, installation and operation of integrated energy facilities, and the fixing of safety-related matters. Following the country's signing of the UN Framework Convention on Climate Change (UNFCCC) in December 1993, the said law was amended to add "to actively cope with the UNFCCC" to its purpose.

The purpose of The Act on the Special Accounts for Energy and Resources-related Projects, which was enacted in 1994, is to establish special accounts for projects related to energy and provide for matters regarding the operation of the accounts in order to stabilize the supply and demand of energy and energy prices and to effectively implement projects related to energy and resources. After a dormant period, The Framework Act on Energy was enacted in 2006, to set out basic matters concerning the establishment and execution of energy policies and plans for the purpose of implementing efficient and an environmentally friendly energy supply and demand structure. It was the most macroprudential and comprehensive of the relevant laws, but it was enacted later than others. In 2010, it was replaced by The Energy Act, with the enactment of The Framework Act on Low Carbon, Green Growth in 2010.

6. Review

To summarize the history of South Korea's energy-related legislations, laws concerning energy sources or energy-related businesses were mostly enacted in the initial stage, followed by those for the establishment of relevant public institutions (corporations). It shows that the law intended to provide support for macroprudential and comprehensive energy policies were enacted much later than those concerning specific energy sources. It means that the country's energy-related legislation has been enacted mostly as measures of settling pending issues rather than those for establishment of fundamental energy policies.

In the post-war period, South Korea adopted economic growth as the country's top priority policy and pushed ahead with government-led economic policies. With it, policies and laws pertaining to economic growth started developing in earnest. The development of energy-related legislation was made within such a framework. Certain portions of government-planned schemes concerning distribution and mobilization of resources, restriction over imports, encouragement of exports, and price control took the place of the market function. An array of laws designed to promote and foster industries were enacted in step with government-led policies for economic growth. Laws were enacted for nationalizing resources and banks and regulating entry into the market.[16)]

With the economy on the right track of growth, efforts were made for sophistication of the industrial structure and the opening of the domestic market. In step with such movement, existing laws were rearranged in a

16) Kim Du-ol, *The Six Decades of History of Korean Economy Legislations*, Haenam, 2011, p. 5.

way that would reduce governmental regulation. Specific government organizations or regulations that had existed only for economic growth were abolished. Observers say that the country could have enhanced the level of its economic growth and democratization one notch higher by rearranging the laws in a way that would enhance self-regulation in the market and mitigate regulation in tune with social changes.[17] It is presumed that the Executive Branch of the government that establishes and executes policies aimed at economic growth and social development and the Legislative Branch that make laws for such activities of the Executive Branch have sought their respective development in an inter-complementary way through checks and balances.[18]

17) Kim Du-ol, *Ibid*, p. 5.
18) Lee Jun-seo, (*supra* note 3), pp. 23-24.

Chapter 3. Analysis of the Development Process of South Korea's Energy-related Legislations

Section 1. Scope of Energy-related Legislation and Their Classification

South Korea's energy-related legislations are somewhat complicated in their systems and content and thus, it not easy to classify them based on clear-cut criteria. Let's have a look at several existing attempts at classification of the country's energy-related legislation and then address the scope of energy policy-related legislation to be scrutinized.

1. Existing classifications

The National Assembly Research Service (NARS) divided energy-related legislation into four categories (i.e., business operations, institutions, safety, and industrial promotion) and then subdivided them into smaller categories pertaining to energy use, transformations, refining, mining, and fund operations (Ref. Table 1).

< Table 1> Classification of Energy-related Legislation (1)

Basic law	○ The Energy Act			
	Energy use	Energy transformation	Refining	Mining
Business operation	○ Energy Use Rationalization Act ○ Act on the	○ Electric Utility Act ○ Integrated Energy Supply Act	○ Petroleum and Petroleum Substitute Fuel Business Act	○ Mining Industry Act ○ Coal Industry Act

	Energy use	Energy transformation	Refining	Mining
	Special Accounts for Energy and Resources-related Projects		○ Urban Gas Business Act	○ Overseas Resources Development Business Act ○ Submarine Mineral Resources Development Act
Organization law		○ Korea Electric Power Corporation Act ○ Act on the Promotion of Restructuring the Electric Power Industry	○ Korea Gas Corporation Act	○ Korea National Oil Corporation Act ○ Korea Coal Corporation Act ○ Korean Mining Promotion Corporation Act
Safety		○ Electrical Construction Business Act	○ Oil Pipeline Safety Control Act ○ Safety Control and Business Regulation of Liquefied Petroleum Gas Act ○ High-Pressure Gas Safety Control Act	○ Mining Safety Act
Business promotion	○ Special Act on Assistance to the Locations of Facilities for Dis-	○ Act on the Promotion of Electrification in Agricultural and Fishing		○ Mining Damage Prevention and Restoration Act ○ Special Act on Assistance to the

	Energy use	Energy transformation	Refining	Mining
	posal of Low and Intermediate Level Radioactive Waste ○ Radioactive Waste Management Act	Villages ○ Act on Assistance to Electric Power Plants-Neighboring Areas ○ Electric Technology Management Act ○ Electric Source Development Promotion Act ○ Electrical Construction Mutual Aid Association Act ○ Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy		Development of Abandoned Mine Areas

Source : Rearranged from NARS, Major Contents and Controversial Points in Current Laws (Ⅲ) - Economy and Industry -, 2008, p. 1290

This method of classification has a merit of analyzing the legislative system by reflecting multilayered features of energy. Each type of energy has several forms and sources and displays different characteristics, depending on the methods of use and development of their sources, which means that different approaches are required for each stage of use of a single energy

source.[19] This classification makes sense as it considers the entire flow ranging from production to consumption of energy (i.e., mining, refining, energy transformation, energy use) based on a single criterion and presents focal points of operation of the energy-related industry (i.e., composition of organization, business operation, safety (management), business promotion] based on another criterion; however, it has limitations, as it is simultaneously based on an energy sources-based classification and the general flow of energy use, which means that it cannot be used for the classification of all energy-related laws.

<Table 2> Classification of energy-related legislation (2)

	Energy sources	Relevant sectors	Relevant laws
Basic law	-	-	○ Energy Act
Ordinary law	-	Energy use	○ Energy Use Rationalization Act
	-	Business-related financing	○ Act on the Special Accounts for Energy and Resources-related Projects ○ Overseas Resources Development Business Act ○ Traffic, Energy and Environment Tax Act ○ Restriction of Special Taxation Act
Individual laws pertaining to energy sources	Underground resources	Mining/development	○ Mining Industry Act ○ Submarine Mineral Resources Development Act
		Refining/sale	○ Coal Industry Act ○ Petroleum and Petroleum Substitute Fuel Business Act ○ Urban Gas Business Act ○ Safety Control and Business Regulation of Liquefied Petroleum Gas Act

19) Jeong Cheol, *South Korea's Major Laws concerning Energy Industry and Their Recent Trend*, The Study of International Trade Law, Vol, 17, No. 2, December 2008, p. 289.

	Energy sources	Relevant sectors	Relevant laws
		Transportation/ storage	○ Oil Pipeline Safety Control Act ○ Safety Control of Dangerous Substances Act ○ Safety Control and Business Regulation of Liquefied Petroleum Gas Act ○ High-Pressure Gas Safety Control Act
		Safety	○ Mining Safety Act
		Business-relatedorganizations	○ Korea National Oil Corporation Act ○ Korea Coal Corporation Act ○ Korean Mining Promotion Corporation Act ○ Korea Gas Corporation Act
		Settlement of problems accompanying development	○ Mining Damage Prevention and Restoration Act ○ Special Act on the Assistance to the Development of Abandoned Mine Areas
	Energy transformation	Operation of basic businesses	○ Electric Utility Act ○ Electric Source Development Promotion Act ○ Integrated Energy Supply Act
		Operation of ancillary business	○ Electrical Construction Business Act ○ Electric Technology Management Act
		Reshuffling industrial structure	○ Act on the Promotion of Restructuring the Electric Power Industry
		Business-related organizations	○ Korea Electric Power Corporation Act ○ Electrical Construction Mutual Aid Association Act
		Settlement of problems accompanying development	○ Act on the Promotion of Electrification in Agricultural and Fishing Villages ○ Act on Assistance to Electric Power Plants-Neighboring Areas
	Nuclear power	Basic law	○ Atomic Energy Act
		Safety	○ Act on Measures for the Protection of Nuclear Facilities, Etc. and Prevention of Radiation Disasters

	Energy sources	Relevant sectors	Relevant laws
		Loss/damages	○ Nuclear Damage Compensation Act ○ Act on Governmental Contracts for Nuclear Damage Compensation
		Business-related organizations	○ Korea Institute of Nuclear Safety Act
		Business-related organizations	○ Special Act on Assistance to the Locations of Facilities for Disposal of Low and Intermediate Level Radioactive Waste
	New and renewable energy	Settlement of problems accompanying development	○ Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy

Source : Jeong Cheol, South Korea's Major Laws concerning Energy Industry and Their Recent Trend, The Study of International Trade Law, Vol, 17, No. 2, December 2008, p. 290-291

It appears that <Table 2> attempts to adopt a more systematic method of classification than Table 1 by sorting out laws based on energy sources and relevant sectors. It is not reasonable to schematize the status of statute laws, dividing them into framework laws, general laws, and specific laws, particularly when The Framework Act on Energy has been replaced by The Energy Act.[20] The terms "energy sources" and "energy" appear to be used together with no distinction between them concerning the classification of underground resources, which includes coal, petroleum, and gas; transformed energy represented by electricity; nuclear power, and new and renewable energy.[21] If we are to regulate energy sources, it is possible to approach

20) Scholars are divided over the status of framework laws. Under such circumstances, it is not reasonable to see framework laws as superior laws and accept the superiority of framework laws over general laws. Lee Jun-seo, (*supra* note 7), p. 20.

21) Etymologically, the word "energy" comes from the Greek word energeia (meaning the ability to do physical work), which stems from energon, meaning work. Thus, it is right

them from a perspective of fundamental right concerning resources themselves as in the right for energy resources, such as petroleum, coal, natural gas, etc, mining right (development right), right to sell or right to use. However, if we deal with energy, which can be transformed to another form, we should approach it from a perspective of energy use or management.[22)]

< Table 3> Classification of energy-related legislation (3)

Sectors		Laws
Energy use and Mining business	Administrative organization and General rules	○ Energy Act ○ Act on the Special Accounts for Energy and Resources-related Projects ○ Korea Resources Corporation Act
	Energy use	○ Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy ○ Energy Use Rationalization Act ○ Integrated Energy Supply Act ○ Rules on Certification of Buildings Using New and Renewable Energy ○ Rules on Certification of Intelligent Buildings
	Mining business	○ Mining Safety Act ○ Mining Damage Prevention and Restoration Act

to say that petroleum, coal, and natural gas are energy sources rather than energy itself as many of us mistakenly think. Heat energy is created when water is heated, using coal, which is an energy source, as fuel. Energy and energy sources are two different concepts. Sunlight, water, wind, etc are energy sources like petroleum, coal, and natural gas, and they should be separated from solar heat, hydro power, wind power, electricity, etc, which are produced using energy sources. That is because the way we regulate energy resources should be distinguished from the way we regulate energy, which has been transformed into the forces with which to do work. Lee Jun-seo, (*supra* note 3), pp. 151-152.

22) Lee Jun-seo, *Ibid*, p. 152.

Sectors		Laws
		○ Mining Business Registration Ordinance ○ Mining Industry Act ○ Korea Coal Corporation Act ○ Petroleum and Petroleum Substitute Fuel Business Act ○ Petroleum and Mine Safety Rules ○ Coal Business Act ○ Oil Pipeline Safety Control Act ○ Special Act on Assistance to the Development of Abandoned Mine Areas ○ Korea Resources Corporation Act ○ Korea National Oil Corporation Act ○ Overseas Resources Development Business Act ○ Submarine Mineral Resources Development Act
Electricity and Gas	Electricity	○ Act on the Promotion of Electrification in Agricultural and Fishing Villages ○ Act on Assistance to Electric Power Plants-Neighboring Areas ○ Radioactive Waste Management Act ○ Electrical Construction Mutual Aid Association Act ○ Electrical Construction Business Act ○ Electric Utility Act ○ Rules on Electric Utility ○ Electric Technology Management Act ○ Electric Source Development Promotion Act ○ Special Act on Assistance to the Locations of Facilities for Disposal of Low and Intermediate Level Radioactive Waste ○ Enforcement Decree of Act on the Creation and Facilitation of Use of Smart Grids; Korea Electric Power Corporation Act

Sectors		Laws
	Gas	○ High-Pressure Gas Safety Control Act ○ Urban Gas Business Act ○ Safety Control and Business of Liquefied Petroleum Gas ○ Korea Gas Corporation Act

Source : KMGL, Classification and Search of Laws, Part 31 Energy Use/Mining Business; Part 32 Electricity/Gas(http://law.go.kr/lsAstSc.do?schType=0&menuId=7&dataCls=lsAstSc&query=&cptOfiCd=&tabNo=1#AJAX)

<Table 3> has an advantage. It is the easiest and most simple chart of the classifications of energy-related legislation introduced in this study. It helps people have a look at the relevant laws item by item with ease. However, it does not explain clearly why it includes “energy use and mining” and “electricity and gas” in one category or how the items in a category are interrelated.

<Table 4> Classification of energy-related legislation (4)

Business management per energy source		○ Mining Industry Act ○ Electric Utility Act ○ Petroleum and Petroleum Substitute Fuel Business Act ○ Submarine Mineral Resources Development Act ○ Overseas Resources Development Business Act ○ Urban Gas Business Act ○ Coal Business Act ○ Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy ○ Integrated Energy Supply Act
Functions	Energy use	○ Energy Use Rationalization Act
	Safety and	○ Mining Safety Act

	environment	○ High-Pressure Gas Safety Control Act ○ Safety Control and Business of Liquefied Petroleum Gas ○ Oil Pipeline Safety Control Act ○ Mining Damage Prevention and Restoration Act
	Financial support	○ Act on the Special Accounts for Energy and Resources-related Projects
Special cases of business support		○ Act on the Promotion of Electrification in Agricultural and Fishing Villages ○ Electric Source Development Promotion Act ○ Act on Assistance to Electric Power Plants-Neighboring Areas ○ Special Act on the Assistance on Development of Abandoned Mine Areas ○ Special Act on Assistance to the Locations of Facilities for Disposal of Low and Intermediate Level Radioactive Waste
Special law concerning structural reshuffling		○ Act on the Promotion of Restructuring the Electric Power Industry
Laws providing the basis for establishment of relevant corporations		○ Korea Coal Corporation Act ○ Korean Mining Promotion Corporation Act ○ Korea National Oil Corporation Act ○ Korea Electric Power Corporation Act ○ Electrical Construction Mutual Aid Association Act ○ Korea Gas Corporation Act
Others		○ Electrical Construction Business Act ○ Electric Technology Management Act ○ Energy Act

Source : Rearranged from : Yeom Myeong-cheon, South Korea's Energy-related Laws and Policies - with a focus on The Petroleum and Petroleum Substitute Fuel Business Act, Seoul Beophak, Vol. 15, No. 1, The Law Institute, University of Seoul, August 2007, pp. 99-100.

<Table 4> divides energy-related legislations into : (ⅰ) basic laws on management of the relevant industries and markets pertaining to energy sources, such as petroleum, coal, and electricity; (ⅱ) laws for certain functions, such as energy use, safety, environmental management, financial support, etc; (ⅲ) special laws for promotion of the government's policy-based programs; (ⅳ) special laws for promotion of restructuring of the energy industry; (ⅴ) laws that lay the basis for establishment and operation of government-invested institutions; (ⅵ) others. This is thought to be the most systematic among the four methods of classification. However, The Act on the Special Accounts for Energy and Resources-related Projects should better be included in "special cases" or "special law", Energy Act included in "Others" will make the importance of the relevant energy policy look weaker, which is not desirable.

2. Classification method used in this study

This study will reclassify the country's energy-related legislation. They can be divided into five categories as follows, depending on their nature : (ⅰ) those designed to carry out general energy-related policy functions, such as energy use and management and financial support (i.e., Energy Act, Energy Use Rationalization Act, Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy, etc), (ⅱ) those for regulation of a relevant industry and market according to energy types or energy sources (such as petroleum, coal, gas, electricity, etc (i.e., Mining Industry Act, Electric Utility Act, Urban Gas Business Act, etc), (ⅲ) special or temporary laws designed to implement specific purposes to make up for insufficiency in energy policies (i.e., Act on the Promotion of Electrification

in Agricultural and Fishing Villages, Act on Assistance to Electric Power Plants-Neighboring Areas, Act on the Promotion of Restructuring the Electric Power Industry, etc), (ⅳ) those designed to provide the basis for establishment and operation of government-invested energy institutions (Korea Coal Corporation Act, Korea National Oil Corporation Act, Korea Electric Power Corporation Act, Korea Gas Corporation Act, etc), and (ⅴ) Other technology-related laws (Electrical Construction Business Act and Electric Technology Management Act).

The main purpose of this study is to have a look at the flow of South Korea's energy policies and analyze the development of relevant legislation. Inclusion of even specific laws (e.g., energy industry-related laws, special or temporary laws, and laws relating to establishment and operation of government-invested energy institutions out of the foregoing list) may lead astray from the main purpose of this study. To stay focused on this paper's main purpose, this study will focus on the laws concerning promotion of comprehensive energy policies and those concerning use and management of energy sources, as shown in <Table 5>.

<Table 5> Classification of energy-related legislation (5)

	Names of legislation	Purpose of legislation
Promotion of energy policies	Act on the Special Accounts for Energy and Resource-related Projects	○ To establish special accounts for projects related to energy and resources and provide for matters regarding the operation of the accounts in order to stabilize the supply and demand of energy and energy prices and to effectively implement projects related to energy and resources
	Energy Act	○ To contribute to the sustainable development of

	Names of legislation	Purpose of legislation
		the national economy and enhancement of the welfare of people by providing for basic matters concerning the formulation and implementation of energy policies and energy-related plans to realize a stable, efficient and environment-friendly energy demand and supply structure
	Energy Use Rationalization Act	○ To contribute to the sound development of the national economy, the promotion of national welfare and international efforts to minimize global warming by realizing stability in the supply and demand of energy, increasing the rational and efficient use of energy, and reducing environmental damage caused by the consumption of energy
	Act on the Promotion on Development and Use of New and Renewable Sources of Energy	○ To contribute to the preservation of the environment, the sound and sustainable development of the national economy, and the promotion of national welfare by diversifying energy sources through the promotion of technological development, use and distribution of new energy and renewable energy, the activation of a new energy industry and renewable energy industry, and promoting the stable supply of energy, environment-friendly conversion of the energy structure, and the reduction of greenhouse gas emissions
	Integrated Energy Supply Act	○ To actively cope with the UNFCCC and contribute to energy conservation and enhancement of the convenience in the life of the people by expanding the integrated energy supply, operating the integrated energy supply reasonably, and prescribing the matters concerning the construction,

	Names of legislation	Purpose of legislation
		operation and safety of integrated energy facilities
	Overseas Resources Development Business Act	○ To contribute to the development of the national economy and enhancement of overseas economic cooperation by means of promoting the development of overseas resources and thereby securing the resources on a long-term and stable basis
Regulation of energy industry and market	High-Pressure Gas Safety Control Act	○ To provide for matters pertaining to the production, storage, sale, transportation and use of high pressure as, as well as the manufacture and inspection, etc of containers, refrigerators and specific equipment for high pressure gas, etc in order to prevent hazards due to high-pressure gas and to secure public safety
	Mining Safety Act	○ To seek rational ways in exploiting underground resources by preventing hazards to miners, as well as reducing mining damage
	Mining Damage Prevention and Restoration Act	○ To properly manage mining damage in order to protect the natural environment and enable people to live in a pleasant environment
	Mining Industry Act	○ To prescribe a basic framework for the mining industry to promote the development of national industries through the rational exploitation of mineral resources
	Urban Gas Business Act	○ To protect users' interests by rationally adjusting and fostering urban gas businesses including securing public safety by devising the sound development of such urban gas businesses and prescribing matters on the installation, maintenance and safety management of gas supply facilities and gas-using facilities

	Names of legislation	Purpose of legislation
	Petroleum and Petroleum Substitute Fuel Business Act	○ To develop the national economy and improve people's lives by stabilizing supply and demand as well as the prices of petroleum and ensuring the proper quality of petroleum products and petroleum substitute fuel
	Coal Industry Act	○ To help the healthy development of the coal industry for the ration exploration an deficient utilization of coal resources, secure the stable demand and supply of coal and coal-processed goods, facilitate the distribution process, promote the implementation of coal mine area development projects and to thereby contribute to a balanced growth of the national economy and promotion of the national standards of living
	Oil Pipeline Safety Control Act	○ To prevent harm from oil pipelines and to secure public safety by prescribing the safety management of oil pipelines
	Safety Control and Business of Liquefied Petroleum Gas	○ To ensure the proper supply and use of liquefied petroleum gas by prescribing matters on the filling, storage, sale and use thereof and the safety control of gas appliances by rationally regulating liquefied petroleum gas businesses
	Electric Utility Act	○ To promote the sound development of electric utilities and protect the interest of consumers of electricity by establishing a basic system and by promoting the competitiveness of electric utilities, thereby contributing to the progress of the national economy
	Act on the Creation and Facilitat-	○ To promote the establishment and use of smart grids, foster relevant industries, cope with global

	Names of legislation	Purpose of legislation
	ion of Use of S-mart Grids	climate change positively, and lay the basis for low carbon, green growth future industries, with a view on innovating the use environment and contributing to the national economy
	Submarine Mineral Resources Development Act	○ To rationally exploit the sea areas adjacent to the coasts of the Korean Peninsula and its affiliated islands that are the territory of the ROK or the continental shelves over which the ROK may extend all of her sovereignty, which are blessed with submarine minerals, hence contributing to industrial development
Establishment and operation of relevant institutions	Korea Coal Corporation Act	○ To contribute to the stability of people's livelihood and enhancement of public welfare through the stable supply and demand of coal, promotion of the development of coal mines, production, processing, and sales of coal and ancillary businesses with the establishment of the Korean Coal Corporation Act
	Electrical Construction Mutual Aid Association Act	○ To contribute to the balanced development of the national economy by establishing the Electrical Construction Mutual Aid Association and having it engage in the works of providing necessary guarantees, fund loans, provide information on purchasing, etc to the members for sound development of the industry, enhancement of the members' self-reliant economic activities and economic status
	Korea Gas Corporation Act	○ To contribute to convenience and interest and people and enhancement of public safety by providing the basis of a stable supply of gas

	Names of legislation	Purpose of legislation
		through the establishment of the Korea Gas Corporation Act
	Korea Resources Corporation Act	○ To contribute to the development of the national economy for a stable supply and demand of mineral resources through the establishment of the Korea Resources Corporation Act, which will engage in the development of mineral resources both inside and outside of the country and the business of fostering and supporting the relevant industries
	Korea National Oil Corporation Act	○ To seek a stable supply and demand of petroleum and contribute to the development of the national economy by carrying out the business pertaining to the development of petroleum resources, storage of petroleum, and improvement of the petroleum distribution structure through the establishment of the Korea National Oil Corporation
	Korea Electric Power Corporation Act	○ To promote the development of electric sources through the establishment of the Korea Electric Power Corporation, seek stable power supply and demand through the rational operation of electric businesses, and contribute to the national economy
Special or temporary or support laws	Act on the Promotion of Electrification in Agricultural and Fishing Villages	○ To improve the productivity of agriculture and fisheries and improve the livelihood of farmers and fishermen by promoting the supply of electricity to agricultural and fishing villages where electricity is unavailable
	Act on Assistance to Electric Power Plants-Neighboring	○ To promote the development of electric power sources, strive for the harmonious operation of electric power plants and contribute to regional

	Names of legislation	Purpose of legislation
	Areas	development by efficiently carrying out assistance programs to the neighboring areas of electric power plants and raising public awareness of electric power businesses
	Electric Source Development Promotion Act	○ To secure the stability of electricity supply and demand and to contribute to the development of the national economy by effectively propelling electric source development businesses
	Special Act on the Assistance on Development of Abandoned Mine Areas	○ To promote the economy of abandoned mine areas that have been depressed following the decline of the coal industry and to help balance regional development and improve the living standard of residents in such abandoned mine areas
Technology-related laws	Electrical Construction Business Act	○ To seek the sound development of electrical construction businesses and secure the safe and appropriate execution of electrical construction by prescribing basic matters concerning electrical construction businesses and the execution, technical management of and contracting for electrical construction
	Electric Technology Management Act	○ To contribute to the development of the national economy and secure the safety of the public by promoting the research and development of electric technology and efficiently utilizing and managing it, so as to improve the level of electric technology and to ensure the appropriate installation of electric facilities

As noted in the foregoing, this study will focus on legislation on South Korea's energy policies in general rather than on specific energy sources. The laws selected for scrutiny for this research are The Energy Act, The Energy Use Rationalization Act, The Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy, The Integrated Energy Supply Act, and The Overseas Resources Development Business Act.

Section 2. Analysis of changes and development of energy policies and legislation

This study will delve into the development of energy policy-related legislation, dividing it into three stages, i.e., the late 1970s through the early 1980s, when the country focused on overseas resources development and energy use rationalization; the late 1980s through the early 1990s, characterized by a switch to alternative energies and expansion of an integrated energy supply, and; the mid-2000s (enactment of The Framework Act on Energy) through the present. The Framework Act on Low Carbon, Green Growth ("The Framework Act on Green Growth"), which was enacted in 2010, is a very unique law, but it can hardly be said to serve as another turning point in the energy policy sector. Sufficient evaluations have not been made on the influence of this law. Thus, this study will not set aside a separate period concerning it.

1. First period

The core of South Korea's energy policy lies in a reasonable harmonization between stability and economic efficiency. Energy demand is increasing day

by day amid the expansion of economic activities, an increase in population, and enhancement of people's living standards, while energy resources are dwindling. As a country with insufficient energy resources, South Korea placed top priority on a stable, economic, and self-reliant energy supply.[23] Such contents were reflected in early energy-related legislation. During the first period, energy-related legislation was focused on overseas resources development, energy use rationalization, and energy and energy resources-related businesses.

(1) Overseas Resources Development Business Act

Overseas resources development refers to the development (including research for the development and business incidental to the development) of minerals and agricultural, livestock, and forest products produced outside of the country (the said Act, Article 2, Subparagraph 3).

Overseas resources development methods stipulated in the said Act include : (ⅰ) Independent development by a group of South Koreans or a joint venture with foreigners, (ⅱ) a group of South Koreans providing foreigners with technical services, (ⅲ) a group of South Koreans providing foreigners developing overseas resources with development funds and then importing all or part of the overseas resources thus developed (the said Act, Article 3).

A South Korean desiring to operate an overseas resources development business should make a report on the plan to the Ministry of Trade, Industry and Energy (MOTIE) for minerals; to the Minster of Agriculture,

23) Kim Dong-won, *Background of Enactment of The Act on the Promotion of the Development and Use of Alternative Energy and Direction of Promotion*, The Korean Solar Energy Society, A Collection of Theses, Vol. 8, No. 1, May 1988, p. 122.

Food and Rural Affairs and livestock products, and; to the Minister of Korea Forest Service (the said Act, Article 5), respectively. The business plan stated in the foregoing sentence is divided into : a survey plan and a development plan. The party who submits such a report like is given special privileges as an overseas resources developer.

The government may provide support for overseas resources development businesses in the forms of a (ⅰ) subsidy, (ⅱ) loan or (ⅲ) tax benefit. Subsidies are provided in relation to surveys and training experts (the said Act, Article 10). Loans are provided to overseas resources developers, overseas resources development funds and specialized resources development funds concerning a need to acquire the right for survey or development, to install and operate facilities, or to lease or purchase land. The government may relieve such a party of its obligation to repay loans (ⅰ) when the effort is ended without materializing commercial production or (ⅱ) when such a party has an unavoidable reason not to repay the loan after commencement of commercial production (the said Act, Article 11).[24)]

The government provides tax benefits to overseas resources development businesses, such as exemption from corporate tax on dividend income (The Restriction of Special Taxation Act, Article 22), tax credit for investments, etc in safety facilities (the same Act, Article 25), exemption from dividend income tax of overseas resources development investment companies (the same Act, Article 91-6), and a special taxation benefit for tax paid indirectly for foreign countries (the same Act, Article 104-6).

The Overseas Resources Development Business Act stipulates the operation of overseas resources development funds and specialized resources develop-

24) The Act on Special Accounts for Energy and Resources-related Projects also has a clause on the exemption from the obligation concerning loans on petroleum development businesses (the said Act, Article 6, Paragraph 4)

ment funds ("the overseas resources development body" altogether). The said body's scope of investment is confined to petroleum, coal, and uranium ore, etc (the said Act, Article 13-2; the Enforcement Decree, Article 12). More than half (or more than 30% in the case of a mining area under exploration) of the capital should be spent for overseas resources development projects[25] (the said Act, Article 14-2).

The overseas resources development body should be registered with the Financial Services Commission in consultation with the Ministry of Industry, Trade and Energy (the said Act, Article 13). It is scheduled to exist for 20 years (may be extended for another 20 years) (the said Act, Article 13-4). The said body may borrow funds or provide surety provisions or debt guarantees for an amount not exceeding 30% of its capital, in addition to the loan from the government (the said Act, Article 14-3).

The overseas resources development fund should be a closed-end mutual fund (the said Act, Article 14). It should be a private equity fund (PEF) (the said Act, Article 13, Paragraph 3). Overseas resources development funds and specialized resources development funds are subject to similar regulations, except that specialized resources development funds are required to invest more than half of their capital in overseas resources development businesses within 2 years under the Overseas Resources Development (the said Act, Article 15, Paragraph 2).

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25) (ⅰ) Investments following overseas resources development methods, (ⅱ) investments in specialized overseas resources development funds, (ⅲ) acquisition of old shares, credits, and beneficial interest of specialized overseas resources development funds, (ⅳ) acquisition of loan participation in specialized overseas resources funds, (ⅴ) investments in derivatives for hedging, (ⅵ) investments for participation in management right of foreign resource development businesses, more than half of whose sales is associated with exploration, development, production, refining, transportation, and sales of petroleum, etc.

(2) Energy Use Rationalization Act

The Energy Use Rationalization Act, which was enacted in 1979, is a law designed to enhance the efficiency of heat-using devices and their safety management, in addition to encouraging rational use of energy, (Article 1). It contains definitions of terms, such as energy, fuel, energy-using facility, energy-using apparatus and material, and heat-using apparatus and material (Article 2). It requires the Minister of MOTIE to formulate basic plans for the rationalization of energy use (Article 3).

The following basic matters were contained in the said Act when it was first enacted : designation of a plan for reduction of energy consumption (Article 5); energy consumption efficiency marking (Article 6); measures taken to restrict energy use (Article 7); submittal of a report on an energy use plan (Article 8); tax and financial incentives (Article 9).

Those using energy above a certain level were designated as those requiring special management and made to formulate and implement annual demand management plans for efficient management of energy use (Article 9). Manufacturing of energy-guzzling devices and equipment required permission from the Minister of Power and Energy (now MOTIE) (Article 19). Businesses engaging in installation and contractual work of specified heat-using devices and equipment were required to be designated by the Minister of Power and Energy (Article 27).

Other clauses that were contained in previous versions of the said Act included : matters concerning the supply of integrated energy, such as combined heat & power generation and district heating in an industrial complex, large-sized buildings, and residential areas, and use of industrial waste heat (Articles 38 through 47); establishment of an energy use rationalization fund

(Article 48); and matters concerning establishment and operation of the Korea Energy Management Corporation for more efficient promotion of the energy use rationalization business (Articles 52 through 71).

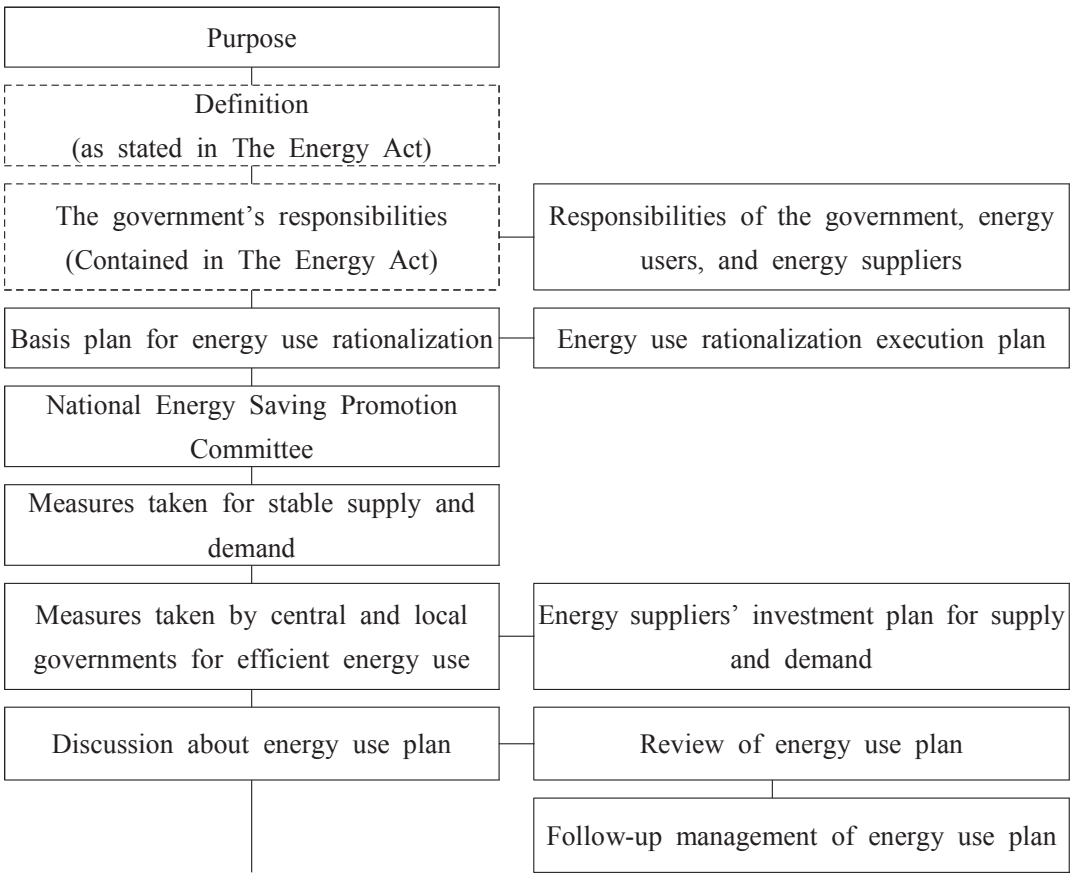
Recently, The Energy Use Rationalization Act was amended as follows. The purpose now reads, "To contribute to the sound development of the national economy, the promotion of national welfare and international efforts to minimize global warming by achieving stability in the supply and demand of energy, increasing the rational and efficient use of energy, and reducing environmental damage caused by the consumption of energy (Article 1). Prior to the enactment of The Framework Act on Energy, the said Act used to stipulate matters concerning the national Basic Plans for Energy, a local Basic Plans for Energy, and an emergency energy supply-demand plan (previous versions, Articles 4 - 6). With the enactment of The Framework Act on Energy, the said Act lost the status as a framework act. It now contains clauses confined to energy use, such as the government's plans and measures for rationalization of energy use (Chapter 2), relevant policies (Chapter 3), management of heat-using machinery, equipment or materials (Chapter 4), etc.

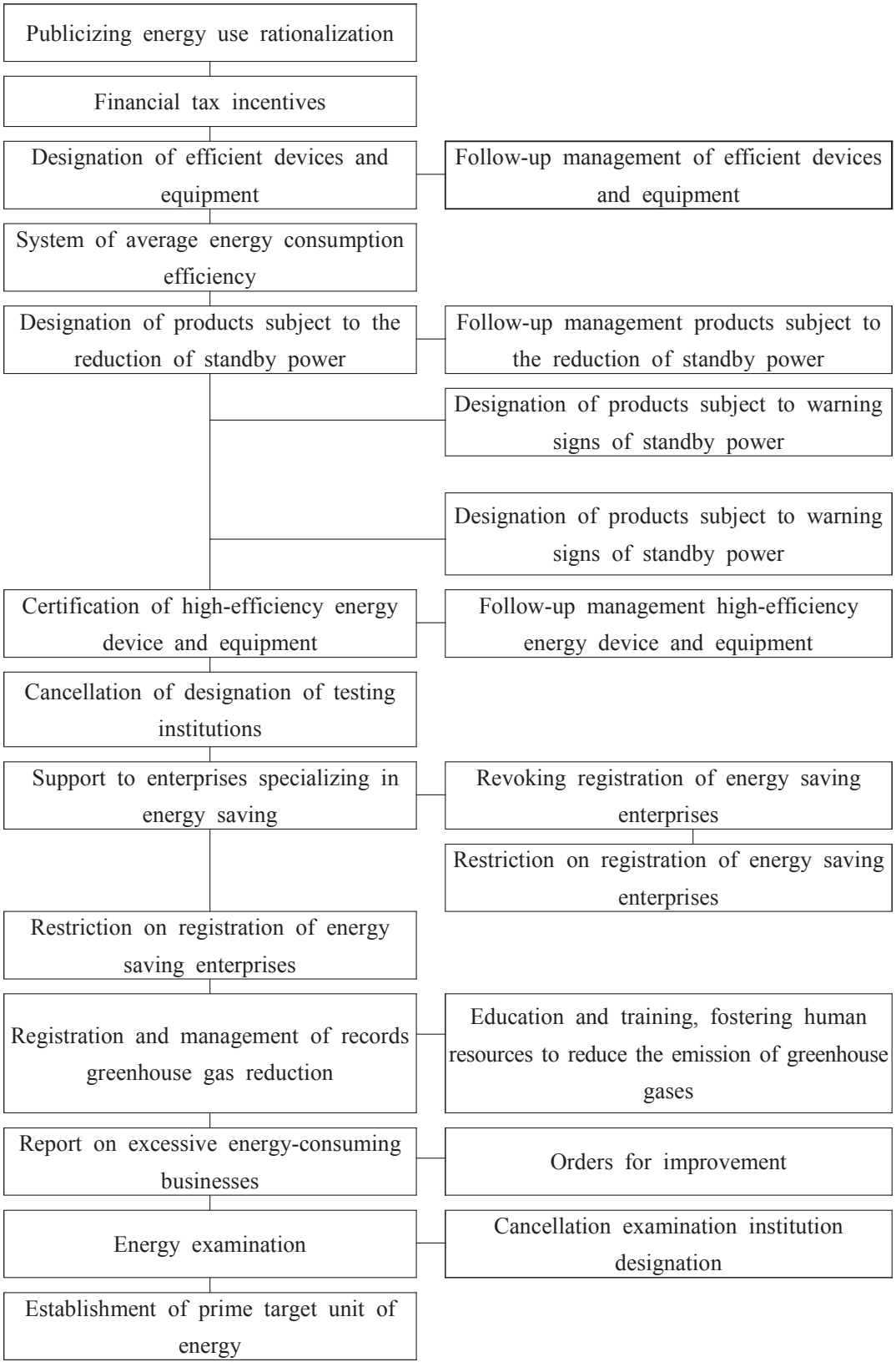
Major content of the said Act concerning the energy industry are as follows. They stipulate the government's measures taken to secure a stable supply and demand of energy (Article 7). Energy users and suppliers should secure energy storage facilities and store energy. The government may adjust or issue an order concerning energy allotment, operation of energy supply facilities, and storage of energy toward relevant industries. The following businesses are required to store a certain amount of energy : electric businesses, petroleum refining businesses, petroleum importers/exporters, urban gas businesses, coal processing businesses, integrated energy businesses, energy

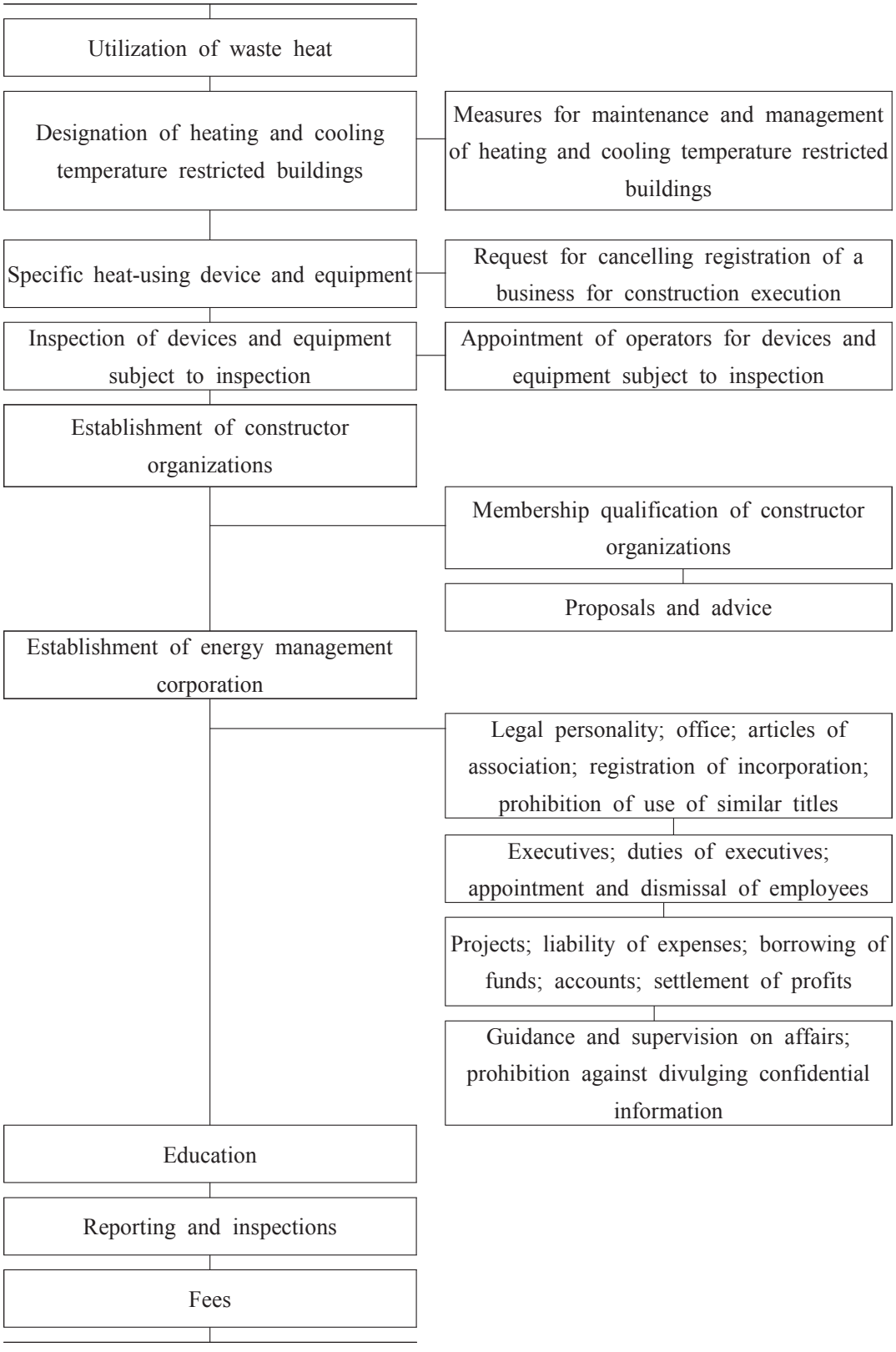
guzzling businesses (consuming more than 20,000 TOE a year) (the Enforcement Decree, Article 3, Paragraph 1).

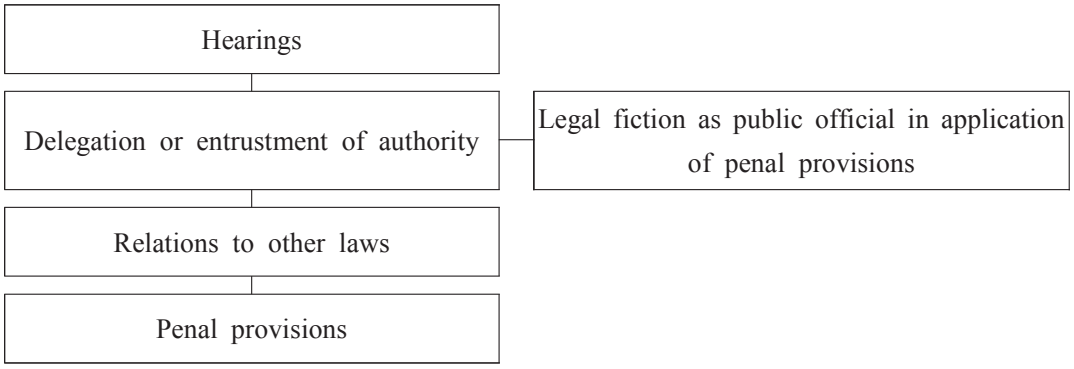
The government requires urban and industrial complex development businesses to submit the following prior to the commencement of their business : the business's impact on overall energy supply and demand; the business's impact on greenhouse gases; an energy supply plan; and a rational energy use appraisal plan (the said Act, Article 10). The government examines energy use plans and adjusts or supplements them as necessary (the said Act, Article 11). The, the government examines or ascertains the status of execution as part of follow-up management (the said Act, Article 12).

<Figure 1> Structure of the Current Energy Use Rationalization Act




Publicizing energy use rationalization
Financial tax incentives
Designation of efficient devices and equipment
Follow-up management of efficient devices and equipment
System of average energy consumption efficiency
Designation of products subject to the reduction of standby power
Follow-up management products subject to the reduction of standby power
Designation of products subject to warning signs of standby power
Designation of products subject to warning signs of standby power
Certification of high-efficiency energy device and equipment
Follow-up management high-efficiency energy device and equipment
Cancellation of designation of testing institutions
Support to enterprises specializing in energy saving
Revoking registration of energy saving enterprises
Restriction on registration of energy saving enterprises
Restriction on registration of energy saving enterprises
Registration and management of records greenhouse gas reduction
Education and training, fostering human resources to reduce the emission of greenhouse gases
Report on excessive energy-consuming businesses
Orders for improvement
Energy examination
Cancellation examination institution designation
Establishment of prime target unit of energy


Utilization of waste heat
Designation of heating and cooling temperature restricted buildings
Measures for maintenance and management of heating and cooling temperature restricted buildings
Specific heat-using device and equipment
Request for cancelling registration of a business for construction execution
Inspection of devices and equipment subject to inspection
Appointment of operators for devices and equipment subject to inspection
Establishment of constructor organizations
Membership qualification of constructor organizations
Proposals and advice
Establishment of energy management corporation
Legal personality; office; articles of association; registration of incorporation; prohibition of use of similar titles
Executives; duties of executives; appointment and dismissal of employees
Projects; liability of expenses; borrowing of funds; accounts; settlement of profits
Guidance and supervision on affairs; prohibition against divulging confidential information
Education
Reporting and inspections
Fees



The Energy Use Rationalization Act stipulates matters concerning basic plans for energy use rationalization and matters related to relevant support and certification based on the responsibilities of the government, energy suppliers, and energy users, with the definitions and responsibilities as stipulated in The Energy Act. Clauses stipulated in the said Act include : measures for stable energy supply and demand, publicizing energy rationalization, registration of businesses specializing in energy saving, devices and equipment subject to efficiency management, measures concerning specific heat-using devices and equipment, establishment of Korea Energy Management Corporation.

(3) Act On Special Accounts For Energy And Resources-Related Projects

This Act was enacted to operate government-controlled special accounts concerning energy and resources-related projects and to provide for matters regarding the operation of the accounts.

The minister of MOTIE has the authority to operate and manage the special accounts for projects related to energy and resources (Article 3). The special accounts are classified into investment accounts and loan and oil

price buffer accounts (Article 4). Investment accounts earn revenue through penalty surcharges, dues, transfers from accounts under energy-related laws and spends project costs, contribution to projects, and transfers to the loan account in energy/resource-related projects (Article 5). Loan and oil price buffer accounts depend on the interest from the loans as revenue. Such revenue is lent to the Korea National Oil Corporation, the Korean Mining Promotion Corporation, the Korea Coal Corporation, the Mine Reclamation Corporation, the Korea Energy Management Corporation, and the Korea Gas Safety Corporation for their respective energy and resource-related business (Article 6).

The said Act contains a clause about relief of the obligation to repay loans. The government may relieve such a party of its obligation to repay loans either partially or wholly (ⅰ) when the effort is ended without materializing commercial production or (ⅱ) when such a party has an unavoidable reason not to repay the loan after commencement of commercial production (the said Act, Article 6, Paragraph 4; the Enforcement Decree, Article 6).

2. Second period

(1) Act On The Promotion Of The Development And Use Of Alternative Energy

Following the second Oil Shock in 1978, South Korea started taking heightened interest in the development of alternative energy and established the Solar Energy Institute. Headed by the Korea Energy Resources Institute, the government started investment in technological development.

It was necessary for the government to play a central role in the development of technologies for alternative energy. In 1987, The Act on the Promotion of the Development and Use of Alternative Energy was enacted for the development of systematic and efficient technologies and provision of the basis for national development.

This Act labeled solar energy, bio energy, wind power, small hyrdo power, fuel cells, coal liquefaction/gasification, marine energy, and waste energy as alternative energy (Article 2) and made it possible for the government to take financial and tax-related measures in promotion of the development of alternative energy-related technologies (Article 3). At present, this Act makes it possible to secure funds required for technological development and operate petroleum project funds as well as private sector special assessments when funding is additionally required.

Promotion for technological development under this Act focused on efficiency and systematic operation in policy formulation. This Act contained clauses for efficient operation of basic plans and annual execution plans based on object-centered management (Articles 4 and 5). The Act made it required to enhance efficiency in R&D and commercialize R&D results through the integrated management of relevant projects and operation of the Alternative Energy Technological Development Policy Deliberation Council (Article 7).

(2) Act On The Promotion Of The Development, Use And Diffusion Of New And Renewable Energy

The Act on the Promotion of the Development and Use of Alternative Energy was replaced by The Act On The Promotion Of The Development, Use And Diffusion Of New And Renewable Energy. Under the new law,

alternative energies were divided into new energy and renewable energy. The main purpose of this Act was to diversify energy sources [i.e., new energy (hydrogen energy, fuel cells, coal gas, etc) and renewable energy (solar energy, wind power, hydro power, marine energy, geothermal energy, bio energy, waste energy, etc)] through the promotion of technological development, use and distribution of new energy and renewable energy, and the activation of the new energy industry and the renewable energy industry, by promoting the stable supply of energy, environment-friendly conversion of the energy structure, and the reduction of greenhouse gas emissions (Article 1).

The law wholly amended in December 2004 established general concepts of new energy and renewable energy and listed specific examples of them. It stipulates that the term "new energy and renewable energy" refers to energy converted from existing fossil fuels or renewable energy, including sunlight, water, geothermal, precipitation, bio-organisms" (the said Act, Article 2, Paragraph 1).[26] Concerning existing bio energy, coal-liquefied/ gasified energy and energy from liquefied or gasified heavy residual oil, waste energy, a certain restriction was enacted by Presidential Decree to distinguish them as new or renewable energy and encourage their development, use, and promotion for distribution under the law.[27] The same

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26) a) solar energy, b) bio energy converted from biological resources which fall within the criteria and scope prescribed by Presidential Decree, c) wind power, d) water power, e) fuel cells, f) energy from liquefied or gasified heavy residual oil which falls within the criteria and scope prescribed by Presidential Decree, g) marine energy, h) energy from waste which falls within the criteria and scope prescribed by Presidential Decree, i) geothermal energy, j) hydrogen energy, k) energy prescribed by Presidential Decree, other than petroleum, coal, nuclear power or natural gas.

27) Through the December 2004 amendment, "bio energy" was replaced by "bio energy converted from biological resources that fall within the criteria and scope prescribed by Presidential Decree"; "energy from liquefied or gasified heavy residual oil" was replaced by "energy from liquefied or gasified heavy residual oil that falls within the criteria and scope prescribed by Presidential Decree"; "waste energy" was replaced by "energy from

holds true of "energy from liquefied or gasified heavy residual oil," which was replaced by "energy from liquefied or gasified heavy residual oil," which falls within the criteria and scope prescribed by Presidential Decree.

Article 2 (Definitions)

The definitions of terms used in this Act shall be as follows :

1. The term "new energy and renewable energy" (hereinafter referred to as "new and renewable energy") means energy converted from existing fossil fuels, or renewable energy, including sunlight, water, geothermal, precipitation, bio-organisms, etc., which falls under any of the following items :
   (a) Solar energy;
   (b) Bio energy converted from biological resources which fall within the criteria and scope prescribed by Presidential Decree;
   (c) Wind power;
   (d) Water power;
   (e) Fuel cells;
   (f) Energy from liquefied or gasified coal, and from gasified heavy residual oil which falls within the criteria and scope prescribed by Presidential Decree;
   (g) Marine energy;
   (h) Energy from waste which falls within the criteria and scope prescribed by Presidential Decree;
   (i) Geothermal energy;
   (j) Hydrogen energy;
   (k) Energy prescribed by Presidential Decree, other than petroleum, coal, nuclear power or natural gas;

Though the enforcement decree was amended to include additional clarification following the amendment to the said Act, "liquefied fuel, with other substances mixed to coal, (in the case of a substance other than coal containing petroleum, whose content comes to 70% or more of the total

waste that falls within the criteria and scope prescribed by Presidential Decree."

weight of inflammable materials, the substance is excluded),” which was designated as alternate or new energy in the enforcement decree, was deleted.

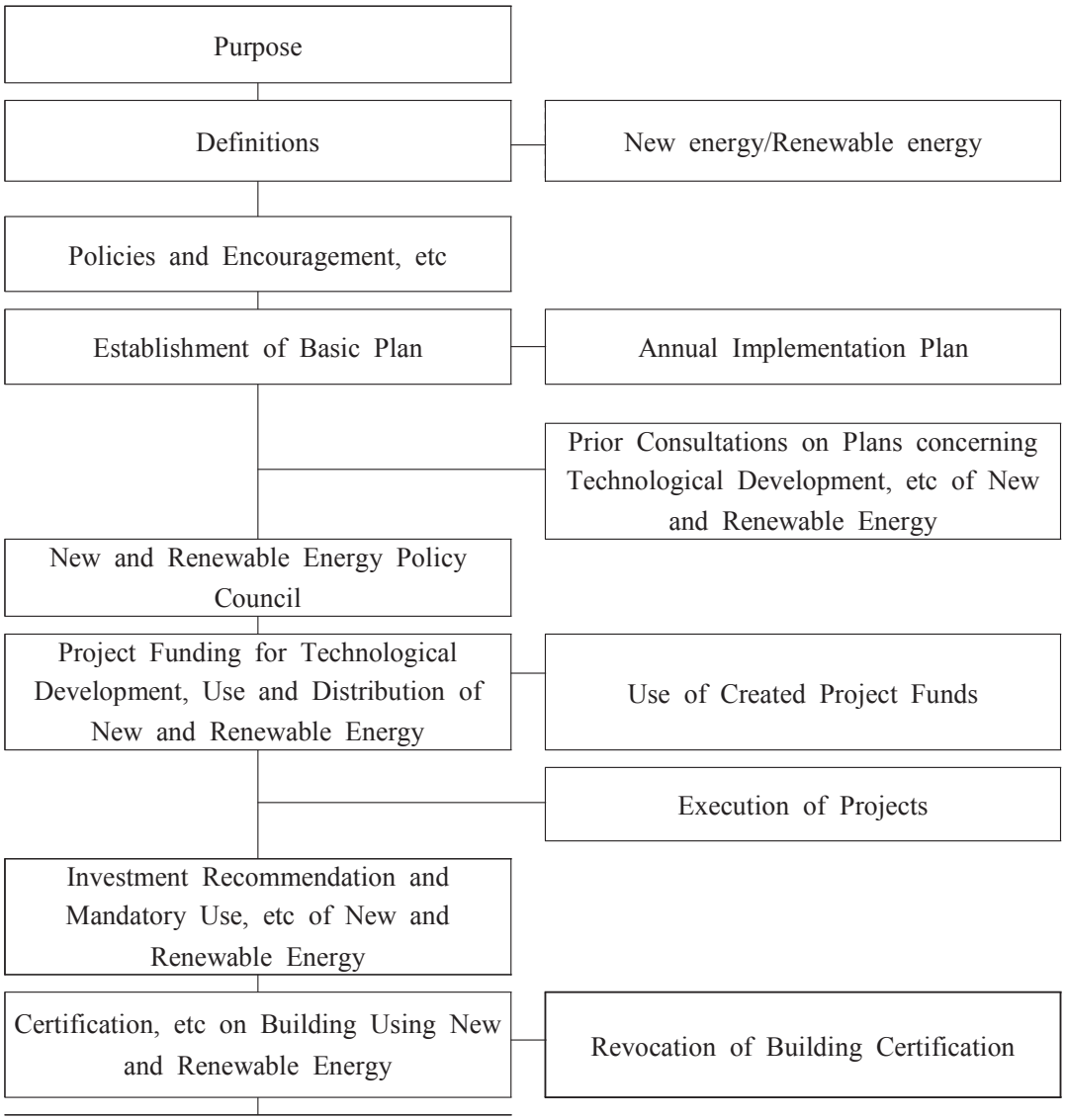
Where a State agency, local government, public institution, or any other person prescribed by Presidential Decree intends to develop and implement a plan for the technological development, use and distribution of new and renewable energy, he/should consult in advance with the Minister of MOTIE as prescribed by Presidential Decree (Article 7). The New and Renewable Energy Policy Council should deliberate important matters concerning the technological development, use and distribution of new and renewable energy (Article 8).

A noticeable thing about the amendment to the said law is that in 2012 South Korea switched to the Renewable Portfolio Standard (“RPS”), which is used in the United States, the United Kingdom, and Japan, after abolishing Feed - in Tariff (“FIT”). The country had used FIT since 2002 as part of its measures to provide support for industries associated with new and renewable energy.[28] RPS refers to a policy of making it obligatory for power generation businesses to switch a given percentage of their power generation capacity to new and renewable energy in order to enhance the percentage of the said energy. The government intends to set the price for

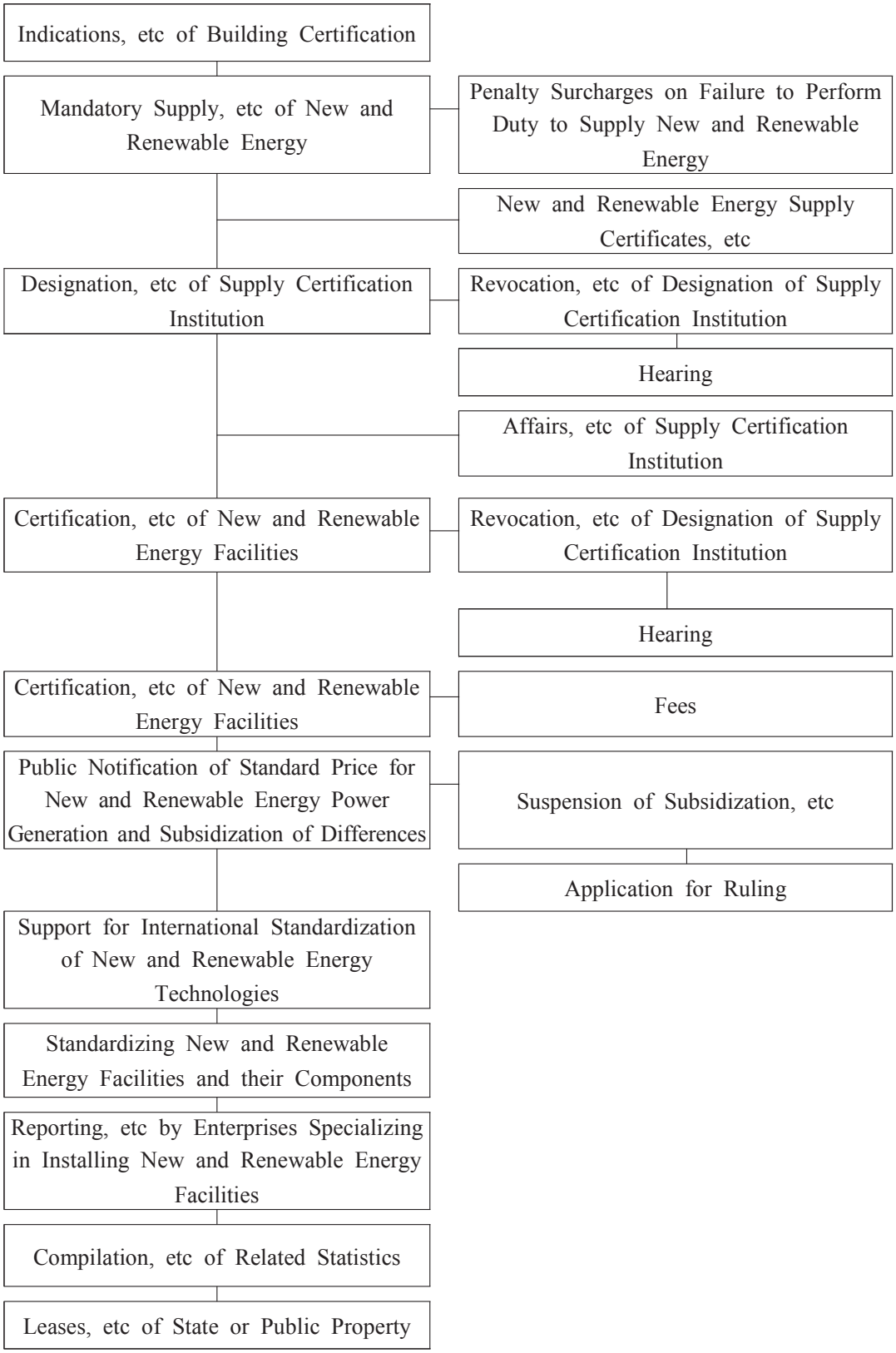
28) Concerning details of the adoption of RPS, the MOKE said that the amendment was made to The Act On The Promotion Of The Development, Use And Diffusion Of New And Renewable Energy, its enforcement decree, and enforcement rules on September 19, 2009. Under the amendment, the scope of mandatory suppliers was set as the closed quotation mark! Please fix. “a power generation business with a facility 500mW or higher (excluding new and renewable energy facilities). Thus, 14 power companies are included : the Korea Water Resources Corporation, and the Korea District Heating Corporation. Thus, the KEPCO’s six subsidiary companies, the said two corporations, POSCO Power, K-Power, GS EPS, GS Power, MPC Yulchon, MPC Daesan. The total mandatory supply amount will increase from 2% of 2012 to 5% by 2017 and then to 10% by 2022.

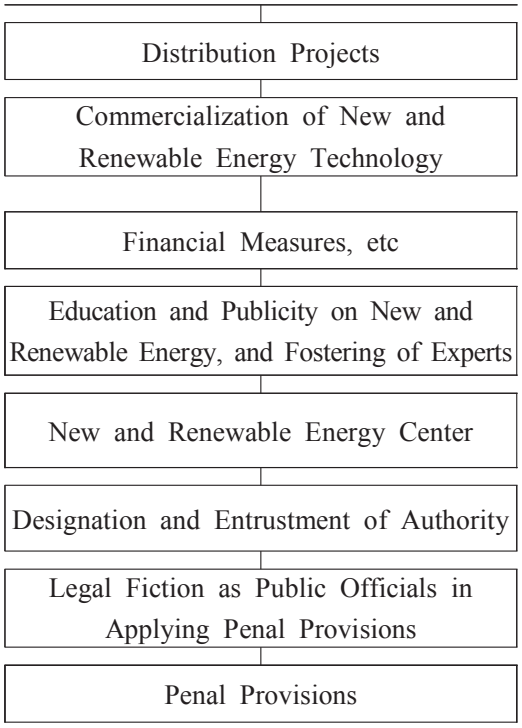
the supply of new and renewable energy through competition in the market and reduce its financial burden.[29)]

<Figure 2> The Act On The Promotion Of The Development, Use And Diffusion Of New And Renewable Energy



29) Choi Hyeon-gyeong, *The System of Mandatory Allotment of New and Renewable Energy and Comparison of It with FIT*, KIET, Industry and Economy, January 2009, p. 29; Lee Jun-seo, Legislative Review of FIT and RPS – with a focus on the RPS Law of Japan, KLRI, 2010, pp. 8-9.


Indications, etc of Building Certification
Mandatory Supply, etc of New and Renewable Energy
Penalty Surcharges on Failure to Perform Duty to Supply New and Renewable Energy
New and Renewable Energy Supply Certificates, etc
Designation, etc of Supply Certification Institution
Revocation, etc of Designation of Supply Certification Institution
Hearing
Affairs, etc of Supply Certification Institution
Certification, etc of New and Renewable Energy Facilities
Revocation, etc of Designation of Supply Certification Institution
Hearing
Certification, etc of New and Renewable Energy Facilities
Fees
Public Notification of Standard Price for New and Renewable Energy Power Generation and Subsidization of Differences
Suspension of Subsidization, etc
Application for Ruling
Support for International Standardization of New and Renewable Energy Technologies
Standardizing New and Renewable Energy Facilities and their Components
Reporting, etc by Enterprises Specializing in Installing New and Renewable Energy Facilities
Compilation, etc of Related Statistics
Leases, etc of State or Public Property



Under the first national Basic Plans for Energy, the government set up a plan to increase the share of new and renewable energy for all sources to 11% by 2030. In his August 15, 2008 commemorative speech delivered on Korea's Liberation Day, President Lee Myung-bak presented Low Carbon, Green Growth as a new national development paradigm. It was expected that legislative activities would be carried out briskly for new and renewable energy-related policies.

In April 2008, the government's Economic Policy Coordination Meeting announced an improvement in the photovoltaic FIT system. Changes in major content included : (ⅰ) an increase in environmental carrying capacity associated with photovoltaic FIT (100MWÆ500MW), (ⅱ) the lowering of the reference price for support (applicable from October 2008) and abolition of the FIT system (in 2012), and (ⅲ) adoption of the RPS system. In September 2008, the Climate Change Measures Committee of the Prime

Minister's Office presented a new direction in the country's climate change policy through its Climate Change Basic Plan. It re-indicated a plan for adoption of the RPS system by 2012. The Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy would be amended for adoption of the RPS system.

3. Third period

(1) Framework Act on Energy

The need for enactment of the energy-related framework law had been raised since the late 1990s. Promotion of The Framework Act on Energy was made to enhance connectivity between integrated and systematic energy-related laws and policies, to upgrade energy-related policy issues, which used to be confined to industries, to the national level and to push ahead with sustainable development and energy security.[30)]

The need for an energy-related framework law had been raised since the late 1990s.[31)32)] Relevant bills were submitted to the 17th National

30) The Commerce, Industry, and Energy Committee of the National Assembly, The Report on Review of the Bill for Framework Act on Energy, February 2005, p. 6.

31) Usually, a framework law is supposed to meet the following requirements : (ⅰ) The expression "Framework Act" should be included in the title, (ⅱ) it should contain basic principles, standing rules or criteria concerning a relevant system or policy, and (ⅲ) specific laws should deal with details of the matters to be embodied in the framework law. It should be understood that a framework law plays a substantial role in linking the Constitution with specific laws, in addition to its symbolic role of presenting the direction of the relevant policies and establishing norms. Such a role in framework law does not mean that a framework is generally superior to specific laws in terms of formality or status. Lee Jun-seo, *The Study of How to Rearrange the Structure of The Framework Act on Environmental Policy*, KLRI, 2009, pp. 15-20.

32) In his thesis, Prof. Yun Sun-jin points to a need for an energy-related framework law, saying, "Existing energy-related laws fail to clarify the principles of the afore-stated energy policies. The Energy Use Rationalization Act stipulates basic energy-related matters, such

Assembly (May 2004 – May 2008). In February 2006, the bill for the Framework Act on Energy passed the National Assembly and the law was implemented in September of the same year. The law enacted at the initiative of the Ministry of Trade, Industry and Energy (now MOTIE) was aimed to present an integrated, long-term vision of the country's energy policies, to establish basic principles of energy policies, and to reinforce the connectivity between energy-related specific laws and energy policies. The said law (Article 3) indicated the following basic principles of the country's energy policy : realization of the goal of a stable supply of energy, production and wider use of environmentally friendly energy, continued energy demand management for conversion to a low-energy consumption economic and social structure, adoption of market competition factors in the energy industry, and deregulation in the energy industry.

The Framework Act on Energy, which was a processor of the current Energy Act, was aimed to contribute to the sustainable development of the national economy and enhance people's welfare by setting out basic matters concerning establishment and implementation of energy policies and plans to create a stable, efficient, and environmentally friendly energy supply and demand structure (Article 1). The law presented basic principles of the country's energy policies (Article 3). The said law made improvements on the following, which were stipulated in The Energy Use Rationalization Act :

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as the national Basic Plans for Energy, local energy plan, emergency energy plan, etc, but it does not state the objective of a sustainable energy system. … It hardly states a need for consideration of the issues of the global environment, including climate change or depletion of energy sources or expansion of renewable energy, not to mention consideration for equity in energy use or the policy decision process. It means that the country has not accommodated a need for conversion to a sustainable energy system, which is the most important matter in this century, as a policy." Yun Sun-jin, *A Desirable Direction of Improving Energy Policy for Conversion to Sustainable Energy System*, The Study of Korean Society and Administration, Vol. 14, No. 1, May 2003, p. 282.

the State Basic Plans for Energy (Article 6), the Local Basic Plans for Energy (Article 7), and the emergency energy supply and demand plan (Article 8). The said law also newly inserted matters concerning the State Energy Committee (Articles 9 and 10).

Looking at the development of energy-related laws, The Framework Act on Energy used to serve as an energy-related framework law until the enactment of The Framework Act on Low Carbon, Green Growth. There were laws concerning a stable energy supply, such as The Overseas Resources Development Business Act, The Petroleum and Petroleum Substitute Fuel Business Act, The Urban Gas Business Act, and The Electric Utility Act. There was also a law concerning energy saving (e.g., The Energy Use Rationalization Act) and there were laws concerning production and use of environmentally friendly energy (e.g., The Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy, The Act on Assistance to Electric Power Plants-Neighboring Areas, etc.).

The Framework Act on Energy was enacted to set out basic matters concerning establishment and implementation of energy-related plans with to the intention of creating a stable, efficient, and environmentally friendly energy supply and demand structure. This law confined energy to fuel, heat, and electricity (Article 2, Paragraph 1) and presented basic principles on energy policies (Article 3).[33)]

33) (i) Realization of the goal of a stable supply of energy, (ii) production and wider use of environmentally friendly energy, (iii) continued energy demand management for conversion to a low-energy consumption economic and social structure, (iv) comprehensive consideration of all energy-related sectors, such as industry, environment, national security, transportation, and architecture, adoption of market competition factors in the energy industry, deregulation in the energy industry, and (vi) continued efforts for enhancement of equity in energy use.

Matters pertaining to establishment of energy-related plans were the core content of The Framework Act on Energy. The said law required the government to establish the National Basic Plans for Energy every 5 years for the entire 20-year plan period (Article 4, Paragraph 1; Article 6). The said law also required the heads of local governments to establish a local energy plan and required the Minister of MOTIE to establish an emergency energy supply and demand plan (Article 4, Paragraph 2; Articles 7 and 8). The government finalized the first National Basic Plans for Energy in August 2008 after long discussions following the implementation of the said law.

This law stipulates matters, such as basic principles, establishment of basic energy-related plans, and composition of the National Energy Committee. It does not contain detailed energy-related regulations itself. The detailed policy directions pursued by The Framework Act on Energy should contain in the National Basic Plans for Energy. Thus, the National Basic Plans for Energy will contain the most crucial content of The Framework Act on Energy.

The next important thing in The Framework Act on Energy was the clause on the composition of the National Energy Committee. The said 25-member committee was composed of the President (Chair), the Prime Minister (Vice Chair), heads of the relevant central administrative institutions and people recommended by civic organizations (Article 9). The committee was divided into sub-expert committees (i.e., those in charge of energy policies, energy-related technologies, resource development, and conflict management). The committee was required to deliberate the following : matters concerning plans including the National Basic Plans for Energy, major policy and business coordination, putting an end to energy-related social conflict, efficient use of budget, nuclear power generation policies, and climate

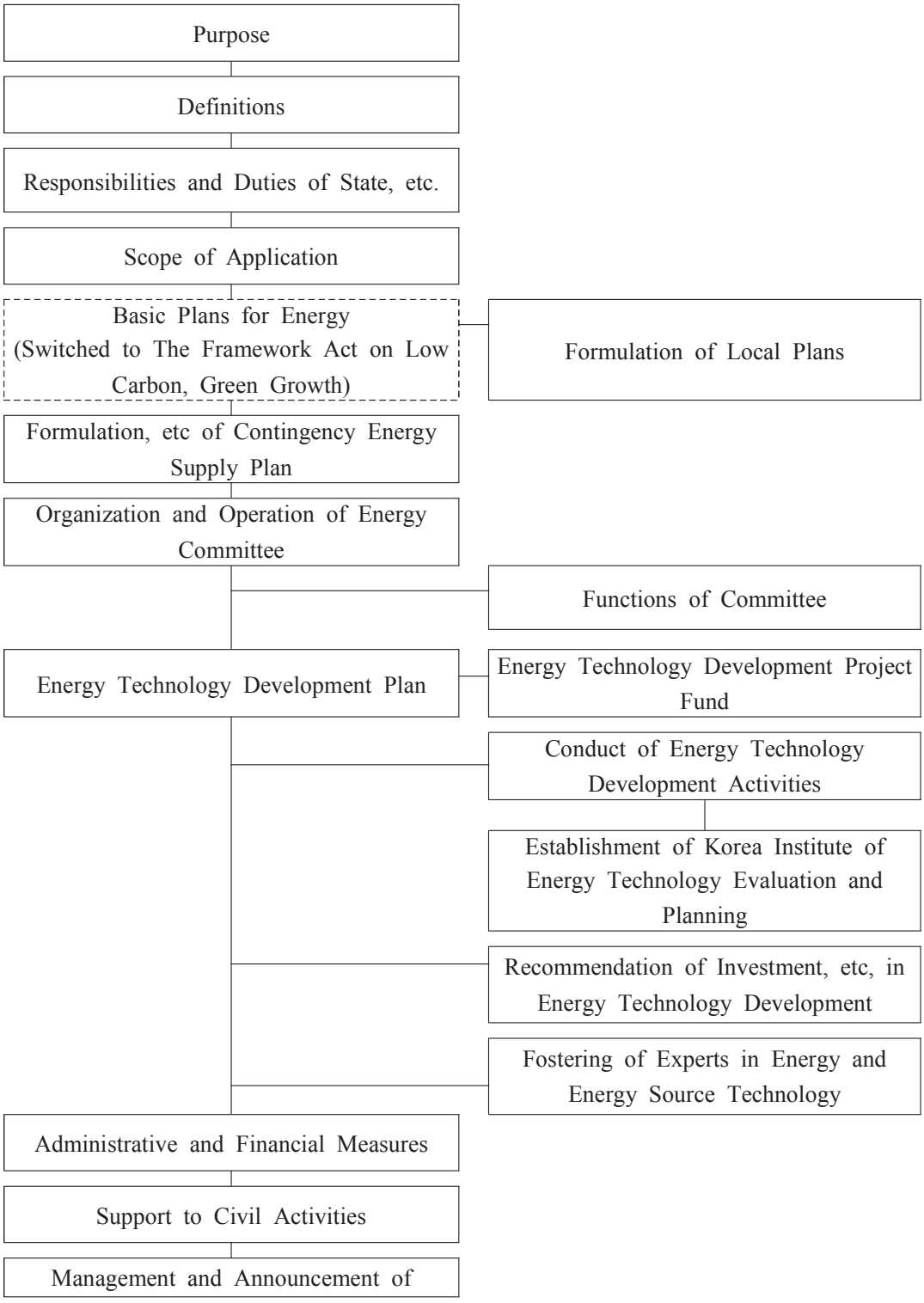
change measures (Article 10). The aforesaid first National Basic Plans for Energy was also finalized through the deliberation of the National Energy Committee.

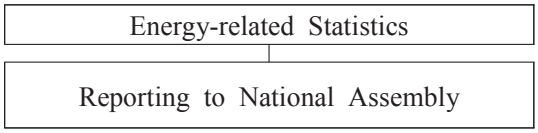
The Framework Act on Energy contains stipulations on the development of energy-related technologies as follows : making it required to establish a plan for the development of energy-related technologies during a period longer than 10 years (Article 11); execution of the development of energy-related technologies (Article 12); designation of an institution dedicated to programs for the development of energy-related technologies (Article 13), and recommendation for investment in the development of energy-related technologies (Article 15).

It is beneficial to enact an energy-related framework law after long discussions, but it would have been much better if the said law could have presented a specific direction of the country's energy policies from a legal perspective. The Framework Act on Energy presented a basic principle of the government policy, but it stipulated that specifics be settled in compliance with regulations, such as the National Basic Plans for Energy, which is inferior to laws. The said law left something to be desired as a framework law, which should play a leading role.

The Framework Act on Energy had a total of 20 articles. Now, it has 18 articles and two of them (i.e., Article 3 Basic Principles of Promotion of Low Carbon, Green Growth and Article 6 National Basic Plans for Energy) are incorporated into The Framework Act on Low Carbon, Green Growth. The relevant structure is displayed in the following figure.

<Figure 3> Structure of The Energy Act





The Energy Act contains definitions of energy-related basic terms, such as energy, fuel, new and renewable energy (Article 2). These terms also apply in The Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy and The Energy Use Rationalization Act. With Basic Plans for Energy incorporated into The Framework Act on Low Carbon, Green Growth, Article 3 of The Energy Act was deleted. The law contains the following stipulations : Responsibilities and Duties of State, etc (Article 4); Formulation of Local Plans (Article 7); Formulation, etc of Contingency Energy Supply Plan (Article 8); matters concerning the Energy Committee (Articles 9 and 10).

The said law contains stipulations on the development of energy-related technologies as follows : Energy Technology Development Plan (Article 11); the basis for establishment of the Korea Institute of Energy Technology Evaluation and Planning (KETEP) (Article 12); improvement of the following clauses, which used to be contained in The Energy Use Rationalization Act : the National Basic Plans for Energy (Article 6), formulation of local plans (Article 7), formulation, etc of contingency energy supply plan (Article 8); new inclusion of matters concerning the National Energy Committee (Articles 9 and 10).

The Energy Act also contains stipulations on matters pertaining to the development of energy-related technologies as follows. The government required the creation of the Energy Technology Development Plan (Article 11); energy technology development activities (Article 12); establishment of the Korea Institute of Energy Technology Evaluation and Planning (Article

13); Recommendation of Investment, etc in energy technology development (Article 15). It also contains stipulations on the fostering of experts in energy and energy resource technology; administrative and financial measures; support to civil activities; and the management and announcement of energy-related statistics.

It was good to enact an energy-related framework law after long discussions, but it is doubtful whether The Energy Act, which lost the status as a framework law, could present a specific direction of the country's energy policies from a legal perspective. As noted in the foregoing, The Framework Act on Energy lost the status as a framework law to the newly enacted Framework Act on Low Carbon, Green Growth and saw its name changed to The Energy Act. Basic principles on energy policy and the National Basic Plans for Energy, which were the core of The Framework Act on Energy were incorporated into The Framework Act on Low Carbon, Green Growth. The National Energy Committee was also downgraded to the Energy Committee.[34)]

At present, the country's energy-related legal system is set up on the basis of The Framework Act on Low Carbon, Green Growth. The Energy Act exists as a general law. There are other energy-related specific laws

34) The 25-member National Energy Committee was composed of the President (Chair), the Prime Minister (Vice Chair), heads of the relevant central administrative institutions and people recommended by civic organizations (Article 9, The Framework Act on Energy). The committee was divided into sub-expert committees (i.e., those in charge of energy policies, energy-related technologies, resource development, and conflict management). The committee was required to deliberate the following : matters concerning plans including the National Basic Plans for Energy, major policy and business coordination, putting an end to energy-related social conflict, and efficient use of the budget, nuclear power generation policies, and climate change measures (Article 10). The aforesaid first National Basic Plans for Energy was also finalized through the deliberation of the National Energy Committee. Following the amendment, the committee was downgraded to the Energy Committee reporting to the Minister of MOTIE.

constituting a legal system encompassing supply, use, and re-use of energy. In the future, the green growth-related energy legal system will have to rearrange itself in conjunction with a need to cope positively with climate change, reinforce energy demand management, and develop the energy industry as a new growth engine of the country's economy. It is also required to substantially improve the content of the energy-related legal system in consideration of the abrupt changes made in the legal system in the period following 2008.

Concerning industrial sectors, there are no well-arranged legal systems established pertaining to green growth similar to that of MOTIE. As for The Industrial Development Act, which has the characteristic as a framework law for industrial sectors, though it contains a clause concerning sustainable industrial development (Chapter 3 – Establishment of Sustainable Industrial Development), overall the law is hardly relevant to The Framework Act on Low Carbon, Green Growth.

The Energy Act aims to contribute to the sustainable development of the national economy and enhancement of the welfare of people by providing for basic matters concerning the formulation and implementation of energy policies and energy-related plans in the hopes of creating a stable, efficient, and environment-friendly energy demand and supply structure (Article 1). The wording of this clause was not revised despite incorporation of matters pertaining to basic principles and the National Basic Plans for Energy into The Framework Act on Low Carbon, Green Growth. It appears inevitable to revise the phrase "by providing for basic matters concerning the formulation and implementation of energy policies and energy-related plans" in a concrete way, as the contents pertaining to energy policies or plans that can be fixed in this law have been reduced. Clauses pertaining to Basic Plans

for Energy contained in The Framework Act on Low Carbon, Green Growth are as follows :

Article 41 (Establishment of Basic Plans for Energy)

(1) The Government shall establish a basic plan for energy every five years (hereafter referred to as "Basic Plans for Energy" in this Article) for a planning period of 20 years in accordance with basic principles for policies on energy.

(2) The Government shall, whenever it intends to establish or amend a Basic Plans for Energy, present a proposed plan to the Energy Committee under Energy Act Article 9 of the Energy Act and then to the Committee and the State Council consecutively for deliberation : Provided, That the foregoing shall not apply to modifications to minor matters prescribed by Presidential Decree.

(3) A Basic Plans for Energy shall including the following matters :

1. Matters concerning trends and prospects of domestic and overseas demand and supply of energy;
2. Matters concerning measures for stable securing, import, supply, and management of energy;
3. Matters concerning the targets of demand for energy, the composition of energy sources, the saving of energy, and the improvement of efficiency in the use of energy;
4. Matters concerning the supply and use of environmentally friendly energy, such as new and renewable energy;
5. Matters concerning measures for the safety control of energy;
6. Matters concerning the development and diffusion of technology related to energy, the training of professional human resources, international cooperation, the development and use of natural resources of energy, and welfare in energy.

Under the Energy Act, all matters concerning establishment of Basic Plans for Energy, their amendment and relevant deliberations are to be made by the Energy Committee. However, the relevant clause was incor-

porated into The Framework Act on Low Carbon, Green Growth, which means that the establishment and deliberations of the basic plans are carried out based on different laws. The Framework Act on Low Carbon, Green Growth is a law that contains stipulations on a wide range of areas, but it is doubtful whether matters pertaining to the establishment of basic plans needs to be incorporated into the said law.

Even so, it cannot be definitely determined that The Framework Act on Energy has lost all its status as a framework law. It still contains definitions of terms, including for energy, which is the focal point of the law (Article 2), stipulations about responsibilities of the State, etc (Article 4), local energy plans (Article 7), establishment of a contingency energy supply and demand plan (Article 8), and matters about the Energy Committee (Articles 9 and 10).

(2) Framework Act On Low Carbon, Green Growth

There has been an accelerated use of fossil fuels, including coal and petroleum, following the Industrial Revolution. Recently, depletion of energy resources has become a major global concern. Economic and geopolitical factors have caused a jump in oil prices. Accumulation of greenhouse gases has caused serious climate change and the international community has taken joint steps to reduce greenhouse gases. It is thought that the measures taken against the energy crisis will have a far-reaching impact not only on the energy sector, but on industrial production and people's life patterns.

In South Korea, legal and systematic efforts are made in step with the ongoing discussion about climate change and energy crisis. Following President Lee Myung-bak's announcement of a vision concerning Low Carbon,

Green Growth in 2008, the first National Basic Plan for Energy (2008) was established, which was followed by an announcement of the Green Energy Industrial Development Strategy (2008), the New Growth Engine Vision and Development Strategy (2009), and the National Strategy for Green Growth and the Five-Year Plan (2009). The Presidential Committee on Green Growth was launched to push ahead such plans and strategies (2008). The bill for the Framework Act on Low Carbon, Green Growth passed the National Assembly toward the end of 2009.

The Framework Act on Low Carbon, Green Growth is composed of General Provisions (Chapter 1), the National Strategy for Low Carbon, Green Growth (Chapter 2), the Presidential Committee on Green Growth (Chapter 3), Promotion of Low Carbon, Green Growth (Chapter 4), Realization of Low Carbon Society (Chapter 5), and Realization of Green Life and Sustainable Development (Chapter 6).

<Table> Composition of Framework Act on Low Carbon, Green Growth

Chapter Ⅰ General Provisions	Article 1 (Purpose) Article 2 (Definitions) Article 3 (Basic Principles of Promotion of Low Carbon, Green Growth) Article 4 (Responsibilities of the State) Article 5 (Responsibilities of Local Governments) Article 6 (Responsibilities of Business Entities) Article 7 (Responsibilities of Citizens) Article 8 (Relationship with other Acts)
Chapter Ⅱ National Strategy For Low Carbon,	Article 9 (National Strategy for Low Carbon, Green Growth) Article 10 (Establishment and Implementation of Action Plans by Central Administrative Agencies)

Green Growth	Article 11 (Establishment and Implementation of Action Plans by Local Governments) Article 12 (Review and Evaluation of Current Status of Performance) Article 13 (Presentation of Opinions on Policies)
Chapter Ⅲ Presidential Committee On Green Growth, Etc.	Article 14 (Composition and Operation of Presidential Committee on Green Growth) Article 15 (Committee's Functions) Article 16 (Meetings) Article 17 (Subcommittees) Article 18 (Green Growth Task Force) Article 19 (Request for Dispatching Public Officials) Article 20 (Composition and Operation of Local Committees on Green Growth) Article 21 (Designation of Green Growth Officer)
Chapter Ⅳ Promotion Of Low Carbon, Green Growth	Article 22 (Basic Principles for Materialization of Green Economy and Green Industries) Article 23 (Fostering of and Support for Green Economy and Green Industries) Article 24 (Facilitation of Recycling of Resources) Article 25 (Facilitation of Enterprises' Green Management) Article 26 (Facilitation of Research, Development, and Commercialization of Green Technology) Article 27 (Diffusion and Utilization of Technology for Information and Communications) Article 28 (Support for and Boosting of Finance) Article 29 (Establishment of and Support for Companies for Investment in Green Industries) Article 30 (Operation of Taxation System) Article 31 (Support and Special Privileges for Green Technology and Green Industries) Article 32 (Standardization and Certification of Green Tech-

	nology and Green Industries) Article 33 (Support for Medium and Small Enterprises) Article 34 (Development of Clusters and Complexes for Green Technology and Green Industries) Article 35 (Creation of Jobs for Green Technology and Green Industries) Article 36 (Advanced Regulation) Article 37 (Countermeasures for International Norms)
Chapter V Realization Of Low Carbon Society	Article 38 (Basic Principles for Coping with Climate Change) Article 39 (Basic Principles of Policies on Energy) Article 40 (Basic Plan for Coping with Climate Change) Article 41 (Establishment of Basic Plans for Energy) Article 42 (Coping with Climate Change and Management of Targets for Energy) Article 43 (Facilitation of Earlier Action for Reduction of Greenhouse Gases) Article 44 (Reporting on Quantity of Greenhouse Gases Emitted and Quantity of Energy Consumed) Article 45 (Establishment of Integrated Information Management System for Greenhouse Gases) Article 46 (Introduction of Cap and Trade System) Article 47 (Management of Greenhouse Gases in Traffic Sector) Article 48 (Assessment of Impacts of Climate Change and Implementation of Measures for Adaptation)
Chapter VI Realization Of Green Life And Sustainable Development	Article 49 (Basic Principles for Green Life and Sustainable Development) Article 50 (Establishment and Implementation of Basic Plans for Sustainable Development) Article 51 (Management of Green Homeland)

	Article 52 (Water Management for Coping with Climate Change) Article 53 (Establishment of Low-Carbon Traffic Systems) Article 54 (Expansion of Green Buildings) Article 55 (Promotion of Environment-Friendly Agriculture and Fisheries and Expansion of Carbon Sinks) Article 56 (Facilitation, etc. of Eco-Tourism) Article 57 (Spread, etc. of Culture in Production and Consumption for Green Growth) Article 58 (Facilitation of Green Life Campaigns) Article 59 (Education and Public Relations Activities for Practice of Green Life)
Chapter Ⅶ Supplementary Provisions	Article 60 (Request for Submission of Data) Article 61 (Enhancement of International Cooperation) Article 62 (Reporting to National Assembly) Article 63 (Preparation of National Reports) Article 64 (Fines for Negligence)

1) Principle and basic plan

The National Strategy for Low Carbon, Green Growth (Chapter 2) includes matters pertaining to ① realization of a green economy system, ② green technology and industry, ③ policies for coping with climate change, an energy policy, and a sustainable development policy, ④ green life, green national territory, a low carbon transportation system, ⑤ international negotiations and collaborations concerning low carbon, green growth, including climate change, ⑥ fund supplies, taxes/finances, development of human resources, education and public relations. That is, the national strategy for green growth encompasses matters pertaining to society in general, including

economy, industry, energy, national land, transportation, and international collaboration. To help carry out such a national strategy, The Framework Act on Low Carbon, Green Growth presents three basic plans, i.e., a basic plan for coping with climate change, a basic plan for energy, and a basic plan for sustainable development; however, the contents of the law makes it difficult to see what relationships there are between the national strategy for green growth and these basic plans.

Essentially, a general principle should be set up, a basic plan should be presented, and then specific strategies should be established. It appears that the overall structure of The Framework Act on Low Carbon, Green Growth is composed as follows : the national strategy for green growth set up as the leading concept; principles (the basic principle for coping with climate change, the basic principle concerning energy policy, and the basic principle concerning green life and sustainable development) based on the said concept; and, relevant basic plans.

Policy measures for substantial low carbon, green growth are taken by means of the aforesaid three basic principles. Then, basic plans for coping with climate change, energy, and sustainable development are set up and implemented based on the principles. Based on the basic plan, specific activities area carried out, as follows : Fostering of and Support for Green Economy and Green Industries (Article 23), Facilitation of Recycling of Resources (Article 24), Facilitation of Research, Development, and Commercialization of Green Technology (Article 26), Support for Medium and Small Enterprises (Article 33), Creation of Jobs for Green Technology and Green Industries (Article 35), Advanced Regulations (Article 36), Establishment of an Integrated Information Management System for Greenhouse Gases (Article

45), Introduction of a Cap and Trade System (Article 46), Water Management for Coping with Climate Change (Article 52), Establishment of Low-Carbon Traffic Systems (Article 53), Expansion of Green Buildings (Article 54), Promotion of Environment-Friendly Agriculture and Fisheries and Expansion of Carbon Sinks (Article 55), Facilitation, etc of Eco-Tourism (Article 56), Spread, etc. of Culture in Production and Consumption for Green Growth (Article 57), etc. However, boundaries between these specific activities are unclear. Chapter 5 (Realization of Low Carbon Society), for example, generally aims at coping with climate change and the reduction of greenhouse gases, but it includes both the basic plan for coping with climate change and the basic plan for energy. Thus, it is not clear whether the basic plan for energy should be viewed as an independent plan concerning the overall energy sector or if the law intends to accomplish certain policy measures through the basic plans.

To summarize, The Framework Act on Low Carbon, Green Growth has a legal and administrative task of forming exquisite relations between it and other relevant laws pertaining to the legal principle and system and objects subject to its application; interrelationship between the three basic principles contained in the law, and; relations between the basic plans and administrative plans contained in other laws.

2) Consideration of the energy planning system

The basic plan for coping with climate change, the basic plan for energy, and the basic plan for sustainable development are major plans for realization of low carbon, green growth. Energy management is a crucial matter in matters concerning sustainable development or coping with climate change.[35)]

35) However, scholars criticize the current Framework Act on Low Carbon, Green Growth saying that it goes too far in matters pertaining to energy management and that it should

Accordingly, the system for establishment and implementation of the basic plan for energy under The Framework Act on Low Carbon, Green Growth should be established in consideration of sustainable development and coping with climate change. Upon successful implementation of the basic plan for energy, the country's greenhouse gases emission will decrease by 50 million tons, i.e., from 524 million tons in 2007 to 472 million by 2030, despite an increase in the demand for primary energy. At the said rate, the country's share of a controllable energy supply will increase from 28% in 2007 to 65% by 2030.[36)]

Article 39 (Basic Principles of Policies on Energy) of The Framework Act on Low Carbon, Green Growth presents energy policy and relevant plans that should be established and implemented for the goal of low carbon, green growth as follows.

Article 39 (Basic Principles of Policies on Energy)

The Government shall establish and implement policies on energy and plans related to energy in accordance with the following principles in order to promote low carbon, green growth :

1. It shall gradually reduce the use of fossil fuels, such as petroleum and coal, and improve the level of self-sufficiency in energy;
2. It shall prevent global warming, conserve the environment, and convert the economic and social structures into the structures of low energy consumption and recycling of resources by rationalizing energy prices, saving energy, impro-

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serve as an implementation law due to the incorporation of the energy planning system into this law, which means that its function as a framework law would be eliminated and that it will be more difficult to integrate the control of energy with the Presidential Committee on Green Growth by controlling the energy plan directly and downgrading the Energy Committee. Jeon Jae-gyeong, *Sustainable Development and Green Growth*, Sogang Beophak, Vol. 11, No. 2, 2009, p. 37.

36) Lee Won-u, *Desirable Energy Policy Direction for Green Growth*, Gukto (National Land), Vol. 327, January 2009, p. 43.

ving efficiency in the use of energy, and reinforcing the control over demands for energy;

3. It shall expand the development, production, use, and distribution of new and renewable energy, such as solar energy, energy from wastes, bioenergy, wind power, geothermal energy, tidal power, fuel batteries, and hydrogen energy, and shall diversify sources of energy;
4. It shall expand the introduction of elements of market competition to energy prices and energy industries, establish the order of fair trade, and introduce and improve regulation on energy industries reasonably, referring to international norms and foreign legal systems, to create a new market;
5. It shall expand benefits from the use of energy to the low-income groups, improve the equitableness in the use of energy, and expand welfare related to energy so that every citizen can benefit from low carbon, green growth equally;
6. It shall reinforce national security in energy by securing domestic and overseas resources of energy, diversifying imports of energy, storing energy, and thus supplying energy stably.

The said Article 39 points to factors that should be the basis for establishment and implementation of energy policies : (i) reduction of the use of fossil fuels and improvement of the level of self-sufficiency in energy, (ii) prevention of global warming, conservation of the environment, conversion of the economic and social structure focusing on low energy consumption and recycling of resources through reinforcement of the control over demands for energy, (iii) diversification of energy sources through development, production, use, and distribution of new and renewable energy, (iv) expansion of the introduction of elements of market competition to energy prices and energy industries, (v) improvement of the equitableness through expansion of benefits from the use of energy and expansion of

energy-related welfare, and (vi) reinforcement of national security in energy. Here, it is necessary to review whether these can be called basic principles.

Article 41 (Establishment of Basic Plans for Energy) of The Framework Act on Low Carbon, Green Growth deals with matters pertaining to establishment of the national basic plans for energy, which used to be covered by The Framework Act on Energy. Under its stipulations, the government is required to establish a basic plan for energy every five years for a planning period of 20 years in accordance with basic principles for policies on energy (Paragraph 1) and present a proposed plan, first, to the Energy Committee under Energy Act Article 9 of the Energy Act and, then, to the Committee and the State Council consecutively for deliberation, whenever it intends to establish or amend the Basic Plans for Energy (Paragraph 2).

Article 41 (Establishment of Basic Plans for Energy)

(1) The Government shall establish a basic plan for energy every five years (hereafter referred to as "Basic Plans for Energy" in this Article) for a planning period of 20 years in accordance with basic principles for policies on energy.

(2) The Government shall, whenever it intends to establish or amend a Basic Plans for Energy, present a proposed plan to the Energy Committee under Energy Act

Article 9 of the Energy Act and then to the Committee and the State Council consecutively for deliberation : Provided, That the foregoing shall not apply to modifications to minor matters prescribed by Presidential Decree.

(3) A Basic Plans for Energy shall including the following matters :

1. Matters concerning trends and prospects of domestic and overseas demand and supply of energy;
2. Matters concerning measures for stable securing, import, supply, and mana-

gement of energy;
3. Matters concerning the targets of demand for energy, the composition of energy sources, the saving of energy, and the improvement of efficiency in the use of energy;
4. Matters concerning the supply and use of environmentally friendly energy, such as new and renewable energy;
5. Matters concerning measures for the safety control of energy;
6. Matters concerning the development and diffusion of technology related to energy, the training of professional human resources, international cooperation, the development and use of natural resources of energy, and welfare in energy.

The Basic Plans for Energy should include matters concerning (ⅰ) trends and prospects of domestic and overseas demand and supplies of energy, (ⅱ) measures for stably securing, importing, supplying, and managing energy, (ⅲ) the targets of demand for energy, the composition of energy sources, the saving of energy, and the improvement of efficiency in the use of energy, (ⅳ) the supply and use of environmentally friendly energy, such as new and renewable energy, (ⅴ) measures for the safety control of energy, (ⅵ) the development and diffusion of technology related to energy, the training of professional human resources, international cooperation, the development and use of natural resources of energy, and welfare in energy.

3) Energy security

Concerning a clause about energy security, the government is required to establish a basic plan for energy every five years for a planning period of 20 years in accordance with basic principles for policies on energy (Article 39). A plan for amendment should be submitted to the Energy Committee and then to the Committee for deliberation. Basic plans should include the

following : trends and prospects of domestic demand and supplies of energy, measures for import, supply, and management of energy, the composition of energy sources, the saving of energy, the improvement of efficiency in the use of energy, the supply and use of environmentally friendly energy, such as new and renewable energy, measures for the safety control of energy, the use and promotion of nuclear energy, the development and diffusion of technology related to energy, the training of professional human resources, international collaboration, the development and use of natural resources of energy, etc.

What is stated in the foregoing means that the requirements of energy security can only be met through the accumulation of relevant information and it stresses that energy policy should be planned amid the balance between supply and demand. The situation is changing very rapidly and it is not reasonable to set up Basic Plans for Energy every 5 years. A procedure for coordination concerning establishment of Basic Plans for Energy should be adopted.[37)]

(3) ACT on the Allocation and Trading of Greenhouse-Gas Emissions Allowances

These clauses stipulate that management of the facilities for the supply of natural gas should be carried out thoroughly at individual business places, which means that an increase in expenses is inevitable. Individual business places should use experts for establishment of greenhouse gas inventory, follow-up management, procedures for inspection and certification, and the establishment of emission allowances strategy. Green growth requires a com-

37) Kim Hyo-seon, *The Framework Act on Low Carbon, Green Growth from a Perspective of Energy Security : In connection with the supply of natural gas*, Quarterly Gas Industry, March 2009, p. 34.

pany-wide low carbon operation system through carbon risk management at each business.[38)]

In regard with a need to cope with climate change, which is an important purpose of The Framework Act on Low Carbon, Green Growth, Article 42 (Coping with Climate Change and Management of Targets for Energy) of the said law requires that the government should establish medium and long-term targets and that the goals attached to each particular phase for targets of distribution of new and renewable energy seek measures necessary for accomplishing the targets in order to actively cope with the global reduction of greenhouse gases and promote low carbon, green growth efficiently and systematically (Paragraph 1).

The said article also stipulates that the government may require appropriate central administrative agencies, local governments, and public institutions specified by Presidential Decree to establish targets for energy saving and targets for the reduction of greenhouse gases for each agency, local government or institution, and provide guidance as well as supervise their performance, as prescribed by Presidential Decree, in order to accomplish targets under Paragraph 1. (Paragraph 3) and shall establish targets for each sector, such as industries, traffic, transportation, household, and commerce and shall actively prepare measures necessary for accomplishing such targets in order to accomplish targets (Paragraph 4).

Article 46 (Introduction of the Cap and Trade System) of The Framework Act on Low Carbon, Green Growth stipulates that the government may operate a system for trading emissions of greenhouse gases by utilizing market functions in order to accomplish the State's target of reduction of greenhouse gases (Paragraph 1), thus providing the basis for the emission trading

38) Kim Hyo-seon, *Ibid*, 34.

system. This stipulation led to the enactment of The ACT on the Allocation and Trading of Greenhouse-Gas Emissions Allowances (2013), including the following : Establishment, etc of Master Plans for Emissions Trading System (Articles 4 through 7), Designation of Business Entities for Allocation and Allotment of Emission Rights (Articles 8 through 18), Trading of Emission Permits (Articles 19 through 23), Reporting and Verification of Amounts of Emissions (Articles 24 through 26), Surrender of Emission Permits, Carryover and Borrowing of Emission Permits, Offset, and Termination (Articles 27 through 34), etc. As it were, the said law paved the way for the country's accomplishment of its targets for greenhouse gas reduction through adoption of a market-based system for emission permit trading.

Chapter 4. South Korea's Energy Policy and Legislation

Section 1. Management by major energy sources

Scholars criticize South Korea's energy-related legislation saying that they have been mostly made as stopgap measures to solve problems rather than having been created as fundamental measures. They also point to a wide diffusion of relevant laws, depending on energy sources, government ministries in charge, and management systems,[39] along with their inability to cope with rapid changes in the international situation promptly and actively.[40]

The country has not made systematic development from legislation on energy policy to those on specific programs. The country's energy-related legislation was mostly made in the beginning with a focus on energy sources or energy-related businesses, followed by laws concerning the establishment of public institutions for implementation of the businesses. As noted in the foregoing, the laws designed to support energy policy in a macroprudential and comprehensive way have been enacted considerably later than those centered on energy sources.

In the beginning, the country could hardly afford to establish macroprudential and comprehensive energy policy and legislation. Thus, at first, the country strived for the development of energy laws at respective energy sources, ministries in charge, and management systems, and then made improvements

39) Choi Bong-seok, *Status of Basic Legislations concerning Energy Management*, Petroleum, December 2006, p. 93.

40) Ham Tae-seong, *Green Growth and Energy laws*, Legislative Research, No. 36, 2009, p. 111. Prof. Ham points out that new measures, including emission rights trading, have not been effectively included in laws.

where necessary to establish comprehensive energy policy and legislation after securing relevant means.

Roughly classified, the country's energy laws were focus on coal in the 1950s, electricity in the 1960s, petroleum, gas, and overseas resources development in the 1970s, alternative energy in the 1980s, and integrated energy and basic energy policy in the 1990s. It shows that the country's energy laws have adapted themselves to the policy directions taken by the government. It is unrealistic to say that the country's energy-related legislation have left much to be desired from a macroprudential and comprehensive perspective. Such remarks are made without taking the country's economic and political situations into consideration.

The courses taken by South Korea will be able to teach a good lesson to developing countries. One may commit the folly of overlooking a specific situation of a country if he focuses only on a macroprudential and comprehensive perspective without considering the difference between energy policies or legislations of industrialized countries and those of a developing country. The energy-related matters may require a stronger need for formulation of a policy from a long-term perspective and based on international trends rather than other matters, but it is acceptable for a country with insufficient natural resources like South Korea to take its policy directions in a microprudential and specific way before entering a stage of advanced economic growth.

Section 2. Securing overseas energy sources

A country that has had a rapid economic growth like South Korea is likely to feel a stronger need for energy security in proportion to the continued increase in energy demand. South Korea's energy demand will continue to

increase and the country should depend on imports for most of the energy demand. Accordingly, the country strives to secure stable energy resources through positive long-term collaboration with resource-rich countries.

South Korea's major trading partners in the sector of energy resources have been mostly energy-producing or supplying countries in the Middle East and Southeast Asia. The country's government strives to diversify these sources to Northeast Asia, Central Asia, Africa, Latin America, etc in expectation of ever-fiercer competition over the securing of resources. Likewise, developing countries need to push forward with specified resource-related collaboration on a mid and long-term basis with a focus on energy sources and regions.

Developing countries need to strengthen collaboration pertaining to resources development with the Middle East, which is an important oil supply source for countries in the Asia-Pacific region, including South Korea, countries along the Caspian Sea, which are emerging as a new supply source of oil, and Northeast Asian regions of Russia. Fareast regions of Russia are known for having considerable crude oil and natural gas reserves as well as hydro power resources. If South Korea succeeds in securing a route of direct supply for energy resources (such as natural gas) as developed in these regions (including Irkutsk and Sakhalin), it will help the country improve its energy security capability to a drastic extent.

Recently, South Korea is taking part in overseas resources development proactively in an effort to develop it as a high-profit sector and make up for disadvantages as a late-starter. To that end, the country needs to establish an efficient information management system and database and share the information collected with the private sector. The country also should minimize fluctuation of crude oil resources through direct overseas investments, while

invigorating the foray upstream as through the procurement of developed oil fields by means of a division of roles between the government and the private sector. Other options left open to the country include alliances with businesses specializing in resources development in foreign countries and enhancement of businesses' competitiveness through vertical integration upstream and downstream.

Section 3. Excavation of new and renewable energy

Compared to other OECD countries, South Korea's dependence on oil remains considerably high. The country strives to lower its dependence on oil to a given level through energy conservation and harmonization between energy sources. To lower dependence on oil, it is necessary to strengthen the resource allocation function of the oil product price system and push ahead with an effort for fuel substitution in transportation and heating. South Korea is switching from oil-based heating to gas-based heating in households and commercial sectors. In addition, the country is replacing gasoline or diesel with alternative fuel, such as fuel cells or CNG, through continued R&D.

Chapter 5. Conclusion

To cope with rapid changes in the environment of the energy sector, the government should play a role, in addition to expanding the self-reliant function of the market. The important task of energy security, which cannot be left to the market, remains as something to be done by the government. The government should also play a leading role in matters pertaining to technological innovation in a country, which remains weak in terms of energy resources or technological prowess. This study explored the flow of the development of energy-related legislation in consideration of such conditions. Major content of the exploration are arranged as follows.

First, there have been attempts made to rearrange energy laws, which have been developed respectively according to energy sources from a comprehensive perspective. In a way, development based on energy sources may be more desirable until the country reaches a certain level of economic growth. However, it is essential to reshuffle a country's energy policy and energy laws when a country has reached a certain level of economic growth, both for the country's long-term vision and short-term measures. South Korea's enactment of The Framework Act on Energy and The Framework Act on Low Carbon, Green Growth was a step taken from a comprehensive perspective.

Second, the country is reinforcing its energy security by establishing and promoting an efficient and systematic strategy based on energy sources. The country continues its efforts for self-reliant development of overseas resources and strategic energy collaboration with energy-rich countries, while striving to improve the energy supply basis, such as oil stockpiling and gas storage facilities.

Third, the country aims to be a low-energy consuming economic society and strives to develop and disseminate new and renewable energy. In connection with a need to cope with climate change and conserve energy, the public sector has stepped up the efforts to reduce energy use.[41] The government plans to continue to enhance the share of new and renewable energy, including PV facilities, in the entire energy picture. The Ministry of Trade, Industry (MOTIE) plans to increase the statutory supply amount of PV by 300 MW (i.e., from 1.2GW to 1.5GW) by 2014-2015 for expansion of the domestic market. The statutory supply amount for the post-2016 period will be reviewed toward the end of 2013 in linkage with the second Basic Plan for Energy.

Support for small-sized businesses engaging in PV energy will be reinforced to reduce undesirable side effects of conversion to the RPS. The MOTIE raised the amount of PV generation from more than 100 ㎿ to more than 150 ㎿ a year, with 30% of it to be allotted to small-sized businesses (less than 100㎾). The weighted preferential treatment (1.2), which is applied to a power plant with a capacity of 30kW or less will be expanded to a power plant with a capacity of 100kW or less. The MOTIE will select businesses that can lease PV facilities to households and install new and renewable facilities in a total of 2,000 households (6 ㎿ in total).

The core of the energy policy is being shifted from the government to the market, from producers to consumers, and from supply-based management to demand-based management.43 Countries in Northeast Asia are engaged in fierce competition over energy resources amid the imbalance in the energy supply and demand. Moreover, the international community is concretizing

41) In 2013, the Government instructed all public institutions to not lower their indoor temperature lower than 28˚C, compared to 26˚C in 2012.

its efforts for environmental protection, including on agreements concerning climate change, with major countries ratifying the Kyoto Protocol. Even the private sector is more strongly committed to energy policies based on the understanding that energy is not an issue that can be left to the government. More and more people feel that it is urgent to secure stable energy sources and establish a more efficient and environmentally friendly energy industry to maintain national competitiveness.

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