

SENATE

S.B. No. 3321

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Introduced by Senator Sergio Osmeña III

EXPLANATORY NOTE

Access to energy is vital in achieving the government's goal of spurring economic activity to create livelihood and employment for 92.3 million Filipinos, 26.5 percent of which are currently living below the poverty threshold (National Statistics Office, 2012). The demand for energy is expected to increase even further in light of the country's growing population, currently pegged at 1.9 percent per year (NSO, 2012). The government basically addresses this situation two-fold: 1) by ensuring adequate supply through vigorous development of indigenous energy resources and promoting investments in the power sector, and 2) managing domestic energy consumption.

Based on the DOE 2010-2030 energy saving forecast projection, there is an annual energy saving potential of 3,455 kilotons of oil equivalent (KTOE) that can be contributed by the energy demand sector comprising of household, industrial, commercial, transport and agriculture sectors. It has a monetary equivalent value of PhP 122 million per year and enough to support socio-economic development of a certain region of the country. Likewise, such projected potential energy saving shall impact on the deferment or postponement of putting-up additional virtual power plant capacity equivalent to 340 Megawatts. On the other hand, the direct contribution of investments and job opportunities could help reciprocate in achieving a sustainable economic environment in this sector of energy. For the environment, a CO₂ reduction shall be in the level of 8.9 million tons per year which means reducing stress to the environment that have direct impact to the survival of the population. Henceforth, the Philippines can actively support global efforts to use energy efficiently as it is widely regarded as the most cost-effective means to reduce CO₂ emissions in the energy sector and mitigate climate change.

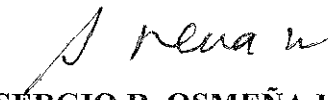
Due to the high cost of energy that fuels its economic growth and insufficient indigenous energy resources at this time, the country has to ensure that all present and future energy supply must be used in an efficient manner with minimal waste. This demand-side approach not only contributes to the national economy, but helps the environment as well through the reduction of harmful emissions caused by the combustion of fuel. Furthermore, it is a low-cost and relatively quick but effective solution to managing the nation's energy security.

While the government has espoused energy efficiency and conservation since the oil crisis of the early seventies, such policy has not been institutionalized through legislation. Numerous executive orders and issuances had been issued to implement said policy, but the lack of an overall framework has precluded the crafting of comprehensive national energy efficiency and conservation programs involving all sectors of the economy and the population at large.

In view of the foregoing considerations, this Energy Efficiency and Conservation measure is being proposed to address the gap by setting an overall policy framework, promoting energy efficiency and conservation through various means, including fiscal and non-fiscal incentives, empowering the Department of Energy to effectively implement the same. Among the other features of the bill are providing incentives for significant capital investments and accreditation of energy service providers and energy manager/ professionals, information, education and communication activities, formulation of an energy utilization data base, setting of performance standards and enforcing compliance thereto

Although this may require building the capacity of government to effectively perform its monitoring and regulatory functions, it does not necessarily entail substantial increases in expenditures as many of the foreseen activities can be undertaken through new modalities of cooperation such as public-private partnerships, international and regional cooperation and assistance from multilateral organizations.

Early approval of this bill is earnestly requested.


SERGIO R. OSMEÑA III
Senator

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AN ACT
INSTITUTIONALIZING ENERGY EFFICIENCY AND CONSERVATION,
ENHANCING THE EFFICIENT USE OF ENERGY, GRANTING INCENTIVES TO
ENERGY EFFICIENCY AND CONSERVATION PROJECTS, AND FOR OTHER
PURPOSES

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

CHAPTER I

GENERAL PROVISIONS

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3 **SECTION 1.** *Short Title.* – This Act shall be known as the “Energy Efficiency and
4 Conservation Act of 2012.”

5 **SEC. 2.** *Policy Declaration.* – It is hereby declared the policy of the State to
6 institutionalize energy efficiency and conservation as a national way of life geared towards the
7 efficient and judicious utilization of energy by formulating, developing, and implementing
8 energy efficiency and conservation plans and programs to enhance energy supply security of the
9 country, cushion the impact of the high price of imported fuels to local markets and protect the
10 environment in support of the economic and social development goals of the country.

11 **SEC. 3.** *Role of Energy Users.* – All Energy users shall exert efforts to use every
12 available energy resources judiciously and efficiently in compliance with the fundamental
13 policies of this Act.

14 **SEC. 4.** *Scope.* – This Act shall establish a framework for introducing and
15 institutionalizing fundamental policies on energy efficiency and conservation including the
16 promotion of efficient and judicious utilization of energy and the definition of responsibilities of
17 various government agencies and private entities.

18 **SEC. 5.** *Definition of Terms.* – For purposes of this Act, the following terms shall, unless
19 the context indicates otherwise, have the following meanings:

20 (a) “Certified Energy Manager” or “CEM” refers to a Professional who becomes eligible
21 for this certification after demonstrating expertise in several areas ranging from standards for
22 energy-consuming appliances, equipment, products, vehicles and systems; air quality; energy
23 audits; procurement and financing. It recognizes individuals who have demonstrated high levels
24 of experience, competence, proficiency and ethical fitness in the energy management profession.

1 Type 2 Designated Establishments shall appoint a CEM who shall be responsible for the
2 management of the energy consumption of its facility or facilities.

3 (b) "Demand Side Management" or "DSM" refers to measures undertaken by distribution
4 utilities to encourage end-users in the proper management of their load to achieve efficiency in
5 the utilization of fixed infrastructures in the system;

6 (c) "Designated Establishment" or "Type 1/Type 2 Designated Establishment) refers to a
7 private entity in the industrial, commercial, transport and power sectors consuming energy and/or
8 having other index equivalent to such energy for the previous year beyond the level specified by
9 the Department of Energy (DOE). Such establishments shall be categorized as Type 1 or Type 2
10 Designated Establishment, according to the annual energy consumption [Type 1: $\geq 1,000,000$ but
11 $< 2,000,000$ Liters of Oil Equivalent (LOE), Type 2: $\geq 2,000,000$ Liters of Oil Equivalent (LOE)];

12 (d) "Distribution Utility" refers to any electric cooperative, private corporation,
13 government-owned utility or existing local government unit (LGU) which has an exclusive
14 franchise to operate the system of wires extending between the delivery points of the
15 transmission system and the customer point of connection. A distribution utility shall have the
16 obligation to provide distribution services to any end-user within its franchise area;

17 (e) "Energy Audit" refers to the evaluation of energy consumption and review of current
18 energy cost, to determine ways in which energy can be conserved to achieve savings. The three
19 types of energy audit are walk-through audit, preliminary audit and detailed audit;

20 (f) "Energy Conservation" refers to the act of reducing the loss and waste in various
21 energy stages from energy production to energy consumption and using energy more efficiently
22 and rationally through application of appropriate energy management system and adopting
23 measures which are technologically feasible, economically sound and environmentally and
24 socially affordable;

25 (g) "Energy Conservation Officer" or "ECO" refers to a person appointed by Type 1
26 Designated Establishments responsible for the supervision and maintenance of facilities for the
27 proper management of energy consumption and such other functions deemed necessary for the
28 efficient and judicious utilization of energy prescribed under this Act;

29 (h) "Energy Efficiency" refers to the efficient utilization of energy in its various forms
30 through cost-effective options towards the use of less energy for the same or higher performance
31 than regular products or energy systems;

32 (i) "Energy Management" refers to the process of managing energy consumption to
33 ensure that energy has been efficiently consumed;

34 (j) "Energy Using Entities" refers to all energy demand sectors such as commercial,
35 industrial, transport, agricultural, household, government buildings and the power generation,
36 transmission and distribution industry sectors;

1 (k) "Energy Conservation Report" refers to the periodic report submitted to the DOE by
2 Type 2 Designated Establishments and the Transmission Utility with regard to the EE&C plan.
3 The items to be reported in the Energy Conservation Report shall be specified by the DOE;

4 (l) "Energy Consumption Report" refers to the periodic report submitted to the DOE by
5 Type 1 or Type 2 Designated Establishments and the Transmission Utility with regard to the
6 energy consumption and energy loss and other status of energy use. The items to be reported in
7 the Energy Consumption Report shall be specified by the DOE;

8 (m) "Specific Energy Consumption" or "SEC" refers to the energy consumption volume
9 required per unit, such as production volume, sales amount, transportation ton-km, transportation
10 km, floor space and such other indicators relevant to energy consumption;

11 (n) "System Loss" refers to the difference between the electric energy purchased and
12 generated and the electric energy sold by a Distribution Utility. For purposes of this Act, the
13 term System Loss shall consist of the following components: Technical System Loss, referring to
14 the loss inherent in the physical delivery of electric energy, including conductor loss, transformer
15 core loss and technical errors in meters; Non-Technical Loss, referring to energy loss not related
16 to the physical characteristics of the electrical system, including those attributable to pilferage,
17 tampering of meters and erroneous meter reading; and Administrative Loss, referring to the
18 energy required for the operation of the distribution system and any un-billed energy for
19 community-related activities;

20 (o) "Transmission Utility" refers to any private corporation or government-owned utility
21 which has an exclusive franchise to operate the system of wires extending from power generating
22 units to the delivery points through the grid. A transmission utility shall have the obligation to
23 provide transmission/distribution services to any end-user within its franchise area and to any
24 sale for resale customers; and

25 (p) "Waste Heat Recovery" refers to the extraction of heat from fluids (i.e., gases or
26 liquids) produced in a thermodynamic or separation process, that would otherwise be vented to
27 the atmosphere, reinjected to the ground or disposed of by other means, for power generation or
28 other applications.

29 CHAPTER 2

30 TYPE 1 AND TYPE 2 DESIGNATED ESTABLISHMENTS

31 **SEC. 6.** *Type 1 Designated Establishments.* Establishments with an annual energy
32 consumption equal to or more than 1,000,000 Liters of Oil Equivalent (LOE) but less than
33 2,000,000 LOE are hereby categorized as Type 1 Designated Establishments and shall include
34 the following sectors:

- 35 a) Building Sector
- 36 1) Commercial Building
 - 37 2) Hotel
 - 38 3) Hospital Building

- 1 4) Educational Institutions
- 2 5) Office Building
- 3 b) Industrial/Manufacturing (Medium-size industrial/manufacturing plants)
- 4 1) Food and Beverages
- 5 2) Plastic
- 6 3) Metal Fabrication
- 7 4) Chemical
- 8 5) Appliance
- 9 c) Transport Sector (Fleet)
- 10 1) Railway
- 11 2) Road Transport
- 12 3) Sea Freight and Passenger Vessel
- 13 4) Air Transport cargo and passenger vessel
- 14 d) Power Sector
- 15 1) Power Generation
- 16 2) Distribution Utilities

17 **SEC. 7. *Obligations of Type 1 Designated Establishments.*** – Type 1 Designated
18 Establishments shall have the following obligations:

19 a) Employ an Energy Conservation Officer (ECO) and duly notify the DOE of said
20 ECO's appointment or separation as soon as possible. The ECO shall manage the energy
21 consumption of facilities, equipment and devices, the improvement and implementation of
22 energy efficiency measures, the conduct of regular energy audit, energy monitoring and control
23 and the preparation of periodic energy consumption report;

24 b) Keep records of monthly energy consumption data and other energy-related data;

25 c) Set up annual targets and plans for the implementation of energy efficiency and
26 conservation projects or measures and submit a *Semi-Annual Energy Consumption Report* to the
27 DOE not later than the 30th day of June and December of each year;

28 d) Conduct, through competent energy auditors certified by bodies accredited by the
29 DOE or by DOE-accredited energy service companies or service providers, a periodic Energy
30 Audit once every three (3) years and submit an Energy Audit Report to the DOE upon
31 completion of the said energy audit.

32 e) Improve the average Specific Energy Consumption (SEC) by at least one percent
33 (1%) every year.

34 **SEC. 8. *Type 2 Designated Establishments.*** – Energy intensive establishments with
35 annual energy consumption equal to or more than 2,000,000 Liters of Oil Equivalent (LOE) are
36 hereby categorized as Type 2 Designated Establishments and shall include the following sectors:

37 a) Building Sector

38 1) Commercial

- 1 2) Hotel
- 2 3) Hospital
- 3 4) Educational Institutions
- 4 5) Office
- 5 b) Industrial/Manufacturing Sectors
- 6 1) Cement
- 7 2) Mining
- 8 3) Food and Beverages
- 9 4) Electronic/Semi-Conductor
- 10 5) Steel & Metal
- 11 6) Chemical
- 12 7) Vehicle
- 13 8) Appliance
- 14 9) Glass
- 15 10) Plastic
- 16 11) Others
- 17 c) Transport Sector (Fleet)
- 18 1) Railway
- 19 2) Road Transport Fleet
- 20 3) Sea Freight and Passenger Vessel
- 21 4) Air Transport cargo and passenger vessel
- 22 d) Power Sector
- 23 1) Power Generating Plants
- 24 2) Distribution and Transmission Utilities

25 **SEC. 9. *Obligations of Type 2 Designated Establishments.*** – Type 2 Designated
26 Establishments shall have the following obligations:

27 a) Employ one (1) Certified Energy Manager (CEM), subject to the provisions of
28 Section 11 of this Act, and duly notify the DOE of the said CEM's appointment or separation as
29 soon as possible. The CEM shall manage the energy consumption of facilities, equipment and
30 devices, the improvement and implementation of energy efficiency measures, the conduct of
31 regular energy audit, energy monitoring and control, and the preparation of periodic energy
32 consumption and energy conservation program reports of the establishment;

33 b) Keep records on monthly energy consumption data and other energy-related data;

34 c) Set up annual targets and plans for the implementation of energy efficiency and
35 conservation projects;

36 d) Submit a *Semi-Annual Energy Consumption Report* and an *Annual Energy*
37 *Conservation Program Report* to the DOE not later than the 30th day of June and December of
38 each year;

1 e) Conduct, through competent energy auditors certified by bodies accredited by the
2 DOE or by DOE-accredited energy service companies or energy providers, a periodic Energy
3 Audit once every three (3) years and submit an Energy Audit Report to the DOE upon
4 completion of the said energy audit.

5 f) Improve the average Specific Energy Consumption (SEC) by at least one percent
6 (1%) every year.

7 CHAPTER 3

8 ROLE OF THE DEPARTMENT OF ENERGY

9 **SEC. 10.** *Responsibilities of the DOE.* – The DOE shall be the primary government
10 agency responsible for the planning, formulation and development of energy management
11 policies and other related energy efficiency and conservation programs and plans. The DOE shall
12 consult and coordinate with other government agencies and the private sector or create an inter-
13 agency committee, as may be deemed necessary, for the effective implementation of energy
14 efficiency and conservation policies of the government. It shall also promote collaborative
15 efforts with the business sector, particularly the commercial, industrial, transport and power
16 sectors, to broaden and enhance their efficient and judicious utilization of energy. The DOE
17 shall, in consultation with the Department of Trade and Industry-Bureau of Product Standards
18 (DTI-BPS), require manufacturers, importers and dealers to comply with the Minimum Energy
19 Performance Standards (MEPS) and to display the Energy Label showing the energy requirement
20 and consumption efficiency of products on their packaging, and on the products themselves,
21 among them designated machinery and equipment, appliances, vehicles and other fuel-using
22 combustion equipment and electric devices

23 CHAPTER 4

24 CERTIFICATION FOR PROFESSIONAL COMPETENCY AND ACCREDITATION 25 FOR PROFESSIONAL SERVICES

26 **SEC. 11.** *Certified Energy Manager (CEM) and Energy Conservation Officer (ECO).* –
27 The Commission on Higher Education (CHED) and State Universities and Colleges (SCUs) shall
28 formulate and develop appropriate training course modules for Energy Managers and Energy
29 Conservation Officers under a Certificate Course Program for inclusion in the school curricula.

30 Similarly, competent Non-Profit Organizations and other private training institutions duly
31 accredited by the DOE and CHED shall offer professional certificate programs for Energy
32 Managers and Energy Conservation Officers.

33 **SEC. 12.** *Accreditation of Energy Service Company (ESCO) and other Energy Efficiency
34 Service Provider (EESP).* – The Department of Energy shall promote and implement an Energy
35 Service Company (ESCO) Accreditation System as an important component for market
36 development measures and for the following purposes:

37 a) Development of professional and qualified ESCOs and energy engineers;

CHAPTER 7
FINAL PROVISIONS

SEC. 16. *Prohibited Acts.* – The following acts shall be prohibited:

- a) Failure and/or willful refusal to submit periodic reportorial compliance reports to the DOE;
- b) Failure and/or willful refusal to appoint/designate an Energy Conservation Officer and Certified Energy Manager;
- c) Failure to comply with the mandate prescribed in Section 15 hereof; and
- d) Willful refusal to submit an energy audit report.

SEC. 17. *Penalties.* – Any person who willfully commits any of the prohibited acts enumerated under this Act shall, upon conviction, be liable for the penalties that will be defined in the Implementing Rules and Regulations of this Act.

SEC. 18. *Contingency Powers.* – Upon the recommendation of the Secretary of Energy, in times of critical energy supply disruptions or imminent danger thereof, the President may 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 energy intensive industries.

SEC. 19. *Appropriations.* – Such sums as may be necessary for the implementation of this Act shall be taken from the current fiscal year appropriation of the DOE. Thereafter, the amount needed for the implementation of the Act shall be included in the annual general appropriations.

SEC. 20. *Implementing Rules and Regulations.* – The DOE shall, in consultation with concerned government agencies and/or entities, the energy, industrial and commercial sectors, and other relevant stakeholders, promulgate the Implementing Rules and Regulations (IRR) of the Act within six (6) months from the effectivity of this Act.

SEC. 21. *Separability Clause.* – If for any reason, any section or provision of this Act is declared unconstitutional or invalid, such parts not affected thereby shall remain in full force and effect.

SEC. 22. *Repealing Clause.* – All laws, Presidential Decrees, executive orders, rules and regulations and other issuances inconsistent with the provisions of this Act are hereby repealed or modified accordingly.

SEC. 23. *Effectivity.* – This Act shall take effect on the fifteenth day after its publication in at least two (2) newspapers of general circulation.

Approved,