Senate
Office of the Secretary

SIXTEENTH CONGRESS OF THE REPUBLIC)
OF THE PHILIPPINES)
Third Regular Session)

'15 SEP 23 P2 :08

RECEIVED BY:

SENATE
S.B. No. 2963

Introduced by: Senator Paolo Benigno "Bam" A. Aquino IV

AN ACT
STRENGTHENING THE PRACTICE OF ELECTRICAL ENGINEERING IN THE PHILIPPINES AND INSTITUTING HIGHER STANDARDS OF REGULATION IN THE LICENSING AND REGISTRATION OF ELECTRICAL ENGINEERS

EXPLANATORY NOTE

For many Filipinos, life would grind to a halt without lights, charged gadgets, TV sets, refrigerators, and microwave ovens.

Homes, hospitals, and offices are reliant on electricity and, on a grand scale, our country's macroeconomic growth and development is dependent on the effective and safe transmission of energy throughout industries and our communities.

It is apparent that the chain from power generation to electrical installation needs to be supported, monitored, and held up to rigorous standards of quality and reliability.

While a current regulatory framework is in place for electrical engineering in the Philippines, the policy has, unfortunately, not been updated for twenty years.

This measure seeks to improve, promote, and cultivate electrical engineering in the country, elevating the standards of the profession and ensuring that our Filipino electrical engineers can build a promising career in the Philippines.

With the Philippine Electric Engineering Bill, we hope to enhance learning, licensing, testing, and practicing in the field of electrical engineering.

This proposal also endeavors to bridge the gap between education and employment by strengthening the relationship between the academe and the industry to make certain that our graduates are well equipped for the jobs available in the market.

As we go about our lives enjoying the convenience technology and industries provide, let us not forget the men and women that make this accessible.

Let us reaffirm the value of our Filipino electrical engineers by empowering them with education and skills development at par with global standards and assuring them of a fulfilling career.

Let us continue to reboot and recharge the country with bright, committed engineers that will help build our beloved nation.

In view of the foregoing, the approval of this bill is earnestly sought.

Senator Paolo Benigno "Bam" A. Aquino IV

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

ARTICLE I

TITLE AND DEFINITION OF TERMS

SECTION 1. ***Short Title.*** – This Act shall be known as the "*Electrical Engineering Act.*"

SEC. 2. ***Declaration of Policy.*** – The State recognizes the importance of electrical engineers in nation building. Towards this end, the State shall foster, develop and nurture a pool of proficient, well-rounded and quality electrical engineering practitioners, whose standards of professional practice shall be outstanding, honorable and globally competitive. The State shall provide rational regulatory measures that are responsive to the growing needs of the electrical engineering profession considering the advances in technology and globalization.

SEC. 3. ***Definition of Terms.*** – As used in this Act:

a) *Electrical engineering* refers to the art and science of conceptualizing, planning, designing and creating *Electrical Systems* including the operation and maintenance of equipment and machinery, electrical processes of buildings, commercial complexes, industrial plants, electric plants, electric locomotives, watercrafts; construction and commissioning of electrical projects, manufacturing and distribution of electrical products, teaching electrical

subjects; and other related facilities or processes, in accordance with the principles of safety and reliability;

b) *Practice of electrical engineering* refers to the act of rendering or offering to render professional electrical engineering service in the form of:

1) Electrical consultancy service in the form of authoritative assessments, investigation, examination, appraisal of electrical system designs or existing systems, specifications and construction processes; providing oral or written advice and direction on technical issues; decisions and recommendation or evaluation on technical audits, in-depth system analyses; and other services requiring expert electrical engineering knowledge, engineering calculations, and application of engineering data and principles;

2) Professional design service which includes the preparation of electrical plans, calculations, designs, studies, specifications and estimates for electrical systems as: electric plants, transmission and distribution systems, power substations, electrical equipment and machinery, network system protection, switchboards and switchgears; electrical systems of dwellings or residences, buildings, industrial plants and factories, industrial parks, commercial complexes, airports, seaports, economic zones, watercrafts, electric locomotives, and other related electrical works, processes or projects.

Professional design service encompasses the performance of the processes in the creation or production of:

(i) Schematic or conceptual design phase;

(ii) Design development phase;

(iii) Procurement specifications and tender documents;

(iv) Construction planning details;

(v) Consultancy services in actual construction as owner's representative;

to include the preparation of preliminary, technical, economic and financial studies of a project; preparation of electrical work specifications, materials and equipment specifications, scopes of work, bill of materials, cost estimates, bidding and tender documents; construction and project management, providing responsible direction or management over the construction, erection, expansion, demolition, renovation, remodeling, alteration, restoration of all Electrical Systems as defined in this Act;

3. Management, supervision or taking charge of the construction, erection, installation, alteration, testing and commissioning of projects involving all kinds of electrical systems;

4. Management, supervision or taking charge of the tending, operation, maintenance and control of electrical systems of electric power plants, grid systems, switchyards, transmission and distribution systems, network protection and monitoring systems, electric utilities, watercrafts, electric locomotives, factories and industrial complexes, commercial buildings, government buildings, health care facilities, airports and seaports and other electrical processes;

5. Management, supervision or taking charge of the manufacture, fabrication, repair, testing and commissioning of electrical components, equipment and devices including switchgears, switchboards, control-gears, transformers, generators, electric motors, controllers, appliances, lighting fixtures, apparatuses and other related processes;

6. Management, supervision or taking charge of the sale, supply and distribution of electrical equipment including electronically-controlled industrial equipment, controllers and devices, power electronics, industrial robotics, instrumentation and automation; and other related equipment or components requiring application of electrical engineering data and principles, interpretation of technical specifications of electrical products;

7. Teaching of basic and professional electrical engineering subjects in government-recognized engineering schools including allied sciences, the Electrical Engineering Law, the Philippine Electrical Code and International Electrical Standards and their applications into the electrical industry;

8. Employment in national, provincial or local government units/agencies or in government-owned and -controlled corporations as a Professional Electrical Engineer, Registered Electrical Engineer, Registered Industrial Electrician or Registered Line Electrician if the nature and character of his work is in line with the profession requiring professional knowledge of the science of electrical engineering.

c) *Authorized electrical engineering practitioner* refers to a person professionally and academically qualified, registered and licensed to practice electrical engineering as defined in this Act, with a Certificate of Registration by the Professional Regulatory Board of Electrical Engineering and a valid professional identification card issued by the Professional Regulations Commission as Professional Electrical Engineer, Registered Electrical Engineer, Registered Industrial Electrician or Registered Line Electrician;

d) *Consulting Electrical Engineer* refers to a highly-experienced, academically qualified, recognized by a professional organization, licensed and authorized Professional Electrical Engineer, who with acknowledged outstanding proficiency in specialized fields of Electrical Engineering, provides expert Consultancy and Professional Design Services to clients;

e) *Electrical System Designer* refers to the authorized Professional Electrical Engineer practitioner with a Service Agreement with a Client as defined in this Act, who is directly responsible for the authorship of plans and designs of the Electrical System of a Project-on-Record with the Office of the Building Official and who shall assume the civil liability for the plans, specifications and contract documents bearing his signature and seal;

f) *Electrical Engineer-in-Charge* refers to the authorized Electrical Engineering Practitioner registered and licensed to practice Electrical Engineering, who is directly responsible of the supervision or taking charge of the operation, tending and maintenance of

electric plants, electric power transmission and distribution systems, substations and switching stations, industrial plants and complexes, commercial buildings and complexes, electric locomotives and watercrafts, and other electrical systems subject to limitations as defined in this Act;

g) *Electrical Project Engineer-In-Charge* refers to the authorized Electrical Engineering Practitioner registered and licensed to practice Electrical Engineering, who is directly and professionally responsible in the supervision of electrical construction in faithful compliance of the design plans-on-record of a Project-on-Record with the Office of the Building Official (OBO), and who shall be liable and accountable for the civil liability over the quality workmanship of the installation process;

h) *Registered Industrial Electrician* refers to the licensed and authorized electrician practitioner who is directly in-charge with the installation works of an industrial, commercial and residential electrical project in faithful compliance of the design plans-on-record of a Project-on-Record with the Office of the Building Official (OBO); or he who is directly operating, tending and maintaining electrical equipment and apparatuses in electric plants, industrial plants, commercial buildings, electric locomotives and watercrafts, and other electrical systems subject to limitations as defined in this Act;

i) *Registered Line Electrician* refers to the licensed and authorized electrician practitioner who is directly in-charge with the installation of electrical transmission or distribution line works; or he who is directly operating, tending and maintaining utility substations including power lines of Grid or Distribution Utility (DU) systems, subject to the limitations as defined in this Act;

j) *Electrical system* refers to a facility or structure or process composing of an arrangement of sets, arrays or assemblage of electrical machinery, equipment, devices; interconnected, interdependent and integrated in combination with each other that are configured to carry out an electrical function or operation such as generating, supplying, conveying or transforming power in providing or utilizing electric energy services to dwellings

and residences, buildings and commercial complexes, factories and industrial complexes, power plants, watercrafts and electric locomotives;

k) *Electrical system design* refers to the professional design service of conceptualizing, creating and developing plans and designs for electrical systems involving engineering calculations to include the choice of system configurations, fault calculations, load flow analysis, sizing calculations, selection and specifications of equipment, system protection and grounding systems, among others;

l) *Service agreement* means a duly notarized written contract or equivalent public instrument stipulating the scope of services of an electrical work or project to be rendered by the authorized electrical engineering practitioner for a client, guaranteeing compensation of such services;

m) *Electrical works or projects* refer to the development of engineering plans, drawings and design or the actual construction, installation, erection and execution of electrical projects in progress, testing and commissioning to include alteration and expansion of power and electrical systems and other electrical structures;

n) *Electrical equipment or machinery* includes all power equipment and components such as electric generators, power substations, transmission and distribution system equipment and accessories, control centers, electric drive motors and control systems, as accessories for steam generators, furnaces, heat exchangers, materials handling equipment, heating, air-conditioning, ventilating, and refrigeration systems, pollution abatement and environmental control system; pressure vessels, printing machines; electrical equipment of all kinds of mills, mining operations, shops, factories, shipyards, drydocks, electric locomotives and other systems or processes utilizing electrical power whether installed on land, underground, or on board watercrafts;

o) *Electric supply equipment* refers to any equipment which produces, modifies, regulates, or controls the supply of electric energy to include but not limited to generators, transformers, voltage regulators, interruptible power supply equipment, and the like;

p) *Utilization equipment* refers to energy-consuming equipment as motors, heaters, furnaces, light sources and other devices which use electric energy, for any productive purpose;

q) *Electric power plant* refers to an industrial facility or establishment for the production or generation of electric power composing of a system of electric generators, ancillary and auxiliary equipment and machines altogether interconnected, interdependent and in combination with each other for the production, conversion or modification of energy derived whether from steam, internal combustion engines, pumping stations, compressed gas, hydraulic, geothermal, dendro-thermal, nuclear, ocean thermal energy, biomass, waste heat, wind, gas, water, solar heat, ocean waves and tides, and other energy sources.

An electric power plant is also referred to as *power station*, *generating station*, *power plant*, *electric plant*, *powerhouse* or *generating plant*.

r) *Industrial plant or factory or manufacturing plant* refers to an industrial building, facility or establishment containing production processing equipment and machines where discrete and continuous goods or products are manufactured to include but not limited to mine processing plants, machine shops, shipyards, drydocks and other related industries;

s) *Industrial complex* refers to a cluster of several inter-connected industrial plants or factories producing several different goods or products under common ownership or general management;

t) *Electrical equipment manufacturing plant* refers to an industrial plant engaged in designing, fabrication, manufacturing and production of electrical products as transformers, motors, generator, switchgears, switchboards, control-gears, control panels, power panels, panel boards other related engineered products;

u) *Commercial establishment* refers to a an edifice or building that is used for business or commercial purposes that includes office buildings, hotels, condominiums, restaurants, resorts, entertainment centers, parking buildings, private hospitals, private schools, warehouses, retail stores, department stores, specialty shops, shopping malls, markets,

supermarkets, theaters, stadiums, convention centers, and the like, or a combination of these functions;

v) *Commercial complex* refers to a cluster of several inter-related commercial buildings for business or commercial use under common ownership or general management;

w) *Institutional buildings* refers to school buildings, public libraries, government hospitals, churches, religious buildings, museums, cultural display centers, government buildings and the like;

x) *Capacity of industrial plant, commercial establishment, process work or project* refers to the rated capacity in Kilovolt-Amperes (kVA) or Megavolt-Amperes (MVA) of electrical works or projects, or industrial or commercial establishments for the purpose of this Act shall be the Total Kilovolt-Ampere (KVA) or Total Megavolt-Ampere (MVA) rating of all generators and transformers wherein which are installed to make available the capability to provide certain amount of power for use as electric supply equipment in such works, projects or plants, or establishments whether in operation or not, and without regard to the connected loads requiring power from power sources;

y) *Capacity of electric power plant* refers to the aggregate or total rated capacity in kilovolt-Amperes (kVA) or Megavolt-Amperes (MVA) of all generators within the plant to include the capacities of transformer tie–ups with other power sources that are owned, operated and controlled by the plant which are installed to make available the capability to provide certain amount of power without regard whether in operation or not;

z) *Power grid or grid* refers to the interconnected network of synchronized power plants or power providers through a maze of transmission, sub-transmission, distribution systems, manned or automated switching stations and substations carrying power from near or distant sources to wholesale demand load centers and is controlled and operated by one or more system operation control centers;

aa) *Grid system operation and control* refers to the round-the-clock management, supervision, monitoring, data acquisition and operational control over the processes of power

grids in coordination with switching and transmission substations, generator control stations and load dispatch centers ensuring real time moment-to-moment power balance, load flow transactions, load scheduling and dispatching in facilitating inter-player transactions, while maintaining the security and stability of the interconnected systems therein;

bb) *Distribution system operation and control* refers to the round-the-clock supervision, data acquisition, monitoring and operational control over the distribution processes of a distribution utility involving manned or unmanned substations and load dispatch centers ensuring moment-to-moment load flow, load scheduling and power delivery;

cc) *Substation* refers to a building, room or an outdoor structure containing a combination of power switches, disconnects, circuit breakers, power transformers, power rectifiers and inverters, voltage regulators, system protection devices, power factor compensation equipment, short-circuit current abatement equipment, switchgears, control-gears and other related equipment interconnected with each other to alternating or direct current power lines; so arranged, schemed and functioning to transform, modify, regulate and control the supply of electric energy;

dd) *System nominal voltage* or *voltage* is the highest effective potential difference between any two conductors of the circuit concerned expressed in volts. For the purpose of this Act, *System nominal voltage* shall be of the following ranges:

1. *Low Voltage* – a voltage level not exceeding 1,000 volts;
2. *Medium Voltage* – a voltage level exceeding 1,000 Volts up to 69,000 Volts;
3. *High Voltage* – a voltage level exceeding 69,000 Volts up to 230,000 Volts;
4. *Extra High Voltage* – a voltage level exceeding 230,000 Volts up to 765,000 Volts.

ee) For purposes of this Act, the term, *kVA* or *MVA* refers to the capacity of an electric plant or ratings of supply equipment expressed in kilovolt-amperes or megavolt-amperes.

kVA or *MVA* is also referred to as the connected load of industrial plants, commercial edifices and other establishments expressed in kilovolt-amperes or megavolt-amperes.

ff) *kW* or *MW* refers to the capacity of an electric plant or ratings of supply equipment expressed in kilowatts or megawatts.

kW or *MW* is also referred to as the connected load of industrial plants, commercial edifices, institutional buildings, watercrafts and other establishments expressed in kilowatts or megawatts.

gg) *Watercraft* refers to any waterborne units which is designed and built to have an electric plant and a distribution system;

hh) *Electric locomotive* refers to the power plant and distribution system mounted on wheels as used in rail transportation industry and industrial locomotive operation;

ii) *Unsafe installations* refers to all new and existing installations which are in violation or non-compliant with the provisions of the latest edition of the Philippine Electrical Code and other Philippine-accepted International Standards;

jj) *Unsafe design* refers to all new and existing plans and designs which are in violation or non-compliant with the provisions of the latest edition of the Philippine Electrical Code and other Philippine-accepted International Standards;

kk) *Philippine Electrical Code* As recognized by this Act, the Philippine Electrical Code sets forth the minimum requirements and standards that constitute the framework as a legal criterion of safe electrical design, trustworthy installations and the appropriate equipment installed within industrial and commercial establishments, public and private buildings, including mobile homes and recreational vehicles, floating buildings, watercrafts; and other structures aimed at safeguarding persons and buildings and their contents from the hazards arising from the use of electricity for light, heat, power, and for other purposes;

ll) *Electrical plans* refers to the documents illustrating the interpretation of the electrical system as designed, through a structure of symbols, drawings and diagrams that gives a vivid description of sizes, ratings, configurations and other relevant identification to every part and components of the system according to the norms set forth by the Philippine Electrical Code and other Philippine recognized International Standards in a form of hard prints used for

reference in construction, operation and maintenance.

Electrical plans duly signed, stamped or sealed, as instruments of service, are the intellectual properties and documents of the author who is the Electrical Design Engineer-of-Record with the Office of the Building Official, whether the object for which they are made is executed or not.

mm) *As-built plans or As-built drawings* refers to a revised set or sets of plans or drawings that are documented during or upon completion of a project or a particular job. As final set of documents, they reflect all the changes that had been made to the original construction drawings including notes, modifications, and any other information in the specifications and working drawings during the construction process, and where the exact dimensions, geometry, and location of all elements of the works completed are shown as of the specific date of the update;

nn) *Office of the Building Official (OBO)* refers to the office forming part of the local government unit (LGU) but under the administrative control of the Secretary of Department of Public Works and Highways (DPWH) whose primarily role is to oversee the full implementation of the National Building Code and its Revised Implementing Rules and Regulations, to include various Referral Codes and all other relevant laws;

oo) *Certified Electrical System Inspector* refers to a Registered Electrical Engineer or a Professional Electrical Engineer authorized to practice in this Act, who is officially employed by a Local Government Unit such as: city, municipality, province or of any government office in-charge of the enforcement of laws, ordinances or regulations on public safety relating to the construction, approval of electrical permits for buildings or for any other purposes who is trained, qualified and certified to conduct inspection, checking, assessment, identify fire hazards arising from the installations and physical review over the electrical system or process as it proceeds under different stages of construction, to make sure that the materials, methods, workmanships and implementation are in compliance with approved plans and designs and to

make sure that the Philippine Electrical Code requirements electrical systems are complied with;

pp) *Certified Electrical Plans Examiner* refers to a Registered Electrical Engineer or a Professional Electrical Engineer authorized to practice in this Act, officially employed by a Local Government Unit such as: city, municipality, province or of any government offices in-charge of the enforcement of laws, ordinances or regulations on public safety relating to the construction, approval of electrical permits for buildings or for any other purposes; and who is trained, qualified and certified to assess and corroborate electrical plans, verify calculations, identify violations to standards, identify alteration needs, organize comments lists for plans and specifications identified as potential safety failures; processes and recommends approval of electrical permits, and to make sure that the Philippine Electrical Code and other related standards whether local, national or international requirements for electrical systems are complied with;

qq) *Distribution utility" or DU* refers to an electric cooperative, or a private corporation, or government-owned utility or a local government unit that has a franchise to operate an electric distribution system;

rr) *Electric cooperative or EC* refers to a cooperative or corporation authorized to provide electric services pursuant to Presidential Decree No. 269, as amended, and Republic Act No. 6938 within the framework of Rural Electrification Program;

ss) *Electrical firm* refers to a partnership or corporation composed of authorized electrical engineering practitioners duly registered with proper government agencies with business permits as professional services providers and who are authorized to collectively render electrical engineering services;

tt) *Continuing Professional Development (CPD)* refers to a sustaining and progressive learning process that maintains, enhances, or increases the knowledge and continuing ability of electrical engineers.

ARTICLE II

BOARD OF ELECTRICAL ENGINEERING

SEC. 4. *Composition of the Board.* – The Board of Electrical Engineering, hereinafter referred to as the Board, shall be created as a collegial body under the general supervision and administrative control of the Professional Regulations Commission (PRC). The Board shall be composed of a chairperson and two (2) members to be appointed by the President of the Philippines from among the recommendees of the Commissioner of the PRC, hereinafter referred to as the Commissioner. The recommendees of the PRC shall be chosen from the nominees of the integrated and accredited association of electrical engineers.

SEC. 5. *Powers and Duties of the Board.* – The Board shall exercise executive, administrative, quasi-legislative (rule-making), or quasi-judicial (investigative) powers in carrying out the provisions of this Act. It shall be vested with the following specific powers, functions, duties and responsibilities:

a) Supervise and regulate the practice of electrical engineering in the Philippines;

b) Determine and evaluate the qualifications of the applicants for registration with or without licensure examinations and for special permits;

c) Prepare the examination questions in accordance with Section 21 hereof or modifications thereof; prescribe the syllabi of the subjects and their relative weights for the licensure examinations; formulate or adopt test questions and deposit them in a test question bank; draw the test questions at random through process of computerization; conduct the examination; correct and rate the examination papers manually or through process of computerization; and submit the examination results within the period provided for by the rules of the PRC;

d) Prescribe, amend or revise the requirements for professional electrical engineers and subjects in the licensure examination for registered electrical engineers, registered industrial electricians and registered line electricians and their relative weights, subject to the approval of the PRC;

e) Register successful applicants for professional electrical engineers and applicants

who have passed the licensure examinations for registered electrical engineers, registered industrial electricians or registered line electricians and issue the corresponding certificates of registration and professional licenses;

f) Issue special permits to individual foreign electrical engineers for specific projects and for a specific duration of time;

g) Establish guidelines, qualification or examination requirements, processes or procedures *in collaboration and consultation with the PRC accredited electrical professional* organization in the issuance of special certifications to Electrical Plans Examiners, Electrical Systems Inspectors and conferment to other fields of specialization as embodied in this Act;

h) Look into the conditions affecting the practice of the electrical engineering profession, adopt measures for the enhancement of the profession and the maintenance of high professional, technical, and ethical standards and conduct ocular inspection of places where registrants practice their profession, such as, but not limited to: electric plants, substations, *switching stations, industrial plants or factories, commercial establishments,* airports, seaports, institutional buildings, watercrafts, electric locomotives, engineering offices, Office of the Building Officials (OBO), repair shops, electrical projects undergoing construction and similar places to determine and enforce compliance with this Act. The Board shall authorize the duly integrated and accredited electrical engineering association to render assistance in this function;

i) Promulgate rules and regulations including a code of ethics, administrative policies, orders and issuances to carry out the provisions of this Act;

j) Investigate violations of the Act and the rules and regulations, code of ethics, administrative policies, orders and issuances promulgated by the Board. The rules on administrative investigation promulgated by the PRC shall govern in such investigation;

k) Issue *subpoena* or *subpoena duces tecum,* to secure the attendance of respondents or witnesses or the production of documents at and relative to the investigation conducted by the Board;

l) Delegate the investigation of the case to the chairperson, a member of the Board or a PRC attorney. If the case concerns strictly the practice of the profession, the investigation shall be presided by the chairman or a member of the Board with the assistance of a PRC attorney;

m) Render decision, order or resolution on preliminary investigation or inquiry, on undocketed cases and on docketed administrative cases against examinees or registrants which shall become final and executory unless appealed with the PRC within fifteen (15) days from receipt of the copy thereof. The decision of the PRC may be appealed to the Court of Appeals in accordance with the procedure provided in the Rules of Court;

n) After due notice and hearing, cancel examination papers and bar any examinee from future examination; refuse or defer his registration; reprimand the registrant with stern warning; suspend him from the practice of his profession; revoke his certificate of registration; delist his name from the roll of professional electrical engineers, registered electrical engineers, registered industrial electricians and registered line electricians for continuous non-payment of annual registration fees and non-compliance with the Continuing Professional Development (CPD) requirements; reinstate or reenroll his name in the said roll, reissue or return his certificate of registration. A decision of suspension, revocation of the certificate of registration, or delisting from the roll by the Board as provided herein, may be appealed initially to the PRC within fifteen (15) days from receipt thereof. The decision of the PRC may be appealed to the Court of Appeals in accordance with the procedure provided in the Rules of Court;

o) Administer oaths in connection with the administration, implementation, or enforcement of this Act;

p) Submit an annual report on the proceedings and accomplishments during the year and on recommendations of the Board to the PRC after the close of each fiscal year;

q) Prosecute or institute criminal action against any violator of the Act or the rules and regulations of the Board;

r) Adopt an official seal;

s) Coordinate with the PRC and the Commission on Higher Education (CHED) in prescribing, amending or revising the courses;

t) Prescribe programs, guidelines and criteria on the CPD program for professional electrical engineers, registered electrical engineers, registered industrial electricians and registered line electricians and renew their professional licenses after compliance with the CPD requirement;

u) Perform such other functions and duties as may be necessary to implement effectively this Act. The policies, resolutions, rules and regulations, orders or decisions issued or promulgated by the Board shall be subject to the review and approval by the PRC; however, the Board's decisions, resolutions or orders which are not interlocutory, rendered in an administrative case, shall be subject to review only if on appeal.

SEC. 6. ***Qualifications of Board Members.*** – Each Board member must, at the time of appointment:

a) Be a natural-born Filipino citizen and a resident of the Philippines for at least ten (10) consecutive years;

b) Be at least forty (40) years of age, of proven integrity with high moral values in his personal as well as his professional conduct;

c) Be a person with no final conviction by the court of an offense involving moral turpitude;

d) Be a holder of the degree of Bachelor of Science in Electrical Engineering (BSEE) from a university, school, college, academy or institute duly constituted, recognized and accredited by the Philippine government;

e) Be a professional electrical engineer for ten (10) years prior to his appointment with a valid certificate of registration and a valid PRC identification card;

f) Have practiced electrical engineering for a period of not less than fifteen (15) years prior to appointment, with a sworn statement as such;

g) Not be an official nor a member of the faculty of, nor have a pecuniary interest in, any university, college, school or institution conferring a bachelor's degree in electrical engineering for at least three (3) years prior to his appointment, and is not connected with a review center or with any group or association where review classes or lectures in preparation for the licensure examinations are offered or conducted at the time of his appointment;

h) Have an expertise in any two (2) or more of the following major electrical engineering fields as:

1. Operation and Maintenance of Power Plant Electrical Systems
2. Operation and Maintenance of Utility Electrical Systems
3. Operation and Maintenance of Industrial Plant Electrical Systems
4. Engineering and Technical Services for Electrical Systems
5. Planning and Designing Electrical Systems
6. Construction and Projects for Electrical Systems
7. Consultancy Services for Power Systems; and

i) Have a record of service with the accredited and recognized electrical engineering association as an officer for a period of at least five (5) years.

SEC. 7. *Term of Office.* – The members of the Board shall hold office for a term of three (3) years from the date of appointment or until their successors shall have been appointed and qualified. They may, however, be reappointed for a second term and shall serve in the Board for a maximum of six (6) years. Each member shall qualify by taking an oath of office before entering upon the performance of his duties.

The Board shall function as a collegial body of three members at any given time. Any vacancies shall be filled immediately from the pool of pre-qualified list of recommendees provided by the Commissioner of the PRC: *Provided,* That vacancy for the Chairmanship of the Board shall be filled in and appointed from among the most senior members of the Board: *Provided, further,* That vacancies in the Board shall be filled by the President of the Philippines from the list of pre-qualified recommendees selected by the Commissioner who were chosen

from the list of nominees submitted by the integrated and accredited association and shall serve for a fresh three-year term of office.

SEC. 8. *Removal of Board Members.* – Any member of the Board may be removed by the President of the Philippines, upon the recommendation of the Commissioner for graft and corruption, neglect of duty, incompetence, malpractice, PRC or tolerance of irregularities in the examinations, or for unprofessional, unethical, or dishonorable conduct such as facilitating examinees to pass the examinations by preparing, training, teaching related board subjects through seminars or sessions among other ignoble acts; after having been given the opportunity to defend himself in a proper administrative investigation.

SEC. 9. *Compensation of Chairman and the Board Members.* – The chairman and members of the Board shall receive a monthly compensation as prescribed under existing laws: *Provided,* That such compensation shall be increased or modified pursuant to the General Appropriations Act of the year: *Provided, further,* That they shall receive other benefits that may be provided for by law.

SEC. 10. *Executive Officer of the Board.* – The Commissioner shall be the executive officer of the Board and shall conduct the examination given by the Board and shall designate any subordinate officer of the PRC to act as secretary and custodian of all records including all examination papers and minutes of the deliberations of the Board.

ARTICLE III

EXAMINATION AND REGISTRATION

SEC. 11. *Examination Required.* – All applicants for registration for the practice of electrical engineering in the Philippines shall be required to pass a technical examination as hereafter provided, except as otherwise specifically allowed under this Act.

SEC. 12. *Registration and License Required.* – A valid certificate of registration and a valid professional identification card from the PRC are required before any person is allowed to practice electrical engineering in the Philippines except as otherwise allowed under this Act.

Certificates of Registration for the practice of electrical engineering shall be of four (4) grades or categories as follows:

a) Professional Electrical Engineer;

b) Registered Electrical Engineer;

c) Registered Industrial Electrician; and

d) Registered Line Electrician.

SEC. 13. *Examination Fees.* – All applications for oral examinations for professional electrical engineer and written examinations for registered electrical engineer, registered industrial electrician and registered line electrician shall be subject to payment of fees prescribed by the PRC: *Provided,* That ninety percent (90%) of the fees is to be treated as a special fund for the programs, projects and activities of the PRC and the remaining ten percent (10%) shall be set aside as a trust fund for the establishment and maintenance of the center for continuing education and research.

SEC. 14. *Registration Fees, License Fees and Fines.* – All applicants for registration and license to practice as professional electrical engineer, registered electrical engineer, registered industrial electrician and registered line electrician, shall be subject to the payment of registration fees, license fees, and fines in case of violation of the pertinent rules and regulations for the amounts prescribed by the Board and approved by the PRC: *Provided,* That fifty percent (50%) from these collections is to be treated as a special fund for programs, projects and activities of the PRC and the other fifty percent (50%) shall be set up in a separate special fund for the supervisory and regulatory functions of the Board.

SEC. 15. *Exemption from Examination.* –

a) Examination shall not be required of foreign electrical engineers, erection, commissioning or guarantee engineers employed as technical consultants by the Philippine government or by private firms, or of foreign electrical installers for the erection and installation of a special project or for any other specialized work, subject to the following conditions:

1. That the abovementioned foreign professionals are legally qualified to practice their profession in their own country in which the requirements and qualifications for obtaining a license or certificate of registration are not lower than those specified in this Act;

2. That the scope of work to be performed by said foreign professionals shall be limited only to the particular work for which they were contracted;

3. That prior to commencing work, the foreign professional shall secure a special permit from the PRC;

4. That said foreign professional shall not engage in private practice on their own account;

5. That for every foreign professional contracted pursuant to this section, one Filipino understudy who is registered under the provisions of this Act shall be employed by the private firm utilizing the services of such foreign professional for at least the duration of the alien expert's tenure with said firm;

6. That the exemption herein granted shall be good only for six (6) months, renewable for another six (6) months at the discretion of the Board; and

7. That the special authorization herein granted shall only cover special projects and does not apply to holding and/or performing line functions in operation and maintenance: *Provided,* That in case the foreign professional ceases to be employed in accordance with this section and engages in an occupation requiring registration as electrical engineer, such professionals have to be registered under the provisions of this Act.

b) Examination and registration shall not be required of foreign electrical engineers from signatory countries under the charters or frameworks of International Integration or Mutual Recognition Arrangements or of any other similar international accords of which the Philippine government is a party of, subject to the following conditions:

1. That such engineers are on valid record in the Registry of recognized international engineers and are bound to the limitations of practice as defined by such Charter or Accord or Mutual Arrangement;

2. That prior to commencing work, the foreign professional shall secure a special permit or authorization from the PRC;

3. That the special authorization herein granted shall be good only for a specific period of time, bound by a specific project, renewable thereafter at the discretion of the Board as approved by the Commissioner;

4. That the practice of such foreign professional shall be subject to the prevailing laws as well as the provisions of this Act, and shall be bound by local codes of professional ethics or conduct in accordance with the provisions as specified in this Act;

5. That the authorization granted to these foreign professionals under the framework mutual accord or agreement shall not be a scope as an independent practice, but in collaboration with the designated local professional engineers subject to the domestic laws and regulations governing the practice of electrical engineering.

SEC. 16. ***Holding of Examinations.*** – Examinations for the practice of electrical engineering in the Philippines should be given twice a year in the City of Manila and other places on dates that the Board may recommend for determination of scheduling. The Board shall schedule the interview or oral examination of every applicant for registration as professional electrical engineer only at the office of the PRC.

To qualified applicants for examination, notice of admission shall be issued not later than ten (10) days prior to the first day of examination.

SEC. 17. ***Qualifications of Applicant for Registration as Professional Electrical Engineer.*** – Any person applying for registration as professional electrical engineer shall establish to the satisfaction of the Board that, on or before the date of registration, the applicant:

a) Is a citizen of the Philippines;

b) Is of good reputation with high moral values;

c) Has not been finally convicted by the court of an offense involving moral turpitude;

d) Is a holder of the degree of Bachelor of Science in Electrical Engineering (BSEE) from a university, school, college, academy or institute duly constituted, recognized and accredited by the Philippine government;

e) Is a registered electrical engineer with certificate of registration and valid professional identification card and with five (5) years or more of active practice beginning from the date of his registration as a registered electrical engineer: *Provided,* That the applicant shows a credible track record and supporting documents of his active practice or experience; and

f) Is a member of good standing of the PRC accredited professional organization for at least five (5) years.

SEC. 18. ***Qualifications of Applicants for Registered Electrical Engineer Examination.*** – Any person applying for admission to the registered electrical engineering examination, as herein provided shall establish to the satisfaction of the Board that, on or before the date of the examination, the applicant:

a) Is a citizen of the Philippines;

b) Is at least twenty-three (23) years of age;

c) Is of good reputation with high moral values;

d) Has not been finally convicted by the court of an offense involving moral turpitude; and

e) Is a holder of the degree of Bachelor of Science in Electrical Engineering (BSEE) from a university, school, college, academy or institute duly constituted, recognized and accredited by the Philippine government.

A person of at least twenty one (21) years old may be permitted to take the registered electrical engineering examination: *Provided,* That the license or certificate of registration shall only be released upon reaching twenty three (23) years of age.

SEC. 19. ***Qualifications of Applicants for Registered Industrial Electrician and Registered Line Electrician Examination.*** – Any person applying for admission to any of the two categories of registered industrial electrician and registered line electrician examinations as herein provided shall establish, to the satisfaction of the Board, that on or before the date of the examination, the applicant:

a) Is a citizen of the Philippines;

b) Is at least twenty-three (23) years of age;

c) Is of good reputation with high moral values;

d) Has not been finally convicted by the court of an offense involving moral turpitude;

e) Is a holder of the degree of Bachelor of Science in Electrical Engineering (BSEE) from a university, school, college, academy or institute duly constituted, recognized and accredited by the Philippine government; and

f) Is a high school graduate and has any of the following technical backgrounds:

1. Completed at least three (3) years of a five-year Bachelor of Science in Electrical Engineering (BSEE) program or a three-year course in electrical engineering technology from an engineering school recognized by the Philippine government and, in addition, has a subsequent specific track record of two (2) year practice in electrical wiring and installation, operation and maintenance of utilization devices and equipment; or

2. Graduated from a two-year electrician's course of instruction from a vocational or trade school recognized by the Philippine government and, in addition, has at least three (3) years of apprenticeship after completion of the course of instruction on electrical installation, operation and maintenance of utilization devices and equipment; or

3. Completed a one-year electrician's course of instruction from a vocational school recognized by the Philippine government and, in addition, has at least

four (4) years of apprenticeship after completion of the course of instruction on electrical installation, operation and maintenance of utilization devices and equipment;

A person who is at least twenty one (21) years old may be permitted to take any of the registered electrician board examinations: *Provided,* That his license or certificate of registration shall only be released upon reaching twenty three (23) years of age.

SEC. 20. *Scope of Examination.* – As a prerequisite for registration as professional electrical engineer, registered electrical engineer, registered industrial electrician and registered line electrician, the applicant shall comply with the following requirements:

a) *Professional Electrical Engineer* – For the purpose of confirming the service record and clarifying the technical report submitted by the applicant for registration as a professional electrical engineer, an oral examination shall be conducted based on the following duly notarized documents to be submitted to the Board:

1. Certified experience record from the date applicant took oath as a registered electrical engineer indicating the inclusive dates, legitimate companies worked for, description of specific responsibilities, significant accomplishments as well as the name and position of immediate supervisors;

2. An itemized list or any other relevant references deemed appropriate by the Board of the specific works experienced on a particular equipment, machines, systems or processes citing background and surrounding facts, lessons learned and the impact to his practice as a professional;

3. Technical Paper covering an evaluation, an analysis, a study or a critical discussion of an electrical engineering project or subject, on one or several technical aspects such as: design, construction, installation, commissioning, testing, operation, maintenance, repair, research and the like. The technical paper shall be supported by engineering principles and data. Published or unpublished scientific paper or treatise on electrical engineering theories and applications may be considered as complying with the requirement;

4. Three (3) certifications signed by three (3) professional electrical engineers to the effect that the experience record submitted by the applicant is factual and that the technical paper submitted was actually prepared by the applicant; and

5. The applicant must obtain passing marks on the experience record and on the technical report in order to qualify for registration as a professional electrical engineer.

b) *Registered Electrical Engineer* – The applicant shall pass a written examination on different subjects or group of subjects as follows:

1. Mathematics including algebra, trigonometry, analytic geometry, differential calculus, integral calculus, differential equations, complex numbers, probability and statistics, advanced engineering mathematics including matrices, power series, Fourier analysis, Laplace transforms, and others. The weight is twenty-five percent (25%).

2. Engineering sciences and allied subjects, including general chemistry, college physics, computer fundamentals and programming, engineering materials, engineering mechanics, fluid mechanics, strength of materials, thermodynamics, electrical system automation, computer applications, electrical engineering law, engineering economics, engineering management, contracts and specifications, code of professional ethics, Philippine Electrical Code and International Standards, and others. The weight is thirty percent (30%).

3. Electrical engineering professional subjects, including electric circuits, electronic theory and circuits, energy conversion, power transmission and distribution, instrumentation and measurement, circuit and line protection, control systems, principles of communication, electrical machines, electrical equipment, components and devices, electric systems, power plant, electronic power equipment and others. The weight is forty five percent (45%).

4. The examination questions on the foregoing subjects shall cover theories and principles, and shall include questions on applications. The number of questions shall be such that the examinations can be finished in three (3) consecutive eight-hour days.

5. The passing general weighted average rating shall be seventy percent (70%) with no grade below sixty percent (60%) in any group of subjects listed above.\

c) *Registered Industrial Electrician* – The applicant shall pass a written examination on the different subjects or group of subjects as follows:

1. Technical Subject: Ohm's Law, direct and alternating current circuits, single phase and three-phase circuits, electrical equipment, machines and apparatuses such as: motors, generators, transformers, wires and cables, fuses, circuit breakers and safety switches; motor controllers as: magnetic starters, reversing starters, star-delta, reduced voltage controllers, soft starters and variable frequency drives; control circuits, and schematic diagrams.

2. Philippine Electrical Code (Part I) and Trade Practice: General requirements for installation of electric wiring and equipment; approved wiring methods, approved types of wiring materials and wiring devices; installation of switchboards and panel boards, installation principles in hazardous locations; methods in creating electrical diagrams and interpretation of diagrams; reading and interpretation of drawing symbols and plans; general knowledge in the provisions of Philippine Electrical Code (Part I), International Electrical Standards and the Electrical Engineering Law.

3. The number of test questions shall be such that the examinations can be finished in one (1) eight-hour day. The relative weights shall be forty percent (40%) for Technical Subjects and forty percent (40%) for Philippine Electrical Code Part I, and 20% for Experience. The passing general average rating shall be seventy percent (70%) with no grade below sixty percent (60%) in any subject.

d) *Registered Line Electrician* – The applicant shall pass a written examination on the different subjects or group of subjects as follows:

1. Technical Subject: Ohm's Law, direct and alternating current circuits, single phase and three-phase circuits, electrical equipment, machines and apparatuses such as: transformers, wires and cables, power fuses, circuit breakers and safety switches; basic transmission and distribution circuits.

2. Philippine Electrical Code (Part II) and Trade Practice: General requirements for the installation of power and distribution transformers and other substation components/equipment; application of different types of standard structures, power lines, line hardwares and devices; principles in banking single phase transformers; installation practices of poles, towers and other structures; principles and practices in operation and maintenance of substation related equipment such as power circuit breakers, switchgears and outdoor power switching equipment; safety practices involving medium, high and extra high voltages.

3. The number of test questions shall be such that the examinations can be finished in one (1) eight-hour day. The relative weights shall be forty percent (40%) for Technical Subjects and forty percent (40%) for Philippine Electrical Code Part II and Trade Practices, and 20% for Experience. The passing general average rating shall be seventy percent (70%) with no grade below sixty percent (60%) in any subject.

e) *Registered Industrial Electrician and Registered Line Electrician* - For the purpose of confirming the apprenticeship service record submitted by the applicant for registration as a registered electrician, the following duly notarized documents shall be submitted to the satisfaction of the Board:

1. Certified experience record from legitimate companies worked for, description of specific responsibilities, significant accomplishments as well as the name and position of immediate supervisors;

2. An itemized list or any other relevant references deemed appropriate by the Board of the specific works experienced on a particular equipment, machines, systems or processes citing background and/or surrounding facts, lessons learned and the impact to his practice as an industrial or line electrician.

3. Two (2) certifications signed by two (2) professional electrical engineers to the effect that the experience record submitted by the applicant is true and factual.

SEC. 21. ***Report of Ratings.*** – The Board of Electrical Engineering shall, within thirty (30) days after the date of completion of the examinations, report the ratings obtained by each candidate to the PRC.

SEC. 22. ***Reexamination of Failed Subjects.*** – An applicant shall be allowed to retake, for four (4) times, only the subject/s in which the applicant has obtained a grade below sixty percent (60%). When the applicant has obtained an average grade of seventy percent (70%) in the subject or subjects repeated, the applicant shall be considered to have passed the licensure examination.

SEC. 23. ***Oath.*** – All successful candidates in the examination shall be required to take a professional oath before the Board or any government official authorized to administer oaths prior to entering upon the practice of professional electrical engineering, registered electrical engineering, registered industrial electrician and registered line electrician.

SEC. 24. ***Issuance of Certificates of Registration and Professional Identifications.*** – The registration of a professional electrical engineer, registered electrical engineer, registered industrial electrician or registered line electrician commences from the date the engineer's name is entered in the roll of registrants or licensees for the profession. Every registrant who has satisfactorily met all the requirements specified in this Act, upon payment of the registration fee, shall be issued a certificate of registration and a professional identification card as a professional electrical engineer, a registered electrical engineer or a registered master electrician that shows the full name of the registrant and with serial number, signed by the Commissioner and by the chairman and members of the Board, stamped with the official seal,

as evidence that the person named therein is entitled to practice the profession with all the rights and privileges appurtenant thereto. The certificate shall remain in full force and effect until withdrawn, suspended, or revoked in accordance with law.

A professional identification card signed by the Commissioner and bearing the registration number and date of issuance thereof and the month of expiry or renewability shall likewise be issued to every registrant who has paid the annual registration fees for three (3) consecutive years and has complied with the requirements of the Continuing Professional Development (CPD), unless exempted therefrom. This professional identification card will serve as evidence that the licensee can lawfully practice his profession until the expiration of its validity. Non-renewal of the professional identification card will render the engineer not authorized to practice electrical engineering as prescribed in this Act.

SEC. 25. ***Continuing Professional Development Program (CPD).*** – The CPD guidelines shall be prescribed and promulgated by the Board subject to the approval of the PRC, after consultation with the integrated and accredited electrical engineering associations. The Board shall incorporate in the said guidelines the creation of a CPD council that shall be composed of officers coming from the Board, the PRC, the integrated and accredited electrical associations. It shall be vested with the functions, duties and responsibilities to implement the guidelines and shall have the juridical personality that is distinct and separate from and independent of the Board, the PRC, the integrated and accredited electrical engineering association.

SEC. 26. ***Integration of the Electrical Engineering Professions.*** – The electrical engineering profession shall be integrated into one national organization which shall be recognized by the Board as the one and only integrated and accredited association of professional electrical engineers, registered electrical engineers, registered industrial electrician and registered line electricians. Every professional electrical engineer, registered electrical engineer, registered industrial electrician and registered line electricians upon registration with the Board as such, shall *ipso facto,* become a member of the integrated national organization. Those who have been registered with the Board but are not members of the said organization

at the time of the effectivity of this Act shall be allowed to register as members of the said integrated organization within three (3) years after the effectivity of this Act. Membership in the integrated organization shall not be a bar to membership in other associations of the electrical engineering profession.

The professional electrical engineer, registered electrical engineer, registered industrial electrician and the registered line electrician shall receive the benefits and privileges appurtenant to this listed membership in the duly integrated and accredited electrical engineering association only upon payment of the required membership fees and dues.

SEC. 27. ***Seal of Professional Electrical Engineer.*** – All licensed professional electrical engineers may obtain a seal of a design prescribed by the Board bearing the registrant's name, the certificate number and the legend "Professional Electrical Engineer." Plans, specifications, reports and other professional documents prepared by or executed under the immediate supervision of, and issued by a licensee, shall be stamped on every sheet with said seal when filed with government authorities or when submitted or used professionally: *Provided, however,* That it is unlawful for anyone to stamp or seal any document with said seal after the registrant's name has been delisted from the roster of professional electrical engineers or after the validity of his professional identification card which bear the evidence that he is authorized to practice as mandated in this Act, has expired.

The registrant shall be allowed again to use his seal or stamp in the documents he prepares, signs or issues only after he is reinstated to the practice of his profession and reissued a new professional identification card.

SEC. 28. ***Indication of Registration or Professional License Number.*** – The professional electrical engineer, registered electrical engineer, registered industrial electrician and registered line electrician shall be required to indicate the registration and professional license number, the date registered, and the date of its expiry in the documents the engineer signs, uses or issues in connection with the practice of profession.

SEC. 29. ***Refusal to Issue Certificates.*** – The Board of Electrical Engineering shall not

issue a certificate of registration to any person convicted by the court of any criminal offense involving moral turpitude or to any person guilty of immoral or dishonorable conduct or to any person of unsound mind. In the event of refusal to issue certificates for any reason, the Board shall give the applicant a written statement setting forth the reasons for such action, which statement shall be incorporated in the records of the Board.

After no less than a year from the finality of the Board's decision, the Board, out of equity and justice, may recommend to the PRC the issuance of the certificate of registration to the applicant.

SEC. 30. ***Revocation of Certificates of Registration and Suspension from the Practice of the Profession.*** – The Board shall have the power, upon proper notice and hearing, to revoke any certificate of registration of any registrant, to suspend the registrant from the practice of profession or to reprimand the registrant for any cause specified in the preceding section, or for the use of, perpetration of any fraud or deceit in obtaining a certificate of registration, or for gross negligence or incompetence or for unprofessional or dishonorable conduct; for violation of this Act, the rules and regulations and other policies of the Board and the Code of Professional Ethics.

It shall be sufficient ground for the revocation of a certificate issued to a person under this Act, and suspension from the practice of profession for unprofessional or dishonorable conduct, if:

a) Being a professional electrical engineer, the registrant has signed and affixed the registrants' seal on any plan, design, technical report, valuation, estimate, specification or other similar document or work not prepared by him or not executed under his immediate supervision;

b) The registrant has represented himself as having taken charge of or supervised: any electrical construction or installation; operation, tending and maintenance of any electric plant; manufacture or repair of electrical equipment, teaching of electrical engineering subjects; sale or distribution of any electric supply or utilization equipment requiring engineering

calculations or application of engineering principles and data, without actually having done so.

The decision of the Board shall be final and executory unless it is appealed by the respondent to the PRC within fifteen (15) days from the receipt of such decision. The decision of the Board or PRC is appealable by the respondent to the Court of Appeals in accordance with the procedure provided under the Rules of Court.

Any person, firm, association or corporation may file charges in accordance with the provisions of this section against any licensee, or the Board may, on its own initiative *(motu proprio)* investigate and take cognizance of acts and practices constituting cause for suspension or revocation of the certificate of registration by proper resolution or order, such charges shall be in writing and shall be sworn to by the person making them and shall be filed with the Board.

The rules and regulations of the PRC on administrative investigation shall govern the procedure and conduct of administrative investigation before the Board.

The respondent shall have the right to a speedy and public hearing and to confront and cross-examine witnesses against him.

SEC. 31. ***Re-issuance of Revoked Certificates and Replacement of Lost Certificates.*** - Subject to the approval of the PRC, the Board may, after the expiration of one (1) year from the date of revocation of a certificate, for reasons it may deem sufficient, entertain an application for a new certificate in the same manner as application for an original one. It may exempt the applicant from the necessity of undergoing an examination.

A new certificate of registration to replace any certificate that has been lost, destroyed or mutilated may be issued, subject to the rules of the Board.

ARTICLE IV
SUNDRY PROVISIONS RELATIVE TO THE PRACTICE OF THE ELECTRICAL ENGINEERING PROFESSION

SEC. 32. ***Field of Practice.*** – The field of practice for Professional Electrical Engineers, Registered Electrical Engineers, Registered Industrial Electricians and Registered Line Electricians shall be as follows:

a) The Professional Electrical Engineer's field covers the practice of the electrical engineering profession in its full scope without limits as to voltage levels or MVA capacities to include the sole authority to design electrical systems, provided that such designs, plans and specifications related therein shall bear his signature and seal as author of official documents appurtenant thereto *the responsibilities and accountabilities, as defined in this* Act.

Further, that the Professional Electrical Engineer-of-Record with the Office of the Building Official and Author of Electrical Documents such as designs, plans, specifications and all others to include the supervision over an electrical installation issued bearing his seal and signature shall have full civil liability over these said documents for a period of fifteen (15) years; unless his responsibility superseded by another Professional Electrical Engineer under the new employ of the establishment owner or management.

Further, that a professional electrical engineer shall be eligible for positions that require a master degree holder in a government or private institution, including teaching professional subjects in electrical engineering course whether in public or private schools.

b) Subject to the limitations as defined in this Act, a Registered Electrical Engineer's field of practice includes the taking charge and supervision of projects execution and installation works; operation and maintenance of electrical systems in power plants, industrial plants, commercial buildings or complexes, watercrafts, electric locomotives, and other electric systems; to include manufacture and repair of electrical equipment and machines, switchboards, transformers, generators, motors, electrical apparatuses; teaching of electrical engineering subjects and allied sciences; and the sale and distribution of electrical equipment requiring engineering calculations or application of engineering data.

Further, that the Registered Electrical Engineer-of-Record with the Office of the Building Official on documents issued bearing his name and signature over the supervision of an electrical installation shall have full civil liability over these said installations for a period of fifteen (15) years; unless his responsibility is superseded by another Registered Electrical Engineer under new employ of the establishment owner or management.

c) Subject to the limitations as defined by this Act, a Registered Industrial Electrician's field of practice includes the installation, erection, wiring, operation, maintenance and repair of electrical machinery, equipment and devices in an electric system of residential, institutional, commercial and industrial plants, in power plants, industrial substations, watercrafts, electric locomotives, and the like: *Provided,* That if the scope of work, or the machinery, equipment or the electrical system involved is rated in excess of seven hundred fifty kilovolt-amperes (750 kVA), or in excess of six hundred volts (600 V), the work shall be under the supervision of a professional electrical engineer or a registered electrical engineer.

d) Subject to the limitations as defined by this Act, a Registered Line Electrician's field of practice covers the installation of transmission, distribution and substation system equipment; erection and installation of electric poles, towers and other related structures, installation of power lines, power switching equipment, line hardwares and devices; banking of single phase transformers; to include but not limited to operation, maintenance and repair thereat.

Provided, That if the scope of work, or the machinery, equipment or the electrical system involved is rated in excess of seven hundred fifty kilovolt-amperes (750 kVA), or in excess of six hundred volts (600 V), the work shall be under the supervision of a professional electrical engineer or a registered electrical engineer.

SEC. 33. *Prohibitions in the Practice of Electrical Engineering.* – It shall be unlawful for any person to:

a) Practice or offer to practice electrical engineering in the Philippines without having previously obtained a certificate of registration, professional license and a valid ID issued by the PRC qualifying him as an Authorized Electrical Engineering Practitioner as defined in this Act, except as provided for in Sections 15 and 16 hereof;

b) Use, or attempt to use as his own, any certificate of registration or the seal of another;

c) Give false or forged evidence of any kind to the Board of Electrical Engineering or to any member thereof in obtaining a Certificate of Registration or Professional License;

d) Falsely impersonate any registrant of like or different name;

e) Attempt to use a revoked or suspended Certificate of Registration or an expired professional identification card;

f) Use, in connection with the registrant's name or otherwise assume, use or advertise any title or description tending to convey the impression that he is a Professional Electrical Engineer, Registered Electrical Engineer, Registered Industrial Electrician or Registered Line Electrician without holding a valid Certificate of Registration and a valid PRC identification card;

g) Sign a document involving electrical design, plan, technical specification, valuation and the like on behalf of a professional electrical engineer;

h) Take responsible charge or supervise the preparation of plans, designs, investigations, valuation, technical reports, specifications, project studies, estimates or consultancy services or to be in the performance of other electrical engineering services unless he is a duly authorized Professional Electrical Engineering Practitioner as defined in this Act;

i) Make offers, proposals, quotations, or enter or sign into a contract to render Professional Design Services, installation works, execution of projects, maintenance services or for the supply or fabrication of electrical equipment, and other electrical services unless he is an authorized Professional Electrical Engineer as defined in this Act: *Provided, however,* That if the electrical work or project does not involve professional design services, signing and sealing of electrical plans and does not exceed 5,000 kVA and 25,000 volts, the Authorized Registered Electrical Engineer may enter into a contract for installation works, project execution or maintenance scope;

j) Make use of electrical plans, designs, specifications, drawings and electrical documents relative to the construction of a building or of any other purposes without bearing

the seal and signature of a Professional Electrical Engineer duly authorized to practice electrical engineering under this Act;

k) To duplicate or to make copies without the expressed written consent of the author of an electrical document for use in the repetition of and for other projects or buildings, whether executed partly or in whole;

l) Take direct charge or responsible supervision of the construction, erection, installation, alteration, testing, commissioning, operation, tending, and maintenance of any electrical system, equipment, machinery or process; or the performance of electrical engineering services in connection with the manufacture, sale, supply, distribution, application of electrical equipment and systems or of any electrical works for projects, either for himself or for others, unless he is a duly authorized Electrical Engineering Practitioner as defined in this Act;

m) Order or otherwise cause the fabrication, manufacture, construction, erection, installation or alteration of any electrical equipment, machinery or process for any electrical works, projects, or plants, unless the designs, plans, layouts or specifications have been prepared by or under the direct responsible charge of an authorized electrical engineering practitioner, and duly signed and sealed by a Professional Electrical Engineer;

n) Teach basic electrical engineering subjects and allied sciences unless the person is duly Registered Electrical Engineer as defined by this Act; and

o) Teach professional subjects in electrical engineering course unless the person is an Authorized Professional Electrical Engineering Practitioner, a Masters or Doctorate Degree holder related to electrical engineering who is authorized to practice electrical engineering under this Act or a Registered Electrical Engineer.

SEC. 34. ***Prohibitions Relative to the Practice of Electrical Engineering.*** **–**

a) It shall be unlawful for any local government unit or agency charged with the enforcement of laws, ordinances or regulations on public safety relating to the construction, inspection and approval of electrical permits for buildings, or for any other purposes unless,

same office or agency has in its employ a complement of permanent and regular Authorized Electrical Engineering practitioners assigned in any Electrical Section or Division of said offices;

Further, That these Authorized Electrical Engineering Practitioners under the employ of these government offices shall be Certified Electrical System Inspectors, and Certified Electrical Plans Examiners with official conferment by the Board of Electrical Engineering in consultation with the PRC accredited professional organization after having passed the examinations and other qualification requirements for specialization as recognized under Section 5 (g) of this Act.

b) It shall be unlawful and conflict of interest as an entity for the Grid Operator, and any Distribution Utilities (DU's) that has a franchise to operate an electric distribution system to render, make offers, proposals, or enter into a contract to provide electrical engineering services for any private persons, companies, entities, clients or projects;

c) It shall be unlawful for any owner-employer or management of power plant, industrial or commercial establishment, watercraft, seaport, airport, whether public or privately-owned, including but not limited to any government-owned and controlled corporation, electrical grid operator, distribution utility and other related entities to operate business or for any other purpose unless, the entity has in its employ the complement of permanent and regular Authorized Electrical Engineering Practitioners as defined by Sections 36, 37, 38, 39, 40, 41, 42, and 43 of this Act;

d) It shall be unlawful for any owner-employer or management of power plant, industrial or commercial establishment, watercraft, seaport, airport, whether public or privately-owned, and other related entities operating businesses who have in its employ Professional Electrical Engineers for operation and maintenance management purposes under the scopes of Sections 36, 37, 38, 39, 40, 41, 42 and 43 of this Act, to have these professional electrical engineers affix their signatures and seals on company plans, designs and documents carrying civil liabilities for fifteen years unless he is compensated separately;

e) It shall be jointly unlawful for any electrical contractor and owner of buildings, edifices, industrial plants, commercial establishments, or any electrical works or projects under

construction to proceed the implementation of said construction unless, the project has in its employ complement of authorized electrical engineering practitioners as defined by this Act;

f) It shall be unlawful for any Electrical Manufacturing Plant to fabricate, manufacture and market electrical products of dubious quality for and in the interest of public use, and where safety risks to lives and properties are involved; unless such products are certified to be safe and fit for use by a government approving agency or by government accredited testing laboratories: *Provided, further,* That it is unlawful for any vendor, store or commercial establishments to sell, market and endorse electrical products of dubious origin, fake products, products of questionable and/or substandard quality unless, such products are stamped approved by a government approving bureau or by government accredited testing laboratories or by Philippine recognized international standardization body.

SEC. 35. ***Minimum Personnel Required for Industrial and Commercial Complexes.*** **–** Except as otherwise provided in this Act, every building or commercial complex, industrial plant, factory, manufacturing plant in an industrial complex or any electrical system or process in operation, shall have not less than the following complement of authorized electrical engineering practitioners:

a) For capacities of 100 kVA up to 300 kVA – one (1) resident Registered Industrial Electrician or one (1) Registered Electrical Engineer as retaining authorized electrical practitioner responsible and civilly liable as to the integrity and safety of the electrical system to include any changes, alteration, addition, subtraction of any parts of the electrical system thereof;

b) For capacities above 300 kVA up to 750 kVA – one (1) resident Registered Industrial Electrician or one (1) resident Registered Electrical Engineer:

Provided, That every factory, building or commercial complex in this category operating in more than one shift in every twenty-four hours, shall have at least one (1) Registered Industrial Electrician per shift and one (1) Registered Industrial Electrician or one (1) Registered Electrical Engineer as Head whose scope of responsibility includes operation and maintenance;

c) For capacities above 750 kVA up to 5,000 kVA – One (1) resident Registered Industrial Electrician and one (1) resident Registered Electrical Engineer or Professional Electrical Engineer:

Provided, That every factory, building or commercial complex in this category operating in more than one shift every twenty-four (24) hours shall have at least one (1) Registered Industrial Electricians per shift and one (1) Registered Electrical Engineer or one (1) Professional Electrical Engineer in-Charge as Managing Electrical Engineer whose scope of responsibility includes over-all operation and maintenance;

d) For capacities above 5,000 kVA to 20,000 kVA – two (2) Registered Industrial Electricians, one (1) Registered Electrical Engineer and one (1) Professional Electrical Engineer as resident complement:

Provided, That every factory, building or commercial complex in this category operating in more than one shift every twenty-four (24) hours shall have at least two (2) Registered Industrial Electricians, one (1) Registered Electrical Engineer per shift and one (1) Professional Electrical Engineer as Managing Electrical Engineer whose scope of responsibility includes over-all operation and maintenance;

e) For capacities above 20,000 kVA to 60,000 kVA – three (3) Registered Industrial Electricians, two (2) Registered Electrical Engineers and one (1) Professional Electrical Engineer, as resident complement:

Provided, That every factory, building or commercial complex in this category operating in more than one shift every twenty-four (24) hours shall have at least three (3) Registered Industrial Electricians, two (2) Registered Electrical Engineers per shift and one (1) Professional Electrical Engineer as Managing Electrical Engineer whose scope of responsibility includes over-all operation and maintenance; and

f) For capacities above 60,000 kVA – five (5) Registered Industrial Electricians, three (3) Registered Electrical Engineers and one (1) Professional Electrical Engineer, as resident complement:

Provided, That every factory, building or commercial complex in this category operating in more than one shift every twenty-four (24) hours shall have at least five (5) Registered Industrial Electricians, three (3) Registered Electrical Engineers per shift and one (1) Professional Electrical Engineer as Managing Electrical Engineer whose scope of responsibility includes over-all operation and maintenance.

SEC. 36. ***Minimum Personnel Required for Electric Power Plants.*** – Except as otherwise provided in this Act, any Electric Power Plant in operation shall have not less than the following complement of resident authorized electrical engineering practitioners:

a) For every Power Plant capacities of up to 20,000 kVA in this category operating in more than one shift every twenty-four (24) hours, at least one (1) Registered Industrial Electrician, one (1) Registered Electrical Engineer per shift and one (1) Professional Electrical Engineer, as Head or Managing Electrical Engineer whose scope of responsibility includes over-all operation and maintenance;

b) For Power Plant capacities of above 20,000 kVA up to 60,000 kVA in this category operating in more than one shift every twenty-four (24) hours, at least two (2) Registered Industrial Electricians, one (1) Registered Electrical Engineer per shift, and one (1) Professional Electrical Engineer, as Head or Managing Electrical Engineer whose scope of responsibility includes over-all operation and maintenance;

c) For Power Plant capacities above 60,000 kVA up to 200,000 kVA in this category operating in more than one shift every twenty-four (24) hours, at least three (3) Registered Industrial Electricians, two (2) Registered Electrical Engineers, one (1) Professional Electrical Engineer as Head of Shift Operations per shift and one (1) Professional Electrical Engineer as Managing Electrical Engineer whose scope of responsibility includes over-all operation and maintenance; and

d) For Power Plant capacities above 200,000 kVA in this category operating in more than one shift every twenty-four (24) hours, at least six (6) Registered Industrial Electricians, three (3) Registered Electrical Engineers, one (1) Professional Electrical Engineer as Head of

Shift Operations per shift and one (1) Professional Electrical Engineer as Managing Electrical Engineer whose scope of responsibility includes over-all operation and maintenance.

SEC. 37. ***Minimum Personnel Required for Power Substation of Grid and Distribution Utilities.*** – Except as otherwise provided in this Act, Power Substations of Grid and Distribution Utilities shall have not less than the following complement of resident authorized electrical engineering practitioners:

a) For single or cluster capacities of Manned Substations of Grid or Distribution Utilities (DU's) up to 75 MVA in specific inclusive area or location:

1) One (1) Registered Line Electrician;
2) One (1) Registered Electrical Engineer per shift and ;
3) One (1) Professional Electrical Engineer as Head or Managing Electrical Engineer whose scope of responsibility includes over-all operation and maintenance;

b) For single or cluster capacities of Manned Substations of Grid or Distribution Utilities (DU's) above 75 MVA up to 200 MVA in an inclusive area or location:

1) Two (2) Registered Line Electrician;
2) one (1) Registered Electrical Engineer per shift; and
3) One (1) Professional Electrical Engineer as Head or Managing Electrical Engineer whose scope of responsibility includes over-all operation and maintenance.

c) For single or cluster capacities of Manned Substations of Grid or Distribution Utilities (DU's) above 200 MVA in an inclusive area or location in this category:

1) Three (3) Registered Line Electricians;
2) Two (2) Registered Electrical Engineers per shift;
3) One (1) Professional Electrical Engineer as Head of Shift Operations;and

4) One (1) Professional Electrical Engineer as Managing Electrical Engineer whose scope of responsibility includes over-all operation and maintenance.

SEC. 38. ***Minimum Personnel Required for Grid System Operation.*** – Except as otherwise provided in this Act, all resident authorized electrical practitioners in Grid System Operations shall have minimum requirements of at least Registered Electrical Engineers or Professional Electrical Engineers during shift operations and one Professional Electrical Engineer as Head or Managing Electrical Engineer for every department, division or section, as the case may be.

Further, that additional qualified personnel shall be employed to ensure safe operation and safeguard public welfare, commensurate to the size and complexity of operation.

SEC. 39. ***Minimum Personnel Required for Distribution System Operation.*** – Except as otherwise provided in this Act, all resident electrical practitioners in Distribution System Operations shall have minimum requirements of at least Registered Electrical Engineers or Professional Electrical Engineers during shift operations, and one Professional Electrical Engineer as Head or Managing Electrical Engineer for every department, division or section as the case may be.

Further, that additional qualified personnel shall be employed to ensure safe operation and safeguard public welfare, commensurate to the size and complexity of operation.

SEC. 40. ***Minimum Personnel Required in Electrical Construction Works or Projects.*** – For electrical works or projects under construction the installation, erection, wiring, in an electric system in residential, institutional, commercial and industrial buildings, power plants, substations, shipbuilding and other electrical projects shall have the following complement of authorized electrical engineering practitioners:

a) For electrical works or projects of 100 kVA up to 750 kVA capacity: One (1) Registered Industrial Electrician as Project Electrician-In-Charge, and one (1) Registered

Electrical Engineer as Project Engineer-In-Charge, and one (1) Professional Electrical Engineer as Project Manager or Consultant.

b) For electrical works or projects of over 750 kVA up to 5,000 kVA capacity: Two (2) Registered Industrial Electricians as Project Electricians-In-Charge, and one (1) Registered Electrical Engineer as Project Engineer-In-Charge, and one (1) Professional Electrical Engineer as Project Manager or Consultant.

c) For electrical works or projects under construction of over 5,000 kVA capacity: Three (3) Registered Industrial Electricians as Project Electricians-In-Charge; and two (2) Registered Electrical Engineers as Project Engineers-In-Charge; and one (1) Professional Electrical Engineer as Project Manager; and one (1) Professional Electrical Engineer as Consultant.

SEC. 41. ***Minimum Personnel Required for an Electrical Equipment Manufacturing Plant.*** **–**

a) The minimum personnel requirement for this type of plant shall be covered under Section 35 of this Act;

b) *Provided, however,* That full-time professional electrical engineers shall be mandatory for the designing section of the plant overseeing, supervising and ensuring over the design of special equipment as transformers, motors, switchgears, switchboards, control-gears, motor control centers, power panels and panelboards, and the like.

SEC. 42. ***Minimum Personnel Required in Watercrafts and Electric Locomotives.*** **–** Watercrafts or electric locomotives operating with installed generating capacity up to the maximum size and voltage available for these units - shall have the following complement of authorized electrical engineering practitioners:

a) For capacities up to 750 kVA with voltages not exceeding 600 volts – one (1) Registered Industrial Electrician or one (1) Registered Electrical Engineer;

b) For capacities above 750 kVA up to 5,000 kVA – one (1) Registered Industrial Electrician and one (1) Registered Electrical Engineer or Professional Electrical Engineer;

c) For capacities above 5,000 kVA – two (2) Registered Industrial Electricians and one (1) Registered Electrical Engineer and one (1) Professional Electrical Engineer as Head or Managing Electrical Engineer.

SEC. 43. *Other Provisions for Complement of Electrical Practitioners.* –

a) The case of clusters of buildings, factories or facilities, Grid or Distribution Utilities substations or switching stations where physical presence and supervision of the minimum personnel required is impossible for reasons of geography, distance or density of electrical equipment, additional qualified personnel shall be employed to ensure safe operation and maintenance of the electrical system and to safeguard public welfare, lives and properties;

b) *Provided, further,* That in the case of operation, maintenance or construction projects:

1) A Registered Industrial or Line Electrician can technically supervise the activities of fellow registered industrial electricians, registered line electricians or non-licensed personnel but assumes the full responsibilities and accountabilities as to the scope and limitations mandated in this Act,

2) A Registered Electrical Engineer can technically supervise fellow Registered Electrical Engineers, Registered Industrial Electricians, Registered Line Electricians or non-licensed personnel but assumes the full responsibilities and accountabilities as to the scope and limitations mandated in this Act,

3) A Professional Electrical Engineer can technically supervise fellow Professional Electrical Engineers, Registered Electrical Engineers, Registered Industrial Electricians, Registered Line Electricians or non-licensed personnel but assumes the full responsibilities and accountabilities as to the scope and limitations mandated in this Act.

c) This section on required minimum personnel, shall not apply to any installation which has a connected capacity of less than 100 kVA and employs voltages of not more than

two hundred fifty volts (250 V) and for installations that do not require resident personnel for their safe operation: *Provided, however,* That for every change, alteration, revision, addition, and 'as-built plans' of any parts of the electrical system, the plans and designs shall bear the signature and seal of an authorized professional electrical engineer: *Provided, further,* That a yearly assessment will be conducted and certified to be in a safe operating condition by a professional electrical engineer, a registered electrical engineer, a registered master industrial or line electrician.

SEC. 44. *Preparation of Plans, Supervision of Projects and Application of the Philippine Electrical Code.* – It shall be unlawful for any person not authorized under this Act to prepare plans, designs, valuations or specifications for any electrical wiring, equipment or system; and no installation thereof shall be undertaken unless the plans, designs, valuations and specifications have been prepared by or under the responsible charge of, and signed and sealed by a professional electrical engineer; and a construction permit for the execution thereof is first secured; and unless the work is done in accordance with the Philippine Electrical Code and other Philippine-Recognized International Standards and is executed under the responsible charge or supervision of a professional electrical engineer, a registered electrical engineer, or a registered industrial electrician, or a registered line electrician as the case may be, and the routinary fiscal, ministerial and technical requirements of the government agency, if any, exercising jurisdiction over the particular installation have been complied with.

SEC. 45. *Practice Not Allowed for Firms and Corporations.* – The practice of electrical engineering is a professional service admission to which is based on individual and personal qualifications. Hence, no firm or corporation shall be registered or licensed as such for the practice of electrical engineering.

However, persons properly authorized in this Act as Electrical Engineering Practitioners may, among themselves, form a partnership or corporation and collectively render electrical engineering service. Individual members of such partnerships or corporations responsible for

specific projects or activities shall be responsible for their own respective acts as practicing electrical engineers as provided in this Act.

Provided, That the Board of Directors or Officers of such partnership or corporation shall be consisting of at least 60% authorized electrical engineering practitioners of any grade and shall have at least one (1) Professional Electrical Engineer among the firm's officers as active and full-time managing partner or director of the firm.

Provided, further, That for multi-disciplinary corporations, wherein part of the scope is electrical engineering, this Act requires at least one (1) Authorized Professional Electrical Engineer sitting as director and as active and full-time managing partner of the firm responsible for the over-all electrical engineering scope.

Provided, finally, That in cases involving professional liability of an electrical engineer employed within and representing the firm in present or past jobs, and whether still or no longer working within the firm; the firm and the engineer involved are jointly and severally liable of its financial obligations whether in litigation expenses or financial damages arising from business transactions of the firm.

SEC. 46. *Posting of Certificates.* – The owner, manager or the person in charge of an electric plant, industrial plant or factory, electrical fabrication or manufacturing plant, commercial establishment, institutional building, or structure building under construction, watercraft, or electric locomotive and others shall post or cause to be posted in a conspicuous place within such plant, establishment, buildings, and construction areas the certificate of registration, valid PRC ID and Professional Tax Receipt (PTR) of the electrical engineering practitioners employed in such plant, establishment, building and construction area in a frame protected by transparent glass or equivalent suited for the purpose.

SEC. 47. *Certificate of Specialty.* – The Board, subject to the approval of the PRC, shall issue Certificates of Specialty to Professional Electrical Engineers who have been screened, selected and recommended by the accredited integrated electrical engineering association;

having demonstrated their training, competence, specialized knowledge and outstanding experience in specific fields of expertise as follows:

a) Power Plant

b) System Protection

c) Industrial Systems Design

d) Building Design

e) Transmission and Distribution System

f) Power Systems

g) System Commissioning

h) Electric Locomotive Mass Transport System

i) Electrical Equipment Manufacturing

The Board shall issue a Certificate of Specialty, subject to the approval of the PRC, to Registered Electrical Engineers or Professional Electrical Engineers who have been trained, screened, have passed the written and oral examinations, and who have been declared as 'qualified' by the integrated and PRC-accredited electrical engineering association for the specialty conferment as:

a) Certified Electrical System Inspector; or

b) Certified Electrical Plans Examiner.

The Board shall, subject to the approval of the PRC, and after consultation with the said professional association, prescribe and issue the necessary guidelines for the issuance of these certificates.

SEC. 48. ***Enforcement of the Act by Officers of the Law.*** – It shall be the duty of all constituted officers of the law of the national government, or any provincial, city or municipal government or of any political subdivision thereof to prosecute any person violating the provisions of this Act. The Secretary of Justice or his assistant shall act as legal adviser of the Board and render such legal assistance as may be necessary in carrying out the provisions of this Act.

SEC. 49. *Penalty Clause.* –

a) Any person whether private or public, Filipino or foreigner, who shall violate any of the provisions of this Act shall be guilty of misdemeanor and shall, upon conviction, be sentenced to a fine of not less than Ten thousand pesos (P10,000.00) nor more than Fifty thousand pesos (P50,000.00) or imprisonment for a period not less than six (6) months nor more than five (5) years or both at the discretion of the court.

b) Any person in the roster of licensed electrical engineers of the PRC who shall violate any of the provisions of this Act shall be guilty of misdemeanor and shall upon conviction, be removed from the Registry, the licensed revoked and shall be sentenced to a fine of not less than Ten thousand pesos (P10,000.00) nor more than Fifty thousand pesos (P50,000.00) or imprisonment for a period not less than six (6) months nor more than five (5) years or both at the discretion of the court.

c) Any head of a government agency or officer of a private firm or institution who violates Sections 35, 36, 37, 38, 39, 40, 41, 42, and 43, of this Act shall be punished by imprisonment of not less than six (6) months and one (1) day nor more than six (6) years, or a fine of not less than Fifty thousand pesos (P50,000.00) nor more than Five hundred thousand pesos (P500,000.00) or both at the discretion of the court.

d) The PRC through the Board, shall impose a maximum fine of not more than five hundred thousand Pesos (P 500,000.00) annually to any government office or agency, private company, establishment, operator who deliberately and repetitively violates the provisions of this Act until such time that the Act have been complied with: *Provided,* That for purposes of the application of the fines, the Board shall prepare a system of penalties based on the violator's ability to pay, degree of willfulness, degree of negligence, history of non-compliance and degree of recalcitrance: *Provided, further,* That in the case of negligence with mitigating circumstances, the first time offender, to the discretion of the Board, may only be imposed a stern warning.

ARTICLE V

TRANSITORY PROVISIONS

SEC. 50. ***Terms of Office of Board Members.*** – Upon approval of this Act, the incumbent chairperson and two (2) members of the Board shall continue to serve until their terms of office expire or until their replacements have been appointed by the President of the Republic.

SEC. 51. ***Transitory Provision for Complement of Electrical Engineers.*** – The Board may allow retainership under rules and limitations it may be establish as a response to any shortage of Authorized Electrical Practitioners in compliance to the provisions on the required minimum engineering complement for establishments under this Act, until such proper time, at the discretion of the Board, that this transitory provision may be lifted.

SEC. 52. ***Deletion from the Rosters of Electrical Engineers under the Old Law.*** – Associate electrical engineers, assistant electrical engineers and master electricians with certificates of registration under Republic Act No. 184 who have not renewed their certificates of registration under Republic Act No. 7920 shall be deleted from the roster of electrical engineers and shall be barred from practicing any form of electrical engineering.

SEC. 53. ***Transitory Provision from Registered Master Electricians to Registered Industrial Electricians and Registered Line Electricians.*** – Registered Master Electricians with certificates of registration under Republic Act No. 7920 shall within five years from the approval of this Act, convert their license with the PRC from Registered Master Electrician into either Registered Industrial Electrician or Registered Line Electrician, depending on the established record of experience.

ARTICLE VI

FINAL PROVISIONS

SEC. 54. ***Repealing Clause.*** – Republic Act No. 7920 is hereby repealed. All other laws, decrees, executive orders, proclamations, rules and regulations, or parts thereof inconsistent with the provisions of this Act are hereby amended, repealed or modified accordingly.

SEC. 55. *Separability Clause.* – If any provision or part of this Act is declared invalid or unconstitutional, the remaining parts or provisions not affected shall remain in full force and effect.

SEC. 56. *Effectivity Clause.* – This Act shall take effect fifteen (15) days after its publication in the *Official Gazette* or in a national newspaper of general circulation.

Approved,