

# Study on the Legal and Contractual Obligations of Power Companies in Private EV Charging Pile Installation Request

Yiran Yang<sup>1</sup>, Shiyao Tan<sup>1</sup>, Yufei Zhu<sup>1</sup> & Yan Luo<sup>1</sup>

<sup>1</sup> Tianjin Normal University, Tianjin, China

Correspondence: Yiran Yang, Tianjin Normal University, Tianjin, China.

doi:10.56397/SLJ.2025.04.03

## Abstract

With the popularization of electric bicycles and new energy vehicles, the demand for private charging pile installation has surged. When users submit installation applications to power companies, disputes arise over whether the latter bears a mandatory contracting obligation. While power companies are obligated to contract under certain circumstances, this obligation has clear boundaries. When the owner does not have the installation conditions, the common parking space has not been agreed by all the owners, and the requirements of the electricity contract are unreasonable after review, the power company has the right to refuse the installation, and the dynamic balance rule of the power company's review right and contracting obligation should be established. By creating a "power company technical review – property synergy management – owner rights protection" three-party linkage mechanism, practical and legally justified solutions can be provided for new energy infrastructure disputes.

**Keywords:** mandatory contracting obligation, private charging pile, power company

## 1. Introduction

### 1.1 Research Background

Background China's electric bicycle and new energy vehicle industries are experiencing rapid growth. As a crucial energy infrastructure integrating transportation and power systems, charging facilities play a vital role in supporting the development of new energy transportation, advancing the construction of new power systems, and facilitating the achievement of "dual carbon" goals. Therefore, the increase in the number of charging piles is an inevitable trend. According to survey data, the number of

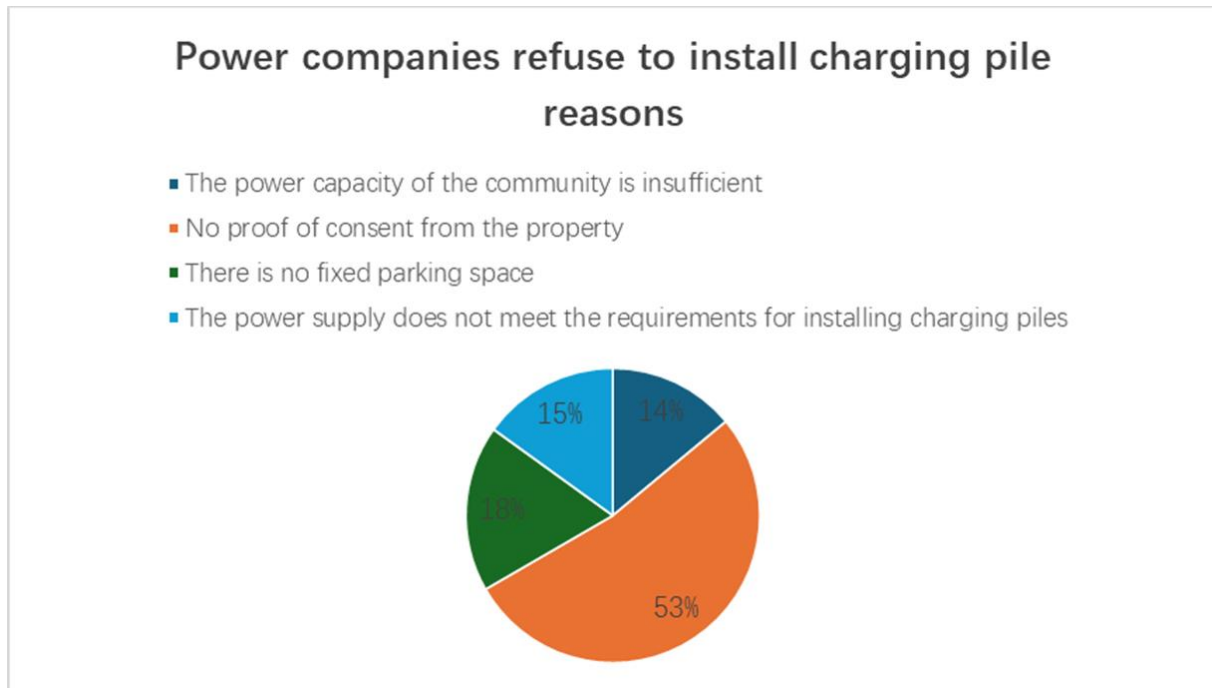
charging piles has surged. For example, in Tianjin, the electric power company reported approximately 5,000 charging piles in the districts of Nankai, Hongqiao, Xiqing, and Baodi in 2022, which increased to around 8,000 in 2023 and has surpassed 10,000 as of the current year.

Around the installation of private charging piles, the applicant and the power company had a dispute on the issue of compulsory contracting. The owner argued to the power company that because the power company had an obligatory contractual obligation, the power company should meet the owner's need to install private charging stations for any reason. The power

company believes that although it has the obligation to promote green energy in accordance with the requirements of the state, it has the right to refuse to approve the installation application that does not meet the safety conditions or exceeds the overall capacity of the community, and the compulsory contracting obligation of the power company is not

unconditional.

According to questionnaire data collected by the research team, 36.6% of surveyed community residents reported having their charging pile installation requests denied by power companies. The breakdown of rejection reasons is shown in the following chart:



The vast majority of owners will sue the power company and the property management company to protect their rights after being refused.

### *1.2 Research Purpose and Methodology*

The main purpose of this study is to conduct an in-depth discussion on the current situation, substantive problems and countermeasures of conflicts between owners applying for installation of private charging piles and electric power companies, focusing on the compulsory contracting obligations of electric power companies. The purpose of this study is to improve the effective way of dispute management, better resolve the disputes between the power company and the owner, protect the legitimate rights and interests of both sides, and build a harmonious community.

The research methods mainly include literature review and empirical research. Firstly, key issues are identified through questionnaires and case collection from China Judgments Online. Secondly, based on the application of Article 494

and 648 of the Civil Code, relevant provisions of the Electricity Law, and regulations on power supply by the State Council, the main factors affecting the mandatory contracting obligation of power companies are analyzed. Finally, countermeasures and suggestions are proposed to harmoniously resolve disputes over mandatory contracting between the two parties.

## **2. Compulsory Contractual Obligations and the Problems Caused in the Installation of Charging Piles**

### *2.1 Definition of Compulsory Contracting Obligation*

According to the academic theory, the so-called compulsory contract means that when one party makes a request to conclude a contract, the other party has the legal responsibility to conclude a contract with it according to law. This system is a necessary restriction of the parties' freedom of making a contract under the traditional principle of autonomy, which is reflected in the

compulsory commitment in most cases.<sup>1</sup> Its core function lies in preventing public service providers from selectively providing services based on their advantages, thereby harming consumer rights and public interests.<sup>2</sup> Although compulsory contracting still needs to follow the basic process of offer and commitment in form, and seems to maintain the mode of contract conclusion with the same intention expressed by both parties, it is actually a special obligation imposed by the law on some civil subjects in specific civil activities based on the consideration of public interests.

Compulsory contracting obligations are particularly common in public services. Because the service involved has the nature of social welfare, it is the basic guarantee for the normal production and life of the public. In order to prevent the public service providers from abusing the market monopoly position and refusing to make a contract with users at will, the law intervenes in the original freely negotiated contractual relationship and restricts the public service providers from refusing to provide services without reason.

In the field of power supply, the mandatory contractual obligation of the power supplier is not to refuse the usual and reasonable demand of the power customer.<sup>3</sup> Here, the power supplier refers to an enterprise that has been approved by the state and obtained a power supply business license. After the electricity user submits an electricity application, the power supply enterprise is responsible for reviewing whether its requirements are reasonable. For reasonable needs, the power supply enterprise should timely determine the power supply plan and inform the user in writing, and then sign a power supply contract. However, it should be noted that not all power supply enterprises have the obligation to conclude a compulsory contract with all users. According to the Electric Power Method and the Measures for the Division and Management of Power Supply Business Areas,

power supply enterprises can only supply electricity within the approved power supply business areas, and users can only apply to power supply enterprises in the business areas where they are located to conclude power supply contracts, and power supply enterprises outside the business areas have no such obligation to users in the area.<sup>4</sup> In addition, even if the power supplier has the obligation to conclude a compulsory contract, and the power supply contract has the attribute of a continuous contract, it does not mean that the power supplier must continue to perform the contract under any circumstances.<sup>5</sup>

According to Article 23 of the Regulations on Power Supply and Use, an administrative regulation of the State Council, "if a power supply enterprise has no reasonable reason for refusal, it shall supply power." The condition for refusal to supply power is that there is a "reasonable reason", which mainly includes the following situations in practice: applications for power use by users not within the service area; the design, construction, testing and operation of power supply and receiving facilities do not meet national standards or power industry standards; refusal to go through relevant procedures or pay relevant fees; users have illegal acts and so on. The definition of "reasonable reasons" needs to be further determined according to specific circumstances.

An analysis of the legislation on mandatory contracting in various countries and regions around the world shows that the mandatory contracting obligations of power supply enterprises are applicable under certain conditions. If the offeror fails to meet the legal conditions or the contracting request made is unreasonable, the power supply enterprise can defend itself on the grounds that the offeror has not met the legal conditions.

The purpose of this study is to provide theoretical guidance and practical strategies with reference value for resolving the civil disputes caused by the installation of private

---

<sup>1</sup> Civil Law Science Compilation Group. (2022). *Civil Law Science* (2nd Edition), Vol. 1. Higher Education Press, p. 371.

<sup>2</sup> Civil Law Science Compilation Group. (2022). *Civil Law Science* (2nd Edition), Vol. 1. Higher Education Press, p. 372.

<sup>3</sup> The Working Group for the Implementation of the Civil Code of the Supreme People's Court. (2020). *Understanding and Application of the Contract Provisions of the Civil Code of the People's Republic of China (II)*. People's Court Press, p. 1140.

---

<sup>4</sup> The Working Group for the Implementation of the Civil Code of the Supreme People's Court. (2020). *Understanding and Application of the Contract Provisions of the Civil Code of the People's Republic of China (II)*. People's Court Press, p. 1140.

<sup>5</sup> The Working Group for the Implementation of the Civil Code of the Supreme People's Court. (2020). *Understanding and Application of the Contract Provisions of the Civil Code of the People's Republic of China (II)*. People's Court Press, p. 1140.

charging piles through in-depth analysis of the contradictions between the owners and the power company, the reasonable demands of the owners who apply for the installation of charging piles, and the difficulties of the power company for the installation of private charging piles.

## *2.2 Dispute on Compulsory Contractual Obligation of Charging Pile Installation*

### *2.2.1 Problems Found in Interviews*

During the interview, the relevant owners believed that the compulsory contractual obligation of the power company was unconditional, while the power company believed that it had the compulsory contractual obligation only when there was no reasonable reason to refuse to supply the power. In the face of the owner put forward unreasonable installation reasons, the power company clearly refused and said: for the installation conditions of charging piles, there are special public boards in the business hall, online platforms are also public, state grid App and district service office have public installation conditions, there are 9598 power supply service hotline, the state also has unified provisions on this. The power company also said that the installation of charging pile is not the power company alone, first of all, according to the national regulations, the owner has the sovereignty of parking space or long-term rent for more than one year. Secondly, owners should install charging piles in accordance with national regulations, such as parking property rights, property consent and fixed parking conditions. The installation of charging piles will involve many government departments, including the grassroots management units of the community, which requires some intervention from government departments. Finally, the security risks after installation are comprehensively considered.

According to the interviews with relevant owners and power companies, there are mainly disputes between the two parties over the compulsory contractual obligations of charging pile installation:

First, the power company refuses to install it on the grounds that it does not have the installation conditions.

Owners applying for the installation of private charging piles need to provide the following materials: application form for electricity consumption, valid identity certificate of

customers, certificate of property right of fixed parking spaces or license certificate of property right units, certificate of consent to use charging and changing facilities and external access construction issued by street office or property, and technical parameters of charging piles. Proof of property is also required in rural areas.

In practice, power companies focus on the first consideration is to have a car and parking space property rights are their own; Or a long-term lease of more than one year. Secondly, the property agrees to install and issues relevant certificates; At the same time, prove that the applicant has the right to use the parking space, at least for more than one year. Many owners who can't install it are basically stuck with the problem of not having a fixed parking space.

Second, power companies refuse to install charging piles because they involve too many subjects.

The situations in which the power companies reflect that there are too many subjects involved include: the power capacity is insufficient and the distribution facilities need to be converted; the reconstruction of the building and its ancillary facilities are matters jointly decided by the owners under Article 278 and need to be decided jointly by the owners, and a certain proportion of voting needs to be met. Article 272 of the Civil Code stipulates that owners have the right to possess, use, benefit and dispose of the exclusive parts of their buildings. Therefore, owners have the right to install charging piles in private parking spaces without harming the legitimate rights and interests of other owners. Article 278 of the Civil Code provides for matters jointly decided by the owners and voting procedures.

Third, the power company refused to install it on the grounds of security risks.

Charging facilities have a certain impact on fire safety and power safety in the residential area. Owners, owners' committees or neighborhood committees and property enterprises can apply for on-site inspection by departments such as electric power, fire control, urban and rural housing construction, etc., if they do not meet the installation conditions, opinions shall be issued by the above relevant departments. The power company decides whether to install it or not according to the opinions issued by the relevant departments. Article 5 of the Fire Protection Law of the people's Republic of China



stipulates that any unit or individual has the obligation to maintain fire safety and protect fire facilities. When installing charging piles, fire safety regulations should be strictly observed to prevent fire accidents.

#### 2.2.2 Problems Reflected in Judicial Cases

First, the dispute over whether the owner's application meets the installation conditions.

In some cases, the owner's application did not meet the installation conditions, and the court held that the power company had no compulsory contracting obligation and had the right to refuse to install private charging piles. In the case heard by the Beijing Tongzhou District people's Court, the Tongzhou Court held that whether the applicant has the ownership or long-term use of the fixed parking space, whether the application for the installation of the parking space conflicts with the planned use of the existing parking space, and whether the consent of the organization representing the interests of all the owners has been obtained. It reflects that the installation of private charging piles may also involve issues such as public safety, owners' right to know, privacy and so on. It may intensify the conflict between the personal electricity demand of owners and community management, the conflict between the use of charging piles and the legitimate rights and interests of others, and the conflict between the operation of charging piles and public safety.<sup>1</sup> The case also involves questions: whether the problems reflected in such cases will also become the basis for power companies to refuse owners to install private charging piles, and whether these bases are reasonable; whether the problem can be solved to enable owners to install private charging piles; how to establish a coordination mechanism for public service departments to strengthen the unified planning and overall coordination of charging pile installation and construction, and to promote the construction and transformation of charging piles in residential communities as a whole.

In some cases, the court held that the owner's application met the installation conditions and the power company had a compulsory contracting obligation. When the owner has the property right or long-term use right of the fixed

parking space, and the electricity demand for the installation of charging piles is reasonable, the power company must fulfill the obligation of compulsory contracting. In the dispute over the property service contract between Liao and Meizhou Management Co., Ltd., the court held that the power company should not refuse the reasonable electricity demand of the electricity users according to the second paragraph of Article 648 of the Civil Code. After the owner puts forward the electricity application, the power company shall examine whether the power demand is reasonable, and if it is reasonable, it must determine the power supply plan and sign the power supply contract as soon as possible.<sup>2</sup>

Second, the dispute about whether the property company, the owners' committee and the interested owners agree to the installation.

First of all, the owner or the owners' committee does not agree to the installation, and the power company does not have the obligation of compulsory contracting. On the magic weapon network of Peking University, the civil judgment of the first instance of disputes over power supply contracts between Yang and the State Grid Beijing Electric Power Company and other power supply contracts involved the issue of power supply contracts. Yang proposed to Beijing Electric Power Company the compulsory right to sign a power supply agreement for the installation of electric vehicle charging piles, and believed that based on the compulsory contracting obligation, the power company must sign a power supply agreement with it and install charging piles. Yang has no fixed parking space, and the location where he applied to install the charging pile belongs to the owner. Yang so-and-so wants to install self-charging piles on parking spaces shared by all owners, which belongs to the use of changing the common part, and this can only be carried out with the consent of all the owners or the owners' committee entrusted by the owners' meeting or other units and organizations that can represent the common interests of all owners, but Yang did not provide any evidence that the above-mentioned units or organizations agreed to install self-charging piles on public parking spaces. In the end, the court rejected Yang's

<sup>1</sup> Beijing Tongzhou District people's Court (2023) Beijing 0112 Preliminary civil trial of No. 4212, the plaintiff Beijing Tongzhou Xinghua property Management Co., Ltd. and the defendant Zhang Qi property service contract dispute.

<sup>2</sup> Guangdong Meizhou Intermediate people's Court (2021) Guangdong 1403 Preliminary civil trial of No.2435, the plaintiff Liao and the defendant Meizhou Management Co., Ltd. property service contract dispute.

claim, arguing that the power company did not have a compulsory contracting obligation.<sup>1</sup> In the contract dispute case between Zhu and a company in Fuxin, the court held that the property had the obligation to cooperate with the power company and the owner to install private charging piles according to the green principle of the Civil Code.<sup>2</sup>

Secondly, after the examination in accordance with the law and regulations, the power company thinks that the requirement of concluding the electricity consumption contract is unreasonable, and the power company does not have the obligation of compulsory contracting. On the China Energy Law Popularization Network, Zhang sued the dispute over the compulsory contracting of the power supply contract of Shandong Zaozhuang Power supply Company,<sup>3</sup> combined with the second paragraph of Article 648 of the Civil Code: “the power supplier who supplies power to the public shall not refuse the reasonable contract requirements of the power user.” It is concluded that the compulsory contracting obligations of power supply enterprises in power supply contracts are clarified from the level of the civil basic law. However, the power supply enterprises have been perplexed by such problems as under what circumstances the power supply enterprises should fulfill the obligation of compulsory contracting and how the requirements for the power users to conclude the contract are reasonable. The court decision gives a clear and clear judicial judgment standard, especially an accurate explanation of the uncertain concept of “reasonable”, which fully demonstrates the solid foundation, stable expectation and long-term value of the Civil Code. The power supply company has a comprehensive and accurate understanding of the current situation of power supply and electricity payment in the residential area, and it is easy to bring security risks from cross power supply (which does not meet the

conditions of direct power supply), the plaintiff responded to the lawsuit in terms of normal electricity consumption without direct economic loss (no additional electricity charge), fully analyzed that the compulsory contracting obligation of power supply is not equal to unconditional contracting, and needs to meet the conditions of “safety, reliability, economy, rationality and convenience for management.” The court finally held that the power supplier had the right to examine and determine whether the requirement of the power consumer to conclude the contract was “reasonable” according to law and regulations. And judging whether it is “reasonable” should follow the principles of “safety, reliability, economy, rationality and convenience for management.” The first and second trials of this case did not support the plaintiff’s claim, and gave a negative evaluation to the plaintiff’s abuse of the right of action. The results fully met the expectations of power supply enterprises and had strong guiding significance for power grid enterprises to solve similar problems.<sup>4</sup>

Finally, the owner’s application meets the installation conditions, but the interested owner raises objections, and the power company can only be required to perform the compulsory contracting obligation after the dispute between the relevant owners is settled. In some old residential areas, the owner’s application for installing private charging piles has been reviewed by the power company and meets the installation conditions. At the same time, the power company has the compulsory contracting obligation to install private charging piles for the applicant. However, because the charging pile installation location is too close to the buildings of other owners, there is a safety hazard. The affected owners hope to remove it as soon as possible and oppose the installation. According to the provisions of Civil Code, the installation of charging piles in public places of residential areas requires the consent of more than 2/3 owners to protect the common rights and interests of owners, while the staff of street offices have only publicized the private charging piles installed in public places in the residential areas and failed to contact the relevant owners. Although the electric power company has

<sup>1</sup> Beijing Yanqing District people’s Court (2021) Beijing 0119 Preliminary civil trial of No.11698, Yang Jiasheng had a power supply contract dispute with Beijing Electric Power Company of the State Grid.

<sup>2</sup> Fuxin Intermediate People’s Court (2009) Fumin: The second instance is final, the plaintiff Zhu and the defendant Fuxin company contract dispute.

<sup>3</sup> Beijing Xicheng District people’s Court (2021) Beijing 0102 Preliminary civil trial of No. 3380, the plaintiff Zhang Yafeng and the defendant State Grid Shandong Power Company Zaozhuang Power supply Company power supply contract dispute.

<sup>4</sup> Hou Zhipeng: *State Grid Shandong Zaozhuang Power Supply Company: Disputes over Compulsory Conclusion of Power Supply and Consumption Contract*. China Energy Law Popularization Network, 2023.

compulsory contracting obligations according to the power supply contract, it cannot install private charging piles for the applicants.

### 3. Factors Affecting Electric Power Company's Fulfilment of Compulsory Contracting Obligation for Charging Pile Installation

Whether electric power company should undertake compulsory contracting obligation or not, the influencing factors include policies and regulations, electric power infrastructure carrying capacity, safety management, economic interests, market competition, technical standards and so on.

#### 3.1 Policy and Regulatory Factors

Policies and regulations are the primary factor in determining whether a power company assumes compulsory contractual obligations. At present, many provinces and municipalities have introduced a series of supportive policies in order to promote the development of the new energy automobile industry. For example, in the "New Energy Vehicle Industry Development Plan (2021-2035)", it is clearly stated that the construction of infrastructure such as charging piles should be accelerated, and power companies should be encouraged to actively support the installation of charging piles.

However, the specific implementation of the policy varies from place to place. In some regions, power companies have set many thresholds in the implementation process, which hinders the owners' installation applications. Taking a certain city as an example, although the city has issued relevant policies requiring power companies to actively cooperate with the owners to install charging piles, in actual operations, the power companies have delayed or rejected the owners' applications for various reasons. Some power companies require owners to provide cumbersome certification materials, such as property consent forms and power capacity certificates, which make it more difficult for owners to apply; some power companies refuse to install charging piles for owners on the grounds that the power grid transformation has not yet been completed. Therefore, further refining and strengthening the implementation of policies and regulations, and clarifying the responsibilities and obligations of power companies, are the key to solving the current dilemma.

In addition, when interviewing power companies, we learned that the current policy

focus on promoting installing charging piles, but the power company, as the executive party of the policy, will encounter many restrictive conditions when installing charging piles for the owners, which cannot be solved by the power company alone. Specific policies are needed to mobilize all parties to solve related problems together. For example, in old residential areas, there are no fixed parking spaces and parking spaces are tight. Under such a problem, the power company has no way to install the charging pile in a certain location according to the owner's requirements. Even if the installation is successful, there will be some other disputes in the future. Disputes. Some power companies have also stated that they hope to introduce relevant policies to solve the safety hazards that will arise after the installation of charging piles. There are also power companies that say that some public charging piles are currently illegally selling electricity to the outside world for profit under the guise of shared charging piles, and they hope that the state will be able to introduce relevant policies.

In practice, some courts avoid "There is no reasonable reason not to supply power." The review is only based on implement policies to meet people's livelihood needs. On the grounds that the power company is responsible for compulsory contracting obligations, is an error of applicable law. In the property service contract dispute between Shang XXX and Luoyang XXX Management Co., Ltd., the court stipulates in accordance with Article 9 of the Civil Code of the People's Republic of China: "Civil entities engaged in civil activities shall be conducive to the conservation of resources and the protection of the ecological environment." It believes that vigorously developing electric vehicles is important to ensure energy security, promote energy conservation and emission reduction, and prevent and control air pollution. It is of great significance. Starting from the above principles, the installation of charging piles is an indispensable equipment for electric vehicles to achieve the purpose of use. The plaintiff has the right to install charging piles equipped with his car on the parking space he uses. All parties shall assist Shang XXX in going through the relevant procedures for the installation of new energy vehicle charging piles in underground parking spaces. The court defines the installation of private charging piles

as an indispensable equipment in the lives of people who purchase new energy vehicles. The development of new energy vehicles is the only way for our country to move from a large automobile country to a powerful automobile country. The development momentum of the new energy automobile industry is strong and the number of new energy vehicles accounts for a huge proportion, which is consistent with the mandatory contracting obligations. The objects have the same characteristics, and under this understanding, the power company will have compulsory contracting obligations.<sup>1</sup> In the above case, it belongs to the “escape to the general clause” in the application of the law.

### 3.2 *The Carrying Capacity of Power Infrastructure*

The carrying capacity of the power infrastructure directly affects whether the power company can successfully fulfill its compulsory contractual obligations. The installation of charging piles requires a stable power supply as a guarantee, and whether the existing power grid structure, transformer capacity and other hardware facilities can meet the access needs of large-scale charging piles has become an urgent problem to be solved. In some old residential areas, the power facilities are outdated and the capacity is limited. Large-scale installation of charging piles may lead to power overload, safety risks and other problems.

During the investigation, it was found that after the owner of an old residential area applied for the installation of charging piles on a large scale, there was a situation of power overload, resulting in frequent power outages in the residential area. Although the power company carried out emergency repairs, it failed to solve the problem fundamentally. Later, the power company invested a lot of money to transform and upgrade the community power grid, increasing the transformer capacity and line load to meet the installation needs of charging piles. Therefore, the government should increase investment in the construction of power infrastructure, promote the intelligent upgrading of the power grid, and provide a solid foundation for the installation of charging piles.

### 3.3 *Safety Management Factors*

Safety management is an important factor that power companies must consider during the installation of charging piles. The installation and use of charging piles involves many aspects such as electrical safety and fire safety, and any safety hazards may have serious consequences. The power company needs to conduct a strict review of the owner’s installation application to ensure that the installation of the charging pile complies with relevant safety standards and specifications.

During the investigation, when some owners applied for the installation of charging piles, they lacked a full understanding of safety issues, chose charging pile products that did not meet the standards or constructed without authorization, which put a lot of pressure on the safety management of power companies. For example, an owner installed a charging pile privately without the approval of the power company. Due to the improper installation location, a power leakage accident occurred during the use of the charging pile. Fortunately, it was found in time and no casualties were caused. Therefore, strengthening safety publicity and education, raising the safety awareness of owners, and standardizing the installation and use behavior of charging piles are important measures to ensure the safe operation of charging piles.

### 3.4 *Factors of Economic Interest*

Economic interests are also an important factor affecting the performance of compulsory contracting obligations by power companies. The installation and maintenance of charging piles requires a certain cost investment, and power companies need to make a trade-off between economic interests and social responsibilities. On the one hand, the installation of charging piles can drive the business growth of power companies and increase power sales; on the other hand, the installation and maintenance of charging piles also requires power companies to invest a lot of manpower, material and financial resources. Under the current electricity price system, power companies have limited profit margins. If the installation cost of charging piles is too high, it may affect the enthusiasm of power companies.

During the investigation, when a power company installed charging piles for the owners, it found that it needed to invest a lot of money

<sup>1</sup> People’s Court of Jianxi District, Luoyang City, Henan Province (2023) Yu 0305 Preliminary civil trial of No.9748, the plaintiff Luoyang Zhonghong Excellence Property Management Co., Ltd. and the defendant Shang xx property service contract dispute.



in power grid transformation and equipment upgrades. Due to the high cost, the power company was very passive during the installation process. Later, the government introduced a series of supporting policies, such as providing financial subsidies and tax incentives, to encourage power companies to actively participate in the installation and operation of charging piles, and the enthusiasm of power companies was improved. Therefore, the government should introduce corresponding support policies to encourage power companies to actively participate in the installation and operation of charging piles.

### *3.5 Market Competition Factors*

The market competition environment will also affect the behavior of power companies. In some regions, the electricity market is gradually opening up and competition is becoming increasingly fierce. In order to attract and retain customers, power companies may take the initiative to provide more convenient and efficient charging pile installation services. However, in a monopoly or semi-monopoly market environment, power companies lack competitive pressure, are prone to inertia, and set unnecessary obstacles to owners' charging pile installation applications.

In the survey, in a city with an open power market, a number of power companies are competing fiercely. In order to attract customers, some power companies have launched a one-stop service for the installation of charging piles, simplifying the application process and improving the installation efficiency. In the monopoly area of the city, the power company is very indifferent to the owner's application for the installation of charging piles, setting up many obstacles. Therefore, promoting power marketization reform, introducing competition mechanisms, and enhancing the service awareness of power companies are important ways to promote the installation of charging piles.

### *3.6 Technical Standard Factors*

The consistency of technical standards is the key to ensure the safe and efficient operation of the charging pile. At present, the technical standards of charging piles have not been completely unified. There are differences in interfaces and communication protocols between different brands and models of charging piles, which have brought great

challenges to the management and maintenance of power companies. Power companies need to conduct compatibility tests and safety assessments of charging piles of different standards, which increases the workload and cost.

During the investigation, when a power company was managing charging piles, it found that the interfaces and communication protocols of different brands of charging piles were not uniform, which brought great difficulties to management and maintenance. Later, the government strengthened the formulation and promotion of charging pile technical standards, promoted the construction of industry standardization, and provided convenience for the management and operation of power companies. Therefore, the government should strengthen the formulation and promotion of charging pile technical standards, promote the construction of industry standardization, and provide convenience for the management and operation of power companies.

## **4. Coping Strategies for Problems**

### *4.1 The Owner Actively Prepares the Application Materials in Accordance with the Relevant Regulations*

Prepare the relevant materials stipulated by law, including the car purchase intention agreement or car purchase invoice, the applicant's valid identity certificate, fixed parking space property rights or more than one year (including one year) use right certificate, parking space floor plan or on-site environment photos, property issuance (no property management community issued by the industry committee or neighborhood committee) consent installation supporting materials of the charging pile. Apply for telegraph installation to the regional power company where it is located. Together with the power company and the property, the on-site survey of electricity consumption and construction feasibility. After confirming the power supply plan, find the construction party to build the charging infrastructure. After the construction is completed and the inspection is qualified, the construction unit and the property will complete the acceptance and test charging confirmation. After the facility is completed, the charging infrastructure will be maintained regularly to prevent infringement of the rights and interests of third parties.

### *4.2 Settlement of Joint Ownership Disputes Between*

### *Owners in the Installation of Charging Piles*

According to Article 278 of the Civil Code, the installation of charging pile facilities in the common part of the community needs to go through double voting, that is, the owners who account for more than two-thirds of the area and number of people in the exclusive part participate in the voting, and more than half of the area and number of people in the voting agree. However, in real life, the following problems have arisen: the street office did not contact the original owner and did not publicize it to all owners through effective channels; the “public interest” of the majority of owners conflicts with the “damage of neighboring rights” of individual owners; after the majority decision is passed, the actual installation may be deadlocked due to the opposition of individual owners.

In response to the above problems, the dual innovation mechanism of “technology + rules” can be adopted: first, establish a blockchain-based community public affairs voting platform, store certificates on the chain for the owner’s voting process, and ensure that the owner’s identity verification and voting results cannot be tampered with; second, when determining the specific location of the charging pile installation, use the platform pushes 3D modeling drawings, safety assessment reports and other materials to all owners; finally, set up an objection feedback window period to realize the closed loop of “right to know — right to vote — right to relief”. For owners who have been damaged by public facilities, compensation can be withdrawn from public income or property fees can be reduced; At the same time, the majority of the consenting parties are required to propose a compensation plan before voting, otherwise the voting will be invalid.

After a double voting process, the community can introduce an additional “majority dissent period” for major matters. If the proportion of dissenting owners reaches a certain level, a second round of negotiation will be triggered. For those owners who did not participate in the voting and did not raise any objections, they will be regarded as having agreed. However, their right to know should be ensured through methods such as sending text messages or visiting them.

### *4.3 Judgment on “Reasonable Grounds for Refusal to Supply Electricity” by Electric Power Companies*

After receiving the application for telegraph installation, go to the site to conduct electricity consumption and construction feasibility survey. For eligible applications, put forward a power supply plan. If the existing power distribution facilities cannot meet the application for telephone installation, and the property rights are for power supply enterprises, the power supply enterprises shall cooperate with relevant parties to propose solutions and complete the relevant transformation. After the construction of the project is completed and the inspection is qualified, the power supply enterprises shall complete the installation and connection of the meter.

The reasonable reasons for the power company to reject the owner’s installation application and related appeals are mainly:

- a. The power supply contract relationship has not been established yet. The acceptance of the application by the power company is not equivalent to the commitment to the installation of charging piles, nor does it mean that the two parties have established a power supply and consumption contract relationship. It also needs to be approved by the relevant functional departments according to technical specifications.
- b. Compulsory contracting obligations are not applicable. Private charging piles are not the only or have no alternative services. Due to the existence of public charging piles, owners can obtain charging services through other channels even if they do not have private charging piles. The power company’s non-power supply does not affect the owner’s right to obtain charging services.
- c. The owner has no right to require the power company to bear the cost of charging and replacing electricity services. The reason why the charging pile cannot be installed will involve many factors, not unilaterally caused by the power company.
- d. The reasonableness of the electric power company to conduct examination and survey in accordance with laws and regulations after accepting the application. There are many restrictions on the existing infrastructure conditions. When handling the application for the installation of charging piles, power companies should take into account the actual situation of the community to ensure safety and feasibility.

#### *4.4 Implement the People's Livelihood Policy and Clarify the Responsibilities of All Parties*

Local development and reform, fire fighting, energy, housing and urban and rural construction departments, etc., should assume the responsibility of "coordination, coordination and supervision", including the supervision of the safety and compliance operation of charging piles.

When the owner believes that the power company has failed to fulfill its mandatory obligations, it can request all departments to intervene and force the power company to fulfill its obligations through the following channels:

##### *a. The intervention of the power regulator*

According to Article 24 of the Electricity Supervision Regulations, the electricity regulatory authority has the right to supervise the service quality of power supply enterprises. The owner can submit a written complaint to the agency sent by the State Energy Administration and attach evidence such as the refusal certificate of the charging pile and the inspection report of the community power facilities. The regulatory department shall review within a certain time limit. If it is determined that there is no legitimate reason for refusing to supply, it may require the power company to fulfill its obligation to install charging piles.

##### *b. The intervention of the housing and construction department*

The owner can ask the housing and construction department to order the power company to participate in the transformation of the community capacitor. The housing and construction department can add the power distribution facilities of the old community to the urban planning and construction, and give priority to allocating funds to solve the dilemma that owners cannot install charging piles because the power distribution facilities in the community do not meet the requirements. At the same time, the "Standards for the Construction of Charging Piles in Residential Areas" are formulated to clarify the subjects of the power grid.

##### *c. The intervention of the street office and the neighborhood committee*

If the owner believes that the power company has failed to fulfill its mandatory contracting obligations, it can report to the street office and the neighborhood committee and ask for help.

The street office and the neighborhood committee should organize the tripartite negotiation between the owners, the power company and the property management company to promote the settlement of installation disputes. It can also be resolved through the vote of the owners' meeting.

##### *d. The intervention of the judicial organs*

The owner can file a civil lawsuit with the court to request that the power company be ordered to fulfill its mandatory contractual obligations. The fact is that the power company's refusal to provide caused the owner to be unable to use the charging pile, which infringed on their legitimate rights and interests.

#### **5. Summary**

By conducting an in-depth discussion on the background and current situation, influencing factors and countermeasures of the mandatory contracting obligation issue regarding the installation applications of private charging piles by power companies for property owners, we can find that the installation of private charging piles is a complex and challenging problem. Based on the comprehensive analysis of the contents of court judgments and research interviews, the circumstances where power companies do not have the mandatory contracting obligation are as follows: Firstly, the property owner does not have the installation conditions; Secondly, the installation of self-used charging piles on a shared parking space has not obtained the consent of all property owners or the property owners' association or other units or organizations entrusted by the property owners' association that can represent the common interests of all property owners; Thirdly, after the power company has conducted legal and regulatory reviews, it considers that the requirements for concluding an electricity contract are unreasonable.

The circumstances under which power companies have the obligation to enter into contracts by force are as follows: First, the property owner has the conditions for installation and the application is reasonable; Second, the property or the property owners' committee agrees to the installation; Third, there is an obligation to enter into contracts by force to meet the needs of people's livelihood as a result of implementing policies; Fourth, the power company fails to actively fulfill its work obligations, thereby preventing property owners

with the conditions for installation from installing charging piles.

In terms of the legal dimension, we also need to conduct further research and practice in accordance with relevant laws and regulations such as the “Electric Power Law of the People’s Republic of China”, the “Civil Code”, and the “Consumer Rights and Interests Protection Law of the People’s Republic of China”, as well as policy documents jointly issued by multiple departments including the National Development and Reform Commission, such as the “Implementation Opinions on Further Improving the Service Guarantee Capacity of Electric Vehicle Charging Infrastructure”. We aim to explore more effective solutions to promote the resolution of the issue of power companies’ mandatory contracting obligations and make greater contributions to the stability and development of society.

## References

- Civil Law Science Compilation Group. (2022). *Civil Law Science* (2nd Edition), Vol. 1. Higher Education Press, 371-372.
- Hou Zhipeng. (2023). *State Grid Shandong Zaozhuang Power Supply Company: Disputes over Compulsory Conclusion of Power Supply and Consumption Contract*. China Energy Law Popularization Network.
- The Working Group for the Implementation of the Civil Code of the Supreme People’s Court. (2020). *Understanding and Application of the Contract Provisions of the Civil Code of the People’s Republic of China (II)*. People’s Court Press, p. 1140.