

DOI: <https://doi.org/10.15407/techned2019.03.074>

COMMERCIAL METERING DATA MANAGEMENT IN CONDITIONS OF UKRAINE'S ELECTRICITY MARKET LIBERALIZATION

Journal	Tekhnichna elektrodynamika
Publisher	Institute of Electrodynamics National Academy of Science of Ukraine
ISSN	1607-7970 (print), 2218-1903 (online)
Issue	No 3, 2019 (May/June)
Pages	74 – 84

Authors

O. Kotsar¹, I. Rasko²

¹- National Technical University of Ukraine Igor Sikorsky Kyiv Polytechnic Institute,
pr. Peremohy, 37, Kyiv, 03056, Ukraine,
e-mail: kovpers@ukr.net

²- Educational-Scientific-Production Complex-ETU Ltd.,
str. Heroiv UPA, 73, Lviv, 79041, Ukraine,
e-mail: iurii.rasko@gmail.com

Abstract

The liberalization of the electricity market aims, in particular, to stimulate market players towards energy-efficient behavior, mainly through widespread use of distributed generation based on alternative and renewable energy sources, efficient use of energy resources, and the real time matching of demand and proposals in the market. Finally this should help to reduce the use of fossil fuels and minimize the negative impact on the environment. The essential condition for effective use of market mechanisms for energy management is to ensure the accuracy, completeness, integrity, authenticity and relevance of metering data at the all points of commercial metering in the electricity market. The article investigates the factors influencing the reliability of data metering at different stages of their formation in distributed smart systems for control, commercial metering and energy management, analyzes the experience of verification and validation the data of commercial metering in the wholesale and retail electricity

markets of Ukraine, and are proposed the effective mechanisms for ensuring the reliability of commercial metering data in conditions of liberalization of the electricity market of Ukraine. References 10, figures 6, tables 3.

Key words: smart metering system, metering data, authenticity, primary database, electricity market, metering point, demand side management.

Received: 18.12.2018

Accepted: 12.02.2019

Published: 05.03.2019

References

1. On Electricity Market: The Law of Ukraine 13.04.2017 No 2019-VIII. URL: <http://zakon3.rada.gov.ua/laws/show/2019-19>
(Accessed at 20.02.2019). (Ukr)
2. Directive 2009/72/EU concerning common rules for the internal market in electricity and repealing: Directive 2003/54/EC. *Official Journal of the European Union*. 14.08.2009. L 211/55–93.
3. Unified Data Transfer Protocol ASCMM MO WEM. Specification. Protocol version 1.0. Document Version 1.1.3.1. 2003 65 p. URL: <http://www.er.gov.ua/doc.php?c=13&wid=91be95c2e3479e0eb4da444ae693e28a>
(Accessed at 20.02.2019). (Rus)
4. Kotsar O.V., Polishchuk O.Y. Practical aspects of work and exploration of ASCMM of final consumers. *Enerhetyka ta Elektryfikatsiia*. 2013. No 6. Pp. 53–64. (Ukr)
5. Code of Commercial Electricity Metering. NEURC decree 14.03.2018 No 311. URL: <http://www.nerc.gov.ua/?id=31799>
(Accessed at 20.02.2019). (Ukr)

6. The procedure for checking the data which received from automated systems for commercial electricity metering of WEM players: NERC decree 16.06.2011 No 1042 and 17.11.2011 No 2195. URL: <http://www.er.energy.gov.ua/doc.php?c=1228> (Accessed at 20.02.2019). (Ukr)
7. Kotsar O.V., Rasko Y.O. Forming of information support for commercial settlement in the WEM of Ukraine. *Enerhetyka: ekonomika, tekhnolohii, ekolohiia*. 2014. No 3. Pp. 38–45. (Ukr)
DOI: <https://doi.org/10.20535/1813-5420.3.2014.126201>
8. The Rules on the Electricity Using: NERC decree 31.07.1996 No 28 in the wording of the NERC decree 17.10.2005 No 910 with amendments and supplements.
9. Kotsar O.V. The electricity metering data classification. *Measuring Equipment and Metrology*. 2018. No 79 (2). Pp. 42–52. (Ukr) DOI: <https://doi.org/10.23939/istcmtm2018.02.042>
10. Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). *Official Journal of the European Union*, 04.05.2016. L 119/1–88.

[PDF](#)