

State Grid Shanghai Electric Power Company

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The State Grid Shanghai Municipal Electric Power Company, Notice of The Company's Two-year Action Plan (2019-2020) to Continuously Optimize Business Environment and Promote Standard of Power Supply Service

To All Subsidiaries:

According to the overall work deployment of the CPC Central Committee and the State Council on deepening the reform of "Delegate, Manage and Serve" and optimizing business environment, conscientiously implement the requirements of Secretary Li Qiang's "The highest level of international standards for the optimization of the business environment in the city". Consolidating the company's achievements in optimizing business environment in 2018, implements the reform measures of "Five Decreases, Five Reduces", adheres to customer-centered, and further enhances the level of "Getting Electricity" within the company's business scope. Combined with *The State Grid Corporation of China, Notice of The Company's Two-year Action Plan to Continuously Optimize Business Environment and Promote Standard of Power Supply Service (GJDWB (2018) No.1028)*, Formulating *The State Grid Shanghai Municipal Electric Power Company, Notice of The Company's Two-year Action Plan (2019-2020) to Continuously Optimize Business Environment and Promote Standard of Power Supply Service*. Hereby formulate and issue *The State Grid Shanghai Municipal Electric Power Company, The Company's Two-year Action Plan (2019-2020) to Continuously Optimize Business Environment and Promote Standard of Power Supply Service*. Relevant departments and units of the company are requested to comply with the implementation.

The State Grid Shanghai Municipal Electric Power Company
December 6th, 2019

(The announcement shall be delivered to the headquarters and their subsidiaries of
the receiving companies)

**The State Grid Shanghai Municipal Electric Power
Company, The Company's Two-year Action Plan to
Continuously Optimize Business Environment and Promote
Standard of Power Supply Service
(2019-2020)**

1. Guiding Ideas

Guided by Xi Jinping's socialist ideology with Chinese characteristics in the new era, Shanghai Municipal Electric Power Company (SMEPC) fully implements the work plan of the CPC Central Committee and the State Council on deepening the reform of "Delegate, Manage and Serve" and optimizing business environment, practices the enterprise purpose of "People's Electricity Industry for People", complies with *The State Grid Corporation of China, Notice of The Company's Two-year Action Plan to Continuously Optimize Business Environment and Promote Standard of Power Supply Service (GJDWB (2018) No.1028)*, adheres to customer-centered, consolidates the company's achievements in optimizing business environment in 2018, implements the reform measures of "Five Decreases, Five Reduces" to continuously optimize the business environment of getting electricity, and further enhances the level of "Getting Electricity" within the company's business scope.

2. Working Goals

On the basis of earnestly evaluating the company's ten initiatives of "5 saves & 5 raises", SMEPC closely adheres to the main line of high-quality development, comprehensively implements the new reform measures of "5 decreases & 5 reduces". In two years, SMEPC will create an international first-class business environment of getting electricity with excellent service. SMEPC will cut the getting electricity procedures of high-voltage customers to four, reduce the average getting electricity time of 10kV customers to less than 60 days, and 35kV and above customers to within 150 days, and further decrease the cost of getting electricity. Meanwhile, SMEPC will cut the procedures to 2 for low-voltage small and micro enterprises, reduce the average time to less than 10 days and bear all the costs of getting electricity for small and micro enterprises. SMEPC will fully cover the reserve materials required for power access projects of small and micro enterprises and deliver within 3 days. Besides, SMEPC will implement the time limit system for construction of customers' power access projects, and in principle, the construction period of 10kV projects shall not exceed 30 days, while projects of small and micro enterprises shall not exceed 5 days. Additionally, SMEPC will fulfill that the average number of outages per household (SAIFI) and the average outage time per household (SAIDI) are

respectively decreased by 3% in 2019 and another 3% in 2020. Finally, the rank of "Getting Electricity" will be steadily improved.

3. Working Principles

3.1 Adhering to goal leading. To strengthen customer-centered, benchmark the highest international standards and advanced practices, with the goal of improving customers' satisfaction with "Getting Electricity", make efforts accurately, and make getting electricity more labour-saving, trouble-saving, money-saving, time-saving and energy-saving.

3.2 Adhering to problem orientation. To strengthen problem awareness, focus on key factors such as procedures, time, cost and reliability of power supply, find out their own gaps and shortcomings, highlight the key points of rectification, implement precise measures, and continuously improve customer service level.

3.3 Adhering to innovation driving. To use new concepts, methods and technologies to drive service innovation, fundamentally promote service mode change, service means improvement, service process optimization, and continuously improve service capabilities.

3.4 Adhering to coordination between government and enterprise. To seize the opportunity of the municipal government's "Delegate, Manage & Serve" reform, actively integrate into the local work of optimizing business environment, promote the Shanghai government to issue more supporting policies, and solve the external environmental constraints such as route planning, licensing, electricity pricing mechanism, road excavation and construction.

4. Specific Measures

4.1 More Labour-saving

Expected results: By 2020, through reducing procedures, streamlining application documents, promoting on-line application, door-to-door and business agency service, customers of large and medium-sized enterprises will get electricity with "counter visit only once" and customers of small and micro enterprises will get electricity with "no counter visit".

4.1.1 Further streamlining the electricity connection procedures. Make full use of the government's multiple channels, such as "one website, all services" platform, online State Grid Electric Power Company, industrial park docking ect.. To obtain customer information, contacting customers proactively, working in advance, in order to support customers' electricity connection services. For large and medium-sized business customers, if applying capacity is 800kVA and below, procedures of "customer site investigation" and "power supply scheme reply" are combined; For 10kV and above customers, procedures of "external construction" and "completion acceptance test" are combined, after the customer pays the fee,

organizing the power supply supporting project construction, at the same time carrying out the procedure of “completion acceptance test”; Regarding 10kV and above customers, procedures of "sign a contract" and "meter installation and electricity connection" are combined. When the procedure of meter installation and electricity connection is proceeding, the contract is completed and the relevant agreement is signed, cancel the design review and intermediate inspection of non-essential power customers, In summary, the number of procedures of high-voltage customers involving external projects are streamlined to 4: "application acceptance", "site investigation and power supply scheme reply", "external construction" and "meter installing and power delivering". The number of procedures of high-voltage customers without external projects are reduced to 3: "application acceptance", "site investigation and power supply scheme reply" and "meter installing and power delivering"; Concerning low-voltage small and micro enterprise customers, the electricity connection of low voltage customers continue to implement the no-charge policy. Procedures of applying for electricity connection comply "application acceptance" and "meter installation and electricity connection". By the end of March 2019, complete the revision of the the Guidelines for Business Expansion. and adjust the marketing system and strictly follow the new process.

4.1.2 Simplifying the procedures for getting electricity. By further sorting out the documents needed for power connection, customers shall not be asked to submit other proof documents except documents and certificates explicitly required in regulations. Existing customer documents or certificates are no longer provided if still valid. customer managers receive information on site,when customers upload data via “Power at Hand” APP and “One website all services”. By the end of March 2019, the State Grid Shanghai Municipal Electric Power Company make clear lists of documents submitted by customers of different business types, and publish it to the public through business hall, “Power at Hand” APP, “One website all services” platform and other channels.

4.1.3 Promoting 24/7 online service. Fully implement the “Internet plus” marketing service, provide “Online SGCC”, 95598 website, “One website all services” and other channels to achieve online application, query process and evaluate service quality, reducing counter visits for customers. By the end of March 2019, the company needs to complete the promotion of a unified online service platform, enabling customers to handle all power usage procedures through one platform.

4.1.4 Providing reservation service. According to information from “Power at Hand” APP, 95598 website, “Online SGCC”, “One website all services”, and other sources, SMEPC can take the initiative to dock and actively carry out services in advance. For 10kV and above customers, SMEPC shall implement the joint service model, the customer managers and the professional of each departments compose the "1 + N" service team, which include development department, maintenance and inspection department, construction department, dispatching control centre and

integrated energy service company, providing a "one-stop" service from technical consultation to meter installation and electricity connection. As for low-voltage small and micro customers, after the customer's application is formally accepted, the supporting power grid construction plan, material demand list and non-blackout operation plan will be considered together to realize one door-to-door and one power transmission. By the end of March 2019, all power supply companies and customer service centers completed the experimental unit, in the year of 2020 all power supply companies and customer service centers are completed covered.

4.1.5 Providing business agency service. For large and medium-sized enterprise customers, especially large-capacity customers such as city-level and above industrial parks, according to customer needs, SMEPC will implement pilot projects that provide agency service such as path planning, license applying, market-oriented electricity sales, integrated energy service and so on. By the end of June 2019, the company implemented the pilot project and supported the relevant units of the company to carry out agency business. By the end of 2019, the relevant business handling rules should be formulated, clearly defined the contents of the service, and further expanded the scope of services.

4.2 More Time-saving

Expected results: By 2020, through setting time limit for every procedure, optimizing authority of constructing supporting power grid projects, promoting the government to streamline approval procedures, speeding up construction and business processing, realizing the average connection time of large and medium-sized enterprise and small and micro enterprises is no more than 60 days and 10 days respectively.

4.2.1 Setting time limit for procedures. According to the regulation (National Energy Supervision [2017] No.110), SMEPC further strengthens monitor and control of each procedure by the process management and control platform. By improving the whole process monitoring, early warning and evaluation mechanism and adopting systematic early warning, short message informing and other means, SMEPC reminds the manager to process procedures in accordance with the prescribed time limit. In 2019, the average connection time of 35kV and above, 10KV and low-voltage customers is no more than 160 days, 70 days and 15 days respectively; while in 2020, the time is 150 days, 60 days and 10 days respectively.

4.2.2 Providing pre-consulting service. Fully implement pre-consulting service for customers of high-voltage (capacity of over 800kVA and above) and residential complementary projects, for all types of industrial park customers who do not have the conditions for applying for electricity and 110 kV and above are incorporated into the key project repository for management, grasping information of energy planning and production arrangement in advance, synchronously push information to Development Department, Maintenance and Inspection Department, Construction

Department and other departments to start pre-work of supporting power grid projects. Guide customers to reasonably determine internal energy usage mode, distribution facilities capacity, location and layout. The Marketing Department tracks process of customer projects and initiates pre-formalities of power supply supporting projects in advance, and then starts formal application for power connection when customer formalities are completed and power demand is determined. Since January 2019, all power supply companies and customer service centers have carried out comprehensive consulting services for large customers.

4.2.3 Simplifying approving of power supply scheme. For high-voltage customers whose capacity is 800kVA and below, power supply schemes are on-site replied; while for 800kVA and above, power supply schemes are jointly signed online or offline. For projects of constrained access to the grid, implement “access first, transform later” or transitional scheme with synchronous distribution network upgrade. For small and micro enterprise customers, cancel the power supply program approval and reply, simultaneously prepare the power supply plan during the site inspection, and directly start the external project implementation related work. Since January 2019, all power supply companies and customer service centers have implemented a low-voltage power supply scheme exemption approval, high-voltage power supply scheme online signing or centralized audit management mode.

4.2.4 Accelerating construction of supporting power grid projects. Decentralize administrative privileges. According to the requirements of State Grid Corporation, the 220 kV and 110 kV conventional supporting power grid projects, and the 35 kV industrial park supporting power grid project was initially set up and approved by the company's construction department, and the 10 kV and below conventional projects were approved by the power supply company. Dynamically adjust supporting project package size, the small and micro enterprises will implement the management mode of “monthly package construction project”. Strengthen the supply of materials, further expand the range of 35-220 kV power transmission and transformation engineering materials agreement inventory procurement. implement integrated bidding and procurement, include feasibility study design, design and construction, and construction materials. Implement a combined material supply mode of supplier storage, physical reserve and negotiated inventory and carry out quota reserve, demand-based acquisition and timely replenishment, in order to achieve full coverage of reserve materials for supporting grid projects will continue to be implemented. Implement time limit mechanism for power connection and supporting grid projects. Since January 2019, all power supply companies have fully implemented the time limit mechanism.

4.2.5 Promoting the government to optimize the licensing process. Relying on the government electronic parallel approval platform, advance 10kV high-voltage projects, approving time of excavation and other administrative approval should be regulated in accordance with the time limit of low-voltage projects. As for 35kV high-voltage

projects, the time limit of approving time should be executed accordingly, further optimize the approval process and shorten the license processing time. By the end of June 2019, the municipal government was urged to introduce the optimization measures for the approval process of the license.

4.2.6 Increasing the efficiency of meter installation and electricity connection. For large and medium-sized enterprise customers, simplify the completion inspection content, focus on the equipment which connected to the power grid, automation equipment, energy metering device, harmonic control device and multi-power latch-up device, cancel the inspection of construction quality of the non-network-related equipment inside the customer, cancel the inspection of operation regulations system and cancel the inspection of the safety measures; After the acceptance, the acceptance reply will be answered once, and the acceptance will be sent immediately. For small and micro enterprise customers, if they have direct installation conditions, they will directly install meter and connect electricity when they go site inspection; if the construction of the supporting power grid project is involved, the meter installation and electricity connection should be finished on the day of the completion of the project. From January 2019, All subsidiaries and Customer Service Center fully implement the policies.

4.3 More Money-saving

Expected results: By 2020, through expanding investment interface, optimizing power supply schemes, promoting classical design and general materials, continuously decrease the cost of getting electricity for large and medium-sized enterprises, and electricity connection is still free of charge for low-voltage small and micro enterprises.

4.3.1 Stretch the investment interface division of Business Expansion. For large and medium-sized enterprise customers, the SMEPC undertakes project investment expansion projects such as electric energy replacement, charging and replacing facilities and photovoltaics, the SMEPC also undertakes the 110 kV and 220 kV projects of substation interval fee, expansion cost of the substation bays, cost of the non-customer used electricity pipe expansion. Cancel the charge of temporary power capacity, load control terminal, metering device and power pipe, promote the government to further standardize greening, road compensation fees, and reduce compensation expenses. For small and micro enterprise customers, continue to extend the grid investment interface to the customer's energy meter box. Since January 2019, All subsidiaries and Customer Service Center fully implement the policies.

4.3.2 Raise the standard of external capacity. Open full access to the grid resources, promote the preparation of power supply scheme through the application of information technology. For high-voltage customers, further optimize the external capacity standard combined with the local grid carrying capacity. Announce the information on grid resources such as open capacity in the region, implement

first-come-first-served, nearby access for customers. For small and micro enterprise customers, all customers with 160 kW and below adopt low-voltage access. By the end of March 2019, the company introduced a new high-voltage customer access capacity standard and announced it to the public.

4.3.3 Providing the guidance on typical construction of customer projects.

Strengthen technical guidance and consulting services. Improve the typical design and standard equipment utilization rate of industrial expansion projects; Free provision of typical design and engineering cost consulting services for switch stations, free 10KV power engineering typical design, free 35 kV and above power engineering cost consulting services, guiding customers to reasonably determine the power application capacity, scientific selection of standardized equipment; Prepare a typical design plan for small and micro enterprises' power-receiving projects and a project cost reference manual to provide free customer enquiries. Before the end of June 2019, All subsidiaries and Customer Service Center fully promoted customer engineering construction consulting services.

4.3.4 Improving the electricity piping usage.

Strengthen the communication between the two levels of government at the city (district), improve the power piping plan, improve the information exchange of road construction plan, increase the investment on power piping, and arrange the power piping investment according to the road construction plan, in order to avoid repeated road excavation and reduce the cost of power piping construction. Before the end of June 2019, the company revised the power piping investment and construction management methods, and the power supply companies improved the government communication mechanism. Since June 2019, the management methods have been implemented in various power supply companies.

4.3.5 Help decrease usage cost.

SMEPC will continue deepening the "1+N" comprehensive energy services. For large and medium-sized enterprises, SMEPC provides energy efficiency diagnosis, equipment maintenance, multi-energy complementary, improving the efficiency of power consumption and reducing customers' costs. For small and micro enterprises, SMEPC provides smart guidance and help reduce the cost. In January 2019, each subsidiaries implemented at least one comprehensive energy service pilot project, and piloted before the end of June. At the beginning in January 2020, the number of pilots will be gradually expanded.

4.4 Promoting more reliable electricity use for customers

Expected target: By 2020, through the implementation of urban distribution power grid reliability improvement project and rural electrification project, build a reasonable grid structure, improve equipment health level, optimize distribution power grid operation mode, and accelerate grid fault repair speed, comprehensively improve the ability of uninterrupted operation.

4.4.1 Improving the level of accurate management of power grid planning and construction. In accordance with local economic and social development and changes in electricity demand, the company will continuously adjust the company's distribution network planning and construction plan to ensure the effective connection between power grid development and local planning. Build a strong, orderly, standard and unified network structure, improve fault self-healing and information interaction capabilities, resist various types of accident risks, and ensure reliable power supply for users. Since 2019, the company has continuously increased the construction of smart grids, accelerated the construction of a new generation of distribution automation systems, and fully completed the overhead line entry project. In 2020, it will be the first to build a world-class city distribution power grid.

4.4.2 Improving the lean management level of grid operation. Summarize the company's "China International Import Expo" power protection experience and build a "smart power supply" model. With the application of intelligent distribution terminal equipment as the core, the company will build a future-oriented company power distribution Internet of Things, supporting the state self-perception of the distribution network equipment and intelligent control of operation and maintenance. Promote the practical application of distribution automation system, and carry out the cloud transformation of the new generation of main station of distribution automation. Deepen the construction and application of the power supply service command platform and improve the intelligent operation level of the distribution network. In 2020, the city will achieve effective full coverage of distribution automation.

4.4.3 Improving the efficiency of grid fault repair. Carry out panoramic monitoring and fault intelligent judgment of distribution power grid operation conditions, accurately locate fault points, obtain power failure range and affected user list in real time, and actively push fault power information such as power outage, repair schedule and planned re-power to customers "point-to-point" through SMS, online stage grid, WeChat and other channels. Since January 2019, the company has optimized the grid repair station, deepened the application of mobile repair terminals, and carried out active fault repair and power-off information accurate push; before the end of June 2019, the company completed the formulation of interrupted power compensation standards, processes and development of related systems and realized automatic recording of power outage time, active reporting of power outages, loss identification and compensation procedures start in time.

4.4.4 Fully promoting the "uninterrupted operation". Strengthen cooperation with Tokyo Electric Power Distribution Network on uninterrupted operation technology, expand the application of complex uninterrupted power projects, actively carry out bypass operations and comprehensive uninterrupted operation methods, and special research on uninterrupted power operation in large-scale projects such as overhead line entry and insulation transformation, promote the application of 0.4kV uninterrupted operation, gradually cancel planned maintenance related to user power

outages, minimize user power outages. Beginning in January 2019, special arrangements for the power transmission plan of 10kV and below will be implemented to achieve full coverage of uninterrupted power maintenance operations. In 2020, the uninterrupted electricity connection rate will be increased to more than 90%.

4.5 Promoting better quality of getting-electricity service for customers

Expected results: By 2020, through the promotion of information sharing between government and enterprises, the implementation of open and transparent information on getting-electricity, the improvement of customer consultation, evaluation and analysis, closed-loop management and control mechanism, to promote the continuous improvement of the level of getting-electricity service, to enhance the customer experience, **to achieve better getting-electricity service and to make customers more satisfied.**

4.5.1 Promoting information sharing with government agencies. By opening the interface between company's marketing system and the government's "one website all services" system, automatically obtaining customer business licenses, project approvals and accounting for the excavation administrative approval and other customer getting-electricity information through the "one website all services", customers can get electricity only using the subject qualification certificate, which means "one ID getting-electricity service". Before the end of March 2019, the company completed the interface development with the "one website all services" system, and started the pilot of "one ID getting-electricity service", and gradually expanded the scope of the pilot. In 2020, it will cover almost all areas of the city.

4.5.2 Implementing transparent disclosure of getting-electricity information. Through online and offline channels such as business halls, online state grid, and "one website all services", the information on grid resources, electricity tariffs, service processes, operating standards, and commitment time limits will be disclosed and updated in a timely manner. Unblock the customer evaluation channels, strengthen industry expansion consultation of the customer service center, pay close attention to the 12398 energy supervision hotline notification, timely grasp the customer experience and appeals, and promote the implementation of various measures. Since 2019, the company has sent the business process information in real time according to customer needs.

4.5.3 Strengthening the closed-loop control of the whole process. The whole process of capacity expansion, power grid project management and project construction will be incorporated into the platform of capacity expansion process information disclosure and real-time management control. Play the role of the power supply service command center, strengthen the supervision and monitoring of the inter-disciplinary collaborative quality and work efficiency for online getting-electricity service, capacity expansion projects and power grid projects, and

dispatch on-site service resources. Focus on customer experience, build an evaluation system covering all aspects of getting-electricity service, and conduct multidimensional evaluations of power customers, power supply companies, and third-party organizations to promote the continuous improvement of service quality. Since 2019, the company has fully implemented the online scheduling of service resources and the management of business processes, responding to customer needs in a timely manner. The company conducts the "Getting Electricity" business environment assessment and publishes evaluation reports on a regular basis.

4.5.4 Creating a good getting-electricity service atmosphere. Extensively carry out business training and establish a "full-service marketing" service concept. Strengthen communication with governments at all levels, news media, and the public. Through the press conference, official website, and online media, actively promote the company's typical measures of optimizing the getting-electricity business environment and create a good external atmosphere. At the end of March 2019, the company has established a normalization management mechanism for publicity and training, and carried out publicity and training in the normal state to ensure that all measures and training were put in place.

5. Work Requirements

5.1 Strengthening organization and leading. All units shall attach great importance to incorporating the optimization of getting electricity business environment into the "Leader" project, set up special working groups, normalize the work of optimizing business environment; adhere to customer-centered and market-oriented, improve the "Market Department Do the Replying" trans-department coordination mechanism and promote quality and efficiency of business expansion; actively explore, boldly innovate, integrate resources, optimize organization and re-construct process.

5.2 Implementing responsibility for work. All units shall refine specific measures, clarify key tasks, responsible persons and completion time according to the action plan; learn from advanced experience of other units, continue to innovate service, and keep consolidating service effectiveness and improving rank of "Getting Electricity" index. Relevant departments of the company shall actively guide subordinate units to refine implementation plans, optimization of authority, system adjustment and so on.

5.3 Strengthen supervision and inspection. All departments of the company shall make good process control and follow-up supervision, focusing on the implementation of issued documents. Customer Service Center shall strengthen customer consultation, focusing on customer perception as well as outer-system processing and other issues. All units shall establish regular meeting systems to follow up progress of projects, coordinate and solve problems, and analyse and control service quality and effectiveness.