

## 4. KOREA

### 4.1 Energy Policies and Actions

Energy policies in Korea have been focused on stable energy supply and demand in order to support high economic growth and improve the quality of life. The government of Korea was heavily involved in regulating energy supply & demand and energy prices. In 1970s, energy supply policies were focused on oil while policies for establishing a stable supply and demand system, such as diversifying energy sources and expanding the energy supply infrastructure, were promoted after the second oil crisis in 1980s.<sup>54</sup>

Due to the increasing demand for energy and concerns on the environment, energy policies are now aimed towards ensuring sustainable development, which considers both economic growth and environmental protection. In the future, energy supply & demand and energy prices will be initiated by privatisation and liberalisation trends and restructuring results. The determination of energy supply & demand and energy prices in which the government previously intervened directly will be turned over to the market so that it can be controlled by the competitive market. The government will carry out supporting roles such as taking care of outside influencing factors which the market cannot solve, including environmental protection, energy conservation and energy crises through measures such as taxes and finances.

The government continues to establish a stable energy supply in order to prepare for a possible energy crisis and for this the following is required: planning strategic regulations for fair market competition, energy conservation, providing renewable energy and creating markets, research and development for mid-to-long term energy technology, environmental protection and global energy cooperation.

To conclude, the vision for energy policies in 2010 for Korea is "Sustainable Korea, Hub of Northeast Asia", which includes the following aims:

- Establish an energy system for sustainable development
- Foster an energy industry with competitiveness and active market functions
- Become powerful in energy technology and energy technology exports
- Become an energy hub of Asia with an open energy system<sup>55</sup>

Further tasks for the Korea government to achieve the above aims include:

- (i) Energy System for Sustainable Development
  - Environment-friendly energy system
  - Disseminating renewable energy
- (ii) Competitive Energy Industry with Activated Market
  - Restructuring and privatising energy industry
  - Activating the function of energy price
- (iii) A leap towards a strong country with advanced energy technology
  - Infrastructure for energy technology development

<sup>54</sup> Referenced to the web site of the Ministry of Commerce, Industry and Energy, <http://english.mocie.go.kr/language/eng/toward/energy01.html>

<sup>55</sup> Referenced to the web site of the Ministry of Commerce, Industry and Energy, <http://english.mocie.go.kr/language/eng/toward/energy03.html>

- Fostering energy technology-related manpower
- Promoting energy technology exports
- Strengthening financial support for energy technology development
- (iv) Energy hub in northeast Asia with open system
  - Strategic use of International Energy Cooperation
  - Network building for energy collaboration in northeast Asia <sup>56</sup>

Korea's current energy conservation policy objectives and directions are to:

- (i) improve trade deficit by reducing energy imports;
- (ii) strengthen industrial competitiveness by reducing production costs resulting from reduced energy use;
- (iii) contribute to global environment protection by minimising CO<sub>2</sub> emissions;
- (iv) enhance efficiency in the whole energy flows of production, distribution and consumption to develop an energy-efficient socio-economic structure;
- (v) strengthen demand-side management in power sector;
- (vi) best use market mechanism to encourage energy efficiency investments;
- (vii) intensify regulations to an appropriate level in key areas (including energy efficiency standards of the energy equipment and appliances);
- (viii) foster an energy and resource-saving lifestyle by raising energy conservation awareness, adjusting energy price levels properly, and the like; and
- (ix) strengthen international cooperation.<sup>57</sup>

The Ministry of Commerce, Industry and Energy (MOCIE), through Korea Energy Management Corporation (KEMCO), operates several energy efficiency programmes to facilitate products embodying low energy input. The objective of these programmes is to stimulate manufacturers to improve their products' efficiency by giving incentives and to induce consumers to purchase more energy efficient products available in the market place.<sup>58</sup> Some of the programmes include Energy Efficiency Standards & Labeling Programme, Certification of High Efficiency Energy-using Appliance Programme, Energy-Saving Office Equipment & Home Electronics Programme. Details of the programmes can be referred to section 4.5.

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<sup>56</sup> Referenced to the web site of the Ministry of Commerce, Industry and Energy, <http://english.mocie.go.kr/language/eng/toward/energy04.html>

<sup>57</sup> Referenced to the web site of United Nations Economic and Social Commission for Asia and the Pacific, <http://www.unescap.org/esd/energy/publications/compend/ceccpart2chapter3.htm>

<sup>58</sup> <http://dsm.iea.org/Files/Exco%20File%20Library/Country%20Publications/programs.doc>

## 4.2 Environmental Evaluation/SEA in Korea

In Korea, it is a statutory requirement under the Framework Act on Environmental Policy (FAEP)<sup>59</sup> that an SEA-like system called Prior Environmental Review System (PERS) should be conducted at the planning stage for various development plans and programmes that require decision making. The PERS is considered as a SEA-like system for plans and programmes, but in general, policy is not covered.<sup>60</sup>

Prior to the PERS, development plans with potential environmental impacts were discussed at the ministerial level according to a provision that required prior consultation with the Minister of Environment. Examples of such development plans include:

- New land-use plans - introduced under the National Territory Usage Management Act
- Rural development plans - introduced under the Special Act on Rural Development
- Plans affected the use of sea resources - introduced under the Act on Prevention of Ocean Pollution
- Other regional development plans.

Since the introduction of PERS in 1993, the PERS has consolidated its legal basis by an amendment of the Framework Act on Environmental Policy (FAEP) in 1999 and 2003, and has been applied to some of the major administrative plans and programmes ever since.<sup>61</sup> Given the limitations of the current PERS and the benefits of SEA, the FAEP (Article 25, 26, 27 and 28) was amended in 2004 and approved in May 2005 mainly on:

- extending the list of plans and programmes subject to PERS;
- stipulation of implementation of PERS at an early stage to enhance its effects in decision making; and
- enhancement of public participation and disclosure.

### Coverage of Plan

Other than the development plans mentioned above covered by PERS, there are other plans added for the coverage of PERS, including: designation of an agro-industrial complex, which didn't have a legal basis for prior consultation in relevant laws, ten administration plans including development plans for hot springs; and development plans led by the private sector in preservation zones, which was excluded from the Prime Minister decree.

<sup>59</sup> Framework Act of Environmental Policy (FAEP),  
[http://siteresources.worldbank.org/INTEAPREGTOPENVIRONMENT/Resources/Korea\\_Act\\_on\\_PERS\\_2002.doc](http://siteresources.worldbank.org/INTEAPREGTOPENVIRONMENT/Resources/Korea_Act_on_PERS_2002.doc),  
originated from the web site of the World Bank

<sup>60</sup> Referenced to "Environmental Impact Assessment Regulations and Strategic Environmental Assessment Requirements - Practices and Lessons Learned in East and Southeast Asia" by the Environment and Social Development Unit (EASES), April 2006,  
<http://siteresources.worldbank.org/INTEAPREGTOPENVIRONMENT/Resources/EIA&SEA-regional-review.pdf>,  
pages 42-46 - Annex 6 Korea

<sup>61</sup> Extracted from "International Experience and Perspective in SEA - Final Program" coordinated by Urszula A. Rzezot under the section "SEA legislation and Policy",  
[http://www.iaia.org/non\\_members/conference/SEA%20Prague/p%2011-36%20Stream%20A.pdf#search=%22Plans%20and%20Programs%20SEA%2CKorea%22](http://www.iaia.org/non_members/conference/SEA%20Prague/p%2011-36%20Stream%20A.pdf#search=%22Plans%20and%20Programs%20SEA%2CKorea%22), page 16)

### General Workflow of PERS

- The heads of administrative agencies that establish, permit, or approve administrative plans are to consult with the Minister of Environment or the head of the local environmental agency on the matter of environmental validity review
- The heads of governmental bodies that establishes or approves administrative plans must fill in the basic forms / individual forms, and submit to the Minister of Environment or the head of the regional environmental office. Basic forms must be submitted for all administrative development plans due for environmental validity previews and must include items such as project purpose, current land usage, and present distribution of preservation areas. Individual forms cover specific ecological characteristics, the current level and types of pollutants, and environmental impact projection and reduction plans.

The PERS system can cancel or downsize plans when the environmental impact is deemed serious in terms of quality and quantity. It can also force the project operator to present countermeasures to minimise environmental impacts.<sup>62</sup>

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<sup>62</sup> Referenced to "Environmental Impact Assessment Regulations and Strategic Environmental Assessment Requirements - Practices and Lessons Learned in East and Southeast Asia" by the Environment and Social Development Unit (EASES), April 2006, <http://siteresources.worldbank.org/INTEAPREGTOPENVIRONMENT/Resources/EIA&SEA-regional-review.pdf>, pages 42-46 - Annex 6 Korea

### 4.3 Environmental Evaluation/SEA on Energy Policies and Actions in Korea

It is a statutory requirement in Korea under the Framework Act on Environmental Policy (FAEP) that an SEA-like system called Prior Environmental Review System (PERS) should be conducted at the planning stage for various development plans and programmes including energy sector that require decision making.

In particular, under the FAEP Article 21-5, it is stated that the governments shall formulate policies necessary to utilise energy rationally and efficiently, and develop and propagate environment-friendly energy to minimise environmental pollution or environmental damage arising from the utilisation of energy.<sup>63</sup> Details of the requirements should refer to section 4.2.



Loading of fuel oil to Southern Korea oil tank <sup>64</sup>



Power plant in Korea <sup>65</sup>

<sup>63</sup> Referenced to the FAEP,

[http://siteresources.worldbank.org/INTEAPREGTOPENVIRONMENT/Resources/Korea\\_Act\\_on\\_PERS\\_2002.doc](http://siteresources.worldbank.org/INTEAPREGTOPENVIRONMENT/Resources/Korea_Act_on_PERS_2002.doc), article 21-5

<sup>64</sup> Source: [http://news.xinhuanet.com/english/2007-07/12/content\\_6364486.htm](http://news.xinhuanet.com/english/2007-07/12/content_6364486.htm)

<sup>65</sup> Source: <http://www.unep.org/images/Korea-SoE/pages/thermal-plant.htm>

A summary table for the energy policies and actions and SEA status in Korea is presented in **Exhibit KR-1**.

Exhibit KR-1 Summary of Energy Policies and Actions and SEA Status in Korea	
<b>(a) Energy Policies and Actions</b>	
<b>Energy Policies and Actions</b>	Policies: <ul style="list-style-type: none"> <li>● “Sustainable Korea, Hub of Northeast Asia” – vision for energy policies in 2010</li> </ul> Actions: <ul style="list-style-type: none"> <li>● Energy Efficiency Standards &amp; Labeling Programme</li> <li>● Certification of High Efficiency Energy-using Appliance Programme</li> <li>● Energy-Saving Office Equipment &amp; Home Electronics Programme</li> </ul>
<b>Guidance/Legislations for Energy</b>	N/A
<b>(b) Environmental Evaluations / SEA Status in Energy Policies and Actions</b>	
<b>Type of Assessment</b>	Prior Environmental Review System (PERS)
<b>Requirement Mechanisms</b>	Statutory
<b>Legislation for Environmental Evaluation / SEA</b>	Framework Act on Environmental Policy (FAEP)
<b>Applications</b>	Plans and Programmes

#### 4.4 Analysis and Conclusions

Energy policies in Korea have been focused on stable energy supply and demand in order to support high economic growth and improve the quality of life. The energy supply policies were once focused on oil but soon they have switched to promote diversified energy sources. The government continues to establish a stable energy supply in order to prepare for a possible energy crisis by planning strategic regulations for fair market competition, energy conservation, etc. The vision for energy policies in 2010 for Korea is "Sustainable Korea, Hub of Northeast Asia", which aims to have a sustainable development of an energy system and become powerful in energy technology and energy technology exports.

Similar to Korea, Hong Kong's energy policy objectives are to ensure that the energy needs of the community are met safely, efficiently and at reasonable prices. The government has put in considerable efforts to promote energy efficiency and renewable energy in order to restrain the rise in energy demand, for sustainable development of the territory. Although renewable energy resources can contribute to mitigating the problems associated with the use of fossil fuels, most of them are intermittent in nature. The government has therefore prepared a backup power supply such as the electricity grid to meet the demand when the electricity generated by the renewable energy system is unable to provide the power required.

For the Environmental Evaluation/SEA in Korea, it is a statutory requirement under the Framework Act on Environmental Policy (FAEP) that an SEA-like system called Prior Environmental Review System (PERS) should be conducted at the planning stage for various development plans and programmes that require decision making. The PERS is considered as a SEA-like system for plans and programmes, but in general, policy is not covered.

When comparing to Hong Kong, it has already two systems for SEA including an administrative requirement and a statutory requirement under Schedule 3 of the EIA Ordinance. Nevertheless, it would be better for Hong Kong to continuously improve its system on SEA by making reference to other countries, as well as to extent the application of SEA by enhancing its SEA system and providing specific SEA guidelines.

#### 4.5 Examples of Energy Policies/Actions or their Environmental Evaluation/SEA

Example KR-1 Korea Energy Efficiency Programme <sup>66</sup>	
<b>Description of Programme</b>	<p>There are three sub-programmes, including “Energy Efficiency Standards &amp; Labeling Programme”, “Certification of High Efficiency Energy-using Appliance Programme”, “Energy-Saving Office Equipment &amp; Home Electronics Programme”. The objective of these programmes is to stimulate manufacturers to improve their products’ efficiency by giving incentives and to induce consumers to purchase more energy efficient products available in the market place.</p> <p>(i) Energy Efficiency Standards &amp; Labeling Programme It aims to encourage the efficiency in the production and use of energy and help consumers choose more energy efficient goods through appliances with energy efficiency label, which shows the energy efficiency grade of the model from 1 to 5.</p> <p>(ii) Certification of High Efficiency Energy-using Appliance Programme This programme is to certify energy-using product whose energy efficiency is much higher than that of others as High Efficiency Energy-using Appliance. To enhance the proportion of energy efficiency appliances in the market, the government provides long term and low interest loans to certified companies. Besides, Government related organisations should use certified products.</p> <p>(iii) Energy-Saving Office Equipment &amp; Home Electronics Programme This programme aims to induce manufacturers to voluntarily produce energy-saving products meeting the energy-efficiency guideline. Manufacturers producing appliances can attach an energy-saving label on their products certified as energy-saving products.</p>
<b>Future Directions</b>	<p>(i) Energy Efficiency Standards &amp; Labeling Programme At present, the subject appliances of the energy efficiency-rating label are 8 including passenger cars. It has been extended step by step since September 1992. Clothes washers are supposed to be included in July 2000 and other new appliances will be included according to the potential of energy saving. Appliances considered to be included are microwave ovens, gas boilers, etc.</p> <p>(ii) Certification of High Efficiency Energy-using Appliance Programme In the past, government related organisations were recommended to use the certified appliances. However the recommendation of the use have been reinforced to obligatory regulation in lighting equipment and it will be enhanced to the all appliances step by step.</p>

<sup>66</sup> <http://dsm.iea.org/Files/Exco%20File%20Library/Country%20Publications/programs.doc>