



Transformation of Consumer Legal Protection Policy on Power Outages in the Era of Industry 4.0 in Makassar City

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Abstract. Power outages in Makassar City, particularly in the era of Industry 4.0, have become a recurring problem that leads to losses for consumers. Therefore, consumer protection policies need to be adjusted to the advancements in technology and the transformation of Industry 4.0 to provide effective protection for consumers. This research aims to analyze the transformation of consumer protection policy towards power outages in the era of Industry 4.0 in Makassar City. The research method used is a normative juridical approach with legislation and theoretical concepts. The results show that the transformation of consumer protection policy needs to be conducted through several stages, including improving the quality of electricity services, enhancing the capacity of electricity providers, and improving the quality and capacity of dispute resolution institutions. Additionally, consumer legal protection also needs to be enhanced by adopting the following regulations: [2] Law Number 8 of 1999 on Consumer Protection, which emphasizes the importance of protecting consumer rights and demanding quality services from service providers, including electricity services; [3] Law Number 30 of 2009 on Electricity, which regulates the provision of reliable and quality electricity for the community; and Government Regulation of the Republic of Indonesia Number 14 of 2012 on the Provision and Utilization of Electricity aimed at improving the welfare of society, which regulates service standards and supervision of the provision and utilization of electricity. The novelty of this study is that consumer protection policy towards power outages in the era of Industry 4.0 in Makassar City needs to be adapted and implemented to provide effective protection for consumers. In this regard, cooperation between the government, electricity providers, and consumer protection institutions is required to achieve optimal consumer protection.

Keywords: Transformation, Policy, Legal Protection, Consumer, Power Outages, Industry 4.0 Era, Makassar City

1 INTRODUCTION

The rapid development of information and communication technology has brought the world into the era of Industry 4.0, where connectivity and machine autonomy have created a digital revolution in various sectors of life. However, this change

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has also led to an increasing reliance on stable and reliable electricity supply. Makassar City, as one of the economic and urban centers in Indonesia, is not exempt from the impacts of this change. The growing dependency on electricity has made power outages a critical issue that must be addressed by the city's residents. In facing this challenge, consumer legal protection plays a significant role in protecting the rights of affected consumers.

Power outages that occur in Makassar City, whether due to technical malfunctions, natural conditions, or distribution management issues, can have serious impacts on society and various economic sectors. From several outages that have occurred from 2021 to 2023, I will cite three outage events as sample examples for this writing. Quoting from [tribuntimur.com](#) in 2021, it was stated that the electricity supply would be temporarily or completely cut off in the Minasa Upa residential complex, Rappocini District, Makassar, on the upcoming Saturday. The outage will be carried out by the State Electricity Company (PLN) ULP Panakkukang UPT 3 Makassar. The notification was circulated in several WhatsApp groups on Friday night, September 24, 2021. According to the notification, the outage will take place from 09:00 to 13:00 WITA. Two substations will be shut down for construction and maintenance of the 20,000-volt network. The purpose is to maintain the electricity supply to RS Bahagia, Jl Minasa Upa, Blok F, Blok H, and Blok J. The estimated number of affected customers mentioned is around 100. The validity of the information or the outage notification has been confirmed by the PLN Sulselbar Public Relations staff. Quoting from [Daeng Detik Sulsel](#) on May 7, 2022, residents in the Summorecon Mutiara housing complex in Makassar City reported a power outage of approximately 6 hours. The power outage was complained about because it greatly disrupted the residents' comfort. This report was submitted by a resident named Edi to the [Lapor Daeng detik-Sulsel](#) program on Tuesday, May 17, 2022. Edi revealed that their house had been without electricity since around 13:00 WITA. Edi informed [detik Sulsel](#) on Tuesday.

On May 17, 2022, Edi stated that since living in Summarecon Mutiara, he has experienced multiple power outages. The duration of the outages is considered abnormal, ranging from 5 to 8 hours. "Normally, power outages last for about 1 hour. But in reality, it can reach up to 5 hours, even 8 hours," he explained. Edi also mentioned that these power outages only occur in residential units, while street lights and park lights remain on as usual. As a result of these outages, Edi admitted that their daily activities at home were disrupted. The residents felt uncomfortable because household facilities couldn't be used due to the power outage. "The impact is significant. Nowadays, we rely on air conditioning. So, when there are no facilities available at home, it becomes difficult. During hot days, it's dark, and we can't even take a shower," Edi said. Quoting from [Kompas.com](#) article titled "Hujan dan Angin Kencang, Listrik di Sejumlah Wilayah Kota Makassar Padam" (Rain and Strong Winds, Electricity in Several Areas of Makassar Goes Out) and citing [CELEBESMEDIA.ID](#), Makassar, Monday, March 20, 2023 - Several areas in Makassar and Gowa have been experiencing rotating power outages in the past two days. The outages are carried out as an effort to prepare for the Holy Month of Ramadan in the year 1444 Hijriah. Comprehensive maintenance is conducted before entering the Ramadan month. As a result, some PLN customers in the affected areas will experience load management for a

certain period, resulting in rotating outages. The residents have complained about these rotating power outages due to the long duration of the outages experienced in each area. For example, Musdalifah, an employee of a coffee shop (Warkop) on Pengayoman Street in Makassar, stated that the power was out for 5 hours. "Last Saturday, the power went out from 14:00 to 18:00 WITA," she said when interviewed on Monday, March 20, 2023. Eni, a resident of Somba Opu Gowa, expressed a similar sentiment. She mentioned that the power went out for a considerable amount of time last Saturday, causing delays in some household tasks. "Yesterday (Saturday), the power was only restored around 21:00 WITA. As a result, laundry and cooking had to be canceled, and none of the electronic devices could be used," she concluded.

In the era of Industry 4.0, many sectors rely on advanced technology and digital data, making them highly vulnerable to losses due to sudden power outages. From companies relying on automated production systems to e-commerce businesses relying on internet infrastructure, power outages can cause disruption in their operations. In addition to its impact on the economy, power outages can also potentially cause inconvenience and danger to individual consumers. For example, power outages can disrupt access to healthcare services, security, and emergency services, which in turn can jeopardize the health and safety of residents. Consumers who use electronic devices such as refrigerators, air conditioners, or other household appliances are also at risk of equipment damage due to unexpected power disturbances. Unplanned power outages can have negative consequences for consumers, particularly in terms of inconvenience, financial losses, and uncertainty.

In facing the challenges of power outages in the era of Industry 4.0, it is important for the government and relevant institutions in Makassar City to undergo a transformation in consumer protection policy. Existing policies need to be updated and adjusted to the context of this digital era, in order to provide effective protection for affected consumers. Strong consumer legal protection will provide assurance to the public that their rights are respected, and it will incentivize power service providers to improve the quality of their services. Through this approach, Makassar City can prepare itself to confront the challenges of power outages in the era of Industry 4.0 and provide better protection for all its consumers. Consumer legal protection is crucial in facing the challenges of power outages in this era of Industry 4.0. Consumers have rights that must be guaranteed by adequate legal protection policies. Therefore, a transformation of consumer legal protection policies that are responsive and adaptive to changes in technology and society is needed. Firstly, the transformation of consumer legal protection policies needs to consider the role of technology in monitoring and reporting power outages. In the era of Industry 4.0, the advancements in the Internet of Things (IoT) enable the use of sensors and connected devices to detect power outages in real-time. Legal protection policies should ensure that consumers have access to accurate and up-to-date information regarding power outages and the recovery efforts being undertaken.

Secondly, the transformation of consumer legal protection policies should also regulate the obligations of electricity service providers to provide fair compensation to consumers affected by power outages. Compensation can take the form of bill reductions or reimbursement for damages incurred due to power outages, ensuring that

consumers do not suffer unfair financial losses. Furthermore, it is important for consumer legal protection policies to regulate the responsibility of electricity service providers in minimizing power outages. This can include setting standards for reliability and quality of power supply that must be met by service providers. If service providers fail to meet these standards, consumers should be protected through penalty mechanisms or strict sanctions. Lastly, the transformation of consumer legal protection policies should also consider the aspect of active consumer participation in influencing policies and decision-making related to power supply. Consumers should have a stronger role in the decision-making process concerning infrastructure investment and power supply management in Kota Makassar. This will give consumers a sense of ownership and improve the accountability of electricity service providers. Consumer legal protection against power outages in Kota Makassar should involve a holistic and progressive policy transformation. By recognizing the role of technology and ensuring fair compensation, as well as establishing clear responsibilities for electricity service providers, consumers will receive effective protection. Moreover, involving consumers in decision-making can enhance participation and ensure the preservation of consumer interests.

The regulations governing consumer protection regarding power outages in Kota Makassar include several relevant laws. [16] Consumer Protection serves as the foundation for protecting consumer rights, including rights related to electricity services. This law emphasizes the importance of protecting consumer rights and demands good service quality from service providers, including in the case of electricity services. Additionally, [2] Electricity also plays a significant role in regulating the procurement and provision of reliable and quality electrical energy to the public. This law provides a framework that governs technical, institutional, and policy aspects in the provision of electrical energy. The objective of this law is to ensure adequate and affordable electricity supply for consumers. Furthermore, Government Regulation of the Republic of Indonesia Number 14 of 2012 concerning the Provision and Utilization of Electricity also plays an important role [1]. This regulation governs the service standards and supervision of the provision and utilization of electricity. With the existence of this regulation, it is expected that electricity service providers have clear responsibilities in minimizing power outages and providing reliable services to consumers.

2 METHODOLOGY

This study utilizes a juridical-normative approach with a focus on the analysis of legislation and theoretical concepts related to the transformation of consumer legal protection policies regarding power outages in the era of Industry 4.0 in Makassar City, while still considering the facts on the ground. The following are the stages carried out in this research: Data Collection: a. Literature Review: Conducting a literature review and examination of various relevant sources, including laws, regulations, journals, articles, and related documents related to power outages, consumer legal protection, and Industry 4.0 transformation. b. Regulation Exploration: Identifying laws, government regulations, and regional regulations that govern consumer legal

protection regarding power outages in Makassar City [4]. Data Analysis: a. Examination of Laws: Analyzing Law Number 8 of 1999 concerning Consumer Protection, Law Number 30 of 2009 concerning Electricity, and Government Regulation of the Republic of Indonesia Number 14 of 2012 concerning the Provision and Utilization of Electricity to understand the concepts related to consumer legal protection regarding power outages. b. Theoretical Conceptual Study: Using theoretical concepts related to consumer legal protection, Industry 4.0 transformation, and technical and institutional aspects of electricity to analyze problems and policy implications. In the Discussion: a. Identifying the problems faced by consumers regarding power outages in Makassar City in the era of Industry 4.0. b. Analyzing the necessary transformation of consumer legal protection policies in addressing power outages in the era of Industry 4.0. c. Discussing the role of laws governing consumer protection regarding power outages, such as Law Number 8 of 1999 concerning Consumer Protection, Law Number 30 of 2009 concerning Electricity, and Government Regulation of the Republic of Indonesia Number 14 of 2012 concerning. The research will also involve field observations of affected consumers and conducting interviews with electricity consumers/customers, industry stakeholders such as resources from the relevant authorities in PLN, and consumer protection agencies in Makassar City as respondents. This approach ensures that the research considers the factual situation on the ground.

3 Result and Discussion

In the research results and discussion regarding the transformation of consumer legal protection policies in response to power outages in the Industry 4.0 era in Makassar City, three regulations are analyzed: the Consumer Protection Law No. 8 of 1999, the Electricity Law No. 30 of 2009, and Government Regulation No. 14 of 2012 concerning the provision and utilization of electricity. These regulations are analyzed to understand how they provide legal protection to consumers, particularly electricity customers or PLN in Makassar City.

The Consumer Protection Law No. 8 of 1999, in the author's analysis, relates to the improvement of electricity service quality and ensures the rights of consumers to quality service. It identifies the obligations of electricity providers to provide services that meet the established quality standards, including reducing unscheduled power outages, evaluating existing mechanisms to monitor and evaluate the quality of electricity services, and enforcing the law against violations of service quality. Regarding the enhancement of the capacity of electricity providers, the analysis includes reviewing the requirements and obligations of electricity providers in ensuring adequate and stable power supply, evaluating policies and incentives given to electricity providers to enhance production and distribution capacity, and considering consumer protection aspects related to power outages caused by capacity shortages. In terms of improving the quality and capacity of dispute resolution institutions, the analysis involves reviewing the role and responsibilities of dispute resolution institutions in handling disputes between consumers and electricity providers regarding power outages. It also examines existing dispute resolution mechanisms, including the speed, transparency,

and fairness of the dispute resolution process. Furthermore, it identifies efforts needed to strengthen the capacity and independence of these institutions. Please note that the translation provided is a general interpretation and may require further editing to adhere to specific legal terminology and style guidelines. Dispute resolution institutions should be able to provide effective legal protection to consumers.

In this analysis, it is important to consider the provisions of consumer protection laws and examine and evaluate each relevant article in the context of consumer protection against power outages in the Industry 4.0 era in Makassar City. Additionally, it is necessary to assess the implementation of these laws and identify the challenges and opportunities that may arise in addressing consumer protection issues related to power outages in the Industry 4.0 era. Please note that the translation provided is a general interpretation and may require further editing to adhere to specific legal terminology and style guidelines.

Similarly, the analysis of Regulation No. 30 of 2009 on Electricity in the transformation of consumer legal protection policies regarding power outages in the Industry 4.0 era in Makassar City focuses on several aspects. Firstly, enhancing the quality of electricity services by optimizing the provisions outlined in the Electricity Law to encourage the improvement of electricity service quality. This involves strengthening the requirements for electricity service standards that must be met by providers and encouraging them to implement programs to enhance service quality, such as improving network reliability, minimizing unscheduled power outages, and enhancing responsiveness to consumer complaints.

Secondly, improving the capacity of electricity providers by promoting investments in the development and modernization of electricity infrastructure in Makassar City. This includes facilitating cooperation between the government, private sector, and third parties in developing more efficient and reliable power generation and distribution projects. Additionally, strengthening regulations pertaining to the construction, operation, and closure of power plants to ensure compliance and enhance the capacity of electricity providers. Lastly, enhancing the quality and capacity of dispute resolution institutions by reinforcing the role of institutions, such as the Electricity Dispute Settlement Body (Badan Penyelesaian Sengketa Konsumen or BPSK), as stipulated in the Electricity Law. This involves improving the capacity of these institutions through training and the development of qualified human resources, ensuring their independence, transparency, and effectiveness in handling disputes related to power outages. These measures aim to guarantee the improvement of electricity service quality, enhance the capacity of electricity providers, and strengthen consumer legal protection. Please note that the translation provided is a general interpretation and may require further editing to adhere to specific legal terminology and style guidelines.

According to the author's analysis, the following solutions can be proposed regarding the policies of Law No. 30 of 2009 on Electricity: 1. Enhancement of Electricity Service Quality: a. Strengthen supervision over electricity providers to ensure compliance with established service quality standards. b. Encourage electricity providers to invest in maintenance, repair, and modernization of infrastructure to enhance the reliability of electricity services. c. Improve transparency in communicating information

about scheduled power outages to consumers. 2. Enhancement of Electricity Provider Capacity: a. Encourage investment and collaboration with private entities in developing efficient power generation and distribution networks. b. Facilitate more effective and efficient licensing and regulatory processes to expedite the development of electricity infrastructure. c. Promote the use of advanced technologies, such as Smart Grid, to improve the efficiency and reliability of the electricity system. 3. Improvement of Dispute Resolution Institutions: a. Strengthen the role of the Electricity Dispute Settlement Body (BPSK) in handling disputes between consumers and electricity providers. b. Ensure independence, transparency, and promptness in the dispute resolution process. c. Increase public awareness of existing dispute resolution mechanisms and consumer rights. 4. Enhancement of Consumer Participation: a. Encourage consumer participation in monitoring and evaluating the quality of electricity services. b. Establish effective communication channels between consumers and electricity providers for reporting complaints and providing feedback. c. Enhance consumer education and awareness regarding their rights and obligations in the context of electricity.

These solutions aim to improve regulations and policies, enhance electricity services, increase the capacity of electricity providers, strengthen dispute resolution institutions, and enhance consumer participation. By implementing these solutions, it is expected that consumer legal protection against power outages can be enhanced in accordance with the provisions of Law No. 30 of 2009 on Electricity. Please note that the translation provided is a general interpretation and may require further editing to adhere to specific legal terminology and style guidelines. The transformation of consumer legal protection policies regarding power outages in the era of Industry 4.0 in Makassar City, related to Government Regulation No. 14 of 2012 on the Availability and Utilization of Electricity, can encompass several aspects as follows: 1. Enhancement of Electricity Service Quality: a. Review Government Regulation No. 14 of 2012 in relation to the quality standards of electricity services that must be met by electricity providers. b. Evaluate the implementation of the regulation and the extent to which the improvement in the quality of electricity services has been achieved. c. Reassess the monitoring mechanisms and sanctions in place to ensure compliance of electricity providers with the service quality standards. 2. Enhancement of Electricity Provider Capacity: a. Review the provisions in Government Regulation No. 14 of 2012 that govern investment in the development and infrastructure of the electricity sector. b. Analyze the extent to which the regulation encourages the improvement of electricity provider capacity in Makassar City. c. Evaluate the success of implementing the regulation in addressing the challenges of the Industry 4.0 era, such as the increasing demand for electricity and the expansion of advanced technology usage. 3. Binding Quality and Capacity of Dispute Resolution Institutions: a. Review the regulations in Government Regulation No. 14 of 2012 related to dispute resolution in the electricity sector. b. Analyze the quality and capacity of dispute resolution institutions governed by the regulation, as well as their effectiveness in handling disputes related to power outages in the Industry 4.0 era. c. Evaluate whether the regulation is adequate in ensuring fair, transparent, and efficient dispute resolution. Through the analysis of Government Regulation No. 14 of 2012 on the Availability and Utilization of Electricity, the extent to which the regulation supports the transformation of consumer

legal protection policies regarding power outages in the Industry 4.0 era in Makassar City can be evaluated. This provides a more comprehensive understanding of the existing regulations and serves as a basis for policy improvements in consumer protection and the electricity sector. In the author's analysis, Government Regulation No. 14 of 2012 on the Availability and Utilization of Electricity can serve as an important foundation, encompassing the enhancement of electricity service quality, the improvement of electricity provider capacity, and the regulation of dispute resolution institutions. Overall, to achieve better consumer legal protection against power outages in the Industry 4.0 era in Makassar City, collaborative efforts are needed among the government, electricity providers, dispute resolution institutions, and consumers. By enhancing service quality, electricity provider capacity, and the effectiveness of dispute resolution institutions, it is expected that consumers can receive better protection in dealing with power outages and ensure improved availability and utilization of electricity in Makassar City.

4 CONCLUSION

1. The transformation of consumer protection policies regarding power outages in the era of Industry 4.0 in Makassar City requires a comprehensive approach that includes improving the quality of electricity services, enhancing the capacity of electricity providers, and strengthening the quality and capacity of dispute resolution institutions.
2. The three relevant laws provide a legal framework that can be used as a basis to strengthen consumer protection regarding power outages.
3. Collaboration among the government, electricity providers, dispute resolution institutions, and consumers is necessary to implement the transformation of consumer protection policies effectively.

5 Recommendation

1. The government needs to strengthen oversight of electricity providers to ensure compliance with the quality standards set in the Consumer Protection Law No. 8 of 1999.
2. Sufficient investment should be made in the electricity infrastructure to enhance the capacity of electricity providers, in accordance with the provisions of the Electricity Law No. 30 of 2009.
3. Dispute resolution institutions, such as the Electricity Dispute Resolution Body (BPSK), should be empowered to handle disputes related to power outages effectively.
4. Consumer awareness of their rights and existing dispute resolution mechanisms needs to be improved through effective educational campaigns.

5. Collaboration among the government, electricity providers, dispute resolution institutions, and consumers should be enhanced through open dialogue and active listening to ensure the interests and needs of all parties are met.
6. By implementing these steps, it is expected that the legal protection of consumers regarding power outages in the era of Industry 4.0 in Makassar City can be significantly improved, creating a better electricity environment for both consumers and providers.

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