

**MINISTRY OF INDUSTRY AND TRADE**  
**ELECTRICITY AND RENEWAL ENERGY AUTHORITY**

**REPORT**

**ACTION PLAN FOR BUILDING THE VIET NAM**  
**ENERGY INFORMATION SYSTEM**

**Hanoi, January 2023**

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## **I. ASSESSMENT REPORT OF THE CURRENT SITUATION, NEED, SIZE AND SCOPE OF THE VIET NAM ENERGY INFORMATION SYSTEM**

### **I.1 LEGAL BASIS**

- *Resolution No. 55-NQ/TW dated February 11, 2020, of the Politburo on orientations of the National Energy Development Strategy to 2030, with a vision to 2045;*
- *Law on Public Investment No. 39/2019/QH14 dated June 13, 2019;*
- *Electricity Law No. 28/2004/QH11; Law amending and supplementing several articles of the Electricity Law No. 24/2012/QH13;*
- *The Law on Economic and Efficient Use of Energy dated June 28, 2010, was amended and supplemented by Law No. 28/2018/QH14 dated June 15, 2018;*
- *Law on Statistics of November 23, 2015;*
- *Decree No. 21/2011/ND-CP dated March 29, 2011, of the Government detailing and implementing measures to implement the Law on Economic and Efficient Use of Energy;*
- *Decree No. 98/2017/ND-CP, dated August 18, 2017, of the Government defining the functions, tasks, powers and organisational structure of the Ministry of Industry and Trade;*
- *Decree No. 09/2019/ND-CP dated January 24, 2019, of the Government providing for the reporting regime of state administrative agencies;*
- *Decree No. 73/2019/ND-CP dated September 5, 2019, of the Government regulating the management of investment in information technology application using state budget capital;*
- *Decree No. 40/2020/ ND-CP dated April 6, 2020, of the Government detailing the implementation of several articles of the Law on Public Investment;*
- *Decree No. 56/2020/ND-CP issued on May 25, 2020, by the Government on the management and use of official development assistance (ODA) capital and concessional loans of foreign donors;*
- *Decree No. 10/2021//ND-CP dated February 9, 2021, of the Government regulating the management of construction investment costs;*
- *Decree No. 15/2021//ND-CP dated March 3, 2021, of the Government detailing several contents on construction investment project management;*
- *A letter of the European Union signed on September 19, 2019, on the financial allocation of 142 million Euros in grants to Viet Nam for the implementation of the Viet Nam - EU Sustainable Energy Transformation program;*
- *Decision No. 749/QD-TTg dated June 3, 2020, of the Prime Minister approving the National Digital Transformation Program to 2025, with orientation to 2030;*
- *QD -TTg dated July 28, 2021, of the Prime Minister approving the receipt of targeted budget support from the European Union in Viet Nam's Sustainable Energy Transition Program- EU ;*
- *Decision No. 4651/QD-BCT dated December 14, 2018, of the Ministry of Industry and Trade promulgating the Action Plan of the Ministry of Industry and Trade to establish a specialised energy information system for the period of 2019-2024;*
- *Circular No. 34/2019/TT-BCT dated November 28, 2019, of the Ministry of Industry and Trade regulating the Energy Information System; Other relevant current legal documents.*

## **I.2 ASSESSMENT OF THE CURRENT STATE OF REPORTING AND STATISTICS OF THE VIET NAM'S ENERGY SECTOR**

In order to manage and monitor development investment and energy use and monitor the annual increase in greenhouse gas emissions in the energy sector, the Ministry of Industry and Trade needs to summarise the situation: investment, production, processing, transportation and consumption of national energy, thereby collecting data and statistics on the level of energy use to propose appropriate policies to develop the sustainable energy industry, towards developing a green economy, emitting low carbon, conserving national energy, protecting the environment and responding to climate change to meet the requirements of NQ55 in the coming time.

However, the implementation of policies and practices on energy development in recent years still has many shortcomings, lacks synchronisation, and has not met expectations. The energy information technology infrastructure system is still lacking; there is no centralised database system for the energy industry. The database systems are built and developed in small, scattered and non-systematic ways. The database in some areas has not been researched and developed and is still stored manually.

Currently, the Ministry of Industry and Trade does not have a centralised database system for the energy industry to serve and support the state management in formulating development policies for the industry. The independent database systems (including electricity database, coal database, oil and gas database, new energy and renewable energy database such as wind, solar, etc.), mainly developed and owned by different corporations, are dispersed and managed in a small way, with many limitations and lacks synchronisation, only to serve the management and supervision work within the narrow scope of each corporation. At the same time, there is no linking, sharing information and providing untimely information to state agencies. This situation has caused a lot of difficulties in the state management of the Ministry of Industry and Trade when it comes to data, processing and exploitation of energy information for policy formulation and implementation.

The policy of sustainable energy development requires the implementation of transparent calculations, comparison with past data or even close coordination between organisations/companies operating in the energy industry with state agencies. However, at present, the above activities are not transparent and synchronous, leading the state management activities of the Ministry of Industry and Trade (Department of Industry and Trade) to face many difficulties in the process of performing assigned tasks, specifically are as follows:

- Develop and submit to competent authorities for approval:
  - Law and ordinance project, draft resolution of the National Assembly, draft resolution of the National Assembly Standing Committee, draft decree of the Government, draft decree of the Prime Minister on energy;
  - Strategy, sectoral planning, regional and territorial planning, long-term, medium-term and short-term investment and development plans on energy; national target programs, programs, projects, schemes and essential works related to national energy security;
  - Mechanisms and policies to encourage investment and ensure the development of electricity and new and renewable energy.
- Direct, inspect and organise the implementation of legal documents, strategies, master plans, plans, programs, projects and schemes on energy after being approved and promulgated by competent authorities.
- Advising on state management on planning and formulation of construction investment policies under the Ministry of Industry and Trade authority for projects in the energy field.

## **I.3 ROLE OF VIET NAM ENERGY INFORMATION SYSTEM**

Viet Nam Energy Information System: Support for state management agencies in managing, supervising, effective planning, general reporting, and forecasting; supporting decision

making for policies or regulations in terms of state management; supporting state management agencies to develop comprehensive and long-term energy development policies; being able to describe the energy system, as well as forecasting future energy prospects.

The energy information system will have the following specific tasks:

- Support for operation and management: The information system allows storing a large amount of necessary information on the energy system, helping the effective management of state management agencies in the area of energy;
- Support decision-making: A fully-informed system will help lawmakers and policymakers get a complete picture of the energy system from which to make appropriate and correct decisions;
- The Viet Nam Energy Information System will help the Government to manage and regulate the national energy system, develop effective and sustainable policies, strategies and solutions to balance energy, as well as monitor progress, achieve results, and verify the impacts of the energy policies and measures implemented;
- Formulating strategies and policies for overall energy development and of energy sub-sectors, including electricity, oil and gas and coal, new and renewable energy sources, etc.; Contributing to ensuring energy security and developing warning mechanisms, leading to solutions for responding to energy crises;
- Planning, implementation, monitoring and validation of energy efficiency and use of renewable energy sources in all end-user groups;
- Develop energy development plans for territories, including regions, provinces, districts, rural areas and islands;
- Support investors and international organisations to access information on Viet Nam's energy, facilitate investment, develop infrastructure and national energy system; Support monitoring electricity access in Viet Nam and the people's consumption of energy to meet the minimum standard of living.

#### **I.4 NECESSITY TO INVEST IN THE VIET NAM ENERGY INFORMATION SYSTEM PROJECT**

In recent years, the domestic energy industry has experienced rapid growth in scale. The trend of transitioning to clean energy sources, encouraging and prioritising the economic and efficient use of energy, and investing in the development of clean energy sources poses many challenges to state management agencies. Viet Nam has always focused on planning, ensuring the balance of energy sources and energy security. However, to make good planning and forecasting of development trends, it is essential to collect and synthesise energy information data.

Currently, Viet Nam in general and the Ministry of Industry and Trade, in particular, do not have a centralised database system for the energy industry. There is no IT infrastructure in the statistical work of the energy industry to serve state management and support state management agencies in formulating policies on energy sector development in response to the current situation.

Besides, Viet Nam is in the 4.0 technology revolution, digital transformation and IT application in state management of the digital Government are one of the significant policies of our Party and State. In particular, the application of IT in statistics in general and the energy industry is vital, aiming at a modern, effective and efficient digital government. Given this context, there is a need and urgency to build a comprehensive "Energy Information System" to have an adequate support tool for state management agencies and Viet Nam Government to plan, implement policies and effectively manage national energy.

The Project develops the Viet Nam Energy Information System using non-refundable ODA provided by the European Union (referred to as the Project), in which: the total project capital

investment is 6.5 million EUR (equivalent to 165.75 billion VND), and the implementation period is 2022-2025.

## **I.5 GENERAL AND SPECIFIC GOALS**

### **1.5.1 GENERAL OBJECTIVES**

The Project's overall objective is to establish an energy-specialised information system organised in a scientific and unified manner within the Ministry of Industry and Trade, with a complete set of international-standard databases, timely, consistent, regularly updated, managed and operated by a team of professionally trained human resources, based on modern information technology infrastructure, to ensure the output of the System with quality enough to best meet the needs of the state management activities of the Ministry of Industry and Trade for the energy industry.

### **1.5.2 SPECIFIC GOALS**

- Building centralised, synchronous and unified databases of the Energy industry, including Electricity Database, New Energy Database, Renewable Energy Database, Coal Database, Petroleum Database, Energy efficiency Database, etc .;
- Investing in equipment and installing infrastructure facilities to establish energy data and information systems;
- Investing in building software to collect, process, and analyse energy data to modernise the production process of energy statistical information, increasing the rate of using e-questionnaires in information collection. Input; connect and integrate with digitised energy data of relevant agencies and units to replace statistical surveys; synchronous processing between collected information to improve the quality of statistical information, to support the decision-making process of leaders at all levels;
- Creating statistical products on the energy industry;
- Setting up the operation method of the Energy Information System (System operating manual);
- Training to improve capacity in analysing, synthesising data and using computational tools and models; improving the ability of experts in energy statistics, IT experts to ensure the delivery of quality energy products based on the collected energy data for the Energy Information System;
- Training technical staff of the focal point and reporting units on operating the System's infrastructure and coordinating in providing input for the System and the IT system operation team;
- Building and consolidating the organisation of the Center for Consulting, Training and Electricity and RE Information (under EREA) with highly qualified human resources for sustainable operation and exploitation of the Viet Nam Energy Information System (VEIS) to ensure the efficient operation of the VEIS; build, maintain and archive the national energy database, on that basis, to implement energy statistical products in service of state management.

## **1.6 SIZE AND SCOPE**

According to the tasks set out in Resolution No. 17/NQ-CP dated March 7, 2019, of the Government; Decision No. 4651/QĐ-BCT dated December 14, 2018, of the Minister of Industry and Trade on the Action Plan of the Ministry of Industry and Trade to establish a specialised energy information system for 2019-2024; and the investment objectives of the Project, EREA has carefully reviewed the current state of information technology infrastructure to take advantage of the existing infrastructure, decide on new items to be purchased, and other contents that need to be hired to precisely determine the hardware and software equipment to be invested in for the Project to select the technical and technological plan, the preliminary design and the estimated investment scale of the Project with the following items:

## **Component 1: Investment in construction and operation management of energy data and information systems**

Activity 1.1: Investing in equipment and installation of infrastructure to establish an energy data and information system, including:

- Server room, including power supply system, lighting, UPS equipment, equipment cabinets, air conditioners, fire prevention and fighting, surveillance cameras, control equipment for people to get in or out;
- Server equipment; Devices for storing and backing up data; Equipment for ensuring safety, security and confidentiality of data, information, and network security; Equipment for accessing, exploiting and updating information;
- Infrastructure software, including the operating system and related software; specialised software for model calculation or estimation, data extraction and transformation;
- Digitalisation equipment and digital contents creation; Communication equipment and transmission lines.

Activity 1.2: Developing system management processes and measures to ensure that the System's infrastructure is continuously operated, secure, and capable of responding to data collection and processing needs and the growing quantity of data in the energy information systems.

## **Component 2: Building capacity for system operation**

Activity 2.1. Training technical staff on operating the system's infrastructure, aiming to improve the operating ability of technical staff at the focal point and reporting units, and coordinating in providing information and news, with a focus on making online reports.

Activity 2.2. Training stakeholders on data collection and reporting as input to the energy sector information system to improve the capacity of reporting and information, sharing obligations in reporting agencies, coordinating and providing information on the legal aspect of the System.

Activity 2.3. Capacity building in analysis, data synthesis and use of tools and computational models, aiming to build capacity for relevant stakeholders to use information from the System on analytical methods, data synthesis, use of tools, and computational models to serve the analysis and formulation of policies and strategies for national energy development.

## **Component 3: Improving the quality of output products**

Activity 3.1. Completing the general data set specialised in energy, including some expected outcomes of the System: Information on energy infrastructure; Statistics on energy prices; Statistics on renewable energy; Energy information associated with geographical indications; Statistics are performed periodically.

Activity 3.2. Completing the set of energy information indicators, including some expected products of the System: The overall energy index, including indicators associated with socio-economic and environmental development factors;

Activity 3.3. Improvement of the national energy balance sheet. Based on the improved quality and quantity of energy information, the national energy balance sheet format will be improved with more content while ensuring compliance with international standards for energy statistics.

Activity 3.4. Conduct annual energy outlook report. This report is a study to assess the national energy supply and demand associated with long-term socio-

economic development. It is considered in terms of world energy development trends, scientific and technical progress and potential for domestic energy supply. To carry out this activity, the energy information system will be the source of detailed data to model the national energy system, starting from exploitation, import and export to processing, production and final consumption.

## **1.7 PLAN FOR ORGANISATION OF MANAGEMENT AND OPERATION OF THE ENERGY INFORMATION SYSTEM**

After finishing the Project, all the implementation results, capital and assets of the Project will be handed over to the Center for Energy Technics and Information under the Electricity and Renewable Energy Authority of Viet Nam to manage, operate and maintain the activities of the VEIS after being decided by the Ministry of Industry and Trade.

The operation, exploitation, maintenance, upgrading and improvement of the operational capacity of the Energy Information System will be assigned to the Center for Consulting, Training and Electricity and RE Information under the Electricity and Renewable Energy Authority to take over the project results, build an operating model, organise management, and maintain the operation.

The operational management structure of the Project to maintain operation management activities for the Energy Information System has absolutely no revenue source; the operating expenses need to be allocated from the state budget every year. Therefore, it's impossible to establish a new Center. EREA proposed to supplement functions and tasks and human resources for management and operation to maintain the operation of the Energy Information System, merging functions, tasks, and organisational structure to consolidate the entire operating system of the Center for Consulting, Training and Electricity and RE Information to recruit additional highly qualified human resources and adequate techniques infrastructure to operate and exploit the Project's efficiency sustainably.

Expenses for management, operation, exploitation, maintenance and updating of data on a quarterly and yearly basis are maintained by regular expenses from the annual state budget. The costs are detailed and calculated according to current regulations and approved by competent authorities to ensure that the Energy Information System is put into stable, effective, and sustainable operation after being invested.

## **II. ACTION PLAN**

### **2.1 ACTION PLAN**

#### **2.1.1 PERIOD 2022 TO 09/2023**

##### ***a) Developing legal framework and preparing information infrastructure***

- Finalising, appraisal and submitting to the Ministry for approval the report on investment policy for the Energy Information System;
- Developing, appraisal and submitting to the Ministry for approval an investment project of the Energy Information System (detailed design of the System, requirements for information infrastructure: hardware, software, security, exploitation, and operation, etc.);
- Including the investment project of the Energy Information System into the annual public investment plan for implementation;
- Selecting consulting contractors for construction drawing design – cost estimation;
- Appraisal and submission to the Ministry of Industry and Trade for approval, or the Electricity and Renewable Energy Authority (if authorised) for approval of the construction drawing design – Project investment estimate;



- Selection of contractor and sign contracts to purchase equipment, software, construction and installation and other bidding packages of the Project.

**b) *Building organisational capacity, raising awareness***

- Disseminating the related content of Circular No. 34 on VEIS to the VEIS focal points at central, local and enterprises levels (departments, institutes, corporations and other agencies, enterprises, etc.);
- Professional training periodically for experts, professional and technical staff of the focal point in the central and locality (departments, institutes, corporations, enterprises, etc.);
- Propagating to raise awareness about the energy information system for relevant people.

**c) *Carrying out some activities, completing some initial products of the Energy Information System***

- Collecting data from sources at agencies and subsidiaries of industry and trade; Reporting the data collection results.

## **2.1.2 PERIOD 09/2023 TO 2025**

**a) *Completing the legal basis and implementing the investment***

- Amending Circular No. 34/2019/TT-BCT regulating energy information system (VEIS) to strengthen institutions for VEIS;
- Implement Project to complete the Energy Information System (components: System detailed design, information infrastructure, data collection software, Website, training, operation, testing etc.) according to the approved public investment projects (including making and approving the cost estimation, making, and approving the bidding plan, conducting the bidding, implementing the investment: procurement, installation, operation, training, transfer, etc.);
- Commencement of the Project: Expected quarter II/2024;
- Checking and supervising the implementation of contracts during the investment process; Project management; Testing or commissioning of items; manuals training, deployment, support, planning for system administration;
- System testing: Expected in QIII/2025;
- Acceptance and payment of products and work items of the Project: Expected in QIII/2025.

**b) *Enhancement of capacity building***

- Continue to train technical staff at the focal point on collecting and operating digital and online information systems;
- Training and capacity building for stakeholders on methods for analysing and synthesising data, using models for analysis and formulation of policies and strategies for national energy development.

**c) *Completing, maintaining, and enhancing investment products of the Energy Information System***

- Annually conduct statistics on energy data from sources at agencies and organisations under the industry and trade sector; Report on data collection results;
- Develop a set of general data specialised in energy to serve the state management;
- Research and development of the national energy outlook reports;
- Completing the set of energy indicators for state management; completing the balance sheet of production/export/import and energy consumption.

## **2.2 REPORTING ON IMPLEMENTATION RESULTS**

Report on the implementation results of the project development of the Viet Nam Energy Information System, using non-refundable ODA funded by the European Union by 01/2023, includes:

### **Period 2022 – 01/2023**

- The Centre for Energy Technics and Information of the Electricity and Renewable Energy Authority (EREA) takes the prime responsibility for developing and submitting the Investment Policy Report on the establishment of the VEIS – MOIT Decision No. 1749/QD-BCT of 29 Sept;
- The Centre for Energy Technics and Information takes lead to develop and complete the draft Viet Nam Energy Statistic Report for 2021. The report is being submitted to EREA leaders for approval for publication/announcement.
- The Centre for Energy Technics and Information continues working on the Viet Nam Energy Statistic Report for 2022;

### **Period 2019 - 2021**

- The Electricity and Renewable Energy Authority took lead to develop and submit for MOIT adoption of the Circular No. 34/2019/TT-BCT dated November 28, 2019, regulating energy information system; Decision No. 4651/QD-BCT dated December 14, 2018, on the Action Plan of the Ministry of Industry and Trade to develop a specialised energy information system for the period of 2019-2024;
- Finalise the draft energy manual on guidance on energy data collection and management based on Circular No. 34/2019/TT-BCT dated November 28, 2019, regulating energy information system;
- Completion of data collection test in the area of renewable energy (wind power projects, terrestrial and floating solar power projects) in 2021;
- Completion of several capacity building training courses in 2021, including (i) basic course on energy statistics; (ii) basic course on ODA project management; (iii) online procurement management course;
- Completion of the conference to disseminate and introduce Circular No. 34/2019/TT-BCT regulating the energy information system in 2021.