

REPORT

Results of the implementation of the 2019–2025 phase of the National Programme on Energy Conservation and Efficiency for the 2019–2030 period

The report on the implementation results for the 2019–2025 phase of the work to implement Decision No. 280/QĐ-TTg dated 13 March 2019 of the Prime Minister on the approval of the National Programme on Energy Conservation and Efficiency for the 2019–2030 period (the Programme) is as follows:

I. GENERAL INFORMATION ON THE PROGRAMME FOR THE 2019–2025

1. The objectives of the Programme

- Achieve energy savings of 5.0 to 7.0 per cent of total national energy consumption during the period from 2019 to 2025;
- Improve the policy framework and legal provisions on energy conservation, including: Researching, amending and supplementing the Law on the Efficient and Rational Use of Energy and subordinate legislation; finalising and supplementing regulations on energy consumption standards for 10 to 15 sectors/sub-sectors within certain key energy-intensive economic sectors; developing and disseminating 15 to 20 technical guidelines for economic sectors and sub-sectors;
- Reduce electricity losses to below 6.5%;
- Reduce average energy consumption across industrial sectors/sub-sectors compared to the 2015–2018 period, specifically: (i) For the steel industry: by 3.00 to 10.00 per cent depending on product type and production technology; (ii) For the chemical industry: by at least 7.00 per cent; (iii) For the plastics manufacturing industry: from 18.00 to 22.46%; (iv) For the cement industry: a minimum of 7.50%; (v) For the textile and garment industry: a minimum of 5.00%; (vi) For the wine, beer and soft drinks industry: from 3.00 to 6.88% depending on the product type and production scale; (viii) For the paper industry: from 8.00 to 15.80% depending on the product type and production scale;
- Ensure that 100% of key transport enterprises have programmes to promote vehicle driving skills and technical solutions for the operation and use of motor vehicles with a focus on energy efficiency;
- Achieve 70% of industrial estates and 50% of industrial clusters accessing and implementing energy-saving and efficient energy use solutions;
- Ensure that 100% of key energy-consuming facilities implement energy management systems in accordance with regulations;
- Ensure compliance with and implementation of the requirements of the National Technical Standard on energy-efficient buildings for construction projects falling within the scope of the Standard;

- Achieve 80 construction projects certified as green buildings that use energy efficiently and effectively;
- Develop and implement a market transition programme for energy performance for at least five commonly available products on the market;
- Train and certify 3,000 energy management/energy audit specialists;
- Achieve 60% of schools conducting awareness-raising and educational activities on energy conservation and efficiency;
- Ensure that 90% of provinces and centrally administered cities develop and approve local plans/programmes for energy conservation and efficiency;
- Maintain and develop a network of energy-saving and cleaner production units in at least 50 provinces and centrally administered cities; establish and maintain a national energy management network;
- Establish 1 Vietnam Energy Data Centre and at least: (i) 2 national training centres on energy conservation and efficiency; (ii) 1 model energy-efficient city; (iii) 5 demonstration models for investment loans for energy conservation and efficiency projects; 2 energy performance testing laboratories;
- Pilot the establishment of a Fund to Promote Energy Conservation and Efficiency through socialisation, funding and cooperation from individuals and organisations both domestically and internationally.

2. The programme's main activities

The Energy Efficiency and Conservation Programme for the period 2019–2030 (VNEEP3) was approved to mobilise domestic and international resources to achieve dual economic and environmental objectives, thereby contributing to Vietnam's sustainable development and climate change mitigation efforts up to 2030. The main tasks under the Programme include: (1) Reviewing, developing and refining mechanisms and policies on energy conservation and efficiency (SDNL TKHQ); (2) Providing technical and financial support to promote investment, production and business projects related to energy efficiency and conservation; (3) Establishing the Vietnam Energy Data Centre, energy databases and information technology applications for energy and energy efficiency and conservation; (4) Strengthening capacity in energy efficiency and conservation; (5) Strengthening inspection, monitoring, supervision, guidance on implementation, and evaluation of the results of compliance with legal regulations on energy efficiency and conservation; (6) Communication and raising public awareness of energy efficiency and conservation; (7) Strengthening international cooperation; (8) Scientific research;

(9) Establish a fund to promote the sustainable development of the TKHQ.

II. EVALUATION OF THE IMPLEMENTATION RESULTS OF THE PROGRAMME

1. Regarding the organisation of the administrative structure and the drafting and issuance of management documents for the Programme

1.1 Implementation of organisational tasks

The Ministry of Industry and Trade has submitted to the Prime Minister for approval Decision No. 1664/QĐ-TTg dated 19 November 2019 establishing the Steering Committee for the National Programme on Energy Conservation and Efficiency (hereinafter referred to as the Programme Steering Committee), chaired by the Deputy Prime Minister; the Minister of Industry and Trade as the Permanent Deputy Chair; and representatives from a number of ministries and sectors as members. Currently, following a process of restructuring and integration, the Steering Committee for the implementation of the Programme is part of the State Steering Committee for important national programmes, projects and works, and key energy sector projects, in accordance with Decision No. 1447/QĐ-TTg dated 22 November 2023 of the Prime Minister.

The Ministry of Industry and Trade serves as the standing agency of the Programme Steering Committee and is responsible for assisting the Committee in organising and supervising the effective implementation of the Programme's activities.

The Ministry of Industry and Trade is responsible for taking the lead and coordinating with other ministries and sectors to draw up annual plans, select and consolidate proposals for tasks from relevant ministries and sectors, and coordinate with the Ministry of Finance to determine and agree on the list of tasks and projects to be implemented under the Programme.

The day-to-day management of the Programme at the local level is undertaken by the Departments of Industry and Trade, with designated officers assigned to monitor the implementation of the Programme locally.

1.2 Drafting and issuing Programme management documents

- The Ministry of Industry and Trade has guided local authorities in the development, adoption and implementation of local action plans for the Programme; by the end of 2020, 100% of provinces and centrally-administered cities had developed and adopted action plans for the energy conservation and efficiency programme within their jurisdictions.

- The Ministry of Industry and Trade has drafted and submitted to the Programme Steering Committee a draft Framework Plan for the implementation of the Programme up to 2025; it has also submitted to the Head of the Programme Steering Committee for issuance Regulation No. 12/QĐ-BCĐTKNL dated 19 January 2022 on the development, selection, and organisation of the management and implementation of tasks under the Programme.

- The Ministry of Industry and Trade has drawn up and issued regulations governing the management and implementation of tasks under the Ministry's National Programme on Energy Conservation and Efficiency for the period 2019–2030, as set out in Decision No. 548/QĐ-BCT dated 19 March 2024.

- The Ministry of Industry and Trade issued Decision No. 145/QĐ-BCT dated 8 February 2022 providing technical guidelines for the implementation of measures under the National Programme on Energy Conservation and Efficiency for the period 2019–2030.

- Regarding electricity-saving activities: 100% of provinces and cities have developed and issued implementation plans for Prime Ministerial Directive No. 20 within their respective jurisdictions, or have issued directives from the Chairpersons of the People's Committees of provinces and centrally-affiliated cities to strengthen the implementation of electricity-saving measures

their respective provinces and cities for the 2021–2025 period. Provinces and centrally-affiliated cities have designated the Department of Industry and Trade as the focal point for implementing Directive No. 20 within their jurisdictions.

2. Regarding the implementation of the Programme's provisions

2.1 Task Force on Reviewing, Developing and Improving Mechanisms and Policies on Energy Conservation and Efficiency

The Ministry of Industry and Trade has taken the lead, in coordination with relevant ministries and sectors, in drafting, submitting for approval, and issuing a system of relevant legal documents, including: The Law Amending and Supplementing Certain Provisions of the Law on Energy Conservation and Efficiency No. 77/2025/QH15, promulgated on 18 June 2025 and effective from 1 January 2026; Decrees, Circulars, Decisions, standards and codes on energy conservation and efficiency, specifically as follows:

- (i) 02 Government Decrees detailing implementation measures and penalty provisions;
- (ii) 02 Decisions of the Prime Minister promulgating national technical standards on energy performance control for energy-consuming vehicles and equipment;
- (iii) 07 Circulars specifying energy consumption rates and measures for the efficient and effective use of energy in various industrial sectors;
- (iv) Circulars on regulations governing training and certification; energy audits; energy labelling; fuel loss rates; biofuel blending ratios; and measures for the efficient and economical use of energy in the industrial, construction, transport and agricultural sectors, etc.
- (v) Over 50 sets of minimum energy performance standards applicable to target equipment groups, accompanied by test methods;
- (vi) Operational guidelines for the implementation of regulations on energy conservation and efficiency have been issued, specifically:
 - Prime Ministerial Directives, 12 Decisions designating 12 energy performance testing facilities, and 16 operational guidance documents have been issued.
 - The ministries and sectors have collaborated with the Central Economic Commission to draft and submit to the Politburo for adoption Resolution No. 55-NQ/TW of 11 February 2020 of the Politburo on the Strategic Orientations for Vietnam's National Energy Development until 2030, with a vision to 2045; Politburo Resolution No. 70-NQ/TW dated 20 August 2025 on ensuring national energy security by 2030, with a vision to 2045, stipulates that the energy saving rate as a proportion of total final energy consumption, compared to a business-as-usual development scenario, is to reach approximately 8–10% by 2030.
 - The Ministry of Industry and Trade has submitted to the Prime Minister for issuance the annual list of key energy-consuming facilities.

- On 15 May 2023, the Prime Minister issued Decision No. 500/QĐ-TTg approving the National Power Development Plan for the period 2021–2030, with a vision to 2050 (Power Plan 8). This Plan affirms that measures for the efficient and effective use of electricity are among the solutions and resources necessary for the successful implementation of the Plan.

- On 26 July 2023, the Prime Minister issued Decision No. 893/QĐ-TTg approving the National Energy Master Plan for the period 2021–2030, with a vision to 2050. The Decision emphasises the role of energy conservation and efficiency, with the target of achieving energy savings of approximately 8–10% by 2030 and approximately 15–20% by 2050 compared to the business-as-usual scenario.

(Details in Annex 1 attached to the Report)

2.2 Technical and financial support to promote investment, production and business projects related to the efficient and economical use of energy in the following activities: production, manufacturing, refurbishment, market transformation of vehicles, equipment, machinery, production lines, public lighting, and energy saving in households

In implementing this initiative, the Ministry of Industry and Trade has carried out a substantial volume of work and achieved the following results:

- Supported 1,200 businesses in conducting energy audits, developing energy management models and implementing measures for the efficient and economical use of energy;

- Energy Labelling Programme:

Implementation of the Energy Labelling Programme and application of minimum energy performance standards for vehicles and equipment: The Ministry of Industry and Trade has implemented energy labelling for nearly 30 product categories listed in the Catalogue specified in Decision No. 04/2017/QĐ-TTg of the Prime Minister, covering household appliances, office equipment and industrial equipment. Over 20,000 products have been labelled with energy labels on the market.

- Since the mandatory energy labelling scheme was introduced in 2013, the Programme has brought about a significant transformation in energy efficiency across the market. According to statistics from the Ministry of Industry and Trade, after nearly seven years of implementing the labelling scheme, nearly 95% of energy-using products, vehicles and equipment in the household, commercial and industrial sectors have been labelled.

- The Programme has helped remove approximately 45 million incandescent light bulbs from the market and improved the energy efficiency of six common electricity-consuming products: transformers, air conditioners, rice cookers, fans, tubular fluorescent lamps, and compact fluorescent lamps (CFLs); with the energy efficiency of air conditioners increasing by 13% annually, saving approximately 100 million kWh per year.

- According to research by the US-based organisation CLASP, the improvement in the energy efficiency of air conditioners (CSPF) from 3.8 to 4.2 under the TCVN 7830:2012 standard to TCVN 7830:2015

alongside the development of inverter air conditioners from 2016 to 2021, assuming that units installed in apartments have a simultaneous operating factor of 0.35, the power saved would be 270 MW for 2021; this capacity is approximately equivalent to a 300 MW thermal power plant.

To date, 12 testing laboratories have been authorised to conduct energy efficiency testing for equipment and appliances nationwide. The testing needs of businesses have been met; specifically, for air conditioning units and refrigerators, there are two testing laboratories in the North and two in the South, three for boilers, and two for electric motors.

- Research into the development of mechanisms, policies and legal regulations for the Energy Service Company (ESCO) business model.
- Developing a system for assessing the capabilities, accrediting and publishing information on energy consulting and service companies.
- Establishing a baseline database and a monitoring and evaluation system for the implementation of the objectives of the National Programme on Energy Conservation and Efficiency
- Standardise energy management and energy audit models in accordance with the Law on the Efficient and Rational Use of Energy.
- Develop technical guidelines for implementing energy-saving and energy-efficient solutions in energy-intensive industries.
- Develop a pilot model for energy-saving lighting using LED lamps for agricultural production.

2.3 Establish the Vietnam Energy Data Centre, energy databases, and information technology applications related to energy and the efficient and economical use of energy

- Compile an annual list of key energy-consuming facilities for the period 2019–2025 and provide training and guidance on using the National Key Energy Reporting System at dataenergy.vn;
- The Ministry of Industry and Trade has completed the development and management of a database covering more than 3,500 key energy-consuming enterprises (those consuming over 1,000 TOE for industrial enterprises and over 500 TOE for offices and buildings).
- Annual Energy Statistics Report for the period 2019–2025;

2.4 Strengthening capacity for energy conservation and efficiency

In carrying out this task, the Ministry of Industry and Trade has focused on the following key activities:

- Organising training and developing human resources in the field of energy conservation and efficiency: training Energy Auditors; Energy Managers; Specifically:

In accordance with regulations, by 2025, the organisation of training and the issuance of Energy Management and Energy Auditor certificates will be carried out by the competent authority (the Ministry of Industry and Trade) for eligible participants.

From 2020 to 2025, the Ministry of Industry and Trade has supported training institutions in the fields of Energy Auditing and Energy Management, as follows:

- 2020: 17 Energy Management training courses were organised, with 441 certificates issued; 6 Energy Auditor training courses were organised, with certificates issued to 137 participants.

- In 2021: 15 Energy Management training courses were organised, with 391 certificates issued; 4 Energy Auditor training courses were organised, with certificates issued to 71 participants.

- In 2022: 18 Energy Management training courses were organised, resulting in the issuance of 543 certificates; 3 Energy Auditor training courses were organised, with certificates awarded to 45 participants.

- In 2023: 35 Energy Management training courses were organised, resulting in the issuance of 847 certificates; 5 Energy Auditor training courses were organised, with certificates awarded to 96 participants.

- 2024–2025: Continue to organise Energy Management and Energy Auditor training courses.

During the 2020–2025 period, a total of 150 training courses were organised and 3,220 certificates were issued to Energy Auditors and Energy Managers.

- Developing training curricula for Energy Auditors and Energy Managers;

- Developing materials and organising advanced training for experts and trainers on Energy Auditing for certified Energy Auditors;

- Provide training and capacity-building for officials and lead agencies responsible for energy conservation and efficiency, from central to local levels, in the organisation and management of the implementation of State regulations on energy conservation and efficiency; provide training and workshops on specialist and technical aspects of energy conservation and efficiency;

- Organising training and capacity-building for research institutes, training institutions, consultancy firms operating in the field of energy conservation, and energy service companies (ESCOs);

- Updating and compiling new training materials, technical documents and guidance materials to support capacity-building activities on energy conservation and efficiency for various target groups.

- Strengthen the activities of the Vietnam Energy Saving Network (VESN) and enhance advisory capacity for electricity utilities and local government agencies (Departments of Industry and Trade) to jointly organise training and workshops on energy saving for electricity consumers and other relevant stakeholders. Enhance

the advisory capacity of electricity utilities regarding the implementation of energy conservation; Enhance the capacity for managing energy efficiency in Vietnam's thermal power sector;

- Develop documentation and organise training on the maintenance and improvement of energy management systems within organisations in accordance with the ISO 50001:2018 standard, targeting lead internal auditors;

- Develop guidance documents on energy management models applicable to enterprises that meet the requirements of the Law on the Efficient and Economical Use of Energy;

- Organise workshops, guidance sessions, and forums for exchanging and sharing experiences on the implementation of energy conservation and efficiency;

- Collaborate, share experiences, plan and implement energy conservation and efficiency measures amongst organisations;

- For credit institutions: Organise training to enhance the capacity to assess loan projects in the field of energy conservation and efficiency.

- For political and social organisations, social organisations and professional associations: Provide training and disseminate initiatives, experiences and solutions for the efficient and economical use of energy.

2.5 Strengthen inspection, monitoring, supervision, guidance on implementation, and evaluation of the results of compliance with legal regulations on the efficient and economical use of energy

The inspection plan regarding the implementation of regulations on the efficient and economical use of energy is approved annually by the Ministry of Industry and Trade and implemented in accordance with legal provisions.

Annually, the Ministry of Industry and Trade conducts inspections on compliance with regulations on energy conservation and efficiency in accordance with the Minister's approved decision and legal provisions, targeting entities including Provincial Departments of Industry and Trade, energy performance testing laboratories, key energy-consuming enterprises, and enterprises that have published energy labels. In general, agencies and enterprises have demonstrated good compliance with regulations on energy conservation and efficiency.

In general, agencies and enterprises have generally complied well with regulations on energy conservation and efficiency, specifically:

- Local Departments of Industry and Trade: Have carried out state management tasks and duties in accordance with the Law on the Economical and Efficient Use of Energy, subordinate regulations and Directive No. 20/CT-TTg of the Prime Minister; Have advised provincial and municipal People's Committees on the issuance of directives and implementation plans for the National Programme on the Economical and Efficient Use of Energy and Directive No. 20/CT-TTg at the local level, and have organised their implementation in accordance with regulations.

- Key energy-consuming enterprises and enterprises subject to

Implementation of energy consumption standards: The facility has essentially fulfilled its obligations as a key energy-consuming entity as stipulated in the Law on Energy Conservation and Efficiency, subordinate regulations, and Directive No. 20/CT-TTg of the Prime Minister on strengthening electricity conservation (Establishing an energy management model, conducting energy audits, implementing energy-saving measures within the enterprise, and complying with the reporting regime for energy consumption standards as prescribed).

- Energy performance testing bodies: Have complied with the provisions of the Law on Energy Conservation and Efficiency, specifically by ensuring technical conditions, testing equipment for energy performance assessment, and guaranteeing the quality of testing services.

- Businesses distributing energy-labelled products: Most businesses have complied with the requirement to affix energy labels to products and equipment prior to placing them on the market; however, some businesses have submitted annual reports to the Department of Industry and Trade and the Ministry of Industry and Trade that do not yet comply with regulations regarding format and timing. The inspection team has noted this and reminded the businesses to learn from their experience and submit corrective reports.

2.6 Communication to raise public awareness of energy conservation and efficiency

The Ministry of Industry and Trade regularly and continuously organises publicity and awareness-raising activities regarding legal regulations on the efficient and economical use of energy through the mass media.

All publicity materials are specifically designed to raise awareness among different sections of the public regarding the significance, importance, economic benefits, best practices and exemplary models of energy conservation and efficiency, with the aim of bringing about a shift in mindset and, ultimately, changing energy consumption behaviour towards a more responsible, economical and efficient approach.

Notable activities include the following:

- Information and publicity on energy conservation and efficiency via television, websites and print media: channels of Vietnam Television; Vietnam Radio (VOV1); Commerce and Industry Magazine, Commerce and Industry Newspaper; the Ministry of Industry and Trade's official website (moit.gov.vn); and the website <http://tietkiemnangluong.com.vn>.

- Organising the "Journalism Award for Publicity on Energy Conservation and Efficiency".

- Organise the "Energy Efficiency Award in Industry"; "Energy Efficiency Award in Construction"; "Highest Energy Efficiency Product Award" and honour individuals at participating facilities who have achieved outstanding results in energy conservation work.

- Organise the National Energy Conservation Conference and host an annual exhibition featuring stands displaying products or equipment supporting energy-saving solutions;

- Organise a knowledge competition on the efficient and effective use of energy via an online platform.

- Organisation of the Earth Hour event series: The Ministry of Industry and Trade and the Vietnam Electricity Group collaborated with media organisations to promote the event, garnering the support of millions of people, particularly a large number of students and other young people, for the series of Earth Hour activities.

- Organising expert forums and disseminating policies in the field of energy conservation and efficiency.

- Collaborate with radio and television stations, as well as press organisations at both central and local levels, to publish news items, articles, videos, feature reports and roundtable discussions to promote policies and disseminate solutions regarding the efficient and economical use of energy, electricity conservation, and exemplary models of energy efficiency.

- Organise exhibition stands to introduce and promote the National Programme on Energy Conservation and Efficiency, as well as energy-saving products and technologies, at trade fairs and exhibitions;

- Organise the online competition “Learn about Energy Conservation and Efficiency”, attracting 218,382 participants over a five-week period.

2.7 Strengthen international relations and cooperation in the field of energy conservation and efficiency

The Ministry of Industry and Trade has successfully organised and implemented international cooperation in the field of energy conservation and efficiency, including a number of large-scale programmes and projects led by the Ministry, such as: The Vietnam-EU Sustainable Energy Transition Programme, with a total grant funding of 142 million euros, comprising 121 million euros in grant funding and 8.5 million euros for policy support; The Project to Promote Energy Efficiency in Vietnam’s Industrial Sectors, with a total budget of 11.3 million USD; The Energy Efficiency Project for Vietnam’s Industrial Sector, with a total budget of 101.7 million USD, comprising 100 million USD in IBRD loans for investment in energy efficiency projects and 1.7 million USD in IDA loans for technical assistance.

The Ministry of Industry and Trade has been actively engaging with international organisations to seek funding to assist certain localities in developing implementation plans for the Programme and Directive on Strengthening Electricity Conservation for the 2020–2025 period within their jurisdictions. Currently, the World Bank (WB), the Asian Development Bank (ADB) and the Government of Denmark are providing funding for the development of implementation plans for the 2020–2025 Programme in 15 localities, and all 15 of these localities have issued and are implementing their plans.

Some projects being implemented during the 2019–2025 period:

- a) Project to Promote Cleaner Technologies in Vietnam’s Industrial Sectors

- Funding body: Green Climate Fund via the World Bank.
- Project duration: from 2022 to January 2026.
- Key activities:

+ Component 1: Operation of the Risk Sharing Facility (RSF): This facility will provide partial credit risk guarantees to financial institutions (commercial banks) participating in the project (PFI) to guarantee loans for industrial enterprises (IE) investing in energy-saving projects.

+ Component 2: Technical assistance: key activities include (i) conducting research and developing technical guidelines to promote the adoption of energy management solutions across Vietnam's industrial sectors; (ii) capacity building for management and technical staff within ministries, local authorities, industrial zones and key energy-consuming facilities; (iii) strengthening the capacity of banks to improve their knowledge, experience and expertise in identifying, appraising and implementing energy-efficient lending projects in the industrial sector; (iv) strengthening the capacity of enterprises and energy efficiency service providers to identify energy-saving projects and prepare project proposals for the development of projects eligible for bank financing.

b) The Vietnam–Denmark Energy Partnership Programme for the period 2020–2025 (DEPP3 Programme)

- Donor: Denmark
- Project duration: from 2021 to April 2026.

- Key activities: Conducting a survey on energy consumption patterns and energy-saving potential within the wood processing industry to assess the feasibility of establishing energy consumption standards for the sector; Piloting the Voluntary Agreement Scheme (VAS) programme at enterprises in Vietnam; Developing a set of guidelines for implementing the VAS programme.

c) Promoting the market for energy efficiency and renewable energy investments in the industrial sector and supporting the implementation of Vietnam's Green Growth Action Plan

- Name of the donor: The Government of the Republic of Korea through the Korea International Cooperation Agency (KOICA).

- Project start date: January 2022 – December 2025.

- Key activities: supporting energy audits for key energy-consuming enterprises, updating and upgrading the Energy Management and Energy Audit curriculum, and a number of communication activities.

d) Vietnam–EU Sustainable Energy Transition Programme:

- PAR3E Project:

Implementation period: from 2023 to 2025

Key activities: supporting communication activities on energy efficiency.

- The IEEP Project (Project to “Promote energy-saving activities in large industrial enterprises through energy management systems and the optimisation of energy-saving systems and practices in small and medium-sized enterprises in Vietnam”).

Implementation period: from January 2023 to December 2027

Key activities: The project aims to promote and stimulate increased market demand and the adoption of energy-saving solutions in industry through the application of energy management standards combined with the optimisation of energy systems, thereby achieving better energy savings, reducing greenhouse gas emissions, lowering carbon footprints, and enhancing the productivity and competitiveness of Vietnam’s industrial sectors.

- The AIS4EE Project (Promoting Innovative Start-ups in the Energy Efficiency Sector)

Funded by: The European Union and the Global Green Growth Institute Duration: October 2022 to September 2025

Key activities: organising an Innovation Accelerator Programme in the field of energy efficiency; reviewing policies to promote innovative start-ups in the field of energy conservation and efficiency.

e) Low-Emission Energy Programme II (VLEEP II).

- Funding body: United States Agency for International Development (USAID).

- Implementation period: 2021–2025.

- Key activities: Developing Vietnam’s Sustainable Energy Communication Strategy; conducting surveys, assessments and proposing energy efficiency solutions in industrial parks, export processing zones and economic zones. Surveying and assessing the electric vehicle ecosystem in Vietnam; Supporting the development and implementation of mechanisms, policies and measures to control and reduce greenhouse gas emissions in the energy and industrial sectors in line with NDC commitments and the Paris Agreement.

Other international cooperation activities:

- Coordinate with the Ministry of Natural Resources and Environment to prepare negotiation materials for the Vietnamese delegation for COP sessions.

- Coordinate with the Ministry of Natural Resources and Environment to prepare, develop and implement the Partnership for Market-Based Solutions (PMI) programme in Vietnam, funded by the World Bank.

- Attend annual meetings within the framework of ASEAN and APEC, as well as annual and ad hoc meetings of specialised working groups such as the

the ASEAN Energy Efficiency and Conservation Network, and the APEC Expert Group Meeting on Energy Efficiency and Conservation.

- Participate in domestic conferences and seminars organised in Vietnam by development partners and international organisations on energy efficiency, climate change and green growth, including: Participate in sessions of the ASEAN Energy Centre, the Asian Development Bank (ADB), Japan, and the Asia-Pacific Climate Week Conference on topics related to carbon pricing mechanisms, energy transition, the implementation mechanism of Article 6 of the Paris Agreement, and the Carbon Capture, Utilisation and Storage (CCUS) forum.

2.8 Scientific research and technological development on the efficient and effective use of energy

The Ministry of Industry and Trade is currently implementing the task of “Developing a key science and technology programme on renewable energy, energy efficiency and high-quality development for the industry and trade sector up to 2030, with a vision to 2045” with the aim of guiding key science and technology research tasks in the field of renewable energy, energy efficiency and high-quality development. The core objective is to reduce energy consumption in manufacturing, industry and domestic use, prioritising the development of renewable energy and the replacement of obsolete equipment. This task is scheduled for completion in 2026.

During the 2019–2025 period, a number of research tasks and the implementation of energy-saving solutions have been carried out, such as:

- Research and implement heat recovery solutions to save energy in the fuel consumption of kilns for ceramic production using a batch process.
- Research into optimising operating modes and implementing smart urban lighting systems designed to save electricity and protect the environment.
- Implement energy-saving and efficient solutions in the extraction and processing of copper ore.
- Research and application of smart air compressor cluster control systems to save energy in industrial plants in Vietnam
- Research and application of technical improvement models to enhance energy efficiency and electricity savings in industrial shrimp farming across the provinces of the Mekong Delta.

2.9 Establishment of a Fund to promote the efficient and effective use of energy

The Ministry of Industry and Trade conducted research and proposed the establishment of the Fund during the drafting of the Law Amending and Supplementing Certain Provisions of the Law on the Conservation and Efficient Use of Energy, which was passed by the National Assembly on 18 May 2025.

Pursuant to the provisions of the Law Amending and Supplementing Certain Provisions of the Law on the Efficient and Economical Use of Energy, the Fund for Promoting the Efficient and Economical Use of Energy is a state financial fund outside the budget, operating on a non-profit basis.

Profit. The Fund for the Promotion of Energy Conservation and Efficiency operates by raising capital, granting loans, making investments, acting as a trustee and accepting trust arrangements to fulfil its function of promoting energy conservation and efficiency activities nationwide.

The Fund for the Promotion of Energy Conservation and Efficiency aims to support and finance projects, tasks and activities promoting energy conservation and efficiency through flexible mechanisms in accordance with the requirements of the sponsor and the provisions of current legislation.

The Prime Minister shall decide on the establishment, organisation and operation of the Fund for the Promotion of Energy Conservation and Efficiency in a manner that promotes socialisation, ensures financial independence, avoids duplication with state budget revenue and expenditure, and minimises the increase in operational and business costs for enterprises and production and business establishments.

The Government shall prescribe the sources of capital for the Fund for the Promotion of Energy Conservation and Efficiency

The Ministry of Industry and Trade is continuing to organise the research, analysis, evaluation and selection of an operational model for the Fund for the Promotion of Energy Conservation and Efficiency, and is preparing the procedures for establishing the Fund in accordance with the law.

3. Regarding the implementation of Directive No. 20/CT-TTg dated 7 May 2020 issued by the Prime Minister on strengthening electricity conservation for the period 2020–2025

On 7 May 2020, the Prime Minister issued Directive No. 20/CT-TTg on strengthening electricity conservation for the 2020–2025 period (Directive No. 20). The Directive sets the target that, during the 2020–2025 period, the whole country must strive to achieve an annual reduction of at least 2.0% in total electricity consumption. To achieve this target, the Prime Minister requires ministries, ministerial-level agencies, government agencies, People's Committees of provinces and centrally-affiliated cities, enterprises, and social organisations and groups to intensify the implementation of electricity conservation across all electricity-consuming sectors, including specific targets for each group. The five groups of measures include: (i) Electricity saving in government offices and public buildings; (ii) Electricity saving in public lighting, lighting for advertising purposes, and outdoor decoration; (iii) Electricity saving in households; (iv) Electricity saving in commercial and service establishments; and (v) Electricity saving in manufacturing enterprises.

In accordance with Directive 20/CT-TTg, the Ministry of Industry and Trade has assisted provinces and cities in developing implementation plans for the National Programme on Energy Conservation and Efficiency for the 2019–2030 period, incorporating measures for the efficient and economical use of electricity to be implemented within their respective jurisdictions. The experience of developing action plans to implement Directive No. 20 by the supported provinces and cities has also been shared and disseminated to provinces and cities nationwide through technical workshops, enabling localities to proactively develop their own action plans. Provinces and cities directly under the Central Government have designated a lead agency to implement Directive No. 20

at the local level (the People's Committees of the provinces and cities have designated the Department of Industry and Trade as the focal point for implementation).

According to calculations by the Vietnam Electricity Group: Between 2020 and 2025, the country has achieved the electricity saving targets set by the Prime Minister in Directive No. 20/CT-TTg dated 7 May 2020 on strengthening electricity conservation for the 2021–2025 period.

4. Regarding the mobilisation and implementation of funding sources for the Programme

Annually, the Ministry of Industry and Trade has implemented tasks under the Programme using funds from the economic sector budget and recurrent expenditure.

In addition, the Programme has mobilised funds from international cooperation projects to support both technical and financial activities in the field of energy conservation and efficiency. In total, approximately 81.5 million USD has been mobilised to support technical assistance activities and investment projects related to energy conservation and efficiency.

2.3. Results of the Programme's implementation at the corporations

2.3.1 Vietnam Electricity Group

a) Results of the electricity saving programme

The 2019–2025 period highlights the efforts and role of Vietnam Electricity Group and its subsidiaries in implementing energy-saving measures whilst ensuring a safe and stable electricity supply for socio-economic development.

Total national commercial electricity generation for the 2019–2025 period (including electricity sold directly by EVN and electricity exports) is estimated to reach approximately 1,711 billion kWh. Through energy-saving and efficiency programmes implemented by EVN and its subsidiaries, the total amount of electricity saved during this period is estimated to reach approximately 31,325 million kWh. The annual electricity saving rate of all distribution units has exceeded 2%, meeting the requirements set out in Directive No. 20/CT-TTg dated 7 May 2020 and Directive No. 20/CT-TTg dated 8 June 2023 issued by the Prime Minister on strengthening electricity conservation for the period 2020 to 2025 and subsequent years. It is estimated that by 2025, the total electricity saved will reach 6,460 million kWh, equivalent to approximately 2.25% of total commercial electricity generation (estimated at 286,979 million kWh). Concurrently, demand-side management (DSM) programmes, along with related technical and operational measures, have contributed to reducing peak power demand by an estimated 12,092 MW during the 2019–2025 period.

EVN and its member units have implemented a comprehensive set of measures to promote energy conservation, including internal energy-saving initiatives; strengthening publicity, advocacy and support for customers to use electricity sparingly and efficiently; and implementing a load management programme to help regulate and reduce electricity demand during peak hours. The distribution sector (Electricity Corporations and Electricity Units) plays a key role in organising and implementing these measures, directly promoting and integrating energy-saving solutions into everyday life. The results of these initiatives show that energy-saving

have gradually become established, forming an important component of management and operational activities within organisations, whilst also helping to raise awareness of energy conservation and efficiency throughout EVN and among electricity customers.

b) Results of the implementation of the objective to reduce electricity losses

EVN's electricity consumption for transmission and distribution has decreased steadily over the years, in line with the expansion of power generation capacity and the ongoing upgrading and expansion of the electricity grid, thereby meeting the high growth in electricity demand whilst ensuring ever-improving power quality, safety and reliability. As a result, EVN's transmission and distribution energy losses have fallen from 10.15% (in 2010) to 6.00% (in 2025), moving Vietnam from a country with high transmission and distribution energy losses to second place in the ASEAN region and on a par with developed nations worldwide (Denmark, France, Poland, Switzerland...)

The Group has always regarded the reduction of electricity losses as a key priority in its production and business operations. EVN and its subsidiaries have drawn lessons from the effective measures implemented and the shortcomings identified in electricity loss reduction efforts over the past period, and have developed a practical and effective programme to achieve the set targets. The Group and its subsidiaries have vigorously and comprehensively implemented technical management, operational, repair and maintenance measures to enhance the reliability of electricity supply and reduce grid incidents, as well as organisational, business management and investment and refurbishment measures to contribute to reducing power losses.

Currently, the transmission and distribution loss ratio of Vietnam's power system is approaching the level of technical losses; therefore, reducing this ratio further would require very significant investment costs. EVN will continue to implement the Prime Minister's directives as set out in Decision No. 538/QĐ-TTg approving the Strategic Development Plan for the Vietnam Electricity Group until 2030, with a vision to 2045, which states that by 2030, the ratio of electricity used for transmission and distribution should be reduced to a level on par with that of advanced countries in the region.

2.3.2 Vietnam National Coal and Mineral Industries Group

The Vietnam Coal and Mineral Industries Group (TKV) has implemented a range of tasks and measures in line with the National Programme on Energy Conservation and Efficiency,

a) Regarding leadership and implementation:

TKV has issued guidance documents on energy conservation and efficiency across the Group: Establishing the TKV Steering Committee on Energy Conservation and Efficiency; developing and issuing the Comprehensive Programme on Energy Conservation and Efficiency for the 2021–2025 period, with a vision towards 2030.

b) Regarding energy audits and energy management:

All key energy-consuming units within TKV have carried out energy audits at regular intervals of once every three years, in accordance with regulations. The audit results have helped to identify

Identified and proposed energy-saving solutions, many of which have been effectively implemented, such as: optimising drainage pump systems, ventilation, mine shaft lighting, conveyor belt operations, and the use of variable frequency drives and automated control systems. - 100% of key units have appointed energy management officers

c) Regarding training, awareness-raising and education: Full participation in training courses organised by state management agencies. - Organising training and refresher courses for management staff at TKV's member units.

d) Regarding investment, technological innovation and the implementation of technical solutions: Implementation of energy-saving projects; Implementation of refurbishment and replacement of high-efficiency equipment (replacement of IE3 and IE4 efficiency motors; installation of variable frequency drives for pumps, fans, conveyors and compressed air transport systems; Implementing automated control and SCADA monitoring for mine electrical systems, pumping stations and conveyors; switching to energy-saving LED lighting). Some units have explored the use of renewable energy (rooftop solar power) to support internal operations.

2.3.2 Vietnam National Industry and Energy Group

The Vietnam National Energy Group has implemented a range of tasks under the National Target Programme on Energy Conservation and Efficiency as follows:

- Establishing energy management models at key energy-consuming units; developing and implementing energy conservation and efficiency programmes with approved solutions and roadmaps; conducting evaluations of implementation results to serve as a basis for updating and supplementing plans for the next phase;
- Conduct energy audits, identify potential electricity savings and propose appropriate solutions;
- Fully implement the regular reporting regime in accordance with government regulations regarding the implementation of energy-saving and efficient energy use;
- Establish an online energy monitoring system, such as: the Visual MESA application, the PI system, and PowerBI reports;
- Research and invest in replacing old equipment with high-efficiency energy-saving equipment. At the same time, prioritise the adoption of new and modern technologies to implement optimal energy solutions for the plant;
- Establish fuel consumption standards for equipment and vehicles used in production and business operations; monitor fuel consumption; schedule operating times scientifically and reasonably; and carry out regular maintenance of energy-using equipment;
- Participate in training courses on energy audits and energy management organised by the Ministry of Industry and Trade, and obtain the relevant certificates;
- Collaborate with research institutes and energy service companies to implement and research energy-saving projects for the facility/plant.

3. Assess the results of implementing the Programme's objectives for the 2019–2025 period

3.1 Achieve energy savings of 5.0 to 7.0% of total national energy consumption during the period from 2019 to 2025

According to calculations by the Association for Science and Technology on Energy Conservation and Efficiency, the period from 2019 to 2025 is assessed by comparing hypothetical energy consumption (BAU) with actual energy consumption. The energy savings rate reached 4.6% by 2024 and exceeded 5% by the end of 2025, in line with the set target of 5–7%.

Category	Unit	2018	2019	2020	2021	2022	2023	2024	2025	2019–2025
Assumed energy intensity (BAU)	kgOE/1,000 USD	57.44	57.44	57.44	57.44	57.44	57.44	57.44	57.44	57.44
Assumed energy consumption (BAU)	KTOE	60,456	64,905	66,764	8,469	74,315	78,079	81,689	85,467	519,692
Actual energy consumption	KTOE	60,456	64,542	66,014	66,114	71,995	75,122	78,054	81,045	502,860
Energy saved	KTOE	-	363.12	750.92	2,355	2,320	2,957	3,635	4,421	16,831
Savings rate		0.00%	0.56%	1.14%	3.56%	3.22%	3.94%	4.66%	5.46%	3.35%

The calculation results obtained from the above assumptions show that the savings rate for the calculation period up to 2023 is 3.94%, with a projected cumulative rate exceeding 5% by 2025; in 2020, the savings rate was 1.14% due to the COVID-19 pandemic leading to a stagnation in economic activities. Although the annual savings rate does not reach 5–7% per year, there is a slight increase over the years. The cumulative energy savings rate for the 2019–2025 period will be 3.35%, and for the 2023–2025 period, it is estimated to be 4.71%.

The table below is used to calculate the impact of changes in the economic structure and the actual effect of energy-saving measures across sectors (through changes in the intensity of economic sectors), with the Services sector including Transport and the Residential sector.

Category	Unit	2019	2020	2021	2022	2023
Total GDP	Millions of USD, 2010 prices	181,657	187,247	192,078	208,944	219,962
Agriculture	Millions of USD, 2010 prices	22,672	23,361	24,228	25,125	26,113
Industry	Millions of USD, 2010 prices	72,144	75,303	77,718	84,075	87,218
Services	Millions of USD, 2010 prices	86,841	88,583	90,132	99,743	106,632
Total energy consumption	KTOE	61,944	63,397	62,461	68,638	71,516
Agriculture	KTOE	3,337	3,253	3,466	3,600	3,789
Industry	KTOE	30,681	35,065	35,713	37,340	39,266
Services	KTOE	27,926	25,079	23,282	27,698	28,461
Electricity intensity	kgOE/USD	321.33	319.51	312.00	314.53	312.14

Although the COVID-19 pandemic had a significant impact on the economy and business operations during the initial phase of the programme (2020–2021), the contribution of energy-saving activities, combined with positive changes in the economic sector structure, ensured that the programme's energy-saving targets were still met.

3.2 Improve the policy framework and legal provisions on energy conservation, including: Researching, amending and supplementing the Law on the Efficient and Rational Use of Energy and subordinate legislation; finalising and supplementing regulations on energy consumption standards for 10 to 15 sectors/sub-sectors within certain key energy-intensive economic sectors; developing and disseminating 15 to 20 technical guidelines for economic sectors and sub-sectors

Based on the figures reported in Section 2.1, the Programme's objective regarding the area of 'Improving policy mechanisms and legal regulations on energy conservation' has been achieved.

The effectiveness of establishing a coherent and unified legal framework for the efficient and effective use of energy has spurred the involvement of the political system nationwide; it has transformed the awareness and behaviour of society as a whole.

Overall, the current system of legal documents governing the use of renewable energy in Vietnam is now relatively comprehensive and coherent, providing the necessary legal framework for the implementation of activities, strengthening the effectiveness of state management over the use of renewable energy, ensuring consistency in the application of laws on renewable energy and energy efficiency, helping to improve economic efficiency, whilst also helping to conserve national energy resources, protect the environment and reduce greenhouse gas emissions, contributing to efforts to mitigate the impacts of global climate change, saving investment resources, and gradually fulfilling commitments on environmental protection and combating climate change...

The Law has established a legal framework, removed barriers and specified regulations on management measures, technical standards and policies to promote the efficient and sustainable use of energy across all industrial production, agricultural, transport, civil construction, lighting and community living activities, thereby facilitating the coordinated implementation of the country's sustainable energy use initiatives.

3.3 Reducing electricity losses to below 6.5%

According to Circular No. 8076/EVN-MTPTBV dated 18 December 2025 from the Vietnam Electricity Group (EVN): EVN's electricity consumption for transmission and distribution has decreased steadily over the years, in line with the expansion of power generation capacity and the upgrading and expansion of the power grid, meeting the high growth in demand whilst ensuring increasingly higher power quality, safety and reliability. As a result, EVN's electricity consumption for transmission and distribution has decreased from 10.15% (in 2010) to 6.00% (in 2025).

3.4 Reduce average energy consumption for industrial sectors/sub-sectors compared to the 2015–2018 period, specifically: (i) For the steel industry: by 3.00 to 10.00 per cent, depending on the product type and production technology; (ii) For the chemical industry: by at least 7.00 per cent; (iii) For the plastics manufacturing industry: from 18.00 to 22.46%; (iv) For the cement industry: a minimum of 7.50%; (v) For the textile and garment industry: a minimum of 5.00%; (vi) For the wine, beer and soft drinks industry: from 3.00 to 6.88% depending on the product type and production scale; (viii) For the paper industry: from 8.00 to 15.80% depending on the product type and production scale

The assessment results indicate that the energy-saving potential in the industrial sector is relatively high, with energy savings of 5.3%, 9.1%, 12.4% and 16.0% of total final energy consumption under the Baseline Scenario in 2020, 2025, 2030 and 2035 respectively.

Summary of projected energy savings (in KTOE)



3.5 Ensure that 100% of key transport enterprises have programmes to promote vehicle driving skills and technical solutions for the operation and use of motorised transport vehicles with a focus on energy efficiency

- Carry out the task of reviewing and improving mechanisms, policies, standards and technical regulations on energy saving in the transport sector, The Ministry of Construction has drafted two TCVN standards on fuel consumption limits for motorcycles, mopeds and new motor vehicles (both domestically manufactured/assembled and imported) to be submitted to the Ministry of Science and Technology for publication, serving as a reference for vehicle manufacturing, assembly and import facilities during implementation.

- The Ministry of Construction has issued regulations on the method for determining fuel consumption levels for the purposes of energy labelling, as stipulated in QCVN 09:2024/BGTVT (for cars) and QCVN 14:2024/BGTVT (for motorcycles and mopeds). At the same time, the Ministry continues to implement Decision No. 876/QĐ-TTg dated 22 July 2022 of the Prime Minister approving the Action Programme on green energy transition, reduction of carbon dioxide and methane emissions in the transport sector, and the tasks assigned by the Government leadership, the Ministry has drafted and submitted to the Prime Minister a report proposing policies to support the transition to electric vehicles; and a report proposing policies to encourage the conversion of transport vehicles to electric power for inter-provincial and fixed-route passenger transport services by bus, with a view to promoting the transition to renewable energy in transport.

- To continue implementing the regulations on energy labelling for passenger cars, motorcycles and mopeds manufactured, assembled and imported in accordance with Circular No. 54/2024/TT-BGTVT, Circular No. 54/2024/TT-BGTVT dated 15 November 2024 of the Ministry of Transport (now the Ministry of Construction).

- Developing and issuing National Technical Standards for passenger terminals, National Technical Standards for freight terminals, and National Technical Standards for rest areas, including provisions on the layout of charging systems for electric vehicles.

- The Ministry has drafted a Circular stipulating energy labelling for energy-using vehicles within the scope of the Ministry of Construction's management, with a view to implementing the tasks assigned under the Law Amending and Supplementing Certain Provisions of the Law on the Efficient and Economical Use of Energy.

3.6 70% of industrial zones and 50% of industrial clusters have adopted energy-saving and efficient solutions

Industrial zones that have adopted energy-saving and efficient measures: Quang Ngai (70%); Bac Ninh (90%); provinces achieving 100% include: Can Tho; Dong Nai; Hanoi; Hung Yen; Ninh Binh; Dak Lak; Lang Son; Son La; Thanh Hoa. With these results, the target of 70% of enterprises accessing and implementing energy-saving and efficient solutions will essentially be achieved by 2025.

Number of industrial estates that have adopted energy-saving and energy-efficient solutions: Quang Ngai (70%); Bac Ninh (80%); provinces achieving 100% include: Can Tho; Dong Nai; Hanoi; Hung Yen; Ninh Binh; Dak Lak; Lang Son; Son La; Thanh Hoa. Thus, by 2025, the target of 50% of industrial clusters having adopted energy-saving and efficient solutions will essentially have been achieved.

3.7 Ensure that 100% of key energy-consuming facilities implement energy management systems in accordance with regulations

According to the DEPP3 survey report assessing industrial enterprises' compliance with energy management regulations, 750 enterprises were selected based on various criteria—ensuring representativeness in terms of size, sector and geographical location—to receive an online survey form evaluating their compliance with energy management regulations. As a result, 371 valid responses were received, comprising 340 key energy-consuming facilities and 31 near-key energy-consuming facilities across the three regions of North, Central and South, spanning various sectors such as: Food and beverages; Textiles, clothing and footwear; Heavy industry and mineral processing; Wood and wood products, paper; Electronics and components; Agricultural products, sugar, and plant-based products; Construction materials production; Chemicals and pharmaceuticals; Others. A summary of the results from the online survey responses of 340 enterprises shows that all (100%) of these enterprises have carried out activities related to energy management; however, the level of compliance varies and is not uniform. Specifically, if we combine the number of enterprises that fully comply and those that do not fully comply with the six groups of CSR criteria as required, 100% of enterprises are included. However, approximately 67% of enterprises have only complied with some CSR requirements and have not met others. Furthermore, the majority of enterprises are still focusing on meeting basic mandatory requirements such as developing policies and plans, organisational structure and reporting; activities related to investment in energy-saving solutions are still rarely implemented.

3.8 Ensure compliance with and implementation of the requirements of the National Technical Standard on Energy-Efficient Buildings for construction projects falling within the scope of the Standard

- According to a report by the Ministry of Construction, to date, the Ministry has published three guidance documents: (1) Guidance on the design and operation of energy-efficient hospitals in Vietnam; (2) Guidance

on the use of simulation tools and energy-saving calculations for new and renovated buildings suitable for Vietnamese conditions; (3) Technical guidelines for optimising the operation of air-conditioning systems in office buildings to promote energy-efficient and effective energy use; and has submitted 21 national standards (TCVN) related to energy efficiency to the Ministry of Science and Technology for publication.

- The Ministry of Construction has tasked the Institute of Building Materials with researching and drafting regulations on the roadmap for energy labelling of building materials, which are expected to be issued in 2026 to implement the new provisions set out in the Law Amending and Supplementing Certain Articles of the Law on the Economical and Efficient Use of Energy.

3.9 Achieved 80 construction projects certified as green buildings, utilising energy efficiently and effectively

According to a report by the Ministry of Construction, as of the end of the fourth quarter of 2024, there were 559 buildings nationwide that had been assessed and certified as green buildings, with a total gross floor area of over 13.5 million square metres. 2024 saw strong growth in green buildings in Vietnam, with 163 new certifications issued – more than double the figure for 2023 and triple that of 2022 (when 54 projects were certified). The number of construction projects certified as green buildings, utilising energy-saving and efficient technologies, has now exceeded the targets set out in Decision No. 280/QĐ-TTg dated 13 March 2019 by the Prime Minister, approving the National Programme on Energy Conservation and Efficiency for the 2019–2030 period.

3.10 Develop and implement a market transformation programme for energy efficiency for at least five commonly available products on the market

The Ministry of Industry and Trade has issued Circular No. 52/2025/TT-BCT dated 14 November 2025, stipulating the list of appliances and equipment subject to energy labelling within the Ministry's remit, as well as the implementation timeline. Accordingly, five products have been added to the energy labelling programme, including: induction hobs, infrared hobs, microwave ovens, desktop computers, commercial air conditioners and LED street lights.

Induction hobs, infrared hobs, microwave ovens, desktop computers and LED street lights will undergo voluntary energy labelling until 31 December 2026, with mandatory energy labelling commencing on 1 January 2027. Commercial air conditioners will undergo voluntary energy labelling.

3.11 Training and certification of 3,000 energy management/energy audit specialists

During the 2019–2025 period, the Ministry of Industry and Trade organised the implementation of this initiative, thereby achieving the Programme's objectives.

3.12 60% of schools have carried out awareness-raising and educational activities on energy conservation and efficiency

According to the provincial People's Committee's report on the implementation of the National Target Programme on energy conservation and efficiency, all schools have carried out awareness-raising and educational activities on energy conservation and efficiency.

3.13 Achieve 90% of provinces and centrally-administered cities having developed and approved local plans/programmes for energy conservation and efficiency

By the end of 2020, 100% of provinces and centrally-administered cities had developed and approved local plans and programmes for energy conservation and efficiency.

3.14 Maintain and develop a network of energy-saving and cleaner production units in at least 50 provinces and centrally administered cities; establish and maintain a national energy management network

Currently, industrial promotion and trade promotion centres within provincial Departments of Industry and Trade nationwide are responsible for implementing programmes and projects to encourage the development of industry and small-scale industry, promote energy efficiency, sustainable production and trade promotion activities; whilst also providing public services and consultancy to businesses and the public in these areas. In addition, there are numerous independent organisations providing energy consultancy and auditing services, such as: Vietnam Technology Solutions Joint Stock Company (VETS); Bach Khoa Energy Conservation Joint Stock Company (ECC Bach Khoa); Hanoi Bach Khoa Energy Technology Joint Stock Company (BKET); the Centre for Research and Development on Energy Conservation (ENERTEAM) ...

III. Projected plan for the 2026–2030 period

Based on the results achieved in the previous period, the consultancy estimates that during the 2026–2030 period, energy savings could reach 8–10% of the country's total commercial energy consumption, as projected in the Revised National Energy Master Plan for the period up to 2030 with a vision to 2050, equivalent to approximately 10 million TOE by 2030. To achieve this target, the consultancy recommends continuing to implement project groups with the following specific priorities:

3.1. Continue to improve mechanisms, legal policies, public awareness campaigns and training to raise public awareness of the sustainable use of natural resources and the conservation of biodiversity

The overarching objectives of the Programme for the 2019–2030 period, as set out in Decision 280/QĐ-TTg, target an energy saving rate of 8%–10% of total national energy consumption for the 2026–2030 phase; this rate is also referenced in Resolution 70-NQ/TW (2025). However, based on calculations for the 2019–2025 period, to achieve the aforementioned target, it is necessary to review and tighten the specific targets of the Programme for the period up to 2030; simultaneously, imposing binding requirements on key sectors or fields such as industry, buildings, and construction, accompanied by plans for measurement, inspection, monitoring, and periodic evaluation; specific tasks:

- Regarding mechanisms, policies and legislation: focus on researching, amending, supplementing and finalising all guiding documents under Law No. 77/2025/QH15, including:

- + Establish and submit to the Prime Minister for issuance the Fund to Promote the Use of Energy Conservation and Efficiency.

- + Circulars guiding energy audits, energy service organisations (ESCOs), energy management systems, etc.

- + Introduce energy consumption standards for certain energy-intensive industries such as: cement, construction materials, mining, and the power industry...

- Consider prioritising logistics and introducing targets for reducing energy consumption or energy intensity at sector and sub-sector levels,

- For programmes and projects:

- + Labelling programme: continue to develop and establish energy efficiency standards for energy-using products in accordance with the roadmap; invest in testing equipment that meets standards; combine implementation with commercialisation during the smart technology era.

- + Continue to expand the list of energy-labelled equipment, such as: industrial boilers, transformers, industrial air conditioners: floor-standing air conditioners, ceiling-mounted air conditioners, chiller systems...

- + Training of energy auditors and energy management personnel: continue to set targets for the number of training sessions and certificates issued; gradually digitise training programmes and content, and regularly update knowledge in line with technological innovation trends.

- + Communication: Continue to implement annual Earth Hour campaigns, the national competition on energy efficiency in industry, buildings and high-efficiency products, innovative solutions to enhance energy efficiency, green consumer fairs, and energy conservation programmes and activities in communities and schools...

- + Pilot a number of energy efficiency projects in industry and the building sector, utilising financial support mechanisms such as the Energy Efficiency Fund and ESCO services.

- + Allocate resources and support small and medium-sized enterprises in implementing energy efficiency activities linked to clean production and environmental protection at the local level.

- Energy efficiency in the transport sector should be given greater priority in the coming phase, linked to plans for public electric vehicles, metro systems, green logistics, and vehicle fuel consumption standards.

- Regarding implementation and financial support: consider whether provinces should undertake province-specific energy-saving activities, setting their own energy-saving targets and energy intensity levels in line with the Programme's overall objectives; develop green financial products; encourage and support investment in innovative activities within the energy-saving sector.

3.2. Promote the use of high-efficiency equipment

During the 2026–2030 period, the Programme is expected to continue developing performance standards for the remaining products, whilst reviewing and raising the standards for already labelled appliances, and at the same time stepping up market research activities and supporting domestic manufacturers in producing high-efficiency appliances.

Component 2.1. Developing energy performance standards and implementing mandatory and voluntary energy labelling schemes:

- Developing a plan and organising the implementation of the labelling programme for the remaining household, office and industrial products in accordance with the roadmap.
- Research the upgrading of the 5-star standard for certain products that were labelled in the previous phase.
- Designate additional laboratory testing centres to support labelling activities, in conjunction with training for testing personnel.
- Conduct regular market surveys (annually or every two years) to assess the effectiveness of the labelling programme.
- Establish a database for the standardisation and energy labelling programme and make it publicly available via the Programme's website.

Section 2.2. Technical support for manufacturers, assemblers, importers and retailers of high-energy-efficiency products:

- Provide support to manufacturers of high-energy-efficiency products through technical assistance, training, information sharing and access to preferential loans.
- Award the 'Green Electrical Appliance Supermarket' certification to retail outlets that achieve sales targets for high-energy-efficiency products.
- Provide training courses for supermarket representatives on sales techniques and how to convey information about high-energy-efficiency products to consumers.
- Conduct research and issue a Circular stipulating the use of high-energy-efficiency equipment in public investment projects.

3.3. Industrial production activities

Develop energy consumption benchmarks for production in selected sectors, whilst establishing roadmaps and action plans for energy efficiency and technological transition.

Promote the implementation of the ISO 50001 standard through training and certification activities within the framework of international cooperation projects.

Continue to compile an annual list of key enterprises, whilst guiding and supporting these enterprises in submitting annual energy consumption reports to local Departments of Industry and Trade and the Programme's website (<http://dataenergy.vn>).

Establish a system for managing and monitoring electricity consumption in the production processes of industrial facilities within the selected sector; encourage, and eventually make mandatory, the adoption of advanced energy consumption standards per unit of product for certain energy-intensive industries.

3.4. Buildings and public lighting

Promote the implementation of the National Technical Standard on Energy-Efficient and Energy-Saving Buildings (QCXD 09:2013/BXD).

Provide capacity-building training for management staff, energy management staff, design consultants, assessors, supervisors and others on the provisions of the National Technical Standards for Energy-Efficient and Energy-Saving Buildings.

Develop a dedicated energy audit programme for the building sector.

Develop green building assessment tools specifically tailored to the Vietnamese construction environment, including criteria for energy-efficient and sustainable use of energy.

Coordinate the issuance of circulars guiding the implementation of QCXD 09:2013/BXD in various types of buildings, such as offices, hospitals and schools, alongside penalty provisions.

Develop and manage a database on the energy consumption of buildings, starting with those with a floor area exceeding 2,500 m².

Establish energy consumption benchmarks for different types of buildings.

Develop model buildings demonstrating efficient and effective energy use, incorporating energy management models.

Develop criteria, standards, tools, and regulations to encourage and support the development of green buildings; establish regulations on the procedures for assessing and certifying green buildings.

Implement a project to establish a testing, assessment and certification facility for energy-saving materials and organise its implementation

Issue technical regulations and standards on energy-efficient public lighting, whilst also issuing a circular providing guidance on the implementation of energy conservation and efficiency measures for public lighting in localities.

3.5. Transport sector

Component 5.1. Energy efficiency in the planning and construction of transport infrastructure.

- Developing guidelines for integrating energy efficiency measures into development planning projects, investment project preparation and the construction of transport infrastructure.

- Develop a public passenger transport system using clean fuels and high-capacity passenger transport to improve travel conditions for the public, enhance energy efficiency and protect the environment.

Component 5.2. Improving energy efficiency in the organisation and operation of the transport system.

- Establish and organise traffic flow management to reduce traffic congestion in urban areas.
- Develop and implement projects to coordinate freight transport modes, prioritising the development of fuel-efficient, environmentally friendly mass transport modes; and make rational use of the rail and waterway transport systems.
- Develop and apply standards for minimum fuel consumption for certain types of transport vehicles, in accordance with the conditions and feasibility of implementation at each stage.
- Promote and raise awareness of fuel-efficient and environmentally friendly driving skills, and enhance fuel-saving awareness within the transport sector.
- Develop and implement measures to strengthen maintenance and repair work to maintain the technical condition of vehicles and equipment, thereby improving the efficiency of transport vehicle and equipment use.

Section 5.3. Application of new technologies and renewable energy in transport.

- Implementing technical innovations and new technologies in transport to conserve energy and reduce emissions of pollutants into the environment.
- Establishing a support mechanism for the commercialisation of biofuels in the domestic market.
- Implementing the use of renewable energy and alternative fuels for transport vehicles and equipment to improve energy efficiency.

Component 5.4. Development of electric transport vehicles:

- Support and facilitate domestic businesses in developing the supporting industry to supply the electric vehicle sector
- Encourage urban development projects and car parks to integrate charging infrastructure for electric vehicles.
- Collaborate with local authorities to promote the development of electric public transport systems in major cities.
- Collaborate with local authorities to enhance the development of public transport and non-motorised transport systems to reduce the demand for private vehicles and the consumption of petrol and diesel.

3.6 Strengthen inspection, monitoring and supervision of the implementation of legal regulations on the efficient and economical use of energy

Organise inspection teams to monitor and supervise the implementation of legal regulations on the efficient and economical use of energy.

3.7 Strengthen training to enhance the capacity of state management agencies, organisations and other individuals involved in energy conservation and efficiency activities.

- Training and capacity-building for civil servants at all levels responsible for implementing measures to promote the efficient and economical use of energy.
- Training on the technical aspects of assessing and evaluating energy-saving investment projects for staff at commercial banks.
- Strengthening specialised training in energy efficiency and conservation: Energy auditors; Energy managers.
- Implementing and applying the energy management system in accordance with ISO 5001:2018 at production and business facilities.

3.8 Campaigning and raising awareness about energy conservation and efficiency, and electricity saving.

- Organise appropriate awareness-raising activities via the mass media on electricity saving and the efficient and economical use of energy.
- Organising competitions, conferences and events to launch and promote electricity saving, the efficient and economical use of energy, and the conservation of energy resources.
- Conduct school-based awareness campaigns on the efficient and economical use of energy and electricity conservation.

The initiatives to be implemented during the 2026–2030 period will bring about a significant transformation and breakthrough in improving energy efficiency, with a targeted selection of specific projects designed to have a substantial and effective impact on achieving the Programme’s objectives, thereby making a positive contribution to improving energy efficiency in end-use sectors, focusing on four key sectors:

- Industrial production,
- Energy-intensive civil engineering projects,
- Transport, and
- Energy use in service activities and households.

IV. CHALLENGES, ISSUES AND RECOMMENDATIONS

1. Challenges and obstacles

a) Limitations in the implementation of the Programme

- Heads of state administrative agencies and civil servants in some provinces and centrally-administered cities have not fully recognised or demonstrated their roles and responsibilities in promoting energy-saving and efficient energy use at the local level. Some implementation plans for the Programme that have been issued remain vague regarding objectives, or the objectives set merely follow national targets without

taking into account the specific characteristics of local energy use, and are poorly aligned with local socio-economic conditions, energy-saving potential, and, in particular, the local socio-economic development strategy. Furthermore, the allocation of financial resources, particularly the local budget, for the implementation of the Energy Saving Plan remains inadequate.

- Local state administrative bodies remain limited in their capacity and face difficulties in developing and implementing action plans for the Programme within their jurisdictions. To date, approximately 89% of provinces and centrally-administered cities have issued action plans for the Programme. The main tasks focus on publicity and awareness-raising activities. Most local implementation plans lack evaluation and monitoring indicators.

- The management and monitoring of energy use by agencies and organisations have not received adequate attention, and there has been a lack of rigour in the implementation of Directive No. 20.

b) Limitations in awareness

- Many groups, such as government agencies, businesses and members of the public, do not yet fully appreciate the importance of using energy sparingly and efficiently; they do not yet fully understand the significance and role of energy conservation and efficiency for themselves, their families, society and the nation; and they do not yet prioritise energy-saving criteria when purchasing electrical household appliances, preferring other features of the appliances instead.

- Manufacturing and processing enterprises have not been proactive in implementing energy-saving measures within their organisations. Investment in refurbishment and improvements to energy efficiency remains limited, and the integration of energy-saving and efficiency criteria into technological innovation, refurbishment, and the replacement of production equipment and machinery is still limited. No movement has yet been established to promote innovation and technical improvements regarding the efficient and economical use of energy amongst the workforce. Efforts to encourage and educate workers to proactively undertake energy-saving measures are still being overlooked. With the exception of enterprises required to conduct energy audits, the majority of other enterprises have not yet carried out such audits.

c) Limitations regarding financial mechanisms and policies

- The allocation and mobilisation of financial resources from legitimate sources to support the implementation of the Programme remain low. Many localities have not allocated a budget for the Programme; where budgets have been allocated, the levels are still very limited, making it difficult to ensure the achievement of local objectives set out in the approved Implementation Plan.

- The non-repayable grant from the European Union under the Vietnam–EU Sustainable Energy Transition Programme for the energy efficiency component (approximately 50 million euros) will only begin to be disbursed from 2025 due to procedural delays on the Vietnamese side. The Ministry of Industry and Trade has issued a document urging

and provided guidance; however, ministries, sectors and localities are not yet ready to receive and disburse these funds.

- Credit institutions have limited funds available for energy-saving and energy-efficient investments, and these are often treated as funds for other development investments due to the lack of specific support mechanisms and policies. Credit staff also lack the expertise to identify and assess investment projects related to energy conservation.

- Policies and mechanisms to encourage the use of energy-saving and energy-efficient measures are lacking and have not yet created sufficient incentives for the public, businesses and the community.

d) Other limitations and challenges

- There are still few innovative intellectual property products that deliver breakthroughs in energy conservation and efficiency. Information on energy-saving and energy-efficient technologies remains scarce, inadequate and unsystematic. The number of applied science and technology studies on energy conservation that yield economic benefits remains modest and has not yet been widely disseminated.

- The number of energy-saving service providers remains low. The business of providing energy-saving services faces significant risks and lacks legal protection. The energy-saving services market has not been adequately guided or supported for development.

- The workforce operating in the field of energy conservation and efficiency is insufficient in number. By 2030, there will only be around 5,000 energy auditors and energy managers who have received additional training to support national energy management and energy auditing activities. The number of experts, researchers and managers specialising in energy conservation and efficiency is very low, with a significant proportion being experts from other sectors who have retired and switched fields.

- The economic restructuring process remains slow and has not yet genuinely shifted towards energy-efficient practices.

- Due to the impact of the COVID-19 pandemic, electricity and energy efficiency in the manufacturing sector have been affected and have declined (due to under-load operation and sub-optimal operating conditions, etc.); domestic electricity consumption has surged (due to remote working and online learning at home, leading to a significant increase in household electricity consumption), and businesses have faced numerous difficulties and constraints in investing in energy-saving and efficient solutions.

2. Remedial measures and proposals

a) Regarding the organisation and management of the Programme's implementation:

- Improve mechanisms and policies to promote energy conservation and efficiency. Review, amend, supplement and systematise legal documents on energy conservation and efficiency, such as: regulations on energy consumption standards

in energy-intensive sectors such as cement, ceramics and building glass, and finalise subordinate guidelines.

- Provide guidance and ensure that targets for energy conservation and efficiency are incorporated into the local authorities' annual economic development plans and those for each specific phase.

- Enhance the capacity of local officials in the implementation, monitoring and enforcement of legal regulations on energy conservation and efficiency.

b) Regarding training and raising awareness:

- Strengthen training and capacity-building to enhance the professional skills and knowledge of local civil servants responsible for state management of energy conservation and efficiency.

- Organise in-depth training courses for experts, consultancy firms and businesses on solutions and technologies for the efficient and economical use of energy, and strengthen their practical implementation and application within businesses.

- Integrate publicity and advocacy for an energy-saving and efficient lifestyle into the campaigns of the Party and the State.

c) Regarding the incentive mechanisms to promote the use of energy-saving and efficient

:

- Establish and promptly operationalise the Fund for Promoting Energy Conservation and Efficiency

to operation to create a capital flow supporting energy-saving investments.

- Continue to develop mechanisms to encourage investment in renewable energy projects, and promote the transformation of the renewable energy equipment market. Mobilise as many international resources as possible to support the renewable energy sector.

- Integrate the field of energy conservation and efficiency into national, ministerial and provincial/municipal science and technology programmes.

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ANNEX I: LIST OF DOCUMENTS ON ENERGY SAVING AND EFFICIENCY

No.	Document Title	Date of issuance	Date of entry into force
I	Legal document issued by a central government agency		
<i>I.1</i>	<i>Laws, Resolutions of the National Assembly</i>		
1	Law Amending and Supplementing Certain Provisions of the Law on the Efficient and Economical Use of Energy, Law No. 77/2025/QH15	18 May 2025	1 January 2026
2	Law on the Conservation and Efficient Use of Energy, Law No. 50/2010/QH12	17 June 2010	1 January 2011
<i>I.2</i>	<i>Government Decrees, Prime Minister's Decisions</i>		
1	Decree No. 30/2026/NĐ-CP detailing certain provisions and measures for the organisation and implementation of the Law on the Efficient and Economical Use of Energy	21 January 2026	21 January 2026
2	Decree No. 134/2013/NĐ-CP stipulating administrative penalties for violations in the fields of electricity, hydroelectric power safety, and the use of energy in a conservative and efficient manner	17 October 2013	1 December 2013
3	Decree No. 17/2022/NĐ-CP amending and supplementing certain provisions of decrees regulating administrative penalties in the fields of chemicals and industrial explosives; electricity, hydroelectric dam safety, and the efficient and economical use of energy; commercial activities, production, the sale of counterfeit and prohibited goods, and the protection of consumer rights; oil and gas activities, and the trading of petroleum products and gas.	31 January 2022	31 January 2022
4	Decision No. 04/2017/QĐ-TTg specifying the list of vehicles and equipment required to display	9 March 2017	25 April 2017

No.	Document Title	Date of issue	Date of entry into force
	Energy labelling, application of minimum energy performance standards and implementation roadmap		
5	Decision No. 14/2023/QĐ-TTg of the Prime Minister Issuing the List and Implementation Timeline for Energy-Using Vehicles and Equipment to be Phased Out and Low-Efficiency Power Generation Units Not to be Constructed	24 May 2023	15 July 2023
6	Decision No. 68/2011/QĐ-TTg Issuing the List of Energy-Efficient Vehicles and Equipment to be Installed and Procured by State Budget-Funded Agencies and Units	12 December 2011	1 February 2012
<i>1.3</i>	<i>Circulars and Joint Circulars of Ministries and Ministerial-level Agencies</i>		
1	Circular 53/2025/TT-BCT on training, certification of energy management and energy auditing	14 November 2025	1 January 2026
2	Circular 52/2025/TT-BCT sets out the list of appliances and equipment required to bear energy labels within the scope of management and the implementation schedule of the Ministry of Industry and Trade	14 November 2025	1 January 2026
3	Circular No. 28/2024/TT-BCT stipulates energy consumption standards in the beer and non-alcoholic beverage manufacturing industry	15 December 2024	1 April 2025
4	Circular No. 29/2024/TT-BCT regulating energy consumption standards in the plastics industry	25 December 2024	1 April 2025
5	Circular No. 50/2025/TT-BCT on the Roadmap for the Application of Biofuel-to-Conventional Fuel Blending Ratios in Vietnam	7 November 2025	1 January 2026
6	Circular No. 48/2022/TT-BGTVT on guidelines for energy labelling of vehicles	30 December 2022	1 July 2023

No	Document title	Date of issue	Date of entry into force
	Passenger cars, motorcycles, and electric and hybrid vehicles		
7	Circular No. 25/2020/TT-BCT on the preparation of plans and reporting on the implementation of energy conservation and efficiency plans; and the conduct of energy audits	29 September 2020	13 November 2020
8	Circular No. 39/2019/TT-BCT stipulating energy consumption standards in the sugarcane production industry	29 November 2019	14 January 2020
9	Circular No. 59/2018/TT-BGTVT providing guidance on energy labelling for motorcycles and motorbikes manufactured, assembled and imported	17 December 2018	1 January 2020
10	Circular No. 52/2018/TT-BCT specifying energy consumption standards in the seafood processing industry, applicable to the industrial processing of catfish and prawn products	25 December 2018	18 February 2019
11	Circular No. 24/2017/TT-BCT on Energy Consumption Standards in the Paper Manufacturing Industry	23 November 2017	10 January 2018
12	Circular No. 15/2017/TT-BXD Issuing the National Technical Standard on Energy-Efficient Buildings, code number QCVN 09:2017/BXD.	28 December 2017	1 June 2018
13	Circular No. 40/2017/TT-BGTVT Guiding the Energy Labelling of Passenger Cars with 7 to 9 Seats	9 November 2017	1 January 2018
14	Circular No. 91/2018/TT-BTC Guidelines on the preparation, management and use of funds for implementing the energy labelling roadmap and applying minimum energy efficiency standards	28 September 2018	18 December 2018
15	Circular No. 36/2016/TT-BCT on regulations for energy labelling of vehicles,	28 December 2016	10 February 2017

No.	Document Title	Date of issue	Date of entry into force
	Energy-using equipment falling within the remit of the Ministry of Industry and Trade		
16	Circular No. 38/2016/TT-BCT on Energy Consumption Standards in the Plastics Industry	28 December 2016	10 February 2017
17	Circular No. 19/2016/TT-BCT specifying energy consumption standards in the beer and soft drinks manufacturing industry	14 September 2016	1 November 2016
18	Circular No. 20/2016/TT-BCT stipulating energy consumption standards in the steel industry	20 September 2016	8 November 2016
19	Circular No. 43/2015/TT-BCT stipulating fuel loss rates in the petroleum trading sector	8 December 2015	1 May 2016
20	Circular No. 02/2014/TT-BCT stipulates measures for the efficient and economical use of energy in industrial sectors	16 January 2014	1 June 2014
21	Joint Circular No. 43/2014/TTLT-BGTVT-BCT dated 24 September 2014 stipulating energy labelling for passenger cars with seven seats or fewer	24 September 2014	1 December 2014
22	Circular No. 19/2013/TT-BNNPTNT providing guidelines on measures for the efficient and economical use of energy in agricultural production	15 March 2013	1 May 2013
II	Directives and guidelines from the Central Committee, the Prime Minister, the Ministry of Industry and Trade, and other ministries and sectors		
1	Resolution No. 70-NQ/TW of the Politburo on ensuring national energy security by 2030, with a vision to 2045	20 August 2025	20 August 2025

No.	Document Title	Date of issuance	Date of entry into force
2	Government Resolution No. 328/NQ-CP promulgating the Action Programme to implement Resolution No. 70-NQ/TW	13 October 2025	13 October 2025
3	Resolution No. 55-NQ/TW of the Politburo on the National Energy Development Strategy to 2030, with a vision to 2045	11 February 2020	11 February 2020
4	Resolution No. 140/NQ-CP promulgating the Government's Action Programme to implement Resolution No. 55/NQ/TW	2 October 2020	2 October 2020
5	Annual Decision of the Prime Minister issuing the list of key energy-consuming facilities	Annually	
6	Directive No. 20/2020/CT-TTg of 7 May 2020 on strengthening electricity conservation for the 2020–2025 period	7 May 2020	7 May 2020
7	Directive No. 20/2023/CT-TTg dated 8 June 2023 on strengthening electricity conservation for the 2023–2025 period and subsequent years	8 June 2023	8 June 2023
8	Decision No. 280/QĐ-TTg approving the National Programme on Energy Conservation and Efficiency for the period 2019–2030	13 March 2019	13 March 2019
9	Decision No. 12/QĐ-BCĐTKNL on the Regulations for the development, selection and organisation of the management and implementation of tasks under the National Programme on Energy Conservation and Efficiency for the period 2019–2030.	19 January 2022	19 January 2022
10	Decision No. 145/QĐ-BCT of the Ministry of Industry and Trade issuing technical guidelines for the implementation of measures under the National Programme on Energy Conservation and Efficiency for the period 2019–2030.	8 February 2022	8 February 2022
11	Decision No. 2539/2020 of the Ministry of Industry	30 September 2020	30 September 2020

No.	Document Title	Date of issue	Date of entry into force
	The Ministry issues guidelines on energy efficiency testing for vehicles and equipment bearing energy labels, and on the application of minimum energy efficiency standards for products circulating in the market.		
12	Decision No. 1677/QĐ-BXD dated 30 December 2020 of the Minister of Construction on the issuance of the Implementation Plan for the implementation of contents and tasks regarding the efficient and economical use of energy for the period from 2020 to 2030 within the scope of the Ministry of Construction's state management.	30 December 2020	30 December 2020

ANNEX II
LIST OF TCVN STANDARDS ON ENERGY EFFICIENCY

No.	Equipm ent Group	List of products requiring labelling in accordance with Roadmap	TCVN Number	Standard Title	Energy label
1.	1. Househol d appliances group	1. Straight fluorescent tubes straight	TCVN 8249:2009	Straight-tube fluorescent lamps – Energy labelling	Certification labelling
2.			TCVN 8249:2013	Tubular fluorescent lamps – Energy labelling	Certification label labelling
3.		2. Fluorescent compact fluorescent	TCVN 7896:2008	Compact fluorescent lamps – Energy efficiency labelling	Certification label labelling
4.			TCVN 7896:2015	Compact fluorescent lamps – Energy efficiency Quantity	Label comparison comparison
5.		3. Electromagnetic ballasts for fluorescent lamps	TCVN 8248:2009	Electromagnetic ballasts – Energy efficiency	Certification label labelling
6.			TCVN 8248:2013	Electromagnetic ballasts - Energy efficiency	Certification certification
7.		4. Electronic ballasts for fluorescent lamps	TCVN 7897:2008	Electronic ballasts for fluorescent lamps – Energy energy efficiency	Certification labelling
8.			TCVN 7897:2013	Electronic ballasts for fluorescent lamps – Efficiency energy efficiency	Certification labelling
9.		5. Air conditioner temperature	TCVN 7830:2007	Air conditioning – Energy efficiency	Label comparison comparison
10.			TCVN 7831:2007	Air conditioning – Method for determining energy efficiency	

No.	Equipment group	List of products requiring labelling in accordance with Roadmap	TCVN number	Standard Title	Energy label
11.			TCVN 7830:2012	Ductless air conditioners – Energy efficiency Labelling	Comparison label labelling
12.			TCVN 7831:2012	Ductless air conditioners – Method for energy efficiency	
13.			TCVN 7830:2015	Ductless air conditioning – Energy efficiency Label	Label 14.
14.			TCVN 7830:2021	Ductless air conditioning – Energy efficiency	
15.		6. Refrigerators	TCVN 7828:2007	Refrigerators, freezers – Energy efficiency	Comparison label comparison
16.			TCVN 7829:2007	Refrigerators, freezers – Methods for determining energy efficiency	
17.			TCVN 7828:2013	Refrigerators and freezers – Energy efficiency	Comparative labelling comparison
18.			TCVN 7829:2013	Refrigerators and freezers – Methods for determining energy efficiency	
19.			TCVN 7829:2016	Refrigerators, Freezers – Methods for Determining Energy Efficiency	
20.			TCVN 7828:2016	Refrigerators, Freezers, and Chillers – Energy Efficiency	
		7. Washing machines	TCVN 8526:2010	Washing machines – Minimum energy efficiency and methods of determination	Comparison label comparison

No.	Product category	List of products requiring labelling Roadmap	TCVN Number	Standard Title	Energy label
			TCVN 8526:2013	Washing machines – Minimum energy efficiency and methods for determination	Comparative label comparison
21.		8. Electric rice cookers	TCVN 8252:2009	Electric rice cookers – Energy efficiency	Comparison label comparison
22.			TCVN 8252:2015	Electric rice cookers – Energy efficiency	Comparison label
23.		9. Electric fan	TCVN 7826:2007	Electric fans – Energy efficiency	Comparison label comparison
24.			TCVN 7827:2007	Electric fans – Methods for determining energy efficiency Efficiency	
25.			TCVN 7826:2015	Electric fans – Energy efficiency	Comparative labelling comparison
26.			TCVN 7827:2015	Electric fans – Methods for determining energy efficiency	
27.		10. Television sets	TCVN 9536:2012	Television sets – Energy efficiency	Comparison label comparison
28.			TCVN 9537:2012	Television Receivers - Methods for Determining Energy Efficiency efficiency	
29.			TCVN 9536:2021	Television receivers – Energy efficiency	
30.		11. LED lamps	TCVN 11844:2017	LED Lamps – Energy Efficiency	Certification label

No.	Equipment Group	List of products requiring labelling Roadmap	TCVN number	Standard Title	Energy label
31.			TCVN 11843:2017	Test Methods for LED Lamps, LED Lighting Fixtures and LED Modules	
32.			TCVN 11842:2017	Prediction of the Long-Term Luminous Flux Maintenance of LED Light Sources	
33.		12. Hot water heater with storage	TCVN7898:2009	Storage water heater - Energy efficiency	
34.			TCVN7898:2018	Storage water heater - Energy efficiency	Comparison comparison
35.		13. Induction cookers	TCVN 13372:2021	Induction cookers - Energy efficiency	
36.		14. Infrared cookers –	TCVN 13373:2021	Infrared cookers – Energy efficiency	
37.	2. Office and Commercial Equipment Group	1. photocopier	TCVN 9510:2012	Photocopiers – Energy efficiency	Certification label label
38.		2. Printers	TCVN 9509:2012	Printers - Energy efficiency	Certification label labels
39.		3. Computer computer	TCVN 9508:2012	Computer displays – Energy efficiency	Certification label Certification
40.		4. Commercial refrigerated cabinets	TCVN10289:2014	Commercial refrigerators – Energy efficiency	Certification label labelling
41.			TCVN 10290:2014	Commercial refrigerated cabinets – Method for determining Energy efficiency	Energy efficiency No.

No.	Equipment Group	List of products requiring labelling Roadmap	TCVN number	Standard Title	Energy label
42.		5. Computers Laptop	TCVN 11848:2017	Laptops – Energy Efficiency	Energy label labels
43.			TCVN 11848:2021	Laptops – Energy efficiency	
44.		Desktop Desktop	TCVN 13371:2021	Desktop computers - Energy efficiency	
45.	3. Industrial equipment	1. Three-phase distribution transformers phase	TCVN 8525:2010	Distribution transformers – Minimum energy efficiency and determination method	Certification labelling
46.			TCVN 8525:2015	Distribution transformers – Maximum energy efficiency Deficiencies and methods of identification	Identification identification
47.		2. Electric motors	TCVN 7450-1:2005	High-efficiency three-phase squirrel-cage induction motors – Part 1: Minimum energy efficiency levels minimum	Certification label
48.			TCVN 7450-2:2005	High-efficiency three-phase squirrel-cage induction motors – Part 2: Methods for determining energy efficiency	
49.			TCVN 7450-1:2013	High-efficiency three-phase squirrel-cage induction motors high efficiency – Part 1: Minimum energy efficiency levels	Certification label

Post	Equipment category	List of products requiring labelling in accordance with Roadmap	TCVN number	Standard Title	Energy label
50.			TCVN 7450-2:2013	High-efficiency three-phase squirrel-cage induction motors – Part 2: Methods for determining energy efficiency	
51.		3. Industrial boilers	TCVN 8630:2010	Boilers – Energy Efficiency and Test Methods Testing	
52.			TCVN 8630:2019	Boilers – Energy Efficiency and Test Methods Test	
53.	4. Transport	1. Motorcycles, two-wheeled motorcycles	TCVN 7356:2014	Road vehicles – motorcycles and two-wheeled motor vehicles – Fuel consumption limits and methods determination	
54.		2. Passenger cars	TCVN 9854:2013	Road vehicles - Passenger cars - Fuel fuel consumption limits and methods of determination	

ANNEX III

ISO STANDARDS ON ENERGY MANAGEMENT SYSTEMS

- Standard TCVN ISO 50001:2019 (ISO 50001:2018), Energy management systems – Requirements with guidance for use.
- ISO 50004:2014: "Energy management systems — Guidance for the implementation, maintenance and improvement of an energy management system"
- ISO Standard 50006:2014: "Energy management systems — Measuring energy performance using energy baselines (EnB) and energy performance indicators (EnPI) — General principles and guidance" (Energy management systems — Measuring energy performance using energy baselines (EnB) and energy performance indicators (EnPI) — General principles and guidance).
- ISO 50015:2014: "Energy management systems – Measurement and verification of energy performance of organisations – General principles and guidance".
- ISO 50002:2015 Energy audits – Requirements with guidance for use

ANNEX IV
Technical standards on energy performance

No.	Name of technical standard	Date of issue	Notes
I	National Technical Standard		
1	QCVN 09:2017/BXD “National Technical Standard for Energy-Efficient Buildings that use energy efficiently”	effective from 1 June 2018	
2	QCVN 07-7:2023/BXD – Lighting Installations, issued pursuant to Circular No. 15/2023/TT-BXD dated 29 December 2023 of Minister of Construction.	effective from 1 July 2024	

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Appendix V. Methodology and results of calculations for energy saving targets for the 2019–2025 period

The programme has achieved its target of reducing the country's total energy consumption by 5–7% by 2025. The method for assessing the achievement of this target was carried out as follows:

- Selection of the base year: The base year was selected as the year preceding the implementation of VNEEP 3. Thus, 2018 was chosen as the base year.

- Calculating the energy intensity of the base year:

Energy intensity of the base year (2018) = Total energy consumption in the base year / GDP of the base year

In which: GDP is the total value of output (converted) as published by the General Statistics Office (GSO), unit: million USD. Total energy consumption in the base year is the total commercial energy consumption, comprising electricity, coal, oil, gas and other forms of energy, unit: KTOE; data can be calculated from publications by the GSO, Customs, EVN, PVN, etc.

- Calculation of assumed energy consumption under the BAU scenario:

Energy consumption calculated under the BAU scenario for the years 2019–2025 is as follows:

Assumed energy consumption = GDP for the respective year

*Base-year energy intensity.

Note that energy consumption under the BAU scenario is calculated based on the assumption that there is no impact from energy-saving programmes.

- Determining the amount of energy saved:

Energy savings (or increase) = Assumed energy consumption under BAU – Actual energy consumption.

Applying the above calculation method, the energy saving rate by 2024 is approximately 4.6%, and it is forecast to exceed 5% by the end of 2025

Table Error! No text of specified style in document.-1. Calculation of the energy saving rate for the 2029–2025 period

Category	Unit	2018	2019	2020	2021	2022	2023	2024	2025
Cường l energy capacity assumed (BA U)	kgOE/1, 000 USD	57.44	57.44	57.44	57.44	57.44	57.44	57.44	57.44
Energy consumption ass umed (BAU)	KTOE	60,456	64,905	66,764	68,469	74,315	78,079	81,689	85,467
Actual energy consumption	KTOE	60,456	64,542	66,014	66,114	71,995	75,122	78,054	81,045*
Energy saved	KTOE	-	63.12	50.92	2,355	2,320	2,957	3,635	4,421
Ratio Savings savings (%)		0.00	0.56	1.14	3.56	3.22	3.94	4.66	5.46*

Source: Energy Statistics 2018–2024

*Forecast figures