

Country Report
CTI the Sixth Workshop for Asia (at ICETT)

1. Name of participant: Phuong Hoang Kim

2. Organization to which participant belongs: Department of Science & Technology, Ministry of Industry

3. Department and duties

The Ministry of Industry is established by the Government and responsible to the Government for the administration in Industry Sector namely powers, mechanical engineering, metallurgy, new energy, renewable energy, oil and gas, minerals mining, chemical (including pharmaceutical industry), industrial explosion materials throughout the country. The Ministry consists of 9 departments, ministerial inspection board, office of the Ministry and two specialized government management directorates.

The Department of Science and Technology is one of the ministry's nine departments (the other nine are Planning Dept., Finance and Accounting Dept., Organizing and Personnel Dept., International Cooperation Dept, Mechanical - Metallurgy and Chemical Dept, Energy and Oil & Gas Dept, Legal Dept, Consumer Goods and Foodstuff Industry Dept.). The Department is specialized in assisting the Minister in implementing the State management functions over Technology and Science in accordance with Law, Ordinance and Legal documents of the Government. Main duties of the Department includes: i) Studying, working out strategies, plans, policies on the development of science and technology, environment protection and product quality assurance; ii) Elaborating, submitting to the Ministry for promulgation within its jurisdiction the processes, rules, standards, economic-technical norms; iii) Managing the industrial product qualities, technologies and application of scientific-technological advances into the industries; iv) Organizing and guiding the implementation of technical and technological solution to supervise and protect the environment; v) Organizing the unified management of standardization, measurement, industrial property, invention and patent of the industries; vi) Taking part in the evaluation and approval of investment of projects on industrial works; vii) Organizing the information network on science, technology, product quality, environment.

The Department is divided into groups, each responsible for the administration of the different sectors and matter. I am a member of the Energy Sector and Information

group. My jobs are involving with different activities related to technology and information aspect of the industry. For example: Energy Sector, Management in quality products, technology, technical and so on, e.g.

4. Impressions of the current situations

The first GHGs inventory for the energy sector in Vietnam was complied in 1992-1993, and it covered only the emissions from combustion and fugitive activities. Combustion activities cover emission of CO₂ and non-CO₂ emissions from fuel burning processes. The fugitive emissions were estimated from coal production as well as production of crude oil and natural gas. Fugitive emissions from crude oil and natural gas are also in the form of CH₄. The results of the estimation of GHGs emissions from energy sector sources in Vietnam in 1993 are present in the table.

GHGs emissions (Gg) by different sector in energy sector in 1993

<i>Sector</i>	CO ₂	CH ₄	N ₂ O	NO _x	CO
Power generation	3,585	0.77	7.54	27.77	13.79
Industry	6,931				
Transportation	2,663	0.92	0.16	66.99	199.55
Com. & Service	3,818	0.12	1.46	5.30	2.20
Other	2,834	0.07	0.73	2.60	1.00
Total	19,833	1.88	9.89	64.07	216.54

Source: ADB (1995).

In order to reduce GHG emissions, one new potential approach is CDM, which is currently applied in many countries. The developing countries saw CDM as a new channel for financial assistance, investments to promote sustainable development, technology transfer, and promotion of equity.

Renewable energy is a significant part of the strategy for curbing carbon dioxide and other greenhouse gas emissions. Regarding to geographical conditions, Vietnam is one country having great potential and many kinds of renewable energy resources (such as biomass, solar, wind, geothermal, hydro etc.) which are distributed in different ecological zones. The renewable energy is an energy source to play an important role in providing energy to meet the increased energy demand in Vietnam. Renewable energy source, by themselves, would actively contribute to the realization of the CDM in Vietnam for the future.

The energy efficiency improvement and inter-fuel substitution is recognized as the major option available for GHG mitigation. A number of studies have examined technological and systemic measures to improve energy efficiency in the end-use as

well as supply sector. In order to regulate organizations, individuals, who are living, operating in Vietnam, on energy saving and efficiency, the Government issues Decree on energy saving and efficiency on 3 Sep, 2003. This Decree regulate the energy conservation and efficiency in industrial production, buildings and equipment, power intensive end uses and residential use. Ministry of industry is the implementation agency and responsibility to supervise of this Decree.

5. Problems, challenges and factors preventing the widespread use of technologies.

Energy investments can cause considerable damage to Vietnam's air, water, and soils with attendant effects on human health. Thus it is becoming increasingly important to address the potential environmental impact of energy investments and policies as well as any environment factors that may constrain the technical or economic feasibility of an energy project. Vietnam has passed legislation and regulations relating to environmental management and planning – emission standards, for example, were passed in 1995. Although these regulations will influence energy investment, there is limited capacity to implement and monitor the standards. Moreover, the standards are often not appropriate given the costs of implementing them, the benefits derived from implementing them, and the level of the targets relative to those in other countries in the region.

While potential is significant, challenges in developing renewable energy in Vietnam are significant. A two-day participatory workshop, in June 1999, discussed the barriers to large-scale renewable energy development and the possible solutions.¹ The major barriers identified are: (i) inadequate policy and regulatory framework to encourage renewable electricity; (ii) inadequate awareness about the technologies, their costs and performance in Vietnam; (iii) lack of commercial businesses to provide renewable electricity equipment and services; (iv) lack of access to financing for consumers, businesses and project developers; (v) high quality technology is not available at affordable prices; and (iv) inadequate resource data to plan a major program.

The Ministry of Industry is now developing regulation under Decree on energy saving

¹ ASTAE. 2000. *Option for Renewable Energy in Vietnam, a report on the June 15-16, 1999 two-day participatory workshop in Hanoi*. ESMAP Technical Paper 001. World Bank, Washington, D.C.

and efficiency: i) assign and guideline to designated energy consumers the including major activities such as establishment and submission for approval of the energy efficiency and conservation plan, the energy consumption report, energy audits; ii) set up the list of the designated equipment, energy efficiency products, non-transferred products or products that must eliminate out of the markets; iii) issue regulations on manufacturers' responsibilities to ensure the required specifications on operation and energy consumption of the designated equipment; iv) stipulate information in terms of energy efficiency of designated equipment on product's label; v) stipulate the procedures for labeling to verify the energy efficiency products in order to encourage manufacturers involving in energy efficiency and conservation promotion; vi) stipulate consulting organizations, which have competence and juridical personality in the fields of energy efficiency and conservation and energy audits, to verify before certificating energy efficiency quality or authorizing energy efficiency labeling on the products.

In order to implementing successful Decree on energy saving and efficiency, we needs experiences from other countries like Japan, e.g. to overcome institutional elements lack experience, capability, funding, e.g. barriers.