

**OUTLINE OF NATIONAL PROGRAM ON ENERGY
EFFICIENCY AND CONSERVATION IN THE PERIOD OF 2021 - 2025,
WITH A VISION TO 2030**

**PRELIMINARY COMMENTS AND SUGGESTIONS
BY THE WORLD BANK**

These comments are on the Outline of the National Program on EE&C prepared in April 2018 by the Vietnam Energy Conservation and Energy Efficiency Association (VECEEA). Additional comments and modifications will be prepared after the World Bank Team has an Opportunity to review the detailed report supporting the April 2018 Outline and the revised Outline of the energy efficiency and conservation (EE&C) Program prepared in May 2018 when English translations of these documents are provided to the Team.

The National Program as outlined by VECEEA provides the rationale for development of a new National Target Program on Energy Efficiency and Conservation in the period of 2021 - 2025 with a vision to 2030. It also presents a good review of the existing legal and policy framework including the relevant laws, decrees and circulars on EE&C.

Based on the review of this document and other relevant information (including the work performed under the various World Bank projects during the last several years, the World Bank Team believes that the following issues need to be addressed more carefully and in more detail to develop a meaningful and implementable EE&C program for the next 5 to 10 years.

1. Objective and targets:
 - Clear definition of the objectives of the Program
 - Developing the EE targets consistent with the NDC targets
2. Moving from voluntary to mandatory targets:
 - Allocating the mandatory targets and holding someone accountable for achieving the EE targets by putting EE obligations on priority energy-intensive enterprises or provincial/local governments
 - Strengthen accountability, with penalty for non-compliance and financial incentives as rewards
 - Alternatively, implementing mandatory industrial benchmarking
3. Increasing financial and non-financial incentives
 - Providing output-based financial incentives to the obliged parties with allocated targets
 - Linking energy efficient appliances with government procurement
 - Link top runner energy efficient products with government procurement?
4. Improving enforcement and measure & verification
 - Increasing monitoring and enforcement capacity at provincial and local levels
 - Establishing measurement and verification protocols based on international standards
 - Establishing a comprehensive database on energy consumption at the enterprise level
 - Establishing enforcement procedures

5. Strengthening supporting policies: Amendment of EE Law
6. Developing innovative ESCO business model (such as super-ESCO model) and improving ESCO capacity
7. Improving access to financing

A brief discussion of each of these issues and the initial suggestions of the World Bank Team are provided below.

1. Objectives and targets

Clearly defining the objectives of the Program

The overall objectives of the proposed EE&C Program have been defined as:

- Strengthen the implementation of the Law on Energy Efficiency and Conservation with a focus on energy-intensive industries
- Achieve the objective of energy efficiency in the whole society, to reduce energy intensity in industries, and to establish energy efficiency as a mandatory indicator.

While these objectives are reasonable, we suggest that they be modified as follows to emphasize some of the items that need to be achieved:

- Strengthen the **provisions and** implementation of the Law on Energy Efficiency and Conservation with a focus on energy-intensive industries, **by developing and adopting appropriate amendments to the Law and the supporting Circulars**
- Achieve the objective of **improving** energy efficiency **and energy intensity** in the whole society, ~~to~~ **significantly** reduce energy intensity in industries, and ~~to~~ establish **mandatory** energy efficiency **targets consistent with the Vietnam's NDCs** ~~as a mandatory indicator~~

Developing the EE targets consistent with the NDC targets

The proposed EE target seems low, and it may not be sufficient to achieve the government's NDC target, of which EE is expected to play a large role. It is important that the EE targets be developed as an important contribution to achieving Vietnam's NDC targets. The World Bank is assisting MOIT in developing energy sector NDC target, including EE targets. The EE&C targets established under the proposed Plan must therefore be consistent with the NDCs.

2. Moving from voluntary to mandatory targets

Given that EE faces many market barriers and failures, international experience, including Vietnamese previous experience, showed that voluntary approach is not effective, unless it is offered with strong financial incentives. Consumers rarely take EE actions on their own, without mandates or incentives. International experience demonstrated that the most effective approach is to combine mandatory regulations with financial incentives to achieve EE gains.

There are several models for mandatory policies, including:

- China's mandatory targets approach
- India's Perform, Achieve and Trade (PAT) scheme
- Energy Efficiency Obligations in Europe and US

In China, the government set a mandatory target to cut energy intensity per unit of GDP by 20 percent from 2011-2015 and 16 percent from 2016-2020. The EE target setting is integrated into the country's long-term goals for sustainable development, climate change (NDC target),

and air pollution control. The national target was then allocated to each province, and the provincial governors are held accountable for achieving the allocated energy intensity reduction targets. The government also signed responsibility contracts on specific enterprise energy saving targets with the nation's top 17,000 energy-consuming enterprises, which account for two-third of China's total energy use. Second, the government tightened energy efficiency standards for appliances, buildings, and vehicles. Finally, the central government provided more than US\$15 billion during the 11th FYP period (with additional funds coming from provincial governments) as incentives for EE investments, rebates for energy efficient consumer products, for technology R&D, and as compensation for the phase-out of inefficient stocks. China's approach requires strong government commitment and top down administrative measures.

India's Bureau of Energy Efficiency is implementing a Perform, Achieve and Trade (PAT) scheme, which sets energy intensity reduction targets (in percentage) based on each unit of output in the baseline year. Targets are set for 478 plants in 8 energy intensive industries, accounting for almost one third of India's energy consumption, with industries allowed to trade with each other. The targets for the first phase have been exceeded, and the second phase has started. The Indian approach is more market-based, but requires strong measurement, reporting, and verification (MRV), and it took a decade to set up the PAT scheme.

In Europe and the US, the government put EE obligations on electricity and gas utilities to achieve energy savings. However, utilities make profits by selling electricity, and saving electricity will hurt their profits. In the US, the electricity regulators in some states implement decoupling regulations that decouple the revenue from sales for the utilities, to incentivize utilities to save. Many states in the US has system benefit charges with a surcharge on all consumers' electric bills, and the system benefit funds can be operated either by the utilities or a dedicated agency to implement EE program.

These different approaches need to be assessed with respect to their advantages and limitations in the Vietnam context, in order to select the most appropriate approach or combination of approaches that would meet Vietnam's needs.

We suggest that the proposed Plan adopt a combination of the approaches utilized in China and India. Both China and India impose mandatory EE targets on priority industrial enterprises. China's top down administrative approach may be difficult to replicate, while the India PAT scheme takes a long time to set up. A combination of these two may be applicable in Vietnam:

- Adopting Chinese approach to set mandatory EE targets and allocate to each province and priority industrial energy-intensive enterprises;
- In the near term, using India's approach for developing benchmarks (using the results of CPEE and other international data) and establishing targets for individual facilities using a simplified methodology that established higher % targets for facilities that are far worse than the benchmarks and lower % targets for facilities that are far better than the benchmarks
- In the longer term, developing detailed approach for establishing targets for individual facilities
- Adopting India's approach to impose penalties on those enterprise who can not achieve the targets, and provide financial rewards to those enterprises who achieved the targets, so a de facto "trading" between the enterprises and the government. The penalties should be adequate. For example, the penalties for not conducting the mandatory audits are less than the cost of complying with the audit requirements. This is a disincentive to complying with

the requirements. New incentive and penalty mechanisms and related compliance and enforcement schemes need to be developed.

- Utilizing the resources in the Energy Conservation Centers (ECCs) to monitor and report on the results of activities by individual facilities with respect to their EE&C efforts.

Involving provincial and local governments and assigning responsibilities

The current version of the Plan does not sufficiently emphasize providing provincial and local governments the authority and responsibility to monitor and report on EE&C activities. As mentioned above, the Plan needs to develop targets at the provincial and local levels and hold the governments at these levels responsible and accountable to meet the targets. This approach has worked very well in China, but it needs a “carrot and stick” approach to be adopted.

The provincial and local governments (along with the ECCs) will have a major role in achieving the Plan targets and their involvement must be a major part of the proposed Plan.

3. Developing incentives

Financial incentives need to go hand in hand with mandatory targets to incentivize energy users comply with the requirements of the Law. The financial incentives would be most effective in the form of output-based incentives, for example, subsidies per delivered energy savings, alternatively, in the form of consumer rebate to purchase energy efficiency appliances.

Given the limited budget of the government, non-financial incentives can also be considered, for example, linking energy efficiency appliances requirement with government procurement rules.

4. Improving enforcement and measure & verification

Increasing monitoring and oversight capacity at provincial and local levels

Consistent with the involvement of the provincial and local governments and assigning responsibilities to them, is the need to build their capacity for monitoring and oversight. The current version of the Plan does not have strong enough provisions for such capacity building.

Establishing measurement and verification protocols based on international standards

A major weakness in many national EE&C programs and plans is the lack of a formal measurement and verification framework. The current version of the Plan refers to monitoring and evaluation, but does not provide much detail on how this will be accomplished and who will be responsible. Also, it does not make any mention of M&V protocols.

We suggest that Vietnam adopt a customized version of international M&V protocols such as the International Performance measurement and Verification Protocol (IPMVP) and develop a M&V guidebook initially for industry and later expanded for buildings.

Establishing a comprehensive database on energy consumption at the enterprise level

The current Plan mentions this as a major initiative. However, it does not clearly define the responsibilities for collecting, organizing and analyzing the data and preparing reports. Also, the process of collecting and verifying the data and the penalties for not complying with the data reporting requirements need to be specified. This portion of the Plan needs to be substantially strengthened.

5. Amendments to the EE&C Law

To scale up EE&C activities, there is a need to amend the existing EE&C Law and the supporting decrees and circulars to remove some of the barriers to EE. Specific areas include:

- Enforcement
- Incentives and penalties
- Procurement and asset transfer regulations
- Allowing EE expenditures to be recovered through tariffs

The proposed Plan can recommend initiatives to accomplish this.

6. Developing innovative ESCO business model (such as super-ESCO model) and improving ESCO capacity

This is a very important area. The capacity to increase the delivery of energy services needs to be substantially expanded to scale up EE&C implementation. Many prior efforts (funded by development partners) have provided assistance in training and capacity building of energy service providers as well as the ECCs. It would be helpful if the Plan can identify the lessons learned from previous programs in order to define what new initiatives are needed.

We suggest the following important activities:

- a. Review the strengths, weaknesses, successes and failures of efforts in other countries to build the capacity of ESCOs

Define what has been done in Vietnam and identify the needed actions

- b. Consider implementing simple performance-based implementation models
- c. Build the capacity of banks and financial institutions

In addition, the Plan should consider the establishment of a Super ESCO that can overcome many of the institutional and financial barriers to implementation, as well as build the capacity of ESCOs and provide “leadership by example” to industry. The efforts of EVN in this regard should be encouraged and the barriers to establishing a Super ESCO be identified and mechanisms to address these barriers defined.

7. Increasing access to financing

We suggest that the proposed Plan includes increasing access to financing. While there are some programs currently being implemented (such as the World Bank’s credit line and risk guarantee program for industry), MOIT could work with the bank sector regulators to mainstream EE financing in the Vietnamese banking sector.