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Annex 1 Sector context and assessment

1 Policy and legal framework

Vietnam has worked with energy efficiency issues for more than 15 years, starting in the mid-1990s with the first projects on assessing the electricity savings potential and promoting Demand Side Management (DSM) as a means to reduce the growth in the need for power capacity. Gradually the Government of Vietnam has intensified the efforts to promote development in the field of energy efficiency and conservation.

Key policies and laws

In September 2003, the Decree on Energy Efficiency and Conservation (EEC), numbered 102/2003/ND-CP, was issued. This Decree was the first step in energy efficiency and provided a definition of designated enterprises and buildings¹, outlined the responsibilities of different stakeholders and introduced incentive mechanisms. Beside this, the decree called for developing national target program on energy efficiency and conservation. In March 2011, this Decree was replaced by Decree number 21/2011/ND-CP Regulating Measures to Implement Law on Energy Efficiency and Conservation (described below). However, related circulars and decisions remain valid.

In July 2004, following the issue of Decree 102/2003/ND-CP, a Guiding Circular on Energy Efficiency and Conservation of Manufacturing Facilities, numbered 01/2004/TT-BCN, was issued by Ministry of Industry (now the Ministry of Industry and Trade). The circular provides separate instruction to non-designated and designated industry. While it required both types of enterprises to report energy performance annually to the Departments of Industry and Trade (DOIT), the designated enterprises are required to assign an energy manager, take appropriate actions to reduce energy consumption and report the performance before and after intervention. It was also required that the DOIT should check, update the situation of industries and report to MOIT annually.

In November 2005, the Vietnam Construction Standard on Energy Efficiency Building Code (EEBC) numbered QCXDVN 09:2005 was issued under decision number 40/2005/QD-BXD by Ministry of Construction. The standard is applied to new buildings or buildings greater than 2500m². The building code sets design requirements for outside layers, ventilation, lighting, energy consumption, water heating, and outlines how to calculate energy efficiency for the entire building.

In April 2006, based on Decree 102/2003/ND-CP, a Decision on National Target Program on Energy Conservation and Efficient Use was issued with number 79/2006/QD-TT. The program was planned for the period of 2006-2015, and is divided into two phases. Phase I (2006-2010) aims to reduce 3-5% of energy

¹According to the later decree in March 2011, designated enterprises (industry, agricultural based or transportation) are the ones with total energy consumption of more than 1000 TOE per year. Designated buildings (offices, living, education, medication, entertaining, sporting, hotel, supermarket, restaurants, shops) are the ones that annually consume more than 500 TOE in all type of energy. Designated units must apply energy management model, submit energy audit report and 5 year plan on EEC to DOIT.

consumption, to develop legal framework, phase II (2011-2015) aims to reduction of energy consumption by 5-8% by further dissemination of results in phase I.

In November 2007, an inter-ministerial-circular on management and usage of state budget for VNEEP was issued with number 142/2007/TTLT-BTC-BCT. The circular defined ceiling financial supports to energy management models (in building, enterprise this support shall be 30% of investment but no more than 70 million VND per model), to energy audit (50% of audit fee and maximum of 50 million VND per audit) and product labelling (30% of total cost and maximum of 60 million VND per enterprise).

In June 2010, the Law on Energy Efficiency and Conservation was approved by 12th National Assembly and became effective on 1 January 2011. This Law is seen as a breakthrough in creating an enabling environment for energy efficiency.

In March 2011, a Decree on Regulating Measures to Implement Law on Energy Efficiency and Conservation, numbered 21/2011/ND-CP was issued. This decree confirmed and revised definition of designated units, responsibility of stakeholders and needs of funding mechanism to promote energy efficiency and conservation that was identified in earlier decree number 102/2003/ND-CP. The Decree confirmed management role of MOIT in coordinating activities with other ministries and sectors. MOIT is in charge of compulsory and voluntary Energy efficiency and conservation activities in production enterprises, while Ministry of Construction is in charge of energy efficiency and conservation activities in building. Provincial Peoples committees are in charge of development and implementation of VNEEP as a part of provincial social economic development plan. The decree also identified the activities, budget and organization of VNEEP. The Decree allows for financial support for investment projects involving upgrade of production facilities or expansion with energy saving technology.

In August 2011, the Government issued a Decree on Administrative Fines on Energy Efficiency and Conservation, numbered 73/2011/ND-CP. This decree regulates administrative fines for violations in 6 areas of (1) energy audit, (2) energy efficiency and conservation in industry, building, transportation and agricultural activities, (3) designated units, (4) labelling, (5) production, import, export and usage of vehicles-to-be-eliminated, and (6) blocking official activities. A fine of 10 to 30 million VND and 20 to 30 million VND is applied for non-compliance to industry energy efficiency requirements and building code.

In December 2011, the Government issued Decision number 2406/QĐ-TTg promulgating a List of Nation Target Programs in the period 2012-2015. VNEEP is 11th of 16 national target programs. According to the decision, the VNEEP in this period consists of 4 component projects for energy efficiency and conservation in (1) public, (2) industry, (3) building and (4) transportation.

Assessment

Vietnam has setup an appropriate policy and legal framework for energy efficiency and conservation. However, the legal framework and capacity for enforcement is still at the early stage. The main gaps are:

Industry

- Activating the role of local authorities: DOIT under the PPC act as the focal point to promote energy efficiency and conservation in provinces. Their tasks include development and implementation of VNEEP program, checking and reporting performance of the programme to MOIT. The capacity at local level in many provinces to carry out these tasks is still inadequate. MOIT has been undertaking a programme to activate and capacitate the provinces and assist them in prioritizing their actions.
- Promotion of energy efficiency in SMEs: Although the priority for energy efficiency is rightly on the large scale designated industries there is a still a recognition that SME sector which accounts for 40% Viet Nam's industrial energy use is important and needs early attention. A number of pilots and strategies have been tested and have demonstrated good results. These need to be replicated and rollout to the provincial levels. Guidance is needed on selection of promising sectors so that promotion efforts are well prioritized.
- Balancing promotion and enforcement: Enforcement of the provisions of the law and its regulations is a weak point that will require considerable attention in the future. The legal framework for enforcement is not completed and will take some years before it is fully effective. Promotion and use of voluntary agreements should be initiated at this stage while detailing legal document and building up capacity of central and local authorities. For example, there are administrative fines identified for industrial violation to article 24 in decree 21/2011/ND-CP - however the mechanism for compliance is not yet in place and the administrative fines shall only be applied to designated units when capacity of inspection and supervision of local authority is sufficient. It is likely that the regulations will develop and be adjusted as more experience is gained on their impact on the ground.
- Capacity: Underlying all aspects of implementation of the legal framework is insufficient capacity and awareness of energy efficiency in the public sector (at national and local level), the private sector amongst service providers and industry themselves. For example, DOIT are supposed to check and evaluate energy performance of enterprises but they do not have sufficient technical knowledge – not every province has an energy efficiency and conservation centre or even a person specialised in this area.
- The incentive environment: The energy price in Viet Nam is still too low to provide a strong commercial incentive. Energy prices are heavily subsidized and it does not always make overwhelming commercial sense for industry owners to adopt energy efficiency practices in the face of other demands on their time and capital. There is a policy of gradually increasing energy prices to reflect market levels but also a concern that doing this too quickly could cause social unrest and economic upheaval.

Buildings

- Revision of building code and guiding circulars: The legal framework on energy efficiency in building is at early stage, mainly based on a building code from 2005. The building code was developed based on general requirements. For example there is no specification of bench mark figures for energy use per square meter or variation according to climate zone, type of building etc. The building code is now under revision and once this is done, more specific circulars on how to interpret and follow the code will still be needed.

- Capacity – Viet Nam has experienced a building boom and the sheer number of inspectors required to enforce the building code means presents a considerable capacity development challenge. Enforcing the building codes and promoting more energy efficient practices in buildings is a complex task and most of the existing building inspectors will require rigorous training.

2 Institutional set up and coordination arrangements

Key actors and stakeholders

The MOIT is the lead agency in managing and coordinating energy efficiency and conservation activities in Vietnam. Currently, all activities in the field of energy efficiency and conservation shall be integrated into VNEEP. A VNEEP steering committee was established to ensure the success of the program on behalf of MOIT. Energy Efficiency and Conservation Office (EECO) plays significant role in coordinating and assisting VNEEP steering committee in planning and implementation of VNEEP.

VNEEP Steering Committee was first established in May 2006 under decision 1294/QD-BCN by Ministry of Industry (now is MOIT). Number and names of members have been changed four times and updated by decision number 6469/QD-BCD in December 2011. The steering committee has 19 members from Ministry of Industry and Trade MOIT (4), Ministry of Information and Communication MIC, People Committees of Hanoi and Ho Chi Minh city, Ministry of Planning and Investment MPI, Ministry of Construction MOC, Ministry of Transportation MOT, Ministry of Justice MOJ, Ministry of Education and Training MOET, Ministry of Agricultural Rural Development MARD, Ministry of Science and Technology MOST, Vietnam National Coal-Mineral Industries Holding Corporation Ltd VINACOMIN, Vietnam Electrical Engineering Association VEEA, Ministry of Finance MOF, Vietnam Electricity EVN, and Petro Vietnam Oil and Gas Group PVN. MOIT Minister is the chairman of VNEEP Steering Committee. VNEEP Steering Committee has established Energy Efficiency and Conservation Office as standing office at MOIT.

Energy Efficiency and Conservation Office (EECO) was established in April 2007 under Department of Science and Technology of MOIT with 13 members by decision 919/QD-BCN. In September 2011, the MOIT established its specialized General Directorate of Energy with 12 functioning departments and two centers by Government Decision number 50/2011/QD-TTg. EECO has been moved to the Department of Science, Technology and Energy Efficiency under General Directorate of Energy. The EECO function remains unchanged as the standing office to support VNEEP Steering Committee in coordination and contact with all national and international stakeholders. Currently EECO has 7 members (1 director, 1 deputy director, 4 professional staff and 1 accountant cum administrator), who are also officials of the host Department. EECO has assigned one staff on training, one on legal document and one on provincial energy efficiency activities. EECO is planning to double their number of staff in 2012 to return to the levels of 2010 before it was transferred.

Provincial People Committees (PPC) is present in all 63 provinces. The PPC is responsible for development of an energy efficiency and conservation plan as a part of

provincial social-economic development plan. Besides, the PPC shall organize and check the implementation of this plan. The PPC decides the structural organization and provides provincial budget for annual activities of local Departments, including Department of Industry and Trade (DOIT).

There are 17 Energy Conservation Centers , of them 10 are set up under DOIT (in Hai Phong, Phu Tho, Tien Giang, Hanoi, Binh Phuoc, Dong Thap, Bac Ninh, Bac Giang, Can Tho, and Quang Nam) and another 7 under Department of Science and Technology (in Vinh Phuc, Hai Phong, Dong Nai, Ho Chi Minh city, An Giang, Da Nang and Binh Duong). These centers operate with two sources of funding. There are provincial budget from PPC through their host Department for public services and consultancy fee for deliver services to industries under contract base.

There are sectoral association, sectoral research centers and universities involved in Energy efficiency and conservation activities at different levels. The MOIT has a list of 955 Associations in Vietnam. Association were set up generally as Vietnam Energy Conservation and Energy Efficiency, Vietnam Small and Medium Enterprises, locally as Hanoi SMEs, and also sectorally eg. as a seafood association, textile association etc. In the field of construction, there are Federation and Civil Engineering Association VFCEA (with 13 member specialized associations and 40 provincial associations and 11 research centres), Vietnam Green Building Association. Associations provide technical support to enterprises in doing business, mainly either on legal aspects, technology and trading.

There are also Sectoral Research Centre/Institute for ceramics, food processing, leather and energy and Vietnam Institute for Building Material to support Ministries in developing strategy, development program and some researches in technology and materials. Besides research centre and institutes, MOIT and MOC also work with Universities in researching and developing new materials and technologies. MOIT has a close corporation with Hanoi University of Science and Technology in developing training courses and technology and MOC has a close corporation with Hanoi Architectural University and Ho Chi Minh city University of Architecture in development of energy efficiency centres.

There is no ESCO in Vietnam that follows the international concept, but Energy Service Providers, have delivered energy efficiency consultancy and equipment since 2003, when the first decree on energy efficiency was issued. These service providers have experience in working with industry and building. Besides, MOIT and MOC are working on certificating energy auditors annually. A first batch of 20 auditors were intensively trained and certified in May 2012.

Assessment

The Energy efficiency and conservation activities are strongly coordinated and led by EECO, particularly by the Director of Science, Technology and Energy Efficiency. EECO has proven to be an effective coordinator of Energy efficiency and conservation activities under VNEEP. However, to start a new support on SMEs and Building under EECO, the following issues are relevant:

- EECO is in high need of doubling their staff members as planned: There only 6 technical staff in EECO which his judged as half the minimum number necessary to carry out the increasingly intensive tasks of coordinating the VNEEP. There are

also many donor projects and these assist in carrying out activities but also place a coordination burden on the main EECO.

- Involvement of Energy Efficiency and Conservation Centre and Provincial People Committee: Centres are established by PPCs, who are responsible for energy performance of province. The local activities shall be much more effective if more PPCs establish energy efficiency and conservation centers and ensure that they are well staffed and resourced. These centers are also the key means of building capacity at the local level.
- Involvement of private service providers: Greater involvement of private service providers is needed to supplement and complement the energy efficiency and conservation centers. Creation of a market for energy efficiency services will help ensure sustainability of current and future energy efficiency initiatives.
- Involvement of other research and development stakeholders: There are many research and development organizations (association, centre/institutes and university) with proven success in the field of energy efficiency that can be further involved in energy efficiency activities.
- Involvement of inspectors at Department of Construction: MOC is promoting energy efficiency in building mainly through two universities of architectures. In order to widen the enforcement activities of MOC, project activities in building code should target local authorities as key end beneficiaries. Role of DOC is still relatively weak in overall management of buildings.

3 VNEEP Programs and Plans

VNEEP Program and Plans

In 2006, the Government of Vietnam has approved National Target Program on Energy Conservation and Efficient Use (VNEEP) for the period of 2006-2015. The program has overall objectives of reducing energy consumption, thus reducing investment on the supply side, reducing environmental impact, making efficient use of energy resources as well as contributing sustainable socio-economic development. The program set targets of reducing energy consumption by 3-5% in phase I (2006-2010) and 5-8% in phase II (2011-2015) by targeting four main groups of public, industry, building and transportation.

In March 2011, MOIT prepared a conclusion report on achievement of phase I. The desired target of phase I was met with energy reduction with energy reduction by 3.4%. Phase I was carried out with 6 program groups and 11 projects. The program focused on (1) stage management, (2) public awareness and education, (3) equipment, (4) industrial production, (5) building and (6) transportation.

In December 2011, VNEEP phase II (2012-2015) was approved with 4 program groups for energy efficiency and conservation in (1) public awareness and education, (2) Industry, (3) building and (4) transportation. Based on this, a proposal on VNEEP activities phase II was prepared with target of savings energy consumption by 5% in light industry, 10% in heavy industry and 10% in construction activities. A total national budget of 820 billion VND and 15 projects was also proposed.

Four program groups and 15 projects were proposed as follows:

Program group 1: Public Awareness and Education

1.1. Public awareness raising

- 1.2. Curriculum development
- 1.3. Household pilot
- Program group 2: High Efficient Equipment
 - 2.1. Standard and labelling
 - 2.2. Equipment manufacturer support
 - 2.3. Production enterprise support
 - 2.4. Energy management model
- Program group 3: Building
 - 3.1. Construction codes
 - 3.2. Training of Energy Manager
 - 3.3. Green Building
 - 3.4. Market development
 - 3.5. Public lighting
- Program group 4: Transportation
 - 4.1. Master plan
 - 4.2. Improvement
 - 4.3. New energy, technology

It is expected that the proposal shall be approved by the end of June 2012 and be the base on which to develop annual plans.

Assessment

Phase I has achieved its target and learnt a number of lessons for continuation in phase II. The following assessment was withdrawn from annex 5 of MOIT's phase I report in March 2011:

- Weak monitoring and coordination: It concluded "*Office buildings, production units received budget funds for energy efficiency and conservation but the benefits are not regularly monitored*". This was partly contributed by unavailability of M&E system in phase I. It was also recommended to "*strengthening the organizational structure, resources from central to local levels to implement, supervise, coordinate and enforcement of Law on Energy Efficiency and Conservation*".
- Weak action from Provincial People Committee: The report recommended that "*provincial people committee shall be actively planning energy efficiency and conservation, considering it as the responsibility and obligation under socio-economic program*"
- SMEs have high energy saving potential and in need of supports: It evaluated "*both industry and construction have great energy saving potentials but difficult to implement, especially SMEs because most of them are using outdated technology. SME's owners have limited awareness and they are facing problem of capital funding for replacing technology and it takes time*". Looking at phase 1 achievement, no effort was made for SMEs.
- Weak enforcement in compliance to building code: It stated "*no deployment of energy efficiency in commercial building due to lack of human resources from central to local levels. The building code was issued in 2005 but not put in enforcement yet. Design and construction is partial applied by individual measure and device*". The building code is under revision by MOC, but the issue of new revision building code does not secure the enforcement unless there is additional awareness and guidance to central to local level inspectors.

4 Financing mechanisms

Main mechanisms

There are several funding mechanisms that can be used to finance energy efficiency in SMEs. They can be categorised under 3 types: (1) Government subsidy facility (2) PECSME loan guarantee fund and (3) other.

Government Subsidy facility The Government budget provides a subsidy of up to 30% or 5 billion VND per application. The current subsidy system is only available for Governmental enterprises (with at least 15% Government share) however a new circular intended to be used for donor funds (specifically the Danish investment funds) is under preparation that would allow private sector industries to apply. 16 projects in the areas of industry, and construction have successfully applied and received subsidies in phase I of VNEEP.

A Loan Guarantee was introduced by UNDP/GEF PECSME project (Promoting Energy Conservation in Small and Medium Scale Enterprise, 2006-2011). This project had a 1.7 million USD as a loan guarantee fund to SMEs' investment in energy efficiency measures. SMEs with approved energy efficiency investment projects could borrow from VietinBank at commercial interest rates without collateral. VietinBank was involved because it is the main bank for industry and has some 160 branches in the country with over 23,000 SME clients. The bank set aside USD 10.4 million for energy efficiency projects for SMEs. The fund carries about 75% of the risk as loan guarantee on investments ranging from 80 million VND to 2 billion VND. In total some 54 projects have been implemented with a total borrowing for energy efficiency of some VND 45 billion (USD 2.25 million). About 50% of the loans are already paid back with only 2 clients defaulting for more than 1 year with a total write off of under VND 200 million (USD 10,000) or less than 0.5%. The VietinBank is interested to continue and revive the loan guarantee fund but for reasons of economy of scale cannot consider a loan guarantee fund of less than USD 10 million.

The PECSME project ended in 2011 and project remaining funds were transferred to the National Foundation for Science and Technology Development. Under this scheme, SMEs with approved energy efficiency investment projects shall approach banks with loan guarantee up to 70% and pay annual guarantee fee of 0.8%.

Other financing mechanisms for SMEs. The Energy Efficiency and Cleaner Production Financing Project by International Finance Corporation (IFC) and banks commit 50 million USD to establish a commercial lending service for energy efficiency and cleaner production projects. The commercial lending programme is executed by the Techcombank for maximum loan duration of 7 years and free support of preparing loan proposal to enterprises. This program targets SMEs, with priority to industrial production enterprises in the fields of cement, steel making, tile and brick making; and investors in generic energy equipment such as lighting system, ventilation, air condition system that are energy efficient.

The Green Credit Trust Fund (GCTF) of 5 million USD was established in Vietnam with resources from State Secretariate of Economic Affairs (SECO) (Switzerland)

through Techcombank, Vietnam International Bank (VIB) and Asian Commercial Bank (ACB) to help SMEs improve their resources efficiency and reduce at-source pollution, moving towards sustainable development. Investors in cleaner production solutions (including EE) can borrow the bank with 50% loan guarantee. After 6 month of operation, if the reduction of 50% of emission is reached, the borrower will be granted by 25% of the investment costs or a maximum of 200.000 USD.

There are also a number of other financial mechanisms which are being developed by KFW and others.

Assessment

- A comprehensive and sustainable financial mechanism for energy efficiency is not yet established: The available mechanisms support a very limited number of investment projects each with a different rationale. Within 5 years, the government subsidy facility provided supports to 16 projects, the PECSME loan guarantee fund provided investment capital for 54 projects and the GCTF supported 10 projects.
- Government subsidy facility should be available for SMEs: The current government subsidy facility requires Government ownership while very few SMEs can meet this criteria. The facility should be accessible to all SMEs.
- Market for commercial loan in energy efficiency is not established: IFC is still building this market and commercial loan has no advantage in financing energy efficiency project at this stage.
- There is no updated review of financial mechanisms. There is a review from 2008 which focuses on cleaner production (Ref: 24) and also a partial review from 2011 (Ref: 15) which focuses on large funding mechanisms for energy efficiency and renewable energy provided by the Asian Development Bank (mainly for the cement industry) and the World Bank (Renewable Energy Development project) as well as the Green Credit Trust Fund (SECO) and PECSME (UNIDO). As mentioned in the Danida review of 2011 (Ref 18) a thorough review of the financial mechanisms is required.

5 Donors

Main donors

During phase I of VNEEP, the program has received International Corporation in energy efficiency from 5 key donors. They are ADB, Danida, Japan Government, UN, and WB. A good summary of the current efforts is available from a donor coordination meeting (Ref: 6).

Asian Development Bank (ADB): ADB provided financial support of 0,9 million US\$ to carry out project "Supporting the implementation of the National Energy Efficiency Program". The project was carried out from 2008-2010 with energy survey in industrial enterprise, development of training materials for energy managers, energy audits in large enterprise, building capacity of energy efficiency and conservation center and developing financing mechanism for industrial enterprises. Currently ADB focuses its activities on energy efficiency investment of 5 cement plants and 2 steel plants with total capital of 40 million USD. ADB also expressed interest in improving

the energy efficiency of thermal power plants and electricity distribution by compact bulbs and clean development mechanism (CDM).

Danish International Development Agency: Danida provided 15 million USD for technical assistance to the implementation of VNEEP from 2010-2012 with an extension to 2015. The technical and financial support aims to develop a national certification scheme and standard training program for energy auditors and managers, to develop a network of energy consulting firms, to capacitate energy efficiency and conservation centres, to develop a communication strategy, to develop M&E system and data collection procedure for the energy database.

The Japan Government provided supports through Japan International Cooperation Agency (JICA) and Ministry of Economy, Trade and Industry of Japan (METI): JICA provided a 50 million USD loan commitment under “Private sector investment finance program” for energy conservation and renewable energy projects to purchase high efficient equipment or renewable technology. This low-interest two-step loan is executed by Vietnam Development Bank (VDB) for investment from 1 million USD. Ministry of Economy, Trade and Industry of Japan (METI) through the Energy Conservation Center Japan (ECCJ) has been actively supporting VNEEP in capacity building. Nearly 50 Vietnamese experts participated in training programs in Japan. ECCJ also provided assistance in developing National Law on Energy Efficiency and Conservation.

United Nations (UN): Three UN organizations provided supports to VNEEP. They are UNDP, UNEP and UNIDO.

UNDP helped Vietnam in conducting project “Promoting Energy Conservation in Small and Medium Scale Enterprises PECSME” from 2005-2011 with total budget of 28.8 million USD. This project was hosted by MOST and focused to SMEs in 5 sectors of brick, ceramics, pulp and paper, textile and food processing. GEF/UNDP/PECSME project built a solid basic for replication: Demonstration projects in SMEs showed a high energy saving potential in brick (26-60%), ceramics and porcelain (15-90%), and textile (15-25%). The project provided awareness raising and technical assistance as well as financial support to SMEs in energy efficiency. This was the first successful project in energy efficiency with SMEs. UNDP is helping Vietnam in “Barrier removal to the cost-effective development and implementation of energy efficiency standards and labeling” from 2009 to 2014 with 0,6 million USD from GEF. Beside capacity building, six appliances shall be selected for removing technical barriers and setting energy benchmarks by adopting applicable and recognizable energy efficiency standards and labeling to all products in the region.

UNEP is helping Vietnam in “phasing out incandescent lamps through lighting market transformation in Vietnam” from 2010-2014 with GEF funding of 3 million USD. The project aims to enhance local lighting capacity, improve QA/QC framework, raise awareness on ESL and develop national policy and support program toward phasing out of ILs and promotion of ESLs.

UNIDO is helping Vietnam in “promoting industrial energy efficiency through system optimization and energy management standards” from 2011 to 2014 with 4,5 million

USD from GEF. The project aims to build professional energy efficiency consultants on system optimization and energy management standard ISO 50001. It provides pilot in 4 sectors of rubber, textile, pulp and paper and food and beverage.

World Bank (WB): World Bank began support Vietnam in 1997 with the “Vietnam Demand-Side Management (DSM) and Energy Efficiency phase 1” project and continued to support the implementation of phase 2. World Bank is currently working with the EECO to study a pilot program in commercial building. Five high-growth sectors shall be identified to receive WB supports on development and implementation of sectoral energy action plan till 2016. The WB is planning to start with chemical, then pulp and paper, food and beverage and plastic.

The International Finance Corporation IFC is currently supporting efforts in building up commercial loans in energy efficiency investment. IFC is supporting VNEEP in “Vietnam Clean Production and Energy Efficiency” from 2011-2016 with 2.3 million USD from GEF. The project aims to develop energy efficiency action plans for key high-growth industrial sectors and in the same time build capacity for ESCO and development of market mechanisms.

In March 2012, IFC signed an MOU with MOC on corporation of Energy Efficiency in Building in Vietnam. The corporation covers three main areas: building survey, revising building energy efficiency code (BEEC) and development of tools and training materials. It was expected that energy consumption in 60 buildings of office, hotels, rentals, hospitals in three main pilot cities of Hanoi, Danang and Ho Chi Minh city shall be surveyed to understand baseline of Vietnam Building. The corporation also provide opportunity to revise BEEC to issue by December 2012 with expectation toward relevance to local practices and readiness, and in the same time the BEEC become easy for implementation, enforcement of construction community and government. In order to support the implementation and enforcement of BEEC, calculation tools, draft technical checklist and training materials shall be developed.

Assessment

Vietnam has received a variety of international support, from legal development to implementation. There is a reasonably well functioning coordination between donors in supporting energy efficiency activities to Vietnam and the recent donor coordination meeting has been very helpful (Ref.6). However, there are still overlaps and some gaps in supporting industrial and building sectors as follows:

- Most assistance is targeted at large enterprises: After the closure of the PECSME projects most donor support is directed to the large designated industries.
- International support in building is just started at MOU level: Unlike industrial sector, support in building is just starting in the form of MOU with MOC. The most significant international support is from IFC in surveying and revising building codes. MOC has signed MOUs for energy efficiency building with Bulgaria, Russia and Germany Government. No specific projects with concrete activities have yet started.

6 Notes on the potential of SMEs

This section is drawn mainly from the proposal submitted by MOIT (Ref:12)

Small and Medium Enterprises (SMEs) are registered business establishments with less than 100 billion VND in capital or less than 300 employees (Decree No. 56/2009/ND-CP dated June 30th, 2009). According to Vietnam Association for Small and Medium Enterprise, Vietnam has 500,000 officially registered enterprises, of which 97% are small and medium scale. The SME sector has created 50% of jobs and made contribution of up to 40% to the gross domestic product and continues to be a dynamic sector, creating a lot of jobs for the economy in the future.

SMEs are using variation form of energy, from electricity, coal, oil, gas to wood/agricultural waste products. As reported by the National Energy Conservation Office, the industrial production sector consumes more than 14 million tons of oil equivalents (TOE) in 2007. This figure is forecasted to increase to 33.5 million TOE in 2020 and 50.5 million TOE in 2030. The energy consumption of SMEs accounts for around 45%-50% in volume out of the total energy consumption in the industry. Mr. Hoang Quoc Vuong, Deputy Minister of Industry and Trade noted the high energy saving potential in Vietnam of SMEs which can save up to 20% (25 March 2011 on closing phase I of VNEEP).

During the period of 2005-2011, GEF and UNDP supported Vietnam in Promoting Energy Conservation in Small and Medium Scale Enterprise (PECSME project). The project aimed to promote energy conservation in five sectors of brick, ceramics, food processing, garment-textile and pulp and paper. Brick and ceramics are two sectors with high reduction of energy cost (17%-60%), low investment cost (3-10 billion VND per project), while other three sectors required higher investment (286-664 billion VND/project) and achieved lower reduction in energy cost (4-12%). There were 38%, 24%, 20%, 9% and 9% of energy conservation demonstrations in the sectors of brick, ceramic, food pressing, garment-textile and pulp and paper.

According to the Report "*Summarizing evaluation results of technological level of industrial sectors*" made by the Department of Science and Technology under the Ministry of Industry and Trade, many industrial SMEs still use the backward equipment which has been used for more than 30 years, and in some cases more than 50 years. Skills of managing staff and equipment operators in SMEs are usually limited by being trained unsystematically. Many SMEs are not aware of energy conservation methods and solutions such as energy audit, and energy management. As a result energy consumption in Vietnam is higher than that of other regional countries and the world's average.

The following table summarizes energy saving potentials in sectors with a high number of SMEs based on energy audit reports of MOST, MOIT and ECC in Ho Chi Minh city. The number of SMEs are mainly from Statistic Year Book 2008, General Statistics Office, the Statistics Publishing House in 2008, page 167-173, while that of brick sectors is from survey of Vietnam Institute for Building Materials and of ceramic sector is from PECSME survey in three big ceramic and porcelain production areas (Bat Trang, Binh Duong and Dong Nai).

Sector	Number of SMEs	Energy cost/production cost	Energy saving potential	Typical technological solutions
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Brick	10,000	30-40%	30-60%	Good housekeeping, replacement of manual brick kilns using wood or coal to vertical shaft brick kilns, un-burned technology
Ceramics-porcelain and glass production	1,690	30%	15-70%	Good housekeeping, modification of drying kiln, replacement of a manual drying kiln to LPG with heat recovery
Paper & pulp	1,153	20-25%		
Textile garment	1,788	20-25%	15-25%	Good housekeeping, change of lighting, condensed water recovery, steam trap, installation of frequency inverter...
Food processing	5628	18-20%		
Rubber and plastic	1,889	6-70%	10-15%	Good housekeeping, installation of frequency converter, change of press machines
Steel	556	6-7%		
Metal products	3683	Na.	15-30%	Good housekeeping, material pre-treatment, production planning and management
Chemicals	1305	30%	25-50%	Good house keeping, material substitution, waste heat recovery, installation of frequency converter, steam strap, change of technology and equipment.

A survey in 500 participating enterprises under PECSME Project showed the following constrains in promoting energy conservation in SMEs:

- (i) Insufficient information on energy conservation measures/technologies
- (ii) Insufficient information on professional service providers
- (iii) Insufficient investment capital to implement energy efficiency measures
- (iv) Difficult access to commercial loans sources for investment in energy efficiency measures.

Annex 2 Financial risk and safeguards

These issues, risks and safeguards are drawn from the VNEEP component of the climate adaptation and mitigation programme as reviewed in June 2011 (Ref 18). They will be reviewed regularly as part of the Danida support to VNEEP under the the climate adaptation and mitigation programme. This project therefore will not need to monitor them independently.

Institution	Issue	Proposed Action and Fiduciary Intervention	Year					Outcome		Current Status
			1	2	3	4	5	Benchmark	Trigger	Joint Review (June 2011)
MoIT	Management Board	As VNEEP funds increase significantly, a separate VNEEP Management Board (within the EEO) needs to be established, and include other ministries (MPI, MoF and MARD) plus donors as ex-officio members	√					More focused VNEEP Managing Board established, with each member having a clearly defined role, VNEEP functions and management / implementation responsibilities	VNEEP Implementation Manual includes: (i) clear, focused management arrangements; (ii) a results matrix agreed with a baseline and annual VNEEP targets (iii) guidelines on decentralisation to provincial level for implementing EE activities	(i) A Management Board has not been established. The scope of EEO is too narrow for high level representation; (ii) A Steering Committee does exist; (iii) VNEEP Implementation Manuals need to be developed.
MoIT	Management mechanisms	EEO and DoF of MoIT should have a clearly defined role and function in managing & implementing VNEEP ²	√							MOIT was assigned the role on behalf of the GoV to coordinate VNEEP activities. EEO is cooperating with DoF of MOIT in financial management issues.
MoIT, MPI, MoF	Implementation Framework	VNEEP Framework document should include very clear & monitorable objectives, with targets and arrangements to meet targets as funds are decentralized to provinces.	√					VNEEP Government / Donor Agreement / MoU includes Results Matrix with baseline and targets		Incomplete; To be considered in connection with monitoring and evaluation system.

² e.g. Role of MPI should be to integrate the impact & resourcing of energy efficiency into policy & planning within SEDP 2011-2020 & in 5 year plans

Institution	Issue	Proposed Action and Fiduciary Intervention	Year					Outcome		Current Status
			1	2	3	4	5	Benchmark	Trigger	Joint Review (June 2011)
MoIT	Administration and oversight	Assessment of resourcing needs for VNEEP undertaken and appropriate resources provided for in VNEEP Budget			√			EEO-MoIT capacity for VNEEP management is adequate as funds increase significantly	Phase 1 Review confirms that capacity of the VNEEP managing office is at an adequate level. If not found to be adequate then a Capacity Building Plan agreed	The role of EEO is increasing, and there is need to strengthening its capacity. The position of EEO in the administrative system should be considered.
MoIT, PPC, provincial DOIC	Coordination of activities	EEO-MoIT should raise the status of EE issues, convening meetings at national level, decentralize funds to PPC. At provincial level, arrangements need to integrate decision-making, as funds decentralized to PPC			√			EEO-MoIT, Steering Committees and MoIT, -PPC, DOIC coordinated department meetings held regularly		Capacity Building Plan not yet developed. Should be proposed for VNEEP Phase 2.
MoIT	Donor Coordination	A mechanism should be determined to effectively coordinate donor activities in field of EE. Supporting donors should gain full support from HQ before VNEEP commences			√		√	Donor coordination mechanism established and working on regular basis	Phase 1 Review finds that donor resource inputs and comments are effectively coordinated	Coordination seems to occur without a fixed mechanism. MOIT plans to arrange a second donor coordination meeting in this year. The mechanism of donor coordination should be established.
MoIT, PPC	Local capacity	A prioritised and focused national capacity building action plan is drawn up for building up capacity of EEO and REEO staff		√	√	√	√	National capacity building plan is drawn up, with explicitly defined skill development plan for MoIT staff and staff in provincial REEOs	As VNEEP funds are decentralized to PPC, PPCs have to report to EEO-MoIT by June 2010 on improvements in capacity required	Eight Energy Efficiency Centers (ECCs) have been established in the last two years, and 20 other agencies are involved in EE activities at province level. Besides MOIT staff, capacity building is especially needed for provincial agencies.
DANIDA,	International	TA provided to all key	√					1 International		Not applicable. At formulation stage of

Institution	Issue	Proposed Action and Fiduciary Intervention	Year					Outcome		Current Status
			1	2	3	4	5	Benchmark	Trigger	Joint Review (June 2011)
MoIT & other relevant GoV line agencies	Technical Advisers	players as required to fulfil their functions, based on their VNEEP roles and responsibilities. International TA jointly recruited by DANIDA & GoV agency (MoIT etc)						Adviser located at MoIT		CCM, it was agreed that one national adviser is located at MoIT (ie. No long-term international advisor).
	National Technical Advisers	Donors provide funding for both international and national TA (though latter will be selected by GoV without consulting donors).	√	√	√	√	√			
MoIT, MoF	Financial management mechanisms	Draft, issue and implement a FM handbook governing and guiding FM issues (FM arrangements, cost norms, reporting, M&E etc) in implementing VNEEP-EE as funds become bigger by DANIDA support		√				Periodic review of Circular on FM arrangements, VNEEP-Handbook	Phase 1 Review finds that sufficient on-the-job training has been provided to line agencies and provinces on provisions in Inter-Ministerial Circular by end-2010 as funds become bigger and decentralized to provinces.	Financial management handbook not yet established. - A comprehensive practical guide for FM issues (FM arrangements, cost norms, reporting, M&E etc) is needed. - The Inter-Ministerial Circular will be revised in 2011. It should include financial management mechanism.
MPI, MoF	GoV counterpart contributions	GoV central State budget contributions to MoIT for VNEEP/ EE activities adequate to implement action plan. Central funding levels at least maintained and realistic levels of	√	√	√	√	√		End-of- Phase 1 and 2 Reviews find that GoV line agency funding is adequate. GoV funding is exceeds 2008 level over 2009-2013	GOV budget continues to increase from 2008 level. Contributions from sub-national levels and companies not yet clear.

Institution	Issue	Proposed Action and Fiduciary Intervention	Year					Outcome		Current Status
			1	2	3	4	5	Benchmark	Trigger	Joint Review (June 2011)
		Provincial, local and company levels of funding set							period and that realistic targets for provincial, local and company contributions are set and realised	
MoF, MoIT	GoV cost norms	A new set of realistic and up-to-date cost norms (e.g. for management, national TA and capacity building activities) is put in place for programme activities	√	√	√	√	√	Revision of Inter-Ministerial Circular guiding VNEEP implementation, and norms revised annually if necessary		The Inter-Ministerial Circular will be revised in 2011, which include cost norms.
MoF, MPI, MoIT	Budget allocation	MoF to ensure that funds are disbursed to MoIT, if decentralized, to PPCs promptly at the start of the financial year	√	√	√	√	√	VNEEP funds disbursed to MoIT and PPCs, if decentralized, in a timely manner		Yes. However, some delays in disbursement does occur.
MoIT, PPC, MPI, MoF	Comprehensive Budgets	Company contributions and Biogas activities should be accounted into VNEEP. MoF-MoIT should address the issue through a clear coding classification, and by a updated inter-ministerial circular stipulating cross-sectoral coordination clearly.	√	√	√	√	√	Budget plan includes all fund sources and expenditures comprehensively.		Issue not examined in detail.
MoF, MPI, MoIT	Allocation of O& M funding	Specific O&M central fund allocations are included as part of annual VNEEP	√	√	√	√	√	Updating Inter-Ministerial Circular to include a	End-of- Phase 1 and 2 Reviews find that O&M funding in place	Not applicable

Institution	Issue	Proposed Action and Fiduciary Intervention	Year					Outcome		Current Status
			1	2	3	4	5	Benchmark	Trigger	Joint Review (June 2011)
		budgets						provision for O&M funding	and implemented	
MoF / DoF	Recurrent budget	Ensure recurrent budget set to enable necessary activities to be undertaken, with checks on spending to ensure sums well spent	√	√	√	√	√	A higher ratio of funds allocated to recurrent budgets and checks carried out to ensure sums necessary	Sufficient GoV funding of recurrent costs	Insufficient funds available to fulfill request from key partners (eg. MOC for work on green buildings).
MoF, State Treasury, MoIT	Reconciliation of allocations and spending	Drawing on experience with other NTPs, State Treasury reports to be used to verify VNEEP expenditures.	√	√	√	√	√	Financial reports from State Treasury used as part of VNEEP financial reporting. Availability of un-used funds at the end of fiscal year separated into capital and recurrent funds.		Yes
MoIT	VNEEP Reporting	Reporting template (with tables, forms etc) prepared and disseminated. Programme Manual drafted with reporting instructions	√					VNEEP Reporting template drawn up		Reporting templates not yet available. Should be included in a Programme Manual.
MPI, MoIT	Supervision of VNEEP works	Ensure regulations in place to enable supervision of works by external supervisors. Commune level supervisory arrangements in place in provinces as decentralization takes place			√			Relevant GoV regulations and commune supervision arrangements are in place to enable effective works	Phase 1 Review confirms that supervision regulations are issued and implemented and that commune and works level supervision arrangements in place	The supervision regulations are not yet issued.

Institution	Issue	Proposed Action and Fiduciary Intervention	Year					Outcome		Current Status
			1	2	3	4	5	Benchmark	Trigger	Joint Review (June 2011)
								supervision.		
MoIT, MPI	Monitoring & Evaluation	MoIT should collaborate with other line agencies to draw up detailed and clear M&E arrangements and these should be included in Inter-Ministerial Circular	√					Detailed and clear M&E arrangements in place		The M&E system for VNEEP is not in place. Some efforts and studies have been conducted, but not yet produced an agreed M&E system.
MoIT, SAV, Donors	External Audit	A regular SAV audit plan for VNEEP-EE to be drawn up, with provision for regular (preferably annual) auditing of VNEEP.	√					Audit Programme implemented on a timely basis	MoU drawn up between MoIT and SAV on VNEEP audit arrangements	Not yet.
SAV, MoF, Donors	Value for Money	Institutionalise and undertake value for money audits on a sample basis			√		√	Value for money audits undertaken by independent auditors (in conjunction with SAV) initially for pilot provinces and then nationally	Value-for-money independent audits in pilot provinces conclude that investments are economical and have acceptable levels of efficiency and effectiveness	Not yet.

Annex 3 List of Danish competencies in energy efficiency

EE in industry

- Development of data bases and statistics on energy consumption in industry
- Mapping of energy consumption and analyses of energy saving potential , e.g. in selected industries
- Development and implementation of energy efficiency measures, e.g.
 - voluntary EE-agreements addressing selected industries
 - mandatory schemes, e.g. minimum requirements for equipment
 - CO₂-emission allowance trading schemes
 - CO₂ levies on industrial consumption
- Implementation of energy management model(s)/system(s), including
 - Training of human resources
 - Development of monitoring systems
 - Information activities
- Implementation of technical/financial schemes in order to enhance EE investments projects, e.g.
 - Training of EE-experts (energy auditors) for EE-centres
 - Providing information material on financial mechanisms and technical issues
 - Development and demonstration of possible business model(s) for enterprises with prospective (profitable/commercial) EE projects, e.g. by supply of external consultancy expertise, including ESCOs
- Sector specific experiences
 - A wide range of Danish industrial enterprises have worked systematically with EE for the a period of 10-15 years and with very good results, i.e. with substantial energy consumption reductions. In this context special attention could be drawn to the following industrial branch of trades, e.g. : food industries (e.g. meat, dairy production, horticulture, fishmeal), medical industries, cement manufacture.

EE in buildings:

- Development and implementation of EE standards /minimum requirements for buildings and for buildings components and materials (windows/doors, insulation, pumps, etc.)
- Development of energy audits for EE in buildings, including e.g.
 - training of energy auditors
 - information activities

- Development and demonstration of possible business models for prospective (profitable/commercial) EE-projects in buildings
- Concepts for and examples of new and retrofitted low energy and sustainable buildings, e.g.
 - Design of highly EE/sustainable new buildings
 - EE upgrades of existing buildings
- Specific activities addressing public sector institutions (e.g. as a show-case)

Cross-cutting activities:

- Planning and prioritisation of EE measures , including design of framework for measures , e.g. the Danish energy saving scheme for energy companies, promoting energy savings among their costumers and the Danish model for implementation af the EU's CO₂ emission allowance trading scheme
- Models for setting up overall cost effective EE-goals/targets covering main end-user energy consumption sectors (industry and trade, households, transport, appliances and lighting)
- Development and implementation of overall EE strategies and actions plans/road maps.

Also, we would certainly agree to assist with specific tasks related to the practical implementation, of EE requirements in the Building Code, e.g.:

- a circular on how to assess EE of a construction project, before a building permit is granted (or not granted), and/or on how to verify that requirements are being met also during the construction phase.
- guidelines, examples of construction details which will make a building comply with the code

Proposal from MoC:

3.2 Experts exchange, training courses and capacity building for relevant stakeholders on EE:

- Nominate experienced short-term and long-term experts from Denmark to assist MoC in implementing activities on EE in buildings
- Organize field trips, surveys, study tours for managers, technicians, experts from Vietnam to Denmark and other countries which have large experience on EE
- Provide coaches, training and capacity building for relevant stakeholders at the central level and construction licensing officials in 63 provinces and cities on energy efficiency and conservation and deployment of Building Code: “Building use energy efficiency”.

Remarks from MECB:

As mentioned above, MCEB could assist in the Building Code review and revision process, if the MoC finds this helpful. Such support would include experts from Denmark.

Also, when the revision process has been completed, MCEB and other experts from Denmark would support practical implementation of the specific requirements.

MCEB would be happy to support workshops and training for relevant stakeholders in Vietnam – in particular construction companies and licensing officials, who would seem to be the ones most immediately affected by the new regulation.

MCEB assistance could also include support for a workshop in Denmark, most likely in the second half of the project period. The scope and purpose would have to be defined in close cooperation between MoC and MCEB.

Proposal from MoC:

3.3 Set up pilot models ...

- To build pilot model buildings applying solutions and technologies for energy efficiency and conservation, thereby replicating to other buildings
- To build 02 model energy efficiency buildings at 02 Centers of Energy Efficiency under MoC for the purpose of education, awareness raising, trainings, capacity building...

Remarks from MECB:

MCEB supports the idea of setting up energy efficient pilot model buildings.

One option would be to have buildings which demonstrate how the Building Code requirements can be met in a practical and cost-effective way. Several such buildings could probably be built in different parts of the country at a relatively modest (extra) cost.

Another option would be to have a more advanced “zero energy” building which demonstrates how low you can get in terms of energy consumption, when energy saving technologies are applied to a very large extent.

After project start, MECB would like to discuss these and other options with the MoC in order to determine how Danish funding could be most helpful.

The funding at hand does not allow for carrying out a complete construction project. Therefore, the MECB suggests that a project proposal be prepared in the present budget period. At the same time, we will seek funding for completion of the project.

Proposal from MoC:

3.4 Support to capacity building, facilities ... for two Centers for Energy Efficiency under the MoC:

- Support for the procurement of facilities, equipment to serve the energy audits, assessment and energy certification for buildings
- Support for training, knowledge transfer, consultancy skills, audit and capacity building for staff from two Centers for consultation on EE under the MoC

Remarks from MECB:

MCEB would like to support training activities addressing relevant stakeholders in Vietnam. However, since resources are limited, it might make sense to focus on those who are most immediately affected and most influential with respect to practical implementation of the requirements.

We tend to think that construction companies and licensing officials would be in this group. Before deciding which institutions and /or organizations to support within this field, their role would have to be clearly defined, e.g. the role of the two EE Centers in Hanoi and HCM.

Proposal from MoC:

3.5 Establishment of a fund or loan mechanism ...:

- Establish a fund and mechanism to provide loans and support buildings in renovating, installing equipment, applying solutions and technologies in EE (from development assistance that the Government of Denmark is supporting the Government of Vietnam in the form of Budget support).

Remarks from MECB:

Financial support, e.g. a fund or a loan mechanism, might well speed up practical implementation of Building Code requirements and/or other EE measures. However, because Danish funds are limited, it is not possible to support such elements under the project.

Annex 5 People met and programme

LIST OF People met *Danish Embassy*

No.	Name	From	Title
1	John Nielsen	Danish Embassy	Ambassador
2	Tran Hong Viet	Climate Change Programme	Programme Manager
3	Nguyen Kim Quy	Water and Sanitation/Mekong River Commission/Green Growth	Senior Programme Officer
4	Jeppe Solmer	Commercial Section	Counsellor
5	Nguyen Thi Thu Hang	Fisheries Sector Programme Support	Programme Manager

Ministry of Industry and Trade

No.	Name	From	Title
1	Hoang Quoc Vuong	Ministry of Industry and Trade	Vice Minister
2	Phuong Hoang Kim	Science Technology and EE Department	Director, EECO's office manager
3	Nguyen Van Long	Science Technology and EE Department	Vice Director
4	Ho Quang Trung	International Cooperation Department	Director General
5	Pham Thi Nga	Project for Promoting Industrial Energy Efficiency through system optimisation and Energy Management Standards in Vietnam	Advisor

Ministry of Construction

No.	Name	From	Title
1	Tran Huu Ha	Department of Science, Technology and Environment	Deputy Director General
2	Nguyen Cong Thinh	Department of Science, Technology and Environment	Expert

No.	Name	From	Title
3	Nguyen Hong My	International Cooperation Department	Vice Director
4	Mr. Loi	Energy Management Department	Expert

Ministry of Finance

No.	Name	From	Title
1	Nguyen Hoang Lam	Bilateral I Division, Department of Debt Management and External Finance	Director

Ministry of Natural Resources and Environment

No.	Name	From	Title
1	Pham Van Tan	General Department of Environment	Director

Ministry of Planning and Investment

No.	Name	From	Title
1	Le Viet Anh	External Economic Department	Deputy Director General
2	Nguyen Thanh Hai	External Economic Department, European and Africa Division	Head of Division
3	Pham Minh Hung	Industrial Energy Department	Expert

Vietnam Energy Conservation and Energy Efficiency Association

No.	Name	From	Title
1	Do Huu Hao	VECEA	Chairman, General Secretary
2	Nguyen Ba Vinh	VECEA	Vice Chairman, Vice General Secretary

Energy Conservation Center, Hanoi Department of Industry and Trade

No.	Name	From	Title
1	Dao Hong Thai	ECC Hanoi	Director
2	Hoang Minh Lam	Electricity Department	Head of Department

Vietnam Association of Small and Medium Enterprises

No.	Name	From	Title
1	Vu Van Dzung	VinaSMEs	Vice General Secretary
2	Nguyen Duc Thang	VinaSMEs	Head of Environmental Advisory Board
3	Nguyen Duc Ngo	VinaSMEs	Programme Manager

Hanoi Architect University

No.	Name	From	Title
1	Nguyen To Lang	Hanoi Architect University	Vice Rector
2	Hoang Manh Nguyen	Institute of Tropical Architecture	Director General
3	Vu An Khanh	Department of Science-Technology and International Cooperation	Architect

World Bank

No.	Name	From	Title
1	Franz Gerner	Energy Sector	Cordinator
2	Laura Altinger	Sustainable Development Programme in Vietnam	Senior Environmental Economist (Climate Change)

No.	Name	From	Title
3	Defne Gencer	Infrastructure Unit	Energy Specialist

UNIDO

No.	Name	From	Title
1	Patrick Jean Gilabert	UNIDO	Representative

JICA

No.	Name	From	Title
1	Shunta Yamaguchi	Project for Establishment of Energy Management Training Center	JICA Expert
2	Nguyen Thi Phuong	Project for Establishment of Energy Management Training Center	Local Coordinator

Vietinbank

No.	Name	From	Title
1	Vuong Thi Huyen	SME Banking Department	Director

Vietnam Energy Sector - Formulation mission, 05.06.2012 - 08.06.2012

Time	Activity	Participants	Venue
Tuesday, 5 June 2012			
11.00 - 12.00	Team arrival, hotel check-in		
13.00 - 13.45	Briefing with embassy	RDE: Ambassador, Tran Hong Viet, Nguyen Kim Quy Team: all members	RDE, 19 Dien Bien Phu, Hanoi
14.00 - 16.00	Meeting Ministry of Industry and Trade: Presentation of VNEEP and suggestion for Danish support	MoIT: Mr. Phuong Hoang Kim, Director of Science Technology and EE department, EECO's office manager, Mr. Ho Quang Trung - Director of International Cooperation Department, Ms. Pham Thi Nga - PECSME project RDE: Tran Hong Viet, Nguyen Kim Quy Team: all mem	Room 207, Building B, MOIT, 54 Hai Ba Trung
18.30 - 20.00	Danish Constitutional day	Team member	Villa 48, Ho Tay Villa Compound, 10 Dang Thai Mai
Wednesday, 6 June 2012			
9.00 - 10.00	Meeting Ministry of Construction: Presentation of EE activities in buildings and suggestions for Danish support	MoC: PhD Tran Huu Ha, Deputy Director General of Science, Technology and Environment Department, Nguyen Thi Hong My - Vice head of International Cooperation Department, Mr. Loi - Energy Management Department RDE: Tran Hong Viet Team: Ulla B.B., Thuy	37 Le Dai Hanh
9.00 - 12.00	Meeting MoIT - SME Project identification	MoIT: Mr. Nguyen Van Long, Deputy Director General of Science, Technology and EE Department, Ms. Pham Thi Nga - PECSMEs project Team: Eric, Ulla V.R, Loan	Room 416, 54 Hai Ba Trung
10.30-11.30	Meeting UNIDO	UNIDO: Mr. Patrick Jean GILABERT - Representative RDE: Tran Hong Viet Team: Ulla B.B, Jesper, Thuy	72 Ly Thuong Kiet
13.30 - 14.30	Meeting Ministry of Finance	MoF: Mr. Nguyen Hoang Lam, Director of Bilateral I Division, Department of Debt Management and External Finance RDE: Tran Hong Viet Team member: Ulla B.B, Jesper, Thuy	28 Tran Hung Dao, R319
13.30 - 14.30	Meeting MoIT - SME Project identification	MoIT: Ms. Pham Thi Nga - PECSMEs project Team: Eric, Ulla V.R, Loan	Room 416, 54 Hai Ba Trung
15.00-16.00	Meeting Energy Conservation and Energy Efficiency Association	Mr. Do Huu Hao - Chairman&General Secretary, Mr. Nguyen Ba Vinh -Vice Chairman & General Secretary RDE: Tran Hong Viet Team: all members	160 Hoang Hoa Tham, Tay Ho, Ha Noi
16.30 - 17.30	Meeting World Bank	Mr. Franz Gerner - Energy Sector Coordinator, Ms. Laura Altinger, Ms Defne Gencer RDE: Tran Hong Viet Team: all members	63 Ly Thai To

Thursday, 7 June 2012

9:00 - 10.15	Meeting Hanoi Energy Efficiency and Conservation Center	Mr. Dao Hong Thai - Director, Mr. Hoang Minh Lam - Head of Electricity Energy, Ms. Huong - Head of General Administration Team: Ulla B.B, Ulla V.R, Jesper, Thuy	Hanoi DoIT, 331 Cau Giay
9.00 - 12.00	Preparation - SME project formulation	Team: Eric, Loan	Hilton Hotel
10.45 - 12.00	Meeting VinaSME (Vietnam SME Association)	Mr. Vu Van Dzung, Vice Secretary General, Mr. Nguyen Duc Thang - Head of Environmental Advisory Board, Mr. Nguyen Duc Ngo - Programme Officer Team: Ulla B.B., Ulla V.R., Jesper, Thuy	Floor 10, Building D Sport Hotel, Hacingo Student village, Le Van Thiem - Nguy Nhu Kon Tum, Thanh Xuan, Hanoi
13.00 - 14.00	Meeting JICA	JICA: Mr. Shunta Yamaguchi - JICA Expert, Ms. Nguyen Thi Phuong - Cordinator Team: Ulla V.R, Jesper, Thuy	Room 207, Building B, MOIT, 54 Hai Ba Trung
13.00-14.00	Meeting MoIT - SME Project formulation	MoIT: Mr. Phuong Hoang Kim Team: Ulla B.B, Eric, Loan	EECO Office, MoIT 54 Hai Ba Trung, Hanoi
14.00 - 15.00	Meeting MOIT	MoIT: Vice Minister Hoang Quoc Vuong, Mr. Phuong Hoang Kim Team: Ulla B.B, Eric, Loan	MOIT, 54 Hai Ba Trung
15.00 - 16.45	Meeting Hanoi Architect University	MoC: Nguyen Hong My - International Cooperation Department, Mr. Loi - Energy Management HAU: Mr. To Lang - Vice Rector, Mr. Hoang Manh Nguyen - Director of Institute of Tropical Architecture, Mr. Vu An Khanh - Architect Team: Ulla V.R., Jesper, Thuy	Architect University, Thanh Xuan, Hanoi
16.00 - 17.00	Meeting MONRE	MONRE: Mr. Pham Van Tan RDE: Tran Hong Viet Team: Ulla B.B	10 Ton That Thuyet, Hanoi

Friday, 8 June 2012

09.00 - 10.00	Meeting Ministry of Planning and Investment	MPI: Mr. Le Viet Anh, Deputy Director General of Foreign Economic Relations Department Mr. Nguyen Thanh Hai, Head of European and African Division, Foreign Economic Relations Department Mr. Pham Minh Hung - Dept of Industry Energy Sector RDE: Tran Hong Vi	6B Hoang Dieu
10.30-11.30	Meeting Embassy - Commercial Section	RDE: Jeppe Solmer - Counsellor (Commercial), Ms. Nguyen Thi Thu Hang - Fisheries Programme Manager, Tran Hong Viet Team: Ulla B.B, Ulla V.R., Jesper, Thuy	
9:00-12:00	Preparation - project background and presentation	Team: Eric, Loan	Hilton Hotel
12:00-13:00	Preparation debriefing note	Team: all members	RDE, 19 Dien Bien Phu, Hanoi
13.00 - 13.45	Debriefing with embassy	RDE: Ambassador, Lis, Viet, Kim Quy	RDE, 19 Dien Bien Phu, Hanoi
14.00 - 15.30	Debriefing with MOIT	MoIT: Mr. Phuong Hoang Kim, Director of Science Technology and EE department, EECO's office manager MoC: Mr. Tran Huu Ha, Mr. Thinh - Dept of Science, Technology and Environment, Ms. Hong My - Dept of International Cooperation, Team: all members	Room 207, Building B, MOIT, 54 Hai Ba Trung
16.00-17.00	Meeting Vietinbank	Vietinbank: Mr. Vuong Thi Huyen - Director, SME banking Department. RDE: Tran Hong Viet Team: Ulla B.B, Eric, Loan, Thuy	Vietinbank Head office, 108 Tran Hung Dao