REPUBLIC OF THE PHILIPPINES
SENATE OF THE PHILIPPINES
Pasay City, Metro Manila

FIFTEENTH CONGRESS
First Regular Session

SENATE BILL NO. 2027

Introduced by: HON. EDGARDO J. ANGARA

ENERGY EFFICIENCY AND CONSERVATION ACT OF 2010

EXPLANATORY NOTE

In recent years, the Philippine government has recognized that it is not only an advantage, but a looming necessity for the country to attain self-sufficiency through maximizing its energy resources. As the country aims for a more self-sufficient energy mix, reducing the country's consumption of high-priced imported oil and coal will not only be potentially beneficial to the economy, but will also ensure long term sustainability.

Although the country has explored renewable energy and non-conventional sources to fuel its developing economy in the past decade, most of which are hydropower, geothermal and biofuels for the transport sector, a nationwide energy crisis still threatens to loom in the next couple of years.

To mitigate the impending energy crisis and to reinforce an existing Energy Conservation Program of the Department of Energy (DOE), the Energy Efficiency and Conservation Program through the Energy Efficiency and Conservation Act shall be institutionalized to postpone unmet energy demands in the near future while accelerating the country's energy sustainability.

In view of the foregoing, the immediate passage of the bill is immediately sought.

EDGARDO J. ANGARA

SENATE
OFFICE OF THE SECRETARY

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ENERGY EFFICIENCY AND CONSERVATION ACT OF 2010

AN ACT PROMOTING THE ENHANCEMENT OF ENERGY EFFICIENCY AND CONSERVATION THROUGH THE DEVELOPMENT OF ENERGY EFFICIENT TECHNOLOGIES, STRENGTHENING ORGANIZATIONAL RELATIONSHIPS AND REINFORCEMENT OF RELATED LAWS AND OTHER STATUTORY PROVISIONS ON ENERGY.

Be it enacted by the Senate and the House of Representatives of the Philippines in Congress assembled:

CHAPTER I

TITLE AND DECLARATION OF POLICIES

SECTION 1. Short Title – This Act shall be known as the "Energy Efficiency and Conservation Act of 2010"

SECTION 2. Policy Declaration – It is hereby the policy of the state to:

(a) Formulate, develop, and implement the Energy Efficiency and Conservation Program to ensure sustainable supply of energy to support the country's socio-economic goals.

(b) Promote and encourage the development of energy efficient

technologies to ensure the optimal utilization of the country's energy resources.

(c) Improve coordination among different government and non-governmental organizations to enable the dynamic and effective implementation of the Energy Efficiency and Conservation Programs.

(d) Reinforce related laws and other statutory provisions for a more comprehensive approach to energy and conservation efficiency in the country.

SECTION 3. Scope – This act shall establish a framework for introducing an effective Energy Efficiency and Conservation Program that will include establishment of a research and development initiative towards creating energy efficient technologies, encouraging collaboration among organizations, and upholding related laws and other statutory provisions.

SECTION 4. Definition of Terms – As used in this Act, the following terms are defined as follows:

(a) Anti-Pilferage Law – refers to Republic Act 7832 or the Anti-Pilferage of *Electricity and Theft of Electric Transmission Lines/Materials Act*, which mandates electric utilities to reduce their system loss to ensure that power rates reflect only actual consumption.

(b) Cogeneration – refers to the use of high-efficiency energy systems to generate both electricity or mechanical power and useful heat from a single energy source.

(c) Demand Side Management – programs undertaken by distribution utilities in encouraging end-users to adopt measures towards the proper management of their load and efficient utilization of fixed system infrastructures.

(d) Distribution Utilities – an electric cooperative, private corporation, government-owned utility, or existing local government unit (LGU), that has exclusive franchise to operate the system of wires and distribution facilities extending between the delivery points of the transmission system and the customer point of connection. A distribution utility shall have the obligation to provide distribution services to any end-user within its franchise area.

(e) Energy Conservation – refers to measures which effect a decrease in the level of energy usage through efficient energy use or through reduced consumption of energy services. Such measures shall include, but shall not be limited to, information, advice, education, promotion, provision of grants and loans.

(f) Energy Efficiency – refers to the efficient utilization of energy resources through cost-effective options towards the use of less energy for the same or higher performance than regular products or energy systems.

(g) Statutory Provisions- provisions contained in, or in any document made or issued under any Act or Decree whether of a general or special in nature.

(h) System Loss – refers to the difference between the electric energy purchased and/or generated and the electric energy sold by a Distribution Utility.

For purposes of this Act, the term System Loss shall consist of the following components: Technical System Loss, referring to loss inherent in the physical delivery of electric energy, including conductor loss, transformer core loss, and technical errors in meters; Non-Technical Loss, referring to energy loss not related to the physical characteristics of the electrical system, including those attributable to pilferage, tampering of meters, and erroneous meter reading; and Administrative Loss, or the energy required for the operation of the distribution system and any unbilled energy for community-related activities.

(i) Waste Heat Recovery- the use of heat that is produced in a thermodynamic cycle (as in a furnace, combustion engine, etc.) in another process, through the use of waste heat gas recovery systems that capture and use some of the thermal energy in the fuel gas that would otherwise be ejected into the environment.

SECTION 5. Functions and Powers of Government Organizations –

(a) The Department of Energy (DOE) shall be the primary agency that will plan, develop and implement the energy conservation and energy efficiency programs and activities. The DOE is tasked to consult and coordinate with other government units for a more effective implementation of energy policies.

(b) The Department of Environment and Natural Resources (DENR) shall coordinate with the DOE in establishing and enforcing the limitation in the exploitation of indigenous energy resources.

(c) The Department of Science and Technology (DOST) shall coordinate

with the DOE in institutionalizing a strategic research and development program aimed at facilitating the development of energy efficient technologies in the country.

(d) The Department of Trade and Industry (DTI), in consultation with the DOE, shall set standards for energy consumption and efficiency for machineries, appliances and equipments that will be sold in the country.

(e) The Department of Transportation and Communication (DOTC), together with the DOE, DENR and DTI, in consultation with the transport sector and Non-Government Organizations shall set the standards in motor vehicle efficiency and emissions.

(f) The Department of Finance (DOF) shall define the applicability of incentives to energy efficiency and conservation projects in accordance with existing laws.

(g) The Department of Education (DepEd) and Commission on Higher Education (CHED) shall integrate energy efficiency and conservation concepts in their respective educational programs.

(h) The Energy Regulatory Commission (ERC) shall perform the regulatory functions in relation to the energy efficiency and conservation programs of the distribution and supply sectors.

(i) The National Electrification Administration (NEA) shall endeavor to

enhance the operational capability of Electric Cooperatives in relation to energy efficiency and conservation.

SECTION 6. Contribution of Private and Non-Government Agencies – Private and non-governmental organizations are encouraged to actively participate in the energy efficiency and conservation endeavors of the country.

SECTION 7. Energy Efficiency and Conservation Fund – An Energy Efficiency and Conservation Fund or the "EEC Fund" is hereby created to be funded out of the contributions from distribution utilities, generation companies and transport entities. These contributions pertain to a percentage of said entities' gross revenue, with the reasonable percentage to be set and reinforced by the ERC, for the generation and distribution sectors, and the DOTC, for the transport sector. Ten percent (10%) of this EEC Fund shall be pooled according to the concerned sector, and shall be used to fund programs that shall benefit the sector as a whole, which programs shall be composed of, but not limited to, the conduct of Research & Development and enabling technology transfer in relevant areas for the sector. The ERC and the DOTC shall act as the administrators of the funds, for the generation and distribution, and transportation sectors, respectively. Said funds shall be disbursed in an open and transparent manner, and shall only be used for the intended purposes. The remaining ninety percent (90%) of the allocated percentage of the entities' revenues shall be for the respective entities' programs towards energy efficiency and conservation, and shall be used for upgrading, repairs, maintenance, expansion of existing facilities or such other programs that shall enhance the performance and efficiency of existing infrastructures. Said entities are likewise mandated to comply with the approval and reporting requirements, as stipulated in Chapter IV Section 14 of this Act.

CHAPTER II

CONVERSION TO ELECTRICAL ENERGY

SECTION 8. Plant Efficiency - To encourage endeavors on plant efficiency improvement and increase the operating capacities of existing power plants and to exploit the potential of technology in exploring other sources of energy, the following policies shall be observed:

(a) The National Power Corporation, in coordination with the DOE, shall develop and undertake a plan for plant efficiency improvement programs in all the plants it owns.

(b) The Board of Investments (BOI) in coordination with the DOE, the DOF and the DOST shall establish a targeted tax relief mechanism for imported machinery to encourage private companies to improve their plant efficiencies.

(c) The DOE, in coordination with the BOI and the DTI shall develop an incentive mechanism based on the increased efficiency of a distribution utility.

(d) All government and private generating companies are required to improve their plant efficiencies after three (3) years upon the effectivity of this Act, which, however, shall in no case exceed seven (7) years. The ERC in coordination with DOE shall monitor plant efficiency improvement programs implemented by generating companies.

SECTION 9. Waste Recovery and Cogeneration Plants - To exploit the possible benefits of cogeneration and waste recovery technologies, the following policies are hereby ordered and mandated:

(a) The DOE shall steer an inter-agency technical committee composed of representatives from the DOST, the DENR, the ERC, the DA and the DTI and other relevant organizations which shall explore new markets for waste recovery and cogeneration and exploit the possible benefits of cogeneration. A report will be given to the DOE for evaluation and further action.

(b) The DOST shall undertake and sustain research and development programs in cogeneration and waste recovery technologies.

CHAPTER III

ELECTRICAL ENERGY TRANSMISSION AND DELIVERY

SECTION 10. Imposition of System Loss Caps - All Distribution Utilities shall reduce systems losses to percentage levels duly determined by the ERC to protect consumers from unreasonable electric rates. Towards this end, the ERC shall carry out the following, in addition to any other act that it may deem proper:

a) Design comprehensive mechanisms in determining the System Loss caps that are achievable, time-bound and reflective of the current conditions of the Distribution Utilities.

b) Require the Distribution Utilities to submit the annual financial statements for monitoring and auditing purposes.

SECTION 11. Enforcement of the Anti-Pilferage Law - The Anti-Pilferage Law shall be strengthened further and be fully enforced with the coordination of the LGU and the utility owning the distribution franchise of the area.

a) The Congress shall revisit and evaluate the applicability of the Provisions of the Anti-Pilferage Law to the Distribution Utilities and its customers and come up with necessary amendments that will favor a significant impact of the Anti-Pilferage Law to Systems loss Reduction and which will adequately address the changes in the power sector.

b) The Distribution Utilities shall initiate a tri-media campaign within their respective areas of franchise that will raise the public's awareness of the relevant provisions of the Anti-Pilferage Law.

SECTION 12. Technology Development and Transfer - The DOE shall steer the provision of the necessary technical assistance and formulation of efficient technology leading to Systems Loss Reduction.

a) The DOE together with the DOST shall sponsor and intensify research and development in systems loss reduction technologies. The research grants shall be given to the duly identified members of the academe and/or experts in the field. Funding of these research and development initiatives shall be determined as indicated in Section 7 of this Act.

b) The DOE and ERC shall intensify technology transfer on efficient transmission and delivery systems through the conduct of trainings and seminars to Distribution Utilities covering effective approaches to reduce systems loss.

c) The ERC shall impose the submission among Distribution Utilities of a monthly performance report on Systems Loss Reduction of all Distribution Utilities. These reports will aid the DOE to identify Distribution Utilities that need monitoring and technical assistance. The ERC shall likewise, make the reports timely and accessible to the public.

SECTION 13. Installation of Efficient Transmission and Distribution System - The DOE shall promote Efficient Transmission and Distribution System through the provision of incentives and benefits enumerated in Chapter VII of this Act to Distribution Utilities that will undertake measures to improve the efficiency of their transmission and distribution networks.

a) *Each Distribution Utility shall bi-annually submit an Electricity Distribution* Network Enhancement Plan that will be constituted by an assessment of its current network efficiency and a proposal on its Network Efficiency enhancement scheme. The Enhancement Plan shall be considered an Energy Efficiency project and shall be entitled to incentives mentioned in Chapter VII of this Act as may be applied.

b) The ERC shall encourage the retirement of inefficient Transmission and Distribution equipment such as transformers and capacitors.

c) Loan grants shall be given to expanding Rural Electric Cooperatives upon presentation of an energy efficient expansion plan.

CHAPTER IV

ELECTRICAL ENERGY UTILIZATION

SECTION 14. Demand Side Management and Load Profile Management (DSM-LPM) – To promote Load Profile Management:

(a) The ERC shall undertake an in-depth assessment of the country's Demand Side Management Program and likewise conduct benchmarking studies on successful DSM Programs in other countries, towards determining an optimal plan for the Philippines. The ERC, in collaboration with the DOE, shall encourage private and public sector participation in setting clear and measurable targets for the performance of distribution utilities. Further, an equitable incentive mechanism shall be determined towards minimizing energy consumption using Part (b) of this section as the basis of the incentive provision.

(b) The ERC, in collaboration with Metering Service Providers (MSPs), shall formulate strategic monitoring mechanisms in determining the baseline energy consumption of the Distribution Utilities and Electric Cooperatives, and analyzing subsequent impacts of the Demand Side Management Program in the energy consumption of each Distribution Utility.

(c) The ERC shall create a Demand Monitoring Division that shall strictly monitor the performance of Distribution Utilities vis-à-vis DSM determined targets and performance indicators.

(d) To reinforce the DSM Program, an Inter-Agency Committee, headed by the Department of Energy, shall be formed with the specific task of educating consumers. The Committee shall be composed of representatives from the NEA, the DOST, the DepEd and representatives from Distribution Utilities.

(e) Within three (3) months from the determination of the DSM-LPM Program, all Private Distribution Utilities and Electric Cooperatives shall be required to allocate a reasonable percentage of their gross revenue to fund their DSM-LPM Program.

(f) Towards the determination abovementioned percentage, the NEA shall conduct nationwide stakeholder consultation with Distribution Utilities and shall submit their evaluation to the ERC for approval. Upon approval, the ERC Demand Side Monitoring Division shall be tasked with constant monitoring of the Distribution Utilities programs and fund allocation.

(g) The ERC shall work jointly with the DOF to determine the feasibility of granting Tax Relief to the Distribution Utilities, which shall be channeled to the DSM fund.

SECTION 15. Time Of Use Rates – To further strengthen the *government's initiatives in energy efficiency and conservation, an appropriate and*

equitable Time of Use (TOU) Rate Mechanism shall be determined:

(a) To support the DSM Program, the ERC, in consultation with Distribution Utilities, shall determine the appropriate TOU Rate Determination Mechanism.

(b) The ERC shall take charge of educating the Distribution Utilities on the dynamics of the abovementioned mechanism to ensure the Distribution Utilities operational competence in adopting the scheme.

(c) Within three (3) months of the ERC's determination of the TOU Rate Mechanism, the Commission shall require the Distribution Utilities and Electric Cooperatives to implement the optional TOU rates to their consumers.

(d) In addition, the ERC shall conduct in-depth analysis on alternative rate mechanisms that may likewise be adopted towards enabling demand side management and equitable pricing.

SECTION 16. Energy Efficient Appliance and Standards – To encourage the use of energy efficient appliances, the following shall be observed:

(a) The DOE shall encourage extensive Research and Development in new technologies through the establishment of the necessary support infrastructure to prompt the country's competitiveness in the development of appliances with high efficiencies and to further augment R&D ventures in efficiency improvements.

(b) The DOE and the DOST shall jointly design a strategic plan for

technology development in the country, in recognition of the need to circumvent possible fragmentation of research and development activities. To further promote energy efficiency orientation, the DOST and the DepEd shall create scholarships in strategic fields.

(c) An inter-agency Committee shall be created towards advancing university-based energy technology centers to optimize government-industry-academe cooperation. This Committee shall be composed of the Secretaries of the DOST, DOE, DepEd, an expert from the Academe, as well as a representative from the private sector. This Committee shall design a program towards eliciting private sector investment through partnerships and collaborations in order to develop energy efficient technologies.

(d) The DOE shall likewise foster government and industry collaboration in jointly setting up appliance standards, as well as the associated procurement polices. Having determined the applicable standards, the DOE shall set the minimum criteria for compliance, and shall strictly enforce said criteria. The DOE shall conduct a yearly evaluation of the determined standards.

(e) To facilitate energy efficiency labeling, the DOE shall create additional testing laboratories and centers to accommodate supplier and consumer initiatives towards compliance with standards.

(f) The DOE shall ensure appliance labeling of energy efficiency ratings by 2010. Distributors and manufacturers are hereby compelled to acquire DOE certification and labels for their appliances. Penalties shall be imposed to non – complying distributors and manufacturers in accordance with Section 23 of this

Act.

(g) Government agencies shall incorporate DOE's energy efficiency standards into their procurement policies.

CHAPTER IV

TRANSPORT FUEL CONVERSION AND UTILIZATION

SECTION 17. Fuel Efficiency

(a) The DOTC, together with the DOE, the DENR and the DTI in consultation with the transport sector and concerned non-governmental Organizations shall set the standards in motor vehicle efficiency and emissions.

(b) The DOTC shall promulgate rules and regulations in the registration and banning of motor vehicles, including fines and penalties, on motor vehicles that will not adhere to the provisions that are set in Subsection (a) of this Section.

(c) The DOE shall encourage technology development that will increase motor engine efficiency *vis-a-vis* technology transfer among major car producing countries.

(d) To discourage the use of vehicles with high fuel consumption, a classification shall be made in terms of fuel consumption rate and the appropriate registration and purchase taxes shall be imposed accordingly by the LTFRB and

DOTC.

SECTION 18. Mass Transport System

(a) To support fuel efficiency program, the DOTC, DPWH, DTI and NEDA shall formulate a Mass Transport System Infrastructure Program that will address current and future requirements in mass transport.

(b) Mass transport system projects utilizing light rail system shall be granted to duly identified investors through a build-operate-transfer scheme or government-private sector partnership to ease up the government from high capital expenditures.

(c) The DOTC shall intensify the regulation and administration of registration among public utility vehicles ensuring that only public utility vehicles that adhere to standards set as provided in Section 17(a) are the only vehicles that are granted a franchise to operate.

(d) The DOTC together with the Metro Manila Development Authority and the respective urban development authorities shall permanently designate strategic loading stations/terminal for public utility vehicles. The locations of loading stations that will be constructed shall be strategically determined to aid in the traffic decongestion of national highways.

CHAPTER V

ENERCON INFORMATION PROGRAMS

SECTION 19. Promotion of Energy Conservation and Management – To increase awareness and educate various sectors regarding energy conservation and management, the DOE shall have the following responsibilities:

(a) Design and embark on an extensive Energy Management Education Program that will increase consciousness of the Energy Efficiency and Conservation Program among government, residential, commercial and industrial sectors;

(b) Educate various sectors through the use of the television, radio and newspaper media regarding energy efficiency and conservation.

(c) Study, along with DepEd and CHED, the incorporation of energy conservation and management subjects in the primary, secondary and tertiary education curricula.

CHAPTER VI

ENVIRONMENTAL COMPLIANCE

SECTION 20. Compliance with Environmental Regulations – All EnerCon Policies and Programs shall be conducted in accordance with existing environmental regulations as prescribed by the DENR and/or any other concerned government agency.

CHAPTER VII

GENERAL INCENTIVES

SECTION 21. Incentives for Energy Efficiency and Conservation Projects - The favored energy efficiency and conservation projects listed in the preceding section shall, for a period of five (5) years upon the effectivity of this Act, be entitled to the following incentives;

(a) Tax and Duty-Free Importation of Capital Equipment – The importation of machinery, equipment and spare parts of energy conservation projects defined herein shall be exempt to the extent of one hundred percent (100%) of the customs duties and national internal revenue taxes payable thereon subject to the condition that said machinery, equipment and spare parts of comparable quality, delivery and price (1) are not manufactured domestically; (2) are reasonably needed and will be used exclusively by the proponent enterprise for energy efficiency and conservation projects; and (3) the approval of the DOE was obtained by the proponent enterprise for the importation of such machinery, equipment and spare parts. In granting said approval, the DOE may require international canvassing: provided, that if the total cost of the capital equipment exceeds five million US dollars (US$5,000,000.00), the DOE may avail of the provisions of Presidential Decree No. 1764 on international competitive bidding; and

(b) Tax Credit on domestic Capital Equipment – A tax credit equivalent to one hundred percent (100%) of the customs duties and national internal revenue taxes on the machinery, equipment and spare parts which would have been waived had these items been imported, shall be given to the proponent

enterprise which purchases said machinery, equipment and spare parts from a domestic manufacturer: Provided, that (1) the said machinery, equipment and spare parts are reasonably needed and will be used exclusively by the proponent enterprises for energy conservation projects; (2) the machinery, equipment and spare parts would qualified for tax and duty-free importation under Paragraph (a) this Section; and (3) the prior approval of the DOE was obtained by the proponent enterprise.

CHAPTER VII

GENERAL PROVISIONS

SECTION 22. Rules and Regulations – The DOE, in coordination with the various departments and/or entities empowered to reform certain acts in the preceding sections, shall within sixty (60) days from the effectivity of this Act, conduct public hearings and issue such rules and regulations as may be necessary to implement this Act. Such rules and regulations shall be subject to the approval of the President and shall take effect fifteen (15) days after their last publications in at least two (2) newspaper of general circulation in the Philippines once a week for two (2) consecutive weeks. Where necessary, the DOE or the departments mandated to undertake activities as herein provided may seek assistance from other government agencies or non-government organizations for the effective implementation of this Act.

SECTION 23. Penalties – Any person who violates any rule or regulations promulgated pursuant to the authority granted in this Act shall, upon conviction, be punished by a fine of not less than ten thousand pesos (P10,000.00) but not more than five hundred thousand pesos (P500,000.00) or by imprisonment of not less than six (6) months but not more than one (1) year or both, at the discretion of the court; Provided,

That if the violation is committed by a judicial person, the penalty herein shall be imposed upon the official and/or employee thereof responsible for the violation: Provided, further, That if the violation is committed by a government official or employee including those in government-owned controlled corporations he shall in addition to the penalty provided above, be subjected to administrative disciplinary action.

SECTION 24. Contingency Powers – In times of critical energy supply disruptions or imminent danger thereof, the President shall direct the adoption of stringent energy conservation measures, including but not limited to power/fuel allocations or rationing, limiting the operating hours of commercial, industrial and similar establishments, restricting the use of government and private motor vehicles, staggering or limiting working hours in both public and private sectors and the temporary closure of all intensive industries.

SECTION 25. Repealing Clause – Any provision of law, presidential decree, executive order, or rules and regulations inconsistent with the provisions of this Act or with the rules and regulations issued pursuant thereto is hereby repealed or modified accordingly.

SECTION 26. This Act shall take effect fifteen (15) days after its complete publication in the Official Gazette or in two (2) newspapers of general circulation.

Approved,