

# THE PHILIPPINES

## ENERGY EFFICIENCY GOALS

### 1. GOVERNMENT POLICY ON ENERGY EFFICIENCY

The Republic Act No. 7638 is an Act creating the Department of Energy (DOE) and functions of government agencies related to energy and for other purposes. The policy of the State is:

- To ensure a continuous, adequate, and economic supply of energy with goal of ultimately achieving self-reliance in the Philippines's energy requirements. This will be done through (i) integrated and intensive exploration, production, management, and development of indigenous energy resources; (ii) judicious conservation, renewal and efficient utilisation of energy to keep pace with growth and economic development; as well as (iii) active participation of the private sector in the various areas of energy resource development.
- To rationalise, integrate, and coordinate the various programmes of the Government towards self-sufficiency and enhanced productivity in power and energy without sacrificing ecological concerns.

The Act also defines the following powers and functions of government agencies, for the development of energy efficiency and conservation plans:

- Establish and administer programmes for the exploration, transportation, marketing, distribution, utilisation, conservation, stockpiling and storage of energy resources of all forms, whether conventional or nonconventional;
- Formulate and implement programmes, including a system of providing incentives and penalties, for the judicious and efficient use of energy in all energy-consuming sectors of the economy.

### 2. ENERGY EFFICIENCY STRATEGY

The policy of the government seeks to promote the judicious conservation and efficient utilisation of energy resources through adoption of the cost-effective options toward the efficient use of energy to contribute on ensuring energy security and help mitigate climate change.

In view of the absence of an enabling law on energy efficiency and conservation, and while awaiting for Energy Efficiency & Conservation Bill be enacted into law in both houses of congress during the 17th congress, the DOE nevertheless has been guided by its Energy Efficiency & Conservation Roadmap 2017-2040 - a revised version from its previous 2014-2030. The current government administration provided a more focus strategic directions on energy efficiency programmes and activities that would complement the 2017-2040 economic goal and vision. A comprehensive list of sectoral strategies to promote energy efficiency is provided in the Energy Efficiency & Conservation Roadmap 2017-2040.

## FUNDING

The programmes and activities are funded under the yearly budget from Congress under the General Appropriation Act. There are two sources: (a) Regular Budget or Fund 101; and (b) Locally Funded Projects or Fund 151.

## LINKS

Energy Efficiency & Conservation Roadmap 2017-2040:

<https://www.doe.gov.ph/pep/energy-efficiency-conservation-roadmap-2017-2040>

## 3. ENERGY EFFICIENCY ACTION PLAN

The government's action plan details energy efficiency programmes that cut across the sectors' of government, transport, industrial, residential, and commercial building. The strategic directions are envisioned to provide market signals to all relevant stakeholders in industry development in the short- and medium-term; strengthen policies, programmes and institutional structures; and, ensure sustainability by mobilising and rationalising private sector participation at the end of the long-term plan. The action plan is shown below:

### Short Term (2017-2019)

- Conduct market demand scoping
- Advocate the passage of Energy Efficiency and Conservation Bill
- Establish cross-sectoral energy performance and rating systems
- Create business tool-kit for ESCOs
- Collaborate with stakeholders for expanded financing models for EE projects
- Conduct IEC campaign on EE practices
- Integrate EE at the Local Government Units (LGUs) level

### Medium Term (2020-2022)

- Create enabling mechanism for private sector participation
- Enhance demand side management mechanism
- Integrate EE&C in the learning and education system
- Mainstream EE&C at the LGUs level

### Long Term (2023-2040)

- Institutionalise EE&C knowledge Management System
- Develop advanced EE&C Research & Development (R&D) capacity

## FUNDING

The programmes and activities are funded under the yearly budget from Congress under the General Appropriation Act. There are two sources: (a) Regular Budget or Fund 101; and (b) Locally Funded Projects or Fund 151.

## LINKS

Philippines Energy Efficiency and Conservation Action Plan 2016-2020:

[https://www.doe.gov.ph/sites/default/files/pdf/announcements/philippines\\_energy\\_efficiency\\_action\\_plan2016-20.pdf](https://www.doe.gov.ph/sites/default/files/pdf/announcements/philippines_energy_efficiency_action_plan2016-20.pdf)

Energy Efficiency & Conservation Roadmap 2017-2040:

<https://www.doe.gov.ph/pep/energy-efficiency-conservation-roadmap-2017-2040>

## 4. ENERGY EFFICIENCY, INTENSITY OR EMISSIONS REDUCTION TARGETS

Economic development shall be through efficiency gains and ensure energy security with a reduction in energy intensity across key economic sectors. Philippines has committed to reduce its energy intensity by 40% in 2030 based on 2005 energy intensity level.

## LINKS

An Energy Efficiency Roadmap for the Philippines, 2014-2030:

[https://www.doe.gov.ph/sites/default/files/pdf/announcements/energy\\_efficiency\\_and\\_conservation\\_roadmap\\_2014-2030.pdf](https://www.doe.gov.ph/sites/default/files/pdf/announcements/energy_efficiency_and_conservation_roadmap_2014-2030.pdf)

Philippines Energy Efficiency and Conservation Action Plan (2016-2020):

[https://www.doe.gov.ph/sites/default/files/pdf/announcements/philippines\\_energy\\_efficiency\\_action\\_plan2016-20.pdf](https://www.doe.gov.ph/sites/default/files/pdf/announcements/philippines_energy_efficiency_action_plan2016-20.pdf)

## 5. SECTORAL ENERGY EFFICIENCY TARGETS

### **Residential: Establish Minimum Energy Performance (MEP) Standard and Labelling for Home Appliances, Motor Vehicles and devices.**

Period: 2017-2019

Description: A Department Circular 2016-004-0005 established the Philippine Energy Standard and Labelling Programme (PESLP) for home appliances, motorised vehicles and other devices. The objective is to establish MEP label on various home appliances, passenger cars and light duty vehicles in the short term period. MEP labels for room air-conditioners, refrigerators and freezers including CFLs has been already established in the past. The MEP label shall be expanded to other home appliances such as TV sets, washing machine, and electric fans. A Vehicle Fuel Economy Label is in the offing of development for passenger cars and light commercial duty vehicles.

## **Commercial Building, Industrial, Transport: Establish MEP in Building, Industrial, and Transport Sectors**

Period: 2017-2019

Description: The objective is to be able to develop MEP at various sub-sector levels or an energy consumption benchmark to help guide these sectors to make decision through comparative analysis on a sector where they belong. This helps the company understand the level of their specific energy consumption and can be used to monitor and evaluate the company's energy efficiency programmes and projects as part of the total energy management system tool. The draft policy, a Department Circular, undergone public consultations to get comments from the affected sectors.

## **Government: Integration & mainstreaming energy efficiency at the Local Government Units (LGUs)**

Period: 2017-2022

Description: The DOE will provide capacity building for local executives, including members of the city/municipal and provincial councils, and other relevant government agencies and stakeholders, to integrate energy efficiency policy at the LGU level. The objective is for the LGU to develop their own energy efficiency roadmap/action plan that can be incorporated into their urban planning development. The development of an Energy Efficiency Policy Regulation is essential for a successful local programme implementation. Examples of local ordinance include Green Building Code; requirement for street lights to use only LEDs or other energy efficient lighting technology; regulation of fumes emission from motorised vehicle; declaration of a municipal or city as a low carbon town; incentives for the use of energy efficient technology in combination with renewable technologies and other smart technologies.

### LINKS

Department Circular 2016-004-0005:

<https://www.doe.gov.ph/laws-and-issuances/department-circular-no-dc2016-04-0005>

Philippines Energy Efficiency and Conservation Action Plan 2016-2020:

[https://www.doe.gov.ph/sites/default/files/pdf/announcements/philippines\\_energy\\_efficiency\\_action\\_plan2016-20.pdf](https://www.doe.gov.ph/sites/default/files/pdf/announcements/philippines_energy_efficiency_action_plan2016-20.pdf)

An Energy Efficiency Roadmap for the Philippines, 2014-2030:

[https://www.doe.gov.ph/sites/default/files/pdf/announcements/energy\\_efficiency\\_and\\_conservation\\_roadmap\\_2014-2030.pdf](https://www.doe.gov.ph/sites/default/files/pdf/announcements/energy_efficiency_and_conservation_roadmap_2014-2030.pdf)

Energy Efficiency & Conservation Roadmap, 2017-2040:

<https://www.doe.gov.ph/pep/energy-efficiency-conservation-roadmap-2017-2040>

## 6. LEAD ENERGY EFFICIENCY INSTITUTIONS

Established in 1992, the DOE is the lead agency responsible for the formulation and development of energy efficiency policies of the Philippines.

## INSTITUTIONAL SETTINGS AND RESPONSIBILITIES

Under the DOE, the Energy Utilisation Management Bureau (EUMB) was created to promote energy efficiency and conservation initiatives in all sectors. Their main responsibilities are:

- Assist in the formulation and implementation of policies for the efficient and economical transformation, conversion, processing, refining, marketing, distribution, transportation, and storage of petroleum, coal, natural gas, geothermal, and other non-conventional energy resources such as wind, solar, biomass, and others.
- Monitor sectoral energy consumption and conduct energy audits, technical training, energy management advisory services, and technology application projects on efficient energy utilisation.
- Assist in the formulation of an operational plan for the allocation of oil, fuel, and energy sources in the event of declaration of critically low energy supply.
- Provide information on energy technology and develop middle and long-term energy technology development strategies in cooperation with the Department of Science and Technology (DOST).
- Require industrial, commercial, and transport establishments to collect waste oil for recycling
- Develop and implement a continuing energy conservation programme designed to optimise energy utilisation, including an economy-wide information campaign on energy conservation.

## STAFF AND BUDGET

The DOE has a total of 741 regular employees with a budget of USD 53.15 million for year 2017.

Under the DOE's Energy Utilisation Management Bureau-Energy Efficiency and Conservation Division (EUMB-EECD), there are ~24 employees. The division's budget for 2017 is USD 1.82 million.

## BUDGET USE

The entire budget has been allocated for the promotion of energy efficiency in all sectors. Majority of the budget goes to the implementation of Information, Education, and Communication (IEC) campaign.

The remaining budget will be used for the printing of energy efficiency booklets, tri-media, and other energy efficiency related contracting-out services such as feasibility study development, development of energy efficiency modules for K12 and College level, etc.

## LINKS

DOE's website: <https://www.doe.gov.ph/>

Role of DOE in energy efficiency: <https://www.doe.gov.ph/energy-efficiency-ec>

## 7. OTHER ENERGY EFFICIENCY AGENCIES

No other government agency involved.

## 8. ENERGY EFFICIENCY INFORMATION DISSEMINATION

The Philippines has specific channels for energy information dissemination. Among of which are the use of the agency's internet portal, social media, tri-media (TV, radio and news print), seminar-workshops & conferences, the use of Audio-Video Presentation materials shown in public places such as passenger terminals of airports, bus, and seaports. Printing of various energy information on brochures, flyers, leaflets, Guide Manuals, booklets and other infomercial materials are likewise developed and disseminated to the appropriate and relevant target sectors.

### LINKS

Information on cost of electricity in Philippines: [www.kuryente.org.ph](http://www.kuryente.org.ph)

Consumers' guide on the selection of home appliances: [www.wattmatters.org.ph](http://www.wattmatters.org.ph)

## 9. ENERGY EFFICIENCY AWARENESS RAISING

### Household:

- Seminar on Energy Efficiency & Conservation – This is a community base-approach by involving the Local Government Units through its local executives and councils. It promotes the selection of energy efficient home appliances, and share information on best practices involving the proper and judicious use of energy.
- Tri-Media & Social Media – The development of taglines and themes is an important aspect in government campaign programmes. Likewise, other communication materials such as Audio-Video Presentation (AVP), flyers, booklets, manual guide, etc have been developed. For tri-media, channels to communicate are television, radio and news-print. For social media, consumers are guided on the selection of home appliances through a website [www.wattmatters.org.ph](http://www.wattmatters.org.ph) and for the cost of electricity at [www.kuryente.org.ph](http://www.kuryente.org.ph). Some of the AVPs are shown in the airport, bus, and seaport.

### Education:

- Seminar on Energy Efficiency & Conservation and Climate Change for teachers and students – The objective is have a wider outreach to the academia.
- Integration of Energy Efficiency & Conservation into the K-12 and college curriculum – The objective is to steer behavioural change among students by instilling appreciation on the proper use of energy resources and impart knowledge about the effect of global climate change. Introduction of proper energy management best practices, energy efficient technologies, climate change mitigation are the major subject topic of the modules being developed. A Memorandum of Agreement was established with the Department of Education for the K-12 grade level and the Commission on Higher Education for the College level. Under the Agreement, high school teachers and college professors will undergo training. They will be equipped with educational modules, visual aids and other logistical material aids.

### Government:

- Seminar on Energy Efficiency & Conservation for government employees and Local Executives – government offices and its attached bureaus, including state colleges and universities, government-own

hospitals, government owned and controlled corporations, and other government facilities, have to reduce electricity and fuel consumption by at least 10% for a minimum of three years from 2005 levels. However, such target has been extended and is now an ongoing target. Henceforth, government Enercon Officers and employees have to be given briefings and seminars to carry out the Order that emanate from the Office of the President of the Republic.

Transport:

- Seminar for Drivers (Public transport, government, private, private fleet)
- Conduct Fuel Economy Run - This is promote fuel-efficient vehicles in the market, specifically for brand new passenger cars and light duty vehicles. This is in collaboration with car manufacturers, dealers, distributors, and importers. Sponsorship of the event normally is in partnership with an Oil Company to promote quality fuel standard (i.e. Euro 4 fuel).

#### LINKS

Administrative Order No. 110, 110-A and 126, Directing the Institutionalization of a Government Energy Management Programme (GEMP):

[https://mfo.doe.gov.ph/mfo\\_files/downloadable\\_files/AO%20110.pdf](https://mfo.doe.gov.ph/mfo_files/downloadable_files/AO%20110.pdf)

[https://mfo.doe.gov.ph/mfo\\_files/downloadable\\_files/AO%20110.pdf](https://mfo.doe.gov.ph/mfo_files/downloadable_files/AO%20110.pdf)

[https://www.doe.gov.ph/sites/default/files/pdf/issuances/ao\\_126.pdf](https://www.doe.gov.ph/sites/default/files/pdf/issuances/ao_126.pdf)

Philippines Energy Plan 2012-2030: [https://www.doe.gov.ph/sites/default/files/pdf/pep/2012-2030\\_pep.pdf](https://www.doe.gov.ph/sites/default/files/pdf/pep/2012-2030_pep.pdf)

## 10.GOVERNMENT SUPPORTED ENERGY EFFICIENCY TRAINING

- The DOE through its Bureaus, Service and Field Offices have provided training funds for its personnel for capacity building on energy efficiency. Local trainings as well as foreign training funds were made available on its annual budget allocated for the given year. Some of the government supported training programmes were in the form participation in the seminars, conferences, short-training courses, to certification and graduate degree diploma courses on energy.
- DOE collaborates with the Development Academy of the Philippines through a partnership agreement to provide capacity development trainings on energy efficiency best practices, energy efficient technologies, effect of climate change, energy efficiency policy development for Local Government Units. The training programmes provided are free-of-charge.
- In addition, with the UNIDO-GEF technical assistance grant, training was provided to develop and recognise National Energy Management Experts and Systems Optimisation Experts under the Philippines Industrial Energy Efficiency Project.

#### LINKS

DOE's website: <https://www.doe.gov.ph/>

Energy efficiency: <https://www.doe.gov.ph/energy-efficiency-ec>

## 11. PRIVATELY OPERATED TRAINING

None at this time.

## 12. GOVERNMENT SUPPORTED RESEARCH & DEVELOPMENT

The Department of Science and Technology-Philippine Council for Industry, Energy, and Emerging Technology Research and Development (DOST-PCIEERD) provides support on energy efficiency programmes. It provides financial support to research and technology innovation for future commercialisation.

### LINKS

The Philippine Council for Industry, Energy, and Emerging Technology Research and Development:  
<http://pcieerd.dost.gov.ph/>

## ENERGY EFFICIENCY MEASURES

### 13. COLLECTION AND MONITORING OF ENERGY EFFICIENCY OUTCOMES

The EUMB is tasked to collect, analyse and monitor energy consumptions of industrial, commercial, transport, household, and government building sectors.

This are mandatory regulatory requirements for energy consuming sectors (Commercial, industrial, and Transport) to submit reports on a Quarterly basis, while government buildings have to submit monthly energy consumption reports.

The Energy Policy and Planning Bureau of the DOE also collates all primary energy mix data including energy consumption to reflect final energy consumption demand. This is reported in the Philippine Energy Plan (PEP).

### LEGAL POWER

Submission of energy consumption is a requirement under the following issued legal policies from the DOE and Office of the President of the Philippines:

- Department Circular 93-03-05

All Commercial, Industrial, and Transport establishments with an Annual Energy Consumption level of 2 million LOE (4 million Kwh) have to submit Quarterly Energy Consumption Reports to the DOE. In addition, establishments with an annual energy consumption level of 4 million LOE (8 million Kwh) have to submit an Annual Energy Conservation Programme for the year reported.

- Administrative Order 110 s. 2004, 110-A, 126 as amended

The National Government Agencies including its attached bureaus and regional offices, government-owned and controlled corporations, state colleges and universities, government hospitals, and other government facilities are required to reduce their electricity and fuel consumption by 10% from 2005 level for a minimum period of three years, which has now been a continuing programme. In addition, these government entities have to submit Monthly Electricity & Fuel Consumption Report to the DOE.

## LINKS

DOE's website: <https://www.doe.gov.ph/>

Administrative Order No. 110, 110-A and 126, Directing the Institutionalisation of a Government Energy Management Programme (GEMP):

[https://mfo.doe.gov.ph/mfo\\_files/downloadable\\_files/AO%20110.pdf](https://mfo.doe.gov.ph/mfo_files/downloadable_files/AO%20110.pdf)

[https://mfo.doe.gov.ph/mfo\\_files/downloadable\\_files/AO%20110.pdf](https://mfo.doe.gov.ph/mfo_files/downloadable_files/AO%20110.pdf)

[https://www.doe.gov.ph/sites/default/files/pdf/issuances/ao\\_126.pdf](https://www.doe.gov.ph/sites/default/files/pdf/issuances/ao_126.pdf)

Philippines Energy Plan 2012-2030: [https://www.doe.gov.ph/sites/default/files/pdf/pep/2012-2030\\_pep.pdf](https://www.doe.gov.ph/sites/default/files/pdf/pep/2012-2030_pep.pdf)

## 14. EVALUATION OF ENERGY EFFICIENCY PROGRESS OR POTENTIAL

There is no periodic evaluation of energy efficiency potential or progress. However, specific sectoral surveys are conducted on an ad-hoc basis to assess the penetration of energy efficient technologies and best practices for market and individual energy users. For instance, in 2007, the Philippine Statistics Authority (PSA) conducted the Household Energy Consumption Survey (HECS). For 2017, market demand scoping likewise has been given priority to further assess the level of energy efficiency penetration in the commercial, industrial and transport sectors.

## LINKS

Not available.

## 15. SELF-EVALUATION OF ENERGY EFFICIENCY PROGRAMMES

Energy efficiency programmes are evaluated based on the following:

- From an Agency Performance Assessment Perspective – Energy efficiency programmes are evaluated based on their achievements or accomplishments, and budget utilisation for the implementation activities in a given year. A comprehensive report will be submitted to substantiate claims on budget utilisation vis-a-vis performance.
- From the National Performance Assessment Perspective – An Energy Intensity (Energy Consumption/GDP) Indicator is used to assess the impact of energy efficiency programme on a national level. Other than the Department of Energy that advocate proliferation of energy efficiency through policy formulation and project implementation the other stakeholders that contributes to the economy includes energy service providers, vendors/suppliers/distributors of energy efficient technologies, professional associations, civil society group, etc. The result was included in the overall energy efficiency report of the Agency.

## 16. CROSS-SECTOR ENERGY EFFICIENCY INITIATIVES

### **The National Energy Efficiency & Conservation Programme (NEECP)**

#### OBJECTIVE

The NEECP is an umbrella programme on energy efficiency with a key objective of advancing economic development through energy efficiency and energy conservation, contributing to improved energy security, and helping to mitigate climate change.

Activities under NEECP are geared towards the promotion of efficient and judicious utilisation of electricity and fuel. Energy efficient technologies are being promoted and introduced, together with best practices and measures that does not require investments. Behavioural change through values formation is one of the key aspects of promoting energy conservation among the people.

## OUTLINE

The NEECP began in 2004 and targets all energy consuming sectors. The programme has the following sub-components: (a) Information, Education, Communication Campaign Programme (b) Government Energy Management Programme (c) Recognition Award Programme (d) Fuel eco-run activity, and (e) Energy Audit services.

The budgetary support fund requirement to implement the entire programme requires congressional approval and must be allowed under the General Appropriation Act.

## LINKS

NEECP: <https://www.doe.gov.ph/national-energy-efficiency-and-conservation-program>

## 17. INDUSTRY ENERGY EFFICIENCY INITIATIVES

### **Energy Management System and System Optimisation initiatives for pulp and paper, cement, steel-metal, food and chemical industry sectors.**

#### OBJECTIVE

This is a five-year technical assistance grant from UNIDO-GEF with the purpose of developing nationally recognised energy management experts and systems optimisation experts on steam system, pumping system, compress-air system. The key objectives are: (a) to provide technical assistance support to identified energy intensive industries; (b) to develop an energy management system and identify systems optimisation projects; (c) to promote energy management system based on ISO 50001 energy management standard framework; and (d) to develop capacity building on appropriate financing scheme.

#### OUTLINE

The project provide trainings on Energy Management System and Systems Optimisation as well as capacity building on financing schemes. Training is offered to plant facility engineers and manager, individual consultants, energy efficient product suppliers and vendors, individual service provider engineers, among others. Walk-through plant assessment/audit was likewise conducted for possible project identification. The Energy Management System was promoted with the intention to make it form part of Corporate Management guidelines, rules and policies.

#### LINKS

News release regarding the Philippine Industrial Energy Efficiency Project:

<http://www.assistasia.org/index.php/media-center/newsroom/241-philippine-industrial-energy-efficiency-project-pieep>

Website of Philippine Industrial Energy Efficiency Project: [www.iee-philippines.com](http://www.iee-philippines.com)

## 18. TRANSPORT ENERGY EFFICIENCY INITIATIVES

### **Vehicle Fuel Economy Labelling Programme**

#### OBJECTIVE

The implementation of this programme was in accordance with the Philippine Energy Standard and Labelling Programme. It includes motorised vehicles such as passenger cars and light duty commercial vehicles.

The main objectives are: (a) to establish and label minimum energy performance of all vehicles including their fuel economy rating; (b) to empower the public to choose the most fuel efficient vehicles sold in the market; (c) to encourage investment on fuel efficient vehicles including alternate-fuelled vehicles; and (d) to contribute to the overall mitigation of climate change.

#### OUTLINE

As above.

#### LINKS

An Energy Efficiency Roadmap for the Philippines, 2014-2030:

[https://www.doe.gov.ph/sites/default/files/pdf/announcements/energy\\_efficiency\\_and\\_conservation\\_roadmap\\_2014-2030.pdf](https://www.doe.gov.ph/sites/default/files/pdf/announcements/energy_efficiency_and_conservation_roadmap_2014-2030.pdf)

Philippines Energy Efficiency and Conservation Action Plan (2016-2020):

[https://www.doe.gov.ph/sites/default/files/pdf/announcements/philippines\\_energy\\_efficiency\\_action\\_plan2016-20.pdf](https://www.doe.gov.ph/sites/default/files/pdf/announcements/philippines_energy_efficiency_action_plan2016-20.pdf)

### **Fuel Economy Run activity**

#### OBJECTIVE

This project collects data on current fuel mileage rating or fuel consumption of brand new vehicles sold in the local market. The measurement indicator is in kilometres per litre of fuel consumption.

The objective is to empower the consumer to choose the best and most fuel efficient vehicles sold in the market. This is an interim strategy towards bridging the current programme as specified in the Department's policy issuance on DC 2016-004-00005.

#### OUTLINE

This activity is conducted in cooperation with car manufacturers, distributors, dealers, importers, motor vehicle associations, oil companies, other government agencies, among others. There are two categories - the passenger car category, and light commercial vehicle category composed of SUVs and vans. Participating

vehicles need to travel an assigned distance in the range of 250 to 300 kilometres, with an average constant cruising speed of 80 km/h. Results from the run and individual vehicle efficiency performance is collected by the DOE. This activity is a prelude to the upcoming policy implementation on vehicle fuel economy labelling.

#### LINKS

Fuel Economy Run: <https://www.doe.gov.ph/fuel-economy-run-results>

## 19. BUILDING ENERGY EFFICIENCY INITIATIVES

### **Government Energy Management Programme**

#### OBJECTIVE

Under the Administrative Orders 110, 110-A, 126, it requires government buildings to reduce electricity and transport fuel consumption by at least 10% in reference to their average energy consumption in 2005 (which has now been a continuing programme of the government). Government offices directed to comply in these Orders includes the National Government Agencies, Government Own and Controlled Corporations, State Colleges and Universities, Government Hospitals, Military and other facilities of the government.

#### OUTLINE

In 2012, under a loan agreement with the Asian Development Bank, 150 government buildings were retrofitted for lighting system from an existing 40-watt linear fluorescent lamp to 28-watt linear fluorescent lamp.

Given the success of the programme, a similar initiative is in the offing for possible similar project for 2017, where the goal is to retrofit selected 150 government buildings using linear LED lamp and Inverter Type air-conditioner and/or the possibility of introducing a district cooling system whenever viable and practical.

#### LINKS

The Philippines Energy Efficiency Project – Lighting Up the Philippines in an Efficient Way:

<http://k-learn.adb.org/system/files/materials/2015/10/philippine-energy-efficiency-project-lighting%2%A0-philippines-efficient%2%A0way.pdf>

### **Integration and mainstreaming of Energy Efficiency in the LGU level**

#### OBJECTIVE

The project, in partnership with the Development Academy of the Philippines, is on the "Integration and Mainstreaming of Energy Efficiency in the LGU level". The main objective is to introduce energy efficiency & conservation policies to help capacitate and for an LGU to develop their own version of policies suitable within their jurisdiction and governance. It may include Green Building Code or simply a Minimum Energy Efficiency Performance for all Building type. The purpose is to develop a local policy ordinance that will require all existing and newly construction buildings to comply with the set Code and/or standard in buildings. Such policy can be operationalised through issuance of building or business permits for instance.

## OUTLINE

Currently, there is a private sector initiated and government supported voluntary green building rating system called Building for Ecologically Responsive Design Excellence (BERDE). The Philippine Green Building Council (PHILGBC) develops the rating system to measure, verify and monitor building performance based on existing mandatory regulations and standards.

## LINKS

Integration & Mainstreaming of Energy Efficiency at the Local Government Units:

[https://d2oc0ihd6a5bt.cloudfront.net/wp-content/uploads/sites/837/2017/06/1\\_Integration--Mainstreaming-of-Energy-Efficiency-at-the-Local-Government-Units-LGUs.pdf](https://d2oc0ihd6a5bt.cloudfront.net/wp-content/uploads/sites/837/2017/06/1_Integration--Mainstreaming-of-Energy-Efficiency-at-the-Local-Government-Units-LGUs.pdf)

Philippine Green Building Council: <http://philgbc.org/>

## 20. ENERGY EFFICIENCY COOPERATION

### COOPERATION AGREEMENTS WITH OTHER ECONOMIES OR ORGANISATIONS

None at this time.

### BILATERAL, REGIONAL OR MULTILATERAL COOPERATION AGREEMENTS

The following are the current foreign assisted cooperation of the Department of Energy:

- EU – Access for Sustainable Energy Programme. The sub-project components are:
  - Standard and Labelling
  - Energy Efficiency in Government Buildings
  - Energy Efficiency in Power Plants
- APEC – Expert Group on Energy Efficiency & Conservation. The DOE co-sponsors the following APEC-EWG Projects:
  - Nearly (Net) Zero Energy Building
  - Distribution Transformers' Energy Efficiency
- ASEAN Energy Awards – Specifically on the following:
  - Energy Management Award for Industries and Buildings
  - Energy Efficiency & Conservation Best Practices Award
  - Green Building Award

## LINKS

EU launches P6-B programme for PHL energy programmes:

<https://www.doe.gov.ph/energist/index.php/2-uncategorised/11082-eu-launches-p6-b-program-for-phl-energy-programs>

ASEAN Energy Awards:

<http://www.aseanenergy.org/aea/>

## 21. OTHER ENERGY EFFICIENCY EFFORTS

The "Energy Efficiency in the Power Sector Programme" is the new target initiatives comprises of the following: (a) Power Plants (b) Transmission Lines, (b) Distribution Lines, and (d) Power Substation facilities. Under this scheme, the objective is to ensure reliability and transparency on the conditions of these power facilities especially during calamities. Transmission up to the distribution supply side of the value chain is the focus of the programme.

The "Energy Efficiency in Power Plant" has been included in the short-term plan. The programme will start with thermal power plants (coal, oil, and other solid fuels) followed by diesel generating facilities and other selected renewable power generating plants such as geothermal, hydro, and others in the near future.

Transmission and distribution lines, including power substations, will also be implemented in cooperation with other government energy offices such as PSALM, NEA, NPC, ERC, and other stakeholders. This is in compliance with the directive from the Office of the Secretary of the DOE, whereby a Task Force and a Committee Group chaired by the DOE has been created for the its purpose.

### LINKS

Not available online.