

EXECUTIVE SUMMARY

EDMS (Hong Kong) Ltd was commissioned by Environmental Protection Department (EPD) of the Hong Kong Special Administrative Region in June 2007 to review the international Energy policies and actions, and the latest practice in their Environmental Evaluation (EE) and Strategic Environmental Assessment (SEA).

The scope of this study included the review of (a) the latest energy policies and actions, (b) the latest practice of EE / environmental scrutiny / SEA for both Policy / Programme / Plan (PPP) proposals in general and the energy policy proposals specifically, with actual examples, in countries and development co-operations as designed by EPD. Policy EE and the SEA process have been reviewed including both the statutory and the non-statutory systems, as well as both the evaluation tools (e.g. mentioned in HK SEA Manual) and the overall process (e.g. Fig. 18 of the HK SEA Manual).

SEA in energy policies and actions is one of the key areas in SEA as these policies and actions would have far-reaching repercussions to the environment. The practices of the SEA on these policies and actions, however, vary between countries around the world. In such circumstances, it is noteworthy to review their latest developments and examine how Hong Kong can conduct SEA on these policies and actions in a comprehensive and effective manner, by taking into account the experiences learnt from other countries.

In this Study, the countries/ development co-operations reviewed include Austria, Australia, Canada, Denmark, Finland, France, Germany, Japan, Korea, Macau, Mainland China, the Netherlands, New Zealand, Norway, Pakistan, Portugal, Singapore, South Africa, Thailand, United Kingdom (including Northern Ireland, Scotland, Wales, and England), USA, plus four development co-operations: the World Bank, the Asian Development Bank, the Inter-American Development Bank, the United Nations Development Programme and the United Nations Environmental Programme.

For each of the above countries/development co-operations, the review contents were organised as follows:

- (i) Energy Policies and Actions
 - Presentation of the latest energy policies and actions for the country/development co-operation
- (ii) EE/SEA in the country / development co-operation
 - Description of the latest practice of EE/SEA for general PPP proposals specifically
- (iii) EE/SEA on Energy Policies and Actions
 - Description of the latest EE/SEA on energy policy proposals
 - A summary table of energy policies and actions and SEA status of the country / development co-operation was also included
- (iv) Analysis and Conclusions
 - Evaluation of the strengths & drawbacks of the country/development co-operation's EE/SEA on energy policies and actions
 - Comparison with Hong Kong's system

- (v) Examples of Energy Policies/Actions or their EE/SEA
 - Relevant examples of energy policies/actions or their EE/SEA were included where applicable for each country/development co-operation

The international energy policies/action and their EE/SEA status are summarised in the following table.

Among the reviewed countries/development co-operations, their energy policies/actions have some common key issues. Firstly, some countries have specific energy plans or legislative frameworks on energy sector, e.g. Energy Law in China, Energy Policy Act in USA and Energy Act in France. Besides, most of the energy actions are programmes related to energy conservation and energy efficiency. Also, policies on the adoption of renewable energy were commonly found at some countries, e.g. ecoENERGY for Renewable Power Programme in Canada. Moreover, in view of the global problem of climate change, most of the countries ratified in Kyoto Protocol (e.g. EU countries, Canada, New Zealand and Canada) which commit to reduce greenhouse emissions in their countries by organizing climate change programme. All details of the international energy policies/actions can be referred to the subsequent chapters of the report.

Regarding their latest EE/SEA status, most of the European countries, e.g. United Kingdom and Finland, have been transposed the EU Directive 2001/42/EC (SEA Directive) into its own legislations. Besides, most of the reviewed countries and development co-operations have developed their own EE/SEA systems, e.g. EIA for plans in Mainland China. All details of the latest EE/SEA status can be referred to the subsequent chapters of the report.

This Final Report was prepared by EDMS to the best of our knowledge, based on the information as published on relevant websites and publications available at the time of preparation. The information as obtained was edited and compiled into this Report based on our previous relevant experience with reasonable professional skills and judgment. EDMS was commissioned to be the prime consultant to be responsible and accountable for undertaking this Review Study and preparing the Final Report.

Summary Table of International Energy Policies and Actions and Environmental Evaluation / SEA Status

Countries/ Development Co-operation	(a) Energy Policies and Actions			(b) Environmental Evaluations / SEA Status in Energy Policies and Actions						
	Energy Policies	Energy Actions	Guidance/Legislations for Energy	Type of Assessment	Requirement Mechanisms	Legislation for Environmental Evaluation / SEA	Applications			SEA Examples reviewed
							Policy	Plan	Programme	
Asia Pacific										
Mainland China	Policies: <ul style="list-style-type: none"> Coal Laws (1996) Electricity Laws (1995) Energy Conservation Laws (1997) Renewable Energy Laws (2003) Energy Law (under drafting) (started in 2006) 	Actions: <ul style="list-style-type: none"> National Action Plan on climate change (2007) Medium and Long-term Energy Development Strategy and Plan to 2020 for renewable energy 	<ul style="list-style-type: none"> Coal Laws (1996) Electricity Laws (1995) Energy Conservation Laws (1997) Renewable Energy Laws (2003) The drafting work for a comprehensive legislation, China's "Energy Law", was started officially in early 2006. 	EIA for plans	Statutory	National Environmental Impact Assessment Law (2003) (EIA Law)	-	√	√	<ul style="list-style-type: none"> Electricity transmission development project in the Western region (2004) SEA of Petroleum Development Plan by Daqing Petroleum Administrative Bureau in the 11th Five-year Plan (2006)
Macau SAR	Policies: <ul style="list-style-type: none"> Promotion of better use of energy through promotional activities on how to increase energy effectiveness Introduction of natural gas, a cleaner and more environment-friendly energy (2007) Preparation of the source inventories so as to implement the obligation as stated in the UNFCCC (1999) 	Actions: <ul style="list-style-type: none"> Macau Energy Conservation Week (2006) 	-	-	-	-	-	-	-	N/A
Japan	Policies: <ul style="list-style-type: none"> "New Energy" Policy 	Actions: <ul style="list-style-type: none"> "Targets for Citizen Action" Programme Top Runner Programme Energy-saving Labeling System New Climate Change Programme (2002) 	<ul style="list-style-type: none"> Energy Conservation Law (2002) Alternative Energy Law (1980) 	SEA	Administrative	Basic Environmental Plan (the third plan) (2006)	√	√	√	N/A
Korea	Policies: <ul style="list-style-type: none"> "Sustainable Korea, Hub of Northeast Asia" - vision for energy policies in 2010 	Actions: <ul style="list-style-type: none"> Energy Efficiency Standards & Labeling Programme Certification of High Efficiency Energy-using Appliance Programme Energy-Saving Office Equipment & Home Electronics Programme 	-	Prior Environmental Review System (PERS)	Statutory	Framework Act on Environmental Policy (FAEP) (2003)	-	√	√	N/A
Thailand	Policies: <ul style="list-style-type: none"> Thailand National Energy Policy and Development Plan (2006) 	Actions: <ul style="list-style-type: none"> Long-term natural gas pipeline system (2001-2011) National Power Development Plan (1999-2001) 	<ul style="list-style-type: none"> Energy Conservation Promotion Act (1992) Draft Energy Industry Act (2001) 	SEA	Administrative	-	√	√	√	<ul style="list-style-type: none"> The Contribution of SEA in Sustainable Energy Planning in Thai Power Sector
Singapore	Policies: <ul style="list-style-type: none"> National Climate Change Strategy 	Actions: <ul style="list-style-type: none"> Energy Labelling Scheme (2002) Fuel Economy Labelling Scheme Fuel Economy Labelling Scheme Energy Smart Building Scheme Energy Audit Scheme Energy Efficiency Improvement Assistance Scheme 	-	-	-	-	-	-	-	N/A
Pakistan	Policies: <ul style="list-style-type: none"> Policy for Power Generation 2002 National Energy Conservation Policy (2005) Policy for Development of Renewable Energy for Power Generation (Small Hydro, Wind and Solar Technologies) (2006) 	Actions: <ul style="list-style-type: none"> Energy Security Action Plan (2005-2030) Assistance for hydropower projects AEDB Programme of 100 Solar Homes per province Commercialisation of Wind Power Potential in Pakistan 	-	SEA	Administrative	National Environmental Policy 2005	√	√	√	N/A

Countries/ Development Co-operation	(a) Energy Policies and Actions			(b) Environmental Evaluations / SEA Status in Energy Policies and Actions						
	Energy Policies	Energy Actions	Guidance/Legislations for Energy	Type of Assessment	Requirement Mechanisms	Legislation for Environmental Evaluation / SEA	Applications			SEA Examples reviewed
							Policy	Plan	Programme	
Australia	Policies: <ul style="list-style-type: none"> Energy White Paper "Securing Australia's Energy Future" (2004) 	Actions: <ul style="list-style-type: none"> Australian Coal Mine Methane Reduction Programme (ACMMRP) (2008-2012) Greenhouse Gas Abatement Programme (GGAP) (2008-2012) Low Emissions Technology and Abatement (LETA) initiative Low Emission Technology Demonstration Fund (LETDF) National Framework for Energy Efficiency (NFEE) 	-	Strategic Assessment	Statutory	Environment Protection and Biodiversity Conservation Act (1999)	√	√	√	<ul style="list-style-type: none"> Assessment Report For the Public Environmental Report For the Myponga/Sellicks Hill Wind Farm Proposal (2003)
New Zealand	Policies: <ul style="list-style-type: none"> Powering our Future: Draft New Zealand Energy Strategy (NZES) to 2050 (2006) 	Actions: <ul style="list-style-type: none"> National Energy Efficiency and Conservation Strategy (NEECS) (2001) 	-	SEA	Statutory	Resource Management Act (1991)	√	√	√	<ul style="list-style-type: none"> Marsden B Power Station Re-powering Project Assessment of Environmental Effects Kawerau Geothermal Power Station Assessment of Environmental Effects
North America										
USA	Policies: <ul style="list-style-type: none"> Energy Policy Act 2005 Advanced Energy Initiative (2006) 	Actions: <ul style="list-style-type: none"> Regional Greenhouse Gas Initiative (2007) 	<ul style="list-style-type: none"> Energy Policy Act 2005 	Environmental Impact Statement	Statutory	National Environmental Policy Act (NEPA) (1969)	√	√	√	<ul style="list-style-type: none"> Wind Energy Final Programmatic Environmental Impact Statement (PEIS) (2005) Draft Environmental Impact Statement for the Proposed Consolidation of Nuclear Operations Related to Production of Radioisotope Power System (2005)
Canada	Policies: <ul style="list-style-type: none"> Action Plan to regulate both greenhouse gas emissions and air pollutants (2007) Renewable Fuels Strategy (2006) 	Actions: <ul style="list-style-type: none"> ecoENERGY for Industry program ecoENERGY for Personal Vehicles Initiative ecoENERGY Retrofit program ecoENERGY for Biofuels Initiative (2007) ecoENERGY Technology Initiative ecoENERGY for Renewable Power program 	-	SEA	Administrative	Cabinet Directive (1999)	√	√	√	<ul style="list-style-type: none"> Orphan Basin Strategic Environmental Assessment, 2003 Strategic Environmental Assessment Laurentian Subbasin (2003)
Europe										
UK - England	Policies: <ul style="list-style-type: none"> Energy White Paper: "Meeting the Energy Challenge" (2007) Biomass Strategy (2007) 	Actions: <ul style="list-style-type: none"> UK Climate Change Programme (UKCCP) (2000) Carbon Trust and the Energy Saving Trust Energy Efficiency Action Plan 2007 	<ul style="list-style-type: none"> Renewables Obligation (England and Wales) Order 2006 	SEA	Statutory	Environmental Assessment of Plans and Programmes Regulations 2004	-	√	√	<ul style="list-style-type: none"> Offshore Wind Energy Strategic Environmental Assessment (2002) SEA5 - Offshore Oil and Gas Licensing, 2004 SEA6 - Strategic Environmental Assessment of Draft Plan for A 24th Seaward round of offshore oil and Gas Licensing (1999)
UK - Wales	Policies: <ul style="list-style-type: none"> Energy White Paper: "Meeting the Energy Challenge" (2007) Biomass Strategy (2007) Environment Strategy (2006) 	Actions: <ul style="list-style-type: none"> UK Climate Change Programme (UKCCP) (2000) Carbon Trust and the Energy Saving Trust Energy Efficiency Action Plan 2007 	<ul style="list-style-type: none"> Renewables Obligation (England and Wales) Order 2006 	SEA	Statutory	Environmental Assessment of Plans and Programmes Regulations (Wales) 2004	-	√	√	N/A
UK - Northern Ireland	Policies: <ul style="list-style-type: none"> Energy White Paper: "Meeting the Energy Challenge" (2007) Biomass Strategy (2007) Energy Strategy for Northern Ireland (2004) 	Actions: <ul style="list-style-type: none"> UK Climate Change Programme (UKCCP) (2000) Carbon Trust and the Energy Saving Trust Energy Efficiency Action Plan 2007 	<ul style="list-style-type: none"> Renewables Obligation Order (Northern Ireland) (2005) 	SEA	Statutory	Environmental Assessment of Plans and Programmes Regulations (Northern Ireland) 2004	-	√	√	N/A

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							Policy	Plan	Programme	
UK - Scotland	Policies: <ul style="list-style-type: none"> Energy White Paper: "Meeting the Energy Challenge" (2007) Biomass Strategy (2007) 	Actions: <ul style="list-style-type: none"> Scottish Climate Change Programme (SCCP) (2006) 	<ul style="list-style-type: none"> Renewables Obligation (Scotland) Order 2006 	SEA	Statutory	Environmental Assessment Act (Scotland) 2005	√	√	√	<ul style="list-style-type: none"> Scottish Marine Renewables: Strategic Environmental Assessment (2007)
Finland	Policies: <ul style="list-style-type: none"> Outline of the Energy and Climate Policy for the Near Future - National Strategy to Implement the Kyoto Protocol (2005) 	Actions: <ul style="list-style-type: none"> Secure energy supply Energy financing Energy taxes (1997) Adopt renewable energy (2003-2006) 	-	SEA	Statutory	Act on the Assessment of the Impacts of the Authorities' Plans, Programmes and Policies on the Environment (200/2005)	√	√	√	<ul style="list-style-type: none"> Kolarctic ENPI CBC Programme 2007-2013 Strategic Environmental Assessment (SEA) in the context of a regional development scheme
Denmark	Policies: <ul style="list-style-type: none"> Energy policy proposal "A Visionary Danish Energy Policy 2025" (2007) Danish Climate Strategy (2003) 	Actions: <ul style="list-style-type: none"> Danish National Plan for allocating CO2 emission CO2 emission trading scheme (2005) 	-	SEA	<ul style="list-style-type: none"> Administrative for policy level Statutory for plans and programmes. 	<ul style="list-style-type: none"> For policies, it is governed by the Prime Minister's Office Circulars (1998) For plans and programmes, it is statutory under the Act on Environmental Assessment (2001) 	√	√	√	<ul style="list-style-type: none"> Strategic Environmental Impact Assessment of hydrocarbon activities in the Disko West area (2006)
Norway	Policies: <ul style="list-style-type: none"> Law for greenhouse gas emission allowance trading (2005) Strategy for hydrogen related activities (2005) 	Actions: <ul style="list-style-type: none"> CLIMIT programme "Reduced energy use - industry" programme "EcoBuild programme" (1998-2002) 	<ul style="list-style-type: none"> Energy Act (1991) 	<ul style="list-style-type: none"> It is required to conduct "Environmental Assessment (EA)" for policies It is required to conduct SEA for plans and programmes 	Statutory	<ul style="list-style-type: none"> Regarding EA for policies, it is required under "Instructions for consequence assessment, submission and review procedures in connection with official studies, regulations, positions and reports to the Storting" Regarding SEA for plans and programmes, it is required under the Planning and Building Act (1990) 	√ (EA)	√ (SEA)	√ (SEA)	N/A
The Netherlands	Policies: <ul style="list-style-type: none"> Clear ambitions for the post-Kyoto period Renewable energy policy (2004) 	Actions: <ul style="list-style-type: none"> Sustainability package Energy for development Transition to sustainable mobility 	-	<ul style="list-style-type: none"> E-test Strategic Environmental Impact Assessment (SEIA) 	<ul style="list-style-type: none"> For E-test, it is an administrative requirement For SEIA, it is a statutory requirement 	<ul style="list-style-type: none"> For E-test, it is required under the Official Gazette 1995, No.15 For SEIA, it is regulated by the Environmental Management Act (2006) 	√ (E-test)	√ (SEIA)	√ (SEIA)	<ul style="list-style-type: none"> Wind Energy Plan Zeeland, the Netherlands (1998) SEA for National Plans for Electricity Production
France	Policies: <ul style="list-style-type: none"> Energy Act 2005 	Actions: <ul style="list-style-type: none"> Issuance of a memorandum to "relaunch European energy policy in a perspective of sustainable development" (2006) Climate Plan 	<ul style="list-style-type: none"> Energy Act 2005 	SEA	Statutory	Statutory under Strategic Impact Assessment (SIA) (1990) for policy level (the corresponding act is not available) Statutory under Environmental Code (2004) for plans and programmes	√	√	√	N/A
Germany	Policies: <ul style="list-style-type: none"> Nuclear phase-out (2000) Energy market reform (2005) Climate change policy (2006) Renewable energy policy 	Actions: <ul style="list-style-type: none"> 100,000-roof photovoltaics programme Market incentive programme 	<ul style="list-style-type: none"> Renewable Energy Sources Act (2000) 	SEA	Statutory	<ul style="list-style-type: none"> Federal Building Code (2004) Federal EIA Act (2005) 	-	√	√	N/A

Countries/ Development Co-operation	(a) Energy Policies and Actions			(b) Environmental Evaluations / SEA Status in Energy Policies and Actions						
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							Policy	Plan	Programme	
Austria	Policies: <ul style="list-style-type: none"> Climate change strategy (2002) Electricity liberalisation laws Eco-Power Act (2002) 	Actions: <ul style="list-style-type: none"> National biomass action plan (2005) 	<ul style="list-style-type: none"> Electricity liberalisation laws Eco-Power Act (2002) 	SEA	Statutory	The requirements in SEA Directive (2001) have been implemented in Austria within the framework of various material laws at federal and provincial levels	-	√	√	N/A
Portugal	Policies: <ul style="list-style-type: none"> National Energy Strategy (2005) 	Actions: <ul style="list-style-type: none"> National Programme for Climate Change (2004) National Plan for the Allocation of Greenhouse Gas Emissions Licenses (2006) Energy Efficiency Programme in Buildings (2004) 	-	SIA for land-use/spatial plans and programmes	Administrative	<ul style="list-style-type: none"> Guidance on SIA of land-use/spatial plans National Directorate General for Land-Use Planning & Urban Development (2003) 	-	√	√	N/A
Africa and Development Co-operation										
South Africa	Policies: <ul style="list-style-type: none"> National Electrification Programme (1994-1999) Energy White Paper of South Africa 1998 Energy Efficiency Strategy (2005) White Paper on renewable energy 2003 	Actions: <ul style="list-style-type: none"> Integrated Energy Plan (IEP) (2003) 	-	SEA	Administrative	National Environmental Management Act (NEMA) (1998) – stipulates a range of environmental management tools, which includes SEA for the proactive integration of environmental issues at the policy and planning level	√	√	√	N/A
World Bank	Policies: <ul style="list-style-type: none"> The World Bank Group's Energy Program (2001) Environmental Strategy on energy sector – "Fuel for Thought" (2000) Energy Week (2006) 	Actions: <ul style="list-style-type: none"> Asia Alternative Energy Program (ASTAE) Carbon Finance at the World Bank Climate Change Group Environmental Management for Power Development (EMPOWER) Energy Sector Management Assistance Programme (ESMAP) 	-	Sectoral / Regional Environmental Assessment	Administrative	Operational Policy / Bank Procedure (OP / BP 4.01) (1999)	√	√	√	<ul style="list-style-type: none"> Strategic sectoral, social and environmental assessment of power development options in the Nile Equatorial Lakes Region Lao PDR Hydropower Strategic Impact Assessment (SIA) (2004)
Asian Development Bank	Policies: <ul style="list-style-type: none"> Energy Policies of the Asian Development Bank (2000) 	Actions: <ul style="list-style-type: none"> Clean Energy and Environment Program (CEEP) (2005) 	-	SEA	Administrative	-	√	√	√	N/A
Inter-American Development Bank	Policies: <ul style="list-style-type: none"> Energy Sector Strategy (2000) Sustainable Energy and Climate Change Initiative (SECCI) (2007) 	Actions: <ul style="list-style-type: none"> Conference: Energy and Climate Change in Latin America and the Caribbean 2006 Workshop: Reducing Emissions from Deforestation and Degradation – Perspectives from Latin America and the Caribbean 2007 	-	SEA	Administrative	Environment and Safeguards Compliance Policy 2006	√	√	√	N/A
United Nations Development Programme	Policies: <ul style="list-style-type: none"> Strengthening national policy frameworks Promoting rural energy services Promoting clean energy technology Increasing access to financing for energy 	Actions: <ul style="list-style-type: none"> Rural Energy Development Programme (REDP) (1996) Programme on Capacity Building to Reduce Key Barriers to Energy Efficiency in Russian Residential Buildings and Heating Systems (1998-2004) 	-	SEA	Administrative	-	√	√	√	N/A

Remarks:
 "N/A" represents "Not available in this study". For those countries with no SEA examples available, examples on the energy policies/actions have been further elaborated.

