
Electricity Theft as an Economic Crime: Legal and Policy Analysis in Indonesia

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ABSTRACT

This study examines electricity theft as an economic crime within the Indonesian legal framework, focusing on its legal implications, enforcement challenges, and impact on state financial interests. The background of this research is rooted in the increasing occurrence of electricity theft, which not only causes financial losses to PT PLN (Persero) but may also contribute to broader state financial losses due to its status as a state-owned enterprise managing public assets. The objective of this study is to analyze the criminal liability of electricity theft offenders and to evaluate the effectiveness of legal enforcement under Law Number 30 of 2009 concerning Electricity. The method used is normative legal research with statutory, conceptual, and comparative approaches. Legal materials were collected through library research and analyzed qualitatively to examine relevant legal norms, doctrines, and judicial interpretations. The results show that electricity theft is explicitly regulated as a criminal offense and should be treated as an economic crime affecting the public interest. However, enforcement practices in Indonesia tend to rely more on administrative sanctions through the Electricity Usage Control Program (P2TL), which reduces the deterrent effect of criminal law. The study concludes that stronger criminal enforcement, clearer legal interpretation of state financial loss, and the integration of modern monitoring technologies are necessary to improve electricity theft prevention and strengthen energy governance in Indonesia.

INTRODUCTION

Electricity is a strategic necessity that plays a significant role in supporting economic activities, public services, and national development. As a vital sector affecting the livelihood of the public, the electricity sector is controlled by the state as mandated under Article 33 of the 1945 Constitution of the Republic of Indonesia. The implementation of such functions is carried out by PT PLN (Persero) as a state-owned enterprise that not only pursues profit but also performs public service obligations (Afiyah, 2023).

In practice, electricity theft frequently occurs through unauthorized electricity usage, manipulation of electricity meters, and illegal connections to power networks. Such actions result in financial losses to PT PLN (Persero) and potentially lead to state financial losses. Economic crimes have increasingly become a major challenge for developing countries due to

their impact on public resources, institutional governance, and economic stability (Herman & Fernhout, 2023). Molina and Rivera explain that economic and financial crimes may weaken public institutions and reduce state financial capacity (Singla, 2024). In the context of electricity theft, unlawful electricity consumption may therefore be viewed as an economic crime affecting state-owned enterprises and broader public interests. Economic crimes and fraud continue to pose serious threats to both public and private institutions worldwide (Kolhe & Bhat, 2024; Remeikienė & Gaspareniene, 2023; Rybalchenko et al., 2021, 2022). According to the Global Economic Crime Survey, fraud-related activities remain among the most disruptive forms of economic crime globally. In public utility sectors, unlawful practices such as electricity theft may generate significant financial losses and undermine institutional trust and operational sustainability (Burgess et al., 2020; Govender, 2025; Jamil & Ahmad, 2019; Kasumba et al., 2025). In addition to financial impacts, electricity theft may also disrupt the quality and reliability of electricity services provided to society. Electricity theft has become a serious issue affecting electricity providers in many countries. International studies indicate that electricity theft contributes significantly to energy shortages, financial losses, and instability within electricity distribution systems. Babar et al. (2022) explain that unauthorized electricity consumption negatively impacts utility companies and reduces the efficiency of electricity services provided to society. Furthermore, electricity theft not only affects electricity providers economically but also creates broader social and infrastructural consequences within national energy systems. Therefore, electricity theft should not merely be viewed as an ordinary criminal offense, but also as a threat to national energy governance and public interests (Van Erp, 2023).

Electricity theft is internationally categorized as part of non-technical losses (NTLs) within electricity systems (Levi & Smith, 2022; Molina & Rivera, 2025). Kulkarni et al. (2011) explain that non-technical losses caused by electricity theft reduce the safety, reliability, and security of energy systems. Such losses generally arise from illegal electricity connections, manipulation of electricity meters, and unauthorized consumption of electrical energy. In addition to financial impacts, non-technical losses may increase operational inefficiency and reduce public trust in electricity providers. Therefore, reducing electricity theft is considered essential to improving the effectiveness and sustainability of electricity distribution systems.

Law Number 30 of 2009 concerning Electricity prohibits the unlawful use of electricity and imposes criminal sanctions upon violators. However, law enforcement practices indicate that many electricity theft cases are still resolved through administrative mechanisms under the Electricity Usage Control Program (P2TL), resulting in suboptimal criminal law enforcement. This research offers novelty by positioning losses caused by electricity theft against PT PLN (Persero) as state financial losses rather than merely corporate losses. This approach is important to strengthen the construction of criminal liability and provide a stronger legal basis for effective law enforcement

METHOD

This study employs normative legal research, which positions law as a set of norms and legal principles applicable within the positive legal system. The research focuses on examining and analyzing criminal law regulations concerning electricity theft and the juridical construction of state financial losses arising from such acts, as regulated under statutory

provisions and reflected in judicial decisions. The normative legal approach is considered appropriate because the study primarily analyzes legal norms, legal doctrines, and legal principles governing electricity theft within the framework of Indonesian criminal law and state finance law.

The approaches utilized in this research consist of statutory and conceptual approaches. The statutory approach is employed to systematically examine legal norms regulating electricity theft and state financial losses, including the 1945 Constitution of the Republic of Indonesia, Law Number 30 of 2009 concerning Electricity, Law Number 17 of 2003 concerning State Finance, Law Number 19 of 2003 concerning State-Owned Enterprises, and the 2023 Indonesian Criminal Code. This approach is essential in evaluating the consistency, structure, and hierarchical position of legal norms within the Indonesian legal system. Meanwhile, the conceptual approach is used to analyze legal concepts underlying the research, such as criminal offenses, unlawful acts, criminal liability, and state financial losses. Through this approach, the research refers to legal doctrines and scholarly opinions in order to obtain a comprehensive understanding of the issues under examination.

The legal materials used in this research consist of primary, secondary, and tertiary legal materials. Primary legal materials include statutory regulations and judicial decisions that possess binding legal authority, such as the 1945 Constitution, the Indonesian Criminal Code, the Electricity Law, the State Finance Law, and relevant Constitutional Court decisions. Secondary legal materials consist of legal textbooks, scientific journals, academic articles, and previous research findings related to criminal law, electricity law, and state financial losses. In addition, tertiary legal materials, including legal dictionaries and legal encyclopedias, are utilized to support the understanding of legal terminology and concepts employed in this research.

The collection of legal materials is conducted through library research by identifying, inventorying, and classifying legal materials relevant to electricity theft resulting in state financial losses. The collected legal materials are subsequently classified and systematized according to their relevance to the research problems in order to facilitate the analytical process. Primary legal materials are obtained from official legal sources, including statutory databases and judicial decision directories, while secondary and tertiary legal materials are collected from academic literature and other reliable scholarly sources.

The analysis of legal materials in this research is conducted using a normative qualitative approach through systematic examination of legal norms governing electricity theft and state financial losses. The analysis is directed toward answering the research problems concerning the regulation of electricity theft, the juridical construction of state financial losses, and the implementation of criminal law enforcement against such acts. The study further analyzes the constituent elements of criminal offenses, legal protection of electricity as a public resource, and the criminalization of unlawful electricity usage. Electricity is positioned as an object of public legal protection managed under state control; therefore, its unlawful use cannot merely be regarded as an administrative violation or private civil matter. Furthermore, the analysis examines the relationship between electricity management by state-owned enterprises and the concept of state financial losses within the framework of public finance law. The study also evaluates the effectiveness and legal certainty of criminal law enforcement practices concerning electricity theft in Indonesia. The results of this analysis are presented descriptively

and normatively with a prescriptive objective to explain electricity theft as an act causing state financial losses and to provide legal recommendations consistent with the objectives of the research.

RESULTS AND DISCUSSION

Electricity Theft as Economic Crime

The findings demonstrate that electricity theft in Indonesia is specifically regulated under Article 51 paragraph (3) of Law Number 30 of 2009 concerning Electricity. The provision stipulates that any person unlawfully using electricity that is not legally entitled to them may be punished with imprisonment of up to seven years and a fine of up to IDR 2.5 billion.

Electricity theft constitutes an unlawful act punishable under Indonesian electricity law. Kalman et al. (2025) explain that Law Number 30 of 2009 concerning Electricity specifically regulates unauthorized electricity usage and provides criminal sanctions for offenders. The regulation demonstrates that electricity theft is categorized as a special criminal offense due to its impact on electricity distribution systems and public interests.

Normatively, the elements of the criminal offense include: (1) any person; (2) using electricity; (3) which does not belong to them; and (4) unlawfully. These elements indicate that the offense focuses on the unauthorized utilization of electrical energy.

Electricity theft commonly occurs through various methods, including direct illegal connections to PLN's electricity network, manipulation of electricity meters, tampering with seals, unauthorized increase of electricity capacity, and modification of prepaid electricity systems. Such acts are intended to avoid payment for consumed electrical energy.

Electricity theft may also be categorized as an economic crime affecting public utility systems. Levi and Smith, (2022) explain that economic crimes targeting public utilities may significantly impact state financial interests and public service sustainability. Since electricity providers often manage strategic public infrastructure, financial losses caused by electricity theft may indirectly affect state finances and national economic stability. Accordingly, electricity theft should not merely be viewed as a private financial dispute but as a criminal offense affecting broader public interests and economic governance.

Comparative Legal Analysis

Conceptually, electricity theft may also be associated with Article 362 of the Indonesian Criminal Code regarding theft. Although electricity is intangible, criminal law doctrine and judicial practices recognize electricity as an object possessing economic value and therefore capable of being categorized as property within the meaning of criminal law. However, following the enactment of the Electricity Law, Article 51 paragraph (3) should prevail based on the principle of *lex specialis derogat legi generali*. Comparative legal studies demonstrate that many countries have strengthened legal frameworks to address electricity theft. Singla explains that legal reforms and technological innovations are essential to combat electricity theft effectively. Several jurisdictions have introduced stricter criminal sanctions, advanced electricity monitoring technologies, and integrated enforcement systems to reduce electricity theft rates. Comparative experiences from other countries may provide important insights for Indonesia in improving its electricity law enforcement mechanisms and strengthening public protection against electricity-related crimes.

The study further finds that losses resulting from electricity theft not only affect PT PLN (Persero) financially but may also be categorized as state financial losses. As a state-owned enterprise, PLN manages separated state assets and performs public service functions within the electricity sector.

Electricity Theft and Energy Governance

Electricity theft causes several forms of losses, including direct financial losses from unpaid electricity consumption, operational losses associated with inspections and repairs, systemic losses related to network inefficiency, and social losses affecting public services and electricity subsidies. Recent technological developments demonstrate that electricity theft remains a major challenge in modern smart grid systems. Electricity theft also poses a serious threat to national energy security. Olowookere et al. (2026) argue that electricity theft causes economic losses and compromises the reliability of electricity networks. Persistent electricity theft may weaken the capacity of utility companies to maintain stable electricity distribution and increase electricity losses within transmission systems. Moreover, ineffective prevention mechanisms may create long-term challenges for electricity governance and public service delivery. Accordingly, electricity theft should be addressed through integrated legal enforcement and technological monitoring systems to protect national energy security and public interests.

Kabir et al. (2025) state that electricity theft significantly undermines grid reliability and creates substantial economic losses for electricity utility providers. In smart grid environments, illegal electricity consumption may disrupt electricity distribution accuracy, increase operational costs, and weaken the sustainability of electricity infrastructure. These conditions indicate that electricity theft not only causes direct financial losses but also affects the long-term stability of national electricity systems. Consequently, effective law enforcement and technological supervision are necessary to prevent increasing electricity theft practices.

Electricity theft and non-technical losses remain critical challenges within modern smart grid systems. Olowookere et al. (2026) explain that electricity theft causes substantial economic losses and compromises the reliability of electricity networks. Persistent electricity theft may weaken electricity distribution systems and reduce the effectiveness of energy governance. Therefore, integrated technological monitoring and stronger law enforcement mechanisms are essential to protect public utility systems and national energy security.

Administrative Settlement and Criminal Enforcement

In Indonesia, electricity theft cases are frequently resolved through administrative mechanisms rather than criminal proceedings. Dodi et al. (2023) explain that administrative approaches such as the Electricity Usage Control Program (P2TL) remain dominant in handling electricity theft cases. Such approaches generally involve additional billing, administrative fines, and electricity disconnection without further criminal prosecution. Although administrative settlements may recover certain financial losses, excessive reliance on administrative sanctions may weaken the deterrent effect of criminal law enforcement. Consequently, stronger coordination between administrative authorities and criminal justice institutions is required to improve the effectiveness of electricity theft prevention.

Law enforcement practices indicate that electricity theft cases are generally initiated through the Electricity Usage Control Program (P2TL). Administrative sanctions may include additional billing, fines, disconnection of electricity services, and dismantling of illegal installations. Criminal proceedings may follow if criminal elements are identified.

Several obstacles hinder effective law enforcement, including difficulties in determining the duration of violations, public perceptions that administrative settlements are sufficient, low legal awareness among consumers, and differing interpretations regarding whether PLN's losses constitute state financial losses (Babar et al., 2022).

Technological Monitoring and Social Challenges

Technological innovation plays an important role in preventing electricity theft. Oguntola et al. explain that electricity theft creates persistent financial deficits and threatens power system stability. The study further emphasizes that artificial intelligence and machine learning technologies can improve electricity theft detection systems within modern electricity networks. The use of advanced monitoring systems may help electricity providers identify suspicious consumption patterns and reduce operational losses. Therefore, the modernization of electricity monitoring systems is necessary to support more effective prevention and law enforcement strategies against electricity theft (Oguntola et al., 2026).

Weak law enforcement is considered one of the factors contributing to the persistence of electricity theft practices. Afiyah explains that collective electricity theft often occurs in communities with low legal awareness and limited supervision from authorities. In many cases, electricity theft becomes socially tolerated despite its harmful consequences for electricity providers and public services. This condition demonstrates that law enforcement mechanisms alone are insufficient without public legal awareness and preventive education. Therefore, efforts to combat electricity theft require both legal enforcement and community participation.

CONCLUSION

The study concludes that electricity theft in Indonesia is firmly regulated under Article 51 paragraph (3) of Law Number 30 of 2009 concerning Electricity, which provides a clear normative basis for criminal sanctions against unlawful electricity consumption. From a doctrinal perspective, electricity is recognized as having economic value and may therefore be treated as an object of criminal law protection, while still being primarily governed under a *lex specialis* framework. The findings further confirm that electricity theft not only generates financial losses for PT PLN (Persero), but also has the potential to be classified as state financial loss due to PLN's position as a state-owned enterprise managing separated state assets. However, current enforcement practices remain dominated by administrative mechanisms, which weakens the deterrent effect of criminal law and limits the effectiveness of legal protection in the public utility sector. Strengthening criminal liability, improving enforcement consistency, and integrating preventive–repressive strategies are therefore essential to ensure legal certainty and protect public energy infrastructure.

For future research, it is recommended that studies move beyond normative analysis and incorporate empirical approaches to measure the actual effectiveness of criminal enforcement and administrative sanctions in reducing electricity theft cases across different regions. Comparative legal studies can also be expanded by examining jurisdictions with advanced

smart grid systems and stronger prosecutorial frameworks to identify best practices for Indonesia. In addition, future research should explore the integration of digital technologies such as artificial intelligence-based detection systems with legal enforcement mechanisms to strengthen early detection and prevention. Socio-legal studies examining public awareness, behavioral drivers of electricity theft, and institutional barriers within enforcement agencies would also provide valuable insights for more holistic policy reform.

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