

Republic of the Philippines
HOUSE OF REPRESENTATIVES
Quezon City, Metro Manila

NINETEENTH CONGRESS
First Regular Session



HOUSE BILL No. 5617

Introduced by Representative CARLITO S. MARQUEZ

EXPLANATORY NOTE

Measurement plays an essential role in science, industry, and commerce. In 2003, Republic Act No. 9236, also known as the “National Metrology Act of 2003,” established the national measurement infrastructure system of the Philippines. The law enables the Philippines to develop, maintain and disseminate measurement standards. Despite the efforts, the Philippines lagged behind Southeast Asia due to a lack of legal framework, policies, technical experts, facilities, and funding to cope with measurement science's fast-paced development and advancement.

The proposed bill will facilitate the development of scientific and technical knowledge and progress in the national economy by providing a modernized National Measurement Infrastructure System (NMIS). The modernized NMIS will ensure the integrity of measurements in the country, meet regional and international requirements on harmonization of national requirements, including technical regulations, document standards and conformity assessment procedures as envisioned in the ASEAN Economic Community (AEC), World Trade Organization (WTO) and other international agreements and covenants, and provide support for the competitiveness of Philippine products and services both local and international market.

This pandemic showed a vital role in medical treatment, from simple measurements of body temperature and blood pressure to more complex genetic analysis of viruses and caused the need for industries and government to adopt digital transformation in business processes. Digital technologies such as artificial intelligence, intelligent technologies, automation, and others depend on reliable and accurate measurements. Moreover, to bring the country to the next level in digital milestones, it is imperative to establish a modernized NMIS to help the country be self-reliant and sustain its scientific and technological requirements.

Given its wide-ranging importance in ensuring economic competitiveness, providing accuracy in the health system, securing consumer welfare, environmental protection, and energy sufficiency. The country's economic income, prosperity and development rely on the ability to develop, manufacture and trade competitive and high-quality products and services. Every day, traders, consumers, industries and the

government make decisions based on measurement results. In all matters relating to measurement, measuring instruments, and procedures, this bill supports the acceleration of national recovery and stability by implementing a modernization plan to meet the current and future demands of the stakeholders in metrology, as well as to adapt international best practices. Only through measurement can things be reliable and monitored accurately. Therefore, science and technology depend on the continuous evolution of measurement principles and procedures.

This legislative measure greatly benefits our country, but the importance of metrology also plays an essential role in generating benefits to many aspects of quality of life in fields such as health and safety, the environment, law and order, defense and security, leisure and trade, and consumer protection.

Therefore, the urgent passage of this bill is earnestly sought.



ENGR. CARLITO "Lito" S. MARQUEZ
Chairperson, Cttee on Science & Technology

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AN ACT
MODERNIZING THE NATIONAL MEASUREMENT SYSTEM (NMS) OF
THE PHILIPPINES, APPROPRIATING FUNDS THEREFOR AND FOR
OTHER PURPOSES

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

1 **CHAPTER I**

2 **GENERAL PROVISIONS**

3 **SECTION 1. Short Title.** – This Act shall be known as the “National
4 Measurement System Modernization Act of 2022”.

5 **SEC. 2. Declaration of Policy.** – It is hereby declared the policy of the State
6 to facilitate the development of scientific and technical knowledge and progress in the
7 national economy by providing a modernized National Measurement System (NMS)
8 that will ensure the integrity of measurements in the country, meet regional and
9 international requirements on harmonization of national requirements, including
10 technical regulations, document standards and conformity assessment procedures as
11 envisioned in the ASEAN Economic Community (AEC), World Trade Organization
12 (WTO) and other international agreements and covenants, and provide support for
13 the competitiveness of Philippine products and services.

14 In pursuance thereof, the State shall support the undertaking of necessary
15 activities to promote metrology, develop appropriate infrastructures, generate experts
16 on metrology and sustain research and development in metrology for the purpose of:

17 (a) continuously improving the national measurement standards and their
18 measurement uncertainties;

(b) developing novel measurement techniques and technologies aiming at Philippine industry take-up to stimulate industrial innovation; and

3 (c) addressing the measurement needs of Philippine society and industries,
4 focusing on contributions for (i) fair trade, (ii) trade facilitation, (iii) consumer
5 protection, (iv) environmental protection, (v) food security, (vi) energy efficiency, and
6 (vii) the health, security and economic well-being of Filipinos.

7 The State shall likewise define the authority, roles, responsibilities, and
8 contributions of the different instrumentalities of the national government, local
9 government units, the private sector and other non-government organization over the
10 field of metrology in the country.

11 **SEC. 3. Scope.** – This Act shall cover the legal system of units of measurement
12 and measurement standards of the country; all agencies, institutions, and entities,
13 public and private, involved in the field of metrology, including their authority and
14 contribution for the development of metrology; and the adoption of conformity
15 assessment procedures of measuring instruments, including the implementation of
16 legal metrological controls and the necessary penalties to ensure compliance thereto.

SEC. 4. Objectives. – Pursuant to the foregoing policy, the modernization of the National Measurement System shall have the following objectives:

19 a. Ensure that measurements in the country are reliable and enhance current
20 capabilities by upgrading physical resources and operational techniques through the
21 acquisition and development of state-of-the-art instruments, equipment, facilities and
22 systems;

23 b. Strengthen and harmonize the country's measurement system in accordance
24 with international best practices to support confidence in measurements for
25 regulation, trade and manufacturing through research and development (R&D), and
26 other similar activities:

27 c. Systematize the implementation of legal metrological controls of measuring
28 instruments in the country through the definition of the roles of the national authority
29 on legal metrology, national regulatory agencies (NRAs), local government units
30 (LGUs) and other entities authorized to perform such function as well as the adoption
31 of uniform processes in ensuring adherence to measurement standards, in the interest
32 of fair trade, trade facilitation, consumer protection, health, safety, law enforcement,
33 and environmental protection;

1 d. Disseminate knowledge on state-of-the-art calibration techniques and
2 develop competencies on legal metrological controls through capacity building
3 programs;

4 e. Foster a metrology culture that will instill a keen appreciation of metrology
5 as a discipline through public information, advocacy and the integration of metrology
6 courses in the education system; and

7 f. Establish a national metrology institute with the appropriate organizational
8 set-up and sufficient manpower complement, imbued with professionalism and
9 commitment to public service and compensated with a more competitive base pay and
10 other benefits.

11 **SEC. 5. *Definition of Terms.*** – For the purpose of harmonizing with
12 international best practices, the following terms are defined as follows:

13 a. *Accreditation* refers to the process in which an authoritative body formally
14 recognizes the competence, impartiality, capability and consistent operation of an
15 organization to carry out specific conformity assessment activities, such as
16 certification, testing, calibration and inspection;

17 b. *Calibration* refers to an operation that, under specified conditions, in a first
18 step, establishes a relation between the quantity values with measurement
19 uncertainties provided by measurement standards and corresponding indications with
20 associated measurement uncertainties and, in a second step, uses this information to
21 establish a relation for obtaining a measurement result from an indication;

22 c. *Certification* refers to a procedure where a third party provides written
23 attestation that a product, process or service meets specified requirements;

24 d. *Certified Reference Materials (CRM)* refers to the secondary measurement
25 standards or working measurement standard.

26 e. *Conformity assessment* refers to a set of processes that shows a product,
27 service or system meets specified requirements. The main forms of conformity
28 assessment are testing, certification, and inspection;

29 f. *Designated Institutes* refer to government agencies or private organizations
30 or entities appointed by the country's national metrology institute to hold and
31 maintain specific measurement standards and provide services that are not covered by
32 the national metrology institute;

33 g. *Inspection* refers to the examination of a measuring instrument to ascertain
34 all or some of the following: verification mark and/or certificate is valid, no sealing

1 marks are damaged, after verification the instrument suffered no obvious
2 modification, its errors do not exceed the maximum permissible in-service errors. The
3 inspection of a measuring instrument may be done only after verification. For
4 prepackaged products, it refers to the examination of an inspection lot through
5 random sampling to determine whether the stated quantity in a label is complied with,
6 subject to permitted tolerance deficiency;

7 h. *International System of Units* or *Système International d'Unités (SI)*, in
8 French, refers to a modern metric system establishing seven base units for base
9 quantities, namely: metre for length, kilogram for mass, second for time, ampere for
10 electric current, kelvin for thermodynamic temperature, mole for amount of
11 substance, and candela for luminous intensity. The derived units of the SI, such as
12 metre per second, watt, newton, are then formed as products of powers of the base
13 units, according to the algebraic relations that define the corresponding derived
14 quantities in terms of the base quantities;

15 i. *Legal metrological controls* refer to a series of evaluations and periodic
16 checks performed on regulated measuring instruments throughout their lifetime to
17 monitor if they are still suitable for their intended use. For prepackaged products, it
18 refers to the checking of the quantities contained in the package with reference to the
19 quantity indicated in the label;

20 j. *Legal metrology* refers to the practice and process of applying regulatory
21 structure and enforcement to measurements and measuring instruments to ensure
22 trade and legal decisions are fair, and that the health, safety and interest of every
23 citizen and his environment are protected against possible abuse related to wrong
24 measurements;

25 k. *Legal units of measurement* refer to units of measurement required or
26 permitted by regulations;

27 l. *Measurement standard* refers to a material measure, measuring
28 instrument, reference material or measuring system intended to define, realize,
29 conserve or reproduce a unit, or one or more values of a quantity to serve as a
30 reference;

31 m. *Measuring instrument* refers to a device used for making measurements,
32 alone or in conjunction with one or more supplementary devices. This may be an
33 indicating measuring instrument or a material measure;

1 n. *Metre Convention* refers to the diplomatic treaty which established a
2 permanent organizational structure for member governments to act in common
3 accord on all matters relating to metrology;

4 o. *Metrological traceability* refers to the property of a measurement result
5 whereby the result can be related to a reference through a documented unbroken chain
6 of calibrations, each contributing to the measurement uncertainty;

7 p. *Metrology* refers to the science of measurement and its application. It
8 includes all theoretical and practical aspects of measurement;

9 q. *National accreditation body* refers to the national authority which attests
10 to the competence and impartiality of conformity assessment bodies (testing and
11 calibration laboratories, certification and inspection bodies), according to
12 internationally accepted standards;

13 r. *National metrology institutes* refer to bodies with the responsibility of
14 maintaining the national measurement standards and disseminating the SI Units
15 nationally, to provide metrological traceability;

16 s. *National Regulatory Agencies* refer to national government departments,
17 bureaus, or offices that promulgate measurement standards for specific products or
18 services, conduct inspection and verification activities for measuring instruments and
19 prepackaged products, and issue certificates of compliance to measurement standards
20 and/or issue permits to use measuring instruments;

21 t. *Prepackaged products* refer to commodities that are enclosed in a
22 container or wrapped in any manner, and for which their quantities have been
23 determined and indicated on their labels prior to being offered for sale. The quantity
24 contained cannot be changed without the prepackaged product being opened or doing
25 a perceptible modification;

26 u. *Proficiency testing* refers to a comparison activity that determines the
27 continuous performance of individual laboratories for specific tests or measurements
28 for regular monitoring;

29 v. *Regional Metrology Laboratory* refers to a body under the Department of
30 Science and Technology (DOST) Regional Office that is tasked to provide calibration
31 and measurement services to stakeholders in the region;

32 w. *Regulated Areas* refer to field of endeavors or areas which are critical to
33 citizens as they affect health, safety, welfare, physical conditions, trade and commerce,

- 1 legal transactions, environment and other areas as may be determined by the National
- 2 Metrology Board and other laws; and

x. *Working measurement standard* refers to a measurement standard that is used routinely to calibrate or verify measuring instruments or measuring systems.

CHAPTER II

THE NATIONAL MEASUREMENT SYSTEM

8 **SEC. 6. National Measurement System.** – The National Measurement
9 System (NMS) is the collective infrastructure of national facilities, expertise,
10 knowledge and research, and the legal framework for reliable, consistent and
11 internationally recognized measurement, covering both the public and private sectors.
12 It shall provide confidence in measurements used for regulation, trade, and
13 manufacturing in the country.

The NMS shall cover the following:

- a. legal units of measurement;
 - b. national measurement standards;
 - c. hierarchy of measurement standards;
 - d. legal metrological controls;
 - e. metrological traceability;
 - f. registration of regulated measuring instruments; and
 - g. accreditation.

SEC. 7. Legal Units of Measurement. – The legal units of measurement of the country shall be the International System of Units (SI) and combinations of those units, and non-SI units that are:

a. accepted for use with the SI, such as, but not limited to, minute, hour, and day for time, hectare for area, tonne for mass, bar for pressure, angstrom for length, nautical mile for distance, decibel for sound level; and

b. allowed by international agreements, such as, but not limited to, feet for altitude navigation, and mmHg for blood pressure.

SEC. 8. National Measurement Standards. – The national measurement standards of the country shall be those measurement standards recognized by the National Measurement Institute of the Philippines (NMIPhil), created under Section 14 of this Act, and which shall serve as the basis for assigning quantity values to other measurement standards for the kind of quantity concerned. The national

1 measurement standards shall in all cases be assumed to be the most accurate
2 measurement standards of the country. The national measurement standards shall be
3 traceable to international measurement standards.

4 **SEC. 9. *Hierarchy of Measurement Standards.*** – The hierarchy of
5 measurement standards in the country shall be defined and disseminated by the
6 NMIPhil.

7 The NMIPhil, and its Designated Institutes, shall maintain the national
8 measurement standards of the country for the legal units of measurement having the
9 highest accuracy. They shall make use of national measurement standards to produce
10 and calibrate secondary measurement standards and, subsequently, make use of the
11 secondary measurement standards to produce working measurement standards.

12 The NMIPhil, or its Designate Institute, shall make use of the appropriate
13 measurement standards and provide metrological services at applicable levels of
14 accuracy for the calibration laboratories, testing laboratories, and proficiency testing
15 and reference materials providers to disseminate the legal units of measurement. They
16 may also provide the same services to industries, research and development institutes,
17 and other public or private entities, whose purpose or activities require or need a
18 higher level of accuracy, or in order to provide accessibility or achieve expediency:
19 *Provided*, That the NMIPhil and its Designated Institutes shall, foremost, promote and
20 encourage the establishment of private calibration laboratories, testing laboratories,
21 and proficiency testing and reference materials providers and, thereby, refrain from
22 competing with them.

23 These laboratories and providers shall, in turn, use working measurement
24 standards that have been calibrated by the NMIPhil, or its Designated Institute, to
25 provide the level of accuracy of calibrations and measurements needed by industry,
26 the academe, and other sectors.

27 For purposes of legal metrological control, calibration at applicable levels of
28 accuracy shall also be provided by NMIPhil, or its Designated Institute, to NRAs and
29 LGUs, and other public and private entities that may be tapped or contracted by NRAs
30 and LGUs to assist them, in the implementation of their mandates. NRAs and LGUs,
31 or the contracted public and private entities, shall use working measurement
32 standards calibrated by the NMIPhil, or its Designated Institute.

33 **SEC. 10. *Legal Metrological Controls.*** – Measuring instruments used in
34 trade, health, safety, law enforcement and environmental protection and in other field

1 of endeavors or areas that may be identified and declared by the NMB, and
2 prepackaged products, shall be subject to legal metrological controls of NRAs and
3 LGUs, pursuant to national laws, policies and rules and regulations, including those
4 guidelines promulgated by the NMB, in conformity with the relevant the International
5 Organization for Legal Metrology (*Organisation Internationale de Métrologie Légale*,
6 OIML) Recommendations, ASEAN Guidelines, ASEAN Common Requirements of
7 Prepackaged Products and other international agreements and commitments of the
8 country.

9 Any provision of law to the contrary notwithstanding, in order to tap the
10 technical expertise, facilities and equipment of other entities and for cost-efficiency
11 and effectiveness, NRAs and LGUs are hereby authorized to secure and contract the
12 services of other public and private entities, including calibration and testing
13 laboratories, proficiency testing providers and reference material producers, in
14 conducting legal metrological activities, subject to guidelines that will be issued by the
15 National Metrology Board, created under Section 18 of this Act. NRAs and LGUs shall
16 issue the appropriate certificate or permit upon compliance with the requirements of
17 applicable legal metrological control.

18 For the effective implementation of the preceding paragraphs, NRAs and LGUs
19 shall have the authority to enter premises during reasonable hours and inspect every
20 establishment or commercial premise, where regulated measuring instruments are
21 kept, used or may be installed. In the same manner, they shall also have the authority
22 to enter premises and inspect every premise or facility where prepackaged products
23 are manufactured, or may be filled, packed, labeled, kept or offered for sale. The
24 officers of NRAs and LGUs conduced the inspection and entering said premises may
25 be accompanied by personnel from contracted public and private entities who can
26 assist them and provide technical expertise in conducting legal metrological activities.

27 Any officer or agent of the establishments, commercial premises or other
28 facilities that refuse the inspection, and that findings in such inspections, shall be
29 subject to the provisions and be liable to the penalties imposed under Sections 31, 32
30 and 33 of this Act.

31 **SEC. 11. Metrological Traceability.** – Measurements in both the regulated
32 and non-regulated areas shall be traceable to the realization of the SI and other
33 accepted or allowed non-SI units through the national measurement standards

1 maintained by the NMIPhil and its Designated Institutes to ensure international
2 compatibility and acceptance of measurement results.

3 For the traceability of measurements that are not available or maintained in the
4 country, the NMIPhil shall recognize measurement standards of other ASEAN
5 Member States and of other national metrology institutes provided they are recognized
6 by the global metrology community.

7 **SEC. 12. Registration of Regulated Measuring Instruments.** – To
8 support and facilitate the implementation of legal metrological controls and for an
9 efficient metrological traceability, a system of registration of measuring instruments
10 is hereby mandated.

11 Information on measuring instruments used as working measurement
12 standards by the NRAs, LGUs, and other public or private entities authorized by the
13 NMB, shall be provided to the NMIPhil.

14 All measuring instruments used in trade, health, safety, law enforcement and
15 environmental protection, and other fields of endeavor or areas, shall be registered
16 with the relevant NRAs and LGUs.

17 The NMB shall promulgate the guidelines for the adoption and implementation
18 of the system of registration of measuring instruments.

19 **SEC. 13. Accreditation.** – To ensure the competence in the regulated areas
20 of all public calibration laboratories, testing laboratories, inspection bodies, certifying
21 bodies, proficiency testing providers, and reference materials producers, national
22 government departments and agencies and LGUs shall secure their accreditation from
23 the Philippine Accreditation Bureau (PAB), the country's national accreditation body,
24 before any metrological service in the regulated areas can be provided by them. Failure
25 to secure accreditation shall make these public institutions ineligible to perform
26 calibration and other metrological services.

27 To promote conformity and traceability to national measurement standards in
28 the private sector, particularly in industries, and for fair trade, safety and health of
29 consumers, all NRAs and LGUs, as needed for their regulatory functions and in the
30 absence or insufficient capacity of similar public institutions, shall utilize and/or rely
31 on private calibration laboratories, testing laboratories, inspection bodies, certifying
32 bodies, proficiency testing providers, and reference materials producers that are
33 accredited by the PAB.

1 Any proof of compliance to metrological requirements that is issued by any of
2 these public and private institutions that is not accredited shall be inadmissible as
3 basis in the issuance of a certificate or permit by NRAs and LGUs.

4

5 **CHAPTER III**

6 **THE NATIONAL MEASUREMENT INSTITUTE OF THE PHILIPPINES**

7 **SEC. 14. National Measurement Institute of the Philippines.** – There
8 is hereby created the national metrology institute of the country, to be known as the
9 National Measurement Institute of the Philippines (NMIPhil).

10 The National Metrology Division of the Industrial Technology Development
11 Institute of the Department of Science and Technology (DOST) and the different
12 Regional Metrology Laboratories of the DOST Regional Offices are hereby merged and
13 shall serve as the nucleus of the NMIPhil. It shall be attached to the DOST for policy,
14 program coordination and administrative supervision.

15 **SEC. 15. Mandates, Powers and Functions.** – The NMIPhil shall be
16 responsible for maintaining and disseminating the national measurement standards
17 of the country. It shall:

18 a. Maintain and continuously update the national measurement standards in
19 all relevant fields and, as such, guarantee that all its metrological laboratories,
20 infrastructure, equipment, instruments, artifacts, reference standards and other
21 similar articles are in good condition, internationally compliant, reliant and possess
22 other qualities that may be required in the future;

23 b. Recognize non-SI units as legal units of national measurement standards, in
24 addition to the SI units of measurement;

25 c. Provide metrological traceability to the realization of the International
26 System of Units (SI) and other accepted or allowed non-SI units for measurements
27 done in the country;

28 d. Facilitate international harmonization and comparability of measurements,
29 including participation in related international metrological activities, such as
30 proficiency testing, peer review, and research and development;

31 e. Appoint government agencies, public or private research institutes and
32 laboratories, and such other private organizations, as “Designated Institutes” capable
33 of holding and maintaining specific measurement standards or providing services that
34 are not covered by it;

1 f. Carry out the type evaluation/approval activities of regulated measuring
2 instruments: *Provided*, That in case it does not have the capability to conduct type
3 evaluation/approval for certain regulated measuring instruments, it may authorize
4 Designated Institutes and public or private institutions to conduct the same: *Provided*,
5 *further*, That in case such capability is not available within the country, it may
6 recognize the type evaluation/approval capability of national metrology institutes of
7 other countries and other foreign private institutions: *Provided, finally*, That the
8 foreign private institutions are recognized by the global metrology community;

9 g. Conduct, support, fund, engage, collaborate and/or coordinate research and
10 development work in metrology should be undertaken both in local and international;

11 h. Provide the necessary advice and technical support to the government,
12 industry, commerce and the public in measurement related issues;

13 i. Strengthen collaboration and coordinate with calibration laboratories and
14 other institutes/bodies having metrological responsibilities in the areas of capacity
15 building and harmonization of measurement protocols and other guidelines in
16 calibration;

17 j. Perform calibration procedures at appropriate levels of accuracy for
18 calibration laboratories, NRAs, LGUs and other public or private entities tasked to
19 disseminate SI and other non-SI legal units of measurement;

20 k. Disseminate knowledge and competencies in metrology through education
21 and capacity building programs to relevant NRAs, LGUS, laboratories, research and
22 development institutes, the academe, and other entities responsible for the
23 implementation of this Act;

24 l. Participate as a Member-State and represent the Philippines' interests in
25 international and regional metrology organizations, consultative committee meetings
26 and working groups, including, but not limited to, the General Conference on Weights
27 and Measures (*Conférence Générale des Poids et Mesures, CGPM*), the International
28 Organization for Legal Metrology (OIML), the Asia Pacific Metrology Programme
29 (APMP), and the Asia Pacific Legal Metrology Forum (APLMF);

30 m. Develop, expand and strengthen the country's human resource on
31 metrology, by providing capacity and capability building programs to NRAs, LGUs,
32 and other public and private entities performing metrological services and legal
33 metrology;

34 n. Impose fees and charges for its products and services;

1 o. Promulgate policies, rules and regulations, guidelines and such other
2 issuances as may be necessary to implement and achieve its mandates and objectives;

3 p. Provide support to National Quality Infrastructure-related institutes,
4 particularly on aspects of standardization, accreditation and conformity assessments
5 that are related to metrology;

6 q. Serve as the technical and administrative secretariat of the National
7 Metrology Board and, for this purpose, coordinate and monitor the adoption and
8 implementation of the policies, guidelines and activities pursued by the NMB;

9 r. Create programs/projects that will support and maintain the national
10 measurement standards of the country; and

11 s. Perform such other functions necessary to achieve the objectives of this Act.

12 **SEC. 16. *Organizational Structure.*** – The NMIPhil shall be headed by an
13 Executive Director, to be appointed by the President upon the recommendation of the
14 Secretary of the DOST and shall receive the benefits, privileges and emoluments
15 equivalent to the rank of Undersecretary.

16 As the chief executive officer, the Executive Director shall be responsible for the
17 promulgation and implementation of policies, rules and regulations, and in directing
18 and controlling the activities of the different offices, divisions and units of the
19 NMIPhil.

20 The Executive Director shall be assisted by three (3) Deputy Executive
21 Directors, for Scientific and Industrial Metrology, Legal Metrology and Quality
22 Management System, and Finance and Administration, who shall likewise be
23 appointed by the President and shall receive the benefits, privileges and emoluments
24 equivalent to the rank of Assistant Secretary.

25 The Executive Director and the Deputy Executive Directors must be Filipinos,
26 at least thirty-five (35) years old at the time of appointment, with at least three (3)
27 years of experience in the field of metrology, and of proven competence, integrity and
28 independence.

29 The NMIPhil, in coordination with the Department of Budget and Management
30 (DBM) and the Civil Service Commission, shall determine its organizational structure,
31 including the technical and administrative support complement necessary for its
32 effective and efficient operations. The organizational structure shall cover, but not
33 limited to, the following fields and areas of concerns:

34 a. Mass and Related Quantities;

- b. Metrology-In-Chemistry and Biometrology;
 - c. Photometry and Radiometry;
 - d. Thermometry and Hygrometry;
 - e. Length and Dimensional Metrology;
 - f. Electricity and Magnetism;
 - g. Time and Frequency;
 - h. Metrological Controls and Registration;
 - i. National Regulators and Laboratories Liaison;
 - j. Intellectual Property, Policy and Legislation;
 - k. National Metrology Training and Proficiency Testing;
 - l. Finance, Procurement and Administrative Management;
 - m. Planning, Information Technology, and Quality Management; and
 - n. Public Information and External Affairs.

14 There shall be established a National Metrology Training Center under the
15 NMIPhil to undertake training on metrology for building the competence and
16 capabilities of metrology-related entities and in implementing legal metrological
17 controls in the country.

**SEC. 17. Main Office, Regional Metrology Laboratories and Other
Centers and Facilities.** – The NMIPhil shall have its main office at the National
Government Administrative Center in New Clark City, Capas, Tarlac. The Bases
of Expansion and Development Authority shall provide, by way of usufruct in
perpetuity, at least thirty (30) hectares to be used exclusively for NMIPhil offices and
research facilities.

24 The NMIPhil shall maintain regional metrology laboratories and establish
25 offices, centers and research facilities/laboratories in strategic areas of the country.
26 The existing facilities of the National Metrology Division shall be retained by the
27 NMIPhil as a center to provide technical metrological services to laboratories,
28 industries, research institutions and academe.

CHAPTER IV

THE NATIONAL METROLOGY BOARD

SEC. 18. The National Metrology Board. – There is hereby established a National Metrology Board (NMB), which shall be the national authority that is responsible for standardizing, delineating, overseeing and coordinating the

1 implementation of legal metrological controls in the country by NRAs, LGUs, and
2 other public and private entities authorized by it, in the interest of fair trade, consumer
3 protection, health, safety, law enforcement, and environmental protection. In fulfilling
4 its mandate, the NMB shall adhere to attainment of the objectives of this Act and other
5 mandated national policies and regulations related to metrology, and pursue
6 conformance with the relevant OIML Recommendations, ASEAN Guidelines, ASEAN
7 Common Requirements of Prepackaged Products, and other international and
8 regional agreements and guidelines.

9 **SEC. 19. Powers and Functions of the NMB.** – The NMB shall have the
10 following powers and functions:

11 a. Promote and coordinate the use in the country of the legal units of
12 measurement;

13 b. To ensure the accuracy and application of the appropriate national
14 measurement standards in all commercial, economic, scientific, technical and similar
15 endeavors, promulgate national policies and guidelines that will guarantee the
16 adoption by all NRAs and LGUs of uniform technical regulations and legal
17 metrological controls throughout the country;

18 c. Oversee, coordinate and monitor the implementation and application of
19 legal metrological controls by NRAs, LGUs, and other public and private entities
20 contracted by them;

21 d. Harmonize and/or delineate the authority of NRAs and LGUs to regulate the
22 importation, sale and repair of measuring instruments, to implement legal
23 metrological controls, and to impose fees, charges and fines, and, as necessary,
24 recommend to the President, to Congress, national government departments and
25 regulatory agencies, and LGUs, the promulgation or enactment of policies, laws
26 ordinances that will promote ease of doing business and minimize red tape in the
27 bureaucracy;

28 e. Issue guidelines to NRAs and LGUs in contracting public and private entities
29 to provide legal metrological services;

30 f. Tap, secure or contract the services of public and private entities in
31 conducting monitoring and auditing activities in the review of guidelines issued;

32 g. Call upon any government department, agency or instrumentality, local
33 government units, private sector organizations and entities, and non-government
34 organizations, to provide data, information, expertise and recommendations in

1 formulating and promulgating policies and guidelines for an efficient and effective
2 legal metrological control; and

3 h. Perform such other functions as may be necessary for the attainment of its
4 mandates.

5 **SEC. 20. Composition and Meetings of the NMB.** – The NMB shall be
6 composed of the following:

7 a. The DOST, with the DOST Secretary as Chair, or an Undersecretary as
8 alternate chair;

9 b. The Department of Trade and Industry (DTI), with the DTI Secretary as Vice-
10 Chair, or the Undersecretary for Competitiveness and Innovation as alternate vice-
11 chair;

12 c. The Department of Health (DOH), to be represented by at least a Director IV
13 of any of the Regulatory Centers of the Food and Drug Administration;

14 d. The Department of Energy (DOE), to be represented by at least a Director IV
15 of any of the Bureaus of the DOE;

16 e. The Department of Agriculture (DA), to be represented by the
17 Undersecretary or Assistant Secretary for Regulations, or the Director IV of the Bureau
18 of Agriculture and Fisheries Standards;

19 f. The Department of Environment and Natural Resources (DENR), to be
20 represented by at least the Director IV of any of the Bureaus of the DENR;

21 g. The Executive Director of the National Measurement Institute of the
22 Philippines (NMIPhil);

23 h. The President of the Union of Local Authorities of the Philippines (ULAP),
24 or his/her duly authorized representative;

25 i. One (1) representative each from the:

26 (i) manufacturing industry;

27 (ii) local manufacturer of measuring instruments; and

28 (iii) private calibration laboratories /professional metrology association of
29 national membership.

30 The representatives of the private sector shall serve for a term of three (3) years,
31 to be appointed by the Secretary of the DOST from nominees submitted by their
32 respective organizations.

33 The Board shall convene at least twice a year. Special meetings may be
34 convened upon the request of the Chair or majority of the member of the NMB.

1 The Chair and Members of the NMB shall be entitled to per diems, allowances
2 and other reimbursable expenses as prescribed by the Department of Budget and
3 Management (DBM).

4 The NMIPhil shall provide technical and administrative secretariat support to
5 the NMB.

6

7 **CHAPTER V**

8 **CAPACITY ENHANCEMENT AND CAPABILITY BUILD-UP OF NMIPHI**

9 **SEC. 21. Strengthening of Research and Development.** – To enhance
10 the capability and capacity of the NMIPhil to expand and continuously improve the
11 national measurement standards and their measurement uncertainties, and develop
12 novel measurement techniques and technologies, its research and development
13 capacity shall be strengthened through the acquisition of new technologies, techniques
14 and expertise in new Calibration and Measurement Capabilities (CMCs) as well as
15 upgrading of capability for current CMCs.

16 The DOST, through its sectoral councils, shall be responsible for, among others,
17 the implementation of programs and projects and shall, in pursuit of thereof, provide
18 the following:

- 19 (a) Facilitate the development of the national metrology research and
20 development roadmap in consultation with other laboratories, research
21 institutions and other relevant stakeholders;
- 22 (b) Ensure the continuous funding support to effectively implement the
23 programs and projects of the roadmap;
- 24 (c) Monitor and assess the implementation of the roadmap;
- 25 (d) Oversee the implementation of the programs and projects funded by the
26 Grant-in-Aid programs of DOST.

27 **SEC. 22. Human Resource Development Program.** – The NMIPhil
28 shall formulate a continuing Human Resource Development Program to recruit and
29 maintain a cadre of highly-proficient personnel on the different aspects of metrology:
30 scientific metrology, industrial/applied metrology, and legal metrology. It shall
31 include:

- 32 (i) Scholarship and Financial Assistance – Not later than three (3) years from
33 the enactment of this Act, scholarship and financial assistance grants shall be provided
34 for undergraduate and graduate studies in metrology and related fields, as well as for

1 specialized training programs, in coordination with the DOST, Commission on Higher
2 Education (CHED), Technical Education and Skills Development Authority (TESDA),
3 Higher Education Institutions (HEIs), and other entities providing support for
4 metrology development in the country. Cooperation with international organizations
5 on human resources development and capacity enhancement shall also be undertaken;
6 and

7 (ii) New Salary Scale for NMIPhil Personnel - The DBM shall develop a new
8 salary scale for NMIPhil personnel in consonance with Republic Act No. 8439, as
9 amended, otherwise known as the “Magna Carta for Scientists, Engineers, Researchers
10 and other Science Technology Personnel in Government” with the corresponding
11 increase in the base pay, allowances and other benefits.

12 **SEC. 23. Acquisition and Upgrading of Physical Resources and
13 Operational Techniques.** – To efficiently and effectively address the expanding
14 measurement needs of society, industry, research institutions and the academe, the
15 acquisition and/or upgrade of state-of-the-art instruments, equipment, facilities and
16 systems shall be immediately pursued. This shall be complemented with technical
17 capability building programs for NMIPhil personnel that are similar or comparable to
18 those in other national metrology institutes and in accordance with international best
19 practices in order to support confidence in measurements for regulation, trade and
20 manufacturing.

21 **SEC. 24. Capacity Enhancement Plan.** – Within six (6) months from the
22 start of the effectivity of this Act, the DOST Secretary, and the Executive Director of
23 the NMIPhil, in consultation with the Secretary of the DBM and the Secretary of the
24 National Economic and Development Authority (NEDA), shall formulate the NMIPhil
25 Capacity Enhancement Plan and submit to the President for approval.

26 The Plan, to be implemented within six (6) years, shall indicate among others:
27 (a) The objectives and key performance indicators;
28 (b) Requirements in terms of equipment, facilities and personnel, and the
29 concomitant technical expertise, necessary to attain the Plan’s objectives;
30 (c) The projects to be undertaken, which shall indicate the equipment and
31 technology acquisitions, including major construction or upgrade of facility; and
32 (d) The schedules and estimated cost of each project.

1 **SEC. 25. Capacity Enhancement Fund.** – To fund the enhancement of the
2 capacity and capability build-up of the NMIPhil, there is hereby established the
3 NMIPhil Capacity Enhancement Fund. The Fund shall be sourced from the following:

4 (a) The amount of Three Billion Pesos (P3,000,000,000.00) to be taken from
5 the share of the National Government in the gross income of the Philippine
6 Amusement and Gaming Corporation (PAGCOR). For four (4) years from the start of
7 the effectivity of this Act, an amount of Seven Hundred Fifty Million Pesos
8 (P750,000,000.00) per year shall be released to the NMIPhil. The entire amount,
9 including any interest income thereon, shall be used exclusively for the construction
10 and purchase of facilities, equipment, information technology systems, and
11 instruments for metrology research and development and calibration purposes;

12 (b) Eighty percent (80%) of the income of NMIPhil from fees and other charges
13 for its products and services. This shall be used exclusively for the upkeep of
14 measurement standards and facilities, provision of technical capability building
15 programs, promotion of metrology culture, awareness raising programs and advocacy
16 campaigns, and likewise for the purchase of equipment, information technology
17 systems, and instruments for metrology research and development and calibration
18 purposes once the funds from PAGCOR have been fully utilized; and

19 (c) Loans, grants, bequests, and donations whether from local or foreign
20 sources. For this purpose, the Secretary of the DOST, with the approval of the NEDA
21 and subsequently the Department of Finance (DOF), is hereby granted the authority
22 to enter into loan agreements with foreign financial institutions.

23 The Fund shall be administered by the Executive Director in accordance with
24 existing government budgeting, accounting and auditing rules and regulations.

25 **SEC. 26. Multi-Year Contracts and Other Contractual
26 Arrangements.** – The NMIPhil may enter into multi-year contracts or other
27 contractual arrangements with local or foreign suppliers and contractors in the
28 implementation of the NMIPhil Capacity Enhancement Plan, and other programs and
29 projects provided with appropriations by Congress, subject to the approval of the
30 President.

31 For multi-year contracts, Congress shall, upon issuance of the multi-year
32 obligational authority by the DBM, make the corresponding appropriations for the
33 ensuing fiscal years: *Provided*, That the NMIPhil and the DBM shall jointly issue the

1 implementing guidelines to ensure consistency with the NMIPhil Capacity
2 Enhancement Plan and existing guidelines on the contracting of multi-year projects.

3 The Secretary of DOST shall submit to Congress, through the Chairmen of the
4 Senate Committees on Science and Technology and Finance and the Chairmen of the
5 House Committees on Science and Technology and Appropriations, copies of these
6 multi-year contracts and other agreements/ arrangements to enable Congress to
7 appropriate funds.

8 **SEC. 27. Direct Purchase of Equipment, Instrument, Artifact and**
9 **other National Measurement Standards.** – To attain the objectives of the
10 Capacity Enhancement Plan and ensure the expeditious acquisition and upgrading of
11 physical resources and operational techniques, the NMIPhil, for a period of six (6)
12 years from the start of the effectivity of the implementing rules and regulations of this
13 Act, is hereby authorized to directly undertake the procurement in the most judicious,
14 economical and expeditious manner, as exemption from the provision on bidding
15 process required under Republic Act No. 9184, otherwise known as the “Government
16 Procurement Reform Act”, and other related laws, of any equipment, instrument,
17 artifact, and/or other national measurement standards used for metrological
18 activities, including calibration, re-calibration, proficiency testing, and comparison
19 measurements, and services for preventive maintenance and repair, and foreign
20 technical services in the utilization and maintenance of these equipment, instrument,
21 artifact or other national measurement standards: *Provided*, That the following
22 information and documents related to the procurement shall be published in the
23 Government Procurement Policy Board (GPPB) online portal, the website of the
24 NMIPhil and at any conspicuous place reserved for this purpose in the premises of the
25 NMIPhil within seven (7) working days from the date of acceptance of the award:

26 (i) Project name;

27 (ii) Approved budget for contract;

28 (iii) Contract period;

29 (iv) Name of winning supplier, distributor, manufacturer, contractor or
30 consultant;

31 (v) Amount of contract as awarded;

32 (vi) Notice of award;

33 (vii) Date of award and acceptance;

34 (viii) Contract or purchase order; and

(ix) A certification stating that the NMIPhil exerted all efforts to secure the most advantageous price to the government based on its existing price data, the relevant agencies or preliminary market scanning done by the NMIPhil showing prevailing market prices and practice.

SEC. 28. *Tax Exemptions.* – Any provision of law to the contrary notwithstanding, any equipment, instrument, artifact, and/or other national measurement standards, spare parts, accessories, and other materials including supplies and services used solely and exclusively for metrological activities, including calibration, re-calibration and other related activities, proficiency testing, comparison measurements, preventive maintenance and repair, that are not obtainable locally or donated by the suppliers and other foreign NMIs and, thus, imported by NMIPhil shall be exempt from all taxes, duties, wharfage fees and other charges, restrictions and impositions by the Bureau of Customs, Bureau of Internal Revenue, or by the Department of Finance. The Secretary of Finance shall cause the promulgation of the necessary issuances to implement the provisions of this Section.

CHAPTER VI

Information, Advocacy and Education

SEC. 29. *Public Information and Advocacy.* – The NMIPhil, in collaboration with other concerned government agencies and stakeholders, shall engage in information campaigns and advocacy programs to increase the public's awareness on metrology and instill greater appreciation of metrology by the public.

SEC. 30. Education and Curriculum Development. The NMIPhil, Department of Education, CHED, TESDA and other concerned government agencies shall formulate the design and details of a curriculum on metrology and its inclusion in all levels of the Philippines' education system.

CHAPTER VII

Prohibited Acts, Fines and Penalties, and Penal Sanctions

SEC. 31. Prohibited Acts. – The following shall constitute prohibited acts of any person or juridical person and are hereby declared unlawful:

32 (a) use of units of measurement other than the legal units of measurement in
33 trade, commercial transactions, documentation and advertisements for products and
34 services, publications, or training;

1 (b) for any officer or agent of an establishment, commercial premise or other
2 facilities to refuse entry of duly authorized representatives of a NRA or LGU to
3 conduct an authorized inspection during reasonable hours;

4 (c) for any person other than the duly authorized representative of the
5 concerned NRA or LGU to place or attach an official tag, seal, sticker, mark, stamp,
6 brand or other characteristic sign used to indicate that such instrument of weight and
7 measure has officially been tested, calibrated, sealed or inspected;

8 (d) for any person to imitate any seal, sticker, mark, stamp, brand, tag or other
9 characteristic sign used to indicate that such instrument of weight or measures has
10 been officially tested, calibrated, sealed or inspected;

11 (e) for any person other than the duly authorized representative of the
12 concerned NRA or LGU to alter in any way the certificate or receipt given by the NRA
13 or LGU as an acknowledgment that the instrument for determining weight or
14 measure has been fully tested, calibrated, sealed or inspected;

15 (f) for any person to make or knowingly sell or use any false or counterfeit seal,
16 sticker, brand, stamp, tag, certificate or license or any dye for printing or making the
17 same or any characteristic sign used to indicate that such instrument of weight or
18 measure has been officially tested, calibrated, sealed or inspected;

19 (g) for any person other than the duly authorized representative of the
20 concerned NRA or LGU to alter the written or printed figures, letters or symbols on
21 any official seal, sticker, receipt, stamp, tag, certificate or license used or issued;

22 (h) for any person to use or reuse any restored, altered, expired, damaged
23 stamp, tag certificate or license for the purpose of making it appear that the
24 instrument of weight of measure has been tested, calibrated, sealed or inspected;

25 (i) for any person engaged in the buying and selling of consumer products or
26 of furnishing services the value of which is estimated by weight or measure to possess,
27 use or maintain with intention to use any scale, balance, weight or measure that has
28 not been sealed or if previously sealed, the license therefor has expired and has not
29 been renewed in due time;

30 (j) for any person to fraudulently alter any scale, balance, weight or measure
31 after it is officially sealed;

32 (k) for any person to knowingly use any false scale, balance, weight or measure,
33 whether sealed or not;

1 (l) for any person to fraudulently give short weight or measure in the making
2 of a scale;

3 (m) for any person, assuming to determine truly the weight or measure of any
4 article bought or sold by weight or measure, to fraudulently misrepresent the weight
5 or measure thereof; or

(n) for any person to procure the commission of any such offense
abovementioned by another.

8 Instruments officially sealed at some previous time which have remained
9 unaltered and accurate and the seal or tag officially affixed thereto remains intact and
10 in the same position and condition in which it was placed by the duly authorized
11 representative of the concerned NRA or LGU shall, if presented for sealing, be sealed
12 promptly by the duly authorized representative of the concerned NRA or LGU without
13 penalty except a surcharge fixed by law, regulation, or ordinance.

14 **SEC. 32. Penal Sanctions.** - Any person who violates any provision of
15 Section 31 of this Act shall be penalized by imprisonment of not less than six (6)
16 months but not more than five (5) years or a fine of not less Fifty Thousand Pesos
17 (PhP50,000.00) but not more than Five Hundred Thousand Pesos (Php 500,000.00),
18 or both upon the discretion of the court: *Provided, however,* that if the violator is a
19 corporation, firm, partnership or association, the penalty shall be imposed on the
20 president or the manager or any officer thereof who knows or ought to have known the
21 commission of the offense: *Provided, finally,* That in case the offender is an alien
22 engaged in business in the country, his license shall be revoked and shall be *ipso facto*
23 deported after service of sentence without need of further proceedings.

24 **SEC. 33. Administrative Fines and Penalties.** – NRAs and LGUs shall
25 continue to impose fines and penalties pursuant to their charters or special laws and
26 Republic Act No. 7160, as amended, otherwise known as the “Local Government Code
27 of 1991”, subject to the harmonization of their technical regulations, fees and charges
28 by the NMB.

CHAPTER VIII

Miscellaneous Provisions

SEC. 34. *Transitory Provisions.* – All powers, functions, personnel, appropriations, funds, records, equipment, facilities, other assets, and liabilities of the National Metrology Division and the Regional Metrology Laboratories in the different

1 DOST Regional Offices shall be transferred to the NMIPhil within six (6) months from
2 the effectivity of this Act.

3 The existing personnel of the National Metrology Division and the Regional
4 Metrology Laboratories shall continue to assume their posts in holdover capacities
5 until new appointments are issued: *Provided*, That there shall be no diminution of
6 rank and salaries, allowances and benefits of transferred employees.

7 The organizational structure, staffing pattern, operating system, and revised
8 budget of NMIPhil shall be put in place within six (6) months from the start of the
9 effectivity of this Act.

10 The membership, rights and obligations of the NMD in international and
11 regional metrology organizations are hereby assumed by the NMIPhil.

12 **SEC. 35. Implementing Rules and Regulations.** – Within ninety (90)
13 days from the start of the effectivity of this Act, the DOST, in consultation with the
14 relevant national government departments and agencies, LGUs, the private sector, and
15 other concerned organizations, shall issue the necessary implementing rules and
16 regulations of this Act.

17 **SEC. 36. Progress Report.** – The Executive Director of the NMIPhil shall
18 submit an annual report on the status of the implementation of this Act, through the
19 Secretary of the DOST, to the President of the Philippines and to the Chairpersons of
20 the Committees on Science and Technology of the Senate and the House of
21 Representatives not later than June 30 of the succeeding year.

22 **SEC. 37. Appropriations.** – The amount necessary to carry out the
23 provisions of this Act shall be initially charged against the current fiscal year
24 appropriations of the DOST-Industrial Technology Development Institute (ITDI).
25 Thereafter, the amount needed for the continued implementation of this Act shall be
26 included in the General Appropriations Act.

27 **SEC. 38. Separability Clause.** – If for any reason, any provision of this Act
28 is declared unconstitutional, the other sections or provisions hereof which are not
29 affected shall continue to be in full force and effect.

30 **SEC. 39. Repealing Clause.** – Republic Act No. 9236 and Articles 61 to 65
31 of Chapter II of Title III of R. A. No. 7394 are hereby repealed. All other laws, decrees,
32 orders, rules and regulations or portions thereof that are inconsistent with this Act are
33 hereby repealed or modified accordingly.

1 **SEC. 40. *Effectivity.*** – This Act shall take effect fifteen (15) days after its
2 complete publication in the Official Gazette or in at least two (2) newspapers of general
3 circulation.

Approved,