



Clean Energy Market Intelligence & Project Access

Country Report Update

Vietnam 2012 Update



ACRONYMS & ABBREVIATIONS



ADB	Asian Development Bank
B	billion
BAKOREN	National Energy Coordinating Board
BAPPENAS	National Development Planning Agency
BAU	Business as Usual
BEE	Bureau of Energy Efficiency
BPPT	Agency for Assessment and Application of Technology
CDM	Clean Development Mechanism
CECEP	China Energy
CECIC	China Energy Conservation Investment Corporation
CER	Certified Emission Reduction
CFL	Compact Fluorescent Lamps
CFO	Carbon Finance Operation
CSP	Concentrated Solar Power
CTF	Clean Technology Fund
DAE	Department of Atomic Energy
DBP	Development Bank of the Philippines
DENR	Department of Environment and Natural Resources
DNA	Designated National Authority for CDM
DOE	Department of Energy
DOST	Department of Science, Technology and Environment
DPL	Development Policy Loan
EE	Energy Efficiency
EE&C	Energy Efficiency and Conservation
ERAV	Electricity Regulatory Authority of Vietnam
ESCO	Energy Service Company
EVN	Vietnam Electricity
FI	Financial Institution
GCM	Generation Competitive Market
GHG	Green House Gas
GOI	Government of Indonesia
GoI	Government of India
GOP	Government of the Philippines
GW	Gigawatt
IFO	International Funding Organization
IGCC	Integrated Gasification Combined Cycle
IIFCL	India Infrastructure Finance Company Limited

Acronyms & Abbreviations

IPP	Independent Power Producers
IREDA	Indian Renewable Energy Development Agency
IRES	Indonesian Renewable Energy Society
IT	Information Technology
kWh	Kilowatt Hours
LBP	Land Bank of the Philippines
LFG	Landfill Gas
M	million
MARD	Ministry of Agriculture and Rural Development
MDB	Multilateral Development Banks
MEMR	Ministry of Energy and Mineral Resources
MHA	Ministry of Home Affairs
MNRE	Ministry of New and Renewable Energy
MOE	Ministry of Environment
MOF	Ministry of Finance
MOIT	Ministry of Industry and Trade
MONRE	Ministry of Natural Resources and Environment
MoP	Ministry of Power
MPI	Ministry of Planning and Investment
MW	Megawatt
NAPCC	National Action Plan on Climate Change
NAPOCOR	National Power Corporation
NDRC	National Development and Reform Commission
NEA	National Energy Administration
NEC	National Energy Commission
NEECP	National Energy Efficiency and Conservation Program
NEP	National Electrification Policy
NHPC	National Hydroelectric Power Corporation
NPCI	Nuclear Power Corporation of India
NTPC	National Thermal Power Corporation
ODA	Official Development Assistance
PD	Presidential Decree
PFC	Power Finance Corporation
PIU	Project Implementation Unit
PLN	Indonesian State Electricity Company
PPA	Power Purchase Agreement
PPC	Provincial Peoples Committees
PPP	Public Private Partnership
PRC	People's Republic of China
PSU	Power Sector Undertaking
PV	Photovoltaic
RA	Republic Act
RE	Renewable Energy
REAP	Renewable Energy Association of the Philippines
REMB	Renewable Energy Management Bureau
RPO	Renewable Purchase Obligations
RPS	Renewable Portfolio Standard
SBV	State Bank of Vietnam
SERC	State Energy Regulatory Commission
SOE	State-Owned Enterprises



Acronyms & Abbreviations

SPV	Solar Photovoltaic
TA	Technical Assistance
TCE	Ton Coal Equivalent
UNFCCC	United Nations Framework Convention on Climate Change
VAT	Value Added Tax
VIP	Vietnam, Indonesia, Philippines
VNEEP	Vietnam National Energy Efficiency Program
WB	World Bank
WBG	World Bank Group
WESM	Wholesale Electricity Spot Market

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REGIONAL UPDATE

VIETNAM



RENEWABLE ENERGY & ENERGY EFFICIENCY

HIGHLIGHTS

- Vietnam's total investment in the power industry will reach about US\$ 48.8 billion dollars in 2020. Also, in the next two decades, the power sector will require about US\$ 123.8 billion.
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- Renewable energy (RE) is one of Vietnam's main focuses. Although not as manifested in numbers, the government insists it strives for a strong green economy. Non-hydro RE contributed to 3.5% of total electricity generation in 2010 and the current target aims to increase the yield to 4.5% in 2020 and 6.0% in 2030. (Previous report (PR): RE sources would contribute to 5% of total power generation by 2020).
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- Vietnam's Master Plan VII, which came into effect in July 2011, calls for energy efficiency (EE), RE development and energy market liberalization. It has set many RE and EE targets for 2020, with the general objectives being the efficient use of energy resources for socio-economic development and the assurance of national energy security.
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- Hydropower is the largest RE sector in Vietnam, contributing around 7,605MW to the power generating capacity in 2011 (PR: up from 5,257 in 2008). Vietnam hopes to increase this to 17,400MW by 2020, prioritizing projects of multi-purposes such as flood control and electricity production.
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- Wind power is in its early stages of growth but has a very large growth potential, as 8.6% of Vietnam's land is rated as "high" or "very high" for wind infrastructure. Vietnam's government has set a plan to bring the total wind power capacity from negligible levels to about 1,000MW by 2020 and 6,200MW by 2030 or about 0.7% and 2.4% of the total electrical production, respectively (PR: adjusted from 2,500-3,200 MW by 2025).
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- EE is another high focus area with a target of energy saving set to 5.0-8.0% for 2011 to 2015, with emphasis on the industry sector. Vietnam is currently drafting a Green Growth Strategy, which highlights its plan to reduce energy consumption by 2020.
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- Currently, Vietnam has more than 120 CDM registered projects in the energy sector, mainly in hydropower (PR: there were 22 CDM registered projects in 2010).

ENERGY SECTOR BACKGROUND

The following report highlights the current stance and projected development of Vietnam's energy industry, specifically focusing on the renewable energy (RE) and energy efficiency (EE) changes.

By the end of 2010, total generation capacity in Vietnam was around 20,000MW. From this number, 36% was from hydropower, 18.5% from gas, 10.5% from coal and the rest from small hydro, diesel and imports from other countries. In 2020 and 2030, Vietnam is hoping to achieve 75,000MW and 146,800MW in power generating capacity, respectively.

Despite vast natural resources, Vietnam has only utilized 2% of its renewable energy potential. The government has thus decided to increase the RE mix in electricity from its present 3.5% to 4.5% in 2020 and 6% in 2030.

As illustrated below, Vietnam's power is mainly from hydroelectric, oil and gas, and coal:

Table 6.1 Vietnam's Power Generating Capacity (MW)

Power Source	2008	2011-2015
Coal	1,545	14,370
Oil and Gas	3,563	2,970
Hydroelectric power	5,257	7,605
Other (small hydro, diesel, imports and other RE)	454	1,966

Source: WB Renewable Energy Development Project and RPT—Vietnam power demand seen up 15 pct/yr in next five yrs -EVN

Currently, Vietnam's energy consumption and electricity demand is growing at a rate 2.5 times quicker than its GDP's growth. The industrial sector has been primarily responsible for this growth. As seen below, the industry and construction sector consumed a little over half the electricity in 2010:

Table 6.2 Vietnam's Electricity Consumption by End User

End User	2008	2010
Industry & Construction	33.0%	52%

Residences	26.7%	37%
Commerce & Other	5.6%	10%
Agriculture	0.4%	1%

Source: WB Renewable Energy Development Project and Vietnam's Power Sector: An Overview

The economic growth of Vietnam over the last years is parallel with a growing demand for electricity. In some areas in Vietnam, annual electricity consumption growth is on average 13.4% and is expected to increase to 24.0-42.0% in 2020-2050.

The RE sector is important to Vietnam, as the government continuously reiterates its support for green energy in the power sector. It plans to increase the RE yield of total energy consumption by 4.5% in 2020 and 6.0% in 2030.

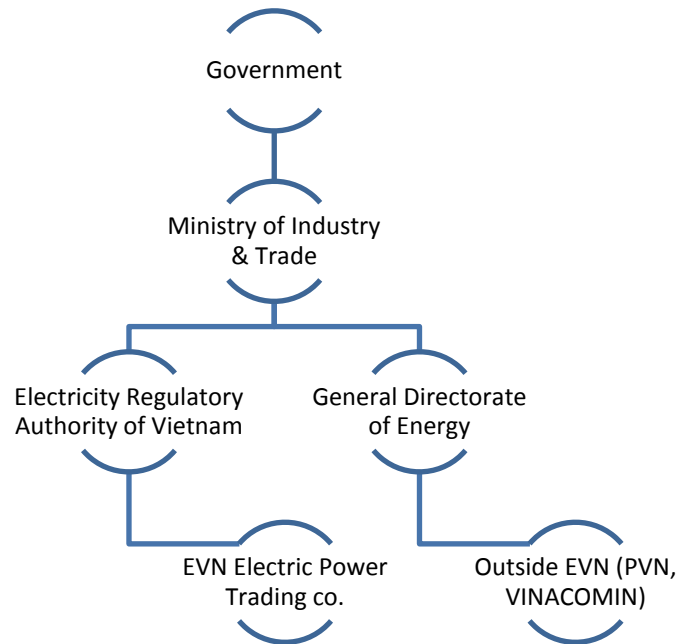
Power Sector Structure & Regulation

The government owns power in Vietnam. The monopoly of state-owned and single electricity retailer, Electricity Corporation of Vietnam (EVN) generates more than 71% of all electricity. As of July 1, 2012, Vietnam deregulated the power market to reduce the monopoly of EVN. This is in line with the goals of the Law of Electricity, which set out to create a competitive trading scheme for power. Nonetheless, EVN remains the holding company of government assets in the power sector. The deregulation of the power market will happen in three phases, enumerated below:

- Completed by 2014: competitive power generating market: power plants can offer to sell electricity to single buyers.
- 2014-2022: competitive wholesale market: wholesale companies will be able to compete in buying electricity before selling to distribution.
- After 2020: competitive retail market: customers will be able to choose their own power supplies.

Currently, the main players in electricity generation are state-owned companies: Vietnam Electricity Corporation (EVN), Petroleum Corporation of Vietnam (PVN) and Vietnam National Coal and Minerals Corporation (VINACOMIN).

- In 2011, the installed capacity was divided between: EVN 55.33%, PVN 9.5% and VINACOMIN 4.9%, foreigners 9.9% and privates 2.3%.

Figure 6.1 The Energy Sector Structure in Vietnam

Source: Pacific Energy Summit, 2012 Summit Papers, Nguyen

The key government agencies of the power sector in Vietnam include:

Table 6.3 Key Government Agencies Relevant to the Power Sector

Agency	Key Role relevant to Energy Sector
Ministry of Industry & Trade (MOIT)	“Line Ministry: - Implementation of government policy, recommending major policy reforms
Electricity Regulatory Authority of Vietnam (ERAV)	Preparation and enforcement of regulations, issue of licenses, review of sector’s expansion and financing needs, recommendation of tariffs.
Department of Science, Technology and Environment (DOST)	Under the MOIT and in-charge of EE projects and initiatives through its energy conservation office
Ministry of Finance (MOF)	Financing, especially public sector loans to qualified users.

The State Bank of Vietnam (SBV)	Allocate foreign exchange, counterpart of international donor lending.
Provincial Peoples Committees (PPCs)	PCCs are responsible for local government; important for implementing projects at local level.
Ministry of Agriculture and Rural Development (MARD)	Leads the biogas program of Vietnam.
Ministry of Planning and Investment (MPI)	Responsible for the preparation of the country's overall economic development plans, including investment plans for RE.
Ministry of Natural Resources and Environment (MONRE)	International Cooperation Development of MONRE is the CDM national authority in Vietnam and plays a key role in the development of investment plans for the CTF.

Energy Sector Highlights and Challenges

- Electricity demand of the country is expected to grow by:
 - 2011-2015: 14.0-16.0% per year.
 - 2016-2020: 11.0-15.0% per year.
 - 2021-2030: 7.4 – 8.4% per year.
- Vietnam's Master Plan VII focuses on energy security, EE, RE development and power market liberalization. Some specific production targets are listed below:
 - Produce and import a total of 194-210 billion kWh by 2015, 330-362 billion kWh by 2020 and 695-834 billion kWh by 2030.
 - Give priority to generating electricity from renewable resources:
 - Increasing the RE yield from 3.5% of total electricity generation in 2010 to 4.5% in 2020 and 6% in 2030.
 - Reduce the energy to GDP elasticity ratio from present 2.0 to 1.5 in 2015 and 1.0 in 2020.
- At present, Vietnam has an electrification rate of 89.3%, with rural areas reaching 85% and urban areas 93%. There are current plans to speed up electrification rates to ensure that almost all rural households will have electricity by 2020.
 - From 2011-2015, the national grid is expected to provide for 500,000 households in rural areas, of which 377,000 will benefit from electricity produced from RE.
 - From 2016-2020, the national grid will supply an additional 200,000 rural households, with RE supplying to 231,000 rural homes.
- Foreseeable challenges in the future:

- Energy import dependence as a consequence of growing demand and limited supply.
- Continued low EE due to poor infrastructure and managing practices.
- Lack of capital and funds for developing energy infrastructure.

Renewable Energy & Energy Efficiency

Renewable Energy

The percentage of RE contributing to total electricity generation in 2010 was 3.5%. The Vietnamese government plans to increase this yield to 4.5% in 2020 and 6.0% in 2030. The increase is said to be modest in comparison to other countries, due to the limited available capital and underdevelopment of RE infrastructure in Vietnam. Due to this claim, many suggest the growth of the RE industry won't be as strong as the government states.

Notwithstanding these claims, the government strongly encourages the growth of the sector as can be seen by the incentives to RE investments. Under Decision 177, investment projects that construct RE establishments are entitled to reductions in corporate income tax, import/export tax and land fees.

Vietnam has not yet established a feed-in tariff system; however, it has the Avoided Cost Tariff Regulation—the avoided costs of the national power grid when a small RE power plant is utilized—which provides financial enticements for the development of RE.

The estimated plan of key energy resources (with RE) in Vietnam is as follows:

Table 6.4 Key Energy Sources Planned

Power Source	Installed Capacity (MW) in 2020	Share in total installed capacity (%) in 2020	Installed Capacity (MW) in 2030	Share in total installed capacity (%) in 2030
Coal thermal power plants	36,000	48.0	75,000	51.6
Gas turbine thermal power plants	10,400	16.50	11,300	7.7
Integrated hydropower plants	17,400	23.1	N/A	11.8

Pumped-storage hydropower plants	1,800	2.4	5,700	3.8
Renewable energy	500	5.6	2,000	9.4
Wind power plants	1,000	N/A	6,200	N/A
Imported power	N/A	3.1	N/A	4.9
Nuclear power	(1 st power plant)	1.3	10,700	6.6
Power generation capacity	75,000		146,8000	

Source: Mayer Brown JSM: Vietnam Power Development Plan for the 2011-2020 Period

Specific Renewable Energy Sectors

Wind power

In comparison to its Asian neighbors, Vietnam has the biggest wind resource potential. It is estimated that about 8.6% of its land has wind resources that are “high” or “very high” for the growth of wind energy infrastructure.

The two most important provinces for wind power are Ninh Thuan and Binh Thuan, located in the south of Vietnam. The region currently has 16 wind projects and a technical potential of 855MW.

At the end of 2011, in two decision proposals, the government sturdily supported the development of wind projects, granting subsidies, low tax rates and corporate rates. This is in conjuncture with Vietnam’s Master Plan VII, which set out wind power generation targets of 1,000MW by 2020, and 6,200MW by 2030.

Hydropower

Large-scale hydropower development is well underway in Vietnam, as almost all of Vietnam’s RE power comes from hydropower plants. Along with its coastlines, Vietnam is home to over 2,200 streams and rivers, allowing for wide implementation of hydropower frameworks.

In the Master Plan VII, the government prioritized the development of hydropower sources, especially the plants that can sustain flood control and produce volumes of electricity. In 2020, the total capacity of hydroelectric power expects to increase to 17,400MW.

Most of Vietnam’s construction is centered on large-scale hydropower development. However, recently, there has been intensive development of mini-hydropower generation.

Biofuel

Biofuel is a sector that is growing at a steady rate in Vietnam. In 2011, Decision 177 of an Energy Efficiency Law targeted bio-fuel development, calling for the production of 1.8 million tons of ethanol and vegetable oil by 2025, which would contribute to 5.0% of the nation's fuel. Domestic biofuel research is also part of the plan.

Biomass

There is high potential for biomass in Vietnam because of the country's agricultural landscape. Most of the exploitable biomass is from rice husks, bagasse from sugar plants and waste from farms. The government plans to increase biomass to 500MW by 2020 and 6,200MW by 2030. One of the largest biomass power plants, worth almost US\$ 59.61 million, will be built in Phu Ninh district for 2013. The plant alone will have a capacity of 40MW.

Solar Power

Although solar power in Vietnam has high potential, not much development has happened. Most projects (except for Intel's new installation of the largest solar power in Vietnam) are at a small scale and focus on harvesting heat for singular structures. Also, private companies are leading the solar PV production, instead of state-owned industries.

Energy Efficiency

Currently, Vietnam's overall EE in the energy sector is weak, as the country lacks proper equipment, capital and up until a few years ago, decent cohesive legislation. However, the government is implementing programs and setting specific targets levels for EE. The Vietnam National Energy Efficiency and Conservation program set up specific objectives such as:

- Six components of revision which include state management on EE and conservation, high energy efficiency equipment, EE & conservation in industrial enterprises, buildings and transportation.
- 2011-2015: total energy consumption: achieve 5.0-8.0% reduction.
- 2011-2015: industry energy consumption: achieve 8.0% reduction.

At present, Vietnam is drafting a Green Growth Strategy to 2020 which designs Vietnam's green growth model. In the strategy, Vietnam highlights its plan to reduce energy consumption by 3.0% per GDP per annum and to drop greenhouse gas emissions by 10-15% by 2020, in comparison to 2010. It will be submitted to the government by the end of 2012.

Opportunities for Singaporean firms in Vietnam

Vietnam offers significant opportunities to Singaporean firms in the RE and EE sectors following the ambitious targets set for energy savings through EE programs, RE growth and goals for privatization. Since Vietnam is beginning to open up its sector to the private industry, SEAS members should act now.

Energy Efficiency

- There is strong government focus on EE with a target of 5.0-8.0% energy saving set for 2011-2015.
- Vietnam is in the process of finishing up its Green Growth Strategy to 2020, which is expected to model a green economy for the future of Vietnam.
- The Green Growth Strategy is said to reduce energy consumption by 3.0% per GDP per year and to drop GHG emission by 10.0-15.0% by 2020, in comparison to 2010.
- The government is focused on improving the EE in the industry, transport and household sectors—the three largest consumers of electricity in Vietnam.
- The Clean Production and Energy Efficiency project has been approved and will begin to promote and implement EE mechanisms in Vietnam. Also, the World Bank is funding the Energy Efficiency in the Industry of Vietnam. This project will be approved by the end of the year and it will bring large EE reformations to the industrial sector.

Wind energy

- The government is encouraging wind energy projects, targeting 1,000MW installed capacity in 2020 and 6,200MW in 2030.
- Although just beginning, Vietnam already has 42 projects in various stages of development.
- Vietnamese government is giving incentives to the wind energy market, such as a corporate income tax rate of 10% for 15 years.
- Binhu Thuan province remains the most fertile ground for wind energy with many European companies already tapping into the region.

Hydropower

- Forefront runner among all RE sources in Vietnam.
- There are new developments for small-hydropower plants too.

Biogas

- There are two main trends of biogas production in Vietnam: biogas for household utilities, such as cooking, and power generation for fuel and heating (almost 90% of domestic energy consumption in rural areas is derived from biomass).
- The government is targeting 500MW generation capacity from biogas by 2025, mainly in south and central provinces.
- There is strong potential for large-scale biogas, such as for livestock farm, agro-food processing factories and waste treatment companies.

Solar

- Solar power has been recognized as a huge potential; however, not much attention has been placed on its development yet.

Overall there are significant opportunities for Singaporean firms in the RE and EE sectors. There is competition from European firms that are already entrenched in several projects. However, Singaporean firms have the ability to offer more innovative, suitable and cost effective solutions in this space and can participate in existing as well as upcoming projects.

FUND MAPPING

Partnerships and Funds for Renewable Energy and Energy Efficiency Development

GLOBAL

- World Bank
- International Finance Corporation
- Asian Development Bank
- Climate Technology Initiative
- Global Environment Facility
- Seed Capital Assistance Facility
- Global Energy Efficiency and Renewable Energy Fund
- Renewable Energy and Energy Efficiency Partnership
- Global Climate Partnership Fund
- Sustainable Energy Market Development Program
- Asia Sustainability and Alternative Energy Program
- Global Energy Program
- Clinton Climate Initiative
- Clean Development Mechanism
- Clean Investment Funds
- Armstrong Asset Management (ASEACE)
- Deutsche Investitions (DEG)
- Norwegian Investment Fund for Developing Countries (Norfund)
- *No longer:* Asia-Pacific Partnership on Clean Development and Climate (APP)

VIETNAM

- Clean Technology Fund
 - Promotes financing for deployment of energy efficient and clean energy technologies

- IFC's Vietnam Energy Efficiency and Cleaner Production Financing Program
 - Works with selected banks to support enterprises that are looking to upgrade inefficient production systems and introduce energy efficient and renewable energy technologies

 - Expand Vietnam's current network of technical service providers

PROJECT MATRICES



Vietnam

Description of Matrices:

Update of active projects from August 2010 in Vietnam region (projects still active are marked with **)

Addition of new active projects since August 2010 in Vietnam region. Only World Bank, ADB and CDM.

Project	Project Cost (million)	Executing Agency	Background	Date Approved	Closing Date
** Renewable Energy Development Project (World Bank)	\$318.05	Ministry of Industry and Trade	<p><i>Sector of Interest:</i> Wind and Biomass; The project aims to increase the supply of electricity to the national grid from renewable energy sources on a commercially, environmentally, and socially sustainable basis.</p> <p><i>SEAS-Relevant Opportunities:</i> 1. Project Development: private developers will develop subprojects not exceeding 30MW based on small hydro, wind, and biomass. The project should be grid connected. 2. Capacity Building: consulting opportunity for the development of regulatory infrastructure related to RE development; and capacity</p>	05/05/09	30/06/14

			building and institutional development for stakeholders in RE. 3. Other opportunities: feasibility studies (RE except small hydro), training services, and special studies		
** Quality and Safety Enhancement of Agriculture Products and Biogas Development Project (ADB)	\$110.39	Ministry of Agriculture and Rural Development	<p><i>Sector of Interest:</i> Biogas; The expected outcome from the project is quality and safety improvements in the country's agricultural outputs to meet domestic and international requirements.</p> <p><i>SEAS-Relevant Opportunities:</i> The project will have a component for biogas development for clean energy, improved agro product safety and reduced health hazards from livestock wastes. The component will include investments for biogas infrastructure; credit facility for biogas; and demonstration and applied biogas research services (ie. Civil works for biogas development and R&D consultants for biogas development).</p>	01/07/09	31/12/15
** Livestock Competitiveness and Food Safety Project (WB)	\$79.03	Ministry of Agriculture and Rural Development	<i>Sector of Interest:</i> Biogas and Carbon Finance; Project to increase the production efficiency of	22/09/09	31/12/15

			<p>household-based livestock producers, to reduce the environmental impact of livestock production, processing and marketing, and to improved food safety in livestock product supply chains (mainly meat) in selected provinces.</p> <p><i>SEAS-Relevant Opportunities:</i> consulting opportunities relating to biogas and carbon finance, and procurement of bio-digesters.</p>		
** <i>Climate Change Impact and Adaption Study in the Mekong Delta (ADB)</i>	\$1.63	Ministry of Natural Resources and Environment	<p><i>Sector of Interest:</i> Climate Change Studies; The expected outcome is that sector and provincial authorities in the Mekong Delta region will have developed the capacity to increase climate-resilience of programs, plans, policies and/or projects to guide future development planning.</p> <p><i>SEAS-Relevant Opportunities:</i> Project activities on Climate Change Predication and Impact Assessment, and Climate Change Adaptation and Planning might be of interest to SEAS. Moreover, the project provides the opportunity for SEAS to meet with the</p>	11/11/09	N/A

			International Cooperation Department of MONRE, whose current activities are focused on RE and EE.		
** Vietnam Biomass Project (Bilateral Funded—Japan)	\$5.00	Department of Science, Technology (Ministry of Industry and Trade)	<p><i>Sector of Interest:</i> Biomass; The five-year Sustainable Integration of Local Agriculture and Biomass Industries project strives to study and produce bio-ethanol from straw. With biogas, bio-ethanol is hoped to be the premise for agricultural development in Ho Chi Minh City.</p> <p><i>SEAS-Relevant Opportunities:</i> The project will study and develop technologies necessary for the production of bio-fuel from biomass in connection with environmental issues.</p>		
<i>Clean Production & Energy Efficiency (WB)</i>	\$4.15	Ministry of Industry and Trade	<p><i>Sector of Interest:</i> Energy Efficiency; The main objective of this project is to strengthen the involved parties in the delivery of the national energy efficiency programs in key industrial sectors. In particular, the project aims to promote sustainable business practices, support the use of energy saving equipment and technologies, enable capacity</p>	05/07/11	30/06/16

			<p>building and improve the energy system.</p> <p><i>SEAS-Relevant Opportunities:</i> consulting services and technical assistance for the involved parties, especially businesses; developing clean energy technologies for specified projects and businesses; SEAS members should also approach the private industries in Vietnam to leverage project funding to fund specific EE projects.</p>		
<i>Urban Water Supply and Wasteland (WB)</i>	\$436.2	Ministry of Planning and Investment/Ministry of Construction/Ministry of Finance	<p><i>Sector of Interest:</i> Energy Efficiency; The project's objective is to increase access to sustainable water services and environmental sanitation in 10 provinces.</p> <p><i>SEAS-Relevant Opportunities:</i> consulting services and technical assistance for project preparation and implementation; assistance and supply of water facilities and clean energy equipment; assistance on frameworks for the development of policies on wastewater and water efficiency.</p>	24/05/11	30/12/16
<i>VN-Trung Son Hydropower</i>	\$741.72	Electricity of Vietnam	<i>Sector of Interest:</i> Renewable	26/04/11	31/21/17

<i>Project (WB)</i>			<p>Energy - Hydropower; The goal of this project is to support Vietnam's development of cost-effective hydropower generation in order to improve Vietnam's electric power service provision in an environmentally and socially sustainable way.</p> <p><i>SEAS-Relevant Opportunities:</i> provide technical assistance and the supply for the building of the dam and ancillary as well as the transmission line component; provide and supply innovative sustainable technologies and equipment.</p>		
<i>Support for the National Target Program on Climate Change with a Focus on Energy and Transport (ADB)</i>	\$2.5	Ministry of Industry	<p><i>Sector of Interest:</i> Energy Efficiency and Renewable Energy; The two year project will focus on implementing the effective action plans of the Vietnamese government to reduce the growth rate of GHG emissions from the industrial sector. The project will also aim to increase the capacity of the target provinces to design and implement climate change projects.</p> <p><i>SEAS-Relevant Opportunities:</i></p>	31/01/11	N/A

			consulting services for energy efficient projects, action plans to support the development and assistance with pilot EE and RE projects; approach private industries in Vietnam to leverage project funding to fund specific EE projects.		
<i>Song Bung 4 Hydropower Project (ADB)</i>	\$196	Viet Nam Electricity	<p><i>Sector of Interest:</i> Renewable Energy - Hydropower; This project is the first hydropower project in Vietnam to receive financing from a multilateral financial institution. Its main objective is to construct four hydropower plants in order to meet the increasing power demand of Vietnam in an environmentally sustainable manner.</p> <p><i>SEAS-Relevant Opportunities:</i> provide technical assistance for the building of the hydropower project; provide and supply innovative sustainable technologies and equipment.</p>	26/06/08	30/06/14
<i>No longer active projects: Supporting Implementation of the National Energy Efficiency Program (ADB—Closing Date: Oct 08)</i>					

Project Briefs:

WB –Vietnam – Clean Production & Energy Efficiency

Project Cost: US\$4.15M

Loan/Grant Amount: US\$ 2.37M

Undisbursed Amount: US\$ 1.78M

Project Status: Approved

Date Approved: 05 Jul 11

Date Closing: 30 Jun 16

Type of Opportunity for SEAS members: consulting services and technical assistance for the enhancement of energy efficiency action plans, strategies and projects; project activities on clean production and energy efficiency in the industrial sector

Implementing Agency: Ministry of Industry and Trade

Project Description: The main objective of this project is to strengthen the involved parties in the delivery of the national energy efficiency programs in key industrial sectors. In particular, the project aims to promote sustainable business practices, support the use of energy saving equipment and technologies, enable capacity building and improve the energy system. Since the industry sector consumes the most energy in Vietnam, this project will promote energy-

efficient technologies and practices in industrial production and manufacturing processes. Also, a sub-objective of this project is to focus on technologies that are commercially available, but face market barriers.

The project is divided into three components:

Component 1: Energy Efficiency Action Plans for Key Industrial Sectors (US\$ 3.21M)

- Technical assistance for forming energy efficiency strategies
- Technical assistance for establishment of voluntary agreements with pilot enterprises

Component 2: Development of Energy Service Providers (US\$0.59M)

- Technical assistance for the development of energy service providers
- Analysis of emerging energy service providers
- Evaluation of funding methods
- Training programs
- Guidelines for energy performance

Component 3: Capacity Building for Program Management, and Monitoring and Evaluation (US\$0.35M)

- Capacity building of MOIT and EECO by monitoring and evaluating activities related to energy efficiency projects, programs and policies.

WB –Vietnam – *Urban Water Supply and Wastewater*

Project Cost: US\$236.2M

Loan/Grant Amount: US\$ 200M

Undisbursed Amount: US\$ 36.2M

Project Status: Approved

Date Approved: 24 May 11

Date Closing: 30 Dec 16

Type of Opportunity for SEAS members: consulting services and technical assistance for project preparation, implementation; assistance and supply of water facilities and equipment; provide professional information and assistance for sustainable project implementations and development schemes; frameworks for the development of policies on wastewater and water efficiency.

Implementing Agency: Ministry of Planning and Investment; Ministry of Construction

Project Description: The project's objective is to increase access to sustainable water services and environmental sanitation in 10 provinces.

The project is divided into two components:

Component 1: Investments and Project Implementation (US\$232.4M)

- Expand coverage of water supply: seven water supply subprojects in individual cities
- Environmental sanitation: seven sanitation and drainage sub-projects in individual cities

Component 2: Technical Assistance (US\$3.8M)

- Institutional strengthening and project monitoring
- Improving the efficiency of investments and operations

WB –Vietnam – VN-Trung Son Hydropower Project

Project Cost: US\$411.72M

Loan/Grant Amount: US\$ 330M

Undisbursed Amount: US\$ 81.72M

Project Status: Approved

Date Approved: 26 Apr 11

Date Closing: 31 Dec 17

Type of Opportunity for SEAS members: provide technical assistance and the supply for the building of the dam and ancillary as well as the transmission line component; provide and supply innovative sustainable technologies and equipment.

Implementing Agency: Electricity of Vietnam

Project Description: The goal of this project is to support Vietnam's development of cost-effective hydropower generation in order to improve Vietnam's electric power service provision in an environmentally and socially sustainable way. The hydropower plant is expected to provide power generation, flood control and irrigation benefits.

The project is divided into three components:

Component 1: The Dam and Ancillary Construction Component (US\$ 265.23M)

- Dam and appurtenant structures: main roller compacted concrete dam, power generation facilities, hydraulic-mechanical and electro-mechanical equipment and construction of site infrastructure
- Access road and bridges
- Construction of power supply lines
- Project management

Component 2: The Transmission Line Component (US\$ 18.44M)

- Create a 220 kV transmission line by which the power generated from the hydropower plant will be transmitted to electricity consumers

Component 3: The Social and Environment Impact Mitigation Component (US\$43.42M)

- Resettlement, livelihoods and ethnic minorities development
- Health support
- Environment management

Component 4: The Capacity Development and Scale-up Component (US\$3.0M)

- Bring EVN hydropower projects up to international standards

ADB –Vietnam – Support for the National Target Program on Climate Change

Project Cost: US\$2.5M +

Loan/Grant Amount: US\$ 2.5M

Undisbursed Amount: N/A

Project Status: Approved

Date Approved: 21 Jan 11

Date Closing: 2014

Type of Opportunity for SEAS members: consulting services for energy efficient projects, action plans to support the development, assistance with pilot EE and RE projects; approach private industries in Vietnam to leverage project funding to fund specific EE projects.

Implementing Agency: Ministry of Industry and Trade

CDM projects from Aug '10 onwards (only two per month displayed below)			
Number	Registered	Title	Annex I Parties
1	28 Aug 10	Dak Ne Hydropower Project	Germany
2	04 Sep 10	Dak Rung Hydropower Project	Germany
3	11 Sept 10	Suoi Sap 3 Hydro Power Project in Son La Province	UK and Northern Ireland
4	29 Oct 10	Thai An Hydropower Project	Japan
5	06 Nov 10	Nam Tang and Na Hau Hydropower Bundled Projects	Switzerland
6	02 Dec 10	Tra Linh 3 Hydropower Project	Germany
7	13 Dec 10	Nam Ngan Hydropower Project	Germany
8	04 Feb 11	Song Ong Hydropower Project	Denmark
9	21 Feb 11	Ho Bon Hydropower Project	Switzerland
10	08 Mar 11	Ha Nang Hydropower Project	Switzerland
11	16 Mar 11	Dak Hnol Hydropower Project	Switzerland
12	11 Apr 11	Dak Doa Hydropower Project	Switzerland
13	03 May 11	Doc Cay hydropower Project	Sweden
14	10 Jun 11	Vinh Son 5 Hydropower Project	Switzerland
15	13 Sep 11	Dak Mi 4c Hydropower Project, Vietnam	Switzerland

16	14 Oct 11	Ea Kar Hydropower Plant, Vietnam	Switzerland
17	09 Nov 11	Ayun Thuong 1A Hydropower Project	Japan
18	20 Dec 11	Nam Pong Hydropower Project	Switzerland
19	18 Jan 12	Dak Sin 1 Hydropower Project	Netherlands
20	31 Jan 12	Song Bung 6 Hydropower Project	Switzerland
21	17 Feb 12	Ta Loi 3 Hydropower Project	Switzerland
22	21 Feb 12	Ia Grai 1 Hydropower Project	Switzerland
23	13 Mar 12	Da Dang 2 Hydropower Project	Netherlands
24	20 Mar 12	Dinh Hai rice husk cogeneration project	Switzerland
25	29 Mar 12	Nam Cat Hydropower Project	Switzerland
26	17 Apr 12	Dakrong 3 Hydropower Project	Switzerland
27	01 May 12	Nam Chim Hydro Power Project	Switzerland
28	Pending	Dakdrinh Hydropower Project	Switzerland
29	Pending	Song Mien 5 Hydropower Project	Sweden
30	Pending	Da M'Bri Hydropower Project	Netherlands

Project Description: The two year project will focus on implementing the effective action plans of the Vietnamese government to reduce the growth rate of GHG emissions from the industrial sector. The project will also aim to increase the capacity of the target provinces to design and implement climate change projects.

ADB –Vietnam – Song Bung 4 Hydropower Project

Project Cost: US\$196M+

Loan/Grant Amount: US\$196M

Undisbursed Amount: N/A

Project Status: Approved

Date Approved: 26 Jun 08

Date Closing: 30 Jun 14

Type of Opportunity for SEAS members: provide technical assistance for the building of the hydropower project; provide and supply innovative sustainable technologies and equipment.

Implementing Agency: Viet Nam Electricity

Project Description: This project is the first hydropower project in Vietnam to receive financing from a multilateral financial institution. Its main objective is to construct four hydropower plants in order to meet the increasing power demand of Vietnam in an environmentally sustainable manner.