

УДК 343.7

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ВИКРАДЕННЯ ЕЛЕКТРИЧНОЇ АБО ТЕПЛОВОЇ ЕНЕРГІЇ ШЛЯХОМ ЇЇ САМОВІЛЬНОГО ВИКОРИСТАННЯ: ПОРІВНЯЛЬНО-ПРАВОВИЙ АСПЕКТ

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THEFT OF ELECTRICAL OR THERMAL ENERGY THROUGH ITS UNAUTHORIZED USE: A COMPARATIVE-LEGAL ANALYSIS

Generation, transmission and distribution of electrical energy involve many operational losses. Whereas, losses implicated in generation can be technically defined, but transmission and distribution losses cannot be precisely quantified with the sending end information. This illustrates the involvement of nontechnical parameter in transmission and distribution of electricity. Overall technical losses occur naturally and are caused because of power dissipation in transmission lines, transformers, and other power system components [1, p. 1114].

Electricity power theft takes place in a variety of forms and thrives with the support of people from different walks of life: utility staff, consumers, labour union leader, political leaders, bureaucrats and high level utility officials.

The problem challenging power utilities worldwide is the electricity, in other words using electricity from utility company without the company's consent. Significantly, it is enough to destroy the entire power sector of country. According to source 20% losses means the masses would have to pay extra 20% in terms of electricity tariffs. This paper discusses the problem of electricity theft as well as proposed new method for calculate and judge the seal braking and also whether electricity stealing is happened or not [2, p. 512-513].

In criminal legal doctrine ambiguously addressed the issue of recognition of the "fluid" (tap water, electricity, gas) as things, in a number of countries, the legislator chose to highlight the abduction as an independent property crime (Albania, Austria, United Kingdom, Vanuatu, Germany, Iran, Spain, Colombia, Côte d'Ivoire, Cuba, Latvia, Lithuania, Moldova, Panama, Paraguay, El Salvador, United States, Switzerland, Sweden, Estonia).

The Criminal Code of Ukraine has an article 188-1 «Theft of electrical or thermal energy through its unauthorized use».

The article provides for criminal liability behind theft of electrical or thermal energy through its unauthorized use without metering (if use of metering is required) or by intentional damage of meter instruments or in any other manner, if such actions caused considerable damage.

According to p. 2 art. 188-1 the same actions committed repeatedly or upon prior conspiracy of a group of persons, or if they caused damage in large amounts shall be punishable by imprisonment for a term up to three years [3].

The criminal laws of some other states equalized electricity and other forms of energy to the property (Italy, the Republic of Korea, France, Japan).

Gas and electricity theft are dealt with in New York State in ways that closely resemble practice in the UK; however a significant difference is the presence in N.Y. State's procedures of a requirement for administrative hearings of disputes between consumers and their supply company by the Public Service Commission. Stealing gas and electricity (typically "meter tampering", or "intentional diversion" by small landlords or small commercial enterprises) is a crime under the N.Y. Penal Law. Prosecution is rare and this is believed to be due to the universal service provisions of the N.Y. Home Energy Fair Practices Act under which continuous residential electric and gas service is declared to be a public policy [5].

Rubens Alexandre de Faria, Keiko V. Ono Fonseca and Bertoldo Schneider Jr. note that smart meters (gas, electricity, water, etc.) play a fundamental role on the implementation of the Smart Grid concept. Nevertheless, the rollout of smart meters needed to achieve the foreseen benefits of the integrated network of devices is still slow.

Among the reasons for the slower pace is the lack of trust on electronic devices and new kinds of frauds based on clever tampering and collusion. These facts have been challenging service providers and imposing great revenues losses. This paper presents a use case of forensics investigation procedures applied to detect electricity theft based on tampered electronic devices. The collusion fraud draw our attention for the involved amounts (losses) caused to the provider and the technique applied to hide fraud evidences [6].

Thomas B. Smith highlights four kinds of "electricity theft" are prevalent in all power systems. The extent of the theft will depend upon a variety of factors—from cultural to how the power utility is managed.

1) Fraud is when the consumer deliberately tries to deceive the utility. A common practice is to tamper with the meter so that a lower reading of power use is shown than is the case.

2) Stealing electricity. Electricity theft can be arranged by rigging a line from the power source to where it is needed bypassing a meter. In South Asian countries this practice is quite common in poor residential areas where those wanting electricity may not have lines allocated and may not be able to pay if they were connected. Called the kunda system in Pakistan, this practice is often accepted by power managers as a fact of life in poor communities.

3) Billing irregularities can occur from several sources. Some power organizations may not be very effective in measuring the amount of electricity used and unintentionally can give a higher or lower figure than the accurate one.

4) Unpaid bills. Some persons and organizations do not pay what they owe for electricity. Residential or business consumers may have left the city or an enterprise has gone bankrupt.

Vrushali V.Jadhav, Soniya S.Patil, Rupali V.Rane, Swati R.Wadje identify methods used to commit theft fall into the Following broad categories: A. Connection of supply without a meter Connection of supply without a meter following disconnection for nonpayment or by “squatters” occupying empty properties. B. Bypassing the meter with a cable It covered into the supply side of the metering installation (i.e. the meter terminals, the metering cables, the cut-out or the service cable). C. Interfering with the meter to slow or stop. The disc, including use of electrical devices which stop the meter or cause it to reverse (so-called black boxes). D. Interfering with the timing control Equipment used for two rate tariffs to obtain a cheaper rate. Methods (C) and (D) usually involve removal of official (certification) seals and/or company seals [7].

Electricity thefts may occur in different forms. From available literature and practical daily reports in Nigeria, the common ways include bypassing (illegal tapping of electricity from the feeder), meter tampering (by grounding the neutral wire as it does not measure readings) and physical methods to evade payment of bills. The basic method of stealing electricity is a direct wire-connection to a main power route passing a shop or a house so that electricity can flow to the consumer without crossing the electric meter installed by a government agency which is responsible for providing electrical services to customer [8].

There are different types of theft done all over the world. Huge amount of power theft are done by tapping from line or bypassing the meter, According to a study 80% of the total theft detected all over the world is from residential buildings and 20% from commercial and industrial premises.

(A) Meter Tampering: Customers tamper the meter by grounding the neutral wire, this causes the meter to assume an incomplete circuit and it does measure the meter reading. (B) Meter bypass: The input terminal and output terminal of the energy meter has been shorted by a wire. This act prevents energy from been registered in the meter. (C) Illegal terminal taps of overhead lines on the low tension side of the transformer: Primarily, electricity theft affects the power sector as a whole, tapping of the low tension side of the transformer result in overloading which causes tripping and can lead to blackout. (D) Illegal tapping to bare wires or underground cables: This is the most used method for theft of power. 80% of total power theft all over the world is done by direct tapping from line. The consumer taps into a direct power line from a point ahead of the energy. This energy source is unmeasured in its consumption and procured with or without switches. (E) Unpaid bills: Non-payment of bills by individuals, government institutions and untouchable VIPs results in utility running at a loss and a must continually increase in electricity charges. (F) Billing irregularities: This incorporates the inaccurate

meter reading taken by bribed servicemen and intentional fixing of the bill by office staffs in exchange of illicit payments from the consumers [8].

An analysis of the criminal legislation of foreign states suggests that the subject of crimes against property recognized not only things in the material sense, but the benefits are not of a material nature: Law services (utilities, telephone, television, mail, transport and restaurant services and entertainment) documents, information, intellectual property, law requirements and other intangible assets, and the like. Traditionally in contemporary Ukrainian science of criminal law, offense subject is usually viewed as a material substance (for example, Articles 185-187) containing the subject of controversy recognizing the abduction of such intangible goods such as electrical or thermal energy.

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Soloviova A. Theft of electrical or thermal energy through its unauthorized use: a comparative-legal analysis

The article analyzes the theft of electrical or thermal energy through its unauthorized use. It reveals the difference these issues the criminal codes of some foreign countries.

Keywords: *crime, theft, property damage, electrical energy, thermal energy.*

Соловійова А.М. Викрадення електричної або теплової енергії шляхом її самовільного використання: порівняльно-правовий аспект

У статті аналізується викрадення електричної або теплової енергії шляхом її самовільного використання. Розкривається різниця в законодавчому вирішенні цих питань кримінальними кодексами окремих зарубіжних держав.

Ключові слова: злочин, крадіжка, майнова шкода, електрична енергія, тепла енергія.

Соловьева А.Н. Похищение электрической или тепловой энергии путем ее самовольного использования: сравнительно-правовой аспект

В статье анализируется похищение электрической или тепловой энергии путем ее самовольного использования. Раскрывается разница в законодательном решении этих вопросов уголовными кодексами отдельных зарубежных государств.

Ключевые слова: преступление, кража, имущественный вред, электрическая энергия, тепловая энергия.

Стаття надійшла до редакції 01.09.2015.