



LAO PEOPLE'S DEMOCRATIC REPUBLIC

PEACE INDEPENDENCE DEMOCRACY UNITY PROSPERITY

Ministry of Science and Technology

No: 1014 /MoST

Vientiane Capital, date: 26 Sep 2016

Decision of
The Minister of Science and Technology
On Watt-Hour Meter Management in Lao PDR

- Pursuant to The law on Metrology Law, No: 36/NA, dated: 13 Dec 2013;
- Pursuant to Decrees of The Prime minister on implementation and performance of Ministry of Science and Technology, No: 309/PM, dated: 28 Sep 2011;
- Upon the proposal of the Department of Standardization and Metrology, No: 2018/MoST-DoSM, dated: 16 Sep 2016.

The Minister of Science and Technology

Decision:

Chapter 1

General Provisions

Article 1. Objective

This decision defines principles, regulations, and measures for Traceability, Calibration and registration and verification management of the Watt-Hour meter that produce, import, export, user and services in Lao PDR; To be unified, on the basis of accuracy, Clearly in accordance with regional and international regulations, With the aim of promoting quality services and adapting to reality, contributing to the national socio-economic development.

Article 2. Watt-Hour Meter

Watt-Hour meter is measure instrument to use for record electric power measure from consumption depending on electricity $P(w)$, $Q(Var)$ and time using $t(h)$, energy

recording (kWh) and (kVarh) from Watt-Hour meter to calculate power electric for trading between the operator and the user.

Article 3. Explanations

1. Flow rate mean electric current that flows through watt-hour meter in working time;
2. U mean a Voltage the unit is (V);
3. F mean electric frequency the unit is (Hz);
4. I mean electric current the unit is (A);
5. P mean electric power the unit is (W);
6. Q mean artificial strength the unit is (Var);
7. $\cos \varphi$ mean electric power copper;
8. Class mean a kind of precision;
9. t mean the time to use real electric (h);
10. Measuring instrument is a device used for making measurements, alone or in conjunction with other supplementary devices including watt-hours meter;
11. Sealing mark on a measuring instrument mean a mark that protects the measuring instrument against any unauthorized modification, adjustment, removal of part or parts;
12. Verification mark mean the mark applied to a measuring instrument and equipment certifying the accuracy of the measuring instrument and equipment was carried out with satisfactory results;
13. Calibration certification mean a document to certify the result of verification certificate of watt-hours meter.

Article 4. Scope of Application of the Decision

This decision is applied to individuals, and organization that launch the business all type of watt-hours meters in Lao PDR.

Article 5. Basic principle for watt-hours meter management

The watt-hours meter management are a kind of traceability, Calibration and registration and verification to improve quality and capability of watt-hour meter on management, services and consumer protection base on the following principle:

1. To provide the needs and ensure the safety of life, properties, environment and stability of electricity;
2. To ensure the public awareness, justice, unity and transparency, reliability, discrimination, barrier to trade avoidance and watt-hours meter user;
3. The watt-hours meter that import, export, use and service must be registered and calibrate from relevant authority to comply with the management regulation of national, regional and international;
4. To ensure the conformity aligns with laws and the situation of using each watt-hours meter.

Chapter 2

Rights and Obligations of business operation and consumer

Article 6. Rights of the business operator

Rights of the business operator consist of:

1. To advertise and promote the watt-hours meter after verification;
2. To request for justice whenever the verification of watt-hours meter is not fair;
3. To inform the relevant management authority of re-traceability unless the watt-hours meter is not stable;
4. To exercise other authorities and perform other duties as prescribed by regulations and relevant law.

Article 7. Rights for Consumers

Rights of the consumers consist of:

1. Complain to related authorities whenever service is unfair and non-conformed to standard accuracy of the watt-hours meter;
2. To inform the suppliers for inspection or replacement whenever the watt-hours meters are broken or out of tolerance;
3. To exercise other rights as prescribed by regulations and relevant law.

Article 8. Obligations of business operators

Obligation of business operators consist of:

1. Samples of watt-hours meter shall be calibrated from relevant authorities to comply with the standard before importing;
2. To sustain the traceability measurement with international system of unit through Department of Standardization and Metrology;
3. All Testing and measurement instrument that Lao Electric power enterprise using for verification shall calibrated according to international procedure;
4. Watt-hours meter that using in Lao PDR shall comply with standards that determined by International Electric Commission (IEC);
5. Testing, accuracy verification, install and maintain shall accredited from trusted authority;
6. The watt-hours meter that installed in building for business or private or Government sectors shall have sealing mark calibrate certification from the relevant authority;
7. Before using and services the watt-hours meter shall calibrate and registration accuracy;
8. To be responsible for all damages caused by watt-hours meters out of standard;
9. To be responsible for the watt-hour meters damages after installation;
10. To collaborate and facilitate to authority officers while verifying each time;

11. To exercise other obligations as prescribed by relevant regulations and law.

Article 9. Obligation of consumer for watt-hour meters

The obligation of consumer consist of:

1. To use the services by following the recommendation of suppliers;
2. To be responsible for all damages caused by any adjustment of the weighing instruments;
3. To exercise other obligations as prescribed by regulations and relevant law.

Chapter 3 Management and Certification Authorities

Article 10. Management and Certification Authorities

Management and Certification authorities assign department of Standardization and Metrology, division of Science and Technology provincials, Vientiane capital as assigned by hierarchy management.

Article 11. Rights of the management and certification authorities

The right of management and certification authorities consist of:

1. Traceability, calibration and verification management of watt-hour meters to conform to the standards, national regulations and regional and international requirements as defined;
2. To send the samples of watt-hour meters for quality inspection to comply with national, regional and international standards before import, export, usage and services;
3. To issue the traceability, calibration and verification of the watt-hour meters after inspection correctly according to the national, regional and international standards;
4. Unconformity to the national, regional and international standards after inspection shall be collaborate with related sectors to discontinue the import, export, produce and give services about watt-hour meters to inform to the hierarchy management.

Article 12. Main duties of the management and certification authorities

The main duties of the management and certification authorities consist of:

1. To collaborate with relevant sectors for inspection and verification the watt-hour meters to conform with the national and regional standards;
2. Justice, transparency, equality and purity on their duties;
3. To give suggestion to manufacturers, importers, exporters and distributors on the process for applying registration of traceability, calibration and verification the watt-hour meters;

4. Assessment, Accredited measurement of watt-hour meters and make list the supplier who were acceptance that can buy or installs by Lao Electricity Enterprise, the measurement shall comply with procedure determined by international organization;
5. To maintain and provide information to the relevant sectors on inspection and verification of watt-hour meters management;
6. To issue the traceability, calibration and verification of the watt-hour meters after inspection correctly according to the national, regional and international standards;
7. To exercise other duty as prescribed by regulations and relevant law.

Chapter 4

Documentation system, Inspection rules and Certification

Article 13. Registration and verification documents

Registration and verification application documents for watt-hour meters include as following:

1. Application form;
2. Copy of business operation document;
3. Copy of production, import, export and service applications;
4. Certification of origin;
5. Other related documents.

Article 14. Considerations and approval of documents

1. Application for traceability, calibration and verification of watt-hour meters shall be considered within 10days of official working day, since the application is applied;
2. Complete and verified documents shall be issued within 5days of official working day.

Article 15. Issuing of traceability, calibration and verification certificates

Individuals and organizations both national and international organizations that operate their business concerning to weighing instrument in Lao PDR before import, export, trade and services shall be traced, calibrated and verified by Department of standardization and Metrology, Division of Science and Technology Provinces, Vientiane capital as assigned.

The certificate will be issued at once without expired date, for the period of verification approval is 1year since verification date issued.

Article 16. Fees and fines measure

Traceability, Calibration and registration and verification of watt-hour meters shall be charge and measure as followed:

1. Fees shall be referred to the ordinance of the president on Fees and Service charges of Metrology Activity that issue each time;
2. Fines shall be referred to the decree of the minister on the fines and measures for violators of standards and metrology laws.

Article 17. Principles of traceability, calibration and verification

Operation principles of traceability, calibration and verification for watt-hour meters including:

1. Verification operation each time shall inform their ID cards issued by Department of Standardization and Metrology, Division of Science and Technology Provinces, Vientiane Capital as assigned;
2. 10% of Samples of the watt-hour meters will be verified by Department of Standardization and Metrology, Ministry of Science and Metrology;
3. Verification certificates shall be issued after the watt-hour meters verified correctly each time;
4. In case of the unconformity of calibration, verification result shall be suspended the import, export and service temporary referring to the national and regional standards, then report to the relevant sectors for resolution.

Article 18. Types and Time frame for verification

Verification and time define for verification of watt-hour meters include 03 type as followed:

1. All watt-hour meters shall be verified before use and service including watt-hour meters produced in Laos and import from aboard;
2. Annual verification shall be implemented as:
 - Class 0,2 verified 05 years/time
 - Class 0,5 verified 05 years/time
 - Class 1,0 verified 03 years/time
 - Class 2,0 verified 02 years/time
3. Emergency verification shall be verified without specific time and informing in advance.

Chapter 5

Types and Attributes of Watt-hour meters

Article 19. Types of Watt-hour meters

Types of watt-hour meters using in Laos include as followed:

1. Watt-hour meter that direct install use low voltage 0,4 kW;
 - Watt-hour meter single Phase voltage 230 v: 3/9, 5/15, 5/20, 10/40, 10/60, 20/80A;
 - Watt-hour meter 3Phase voltage 400 v: 10/40, 15/60, 20/60, 20/80A;
2. Watt-hour meter that install CT, VT use higher Voltage 0,4kv, 22kv, 115kV;
 - Watt-hour meters 3Phase: 4 line together with CT 0,4 kV;

- Watt-hour meters 3 Phase: 3 line together with CT, VT, 22kV;
- Watt-hour meters 3 Phase: 4 line together with CT, VT, 22kV, 115kV up.

Article 20. Permissible errors of Watt-hour meters for each Class

Permissible errors of watt-hour meters for each Class include:

- Class 0,2 ± 0,2 %
- Class 0,5 ± 0,5 %
- Class 1,0 ± 1 %
- Class 2,0 ± 2 %

Article 21. Labeling and Marking

All watt-hour meters shall be labeled and marked, the information shall be cleared and in Lao Language, in case of foreign Language shall be comply with Lao language as below:

1. Name or trade mark of manufacturer;
2. Name and address of factory or company, importer or distributor;
3. Types;
4. Number;
5. Frequency;
6. Set Voltage;
7. Set Electricity and Maximum electricity;
8. Multiplic number of round/kWh;
9. Class;
10. The reading point indicates the measured;
11. Instructions;
12. Barcode;
13. Standard mark (if have);
14. Verification mark of watt-hour meters.

**Chapter 6
Restrictions**

Article 22. Restrictions for business operators

Restrictions for business operations consist of:

1. To forge and adjust any measuring equipment relevant to watt-hour meters;
2. To occupy, install the watt-hour meters that is not verified or certification mark by metrology management authorities;
3. To interrupt the performances of metrology verification and inspection authorities, to bribe and consort with inspection authorities;
4. To duplicate the certified document relevant to any watt-hour meters.

Article 23. Restrictions for officers or authority officers

Restrictions for officers or authority officers as followed:

1. Authority officers are not allowed to perform their duties without assignment;

2. Authority officers shall perform their duties strictly;
3. To perform injustice and prejudice against individuals or organizations;
4. To bribe and use their duties for personal benefit;
5. To forge, hold back and delay the documents of certification;
6. To perform other duties that comply with regulations and laws.

Article 24. Restrictions for individuals and organizations

Restrictions for individuals and organizations consist of:

1. To interrupt and interfere the performance of inspection authority officers;
2. To advertise and promote the watt-hour meters that are not inspected correctly;
3. To make pollution to the environment and social;
4. To assist and protect the violators of the Decision;
5. To conceal and hide the violation that concerns to the regulations and laws;
6. To perform other duties that comply with regulations and laws.

Chapter 7 Policies towards Persons with Outstanding performance and measures against violators

Article 25. Policies towards persons with outstanding performance

Individuals and organizations with outstanding performance in cooperation, implementation the regulation and law related to metrology management or this Decision will receive the rewards or other policies as defined by regulation and law.

Article 26. Measures against authority officers

Authority officers who interrupt or violate this Decision shall be punished as following: education, removal, imposition or dismiss, and other measures as provided by Chapter 8 of Penal law, in any cases and other relevant regulations and law.

Article 27. Other measures against violators

Individuals and organization that violate this Decision shall be warned and subject to educational or disciplinary, fines, penal measures, compensations or punishment as any cases by regulations and laws.

Chapter 8 Final Provisions

Article 28. Implementation

The ministry of Science and Technology assigns the Department of Standardization and Metrology to collaborate with related departments and organizations to implement this decision according to their duties.

Article 29. Effectiveness

This Decision comes into effect on the date of its signing and after posting on Lao Official Gazette for 15 days. All registrations that are incompliant with this Decision must be cancelled.

Minister
Ministry of Science and Technology
Borviengkham Vongdala