

MINISTRY OF INDUSTRY AND TRADE
ELECTRICITY AND RENEWABLE ENERGY AUTHORITY

REPORT

**PROGRESS UPDATE ON ESTABLISHMENT OF
VIET NAM ENERGY INFORMATION SYSTEM**

Hanoi, January 2024

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1. ASSESSMENT REPORT OF CURRENT STATUS, NECESSITY, SCALE, AND SCOPE OF VIET NAM ENERGY INFORMATION SYSTEM

1.1 Legal basis

- Politburo's Resolution 55-NQ/TW dated 11 February 2020 on the Orientation of the Viet Nam's National Energy Development Strategy to 2030, with an outlook to 2045;

- Law No. 39/2019/QH14 dated 13 June 2019 on Public Investment;

- Law No. 28/2004/QH11 on Electricity; Law No. 24/2012/QH13 Amending and Supplementing a Number of Articles of the Electricity Law;

- Law on Economical and Efficient Use of Energy dated 28 June 2010 amended by Law No. 28/2018/QH14 dated 15 June 2018;

- Law on Statistics dated 23 November 2015;

- Decree No. 21/2011/ND-CP dated 29 March 2011 of the Government, detailing the Law on Economical and Efficient Use of Energy and Measures for its implementation;

- Decree No. 98/2017/ND-CP dated 18 August 2017 of the Government, regulating functions, tasks, powers, and organisational structure of Ministry of Industry and Trade;

- Decree No. 09/2019/ND-CP dated 24 June 2019 of the Government on the reporting regime of state administrative agencies;

- Decree No. 73/2019/ND-CP dated 5 September 2019 of the Government on management of state investment in information technology application;

- Decree No. 40/2020/ND-CP dated 6 April 2020 of the Government detailed regulations on the implementation of several articles of the Law on Publish Investment;

- Decree No. 56/2020/ND-CP dated 25 May 2020 of the Government on management and use of Official development assistance (ODA) and concessional loans granted by foreign donors;

- Decree No. 10/2021/ND-CP dated 9 February 2021 of the Government on management of construction investment cost;

- Decree No. 15/2021/ND-CP dated 3 March 2021 of the Government detailing a number of provisions of management of construction investment cost;

- Official Letter of the European Union signed on 19 September 2019 on the financial agreement of 142 million Euro in non-refundable grant to Viet Nam to implement the Viet Nam - EU Sustainable Energy Transition Programme;

- Decision No. 749/QĐ-TTg dated 3 June 2020 of the Prime Minister approving the National Digital Transformation Programme by 2025, with orientations towards 2030;

- *Decision No. 1367/QĐ-TTg dated 28 July 2021 of the Government on approval of receiving targeted budget support from the European Union in the EU – Viet Nam Sustainable Energy Transition Programme;*

- *Decision No. 4651/QĐ-BCT dated 14 December 2018 on the Ministry of Industry and Trade’s promulgation of the Action Plan for information system of the energy sector in the period 2019-2024;*

- *Circular No. 34/2019/TT-BCT dated 28 November 2019 of the Ministry of Industry and Trade regulating the Energy Information System; Other current relevant legal documents.*

1.2 Assessment of the current status of reporting and statistics of Viet Nam’s energy sector

To manage and monitor the development investment and energy use, and to monitor the yearly increase in greenhouse gas emissions in the energy sector, the Ministry of Industry and Trade (MOIT) needs to compile the situation of investment, production, processing, transportation, and consumption of national energy. This compilation will involve collecting data and statistics on energy use levels to propose appropriate policies to develop a sustainable energy sector. These policies aim to foster a green economy, reduce carbon emissions, preserve national energy resources, protect the environment, and respond to climate change in line with the requirements of Resolution 55 in the future.

However, there are still many gaps and a lack of synchronisation in policy implementation and practices regarding energy development in recent times, thus failing to meet expectations. The energy information technology infrastructure system remains in poor condition; there is no centralised database system for the energy sector; the database systems are built and developed in a scattered and unsystematic way; databases in some sectors have not been developed and are still stored manually.

At present, MOIT does not have a centralised database system for the energy sector to serve and support the state management in developing energy policies. The independent database systems (including electricity databases, coal databases, oil and gas databases, new energy and renewable energy databases such as wind, solar, etc.) mostly developed by State-owned Corporations and Enterprises are fragmented and managed in a small-scale way, with many limitations and lack of synchronisation, and primarily to serve their internal management and supervision within the scope of their mandates. Additionally, these database systems lack linkage, information-sharing schemes, and timely provision of information to state agencies. This has caused significant difficulties for MOIT in fulfilling its management mandates regarding data processing and exploiting energy information for policy development and implementation.

Sustainable energy development policies require transparent calculations and comparisons with historical data, or even close coordination between organisations/companies in the energy field and state agencies. However, currently, the above activities lack clarity and synchronisation, causing MOIT (Electricity and

Renewable Energy Authority - EREA) to face many difficulties in fulfilling its mandates and implementing its assigned tasks as follows:

- Prepare and submit to competent authorities for approval:
 - + Law and ordinance projects, draft resolutions of the National Assembly, draft resolutions of the National Assembly Standing Committee, draft decrees of the Government, draft decrees of the Prime Minister on energy;
 - + Strategies, sectoral planning, regional and territorial planning, long-term/medium-term and short-term energy investment and development plans; national targets, programmes, projects, schemes, and essential works related to national energy security;
 - + Mechanisms and policies to encourage investment and ensure the development of power, new energy, and renewable energy.
- Direct, inspect, and organise the implementation of legal documents, strategies, planning, plans, programmes, projects, schemes on energy after the competent authorities' approval and promulgation.
- Advise the state management on planning and formulation of construction investment policies as per MOIT's authority for projects in the energy sector.

1.3 Role of Viet Nam Energy Information System

Viet Nam Energy Information System (VEIS): Support the state management agencies in management, supervision, increasing efficiency in planning, general reporting, and forecasting; Support decision-making processes regarding policies and regulations within state management; Support the state management agencies in developing comprehensive and long-term energy development policies; Possesses the capability to depict the energy system and forecast energy trends and outlook in the future.

The energy information system has the following specific roles:

- Assist in operation and management: The energy information system allows the storage of a large amount of essential information about the energy system, assisting state energy management agencies in their effective and efficient management and operation;
- Assist in decision-making: A complete information system will assist policymakers and lawmakers in obtaining a comprehensive picture of energy system, thereby enabling them to make appropriate, correct, and efficient policies;
- The VEIS will support the Government of Viet Nam in the management and regulation of the national energy system, the formulation of policies, strategies, and measures to balance energy supply and demand in an effective and sustainable manner, as well as tracking the progress and achievement, and verifying the impacts of implemented energy policies and measures;
- Develop strategies and overall development plans for the energy sector and its sub-sectors, i.e., power, oil and gas, new energy, and renewable energy, etc.;

Contribute to ensuring energy security and develop a warning mechanism and measures responding to energy crisis;

- Plan, implement, monitor, and validate the energy efficiency and the use of renewable energy in all end-user groups;

- Develop energy development plans for territories, including regions, provinces, districts, rural areas and islands;

- Support investors and international organisations in accessing Viet Nam's energy information, facilitating investment, and developing infrastructure and national energy system; Support monitoring the state of energy access in Viet Nam and the people's energy consumption levels to meet the minimum standard of living.

1.4 The need to invest in the Vietnam Energy Information System project

In recent years, Viet Nam's energy sector has experienced rapid growth in scale, a trend of transitioning to clean energy sources in the energy mix, encouragement of economical and efficient use of energy, and investment in clean energy sources development, which pose many challenges to the state management agencies. The country has always paid special attention to planning, ensuring the balance of energy sources and energy security. However, to ensure good planning and forecasting of development trends, it is essential to collect and synthesise energy information and data.

At present, Viet Nam in general, and MOIT in particular do not have a centralised database system for the energy sector, and information and technological (IT) infrastructure in energy statistics works for the purpose of state management and supporting state management agencies in developing energy development policies in response to the actual situation.

Furthermore, Viet Nam is embracing the Fourth Industrial Revolution (also known as Industry 4.0), digital transformation, and IT application in state management of the digital Government, which is one of the major policies of the Party and the State. In particular, it's vital to integrate IT applications in statistics in general and in the energy sector in particular, aiming for a modern, effective, and efficient digital Government. Given this context, it's important and urgent to develop a comprehensive "Energy Information System" as a tool to assist state management agencies and the Government of Viet Nam in effectively planning, implementing policies, and governing national energy.

The investment project to develop the Viet Nam Energy Information System using the non-refundable ODA grant by the European Union (EU) (hereinafter referred as "the Project"). The Project has a total investment capital of 6.5 million EUR (equivalent to 165.75 billion Viet Nam Dong) and an implementation duration of 2022 - 2025.

1.5 Overall objective and specific goals

1.5.1 Overall objective

The Project's overall objective is to establish an energy-specialised information system in a scientific and unified manner within MOIT, with a complete set of international-standard, well-timed, consistent, regularly updated, being managed and operated by a professionally trained team based on modern IT infrastructure, to ensure a sufficient quality energy information system to meet the needs of state management of MOIT for the energy sector.

1.5.2 Specific goals

- To build a centralised, synchronous, and unified database of the Energy sector, including Electricity database, new energy database, renewable energy database, Coal database, Oil and Gas database, Energy efficiency database, etc.;

- To invest in equipment and install infrastructure to establish an energy information and data system;

- To invest in developing software to collect, process, and analyse energy data to modernise the process of producing energy statistical information, including increasing the use of electronic templates in collecting input information; linking and integrating with digitised energy data from relevant agencies and units to replace conventional statistical surveys; synchronising the processing of collected information to improve the quality of statistical information, to support the decision-making process of leaders at all levels in management;

- To produce energy statistical products;

- To establish an operation method of the Energy Information System (System Operational Manual);

- To enhance capacity building in analysing, synthesising data, and using calculation tools and models; Improve the capacity of energy statistics experts and IT experts to ensure quality outputs of energy products based on energy data collected for the Energy Information System;

- To train technical staff in operating the system's infrastructure at the Focal Point and Reporting units, and to coordinate in providing input information to the System and the Project's IT system operation team;

- To build and strengthen the organisation of the Centre of Consulting, Training and Information on Electricity and Renewable Energy¹ (under EREA) with highly qualified human resources to sustainably serve the operation and exploitation of the VEIS to ensure the effective operation of VEIS; setup, maintain, and store the national energy database, on that basis, produce energy statistical products to serve the state management.

¹ *Translator's note: the Centre of Consulting, Training and Information on Electricity and Renewable Energy (under ERA) was formerly changed into the Center for Energy Technology and Information (CETI) under EREA.*

1.6 Scale and scope

According to the tasks set out in Resolution No. 17/NQ-CP dated 7 March 2019 of the Government, and Decision No. 4651/QĐ-BCT dated 14 December 2018 of the Minister of MOIT on the Action plan to establish the information system of the energy sector in period 2019-2024, along with the Project's objectives and goals, EREA has thoroughly reviewed the current situation of IT infrastructure to take advantage of the existing infrastructure, decide on items to be newly purchased, and other items to be rented to precisely identify the hardware and software that require investment for the Project to select the technological solutions, the preliminary design and the estimated investment scale of the Project. The specific investment items are as follows:

Component 1: Investment in the development and operation of the energy data and information system

Activity 1.1: To invest in equipment and install IT infrastructure to establish the energy data and information system, including:

- Server room, including power supply system, lighting, uninterruptible power Supply equipment, equipment cabinets, air conditioning, fire prevention and fighting equipment, surveillance cameras, access control equipment;
- Server equipment; Data storage and backup devices; Equipment for ensuring safety, security, and data and information security, network security; Equipment for accessing, exploiting, and updating information;
- Infrastructure software includes operating system and related software; Specialised software for model calculation or estimation, data extraction, and conversion;
- Equipment for digitising and creating digital contents; Communication equipment and transmission lines.

Activity 1.2: Develop system management processes and measures to ensure that the system's infrastructure operates continuously, safely and is able to respond to the increasing demand for data collection and processing of the energy information system.

Component 2: Capacity building on system operation

Activity 2.1. To train technical staff on the system infrastructure operation, aimed at enhancing the operational capability of technical staff at focal points and reporting units, and coordinating to provide information with a focus on producing online reports.

Activity 2.2. To train stakeholders on data collection and reporting as input to the energy information system, in order to improve the capacity to perform the obligations of reporting and sharing information for the reporting units, and to coordinate and provide information based on the legal basis governing the system.

Activity 2.3. To build capacity in analysing, synthesising data, and using calculation tools and models, aiming to build capacity for relevant stakeholders who would use the information of the system, in terms of methods of analysing and

synthesising data, using tools and calculation models to serve the analysis and development of national energy development policies and strategies.

Component 3: Enhancement of output products

Activity 3.1. To complete a comprehensive set of energy-specialised data, including a number of expected products 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. To complete the set of energy information indicators, including a number of expected products of the system: Overall energy index, including indicators linked to socio-economic development and environmental factors;

Activity 3.3. To improve 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 still ensuring compliance with international standards on energy statistics.

Activity 3.4. To produce annual energy outlook reports. This is a study to evaluate national energy supply and demand associated with long-term socio-economic development, considering the world energy development trend, scientific and technical progress, and potential 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, throughout the stages of exploitation, import and export, processing, production and end-user consumption.

1.7 Post-investment plan for Organisation of managing and Operating the Energy Information System

Once the investment project is complete, all the Project's outputs and results, capital, and assets will be handed over to the Centre of Consulting, Training and Information on Electricity and Renewable Energy under EREA, which will manage, operate, and maintain the VEIS after being decided by the MOIT.

The operation, exploitation, maintenance, upgrading, and improvement of the operational capacity of the Energy Information System will be assigned to the the Centre of Consulting, Training and Information on Electricity and Renewable Energy under EREA, which will take over the project results and set up an operating model, organise the management and maintain the operation.

The post-investment project's operational management structure to maintain the Energy Information System absolutely has no revenue source, the operating expenses have to be allocated from the annual state budget, therefore, it's impossible to establish a new Center. EREA proposed to supplement functions, tasks, and human resources to maintain the operation of the Energy Information System after investment and to merge them into functions, tasks and organisational structure of the Centre of Consulting, Training and Information on Electricity and Renewable Energy (under EREA), consolidating its organisational structure and human resources to recruit

additional highly qualified human resources, and provide sufficient infrastructure to sustainably operate and effectively exploit the Project's results after investment.

Expenses for management, operation, exploitation, maintenance, and data updates on a quarterly and annual basis are maintained by regular budget allocations from the annual State budget. The costs are prepared and calculated in detail following the current regulations and submitted to competent authorities for approval to ensure that the Energy Information System, after investment, operates stably, effectively, and sustainably.

2. ACTION PLAN

2.1 Action plan

2.1.1 From 2022 to September 2023

a) Develop legal framework and prepare information infrastructure

- Finalise, appraise, and submit to the Ministry for approval of the Report on proposing the investment policy for the Energy Information System;

- Develop, appraise, and submit to the Ministry for approval of the Energy Information System investment project (detailed system design, information infrastructure requirements: hardware, software, security, exploitation and operation, etc.);

- Include the Energy Information System investment project in the annual public investment plan for implementation;

- Select consulting contractors for construction drawings design - project's cost estimates;

- Conduct appraisal and submit to the Ministry for approval, or to EREA (if authorised by the Ministry) to approve construction drawing design - project's cost estimate;

- Select contractor and sign contracts to purchase equipment, software, construction, and other bidding packages of the Project;

b) Conduct organisational capacity building and awareness raising

- Organise the dissemination of the Circular No. 34, and contents related to VEIS among the VEIS's focal points at central and local levels, and businesses (ministerial- and provincial-level departments/authorities, institutes, corporations and other enterprises, etc.);

- Conduct periodic professional training for experts, professional and technical staff of the focal points at central and local levels (ministerial- and provincial-level departments/authorities, institutes, corporations and other enterprises, etc.);

- Conduct communication and awareness raising on the energy information system for stakeholders;

c) Carry out several activities and produce some initial products of the Energy Information System

- Collect data from agencies and subsidiaries of the industry and trade sector; Report the data collection results.

2.1.2 From September 2023 to 2025

a) Complete the legal basis and implement the investment

- Revise Circular No. 34/2019/TT-BCT regulating energy information system (VEIS) to strengthen institutions for VEIS;

- Implement the investment 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 to be in Quarter II/2024;

- Check and supervise the implementation of the contracts during the investment project timeline; Manage the Project implementation; Conduct testing or commissioning of items; Conduct training on how to use the system, and deploy, support, plan for the system administration;

- System testing: Expected to be in Quarter III/2025;

- Acceptance and payment of the Project's outputs and items: Expected to be in Quarter III/2025.

b) Conduct capacity strengthening

- Continue to train technical staff at the VEIS's focal points in collecting and operating digitised and online information systems;

- Conduct training and capacity building for stakeholders in methods for analysing and synthesising data, using models for analysis and formulation of policies and strategies for national energy development.

c) Complete, maintain, and enhance investment products of the Energy Information System

- Annually conduct statistics on energy data from sources at agencies and organisations in the industry and trade sector; Report on data collection results;

- Develop a set of general energy-specialised data to serve the state management;

- Research and develop the national energy outlook reports;

- Complete the set of energy indicators for the state management; Complete the balance sheet of production/export/import and energy consumption.

2.2 Reporting on the implementation results

Report on the implementation results of the investment project to establish the Viet Nam Energy Information System, using non-refundable ODA funded by the European Union by January 2024, includes:

2.2.1 Task: Collection, processing, synthesis and conducting statistics of energy information in 2023

In 2023, the Centre of Consulting, Training and Information on Electricity and Renewable Energy organised the task of collecting, processing, synthesising, and conducting statistics of energy information in 2022. After completing the task, the Center reported to Directors of EREA through Document No. 109/BC-TT dated 20 December 2023 and Document No. 01/BC-TT dated 3 January 2024 on the completion of the task, and proposed to Directors of EREA to deploy appraisal procedures and issue Vietnam Energy Information Report 2022 following the regulations.

2.2.2 Task: Prepare draft Circular to amend and supplement the Circular No. 34/2019/TT-BCT

Conducted research, review, synthesis, and evaluation of the implementation of Circular No. 34 and proposed necessary contents to develop a Circular amending and supplementing Circular No. 34/2019/TT-BCT and reported to Directors of EREA, submitted to the Planning Division and the EREA Office to implement the registration procedures to develop the revised Circular according to the following regulations:

- Document No. 105/BC-TT dated 6 December 2022 submitted to Directors of EREA on developing a digital transformation plan in the energy sector and developing a Circular amending, supplementing, and replacing the Circular No. 34/ 2019/TT-BCT;

- Document No. 75/BC-TT dated 5 September 2023 submitted to the Planning Division, Directors of EREA, and EREA Office on registration for formulation and issuance of the Circular amending, supplementing, and replacing the Circular No. 34/2019/TT-BCT stipulating regulations on the Energy Information System under the Program for building Legal Management Documents of the MOIT in 2024. In particular, the Centre of Consulting, Training and Information on Electricity and Renewable Energy has completed the dossier to prepare the plan to develop the Circular amending and supplementing Circular No. 34/2019/TT-BCT, including: Draft Circular to be submitted to the Department of Legal Affairs to propose the development of the Circular amending, supplementing, and replacing the Circular No. 34/2019/TT-BCT.

2.2.3 Assessment

At present, the investment project as in the 2023 plan has not been implemented (see Section 2.1 - Action plan at page 10 of this report). The reason for the delay is that the EU – Viet Nam Sustainable Energy Transition Programme (SETP) has not been approved by competent authorities for several domestic public investment procedures.

2.3 Implementation plan of 2024

Task: Collection, processing, synthesis, and conducting statistics of energy information in 2023

The Centre of Consulting, Training and Information on Electricity and Renewable Energy is preparing documents to be submitted to Directors of EREA for approval of the task of collection, processing, synthesising, and conducting statistics of energy information in 2023.

EU - Viet Nam Sustainable Energy Transition Facility (EVSET Facility)

Coordinate with the Grid and Rural Electrification Division, EU, and the EVSET Facility to implement two technical assistances, i.e., Task 1.6.1 “Studying and proposing supplementary data to be collected and data collection templates for the revision of Circular” and Task 1.10.1 “Support in developing templates for statistics products – phase 1”.

Continue to coordinate with the Planning Division to finalise the draft Circular and submit it for promulgating the Circular amending and supplementing the Circular No. 34/2019/TT-BCT.

Implement the investment project on establishing the Viet Nam energy information system once the SETP is approved by competent authorities for several domestic investment procedures to allocate capital to investors for the implementation.