

SEVENTEENTH CONGRESS OF THE REPUBLIC
OF THE PHILIPPINES
First Regular Session

HOUSE OF REPRESENTATIVES

RECEIVED

DATE: 18 JUL 2016

TIME: 12:10 PM

BY:

REGISTRATION UNIT
BILLS AND INDEX SERVICE

HOUSE OF REPRESENTATIVES

H.B. NO. 1622

Introduced by: Cong. Eugene Michael B. de Vera
ABS Party-list

AN ACT

**STRENGTHENING THE PRACTICE OF ELECTRICAL ENGINEERING IN THE
PHILIPPINES AND INSTITUTING FOR THE PURPOSE HIGHER STANDARDS
OF REGULATION IN THE LICENSING AND REGISTRATION OF ELECTRICAL
ENGINEERING PRACTITIONERS**

EXPLANATORY NOTE

For almost twenty years and up to present, RA 7920 entitled AN ACT PROVIDING FOR A MORE RESPONSIVE AND COMPREHENSIVE REGULATION FOR THE PRACTICE, LICENSING, AND REGISTRATION OF ELECTRICAL ENGINEERS AND ELECTRICIANS has been Electrical Engineer's (EE) regulatory law. The salient point that RA 7920 brought was the licensing of electrical engineers limiting only to persons who have completed Bachelor of Science Degree in Electrical Engineering. However, the law, albeit unintentional, depicts a question mark on the issue of 'employability' that is wanting in these licensed electrical engineers.

Underpinning this bill seeking for a mandate of a fresh Electrical Engineering Law with its policy statement, subsequently says:

"The State recognizes the importance of electrical engineers in nation building. Towards this end, the State 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."

From the above guiding principles, the proposed new EE Law is envisioned & driven to address and achieve the following end-results and objectives:

- 1.) A pool of proficient, well-rounded & quality electrical engineers,
- 2.) A professional practice that is outstanding, honorable & globally competitive
- 3.) A profession that is valuable,
- 4.) A profession that seeks continuing growth in competence and development in work life.

Among other provisions of this proposed law, this bill seeks to introduce several new substances, as follows:

- 1.) The proposal manifests more comprehensive definition of terms surrounding the profession. This will help clear the ambiguity of scopes, coverage of practice, specific systems or processes to differentiate other disciplines and to eliminate misinterpretation. It also helps the dignity of the electrical engineering as a profession.
- 2.) Among other provisions in this draft bill, the board examinations shall not only cover theories but also applications. The improvements on the qualifications of the Board of Electrical Engineering and the would-be-licensee professionals. This way, it can help bridge the gap between the academe & the industry.
- 3.) A more purposive characterization on who are “authorized to practice” electrical engineering is defined in this proposal. Passing the board examinations, registration with the PRC as professionals and taking the professional oath are not enough.
- 4.) Also, a more purposive characterization on who are “authorized to teach” in the electrical engineering course.
- 5.) More comprehensive provisions for the practice of foreign professionals, especially for project consultants involved in technology transfer and in the mutual internationalization accords.
- 6.) A wider and more comprehensive field & coverage of the practice of the profession. This will not only help ensure safety to mankind and preservation of properties in the establishments but also enhances and strengthens the employability & dignity of the profession.
- 7.) The imposition of the Philippine Electrical Code and Philippine Recognized International Standards as a measurable bases or references for the quality of designs, the character of implementation of electrical creations and clearer points in the enforcement of in-progress constructions.

These are only a few of the highlights of this measure. The creation of a culture of quality and responsible competence in the performance of electrical engineering shall have the sense of liability and accountability accompanying thereat. For how good is the law without a driving force? For what good is the law without accountability and enforcement?

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



EUGENE MICHAEL B. DE VERA
ABS Party-list

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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 practitioners in nation-building. Towards this end, the State fosters, develops and nurtures a pool of proficient & quality electrical engineering practitioners whose standards of practice shall be outstanding, honorable & 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 profession of the art & science of conceptualizing, planning, designing and creating *Electrical Systems* to include but not limited to the operation and maintenance of equipment & machinery, electrical processes of all types of buildings, commercial complexes, factories or industrial plants, electric plants, electric locomotives, watercrafts; construction and commissioning of electrical projects, manufacturing and

17 distribution of electrical products, teaching electrical subjects; and other related facilities or
18 processes, in accordance with the principles of safety and reliability.

19 **b) Practice of Electrical Engineering** refers to the professional act in responsible
20 character of performing electrical engineering services in the form of:

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

27 *2) Professional Design Service* refers to the preparation of electrical plans,
28 calculations, designs, studies, specifications and estimates for electrical systems as:
29 electric plants, transmission and distribution systems, power substations, electrical
30 equipment & machinery, network system protection, switchboards and switchgears;
31 electrical systems of dwellings or residences, buildings, facilities, industrial plants &
32 factories, industrial parks, commercial complexes, mining operations, airports, seaports,
33 economic zones, watercrafts, electric locomotives, and other related electrical works,
34 processes or projects;

35 *Professional Design Service* encompasses the performance of the processes in the
36 creation or production of:

- 37 (i) schematic or conceptual design phase,
- 38 (ii) design development phase,
- 39 (iii) procurement specifications & tender documents
- 40 (iv) construction planning details,
- 41 (v) consultancy services in actual construction as owner's representative,
42 to include the preparation of preliminary, technical, economic and financial studies of a
43 project; preparation of electrical work specifications, materials and equipment
44 specifications, scopes of work, technical terms of reference, bill of materials, cost
45 estimates, bidding & tender documents; construction and project management, providing
46 responsible direction or management over the construction, erection, expansion,
47 demolition, renovation, remodeling, alteration, restoration of all *electrical systems* as
48 defined in this Act;

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

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

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

63 6) Management, supervision or taking charge of the sale, supply and distribution
64 of electrical equipment including industrial equipment and its control systems,
65 controllers & devices, power electronics, industrial robotics, instrumentation and
66 automation; and other related equipment or components requiring application of
67 electrical engineering data and principles, interpretation of technical specifications of
68 electrical products;

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

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

78 c) *Electrical Practice of Responsible Character* – refers to the maturity, experience,
79 confidence and the accountability over the practitioner's work whether design, execution or
80 implementation of projects or operation and maintenance, as guaranteed safe to lives and the
81 preservation of properties to include the responsibility over the safety and well being of the
82 personnel under the practitioner's supervision.

83 *d) Authorized Electrical Engineering Practitioner* refers to a person professionally and
84 academically qualified, registered and licensed to practice electrical engineering as defined in
85 this Act, with a Certificate of Registration by the Professional Regulatory Board of Electrical
86 Engineering and a valid professional identification card issued by the Professional
87 Regulations Commission as Professional Electrical Engineer, Registered Electrical Engineer
88 or Registered Master Electrician.

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

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

99 *g) Electrical Engineer-In-Charge* refers to the authorized Electrical Engineering
100 Practitioner registered and licensed to practice Electrical Engineering, who is directly
101 responsible of the supervision or taking charge of the operation, tending and maintenance of
102 electric plants, electric power transmission and distribution systems, substations and
103 switching stations, industrial plants and complexes, commercial buildings and complexes,
104 electric locomotives and watercrafts, and other facilities involving electrical systems subject
105 to limitations as defined in this Act;

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

112 *i) Electrical System* refers to a facility or structure or process composing of an
113 arrangement of sets, arrays or assemblage of electrical machinery, equipment, devices;
114 interconnected, interdependent and integrated in combination with each other that are
115 configured to carry out an electrical function or operation such as generating, supplying,

116 transmitting, distributing, conveying, or transforming power in providing or utilizing electric
117 energy services.

118 For purposes of this Act, electrical systems cover the following:

119 (i) Electrical System for Dwellings & Residences – includes service entrance
120 conductors, service equipment, feeders & sub-feeders, distribution panelboards, circuit
121 conductors, grounding conductors, utilization devices, appliances, lighting fixtures,
122 wirings & accessories, branch circuit protection, back-up generating facilities & control
123 system; and other related system components within a dwelling or residence;

124 (ii) Electrical Systems of Buildings & Commercial Complexes – includes the
125 customer-owned and operated primary substations, vaults, power centers or secondary
126 substations, on-site generation facilities, distribution switchgears, switchboards,
127 distribution boards; interconnections with other buildings within a complex; feeders, sub-
128 feeders, system protection, motor control centers, control centers, power factor
129 compensation equipment, metering & sub-metering, grounding systems, lightning
130 protection, indoor & outdoor lighting & illumination; uninterrupted power supplies,
131 programmable logic controllers, building electronic/electrical control systems; electrical
132 processes for: ventilating & air-conditioning systems, personnel conveyance systems,
133 materials conveying systems; power supply, distribution boards, power panels & branch
134 circuits for communication, telecommunications, telephone, fire alarms, building
135 management systems, in-building direct current (DC) systems and other facilities
136 involving electrical processes;

137 (iii) Electrical Systems of Factories & Industrial Complexes – includes the
138 customer-owned and operated primary substations, vaults, secondary substations or
139 power centers, on-site generation facilities, control & data acquisition centers, distribution
140 switchgears, switchboards, distribution centers, control centers, feeders, sub-feeders,
141 system protection, lighting & illumination, electrical sub-systems for ventilating & air-
142 conditioning, personnel conveyance systems, materials handling & conveying systems;
143 interconnections with other buildings or plants within a complex, grounding systems,
144 lightning protection systems; electrical sub-systems for process equipment & machineries
145 to include but not limited to: uninterrupted power supplies, programmable controllers,
146 industrial electronic/electrical control systems, instrumentation & automation systems,
147 power electronics & industrial robotics; distribution boards, power panels, panelboards
148 and branch circuits for communication, telecommunications, telephone, fire alarm, inter-
149 building management systems, and other facilities involving electrical processes;

(iv) Electrical Systems of Power Plants – includes the array or assemblage of power generators and their control systems & protection, take-off substations, power centers, supervisory control & data acquisition centers, distribution switchgears, switchboards, in-plant direct current (DC) systems, power circuit breakers, motors & motor control centers, interconnections with other power plants, or with the grid, short circuit abatement systems, system protection, interconnection to auxiliaries, grounding systems, lightning protection systems; industrial electronics control systems, instrumentation & automation systems, distribution boards, sub-systems for lighting & illumination, ventilating & air-conditioning, materials handling & conveying systems; distribution boards & branch circuits for communication, telephone, fire alarm, building management systems, and other facilities involving electrical systems;

(v) Power Transmission System – refers to an electrical process so arranged, schemed & functioning to carry out the conveyance & delivery of bulk power over short, medium or long spans of distances through a series of structure arrangement of towers or steel poles, with assemblages of high voltage (HV), extra high voltage (EHV) electrical equipment that include but not limited to power substations, switching, or power factor compensating stations; all containing power switches, disconnects, circuit breakers, transformers, regulators, power capacitors, short-circuit current abatement equipment, direct current (DC) systems, switchgears, switchboards, control systems, supervisory, control & data acquisition centers; with power lines installed whether overhead, underground or underwater; in alternating or direct current form, auxiliaries & accessories inter-connected, interdependent and in combination with each other;

(vi) Power Distribution System - refers to an electrical process so arranged, schemed and functioning to carry out delivery of power over short or medium spans of distances near or at the load centers through a series of structure arrangement of steel, concrete or wooden poles, with assemblages of medium (MV) or low voltage (LV) equipment & components that include but not limited to power substations all containing power switches, disconnects, power centers, circuit breakers, power transformers, regulators, power factor compensation equipment, direct current (DC) systems, short-circuit current abatement equipment, control systems, supervisory control & data acquisition centers, feeders, sub-feeders, distribution centers; with power lines whether installed overhead, underground or underwater; auxiliaries & accessories inter-connected, interdependent and in combination with each other:

(vii) Electrical Systems for Watercrafts - includes power generators and their control systems & protection, supervisory control & data acquisition centers, distribution switchgears, switchboards, direct current (DC) systems, power circuit breakers, motors & motor control centers, system protection, interconnection to auxiliaries, grounding systems, lightning protection systems, instrumentation & automation systems, distribution boards, sub-systems for lighting & illumination, ventilating & air-conditioning, electric cranes, materials handling & conveying systems; panelboards & branch circuits for communication, telephone, fire alarm, building management systems, and other facilities involving electrical systems within the watercraft;

(viii) Electrical Systems for Electric Locomotives - includes power generators and their control systems & protection, supervisory control & data acquisition centers, distribution switchgears, switchboards, direct current (DC) systems, power circuit breakers, motors & motor control centers, system protection, interconnection to auxiliaries, grounding systems, lightning protection systems, instrumentation & automation systems, distribution boards, sub-systems for lighting & illumination, ventilating & air-conditioning, electric cranes, materials handling & conveying systems; panelboards & branch circuits for communication, telephone, fire alarm, building management systems, and other facilities involving electrical systems within the electric locomotive;

j) *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 & specifications of equipment, system protection and grounding systems, detailing of the requirements for control systems, protective device discrimination and other related processes in harmony with Philippine-recognized Codes and Standards applied into the design of *Electrical Systems*.

k) 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.

1) Electrical Works or Projects refers to the development of engineering plans, drawings and designs or the actual construction, installation, erection and execution of electrical projects in progress, testing and commissioning to include alteration and expansion of power & electrical systems and other electrical structures.

217 *m) Electrical Equipment or Machinery* includes all power equipment and components
218 such as electric generators, power substations, transmission and distribution system
219 equipment and accessories, control centers, electric drive motors and control systems, power
220 electronics, industrial robotics and automation systems to include industrial programmable
221 logic controllers, as accessories for generators, furnaces, heat exchangers, manufacturing
222 processes, materials handling processes, heating, air-conditioning, ventilating, and
223 refrigeration systems, pollution abatement and environmental control system, pressure
224 vessels, printing machines, electrical equipment of all kinds of mills, mining operations,
225 shops, factories, shipyards, drydocks, electric locomotives and other systems or processes
226 utilizing electrical power whether installed on land, underground, or on board watercrafts;

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

230 *o) Utilization Equipment* refers to power-consuming equipment as motors, heaters,
231 furnaces, light sources and other devices which use electric power for any productive
232 purposes;

233 *p) Electric Power Plant* refers to an industrial facility or establishment for the
234 production or generation of electric power composed of a system of electric generators,
235 ancillary and auxiliary equipment & machines altogether interconnected, interdependent and
236 in combination with each other for the production, conversion or modification of energy
237 derived whether from steam, internal combustion engines, pumping stations, compressed gas,
238 hydraulic, geothermal, dendro-thermal, nuclear, ocean thermal energy, biomass, waste heat,
239 wind, gas, water, solar heat, ocean waves and tides, and other energy sources. An electric
240 power plant is also referred to as *power station, generating station, power plant, electric*
241 *plant, powerhouse or generating plant*;

242 *q) Industrial Plant or Factory or Manufacturing Plant* refers to an industrial building, facility or
243 establishment containing production processing equipment and machines where discrete and
244 continuous goods or products are manufactured to include but not limited to mineral processing
245 plants, machine shops, shipyards, drydocks and other related industries;

246 *r) Industrial Complex* refers to a cluster of several inter-connected industrial plants or factories
247 producing several different goods or products under common ownership, control or general
248 management;

249 *s) Electrical Equipment Manufacturing Plant* refers to an industrial plant engaged in designing,
250 fabrication, manufacturing and production of electrical products as transformers, motors, generator,

251 switchgears, switchboards, control-gears, control panels, power panels, panelboards other related
252 engineered products;

253 *t) Commercial Establishment* refers to a an edifice or building or structure that is used for
254 business or commercial purposes that includes office buildings, hotels, condominiums, restaurants,
255 resorts, entertainment centers, parking buildings, warehouses, retail stores, department stores,
256 specialty shops, shopping malls, markets, supermarkets, theaters, stadiums, convention centers,
257 airports, seaports and the like;

258 *u) Commercial Complex* refers to a cluster of several inter-related commercial establishments for
259 business or commercial use under common ownership or general management;

260 *v) Institutional Buildings* refer to school buildings, libraries, hospitals, churches, religious
261 buildings, museums, cultural centers, government buildings and the like;

262 *w) Capacity of Industrial Plant, Commercial Establishment, Process Work or Project*
263 refers to the rated capacity in Kilovolt-Amperes (kVA) or Megavolt-Amperes (MVA) of
264 electrical works or projects, or industrial or commercial establishments for the purpose of this
265 Act shall be the Total Kilovolt-Ampere (kVA) or Total Megavolt-Ampere (MVA) rating of
266 all generators and transformers *installed to make available the capability to provide certain*
267 *amount of power* for use as electric supply equipment in such works, projects or plants, or
268 establishments whether in operation or not, and without regard to the connected loads
269 requiring power from power sources;

270 *x) Capacity of Electric Power Plant* refers to the aggregate or total rated capacity in
271 Kilovolt-Amperes (kVA) or Megavolt-Amperes (MVA) of all generators within the plant to
272 include the capacities of transformer tie-ups with other power sources that are owned,
273 operated & controlled by the plant which are installed to make available the capability to
274 provide certain amount of power without regard whether in operation or not;

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

280 *z) Grid System Operation and Control* refers to the round-the-clock management,
281 supervision, monitoring, data acquisition and operational control over the processes of power
282 grids, substations, generator control stations and load dispatch centers ensuring real time
283 moment-to-moment power balance, load flow transactions, load scheduling and dispatching
284 in facilitating inter-player transactions, while maintaining the security and stability of the
285 interconnected systems therein;

- 286 *aa) Distribution System Operation and Control* refers to the round-the-clock
287 supervision, data acquisition, monitoring and operational control over the distribution
288 processes of a distribution utility involving manned or unmanned substations and load
289 dispatch centers ensuring moment-to-moment load flow, load scheduling & power delivery;
- 290 *bb) Substation* refers to a room, or a building, or an outdoor structure containing a
291 combination of power switches, disconnects, circuit breakers, power transformers, power
292 rectifiers and inverters, voltage regulators, system protection devices, power factor
293 compensation equipment, short-circuit current abatement equipment, switchgears, control-
294 gears, metering equipment and other related equipment interconnected with each other to
295 alternating or direct current power lines so arranged, schemed and functioning to transform,
296 modify, regulate and/or control the supply of electric energy;
- 297 *cc) System Nominal Voltage or Voltage* is the highest effective potential difference
298 between any two conductors of the circuit concerned expressed in volts. For the purpose of
299 this Act, "System Nominal Voltage" shall be of the following ranges:
300 1) Low Voltage – a voltage level not exceeding 1,000 volts
301 2) Medium Voltage – a voltage level exceeding 1,000 Volts up to 69,000 Volts
302 3) High Voltage – a voltage level exceeding 69,000 Volts up to 230,000 Volts
303 4) Extra High Voltage – a voltage level exceeding 230,000 Volts up to 765,000 Volts
- 304 *dd)* For purposes of this Act, the term, *kVA* or *MVA* refers to the capacity of an
305 electric plant or ratings of supply equipment expressed in kilovolt-amperes or megavolt-
306 amperes. *kVA* or *MVA* is also referred to as the connected load of industrial plants,
307 commercial edifices and other establishments expressed in kilovolt-amperes or megavolt-
308 amperes;
- 309 *ee) kW* or *MW* refers to the capacity of an electric plant or ratings of supply
310 equipment expressed in kilowatts or mega watts. *kW* or *MW* is also referred to as the
311 connected load of industrial plants, commercial edifices, institutional buildings, watercrafts
312 and other establishments expressed in kilowatts or megawatts;
- 313 *ff) Watercraft* refers to any waterborne units which is designed and built to have
314 an electric plant and a distribution system;
- 315 *gg) Electric Locomotive* refers to the power plant and distribution system mounted
316 on wheels as used in rail transportation industry and industrial locomotive operation;
- 317 *hh) Unsafe Installation* refers to all new and existing installations which are in
318 violation or non-compliant with the provisions of the latest edition of the Philippine Electrical
319 Code and other Philippine-accepted International Standards;

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

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

331 *kk) Electrical Plans* refers to the documents illustrating the interpretation of the
332 electrical system as designed, through a structure of symbols, drawings and diagrams that
333 gives a clear description of sizes, ratings, configurations and other relevant identification to
334 every part and components of the system according to the norms set forth by the Philippine
335 Electrical Code and other Philippine recognized International Standards in a form of hard
336 prints used for reference in construction, operation and maintenance;

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

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

348 *mm) Office of the Building Official (OBO)* refers to the office forming part of the
349 local government unit (LGU) but under the administrative control of the appropriate
350 government agency whose primarily role is to oversee the full implementation of the National
351 Building Code and its Revised Implementing Rules and Regulations, to include various
352 Referral Codes and all other relevant laws;

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

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

375 *pp) Distribution Utility* or *DU* refers to an electric cooperative, or a private
376 corporation, or government-owned utility or a local government unit that has a franchise to
377 operate an electric distribution system;

378 *qq) Electric Cooperative or EC* refers to a cooperative or corporation authorized
379 to provide electric services pursuant to Presidential Decree No. 269;

380 *rr) Electrical Firm* refers to a partnership or corporation composed of authorized
381 Electrical Engineering Practitioners duly registered with proper government agencies with
382 business permits as professional services providers and who are authorized to collectively
383 render electrical engineering services;

384 *ss) Continuing Professional Development (CPD)* refers to a sustaining and
385 progressive government -driven learning program or process that maintains, enhances, or
386 increases the knowledge and continuing ability of electrical engineers;

387 *tt) Electrical Practice Record Book* (EPRB) refers to a PRC controlled record
388 book which shall bear all the professional experiences of the practitioner which shall include
389 description of specific responsibilities, significant accomplishments as well as the name and
390 position of immediate mentors and supervisors who shall attest to the entries therein. This
391 shall be made available to those aspiring to become a licensed electrical practitioner.

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, or quasi-judicial powers in carrying out the provisions of this Act. It shall be vested with the following specific powers, functions, duties and responsibilities:

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

406 b) Determine and evaluate the qualifications of the applicants for registration

407 with or without licensure examinations and for special permits;

408 c) Prepare the examination questions in accordance with the Scope of

409 Examinations under this Act; prescribe the syllabi of the subjects and their relative weights

410 for the licensure examinations; formulate or adopt test questions and deposit them in a test

411 question bank; draw the test questions at random through process of computerization;

412 conduct the examination; correct and rate the examination papers manually or through

413 process of computerization; and submit the examination results to the Professional

414 Regulations Commission (PRC) within the period provided for by the rules of the

415 Commission;

416 d) Prescribe, amend or revise the requirements for professional electrical

417 engineers and subjects in the licensure examination for registered electrical engineers,

418 registered industrial electricians and registered line electricians and their relative weights,

419 subject to the approval of the PRC;

420 e) Register successful applicants for professional electrical engineers and
421 applicants who have passed the licensure examinations for registered electrical engineers or
422 registered master electricians and issue the corresponding certificates of registration and
423 professional licenses;

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

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

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

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

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

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

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

452 m) Render decision, order or resolution on preliminary investigation or inquiry,
453 on undocketed cases and on docketed administrative cases against examinees or registrants

454 which shall become final and executory unless appealed with the PRC within fifteen (15)
455 days from receipt of the copy thereof. The decision of the PRC may be appealed to the Court
456 of Appeals in accordance with the procedure provided in the Rules of Court;

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

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

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

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

474 r) Adopt an official seal;

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

477 t) Prescribe programs, guidelines and criteria on the Continuing Professional
478 Development program (CPD) for professional electrical engineers, registered electrical
479 engineers and registered master electricians and renew their professional licenses after
480 compliance with the CPD requirement;

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

486 **SEC. 6. Qualifications of Board Members.** - Each Board member must, at the time of
487 his appointment:

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

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

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

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

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

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

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

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

508 1) Operation and Maintenance of Power Plants

509 2) Operation and Maintenance of Utility Electrical Systems

510 3) Operation and Maintenance of Industrial Plants

511 4) Electrical Engineering Technical Services

512 5) Planning, Designing and Construction of Electrical Systems

513 6) Power Systems Consultancy Services

514 7) Teaching of Professional Electrical Engineering Subjects

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

517 **SEC. 7. *Term of Office.*** – The members of the Board shall hold office for a term of
518 three (3) years from the date of appointment or until their successors shall have been
519 appointed and qualified. They may, however, be reappointed for a second term and shall
520 serve in the Board for a maximum of six (6) years. Each member shall qualify by taking an
521 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 Commissioners en banc for graft & corruption, neglect of duty, incompetence, malpractice, commission 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.

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

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

ARTICLE III

EXAMINATION AND REGISTRATION

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

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

555 Certificates of Registration for the practice of electrical engineering shall be of three
556 (3) grades or categories as follows:

- a) Professional Electrical Engineer;
 - b) Registered Electrical Engineer;
 - c) Registered Master Electrician

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

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

SEC. 15. *Exemption from Examination.* —

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

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

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

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

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

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

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

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

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

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

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

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

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

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

621 **SEC. 16. *Holding of Examinations.*** – Examinations for the practice of electrical
622 engineering in the Philippines should be given twice a year in the City of Manila and other
623 places on dates that the Board may recommend for determination of scheduling. The Board
624 shall schedule the interview or oral examination of every applicant for registration as
625 professional electrical engineer only at the office of the PRC. To qualified applicants for
626 examination, notice of admission shall be issued not later than ten (10) days prior to the first
627 day of examination.

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

- 632 a) Is a citizen of the Philippines;
- 633 b) Is at least twenty-eight (28) years of age;
- 634 c) Is of good reputation with high moral values;
- 635 d) Has not been finally convicted by the court of an offense involving moral
636 turpitude;
- 637 e) Is a holder of the degree of Bachelor of Science in Electrical Engineering
638 (BSEE) from a university, school, college, academy or institute duly constituted,
639 recognized and accredited by the Philippine government;
- 640 f) Is a registered electrical engineer with certificate of registration and valid
641 professional identification card and with five (5) years or more of active practice beginning
642 from the date of his registration as a registered electrical engineer as reflected in the
643 applicant's Electrical Practice Record Book
- 644 g) Is a member of good standing of the PRC accredited professional organization
645 for at least five (5) years.

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

- 650 a) Is a citizen of the Philippines;
- 651 b) Is at least twenty-three (23) years of age;
- 652 c) Is of good reputation with high moral values;
- 653 d) Has not been finally convicted by the court of an offense involving moral
654 turpitude; and

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

658 f) A person of at least twenty two (22) years old may be permitted to take the
659 registered electrical engineering examination: *Provided, that* in case the applicant
660 passed, the license or certificate of registration shall only be released upon
661 reaching twenty three (23) years of age.

662 **SEC. 19. *Qualifications of Applicants for Registered Master Electricians***

663 **Examination** – Any person applying for examinations for Registered Master Electrician as
664 herein provided shall establish, to the satisfaction of the Board, that on or before the date of
665 the examination, the applicant:

666 a) Is a citizen of the Philippines;

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

668 c) Is of good reputation with high moral values;

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

670 e) Has satisfied any of the following conditions:

671 1) Has completed a four-year course in Bachelor of Science in Engineering
672 Technology or Industrial Technology Major in Electrical Technology from a school
673 recognized by the Philippine government and, in addition has a subsequent specific
674 track record of one (1) year experience in electrical wiring and equipment installation,
675 operation and maintenance of power, utilization devices and equipment; or power line
676 installation and maintenance, or substation installation, operation and maintenance;

677 2) Has completed at least four (4) years of a five-year Bachelor of Science in
678 Electrical Engineering (BSEE) program from an engineering school recognized by the
679 Philippine government and, in addition has a subsequent specific track record of one (1)
680 year experience in electrical wiring and equipment installation, operation and
681 maintenance of power, utilization devices and equipment; or power line installation and
682 maintenance, or substation installation, operation and maintenance;

683 3) Has completed a three-year Certificate Course in Electrical Technology from a
684 school recognized by the Philippine government and, in addition, has a subsequent
685 specific track record of two (2) years experience in electrical wiring and equipment
686 installation, operation and maintenance of power, utilization devices and equipment; or
687 power line installation and maintenance, or substation installation, operation and
688 maintenance;

689 4) Has completed a Senior High School under the K-12 Program majoring in
690 Electrical Technology from a school recognized by the Philippine government and, in
691 addition has a subsequent specific track record of five (5) years experience in electrical
692 wiring and equipment installation, operation and maintenance of power, utilization
693 devices and equipment; or power line installation and maintenance, or substation
694 installation, operation and maintenance;

695 5) Has completed secondary education and has completed a separate but relevant
696 technical education and skills training program with corresponding certificate of
697 competency.

698 *Provided, however,* that the applicant has a specific track record of at least seven (7)
699 years of experience in electrical wiring and equipment installation, operation and
700 maintenance of power, utilization devices and equipment, or power line installation
701 and maintenance, or substation installation, operation and maintenance.

702 *Provided further,* that the applicant for examination as registered master electrician
703 must submit the duly accomplished PRC controlled Electrical Practice Record
704 Book.

705 *Provided, however,* that a person of at least twenty two (22) years old may be
706 permitted to take the registered master electrician board examinations and in case
707 the applicant passed, his license or certificate of registration shall only be released
708 upon reaching twenty three (23) years of age.

709 **SEC. 20. Scope of Examination.** – As a prerequisite for registration as professional
710 electrical engineer, registered electrical engineer, registered master electrician, the applicant
711 shall pass the examinations and shall comply with the requirements thereto:

712 a) *Professional Electrical Engineer* –

713 (i) Electrical Practice Record Book showing at least five years of experience from
714 the date applicant took oath as a registered electrical engineer indicating the inclusive
715 dates, legitimate companies worked for, description of specific responsibilities, significant
716 accomplishments as well as the name and position of immediate mentors and supervisors
717 which shall be summarized and attested by a notary public;

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

722 (iii) Submittal of a Technical Report or Dissertation covering an evaluation, an
723 analysis, a study or a critical discussion of an electrical engineering project or subject, on
724 one or several technical aspects such as: design, construction, installation, testing,
725 commissioning, operation, maintenance, research and the like. The technical paper shall be
726 supported by engineering principles and data. Published or unpublished scientific paper or
727 treatise on electrical engineering theories and applications may be considered as
728 complying with the requirement; Provided further, That three (3) duly notarized
729 certifications signed by three (3) professional electrical engineers to the effect that the
730 technical paper submitted was actually prepared by the applicant;

731 (iv) The applicant must pass the oral examination or interview conducted by the
732 Board,

733 (v) The applicant must obtain passing marks on the following factors: Technical
734 Report (40%), Interview or Oral Examinations (40%) and, Relevant Experience (20%).

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

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

739 1. Mathematics including algebra, trigonometry, analytic geometry, differential
740 calculus, integral calculus, differential equations, engineering mechanics, strength of
741 materials; complex numbers, probability and statistics, advanced engineering
742 mathematics including matrices, power series, Fourier analysis, Laplace transforms,
743 and others. The weight is twenty five percent (25%).

744 2. Engineering sciences and allied subjects, including general chemistry, college
745 physics, computer fundamentals, engineering materials, fluid mechanics,
746 thermodynamics, equipment foundations, power line construction, electrical system
747 automation, computer applications, electrical engineering law, engineering
748 economics, engineering management, contracts and specifications, code of
749 professional ethics, Philippine Electrical Code (Part I & II) and International
750 Standards, and others. The weight is thirty percent (30%).

751 3. Electrical engineering professional subjects, including electric circuits, electronic
752 theory and circuits, energy conversion, power plants, substations, power transmission
753 and distribution, power system analysis, fault analysis, instrumentation and
754 measurements, circuit and line protection, control systems, electrical machines and

755 electrical equipment, components and devices, electric systems, electronic power
756 equipment and others. The weight is forty five percent (45%).

757 4. The examination questions on the foregoing subjects shall cover theories and
758 principles, and shall include questions on applications. The number of questions shall
759 be such that the examinations can be finished in two (2) consecutive eight-hour days.

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

762 c) *Registered Master Electrician* – the applicant for Registered Master electrician shall
763 pass the examinations and shall comply with the requirements thereto:

764 1) Electrical Practice Record Book that contains legitimate companies worked
765 for, description of specific responsibilities, significant accomplishments as well as the
766 name and position of immediate mentors and supervisors which shall be summarized
767 and attested by a notary public;

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

772 3) The applicant shall pass a written examination on the different subjects or
773 group of subjects as follows:

774 (i) Technical Subject: Ohm's Law, basic calculations on direct and alternating
775 current circuits, single phase and three-phase circuits, basic transmission &
776 distribution circuits; basic theories in electrical equipment, machines and
777 apparatuses such as: motors, generators, transformers, wires and cables, fuses,
778 circuit breakers and safety switches; knowledge in motor controllers as: basic
779 magnetic starters, reversing controllers, star-delta, reduced voltage controllers, soft
780 starters and variable frequency drives; control circuits, and schematic diagrams.

781 (ii) Philippine Electrical Code (Part I & II) and Trade Practice: General
782 requirements for installation of wirings for lighting and power; approved wiring
783 methods, approved types of wiring materials and devices; installation of
784 switchboards and panel boards, installation principles for hazardous locations;
785 methods in creating electrical diagrams, reading and interpretation of drawing
786 symbols and plans; installation principles of power and distribution transformers,
787 substation components; application of standard structures, power line construction,
788 line hardwares and devices; principles in banking single phase transformers;

789 installation practices of poles, towers and other structures; principles and practices
790 in operation and maintenance of electrical equipment such as power circuit
791 breakers, switchgears and outdoor power switching equipment; safety practices and
792 involving low, medium, high voltages; and general knowledge in the Philippine
793 Electrical Engineering Law.

794 (iii) The number of test questions shall be such that the examinations can be
795 finished in two (2) consecutive eight-hour days. The relative weights shall be forty
796 percent (40%) for Technical Subjects and forty percent (40%) for Philippine
797 Electrical Code (Part I & II) and Trade Practices, and 20% for Experience. The
798 passing general average rating shall be seventy percent (70%) with no grade below
799 sixty percent (60%) in any subject.

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

803 **SEC. 22. *Reexamination of Failed Subjects.*** – An applicant shall be allowed to
804 retake, for four (4) times, only the subject/s in which the applicant has obtained a grade below
805 sixty percent (60%). When the applicant has obtained an average grade of seventy percent
806 (70%) in the subject or subjects repeated, the applicant shall be considered to have passed the
807 licensure examination.

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

812 **SEC. 24. *Issuance of Certificates of Registration and Professional Identifications.*** –
813 The registration of a professional electrical engineer, registered electrical engineer and
814 registered master electrician commences from the date the name of the professional is entered
815 in the roll of registrants or licensees for the profession. Every registrant who has satisfactorily
816 met all the requirements specified in this Act, upon payment of the registration fee, shall be
817 issued a certificate of registration and a professional identification card as a professional
818 electrical engineer, a registered electrical engineer or a registered master electrician that
819 shows the full name of the registrant and with serial number, signed by the Commissioner
820 and by the chairman and members of the Board, stamped with the official seal, as evidence
821 that the person named therein is entitled to practice the profession with all the rights and

822 privileges appurtenant thereto. The certificate shall remain in full force and effect until
823 withdrawn, suspended, or revoked in accordance with law.

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

832 **SEC. 25. *Continuing Professional Development Program (CPD).*** – The CPD
833 guidelines shall be prescribed and promulgated by the Professional Regulation Commission
834 through the Board of Electrical Engineering, in collaboration with the accredited electrical
835 engineering association. The PRC shall incorporate in the said guidelines the creation of a
836 CPD council that shall be composed of officers coming from the Board, the PRC, the
837 integrated and accredited electrical associations and other parties as maybe provided for by
838 law.

839 **SEC. 26. *Organization of Electrical Engineering Practitioners.*** – There shall only be
840 one national organization of electrical engineering practitioners, which shall be recognized
841 and accredited by the PRC. Every grade of electrical engineering practitioners under this Act
842 upon registration with the PRC as such, shall *ipso facto*, become a member of the accredited
843 national organization. Those who have been registered with the Board but are not members of
844 the said organization at the time of the effectivity of this Act shall be allowed to register as
845 members of the said accredited organization within three (3) years after the effectivity of this
846 Act.

847 The professional electrical engineer, registered electrical engineer and the registered
848 master electrician shall receive the benefits and privileges appurtenant to this listed
849 membership in the duly accredited electrical engineering association only upon payment of
850 the required membership fees and dues.

851 **SEC. 27. *Seal of Professional Electrical Engineer.*** – All licensed professional
852 electrical engineers may obtain a seal of a design prescribed by the Board bearing the
853 registrant's name, the certificate number and the legend "Professional Electrical Engineer."
854 Plans, specifications, reports and other professional documents prepared by or executed under
855 the immediate supervision of, and issued by a licensee, shall be stamped on every sheet with

856 said seal when filed with government authorities or when submitted or used professionally;
857 *Provided, however,* That it is unlawful for anyone to stamp or seal any document with said
858 seal after the registrant's name has been delisted from the roster of professional electrical
859 engineers or after the validity of his professional identification card which bear the evidence
860 that he is authorized to practice as mandated in this Act, has expired.

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

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

869 **SEC. 29. *Refusal to Issue Certificates.*** – The Board of Electrical Engineering shall
870 not issue a certificate of registration to any person convicted by the court of any criminal
871 offense involving moral turpitude or to any person guilty of immoral or dishonorable conduct
872 or to any person of unsound mind. In the event of refusal to issue certificates for any reason,
873 the Board shall give the applicant a written statement setting forth the reasons for such action,
874 which statement shall be incorporated in the records of the Board.

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

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

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

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

893 b) The registrant has represented himself as having taken charge of or
894 supervised: any electrical construction or installation; operation, tending and
895 maintenance of any electric plant; manufacture or repair of electrical equipment,
896 teaching of electrical engineering subjects; sale or distribution of any electric supply or
897 utilization equipment requiring engineering calculations or application of engineering
898 principles and data, without actually having done so,

899 c) The registrant has violated any of the applicable provisions of this act.

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

906 e) The rules and regulations of the PRC on administrative investigation shall
907 govern the procedure and conduct of administrative investigation before the Board.
908 Further, that the respondent shall have the right to a speedy and public hearing and to
909 confront and cross-examine witnesses against him.

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

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

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

921 ARTICLE IV

922 SUNDRY PROVISIONS RELATIVE TO THE PRACTICE OF THE ELECTRICAL

923 **ENGINEERING PROFESSION**

924 **SEC. 32. *Field of Practice.*** – The field of practice of responsible character for
925 Professional Electrical Engineers, Registered Electrical Engineers, and Registered Master
926 Electricians shall be as follows:

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

932 Further, that the Professional Electrical Engineer-of-Record with the Office of the
933 Building Official and Author of Electrical Documents submitted bearing his seal and
934 signature shall have full liability over these said documents for a period of fifteen (15) years;
935 unless his responsibility is assumed by another Professional Electrical Engineer who made
936 modification to the electrical system under the new employ of the establishment owner or
937 management.

938 Further, that a professional electrical engineer shall be eligible for any position that
939 requires a Master's Degree holder in a government or private institution, including teaching
940 professional subjects in electrical engineering course whether in public or private schools.

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

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

955 c) Subject to the limitations as defined by this Act, a Registered Master
956 Electrician's field of practice includes the installation, erection, wiring of electrical projects;

957 operation, maintenance and repair of electrical machinery, equipment and devices in an
958 electric system of residential, institutional, commercial and industrial plants, in power plants,
959 industrial substations, watercrafts, electric locomotives, to include installation of
960 transmission, distribution and substation system equipment; erection and installation of
961 electric poles, towers and other related structures, installation of line hardwares, stringing of
962 power lines, switching equipment and devices; banking of transformers; to include but not
963 limited to operation, maintenance and repair thereof. *Provided*, That if the scope of work, or
964 the machinery, equipment or the electrical system involved is rated in excess of seven
965 hundred fifty kilovolt-amperes (750 kVA), or in excess of six hundred volts (600 V), the
966 Registered Master Electrician shall be under the supervision of a professional electrical
967 engineer or a registered electrical engineer.

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

- 970 a) Practice or offer to practice electrical engineering in the Philippines without
971 having previously obtained a certificate of registration, professional license and a valid ID
972 issued by the PRC qualifying him as an Authorized Electrical Engineering Practitioner as
973 defined in this Act, except as provided for in Section 15 hereof;
- 974 b) Use, or attempt to use as his own, any certificate of registration or the seal of
975 another;
- 976 c) Give false or forged evidence of any kind to the Board of Electrical Engineering
977 in obtaining a Certificate of Registration or Professional License;
- 978 d) Falsely impersonate any registrant of like or different name;
- 979 e) Attempt to use a revoked or suspended Certificate of Registration or an expired
980 professional identification card;
- 981 f) Use, in connection with the registrant's name or otherwise assume, use or
982 advertise any title or description tending to convey the impression that he is a Professional
983 Electrical Engineer, Registered Electrical Engineer or Registered Master Electrician without
984 holding a valid Certificate of Registration and a valid PRC identification card;
- 985 g) Sign a document involving electrical design, plan, technical specification,
986 valuation and the like on behalf of a professional electrical engineer;
- 987 h) Take responsible charge or supervise the preparation of plans, designs,
988 investigations, valuation, technical reports, specifications, project studies, estimates or
989 consultancy services or to be in the performance of other electrical engineering services

990 unless he is a duly authorized Professional Electrical Engineering Practitioner as defined in
991 this Act;

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

1000 j) Make use of electrical plans, designs, specifications, drawings and electrical
1001 documents relative to the construction of a building or of any other purposes without bearing
1002 the seal and signature of a Professional Electrical Engineer duly authorized to practice
1003 electrical engineering under this Act;

1004 k) To duplicate or to make copies without the expressed written consent of the
1005 author of an electrical document for use in the repetition of and for other projects or
1006 buildings, whether executed partly or in whole;

1007 l) Take direct charge or responsible supervision of the construction, erection,
1008 installation, alteration, testing, commissioning, operation, tending, and maintenance of any
1009 electrical system, equipment, machinery or process; or the performance of electrical
1010 engineering services in connection with the manufacture, sale, supply, distribution,
1011 application of electrical equipment and systems or of any electrical works for projects, either
1012 for himself or for others, unless he is a duly authorized Electrical Engineering Practitioner as
1013 defined in this Act;

1014 m) Order or otherwise cause the fabrication, manufacture, construction, erection,
1015 installation or alteration of any electrical equipment, machinery or process for any electrical
1016 works, projects, or plants, unless the designs, plans, layouts or specifications have been
1017 prepared by or under the direct responsible charge of an authorized electrical engineering
1018 practitioner, and duly signed and sealed by a Professional Electrical Engineer;

1019 n) Teach basic electrical engineering subjects and allied sciences unless the person
1020 is a duly Registered Electrical Engineer or Professional Electrical Engineer authorized to
1021 practice as defined by this Act; and

1022 o) Teach professional subjects in electrical engineering course unless the person is
1023 an authorized Professional Electrical Engineer; or an authorized Registered Electrical
1024 Engineer with a Masteral or Doctorate Degree related to electrical engineering.

1025 p) To render, make offers or proposals, or enter into a contract to provide electrical
1026 engineering services for any private persons, entities, clients or projects, whether in personal
1027 capacities for any registered electrical engineering practitioner who is an officer or employee
1028 of any local government unit or agency charged with the enforcement of laws, ordinances or
1029 regulations relating to the construction, inspection and approval of electrical permits.

1030 q) To render, make offers or proposals, or enter into a contract to provide electrical
1031 engineering services for any private persons, entities, clients or projects, whether in personal
1032 capacities for any registered electrical engineering practitioner who is an officer or employee
1033 of the Grid Operator and Distribution Utilities (DU's) or any other practitioners similarly
1034 situated.

1035 **SEC. 34. *Prohibitions Relative to the Practice of Electrical Engineering.* –**

1036 a) It shall be unlawful for any local government unit or agency charged with the
1037 enforcement of laws, ordinances or regulations on public safety relating to the construction,
1038 inspection and approval of electrical permits for buildings, or for any other purposes unless,
1039 same office or agency has in its employ a complement of permanent and regular Authorized
1040 Electrical Engineering practitioners assigned in any Electrical Section or Division of said
1041 offices;

1042 Further, that these Authorized Electrical Engineering Practitioners under the employ
1043 of these government offices shall be Certified Electrical System Inspectors, and Certified
1044 Electrical Plans Examiners with official conferment by the Board of Electrical Engineering in
1045 consultation with the PRC accredited professional organization after having passed the
1046 examinations and other qualification requirements for specialization as recognized under this
1047 Act.

1048 b) It shall be unlawful and conflict of interest as an entity for any Distribution
1049 Utilities (DU's) that has a franchise to operate an electric distribution system to render, make
1050 offers, proposals, or enter into a contract to provide electrical engineering services for any
1051 private persons, companies, entities, clients or projects;

1052 c) It shall be unlawful for any owner-employer or management of power plant,
1053 industrial or commercial establishment, watercraft, seaport, airport, whether public or
1054 privately-owned, including but not limited to any government-owned and controlled
1055 corporation, electrical grid operator, distribution utility and other entities to operate business

1056 or for any other purpose unless, the entity has in its employ the complement of permanent
1057 and regular Authorized Electrical Engineering Practitioners as defined under this Act;

1058 d) It shall be unlawful for any owner-employer or management of power plant,
1059 industrial or commercial establishment, watercraft, seaport, airport, whether public or
1060 privately-owned, and other related entities operating businesses who have in its employ
1061 Professional Electrical Engineers for operation and maintenance management purposes under
1062 the scopes under this Act, to have these professional electrical engineers affix their signatures
1063 and seals on company plans, designs and documents carrying civil liabilities for fifteen years
1064 unless he is compensated separately;

1065 e) It shall be jointly unlawful for any electrical contractor and owner of buildings,
1066 edifices, industrial plants, commercial establishments, or any electrical works or projects
1067 under construction to proceed the implementation of said construction unless, the project has
1068 in its employ complement of authorized electrical engineering practitioners as defined under
1069 this Act;

1070 f) It shall be unlawful for any Electrical Manufacturing Plant to fabricate,
1071 manufacture and market electrical products of dubious quality for and in the interest of public
1072 use, and where safety risks to lives and properties are involved; unless such products are
1073 certified to be safe and fit for use by a government approving agency or by government
1074 accredited testing laboratories: *Provided, further.* That it is unlawful for any vendor, store or
1075 commercial establishments to sell, market and endorse electrical products of dubious origin,
1076 fake products, products of questionable and/or substandard quality unless, such products are
1077 stamped approved by a government approving bureau or by government accredited testing
1078 laboratories or by Philippine recognized international standardization body.

1079 **SEC. 35. Minimum Personnel Required for Industrial and Commercial**
1080 **Complexes.** – Except as otherwise provided in this Act, every building or commercial
1081 complex, industrial plant, factory, manufacturing plant in an industrial complex or any
1082 electrical system or process in operation, shall have not less than the following complement
1083 of authorized electrical engineering practitioners:

1084 a) For capacities of 150 kVA up to 300 kVA – one (1) resident Registered
1085 Master Electrician;

1086 *Provided,* That every factory or manufacturing plant in this category operating in
1087 more than one shift in every twenty-four hours, shall have one (1) Registered Master
1088 Electrician per shift;

1089 b) For capacities above 300 kVA up to 750 kVA – one (1) resident Registered
1090 Master Electrician;

1091 *Provided*, That every factory, building or commercial complex in this category
1092 operating in more than one shift in every twenty-four hours, shall have at least one (1)
1093 Registered Master Electrician per shift, and one (1) Registered Master Electrician or
1094 Registered Electrical Engineer as Head whose scope of responsibility includes operation
1095 and maintenance;

1096 c) For capacities above 750 kVA up to 5,000 kVA – Two (2) resident Registered
1097 Master Electricians, and one (1) resident Registered Electrical Engineer or Professional
1098 Electrical Engineer:

1099 *Provided*, That every factory, building or commercial complex in this category
1100 operating in more than one shift every twenty-four (24) hours shall have at least two (2)
1101 Registered Master Electricians per shift, and one (1) Registered Electrical Engineer or
1102 Professional Electrical Engineer in-Charge as Managing Electrical Engineer whose scope
1103 of responsibility includes over-all operation and maintenance;

1104 d) For capacities above 5,000 kVA to 20,000 kVA – three (3) Registered Master
1105 Electricians, one (1) Registered Electrical Engineer and one (1) Professional Electrical
1106 Engineer as resident complement:

1107 *Provided*, That every factory, building or commercial complex in this category
1108 operating in more than one shift every twenty-four (24) hours shall have at least three (3)
1109 Registered Master Electricians, one (1) Registered Electrical Engineer per shift; and one
1110 (1) Professional Electrical Engineer as Managing Electrical Engineer whose scope of
1111 responsibility includes over-all operation and maintenance;

1112 e) For capacities above 20,000 kVA to 60,000 kVA – four (4) Registered Master
1113 Electricians, two (2) Registered Electrical Engineers, and one (1) Professional Electrical
1114 Engineer, as resident complement:

1115 *Provided*, That every factory, building or commercial complex in this category
1116 operating in more than one shift every twenty-four (24) hours shall have at least four (4)
1117 Registered Master Electricians, two (2) Registered Electrical Engineers per shift, and one
1118 (1) Professional Electrical Engineer as Managing Electrical Engineer whose scope of
1119 responsibility includes over-all operation and maintenance; and

1120 f) For capacities above 60,000 kVA – five (5) Registered Master Electricians,
1121 three (3) Registered Electrical Engineers, and one (1) Professional Electrical Engineer, as
1122 resident complement:

1123 *Provided*, That every factory, building or commercial complex in this category
1124 operating in more than one shift every twenty-four (24) hours shall have at least five (5)
1125 Registered Master Electricians, three (3) Registered Electrical Engineers per shift, and one
1126 (1) Professional Electrical Engineer as Managing Electrical Engineer whose scope of
1127 responsibility includes over-all operation and maintenance.

1128 **SEC. 36. *Minimum Personnel Required for Electric Power Plants.*** – Except as
1129 otherwise provided in this Act, any Electric Power Plant in operation shall have not less than
1130 the following complement of resident authorized electrical engineering practitioners:

1131 a) For every Power Plant capacities of up to 20,000 kVA in this category
1132 operating in more than one shift every twenty-four (24) hours: at least one (1) Registered
1133 Master Electrician, one (1) Registered Electrical Engineer as Shift Electrical Engineer per
1134 shift; and one (1) Professional Electrical Engineer, as Head or Managing Electrical
1135 Engineer whose scope of responsibility includes over-all operation and maintenance;

1136 b) For Power Plant capacities of above 20,000 kVA up to 60,000 kVA in this
1137 category operating in more than one shift every twenty-four (24) hours: at least two (2)
1138 Registered Master Electricians, one (1) Registered Electrical Engineer as Shift Electrical
1139 Engineer per shift; and one (1) Professional Electrical Engineer, as Head or Managing
1140 Electrical Engineer whose scope of responsibility includes over-all operation and
1141 maintenance;

1142 c) For Power Plant capacities above 60,000 kVA up to 200,000 kVA in this
1143 category operating in more than one shift every twenty-four (24) hours: at least four (4)
1144 Registered Master Electricians, two (2) Registered Electrical Engineers as Shift Electrical
1145 Engineers, one (1) Professional Electrical Engineer as Head of Shift Operations per shift;
1146 and one (1) Professional Electrical Engineer as Managing Electrical Engineer whose scope
1147 of responsibility includes over-all operation and maintenance; and

1148 d) For Power Plant capacities above 200,000 kVA in this category operating in
1149 more than one shift every twenty-four (24) hours: at least six (6) Registered Master
1150 Electricians, three (3) Registered Electrical Engineers as Shift Electrical Engineers, one (1)
1151 Professional Electrical Engineer as Head of Shift Operations per shift; and one (1)
1152 Professional Electrical Engineer as Managing Electrical Engineer whose scope of
1153 responsibility includes over-all operation and maintenance.

1154 **SEC. 37. *Minimum Personnel Required for Power Substation of Grid and***
1155 ***Distribution Utilities.*** – Except as otherwise provided in this Act, Power Substations of Grid

1156 and Distribution Utilities shall have not less than the following complement of resident
1157 authorized electrical engineering practitioners:

1158 a) For single or cluster capacities of Manned Substations of Grid or Distribution
1159 Utilities (DU's) up to 75 MVA in specific inclusive area or location: one (1) Registered
1160 Master Electrician, one (1) Registered Electrical Engineer per shift, and one (1)
1161 Professional Electrical Engineer as Head or Managing Electrical Engineer whose scope of
1162 responsibility includes over-all operation and maintenance;

1163 b) For single or cluster capacities of Manned Substations of Grid or Distribution
1164 Utilities (DU's) above 75 MVA up to 200 MVA in an inclusive area or location: two (2)
1165 Registered Master Electricians, one (1) Registered Electrical Engineer per shift, and one
1166 (1) Professional Electrical Engineer as Head or Managing Electrical Engineer whose scope
1167 of responsibility includes over-all operation and maintenance.

1168 c) For single or cluster capacities of Manned Substations of Grid or Distribution
1169 Utilities (DU's) above 200 MVA in an inclusive area or location in this category: three (3)
1170 Registered Master Electricians, two (2) Registered Electrical Engineers per shift, one (1)
1171 Professional Electrical Engineer as Head of Shift Operations, and one (1) Professional
1172 Electrical Engineer as Managing Electrical Engineer whose scope of responsibility
1173 includes over-all operation and maintenance.

1174 **SEC. 38. *Minimum Personnel Required for Grid System Operation.*** – Except as
1175 otherwise provided in this Act, all resident authorized electrical practitioners in Grid System
1176 Operations shall have minimum requirements of at least Registered Electrical Engineers or
1177 Professional Electrical Engineers during shift operations and one Professional Electrical
1178 Engineer as Head or Managing Electrical Engineer for every department, division or section,
1179 as the case may be.

1180 Further, that additional qualified personnel shall be employed to ensure safe operation
1181 and safeguard public welfare, commensurate to the size and complexity of operation.

1182 **SEC. 39. *Minimum Personnel Required for Distribution System Operation.*** –
1183 Except as otherwise provided in this Act, all resident electrical practitioners in Distribution
1184 System Operations shall have minimum requirements of at least Registered Electrical
1185 Engineers or Professional Electrical Engineers during shift operations, and one Professional
1186 Electrical Engineer as Head or Managing Electrical Engineer for every department, division
1187 or section as the case may be.

1188 Further, that additional qualified personnel shall be employed to ensure safe operation
1189 and safeguard public welfare, commensurate to the size and complexity of operation.

1190 **SEC. 40. *Minimum Personnel Required in Electrical Construction Works or***
1191 ***Projects.*** – For electrical works or projects under construction the installation, erection,
1192 wiring, in an electric system in residential, institutional, commercial and industrial buildings,
1193 power plants, substations, shipbuilding and other electrical projects shall have the following
1194 complement of authorized electrical engineering practitioners:

- 1195 a) For electrical works or projects of 150 kVA up to 750 kVA capacity: One (1)
1196 Registered Master Electrician as Project Electrician-In-Charge, and one (1) Registered
1197 Electrical Engineer as Project Engineer-In-Charge, and one (1) Professional Electrical
1198 Engineer as Project Manager or Consultant.
- 1199 b) For electrical works or projects of over 750 kVA up to 5,000 kVA capacity:
1200 Two (2) Registered Master Electricians as Project Electricians-In-Charge, and one (1)
1201 Registered Electrical Engineer as Project Engineer-In-Charge, and one (1) Professional
1202 Electrical Engineer as Project Manager or Consultant.
- 1203 c) For electrical works or projects under construction of over 5,000 kVA
1204 capacity: Three (3) Registered Master Electricians as Project Electricians-In-Charge; and
1205 two (2) Registered Electrical Engineers as Project Engineers-In-Charge; and one (1)
1206 Professional Electrical Engineer as Project Manager; and one (1) Professional Electrical
1207 Engineer as Consultant.

1208 **SEC. 41. *Minimum Personnel Required for an Electrical Equipment***
1209 ***Manufacturing Plant.*** –

- 1210 a) The minimum personnel requirement for this type of plant shall be covered
1211 under Section 35 of this Act;
- 1212 b) *Provided, however,* That full-time professional electrical engineers shall be
1213 mandatory for the designing section of the plant overseeing, supervising and ensuring
1214 over the design of special equipment as transformers, motors, switchgears,
1215 switchboards, control-gears, motor control centers, power panels and panelboards,
1216 and the like.

1217 **SEC. 42. *Minimum Personnel Required in Watercrafts and Electric Locomotives.*** –

1218 Watercrafts or electric locomotives operating with installed generating capacity up to the
1219 maximum size and voltage available for these units - shall have the following complement of
1220 authorized electrical engineering practitioners:

- 1221 a) For capacities up to 750 kVA with voltages not exceeding 600 volts – one (1)
1222 Registered Master Electrician;

- 1223 b) For capacities above 750 kVA up to 5,000 kVA – one (1) Registered Master
1224 Electrician and one (1) Registered Electrical Engineer;
1225 c) For capacities above 5,000 kVA – two (2) Registered Master Electricians and
1226 one (1) Registered Electrical Engineer and one (1) Professional Electrical Engineer as
1227 Head or Managing Electrical Engineer.

1228 **SEC. 43. *Other Provisions for Complement of Electrical Practitioners.* –**

1229 a) The case of clusters of buildings, factories or facilities, Grid or Distribution
1230 Utilities substations or switching stations where physical presence and supervision of the
1231 minimum personnel required is impossible for reasons of geography, distance or density of
1232 electrical equipment, additional qualified personnel shall be employed to ensure safe
1233 operation and maintenance of the electrical system and to safeguard public welfare, lives
1234 and properties;

1235 b) *Provided, further,* That in the case of operation, maintenance or construction
1236 projects:

1237 1) A Registered Master Electrician can technically supervise the activities of
1238 fellow *Registered Master Electrician* or non-licensed personnel but assumes the full
1239 responsibilities and accountabilities as to the scope and limitations mandated in this
1240 Act,

1241 2) A Registered Electrical Engineer can technically supervise fellow Registered
1242 Electrical Engineers, Registered Master Electricians or non-licensed personnel but
1243 assumes the full responsibilities and accountabilities as to the scope and limitations
1244 mandated in this Act,

1245 3) A Professional Electrical Engineer can technically supervise fellow
1246 Professional Electrical Engineers, Registered Electrical Engineers, Registered
1247 Master Electricians or non-licensed personnel but assumes the full responsibilities
1248 and accountabilities as to the scope and limitations mandated in this Act.

1249 c) This section on required minimum personnel, shall not apply to any
1250 installation which has a connected capacity of less than 150 kVA and employs voltages of
1251 not more than two hundred fifty volts (250 V) and for installations that do not require
1252 resident personnel for their safe operation: *Provided, however,* That for every change,
1253 alteration, revision, addition, and ‘as-built plans’ of any parts of the electrical system, the
1254 plans and designs shall bear the signature and seal of an authorized professional electrical
1255 engineer: *Provided, further,* That a yearly assessment will be conducted and certified to be

1256 in a safe operating condition by a professional electrical engineer, a registered electrical
1257 engineer or a registered master electrician.

1258 **SEC. 44. Preparation of Plans, Supervision of Projects and Application of the**
1259 **Philippine Electrical Code.** – It shall be unlawful for any person not authorized under this
1260 Act to prepare plans, designs, valuations or specifications for any electrical wiring,
1261 equipment or system; and no installation thereof shall be undertaken unless the plans,
1262 designs, valuations and specifications have been prepared by or under the responsible charge
1263 of, and signed and sealed by a professional electrical engineer; and a construction permit for
1264 the execution thereof is first secured; and unless the work is done in accordance with the
1265 Philippine Electrical Code and other Philippine-Recognized International Standards and is
1266 executed under the responsible charge or supervision of a professional electrical engineer, a
1267 registered electrical engineer, or a registered master electrician as the case may be, and the
1268 routinary fiscal, ministerial and technical requirements of the government agency, if any,
1269 exercising jurisdiction over the particular installation have been complied with.

1270 **SEC. 45. Practice Not Allowed for Firms and Corporations.** – The practice of
1271 electrical engineering is a professional service admission to which is based on individual and
1272 personal qualifications. Hence, no firm or corporation shall be registered or licensed as such
1273 for the practice of electrical engineering.

1274 However, persons properly authorized in this Act as Electrical Engineering
1275 Practitioners may, among themselves, form a partnership or corporation and collectively
1276 render electrical engineering service. Individual members of such partnerships or
1277 corporations responsible for specific projects or activities shall be responsible for their own
1278 respective acts as practicing electrical engineers as provided in this Act.

1279 *Provided,* that the Board of Directors or Officers of such partnership or corporation
1280 shall be consisting of at least 60% authorized electrical engineering practitioners of any grade
1281 and shall have at least one (1) Professional Electrical Engineer among the firm's officers as
1282 active and full-time managing partner or director of the firm.

1283 *Provided, further,* that for multi-disciplinary corporations, wherein part of the scope is
1284 electrical engineering, this Act requires at least one (1) Authorized Professional Electrical
1285 Engineer sitting as director and as active and full-time managing partner of the firm
1286 responsible for the over-all electrical engineering scope.

1287 *Provided, finally,* that in cases involving professional liability of an electrical engineer
1288 employed within and representing the firm in present or past jobs, and whether still or no

1289 longer working within the firm; the firm and the engineer involved are jointly and severally
1290 liable to all obligations arising from business transactions of the firm.

1291 **SEC. 46. *Posting of Certificates.*** – The owner, manager or the person in charge of an
1292 electric plant, industrial plant or factory, electrical fabrication or manufacturing plant,
1293 commercial establishment, institutional building, or structure building under construction,
1294 watercraft, or electric locomotive and others shall post or cause to be posted in a conspicuous
1295 place within such plant, establishment, buildings, and construction areas the certificate of
1296 registration and valid PRC ID of the electrical engineering practitioners employed in such
1297 plant, establishment, building and construction area in a frame protected by transparent glass
1298 or equivalent suited for the purpose.

1299 **SEC. 47. *Certificate of Specialty.*** –

- 1300 a) The PRC, through the Board of Electrical Engineering, shall institute the creation
1301 of an Electrical Specialty Council that shall be composed of a member coming
1302 from the Board of Electrical Engineering and four (4) members from the PRC-
1303 accredited electrical organization who as a collegial body establishes the specific
1304 fields of specialization and issue guidelines for the issuance of these Specialty
1305 Certificates.
- 1306 b) The Electrical Specialty Council shall endorse to PRC the issuance of certificate
1307 of specialty to Professional Electrical Engineers who have been screened, selected
1308 and recommended for having demonstrated their training, competence, specialized
1309 knowledge and outstanding experience in specific fields of expertise.
- 1310 c) The PRC shall issue the certificate of Specialty upon recommendation from
1311 the Electrical Specialty Council to Registered Electrical Engineers or Professional
1312 Electrical Engineers who have been trained, screened, have passed the written and oral
1313 examinations by the PRC accredited electrical engineering organization, and who have
1314 been declared as qualified for conferment as, but not limited to:
 - 1315 1. Certified Electrical System Inspector; and
 - 1316 2. Certified Electrical Plans Examiner.

1317 **SEC. 48. *Enforcement of the Act by Officers of the Law.*** – The Professional Regulation
1318 Commission shall be the enforcement agency of the Board. As such, the Commission shall
1319 implement the concerned provisions of this Act, enforce its implementing rules and
1320 regulations as adopted by the Board, conduct investigations on complaints including
1321 violations of the Code of Conduct of the profession and prosecute when so warranted. It shall
1322 be the duty of all duly constituted authorities through the officers of the law of the national

1323 government, or any provincial, city, or municipal government or any political subdivision
1324 thereof, to enforce the provisions of this Act and to prosecute any person violating the same.

1325 **SEC. 49. *Penalty Clause.*** – In addition to the administrative sanctions imposed under
1326 this Act:

1327 a) Any person whether private or public, Filipino or foreigner, who shall violate
1328 any of the provisions of this Act shall be guilty of misdemeanor and shall, upon
1329 conviction, be sentenced to a fine of not less than Fifty Thousand Pesos (P 50,000.00) nor
1330 more than Three Hundred Thousand Pesos (P 300,000.00) or imprisonment for a period
1331 not less than three (3) years nor more than six (6) years or both at the discretion of the
1332 court.

1333 b) Any person in the roster of licensed electrical practitioners of the PRC who
1334 shall violate any of the provisions of this Act shall be guilty of misdemeanor and shall
1335 upon conviction, be removed from the Registry, the license revoked and shall be
1336 sentenced to a fine of not less than Five Thousand Pesos (P 5,000.00) nor more than
1337 Thirty Thousand Pesos (P 30,000.00) or imprisonment for a period not less than six (6)
1338 months nor more than three (3) years or both at the discretion of the court.

1339 c) Any government agency or private firm or institution who violates under this
1340 Act shall be punished by a fine of not less than Fifty Thousand Pesos (P50,000.00) nor
1341 more than Five Hundred Thousand Pesos (P500,000.00) at the discretion of the court.

1342 d) The PRC through the Board, shall impose a minimum fine of One Hundred
1343 Thousand Pesos (P 100,000.00) annually to any government office or agency, private
1344 company, establishment, operator who deliberately and repetitively violates the
1345 provisions of this Act until such time that the Act have been complied with: *Provided*,
1346 That for purposes of the application of the fines, the Board shall prepare a system of
1347 penalties based on the violator's ability to pay, degree of willfulness, degree of
1348 negligence, history of non-compliance and degree of recalcitrance: *Provided, further*,
1349 That in the case of negligence with mitigating circumstances, the first time offender, to
1350 the discretion of the Board, may only be imposed a stern warning.

ARTICLE V

1353 ***SEC. 50. Terms of Office of Board Members.*** – Upon approval of this Act, the
1354 incumbent chairperson and two (2) members of the Board shall continue to serve until their
1355 terms of office expire or until their replacements have been appointed by the President of the
1356 Republic.

1357 **SEC. 51. *Transitory Provision for Complement of Electrical Engineers.*** – The Board
1358 may allow retainership under rules and limitations the Board may establish as a response to
1359 any shortage of Authorized Electrical Practitioners in compliance to the provisions on the
1360 required minimum engineering complement for establishments under this Act, until such
1361 proper time, at the discretion of the Board, that this transitory provision may be lifted.

1362 **SEC. 52. *Deletion from the Rosters of Electrical Engineers under the Old Law.*** –
1363 Associate electrical engineers, assistant electrical engineers and master electricians with
1364 certificates of registration under Republic Act No. 184 who have not renewed their
1365 certificates of registration under Republic Act No. 7920 shall be deleted from the roster of
1366 electrical engineers and shall be barred from practicing any form of electrical engineering.

1367 **ARTICLE VI**

1368 **FINAL PROVISIONS**

1369 **SEC. 53. *Implementing Rules and Regulations.*** – The Board shall formulate and issue
1370 the implementing rules and regulations to carry out the provisions of this Act.

1371 **SEC. 53. *Funding Provisions.*** – Such sums as may be necessary to carry out provisions
1372 of this Act shall be included in the General Appropriations Act of the year following its
1373 enactment into law and thereafter.

1374 **SEC. 55. *Repealing Clause.*** – Republic Act No. 7920 is hereby repealed. All other
1375 laws, decrees, executive orders, proclamations, rules and regulations, or parts thereof
1376 inconsistent with the provisions of this Act are hereby amended, repealed or modified
1377 accordingly.

1378 **SEC. 56. *Separability Clause.*** – If any provision or part of this Act is declared invalid
1379 or unconstitutional, the remaining parts or provisions not affected shall remain in full force
1380 and effect.

1381 **SEC. 57. *Effectivity Clause.*** – This Act shall take effect fifteen (15) days after its
1382 publication in the *Official Gazette* or in a national newspaper of general circulation.

1383 Approved,