

# 2025年 重庆市外商投资环境测评报告 Chongqing Foreign Investment Environment Evaluation Report 2025

重庆市外商投资企业协会  
Chongqing Association of Enterprises with Foreign Investment

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重庆市外商投资企业协会与安永（中国）企业咨询有限公司对于《2025年重庆市外商投资环境测评报告》共同享有版权，任何第三方未经所有版权人的事先书面授权，不得转载、摘编，或以其他方式使用其中的相关信息和调查成果或用于其它商业用途。

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# 前言

## Preface

《重庆市外商投资环境测评报告》（以下简称《测评报告》）系重庆市外商投资企业协会组织编写的系列报告，以期对重庆市外商投资环境进行持续测评。《测评报告》自2016年首次发布以来，至今已连续发布了八年。《测评报告》旨在密切跟踪外商投资企业的意见和建议，深入分析近年来重庆外商投资环境变化，全面客观反映营商环境建设成就及存在的问题，以助力重庆营商环境优化。《2025年重庆市外商投资环境测评报告》（以下简称《2025年测评报告》）延续了以前年度的主要测评内容，另外专门针对绿色电力相关发展情况进行了调查。

本次调查获得了作为全球领先的审计、税务、战略、交易和咨询服务机构之一安永的大力支持和协助，安永参与了调查问卷的设计和数据处理，以及《2025年测评报告》的编制。

欢迎中外投资者在使用过程中提出宝贵意见和建议。

"Chongqing Foreign Investment Environment Evaluation Report" (hereinafter referred to as the "Evaluation Report") is a series of reports issued by the Chongqing Association of Enterprises with Foreign Investment to continuously evaluate the foreign investment environment in Chongqing. Since the first release of the "Evaluation Report" in 2016, it has been released for eight consecutive years. The "Evaluation Report" aims to closely track the opinions and suggestions of foreign-invested enterprises, deeply analyze the changes in Chongqing's foreign investment environment in recent years, comprehensively and objectively reflect the achievements and problems of business environment development, so as to help optimize Chongqing's business environment. "2025 Evaluation Report" keeps to assess the major investment environments as what have done in last years, and specifically adds evaluation analysis of investigates development related to the Green Power industry chain.

The issuance of "2025 Evaluation Report" was strongly supported by Ernst & Young ("EY"), one of the world's leading audit, tax, strategy, transactions and advisory services organization. EY participated in the design of survey questionnaire template, numerical analysis on survey feedback, and compilation of "2025 Evaluation Report".

Any opinions, suggestions or ideas are welcomed.



重庆市外商投资企业协会（以下简称“协会”）成立于1988年，隶属于重庆市商务委员会，是重庆市外商投资（含港澳台侨投资）企业自愿加入组成的非营利社会团体，是5A级社会组织。三十多年来，协会在重庆市委、市政府的高度关注和大力支持下，在重庆市商务委及市级相关部门的指导下，秉承“凝聚会员、服务企业、联系政府、回馈社会”的服务宗旨，充分发挥政府与外企之间的“桥梁、纽带”作用，推动在渝外商投资企业健康发展和积极参与重庆市社会、经济建设，赢得了在渝外企及社会各届的赞誉和信任，在国内外树立了良好形象，并产生了广泛影响。

Chongqing Association of Enterprises with Foreign Investment (hereinafter referred to as the "Association") was established in 1988, under the Chongqing Municipal Commission of Commerce, is a Chongqing foreign investment (including Hong Kong, Macao and Taiwan investment) enterprises voluntarily joined to form a non-profit social organization, is a 5A social organization. Over the past 30 years, with the high attention and strong support of Chongqing Municipal Party Committee and Municipal government, and under the guidance of Chongqing Municipal Commission of Commerce and relevant municipal departments, the Association has adhered to the service purpose of "uniting members, serving enterprises, contacting the government and giving back to the society", and fully played the role of "bridge and link" between the government and foreign companies. Promote the healthy development of foreign-invested enterprises in Chongqing and actively participate in the social and economic construction of Chongqing, and win the praise and trust of foreign enterprises in Chongqing and the society, establish a good image at home and abroad, and have a wide impact.

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# 1

## 重庆总体概况 Overview of Chongqing

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Glance of Chongqing

2. 大事记  
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3. 外商投资企业在重庆市的注册数量分布图  
Map Illustrating Volume of Foreign-invested Enterprises Registered in Chongqing

# 重庆概览

## Glance of Chongqing



### 城市简介 Introduction

重庆，简称“渝”，是**中国中西部唯一的直辖市**，也是长江上游地区经济中心、国家中心城市，中国最具增长潜力的城市。

Chongqing, referred to as "Yu", is the only municipality directly under the central and western China, the economic center of the upper reaches of the Yangtze River, the national central city, and the city with the most growth potential in China.



### 文化底蕴 Cultural heritage

中国著名历史文化名城，是巴渝文化的发祥地。公元581年，隋文帝改楚州为渝州，重庆始简称“渝”。公元1102年，渝州改称恭州。公元1189年，宋光宗赵惇先封恭王再即帝位，称为“双重喜庆”，遂升恭州为重庆府，重庆由此而得名。

China's famous historical and cultural city, is the birthplace of Bayu culture. In 581 AD, Emperor Wen changed Chuzhou into Yuzhou, and Chongqing began to be referred to as "Yu". In 1102, Yuzhou was renamed Gongzhou. In 1189 AD, Zhao Dun, Emperor Guangzong of Song Dynasty, first conferred King Gong and then the throne, which was called "double jubilation", and then promoted Gong Zhou to Chongqing Prefecture, from which Chongqing got its name.



### 经济概况 Economic profile

2024年，地区生产总值（GDP）达**32,193.15**亿元，同比增长**5.7%**，全国排名**第四**。

In 2024, the gross domestic product (GDP) of the region reached CNY32,193.15 billion, a year-on-year increase of 5.7%, ranking fourth in China.



### 产业发展 Industry development

2024年，重庆第一产业实现增加值**2,135.82**亿元，增长**2.4%**；第二产业实现增加值**11,690.68**亿元，增长**4.6%**；第三产业实现增加值**18,366.65**亿元，增长**6.8%**。

In 2024, the added value of Chongqing's primary industry will reach CNY213.582 billion, up by 2.4%; The added value of the secondary industry was CNY11,690.68 billion, up by 4.6%; The tertiary industry achieved an added value of CNY18,366.65 billion, up by 6.8%.



### 生态资源 Ecological resources

重庆市共有**291**个A级景区，其中5A级景区**12**个。

There are 291 A-level scenic spots in Chongqing, including 12 5A level scenic spots.

2024年，重庆市**74**个国家控制断面水质优良比例连续2年达到**100%**，空气质量优良天数连续5年稳定在**325**天以上。

In 2024, the proportion of good water quality in 74 state-controlled sections in Chongqing has reached 100% for two consecutive years, and the number of days with good air quality has remained above 325 days for five consecutive years.



### 区位优势 Location advantage

重庆是我国西部唯一的集铁、公、水、空运输方式于一体的特大城市。

Chongqing is the only megacity in the west of China that integrates iron, public, water and air transportation.

西部陆海新通道通达**119**个国家，**393**个港口。

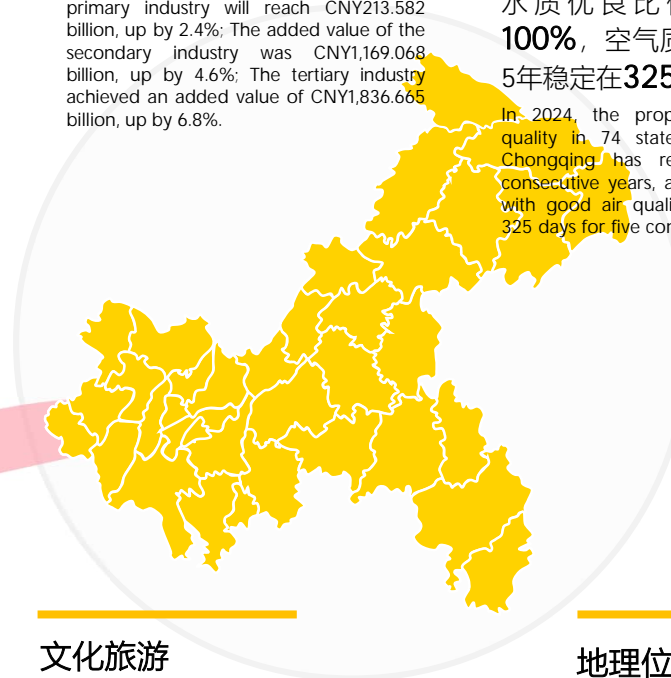
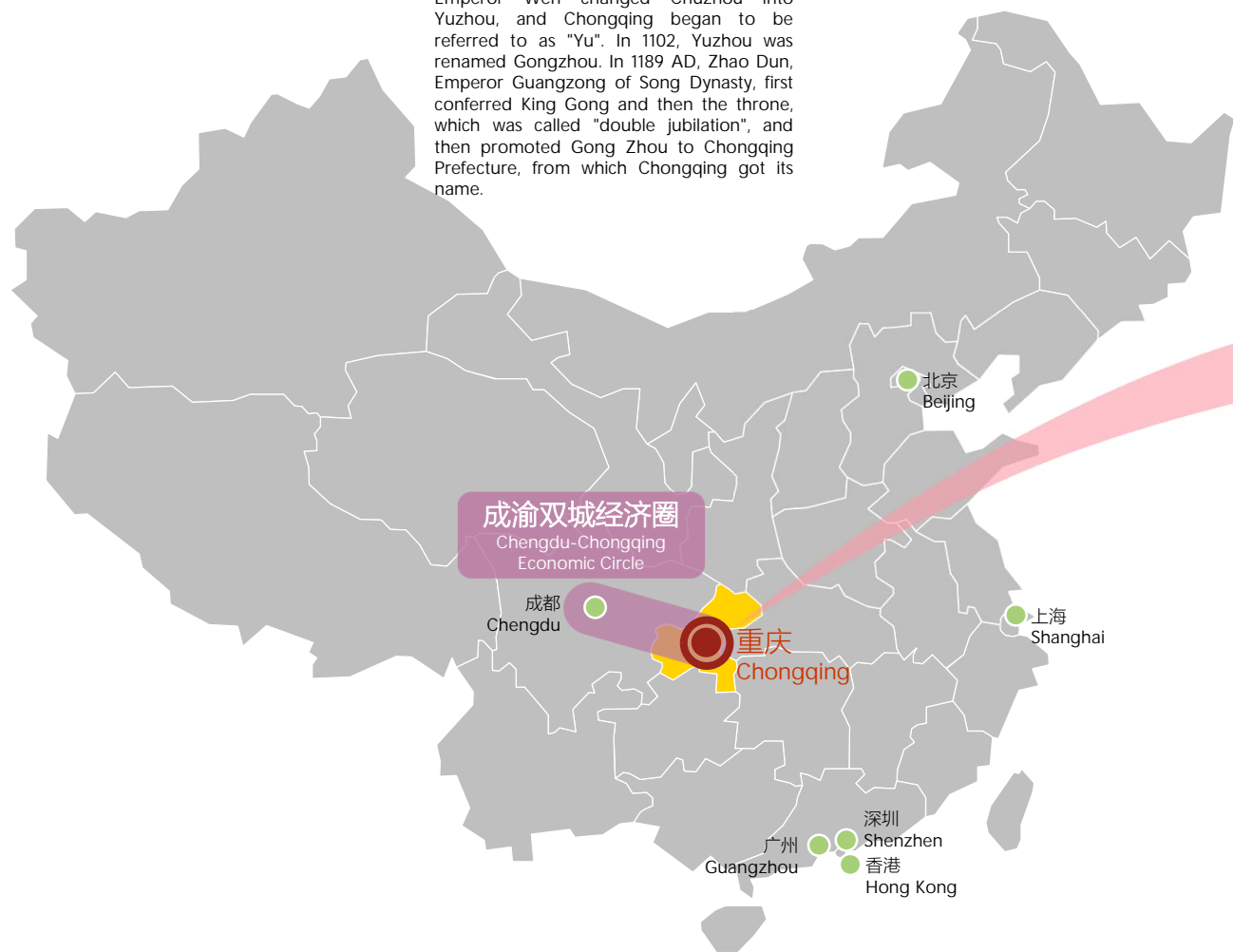
The new Western land-sea Corridor connects 119 countries and 393 ports.

中欧班列（成渝）辐射亚欧近**40**个国家，超**100**个城市节点。

The China-Europe Express (Chengdu-Chongqing) radiates to nearly 40 countries and more than 100 city nodes in Asia and Europe.

长江黄金水道基本建成“一干两支”航道体系，航道总里程超过**4,500**公里。

The Yangtze River Golden Waterway has been basically completed with a "one trunk and two branches" waterway system, with a total waterway length of more than 4,500 kilometers.



### 文化旅游 Cultural tourism

2024年，重庆接待国内游客、实现国内游客花费**4.7**亿人次、**5,000**亿元，同比分别增长**12%**、**16%**左右。

In 2024, Chongqing received domestic tourists and achieved a total expenditure of 470 million and CNY500 billion respectively, an increase of about 12% and 16% year-on-year.

### 地理位置 Geography location

中国内陆西南部、长江上游地区。  
Located in Southwest China and the upper reaches of the Yangtze River.

### 行政面积 Administrative area

82,402平方公里。  
82,402 square kilometers.

### 行政区划 Administrative divisions

下辖**26**市辖区、**8**县、**4**自治县。  
26 districts, 8 counties and 4 autonomous counties.

# 大事记

## Milestones



2024年1月  
Jan

重庆市第六届人民代表大会第二次会议（1月21-24日）和政协第六届委员会第二次会议（1月20-23日）相继召开。会议听取审议了市政府工作报告，审查批准了2023年计划和预算执行情况以及2024年计划和预算草案等重要议程。

The Chongqing "Two Sessions" convened: In late January of 2024, the second session of the sixth People's Congress of Chongqing (21-24 January) and the second session of the sixth Committee of the Chinese People's Political Consultative Conference (20-23 January) were held successively. The meetings reviewed and discussed the municipal government work report, examined and approved the implementation of the 2023 plans and budget, as well as the draft plans and budget for 2024, among other important agendas.



2024年2月  
Feb

重庆市人民政府办公厅发布《重庆市进一步优化外商投资环境加大吸引外商投资力度实施方案》，从进一步提高利用外资质量、保障外商投资企业国民待遇、持续加强外商投资保护、提高投资运营便利化水平、加大财税支持力度、完善外商投资促进方式六个方面提出具体要求。

The General Office of the Chongqing Municipal People's Government has released the "Implementation Plan for Further Optimizing the Foreign Investment Environment and Increasing the Attraction of Foreign Investment in Chongqing", which proposes specific measures from six aspects: further improving the quality of foreign investment utilization, ensuring national treatment for foreign-invested enterprises, continuously strengthening foreign investment protection, improving the level of investment operation convenience, increasing financial and tax support, and improving the promotion methods for foreign investment.



2024年4月  
Apr

中共中央总书记、国家主席习近平在重庆考察调研。在市委书记袁家军等陪同下，习近平深入物流园区、社区和城市运行管理中心等处实地了解情况。习近平强调重庆要对标党中央赋予的使命，进一步全面深化改革，奋力打造新时代西部大开发重要战略支点和内陆开放综合枢纽。

General Secretary of the Communist Party of China and President Xi Jinping conducted an inspection in Chongqing. Accompanied by the municipal party secretary Yuan Jiajun and others, Xi went to logistics parks, communities, and the city's operational management centre to gain an understanding of the situation on the ground. He emphasised that Chongqing should align with the mission assigned by the Central Committee of the Communist Party, further deepen comprehensive reform and opening-up, and strive to build an important strategic pivot for the Western Development in the new era and a comprehensive inland open hub.



2024年4月  
Apr

习近平总书记在重庆主持召开新时代推动西部大开发座谈会并发表重要讲话。李强总理等中央领导出席会议，四川、陕西、新疆等西部地区主要负责同志在会上汇报工作并提出建议。

General Secretary Xi Jinping chaired a symposium in Chongqing to promote the development of the western region in the new era, where he delivered an important speech. Premier Li Qiang and other central leaders attended the meeting, during which the main officials from western regions such as Sichuan, Shaanxi, and Xinjiang reported on their work and made suggestions.



2024年5月  
May

第六届中国西部国际投资贸易洽谈会在重庆开幕。本届西洽会以“新西部、新制造、新服务”为主题，吸引了来自40个国家和地区及国内27个省区市的1748家企业参展参会。

The 6th China Western International Investment and Trade Fair opened in Chongqing. This year's fair, themed "New West, New Manufacturing, New Services," attracted 1,748 enterprises from 40 countries and regions, as well as 27 provinces and cities across China.



2024年11月  
Nov

越南总理范明政率团来渝访问，重庆市委书记袁家军、市长胡衡华代表市委市政府会见范明政一行。双方就深化重庆与越南在经贸投资、物流通道、人文交流等领域的务实合作进行交流。范明政表示重庆发展成就突出，越方愿与重庆携手加强包括数字经济、科技创新、互联互通等在内的多领域合作。

Vietnamese Prime Minister Pham Minh Chinh led a delegation to visit Chongqing. Yuan Jiajun, Secretary of the Chongqing Municipal Committee, and Hu Henghua, Mayor of Chongqing, met with Prime Minister Pham and his team on behalf of the municipal government. The two sides discussed practical cooperation in various fields, including economic and trade investment, logistics channels, and cultural exchanges, to deepen collaboration between Chongqing and Vietnam. Pham Minh Chinh expressed that Chongqing has made remarkable development achievements, and the Vietnamese side is willing to work together with Chongqing to strengthen cooperation across multiple areas, including the digital economy, technological innovation, and connectivity.



2024年12月  
Dec

重庆市委召开经济工作会议，全面总结当年全市经济社会发展成效，分析研判当前形势，研究部署来年经济工作。市委书记袁家军在会上讲话，强调提振发展信心、防范化解风险等重点；市长胡衡华主持会议并作总结讲话。会议明确了2025年是“十四五”收官之年，要求全市稳中求进推进高质量发展，为现代化新重庆建设夯实基础。

The Chongqing Municipal Committee held an economic work meeting to comprehensively summarise the achievements in the city's economic and social development over the year, analyse the current situation, and plan the economic work for the coming year. During the meeting, Municipal Party Secretary Yuan Jiajun delivered a speech. Mayor Hu Henghua chaired the meeting and provided a concluding address. The meeting clarified that 2025 will mark the end of the 14th Five-Year Plan, calling for the city to pursue stable progress while advancing high-quality development, thereby laying a solid foundation for the construction of a modernized new Chongqing.



2024年12月  
Dec

川渝两地举行推进成渝地区双城经济圈建设党政联席会议第十次会议成果发布会，在重庆发布年度合作“成绩单”。据发布，2024年川渝共建项目年度投资超过5,000亿元，渝昆高铁重庆至宜宾段、江北机场第四跑道等一批重大项目建成投用。川渝两地紧密协作，在“双核”联动、平台共建、市场互通等方面取得显著进展。

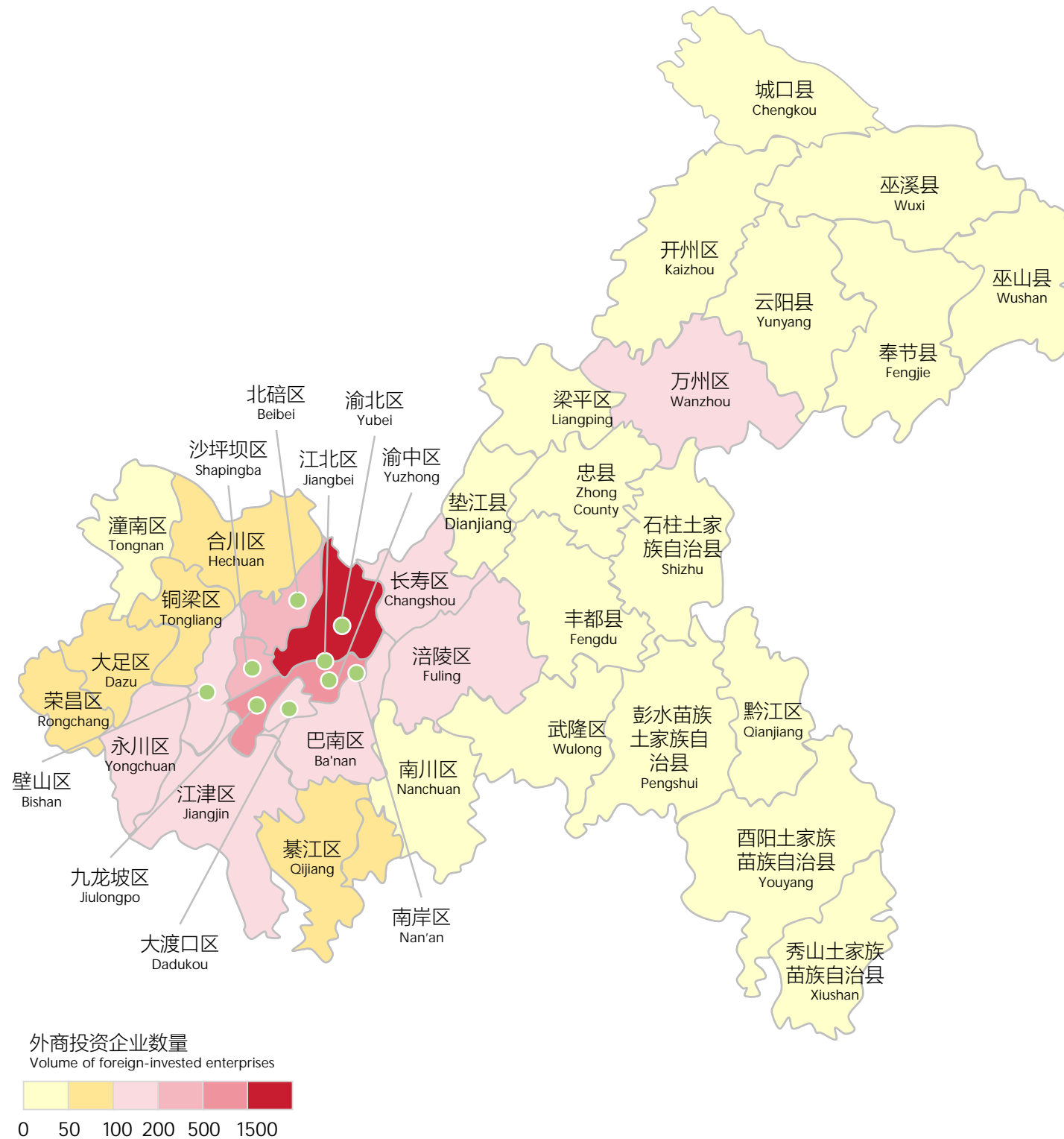
A press conference was held in Chongqing to announce the outcomes of the 10th meeting of the Party and government joint conference aimed at advancing the Chengdu-Chongqing Economic Circle. The annual cooperation "report card" was published, revealing that in 2024, the joint investment in projects between Sichuan and Chongqing is expected to exceed CNY500 billion. Major projects, including the Yuxi-Kunming High-Speed Railway from Chongqing to Yibin and the fourth runway at Jiangbei Airport, are set to be completed and put into operation. The two regions have closely collaborated, achieving significant progress in areas such as "dual-core" coordination, joint platform construction, and market connectivity.

# 外商投资企业在重庆市的注册数量分布图

Map Illustrating Volume of Foreign-invested Enterprises Registered in Chongqing

根据重庆市商务委截至2024年12月31日的数据统计，安永整理制作了重庆市外商投资企业在重庆38个行政区划注册数量分布地图。如本页地图所示，重庆市的外商投资企业主要注册在渝北区、渝中区、江北区、九龙坡区、南岸区和沙坪坝区等中心城区。

Based on the survey statistics as of 31 December, 2024 provided by Chongqing Commerce Commission, EY prepared the map illustrating the volume of foreign-invested enterprises registered in each of the 38 districts/counties of Chongqing. Based on the map, it appears that Chongqing's foreign-invested enterprises are mainly registered in Yubei District, Yuzhong District, Jiangbei District, Jiulongpo District, Nan'an District and Shapingba District, etc.



外商投资企业数量 Number of Foreign-Invested Enterprises	行政区划 Districts/Counties
≥1500	渝北区 Yubei
500~1500	渝中区 Yuzhong 江北区 Jiangbei 九龙坡区 Jiulongpo
200~500	沙坪坝区 Shapingba 南岸区 Nan'an 北碚区 Beibei
100~200	巴南区 Ba'nan 江津区 Jiangjin 永川区 Yongchuan 万州区 Wanzhou 涪陵区 Fuling 长寿区 Changshou 大渡口区 Dadukou 璧山区 Bishan
50~100	合川区 Hechuan 綦江区 Qijiang 大足区 Dazu 铜梁区 Tongliang 荣昌区 Rongchang
<50	南川区 Nanchuan 黔江区 Qianjiang 忠县 Zhong County 开州区 Kaizhou 彭水苗族土家族自治县 Pengshui 丰都县 Fengdu 潼南区 Tongnan 垫江县 Dianjiang 云阳县 Yunyang 梁平区 Liangping 武隆区 Wulong 酉阳土家族苗族自治县 Youyang 秀山土家族苗族自治县 Xiushan 石柱土家族自治县 Shizhu 城口县 Chengkou 巫溪县 Wuxi

# 2

## 重庆市外商投资企业投资环境 问卷调查结果分析 Evaluation Analysis of Chongqing Foreign Investment Environment

1. 概述  
Overview
2. 要素环境  
Fundamental Environment
3. 市场环境  
Market Environment
4. 政府与政策服务环境  
Policies and Government Services Environment
5. 生活环境  
Living Environment
6. 企业发展  
Enterprise Development
7. 测评结果特点分析  
Analysis of Characteristics of the Survey



# 概述

## Overview



针对《2025年测评报告》，重庆市外商投资企业协会累计收回完成问卷403份。根据回收问卷，这403个受访外商投资企业的覆盖范围比较广泛，具有调查的普遍性和典型性。

For the preparation of "2025 Evaluation Report", 403 survey questionnaires were completed and collected back by Chongqing Association of Enterprises with Foreign Investment. According to the collected questionnaire, the coverage of these 403 surveyed foreign-invested enterprises is relatively wide, which has the universality and typicality of the survey.

本次调查活动涵盖了以下五项内容：

The survey covered the following five aspects:



### 要素环境 Fundamental Environment

- ▶ 能源环境 Energy Environment
- ▶ 用地用房环境 Land and Property Environment



### 市场环境 Market Environment

- ▶ 经济环境 Economic Environment
- ▶ 金融环境 Financial Environment
- ▶ 税收环境 Tax Environment
- ▶ 人力资源环境 Human Resources Environment
- ▶ 产业配套环境 Industry Supporting Facility Environment
- ▶ 物流环境 Logistics Environment
- ▶ 环保建设 Environmental Protection
- ▶ 科技环境 Scientific and Technological Environment



### 政府与政策服务环境 Policies and Government Services Environment



### 生活环境 Living Environment



### 企业发展 Enterprise Development

- ▶ 较前一年度的经营难易程度 Status of Business Operation Compared with Last Year
- ▶ 在重庆发展前景的预期 Expectations for Future Development in Chongqing
- ▶ 在重庆生产经营面临的主要挑战 Key challenges of Business Operation in Chongqing
- ▶ 未来在重庆的投资意向 Future Investment Plans in Chongqing
- ▶ 投资母国及地区的来源地图 Map for Home Countries (Regions) of Foreign-invested Enterprises

在设计问卷调查时，受访企业的满意度采用10分制（10分最高，1分最低）。为方便理解，10至7分为满意，6至5分为中等，4至1分为不满意。

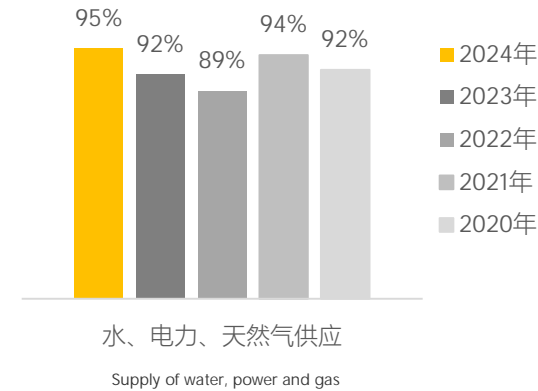
When designing the questionnaire, a 10-score assessment standard was introduced (i.e., 10 score refers to Excellent, while 1 score refers to Very Poor). For easy understanding, 10 to 7 score represents "Satisfied", 6 to 5 score represents "Medium", and 4 to 1 score represents "Unsatisfied".



# 要素环境

## Fundamental Environment

### 能源环境 Energy Environment



2024年有95%受访企业对重庆市的电力供应、天然气供应、水供应表示满意，认为其价格适中、供应量充足。

In 2024, 95% of the respondents were satisfied with Chongqing's electricity supply, natural gas supply and water supply, which were considered moderate in price and sufficient in supply.

近五年调查数据显示，受访企业对历年能源环境满意度总体评价较高，且位于各项评价指标前列。与2023年相比，受访企业对2024年能源环境满意度上升了3%，达近五年满意度之最。

According to the survey data of the past five years, the overall evaluation of the respondents' satisfaction with the energy environment over the years is high, and it is at the forefront of various evaluation indicators. Compared with 2023, the respondents' satisfaction with the energy environment in 2024 increased by 3%, reaching the highest satisfaction in the past five years.

根据问卷反馈，部分受访企业依然存在下列不满意之处：电力及天然气供应不足、电压不稳、电力计费方式复杂、电费价格偏高、天然气涨价幅度大等。

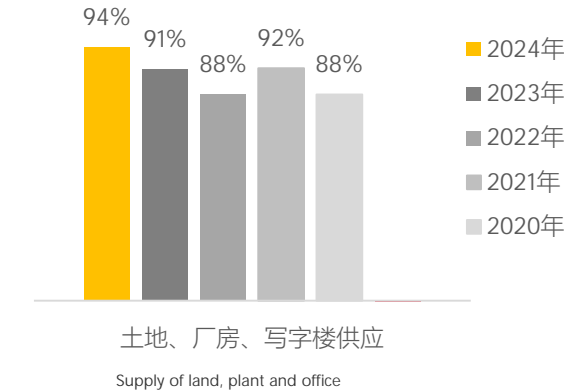
According to the questionnaire feedback, some surveyed enterprises still have the following dissatisfaction: insufficient supply of electricity and natural gas, unstable voltage, complicated electricity billing methods, high electricity prices, and large price increases of natural gas.

### 安永建议 EY Suggestion

能源环境稳定关乎企业的日常平稳运作。安永建议有关部门深化电价改革，有序推动经营性电力用户进入电力市场，完善居民阶梯电价制度，并简化电力计费方式，及时向社会公示并讲解电力计费方式；完善跨省跨区和市内市场的衔接机制，推动打破电力、天然气省间交易壁垒，促进多层次电力、天然气市场协同运行；完善输电线路和变电站设施建设，增加输电能力和运行的可靠性；加强对电网设备的监测和维护，及时发现和排除各类故障，保证设备的正常运行；形成透明化价格机制，定期公开购气来源、购气数量、采购价格等信息，增强市场透明度；继续扩大天然气进口，特别是液化天然气进口，确保进口来源的多元化和稳定性。

The stability of energy environment is related to the smooth daily operation of enterprises. EY recommends that the relevant departments deepen the reform of electricity prices to promote the orderly entry of operational electricity users into the electricity market, improve the residential ladder electricity price system, and simplify the electricity billing method, and timely publicize and explain the electricity billing method to the society; We will improve the mechanism for connecting inter-provincial, inter-regional and intra-city markets, break down barriers to inter-provincial electricity and natural gas transactions, and promote the coordinated operation of multi-level electricity and natural gas markets. Improve the construction of transmission lines and substation facilities to increase transmission capacity and operation reliability; Strengthen the monitoring and maintenance of power grid equipment, discover and eliminate all kinds of faults in time, and ensure the normal operation of equipment; Establish a transparent price mechanism, and regularly disclose information such as the source, quantity and price of gas purchases to enhance market transparency; We will continue to expand imports of natural gas, especially LNG, to ensure the diversification and stability of import sources.

### 用地用房环境 Land and Property Environment



2024年有94%受访企业对重庆市的土地、厂房、写字楼供应表示满意，认为其价格适中、供应量充足。

In 2024, 94% of the respondents were satisfied with the supply of land, factories and office buildings in Chongqing, believing that the price is moderate and the supply is sufficient.

近五年调查数据显示，受访企业对历年用地用房环境满意度总体评价较高。受访企业对2024年用地用房环境满意度较2023年上升了3%，达近五年满意度之最。

According to survey data from the past five years, the respondents have a relatively high overall satisfaction with the land and housing environment over the years. The satisfaction of the surveyed enterprises with the land and housing environment in 2024 has increased by 3% compared to 2023, reaching the highest satisfaction level in nearly five years.

根据问卷反馈，部分受访企业依然存在下列不满意之处：房租价格高企业负担重、写字楼资源稀缺，存在土地浪费、用地指标不足、供地周期时间长等。

According to the questionnaire feedback, some of the respondents still have the following dissatisfaction: heavy burden of enterprises with high rent prices, scarce office resources, land waste, insufficient land indicators, and long land supply cycle.

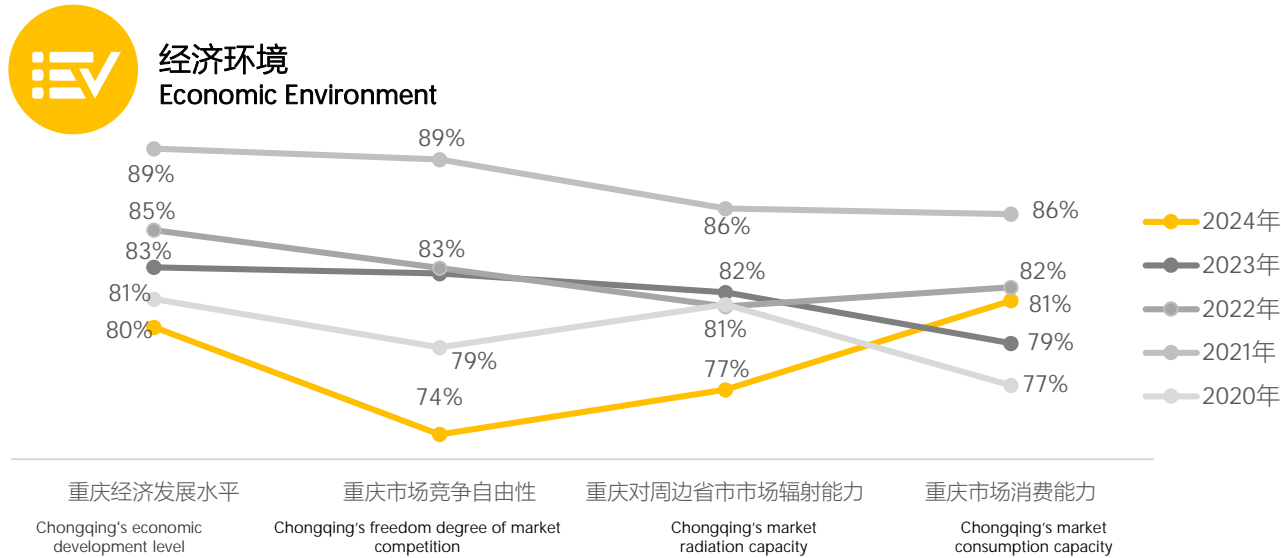
### 安永建议 EY Suggestion

房屋和土地是企业发展的必备因素和坚实基础。安永建议有关部门可设立专项纾困资金，对符合条件的中小企业给予房屋租金补贴，减轻企业负担；鼓励企业采用共享办公模式，政府可对提供共享办公服务的平台给予一定的政策支持和资金补贴，降低企业的办公成本，提高写字楼的空间利用效率；有序开展土地综合治理，对批而未供、供而未用的土地进行分类消化，加大财政资金投入，鼓励社会资本参与，提高土地资源的利用效率；进一步精简审批事项、优化流程，推行工业项目以告知承诺方式申请办理建设工程规划许可，加快供地项目的审批速度，缩短供地周期。

Housing and land are essential elements and solid foundations for enterprise development. EY recommends relevant authorities to: establish special relief funds to provide eligible SMEs with rental subsidies, alleviating their financial burdens; encourage enterprises to adopt shared office models by offering policy support and funding subsidies to service platforms, reducing office costs while enhancing space utilization efficiency in commercial buildings; carry out systematic land remediation by categorizing treatment for approved-but-unallocated and allocated-but-unutilized land parcels, increasing fiscal investment and encouraging private capital participation to improve land resource efficiency; further streamline approval processes by implementing a notification-commitment mechanism for industrial projects applying for construction planning permits, accelerating approval procedures and shortening land supply cycles.

# 市场环境

## Market Environment



2024年分别有80%、74%、77%、81%的受访企业对重庆经济发展水平、市场竞争自由性、对周边省市市场辐射能力、市场消费能力表示满意。受访企业对重庆经济发展水平、市场竞争自由性、对周边省市市场辐射能力的满意度，较2023年分别下滑1%、5%、4%，这主要受中美贸易摩擦、国内经济增速放缓等因素的影响。但受访企业对重庆市场消费能力满意度较2023年略有上升，重庆构建的“4+4+M+N”消费促进活动体系初见成效，消费者消费信心有所提升。

In 2024, 80%, 74%, 77% and 81% of the respondents were respectively satisfied with Chongqing's economic development level, market competition freedom, market radiation ability of neighboring provinces and cities, and market consumption capacity. The satisfaction of surveyed enterprises on Chongqing's economic development level, market competition freedom, and market radiation ability of neighboring provinces and cities decreased by 1%, 5%, and 4%, respectively, compared with 2023, which is mainly affected by Sino-US trade friction, domestic economic growth slowdown and other factors. However, the satisfaction of the respondents on the consumption power of the Chongqing market has slightly increased compared with 2023, and the "4+4+M+N" consumption promotion activity system built by Chongqing has achieved initial results, and consumer confidence has been improved.

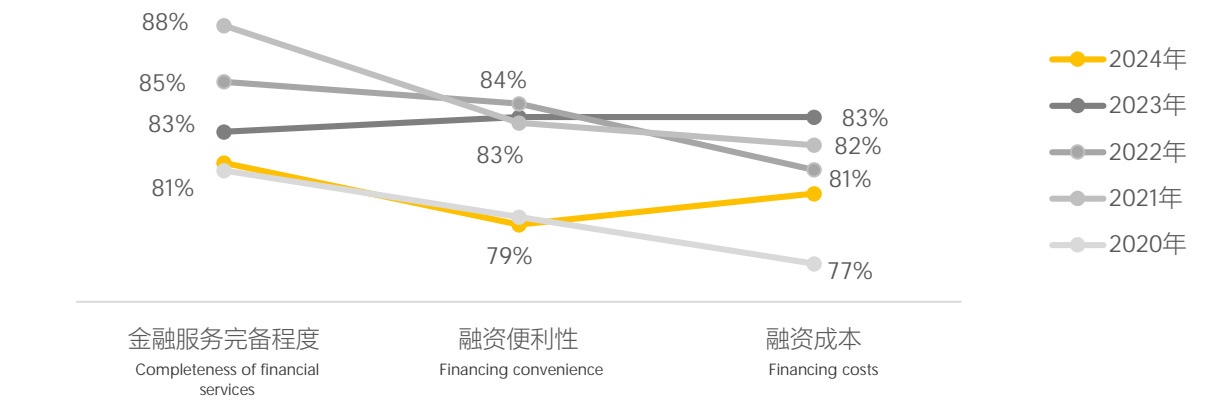
根据问卷反馈，部分受访企业认为重庆经济环境韧性较强，觉得重庆经济正处于上升期。而部分受访企业不满意的原因主要有：重庆商贸发展水平差、对周边省市辐射能力弱、行业竞争激烈等。

According to the questionnaire feedback, some of the respondents reported that the economic environment of Chongqing is more resilient, and they think that Chongqing's economy is in a rising period. The main reasons for the dissatisfaction of some surveyed enterprises are: Chongqing's poor level of business development, weak ability to radiate to neighboring provinces and cities, and fierce industry competition.

### 安永建议 EY Suggestion

经济是城市发展引擎。安永建议有关部门优化主城都市区“一核一环一片”商品交易市场布局，推进中心城区传统大型商品交易市场外迁和转型升级；深化与周边省市商务合作，强化主城新区与临近省份的商务联动；创新内外贸融合发展模式，探索开展内外市场双地展销，缓解省内行业竞争，促进内销转出口。

Economy is the engine of urban development. EY recommends that relevant departments optimize the "one core, one ring, one piece" commodity trading market layout in the main urban areas, and promote the relocation and transformation and upgrading of traditional large-scale commodity trading markets in the central urban areas; Deepen business cooperation with neighboring provinces and cities, and strengthen the business linkage between the new district of the main city and neighboring provinces; Innovate the integrated development mode of domestic and foreign trade, explore and carry out the exhibition and sale of both domestic and foreign markets, ease the industry competition in the province, and promote the transformation of domestic sales into exports.



2024年有81%、79%、81%的受访企业对重庆金融服务完备程度、融资便利性、融资成本表示满意。近五年调查数据显示，受访企业对金融环境的整体满意度2024年较2023年有所下滑。其中，受银行贷款审核口径收紧、银行坏账压力加剧等因素影响，银行放贷更加谨慎，受访企业对重庆金融服务完备程度、融资便利性、融资成本满意度较2023年有小幅下滑。

In 2024, 81%, 79% and 81% of the respondents were satisfied with the completeness of financial services, financing convenience and financing cost in Chongqing. Data from the last five years of the survey show that the overall satisfaction of the surveyed companies with the financial environment has declined in 2024 compared with 2023. Among them, under the influence of factors such as tightening the scope of bank loan review and intensifying the pressure of bad debts, banks are more cautious in lending, and the satisfaction of surveyed enterprises on the completeness of financial services, financing convenience and financing cost in Chongqing has decreased slightly compared with 2023.

根据问卷反馈，大部分企业对重庆金融环境整体满意，认为银行服务积极主动。而部分受访企业不满意的原因主要有：财政补贴力度不足、中小企业及民营企业融资难度大、贷款利率高。

According to the questionnaire feedback, some enterprises are satisfied with the overall financial environment in Chongqing and think that the banking services are proactive. The main reasons for the dissatisfaction of some surveyed enterprises are: insufficient financial subsidies, difficult financing for small and medium-sized enterprises and private enterprises, and high loan interest rates.

### 安永建议 EY Suggestion

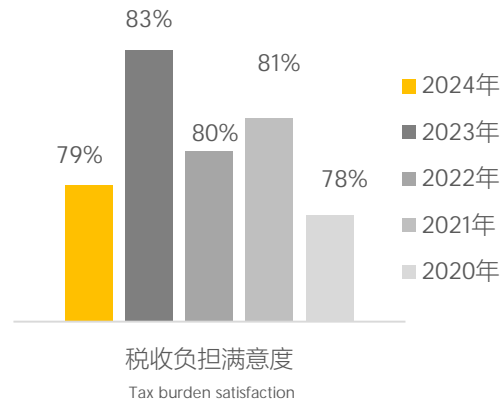
金融政策的支持对企业维持发展至关重要，金融业是重庆外企集中度较高的行业之一。安永建议有关部门设立民营企业贷款风险补偿专项资金、引导基金或信用保证基金，为民营中小微企业首贷、转贷、续贷等提供增信服务；政府与银行通力合作，开发低利率贷款产品；金融机构应加大对中小企业的支持力度，开发更多适合中小企业特点的金融产品，如众筹、供应链金融等新型融资模式。

The support of financial policy is crucial for enterprises to maintain development, and the financial industry is one of the industries with a high concentration of foreign companies in Chongqing. EY recommends that relevant departments set up a special fund for loan risk compensation for private enterprises, a guide fund or a credit guarantee fund to provide credit enhancement services for private small, medium and micro enterprises in the first loan, transfer loan and renewal loan. The government worked with banks to develop low-interest loan products; Financial institutions should increase their support for smes and develop more financial products suitable for the characteristics of smes, such as crowdfunding, supply chain finance and other new financing models.

# 市场环境

## Market Environment

### 税收环境 Tax Environment



2024年有79%的受访企业表示对税收环境满意，较2023年下滑了4%。由于税务检查频率上升、部分税收优惠政策到期、税收返还政策执行不到位等问题，受访企业税收环境满意度有所下滑。

In 2024, 79% of companies surveyed said they were satisfied with the tax environment, down 4% from 2023. Due to the increase in the frequency of tax inspections, the expiration of some tax incentives, and the inadequate implementation of the tax return policy, the satisfaction of the respondents in the tax environment has declined.

2024年延续了增值税小规模纳税人减免增值税、小型微利企业所得税优惠政策、研发费用加计扣除等税收政策。结合2024年受访企业反馈来看，企业整体能够感受到税收透明度高、税负合理，对现行税收政策满意度较高。

In 2024, tax policies such as VAT reduction and exemption for small-scale taxpayers, preferential income tax policies for small and low-profit enterprises, and additional deductions for research and development expenses will be extended. According to the feedback from the respondents in 2024, the enterprises as a whole can feel high tax transparency, reasonable tax burden, and high satisfaction with the current tax policy.

根据问卷反馈，部分受访企业不满意的原因主要有：政策宣传力度不够、税收返还政策执行不到位、税务稽查频繁、工作人员服务意识有待加强等。

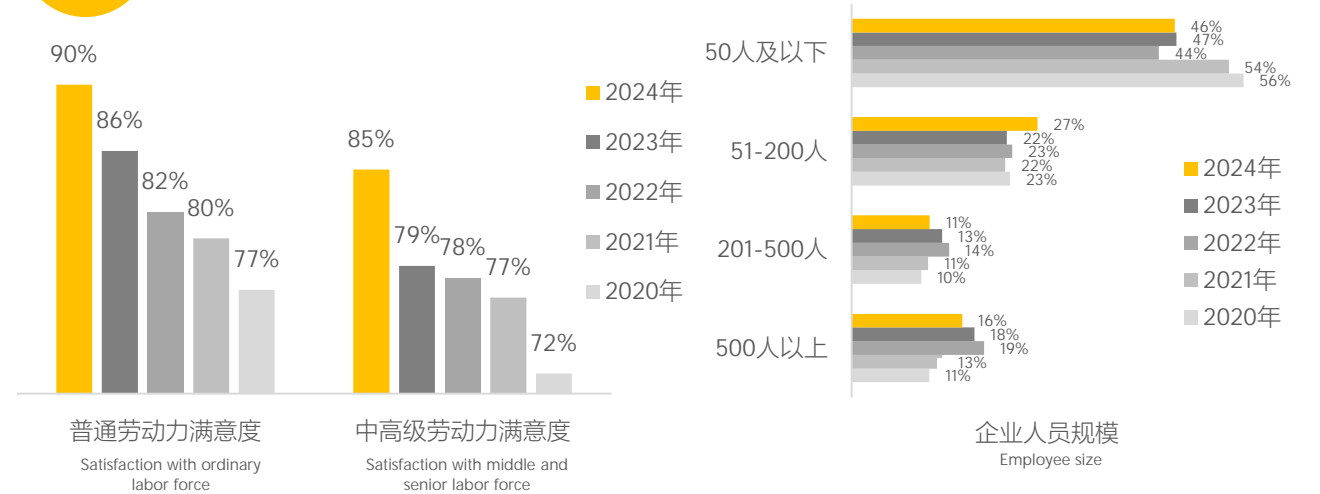
According to the questionnaire feedback, the main reasons for the dissatisfaction of some surveyed enterprises are: insufficient policy publicity, inadequate implementation of tax return policies, frequent tax audits, and staff service awareness to be strengthened.

### 安永建议 EY Suggestion

税收是国之根本，对社会稳定有着重大意义。安永建议有关部门利用微信公众号、办税服务大厅等渠道围绕减税降费等政策和纳税人缴费人关注热点，编辑制作视频、宣传图解、海报等进行宣传；建立健全税收返还政策执行的监督机制，定期对政策执行情况进行检查和评估；引入AI大数据，扫描纳税人风险点后先进行风险评估，再对高风险纳税人进行检查，降低税务稽查频率；建立工作人员服务评价和激励机制，对表现优秀的工作人员给予表彰和奖励，激发其工作积极性。

Taxation is the foundation of a country and is of great significance to social stability. EY suggested that relevant departments use wechat public accounts, tax service halls and other channels to focus on tax reduction and fee reduction policies and taxpayer payers' attention to hot spots, edit and produce videos, publicity diagrams, posters and other publicity; Establish and improve the supervision mechanism for the implementation of tax refund policies, and regularly check and evaluate the implementation of policies; AI big data is introduced to conduct risk assessment after scanning the risk points of taxpayers, and then inspect high-risk taxpayers to reduce the frequency of tax inspection; Establish a staff service evaluation and incentive mechanism, commend and reward staff with excellent performance, and stimulate their enthusiasm for work.

### 人力资源环境 Human Resources Environment



2024年分别有90%、85%的受访企业对重庆普通劳动力、中高级劳动力表示满意。受访企业对重庆劳动力的满意度在近五年逐年上升，其中中高级劳动力满意度上升最为明显，较2023年上升了6%，达近五年最高水平，表明重庆政府近年在人才发展和人才引进方面发挥了显著作用，劳动力质量不断提高，中高级劳动力短缺问题有所缓解。

In 2024, 90% and 85% of the respondents are satisfied with Chongqing's ordinary labor force and middle and senior labor force respectively. The satisfaction of the respondents with Chongqing's labor force has increased year by year in the past five years, among which the satisfaction of middle and senior labor force has increased by 6% compared with 2023, reaching the highest level in the past five years, indicating that Chongqing government has played a significant role in talent development and talent introduction in recent years, the quality of labor force has been continuously improved, and the shortage of middle and senior labor force has been alleviated.

根据问卷反馈，部分受访企业不满意的原因主要有：高端人才及服务业人才稀缺、用工成本高、普通人才饱和、一线人才短缺、人才流失严重等。

According to the questionnaire feedback, the main reasons for the dissatisfaction of some surveyed enterprises are: scarcity of high-end talents and service talents, high labor costs, saturation of ordinary talents, shortage of front-line talents, and serious brain drain.

### 安永建议 EY Suggestion

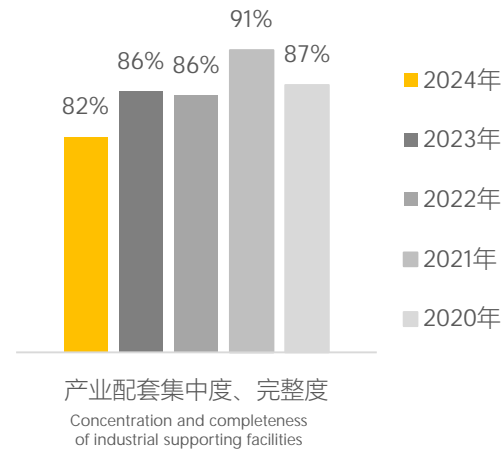
人才对企业来说是重要的战略资源。安永建议有关部门迭代升级紧缺高端人才目录，开设职称评审“绿色通道”，探索建立境外职业资格证书认可清单；完善人才服务体系，为高端人才提供子女入学、医疗、配偶就业等全方位服务留住人才；支持高校和职业院校设置服务业相关专业，完善专业设置及动态调整机制，加快相关专业升级和数字化改造；对重点企业给予税收、金融等方面的专项人才扶持，减轻企业负担；对一线技能人才给予适当的政策倾斜和激励，如提高技能人才的待遇、评选表彰等。

Talent is an important strategic resource for enterprises. EY recommends that relevant departments iterate and upgrade the list of high-end talents in short supply, open a "green channel" for title evaluation, and explore the establishment of a list of overseas vocational qualification certificates; Improve the talent service system to provide high-end talents with all-round services such as children's enrollment, medical insurance, and spouse employment to retain talents; We will support universities and vocational colleges in setting up service-related majors, improve their setting and dynamic adjustment mechanisms, and accelerate the upgrading and digital transformation of these majors. Special talent support for key enterprises in taxation, finance, etc., to reduce the burden on enterprises; Appropriate policy inclinations and incentives should be given to front-line skilled talents, such as improving the treatment of skilled talents, selection and recognition.

# 市场环境

## Market Environment

### 产业配套环境 Industry Supporting Facility Environment



2024年有82%受访企业对重庆市产业配套集中度、完整度表示满意，较2023年下滑4%。  
In 2024, 82% of the respondents were satisfied with the concentration and integrity of Chongqing's industrial supporting facilities, down 4% from 2023.

近五年调查数据显示，受访企业对历年产业环境配套环境满意度总体评价自2021年以来呈下降趋势。  
The survey data of the past five years show that the overall evaluation of the satisfaction of the respondents with the energy environment has fluctuated over the years.

根据问卷反馈，多数企业对产业配套环境表示满意。部分企业认为汽车产业配套较为合理，部分行业配套完善，产业配套环境良好。

According to the questionnaire feedback, most enterprises are satisfied with the industrial supporting environment. Some enterprises believe that the automobile industry is more reasonable, some industries are perfect, and the industrial supporting environment is good.

部分受访企业不满意的原因主要有：周边配套不完善、交通便利度低、产业配套政策较少等。

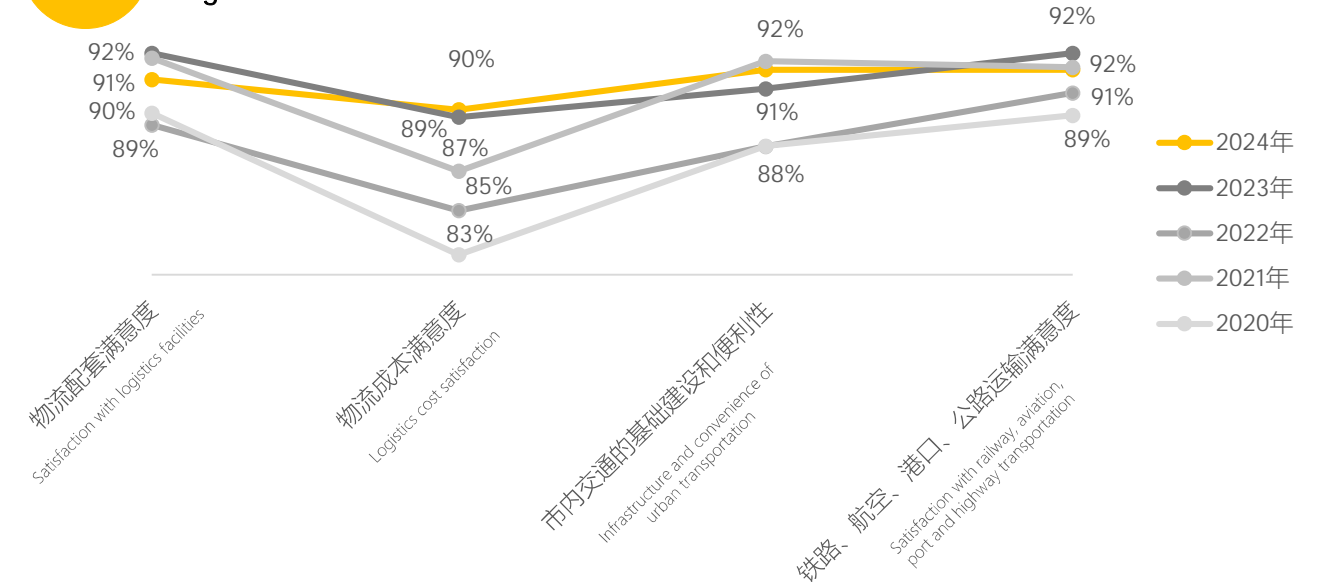
The main reasons for the dissatisfaction of some surveyed enterprises are: imperfect surrounding supporting facilities, low transportation convenience, and fewer industrial supporting policies.

### 安永建议 EY Suggestion

重庆正处于推动产业升级、优化经济结构、提升城市能级的关键时期，产业配套不仅是实现产业链协同发展的基础，更是提升区域经济整体效率、增强产业竞争力的重要支撑，因此，优化产业配套对重庆格外重要。安永建议有关部门统筹配置居住、就业、医疗、教育、养老、托育、文化、体育、通勤、应急等功能设施，形成“一圈多能”的空间体系；构建以轨道交通为骨干、常规公交为主体的城市公共交通系统，推动城市交通多种方式协同，提升出行品质；出台更多优化产业配套的政策。

Chongqing is in a critical period of promoting industrial upgrading, optimizing economic structure and upgrading urban energy level. Industrial supporting is not only the basis for realizing the coordinated development of industrial chain, but also an important support for improving the overall efficiency of regional economy and enhancing industrial competitiveness. Therefore, optimizing industrial supporting is particularly important for Chongqing. EY recommends that relevant departments coordinate the allocation of housing, employment, medical care, education, elderly care, childcare, culture, sports, commuting, emergency and other functional facilities to form a "multi-functional" space system; Build an urban public transport system with rail transit as the backbone and conventional bus as the main body, promote the coordination of urban transport modes, and improve the quality of travel; We will introduce more policies to improve industrial support.

### 物流环境 Logistics Environment



2024年分别有91%、90%、92%、92%的受访企业对重庆市的物流配套、物流成本、市内交通以及铁路、航空、港口、公路运输表示满意，整体满意度与2023年持平。

In 2024, 91%, 90%, 92% and 92% of the respondents were respectively satisfied with Chongqing's logistics facilities, logistics costs, urban transportation and railway, aviation, port and road transportation, and the overall satisfaction was the same as that in 2023.

根据问卷反馈，多数企业认为重庆交通便利，物流配套完备便捷，整体满意度高。而部分受访企业不满意的原因主要有：对物流车的管控严、物流成本高、国际航班少等。

According to the questionnaire feedback, most enterprises believe that Chongqing has convenient transportation, complete and convenient logistics facilities, and high overall satisfaction. The reasons for dissatisfaction of some surveyed enterprises are: strict control of logistics vehicles, high logistics costs, few international flights, road congestion, incomplete development of China-Europe train, and disorderly parking of vehicles.

### 安永建议 EY Suggestion

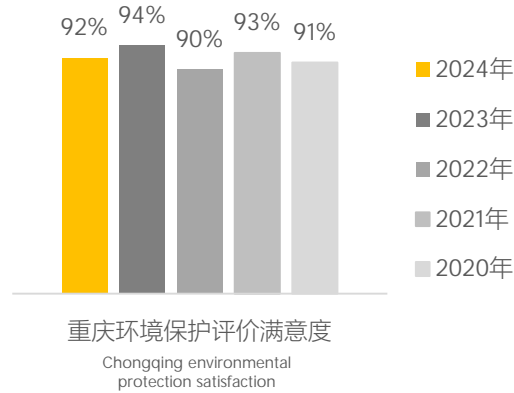
物流环境是企业对外销售的重要保障。安永建议有关部门推动城市配送车辆通行精细化管理和差异化管理，实行分车型、分时段、分路段管控；鼓励配送入城返空车辆配载逆向回收物资；引导口岸经营单位降低作业费，对国际标准集装箱运输车辆给予通行费优惠；推进江北国际机场T3B航站楼及第四跑道建设，加密重要国际客货运航线；应用5G、物联网等技术，提升交通智能化水平；加快中欧班列集结中心建设，优化班列线路和班次；加强对乱停乱放行为的执法力度，通过智慧交通系统优化交通疏导，减少拥堵。

Logistics environment is an important guarantee for enterprises to sell abroad. EY recommends that relevant departments promote refined and differentiated management of urban distribution vehicle traffic, and implement control by vehicle model, time segment and road section; Encourage the distribution of empty vehicles into the city to carry reverse recycling materials; Guide port operation units to reduce operating fees and give preferential tolls to international standard container transport vehicles; Promote the construction of Terminal T3B and the fourth runway of Jiangbei International Airport, and secure important international passenger and cargo routes; Use 5G, Internet of things and other technologies to improve the intelligent level of transportation; Speed up the construction of the China-Europe railway assembly center, optimize the railway routes and frequencies; Strengthen law enforcement against indiscriminate parking, optimize traffic dispersal through smart transportation systems, and reduce congestion.

# 市场环境

## Market Environment

### 环保建设 Environmental Protection



2024年有92%受访企业对重庆市环境保护表示满意。近五年调查数据显示，受访企业对历年环保环境的满意度均达到90%以上。得益于《重庆市生态环境保护“十四五”规划（2021—2025年）》等政策的出台和落地，重庆近年环境保护效果显著。2024年颁布的《美丽重庆建设行动计划》也为重庆环保建设添砖加瓦。

In 2024, 92% of the respondents expressed satisfaction with Chongqing's environmental protection. According to the survey data of the past five years, the satisfaction of the respondents with the environmental protection environment over the past years has reached more than 90%. Thanks to the introduction and implementation of policies such as the 14th Five-Year Plan (2021-2025) for Ecological Environmental Protection in Chongqing, Chongqing has achieved remarkable environmental protection results in recent years. The "Beautiful Chongqing Construction Action Plan" promulgated in 2024 has also contributed to Chongqing's environmental protection construction.

根据问卷反馈，多数企业对环保建设表示满意，认为重庆着力推动智慧环保基础设施建设，引入了智能环保技术，实现了智能环保管理。此外，重庆还通过引入生态修复和绿色建筑等智能技术，提高了城市生态环境的质量和可持续性。而受访企业不满意的原因主要有：城市垃圾分类和集中处理不到位、化工园区空气质量差、工地施工粉尘污染路面等。

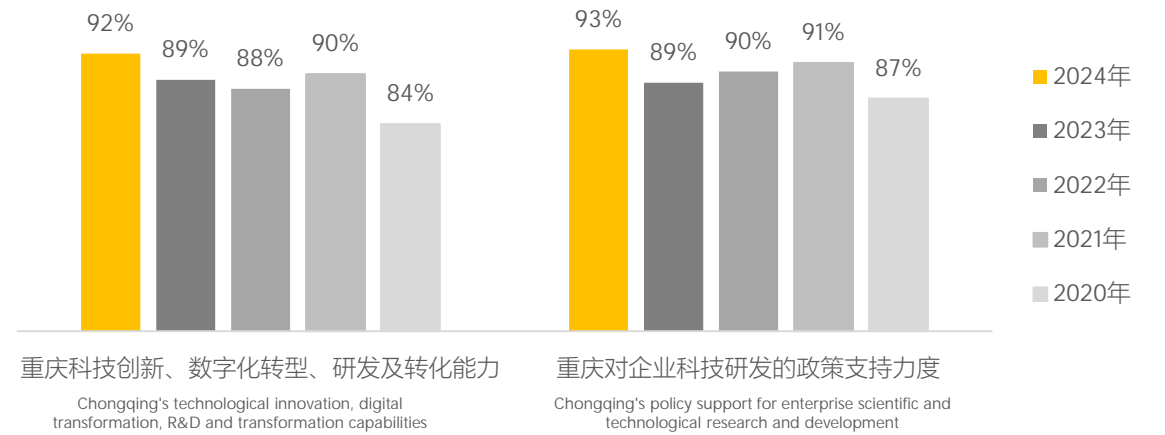
According to the questionnaire feedback, most enterprises are satisfied with the environmental protection construction, and believe that Chongqing strives to promote the construction of intelligent environmental protection infrastructure, introduces intelligent environmental protection technology, and realizes intelligent environmental protection management. In addition, Chongqing has improved the quality and sustainability of the city's ecological environment by introducing smart technologies such as ecological restoration and green construction. The main reasons for the dissatisfaction of the respondents are: urban waste classification and centralized treatment is not in place, poor air quality in the chemical industry park, and construction dust pollution of the road surface.

#### 安永建议 EY Suggestion

环保建设是实现可持续发展的关键，是保障经济社会长远发展、提升生活质量的基础。安永建议有关部门持续开展垃圾分类宣传活动，通过社区讲座、媒体宣传等多种形式，提高居民对垃圾分类重要性的认识，并建立垃圾分类激励机制，如积分兑换、奖励优秀社区等，激发居民参与积极性；对化工企业实施严格的环境监管，要求企业安装废气在线监测设备，确保达标排放，对违规排放的企业，依法予以处罚并责令整改，同时通过媒体曝光增加社会监督力度；严格落实控尘“十项规定”，深化施工工地扬尘控制“红黄绿”标志分级管理制度，规范建筑垃圾运输，推广新型全密闭运输车辆，防止“冒装撒漏”，对建筑垃圾堆场和物料仓库进行围挡、苫盖和喷淋等抑尘设施改造。

Environmental protection is the key to achieving sustainable development, and is the basis for ensuring long-term economic and social development and improving the quality of life. EY suggested that relevant departments continue to carry out garbage classification publicity activities, through community lectures, media publicity and other forms, to raise residents' awareness of the importance of garbage classification, and establish incentive mechanisms for garbage classification, such as point exchange, reward excellent communities, etc., to stimulate residents' enthusiasm for participation; Implement strict environmental supervision on chemical enterprises, require enterprises to install online monitoring equipment to ensure that emissions meet standards, punish enterprises that discharge illegal emissions and order rectification according to law, and increase social supervision through media exposure; Strictly implement the "ten provisions" for dust control, deepen the graded management system of "red, yellow and green" signs for dust control at construction sites, standardize the transportation of construction waste, and promote new fully-enclosed transport vehicles to prevent "loading and leakage". Dust suppression facilities such as enclosure, cover and spray should be reformed for construction waste dumps and material warehouses

### 科技环境 Scientific and Technological Environment



2024年分别有92%、93%的受访企业对重庆科技创新、数字化转型、研发及转化能力及重庆对企业科技研发的政策支持力度满意，均较2023年有所上升。

In 2024, 92% and 93% of the respondents were satisfied with Chongqing's scientific and technological innovation, digital transformation, research and development and transformation capabilities, and Chongqing's policy support for enterprise scientific and technological research and development, which increased compared with 2023.

根据问卷反馈，多数企业对科技环境表示满意。而部分受访企业不满意的原因主要有：政策引导和支持力度逐年下降、对纯研发企业的扶持力度有待加强、数字化及智能化还有待提高等。

According to the questionnaire feedback, most enterprises are satisfied with the technology environment. The main reasons for the dissatisfaction of some surveyed enterprises are: policy guidance and support have declined year by year, support for pure R & D enterprises needs to be strengthened, and digitalization and intelligence need to be improved.

#### 安永建议 EY Suggestion

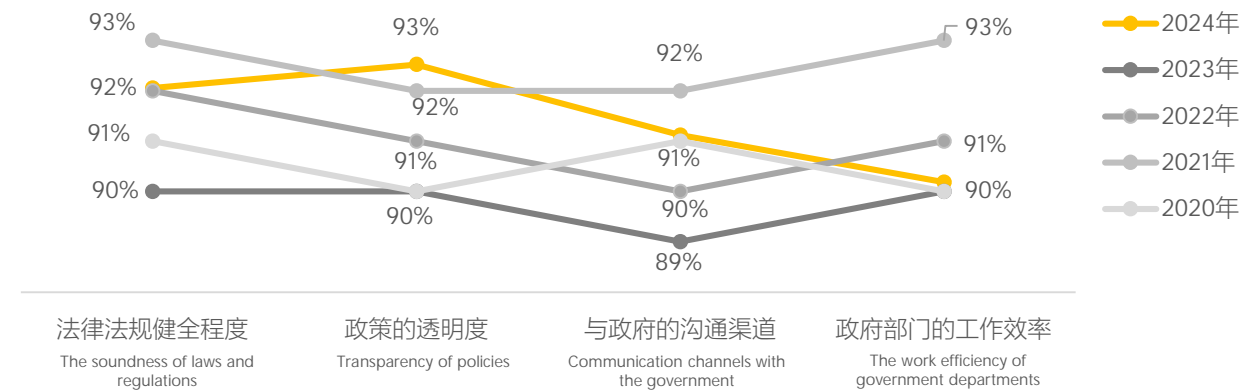
科技环境是推动创新与发展的关键基础，是实现经济高质量发展和社会可持续发展的核心动力。安永建议有关部门加大对科技研发的财政投入，设立专项基金支持纯研发企业和前沿技术研究。例如，支持未来产业领域产品研发生产，对标志性产品给予奖励；落实企业研发费用税前加计扣除政策，对研发投入较高的企业给予专项补贴。例如，对建立研发准备金制度的企业，按研发费用存量和增量给予一定比例的补助，鼓励纯研发企业与高校、科研机构建立紧密合作关系，推动科技成果转化；加快构建“产业大脑+未来工厂”模式，推动产业链数字化升级。例如，支持企业通过工业互联网平台实现生产优化和供应链管理。

The scientific and technological environment is the key foundation for promoting innovation and development, and the core driving force for achieving high-quality economic development and sustainable social development. EY recommends that relevant departments increase financial investment in science and technology research and set up a special fund to support pure research enterprises and cutting-edge technology research. For example, supporting the development and production of products in future industrial fields, and giving rewards to iconic products; We will implement the policy of pre-tax deduction of R&D expenses for enterprises, and give special subsidies to enterprises with high R&D investment. For example, enterprises that have established a research and development reserve system will be given a certain proportion of subsidies according to the stock and increase of research and development expenses, and pure research and development enterprises will be encouraged to establish close cooperation with universities and research institutions to promote the transformation of scientific and technological achievements. Accelerate Building the "industrial brain + future factory" model to promote the digital upgrading of the industrial chain. For example, it supports enterprises to achieve production optimization and supply chain management through industrial Internet platforms.

# 政策与政府服务环境

## Policy and Government Service Environment

### 政策与政府服务环境 Policy and Government Service Environment



调查结果显示，受访企业对政策与政府服务环境近五年满意度总体评价较高，基本达到90%以上，2024年受访企业对各项因素满意度有所回升，其中政策透明度达到了近五年最高。

The survey results show that the respondents have a high overall satisfaction rating of the policy and government service environment in the past five years, basically reaching more than 90%, and in 2024, the respondents' satisfaction with various factors has rebounded, among which the policy transparency has reached the highest in the past five years.

根据问卷反馈，多数企业对政策与政府服务环境满意，认为重庆对于外商投资友好。受访企业不满意的原因主要有：不同区域政策理解不一致、工作人员服务态度有待提升、法院审判周期长、办事流程复杂等。

According to the questionnaire feedback, most enterprises are satisfied with the policy and government service environment, and think that Chongqing is friendly to foreign investment. The main reasons for the dissatisfaction of the respondents are: inconsistent understanding of policies in different regions, staff service attitude to be improved, long trial cycle of the court, complicated process, etc.

### 安永建议 EY Suggestion

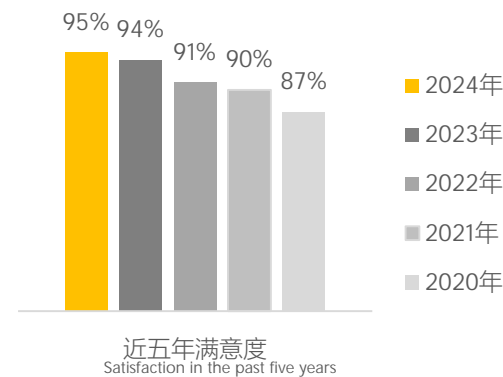
建议有关部门在政策制定后，及时组织面向基层工作人员的培训，确保其准确理解政策内容。同时，通过多种渠道（如政府官网、社交媒体等）发布权威解读，方便企业和群众了解；建立科学的绩效考核体系，将服务态度、办事效率等纳入考核指标，对表现优秀的工作人员给予表彰和奖励，对服务态度差的进行问责；进一步深化智慧法院建设，利用大数据、人工智能等技术优化审判流程。例如，重庆法院已通过类案智能专审平台，将信用卡纠纷案件的平均审理周期缩短至27.4天；统一政务服务事项的受理条件、办理流程、申请材料等，编制清晰的办事指南和工作指引，避免因区域差异导致的流程复杂；整合各部门资源，设立综合服务窗口，实现“一窗受理、集成服务”，减少群众办事的跑腿次数。

It is suggested that relevant departments should organize training for grass-roots staff in time after the formulation of policies to ensure that they accurately understand the contents of policies. At the same time, authoritative interpretations are released through various channels (such as government official website, social media, etc.) to facilitate the understanding of enterprises and the public; Establish a scientific performance appraisal system, including service attitude and work efficiency into the assessment indicators, commend and reward the staff with excellent performance, and hold those with poor service attitude accountable; We will further deepen the construction of smart courts, and optimize the trial process using big data, artificial intelligence and other technologies. For example, Chongqing courts have shortened the average trial period of credit card dispute cases to 27.4 days through the intelligent special trial platform for class cases; Unify the acceptance conditions, handling procedures, application materials, etc. of government services, prepare clear guidelines and work guidelines, and avoid complicated processes caused by regional differences; Integrate the resources of various departments, set up a comprehensive service window, achieve "one window acceptance, integrated service", and reduce the number of errands for the masses.

# 生活环境

## Living Environment

### 生活环境 Living Environment

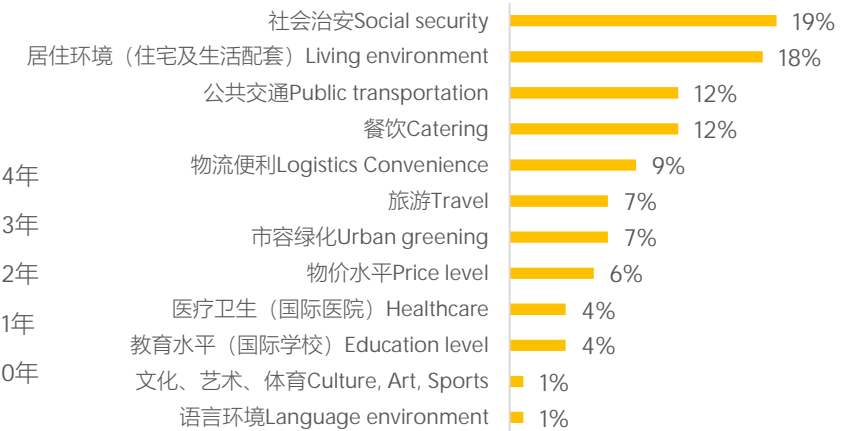


调查结果显示，受访企业对生活环境整体评价持续走高。2024年有95%受访企业对生活环境表示满意，达到近五年最高水平，说明重庆近几年城市生活质量持续提升。但医疗卫生、文化氛围、教育水平、语言环境满意度相较其他因素仍旧排名偏低。

The survey results show that the respondents have a high overall evaluation of the living environment. In 2024, 95% of the respondents expressed satisfaction with the living environment, reaching the highest level in the past five years, indicating that the quality of life in Chongqing has continued to improve in recent years. However, health care, cultural atmosphere, education level and language environment satisfaction are still lower than other factors.

根据问卷反馈，部分企业反映存在黄牛黑车拉客现象，扰乱商业秩序，影响企业经营；物价偏高，生活成本压力较大等问题需引起重视。

According to the questionnaire feedback, some enterprises reported the phenomenon of scalpers and unregistered cars soliciting passengers, disrupting business order and affecting business operation; High prices, the cost of living pressure and other problems need to be paid attention to.



### 安永建议 EY Suggestion

建议由公安、交通等部门联合开展专项整治行动，加大对客运站、旅游景区、医院等重点区域的巡查力度，严厉打击黄牛和黑车的非法揽客行为；在客运站周边设置明显的警示标识，引导乘客到正规区域乘车，并通过广播、宣传栏等形式，提醒乘客拒绝乘坐黑车；建立举报奖励制度，鼓励群众通过电话、网络等渠道举报黄牛和黑车行为，对查实的举报给予奖励；完善价格监测机制，加强对重要民生商品和服务价格的监测预警，及时掌握市场价格动态；在必要时采取价格干预措施，如实施临时价格管制、储备调节等，确保物价稳定；加强对市场经营行为的监管，严厉打击囤积居奇、哄抬物价等违法行为，维护市场秩序；推动消费载体转型升级，支持商贸企业开展促销活动，发放惠民消费券，降低居民生活成本。

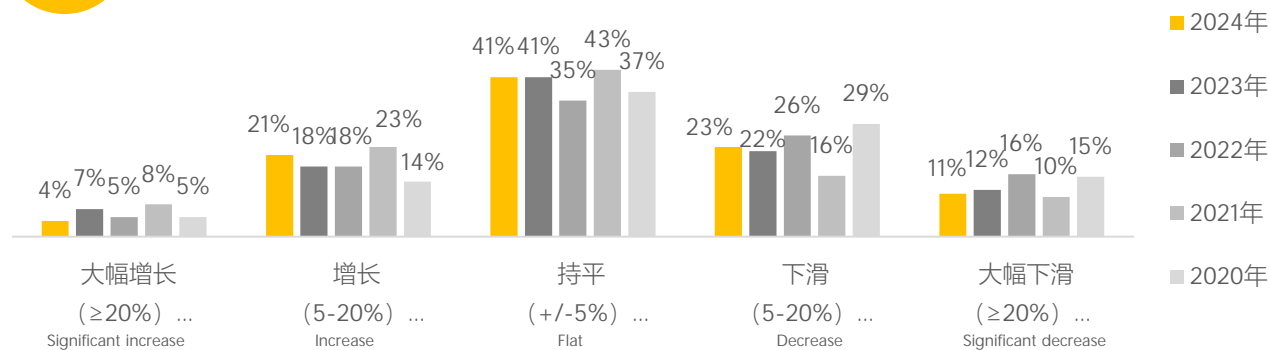
It is suggested that the public security, transportation and other departments jointly carry out special rectification actions, increase the inspection of passenger terminals, tourist attractions, hospitals and other key areas, and severely crack down on illegal acts of scalpers and black cars. Set up obvious warning signs around the passenger station to guide passengers to the regular area, and remind passengers to refuse to take the black train through the form of radio, publicity column, etc. Establish a reward system for reporting, encourage the public to report scalpers and unlicensed cars through telephone, Internet and other channels, and reward verified reports; We will improve the price monitoring mechanism, strengthen monitoring and early warning of prices of important goods and services for people's livelihood, and keep abreast of market price movements. Take price intervention measures when necessary, such as temporary price control, reserve adjustment, etc., to ensure price stability; We will strengthen supervision over market operations, severely crack down on illegal acts such as hoarding and price gouging, and maintain market order. Promote the transformation and upgrading of consumer carriers, support commercial enterprises to carry out promotional activities, issue consumer vouchers to benefit the people, and reduce residents' living costs.

# 企业发展

## Enterprise Development



较前一年度的营业收入增减情况  
Increase or Decrease in Operating Income from Prior Year

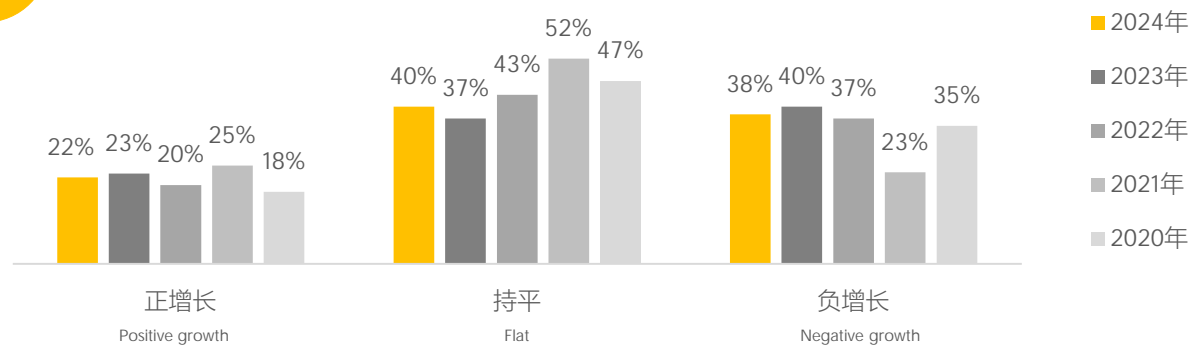


调查结果显示，41%的受访企业表示其2024年营业收入较2023年持平，21%的受访企业表示有增长，但23%的受访企业表示有下降，整体表现差强人意，这主要是受宏观环境不景气和需求下降的影响。但值得欣慰的是，表示营业收入大幅下滑的企业占比从2023年的12%缓解至11%，收入下降的势头在减缓。

The survey results show that 41% of the respondents said that their operating income in 2024 was flat compared with 2023, 21% of the respondents said that they had increased, but 23% of the respondents said that they had declined, and the overall performance was unsatisfactory, mainly due to the sluggish macro environment and declining demand. However, it is gratifying that the proportion of enterprises indicating a sharp decline in operating income has eased from 12% in 2023 to 11%, and the momentum of revenue decline is slowing down.



较前一年度的净利润增减情况  
Increase or Decrease in Net Profit from Prior Year

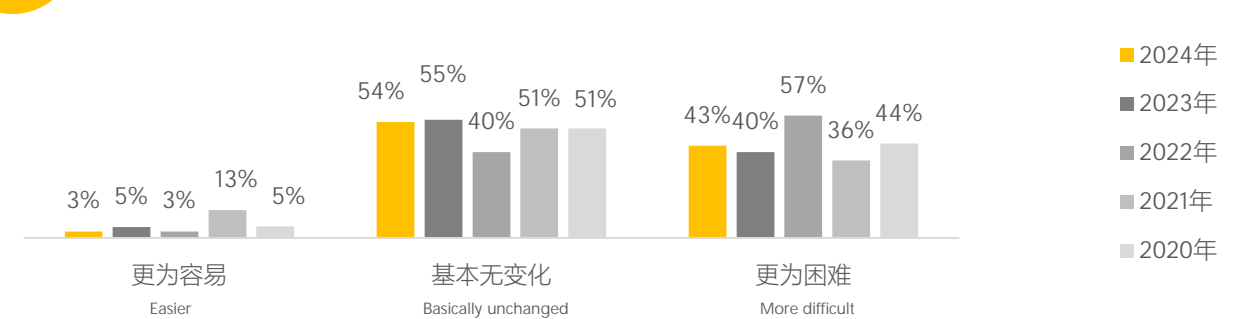


调查结果显示，38%的受访企业净利润较2023年下降。通常可能会有两个因素影响：一方面是企业在控制成本费用方面可能面临挑战，另一方面企业营业收入不增反降可能难以维持较高的固定成本。表示利润持平的企业占比较2023年增加了3%，反映出当前大环境下企业力争保持平稳运营的总体发展战略。安永建议重庆政府出台刺激消费和引领需求的政策，使经济维持稳中有升的发展态势。

The survey results show that the net profit of 38% of the respondents is lower than that in 2023. There are usually two factors that may affect this. On the one hand, enterprises may face challenges in controlling costs and expenses, and on the other hand, it may be difficult for enterprises to maintain high fixed costs without increasing their operating income. The proportion of enterprises with flat profits increased by 3% compared with 2023, reflecting the overall development strategy of enterprises is trying to maintain stable operation under the current environment. EY recommends that the Chongqing government introduce policies to stimulate consumption and lead demand, so that the economy can maintain a steady upward trend.



较前一年度的经营难易程度  
Operating Difficulty Compared with Prior Year

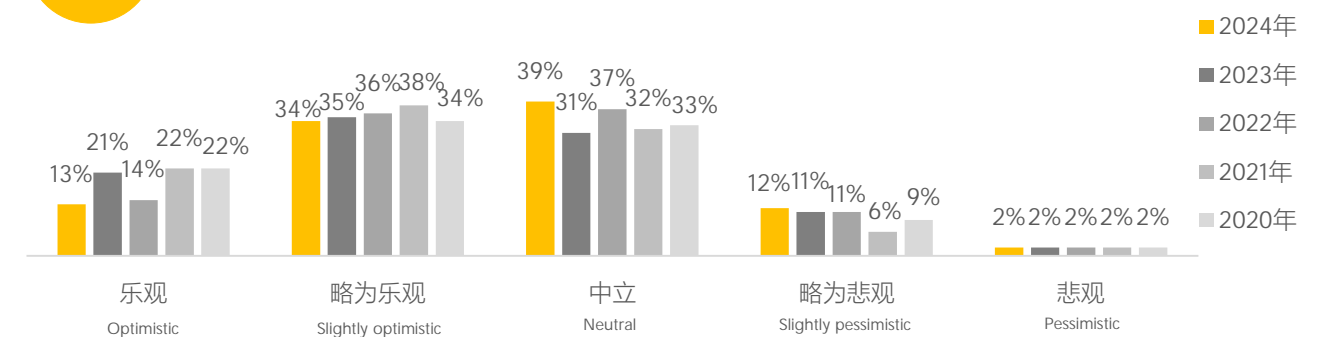


调查结果显示，54%的受访企业表示其2024年经营难易程度较2023年持平，43%的受访企业表示更难，仅有3%的受访企业表示更容易。2024年企业经营难度整体呈上升趋势，可能的原因因为国际贸易摩擦等因素影响企业出口和投资信心，以及传统支柱产业面临转型升级压力。建议政府加大对企业转型升级的支持力度，完善金融服务体系。

The survey results show that 54% of the respondents said that their operating difficulty in 2024 was the same as that in 2023, 43% said it was more difficult, and only 3% said it was easier. In 2024, the overall difficulty of enterprise operation showed an upward trend, possibly due to international trade frictions, factors such as affecting enterprise export and investment confidence, and the pressure of transformation and upgrading of traditional pillar industries. It is suggested that the government should increase support for the transformation and upgrading of enterprises and improve the financial service system.



未来两年在重庆发展前景的预期  
Outlook for Future Development in Chongqing over the Next Two Years



调查结果显示，13%的受访企业对重庆未来两年的发展预期持乐观态度。2024年持乐观态度的受访企业占比较2023年下降8%。这表明企业对重庆市场的增长潜力和商业环境的发展预期有所减弱。这种情绪可能受到市场需求、政策支持、产业环境等因素的推动，建议重庆市政府推动线上线下消费融合，同时加大科技创新支持力度，提升产业竞争力。

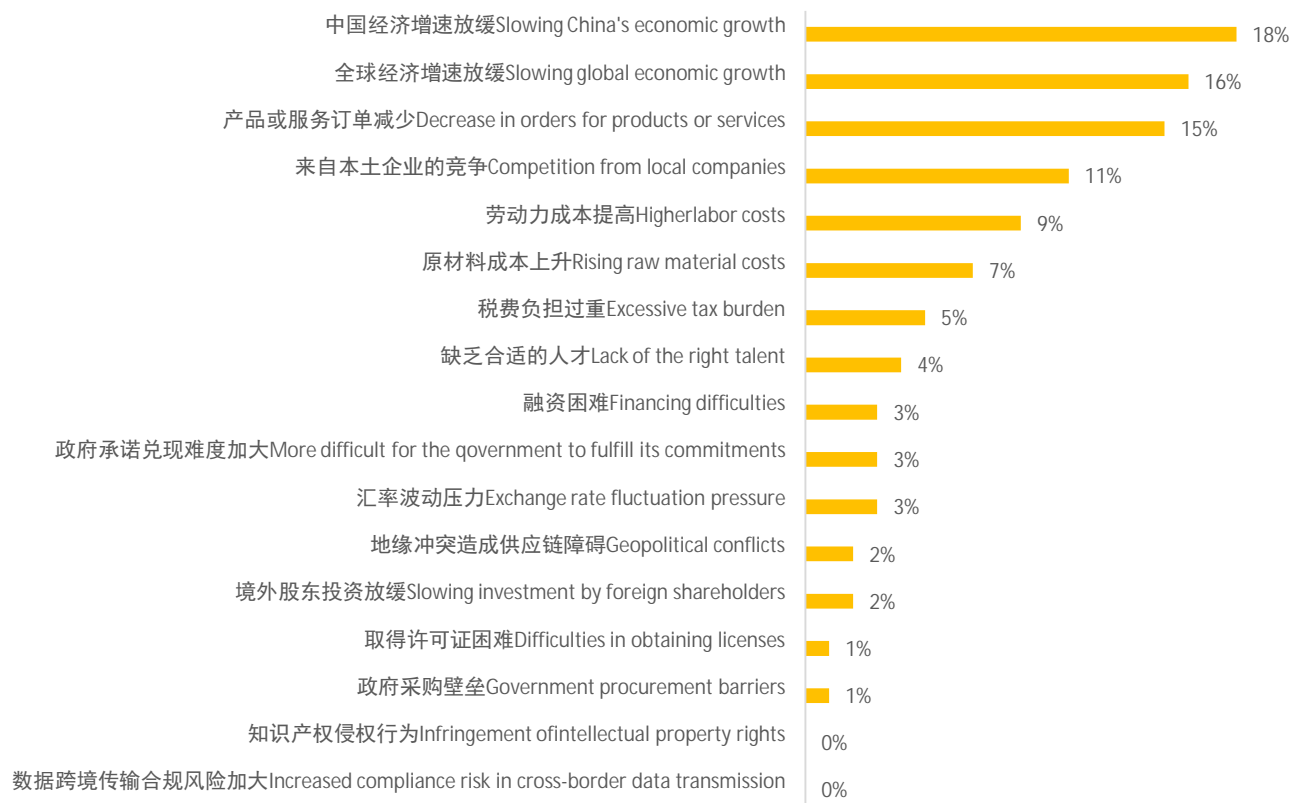
The survey results show that 13% of the respondents are optimistic about Chongqing's development expectations in the next two years. The proportion of optimistic respondents in 2024 decreased by 8% compared with 2023. This shows that enterprises have weakened their expectations for the growth potential of Chongqing market and the development of business environment. This sentiment may be driven by market demand, policy support, industrial environment and other factors. It is suggested that the Chongqing Municipal Government promote the integration of online and offline consumption, increase support for scientific and technological innovation, and enhance industrial competitiveness.

# 企业发展

## Enterprise Development



### 在重庆生产经营面临的主要挑战 Key Challenges of Business Operation in Chongqing



调查结果显示，全球经济/中国经济增速放缓、订单减少、来自本土企业的竞争、劳动力成本提高、原材料成本上升是受访企业2024年在生产经营中面临的主要挑战。

The survey results show that slowing global/Chinese economic growth, reduced orders, competition from local enterprises, rising labor costs and rising raw material costs are the main challenges faced by the respondents in production and operation in 2024.

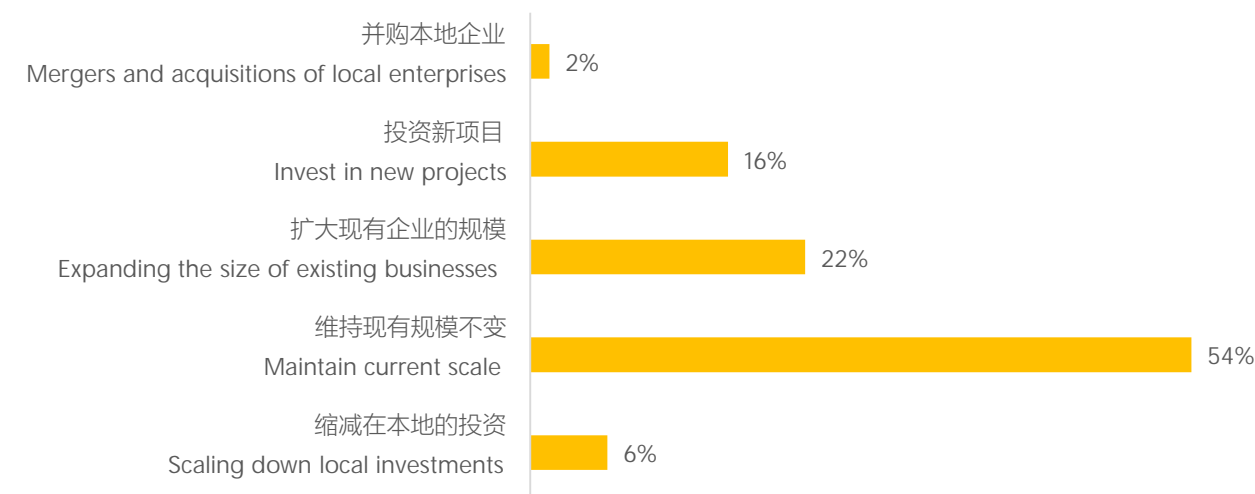
### 安永建议 EY Suggestion

建议重庆市政府通过多方面改善宏观经济发展环境，以增强经济活力。首先，应加大对技术创新和数字化转型的投资，提升企业的生产效率，降低对传统劳动力的依赖。同时，通过加强职业培训和教育，提升劳动力的技能水平，以适应新兴市场需求。此外，优化产业结构，特别是推动高附加值和服务业的发展，可以帮助企业提升盈利能力，减轻对传统制造业的压力。此外，改善营商环境、简化行政审批程序、加强基础设施建设，将吸引更多国内外投资，促进经济增长。

It is suggested that Chongqing Municipal Government should improve the macroeconomic development environment in many ways to enhance economic vitality. First of all, investment in technological innovation and digital transformation should be increased to improve the productivity of enterprises and reduce dependence on traditional labor force. At the same time, vocational training and education should be strengthened to improve the skill level of the labor force to meet the needs of emerging markets. In addition, optimizing the industrial structure, especially promoting the development of high value-added and service industries, can help enterprises improve their profitability and reduce the pressure on traditional manufacturing industries. In addition, improving the business environment, simplifying administrative approval procedures and strengthening infrastructure construction will attract more domestic and foreign investment and promote economic growth.



### 未来在重庆的投资意向 Future Investment Plans in Chongqing



调查结果显示，54%受访企业计划未来维持现有规模不变，而仍有40%受访企业计划扩大投资规模、投资新项目或并购本地企业，仅6%受访企业表示可能会缩减本地投资。大部分企业对当前的经济环境持谨慎态度，更偏向于选择保持稳定并观望市场发展。但仍有不少受访企业对重庆市的投资意向持积极态度，也反映了重庆市在吸引外部投资和促进企业发展方面取得了一定成就。

According to the survey results, 54% of the respondents plan to maintain their current scale in the future, while 38% of the respondents plan to expand their investment scale, invest in new projects or acquire local enterprises, and only 6% of the respondents say they may reduce their local investment. Most enterprises are cautious about the current economic environment, preferring to choose to maintain stability and wait and see market development. However, there are still many respondents who have a positive attitude towards Chongqing's investment intention, which also reflects that Chongqing has made certain achievements in attracting external investment and promoting enterprise development.

### 安永建议 EY Suggestion

首先，建议政府持续扩大税收优惠政策的覆盖面，尤其是对中小企业和创新型企业提供更为灵活和长期的税收减免政策。这将鼓励企业投入更多资金用于技术创新和产品研发，提高核心竞争力。其次，政府应进一步简化融资渠道，设立专门支持中小企业的贷款基金，降低融资利率，减轻企业资金压力。同时，可以引入风险投资和创投公司，通过债权和股权融资的结合，为企业的持续发展提供多元化的资金支持。此外，建议加强人力资本的投入，政府可以与高校和职业培训机构合作，提供针对企业需求的技能培训项目，以培养和引进高素质的人才。

First of all, it is suggested that the government should continue to expand the coverage of preferential tax policies, especially providing more flexible and long-term tax relief policies for small and medium-sized enterprises and innovative enterprises. This will encourage enterprises to invest more money in technological innovation and product research and development to improve their core competitiveness. Secondly, the government should further simplify financing channels, set up loan funds to support small and medium-sized enterprises, reduce financing interest rates, and reduce the capital pressure of enterprises. At the same time, venture capital and venture capital companies can be introduced to provide diversified financial support for the sustainable development of enterprises through the combination of creditor's rights and equity financing. In addition, it is suggested to strengthen investment in human capital, and the government can cooperate with universities and vocational training institutions to provide skills training programs tailored to the needs of enterprises in order to cultivate and introduce high-quality talents.

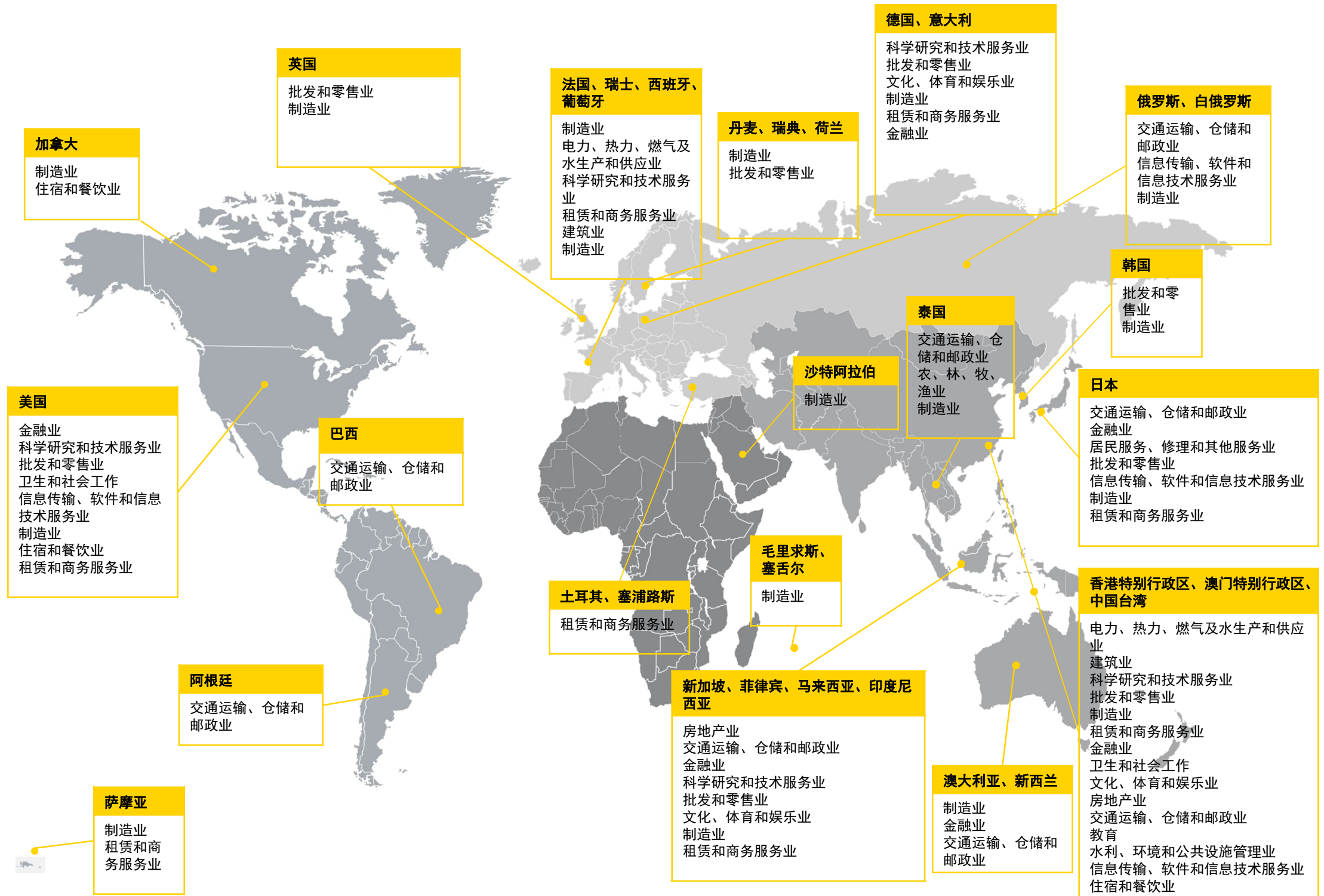
# 外商投资企业投资母国及地区的来源地图

Map for Home Countries (Regions) of Foreign-invested Enterprises



安永根据受访企业反馈的调查问卷，整理制作了重庆市外商投资企业投资母国及地区的来源地图。如本页地图所示，投资方大量集中在香港特别行政区、新加坡、美国、日本、韩国、中国台湾、德国等发达国家或地区，涵盖了制造、租赁和商务服务、批发和零售、房地产、信息与技术、金融、住宿餐饮等行业。有部分企业的投资者来自东南亚、中东、澳大利亚、非洲等地区。

Based on the survey, EY compiled a map for home countries (regions) of foreign-invested enterprises. As shown on the map, a great number of investors are from Hong Kong, Singapore, the United States, Japan, Republic of Korea, Taiwan, Germany and other developed countries (regions), engaging in various industries such as manufacturing, leasing and commercial services, wholesale and retail, real estate, IT, financial, accommodation and catering, etc. Some investors come from Southeast Asia, the Middle East, Australia, Africa and other regions.



# 测评结果特点分析

## Analysis of Characteristics of the Survey

### 特点一 Feature 1

2024年整体满意度的形态与历史趋同，其中人力资源环境提高最多（提升了5%）。

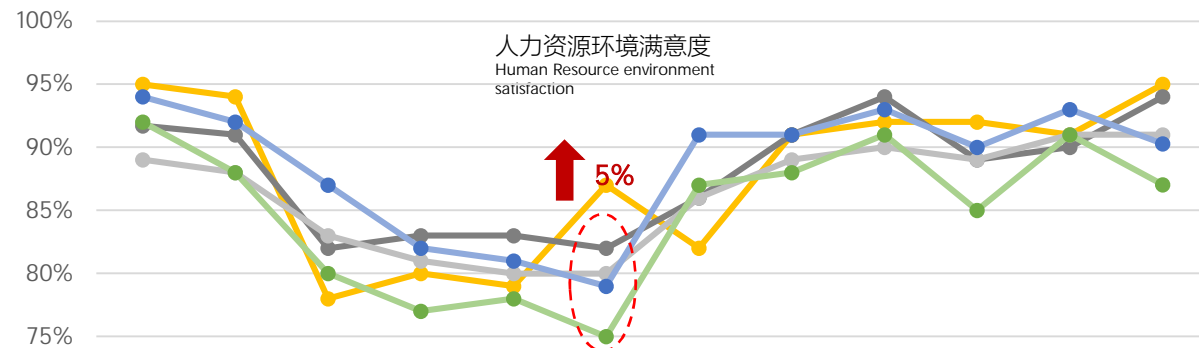
The pattern of overall satisfaction in 2024 is similar to that in history, with the human resource environment improving the most (improved 5%) .

- ▶ 满意度较高的环境依然为能源环境、用地用房环境、物流环境、环保环境、政策与政府服务环境、生活环境。

The environment with high satisfaction is still energy environment, land and housing environment, logistics environment, environmental protection environment, policy and government service environment, and living environment.

- ▶ 满意度待提高的环境依然为经济环境、金融环境、税收环境、人力资源环境、产业配套环境。本年产业配套环境满意度下降4%，为近五年最低水平。

The environment to be improved in satisfaction is still the economic environment, financial environment, tax environment, human resources environment and industrial supporting environment. Satisfaction with the supporting industrial environment has decreased by 4% this year, reaching the lowest level in nearly five years.



	能源环境	用地用房环境	经济环境	金融环境	税收环境	人力资源环境	产业配套环境	物流环境	环保建设	科技环境	政策与政府服务环境	生活环境
2024年	95%	94%	78%	80%	79%	87%	82%	91%	92%	92%	91%	95%
2023年	92%	91%	82%	83%	83%	82%	86%	91%	94%	89%	90%	94%
2022年	89%	88%	83%	81%	80%	80%	86%	89%	90%	89%	91%	91%
2021年	94%	92%	87%	82%	81%	79%	91%	91%	93%	90%	93%	90%
2020年	92%	88%	80%	77%	78%	75%	87%	88%	91%	85%	91%	87%

图：近五年各项环境指标变化情况

Trends of environmental indicators in the past five years

测评环境 — 大类 Assessment environment - Category	测评环境 — 子类 Assessment Environment - Subcategory	2024年较2023年 满意度上升百分比 Satisfaction compared with 2023
要素环境 Fundamental Environment	能源环境 Energy Environment	2%
	用地用房环境 Land and Property Environment	3%
市场环境 Market Environment	经济环境 Economic Environment	-4%
	金融环境 Financial Environment	-3%
	税收环境 Tax Environment	-4%
	人力资源环境 Human Resources Environment	5%
	产业配套环境 Industry Supporting Facility Environment	-4%
	物流环境 Logistics Environment	0%
	环保环境 Environmental Protection	-2%
政策与政府服务 Policies and Government Services Environment	科技环境 Scientific and Technological Environment	3%
	生活环境 Living Environment	1%

我们认为，之所以受访企业在人力资源环境满意度显著提高，是因为重庆近年出台了“新凤人才”计划、“鸿雁计划”等人才计划，在吸引人才入驻的同时为人才提供切实便利流注人才，为企业提供了良好的人才供应池，提高了企业的用人满意度，对人力资源环境更有信心。

We believe that the reason why the interviewees' satisfaction with the human resources environment has increased significantly is that Chongqing has introduced talent plans such as the "Xinfeng Talents" plan and the "Hongyan Plan" in recent years, which provide practical convenience for talents to migrate while attracting talents, provide a good talent supply pool for enterprises, improve the employment satisfaction of enterprises, and have more confidence in the human resources environment.

作为全国首批营商环境创新试点6大城市之一，近年来，重庆先后出台了一系列优化营商环境的文件，加快打造优质有序的市场环境、高效便捷的政务环境。

As one of the first batch of six major cities in China for business environment innovation, Chongqing has issued a series of documents to optimize the business environment in recent years, accelerating the creation of a high-quality and orderly market environment and an efficient and convenient government environment.

安永根据问卷反馈结果，对本年满意度相对较低的经济环境和税收环境从人员规模和行业两个维度进行了深入透视分析，结果显示：

EY conducted in-depth perspective analysis of the economic and tax environments with relatively low satisfaction this year from two dimensions of industry and personnel scale according to the questionnaire feedback results, and the results showed that:

- ▶ 从人员规模角度出发，受访企业满意度基本呈均匀分布，即不同人员规模受访企业的评价满意度分布情况基本一致。以规模为50人及以下的企业（我们称之为“中小微企业”）为例，中小微企业占全部受访企业比重为46%。而在对经济环境表示满意的受访企业中，中小微企业占比为40%。两个占比较为相近。

From the perspective of personnel scale, the satisfaction of the respondents is basically evenly distributed, that is, the distribution of evaluation satisfaction of the respondents with different personnel scale is basically consistent. For example, for enterprises with 50 people or less (we call them "SMEs"), SMEs accounted for 46% of all respondents. Among the respondents who are satisfied with the economic environment, the proportion of small and medium-sized enterprises is 40%. The two proportions are relatively close.

- ▶ 从行业角度出发，受访企业满意度基本呈均匀分布，即不同行业的受访企业评价满意度分布情况基本一致。以制造业为例，制造业企业数量占全部受访企业数量的比例为35%。而在对税收环境表示满意的受访企业中，制造业企业占比为29%。两个占比较为相近。

From the perspective of the industry, the satisfaction of the respondents is basically evenly distributed, that is, the distribution of the evaluation satisfaction of the respondents in different industries is basically the same. Taking the manufacturing industry as an example, the proportion of manufacturing enterprises to the total number of surveyed enterprises is 35%. Among the surveyed enterprises that expressed satisfaction with the tax environment, manufacturing enterprises accounted for 29%. The two proportions are relatively close.

# 测评结果特点分析

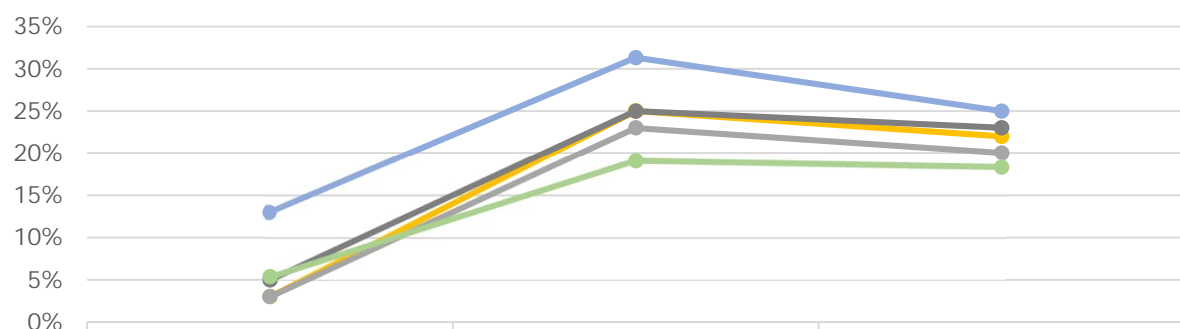
## Analysis of Characteristics of the Survey

### 特点二

### Feature 2

2024年企业经营信心和经营状况依然不容乐观。在投资意向方面，本次测评中有六成受访企业选择趋于观望，但值得欣慰的是依然有40%受访企业保有进一步投资热情。

In 2024, the business confidence and operating conditions of enterprises are still not optimistic. Regarding the future investment plan, 60% of the respondents choose to wait and see, but it is gratifying that 40% of the respondents still have future investment enthusiasm.



	被调查企业经营难易程度较前一年度更为容易	被调查企业在本年度较前一年度营业额有所增长	被调查企业在本年度较前一年度净利润实现正增长
2024年	3% (↓2%)	25% (持平)	22% (↓1%)
2023年	5%	25%	23%
2022年	3%	23%	20%
2021年	13%	31%	25%
2020年	5%	19%	18%

Respondents indicated that their business operation were easier than prior year

Respondents indicated that their revenue were increased compared with prior year

Respondents indicated that their profit were increased compared with prior year

2024年受访企业经营状况较2023年发生小幅下滑，受全球经济复苏乏力导致外需萎缩、国内产业政策升级及竞争加剧压缩利润空间，叠加国际物流成本上升、汇率波动及供应链重构压力，同时本地消费疲软和用工成本攀升进一步削弱企业盈利预期，多重因素共同作用下受访企业短期经营承压。

The operating conditions of the respondents in 2024 have slightly declined compared to 2023. Due to the weak global economic recovery leading to a contraction in external demand, the upgrading of domestic industrial policies, and intensified competition, profit margins have been compressed. In addition, international logistics costs have risen, exchange rate fluctuations, and supply chain restructuring pressures have been added. At the same time, weak local consumption and rising labor costs have further weakened the profit expectations of the respondents. Under the combined effect of multiple factors, the short-term operating pressure of the respondents has increased.

与此同时，中国政府和重庆政府也出台了一系列支持政策，包括支持大规模设备更新和消费品以旧换新、简化审批流程等措施，为企业营造了更加良好、宽松的经营环境。

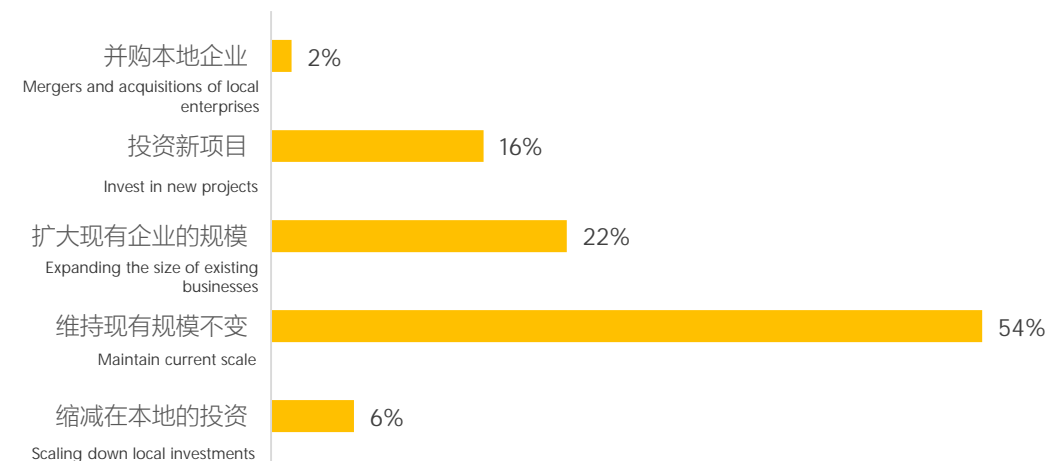
At the same time, the Chinese government and the Chongqing government have also introduced a series of support policies, including tax incentives, reducing the burden of enterprises, simplifying the approval process and other measures, which have created a better and more relaxed business environment for enterprises.

- ▶ 2024年3月，重庆市政府出台了《重庆市优化营商环境专项行动方案》，要求实现营商环境竞争力显著提高，政务环境更加高效、法治环境更加公正、市场环境更加有序、创新环境更加活跃、要素保障环境更加完善，形成更多具有重庆辨识度、全国影响力的标志性成果，努力成为西部地区营商环境排头兵。

In March 2024, the Chongqing Municipal Government issued the Special Action Plan for Optimizing the Business Environment of Chongqing, which requires significantly improving the competitiveness of the business environment, making the government environment more efficient, the rule of law environment more fair, the market environment more orderly, the innovation environment more active, and the factor guarantee environment more perfect, so as to form more landmark achievements with Chongqing's recognition and national influence, Strive to become the leader of business environment in the western region.

- ▶ 2024年4月，重庆市政府印发了《重庆市进一步优化外商投资环境加大吸引外商投资力度实施方案》，要求营造市场化、法治化、国际化一流营商环境，更大力度、更加有效吸引和利用外商投资，建立健全外商投资促进成效评价体系，注重引资对经济社会发展的实际贡献。

In April 2024, the Chongqing Municipal Government issued the Implementation Plan for Chongqing to Further Optimize the Foreign Investment Environment and Increase the Attraction of Foreign Investment, which calls for creating a market-oriented, legalized and internationalized first-class business environment, attracting and utilizing foreign investment more vigorously and effectively, establishing and improving the effectiveness evaluation system of foreign investment promotion, and paying attention to the actual contribution of capital attraction to economic and social development.



图：受访企业在重庆的投资计划情况  
Figure: Investment plans of the respondents in Chongqing

在投资意向方面，40%的受访企业表示未来在重庆有投资计划，包括但不限于扩大现有企业规模、投资新项目或者并购本地企业，另有54%企业表示将维持现有规模不变，仅有6%企业计划缩减本地投资。整体来看，大多数受访企业对重庆市的投资意向仍然保持积极，表现出对当地经济发展的信心和期待，并保有进一步扩张的投资热情。

In terms of investment intention, 40% of the respondents said they had investment plans in Chongqing in the future, including but not limited to expanding the scale of existing enterprises, investing in new projects or mergers and acquisitions of local enterprises, while 54% of the respondents said they would maintain the existing scale, and only 6% of the respondents planned to reduce local investment. On the whole, most of the respondents still maintain positive investment intentions in Chongqing, showing confidence and expectations for local economic development, and maintaining investment enthusiasm for further expansion.

# 3

## 绿色电力产业专题调研分析

Special research and analysis on green power industry

### 1. 概述

Overview

调研背景

Research background

绿色电力简介

Introduction to Green Power

调研方法论

Research Methodology

### 2. 重庆绿色电力产业链介绍

Introduction to Chongqing Green Power Industry Chain

绿色电力全产业链图

The Whole Industry Chain Diagram of Green Power

重庆市绿色电力产业链重点企业分布图

Distribution of Key Enterprises In Chongqing's Green Power Industry Chain

中国绿色电力（绿证）消费TOP100企业

Top 100 Chinese Green Power (Green Certificate) Consumption Enterprises

国内地区总体政策对比

Comparison of Overall Policies In Domestic Regions

### 3. 各类型可再生能源发电产业链具体分析

Specific Analysis of Various Types of Renewable Energy Power Generation Industry Chains

### 4. 问卷调查结果分析

Analysis of Questionnaire Survey Results

### 5. 小结

Summary



# 概述

## Overview

随着全球气候变暖的加剧，极端天气事件频发，各国在应对气候变化方面的压力与日俱增。中国作为世界上最大的发展中国家和碳排放国，面临着巨大的环保压力与国际责任。在这一背景下，中国提出碳达峰和碳中和目标（“双碳目标”），彰显了中国在全球气候治理中的积极态度。“双碳”目标背景下，中国能源结构持续调整、国家推动绿色低碳能源转型向纵深发展的规划和举措也越来越明确。

With the intensification of global warming and frequent extreme weather events, countries are under increasing pressure to cope with climate change. As the world's largest developing country and carbon emitter, China is facing enormous environmental pressure and international responsibility. In this context, China has proposed carbon peaking and carbon neutrality goals, demonstrating China's positive attitude towards global climate governance. Against the backdrop of the "dual carbon" target, China's energy structure continues to adjust, and the country's plans and measures to promote the deep development of green and low-carbon energy transformation are becoming increasingly clear.

在全球追求可持续发展的浪潮下，ESG理念应运而生。ESG兼顾环境、社会、公司治理等多维度的价值观念，与我国提出的创新、协调、绿色、合作、共享的新发展理念高度契合。随着政策对ESG相关内容关注度的提升，越来越多的组织也将ESG因素纳入其资本配置决策，ESG逐渐成为竞争优势和创造价值机会的来源。

Under the global trend of pursuing sustainable development, the ESG concept has emerged. ESG values that take into account multiple dimensions such as environment, society, and corporate governance are highly compatible with China's new development concept of innovation, coordination, greenness, cooperation, and sharing. With the increasing attention to ESG related content in policies, more and more organizations are incorporating ESG factors into their capital allocation decisions, ESG is gradually becoming a source of competitive advantage and creating value opportunities.

在这样的大背景下，传统能源模式面临着前所未有的挑战。发展绿色电力成为必然选择，它不仅是实现双碳目标的关键抓手，能有效减少碳排放，助力能源结构深度调整；更是企业践行ESG理念的重要体现，彰显着企业对环境保护与社会责任的担当。本章将聚焦重庆市在绿色电力领域的发展情况，对绿色电力交易数据、绿色电力企业分布、绿色电力政策等方面进行调研，梳理各类可再生能源电力在重庆市的现状，展示重庆市各类可再生能源电力的发展趋势，以期找出重庆市绿色电力的发展短板。并结合企业实际调研情况，为绿色电力的发展、产业链建设以及招商引资提供参考建议。

In this context, traditional energy models are facing unprecedented challenges. Developing green electricity has become an inevitable choice. It is not only a key lever to achieve the dual carbon goals, but also can effectively reduce carbon emissions and assist in the deep adjustment of energy structure; It is also an important manifestation of enterprises practicing ESG concepts, demonstrating their commitment to environmental protection and social responsibility. This chapter will focus on the development of green power in Chongqing, conduct research on green power trading data, distribution of green power enterprises, green power policies, etc., sort out the current situation of various renewable energy sources in Chongqing, display the development trends of various renewable energy sources in Chongqing, in order to identify the development shortcomings of green power in Chongqing. And based on the actual research situation of the enterprise, provide reference suggestions for the development of green power, industrial chain construction, and investment attraction.



## “双碳”目标

### Carbon Peaking and Carbon Neutrality Goals

- ▶ **碳达峰**：指一个国家或地区的碳排放量在某一达到最高点后，逐步减少。中国计划在2030年前实现这一目标，意味着未来几年内，碳排放总量将保持在一个相对稳定的水平，并逐步向下降趋势转变。

Carbon peaking: It refers to the gradual reduction of carbon emissions in a country or region after reaching the highest point in a certain year. China's plan to achieve that target by 2030 means that total carbon emissions will remain at a relatively stable level for the next few years and gradually shift to a downward trend.

- ▶ **碳中和**：指通过植树造林、碳捕捉与封存等措施，将排放的二氧化碳通过自然和技术手段抵消，使得净排放量为零。中国致力于在2060年前实现碳中和，这意味着在未来35年内，要大幅度提升碳排放减少的能力，努力打造低碳、绿色的社会经济体系。

Carbon neutrality: It refers to offsetting carbon dioxide emissions through natural and technological means through afforestation, carbon capture and storage and other measures, so that the net emissions are zero. China is committed to achieving carbon neutrality by 2060, which means significantly improving its ability to reduce carbon emissions and striving to build a low-carbon and green socio-economic system in the next 35 years.

## 环境、社会和治理 (“ESG”)

### Environmental, Social and Governance (“ESG”)



#### 定义 Definition

环境、社会和治理 (Environmental, Social, and Governance, “ESG”)，是一种用于评估企业可持续性和社会影响的标准。ESG标准帮助投资者分析公司在环境保护、社会责任和公司治理方面的表现，从而做出更明智的投资决策。随着全球对可持续发展和社会责任的关注增加，ESG已经成为投资者和公司管理层普遍认可的重要指标。

Environmental, Social and Governance (“ESG”) is a standard used to assess corporate sustainability and social impact. ESG standards help investors analyze companies' performance in environmental protection, social responsibility and corporate governance to make smarter investment decisions. As global attention to sustainable development and social responsibility increases, ESG has become an important indicator widely recognized by investors and company management.

- ▶ **环境**：环境因素关注企业在生态保护、资源管理及应对气候变化方面的表现。这包括公司的温室气体排放、能源使用、废物管理、水资源管理、生态影响和环境保护措施等。

Environmental: Environmental factors focus on the performance of enterprises in ecological protection, resource management and climate change. This includes the company's greenhouse gas emissions, energy use, waste management, water management, ecological impacts and environmental protection measures.

- ▶ **社会**：社会因素涉及企业对员工、客户、供应商和社区等利益相关者的影响。这包括员工待遇与福利、劳工权利、产品安全、供应链管理以及与社区的关系等。

Social: Social factors relate to the impact of the business on stakeholders such as employees, customers, suppliers and communities. This includes employee benefits and benefits, labor rights, product safety, supply chain management, and community relations.

- ▶ **公司治理**：公司治理因素关注公司内部管理结构和效率，包括董事会的独立性、透明度、业务伦理、股东权利以及法律合规性等。

Governance: Governance factors focus on the company's internal management structure and efficiency, including board independence, transparency, business ethics, shareholder rights and legal compliance.



#### 国际发展趋势 International trend

**投资者关注度上升**：随着全球对可持续发展的关注增加，越来越多的投资者开始将ESG纳入投资决策过程。机构投资者、养老基金和财富管理公司越来越多地采用ESG标准，以评估投资项目的长期风险和回报。

Rising investor attention: As global attention to sustainable development has increased, more and more investors have begun to incorporate ESG into their investment decision-making process. Institutional investors, pension funds and wealth management companies are increasingly adopting ESG standards to assess the long-term risks and returns of investment projects.

**政策法规的推动**：各国政府和监管机构正在逐步加强对企业ESG信息披露的要求。这些立法措施旨在提高企业ESG层面的透明度，推动可持续投资的快速发展。

Governments and regulators are gradually strengthening the requirements for enterprise ESG information disclosure. These legislative measures aim to increase transparency at the ESG level of enterprises and promote rapid development of sustainable investment.

**标准化与统一化**：随着ESG的普及，各种评估标准和框架逐渐涌现。这些努力旨在实现ESG信息披露的统一化，帮助企业和投资者更好地理解与比较不同公司的ESG表现。

With the popularization of ESG, various evaluation standards and frameworks gradually emerge. These efforts aim to unify ESG disclosures and help companies and investors better understand and compare ESG performance across companies.

# 绿色电力简介

## Introduction to Green Power

绿色电力是指由可再生能源资源生成的电力，这些资源包括太阳能、风能、水能、地热能和生物质能等，相对于传统的依靠化石燃料发电（如煤、石油和天然气），绿色电力的生产过程基本上是可可持续的，且对环境的影响较小。

Green power refers to power generated from renewable energy resources, including solar, wind, water, geothermal and biomass energy. Compared with traditional fossil fuel power generation (such as coal, oil and natural gas), the production process of green power is basically sustainable and has less impact on the environment.



太阳能  
Solar energy



风能  
Wind energy



水能  
Hydro energy



地热能  
Geothermal energy



生物质能  
Biomass energy



海洋能  
Ocean energy



## 发展绿色电力之于重庆的意义

### The Significance of Developing Green Power for Chongqing

- ▶ 顺应ESG理念趋势，响应“双碳”政策号召  
Following the trend of ESG ideology and responding to the call for "dual carbon" policies
- ▶ 建立健全绿色低碳循环经济体系，构建绿色可持续经济社会  
Establish and improve a green, low-carbon, and circular economy system, and build a green, sustainable economic and social society
- ▶ 促进重庆绿色电力产业结构优化升级，创造新的经济增长点  
Promote the optimization and upgrading of Chongqing's green power industry structure, and create new economic growth points
- ▶ 实现能源结构多元化，提高能源系统稳定性和可靠性  
Diversify the energy structure and improve the stability and reliability of the energy system
- ▶ 帮助企业履行社会责任，树立良好形象，提升市场竞争力  
Assist enterprises in fulfilling their social responsibilities, establishing a good image, and enhancing market competitiveness
- ▶ 促进环境保护与生态恢复，营造更宜居的城市环境  
Promote environmental protection and ecological restoration, and create a more livable urban environment

## 绿色电力发展的历史沿革 History of Green Power Development

绿色电力的发展历史是一个渐进而复杂的过程，涉及科技进步、政策变革及社会意识的提升。以下是绿色电力发展历程的概述，从早期的可再生能源利用到如今全球关注的低碳电力转型。

The history of green power development is a gradual and complex process, involving scientific and technological progress, policy changes and the promotion of social awareness. Here is an overview of the evolution of green power, from early renewable energy use to today's global focus on low-carbon power transformation.

● **早期阶段：**绿色电力的根源可以追溯到19世纪，特别是在1850年代，随着工业革命的兴起，人们开始探索如何利用自然能源来驱动机械设备。水能的利用最早出现在水车的发明上，最初用于磨坊和锯木厂等简单的机械设备。

Early stage: The roots of green power can be traced back to the 19th century, especially in the 1850s, when the Industrial Revolution began to explore how to use natural energy to power machinery. The use of water power first appeared in the invention of the waterwheel, which was originally used in simple mechanical equipment such as mills and sawmills.

● **碳中和目标的提出：**随着全球气温上升和气候变化问题的日益严重，近二十年来，很多国家陆续提出了较为雄心勃勃的减排目标。在2020年9月，中国宣布力争于2060年前实现碳中和，绿色电力发展进一步提速。

Proposal of carbon neutrality target: With the increasing global temperature rise and climate change, many countries have proposed ambitious emission reduction targets in the past two decades. In September 2020, China announced that it would strive to achieve carbon neutrality by 2060, further accelerating the development of green power.

● **全球政策和合作：**各国政府也在不断推动政策来促进绿色电力的发展，2030年可再生能源占全球能源供应比例的目标、碳中和目标等成为越来越多国家的政策重点。这使得绿色电力在全球范围内受到前所未有的重视。

Global policies and cooperation: Governments are also constantly promoting policies to promote the development of green power. The 2030 target of renewable energy as a proportion of global energy supply and the carbon neutrality target have become the policy priorities of more and more countries. This makes green power receive unprecedented attention worldwide.

## 重庆绿色电力发展历程 The Development of Green Power in Chongqing



● **起步阶段：**在20世纪末至21世纪初，随着中国对环境保护和可持续发展的重视，重庆开始探索绿色电力的发展。这一时期，重庆主要是通过小规模的水电项目来开发绿色能源。

**Initial stage:** From the end of the 20th century to the beginning of the 21st century, Chongqing began to explore the development of green power with China's emphasis on environmental protection and sustainable development. During this period, Chongqing developed green energy mainly through small-scale hydropower projects.

● **发展阶段：**进入21世纪后，重庆的绿色电力产业进入了快速发展阶段。重庆利用其丰富的水资源和山地地形，大力发展水电项目。同时，重庆也开始尝试其他形式的绿色能源。

**Development stage:** After entering the 21st century, Chongqing's green power industry has entered a stage of rapid development. Chongqing uses its abundant water resources and mountainous terrain to vigorously develop hydropower projects. Meanwhile, Chongqing is experimenting with other forms of green energy.

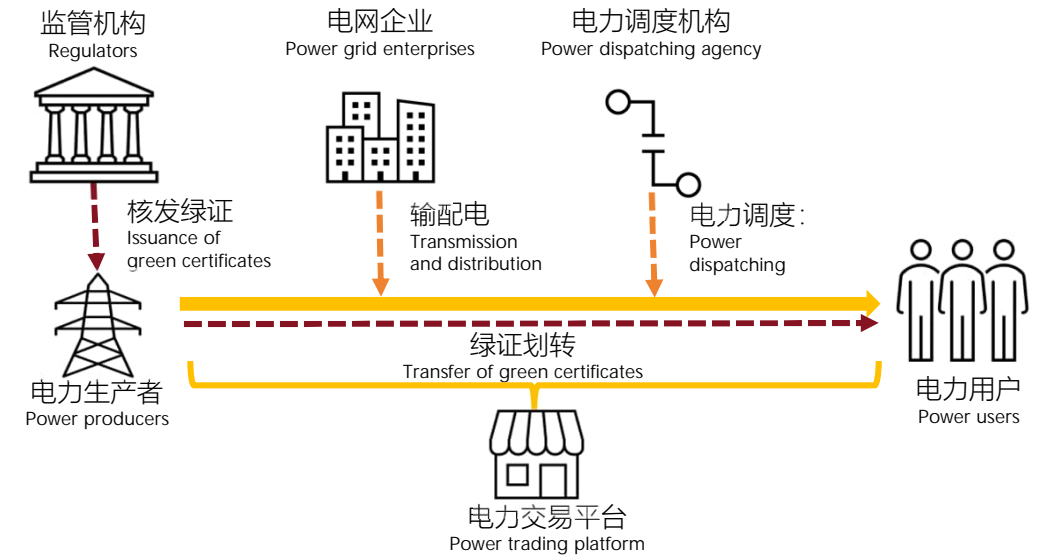
● **多元化阶段：**近年来，重庆绿色电力产业逐渐向多元化方向发展。重庆市政府出台了一系列政策措施，鼓励绿色电力产业的发展，包括财政补贴、税收优惠、优先上网等。

**Diversification stage:** In recent years, Chongqing's green power industry has gradually developed in the direction of diversification. The Chongqing Municipal Government has introduced a series of policies and measures to encourage the development of the green power industry, including financial subsidies, tax incentives, and preferential access to the Internet.

# “绿色电力”交易 "Green Power" Transaction

绿色电力交易是指通过市场机制，买卖来自可再生能源（如风能、太阳能、水能、生物质能等）的电力。这一机制的建立旨在促进绿色能源的发展和利用，从而推动生态文明建设和应对气候变化。中国在绿色电力交易方面的探索与实践，源于国家对可再生能源的重视和对环境保护的呼声，而其具体的交易规则也在不断发展与完善中。

Green power trading refers to buying and selling electricity from renewable energy sources (such as wind, solar, hydropower, biomass energy, etc.) through a market mechanism. The establishment of this mechanism aims to promote the development and utilization of green energy, so as to promote the construction of ecological civilization and cope with climate change. China's exploration and practice in green power trading stems from the state's emphasis on renewable energy and the call for environmental protection, and its specific trading rules are also constantly developing and improving.



## 绿色电力交易的基本规则 Basic Rules for Green Power Trading

中国的绿色电力交易机制通过严格的准入、绿色电力证书（以下简称“绿证”）以及精准的计量与监测体系，推动可再生能源的消费和发展。符合环保标准和效率指标的可再生能源发电企业才能进入市场，每生产一度绿色电力会生成一个绿证，作为交易的基础。

电力监测机构对发电量进行准确计量并提交数据，确保绿证的发放和交易的透明度。交易方式包括电力直接交易（生产者和消费者直接签订合同，约定价格和数量）和电力交易市场（通过电力交易中心等机构发布信息，进行竞标交易）。这一机制通过市场化手段促进绿色电力的消纳，助力能源结构转型和“双碳”目标的实现。

China's green power trading mechanism promotes the consumption and development of renewable energy through strict market access, green power certificate (hereinafter referred to as "Green Certificate") and accurate measurement and monitoring system. Renewable energy power generation enterprises that meet environmental standards and efficiency indicators can enter the market, and a green certificate will be generated for each time green power is produced as the basis for transactions.

Power monitoring agencies accurately measure and submit data on electricity generation to ensure the transparency of green certificate issuance and transactions. Trading methods include direct electricity trading (producers and consumers directly sign contracts to agree on prices and quantities) and electricity trading markets (through electricity trading centers and other institutions to publish information for bidding transactions). This mechanism promotes the absorption of green power through market-oriented means, and helps to achieve the goal of energy structure transformation and "Carbon Peaking and Carbon Neutrality Goals".

## 绿色电力交易的参与主体与交易模式 Participants and Trading Models of Green Power Trading

### ▶ 电力生产者：包括各类可再生能源发电厂，主要是风电、太阳能、地热和水力发电等。

Power producers: including all kinds of renewable energy power plants, mainly wind, solar, geothermal and hydropower.

### ▶ 电网企业：提供输配电服务和电网接入服务，提供报装、计量、抄表收费等各类供电服务。

Power grid enterprises: provide power transmission and distribution services and grid access services, and provide various power supply services such as installation, metering, meter reading and charging.

### ▶ 电力调度机构：安全校核、电力调度、保障电力交易结果的执行等。

Power dispatching organization: security check, power dispatching, guarantee of execution of power transaction results, etc.

### ▶ 电力用户：作为购电方，签订和履行购售电合同，输配电服务合同，支付购电费、输配电费等费用。

Power users: as power purchasers, sign and perform power purchase and sale contracts, power transmission and distribution service contracts, and pay power purchase fees, power transmission and distribution fees, etc.

### ▶ 电力交易平台：负责形成和维护交易市场，提供交易服务的机构，如电力交易中心。

Power trading platform: an institution responsible for forming and maintaining a trading market and providing trading services, such as a power trading center.

## 绿色电力交易相关政策发布 Green Power Trading Policies

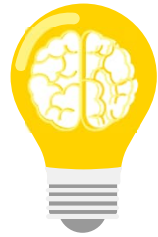
自2021年以来，国家发改委、国家能源局等相关部门陆续出台了一系列政策，旨在加快建立有利于促进绿色能源生产消费的市场体系和长效机制。

Since 2021, the National Development and Reform Commission, the National Energy Administration and other relevant departments have introduced a series of policies aimed at accelerating the establishment of a market system and a long-term mechanism conducive to promoting green energy production and consumption.

2021年8月28日	国家发改委、能源局批复了《关于绿色电力交易试点工作方案的复函》，标志着绿色电力交易试点正式启动。 The National Development and Reform Commission and the Energy Administration approved the Letter on the Pilot Work Plan of Green Power Trading, marking the official launch of the pilot green power trading.
2021年10月11日	重庆市政府印发了《关于加快建立健全绿色低碳循环发展经济体系的实施意见》，就加快建立健全绿色低碳循环发展经济体系提出了实施意见。 Chongqing Municipal Government issued the Implementation Opinions on Accelerating the Establishment and Perfection of Green Low Carbon Circular Economy System, which put forward implementation opinions on accelerating the establishment and perfection of green low carbon circular development economy system.
2022年12月28日	国家发改委、国家能源局发布《关于推动电力交易机构开展绿色电力证书交易的通知》，积极稳妥扩大绿电和绿证交易范围，更好体现可再生能源的环境价值，服务新型电力系统建设。 The National Development and Reform Commission and the National Energy Administration issued the Notice on Promoting Power Trading Institutions to Carry out Green Power Certificate Trading, actively and steadily expanding the scope of green power and green certificate trading, better reflecting the environmental value of renewable energy, and serving the construction of new power systems.
2023年2月15日	国家发改委、财政部、能源局印发了《关于享受中央政府补贴的绿电项目参与绿电交易有关事项的通知》，为享受补贴的绿电项目参与绿电交易提供了政策支持。 The National Development and Reform Commission, the Ministry of Finance and the Energy Administration issued the Notice on Matters Relating to the Participation of Green Power Transactions by Green Power Projects Enjoying Subsidies from the Central Government, which provides policy support for the participation of subsidized green power projects in green power transactions.
2024年1月22日	重庆市发改委印发了《关于绿色小水电上网电价及有关事项的通知》，为有效发挥价格机制的激励、约束作用，引导资源在生态环保等领域高效配置，促进经济高质量发展提供了指导文件。 The Chongqing Municipal Development and Reform Commission issued the Notice on the On grid Price of Green Small Hydropower and Related Matters, which provides guidance documents for giving full play to the incentive and restraint effects of the price mechanism, guiding the efficient allocation of resources in ecological and environmental protection fields, and promoting high-quality economic development.

# 调研方法论

## Research Methodology



### 调研方法

#### Research Method

- ▶ **信息收集**：通过公开渠道调研重庆市绿色电力的发展情况，以收集相关企业在所属行业、区域分布以及发展现状与趋势等方面的信息。

Information collection: Survey the industrial overview related to green power in Chongqing through open channels to collect information on the industry, regional distribution, development status and trend of relevant enterprises.

- ▶ **实地走访**：前往多个绿色电力产业链相关企业进行实地调研与访谈，就产业链生态、行业发展情况等问题进行详细探讨，以了解重庆市绿色电力相关企业在参与绿色电力生产或交易环节的真实感受。

Field research: Go to a number of green power industry chain related enterprises for field research and interviews, so as to conduct detailed discussions on industrial chain ecology, industry development and other issues, so as to understand the real feelings of green power related enterprises in Chongqing in the process of participating in green power production or trading.

- ▶ **问卷调研**：向企业发放绿色电力相关的调查问卷，就重庆市绿色电力交易的优劣势，公司参与绿色电力交易的意愿、时间长度、动机以及绿色电力交易方案等问题，调查重庆市外商投资企业对于当前绿色电力发展的看法。

Questionnaire survey: The questionnaire related to green power was distributed to more than 100 enterprises to investigate the views of foreign-invested enterprises in Chongqing on the current development of green power on the advantages and disadvantages of green power trading in Chongqing, the willingness, length of time, motivation and green power trading scheme of the company to participate in green power trading.

- ▶ **案头分析**：基于所收集的信息进行汇总分析，选取重点领域及重点企业，通过纵向及横向对比、区位分布透视、指标对比分析等方法深入研究各环节所涉及的绿色电力企业的发展现状及发展趋势，分析产业发展优劣势，为重庆市绿色电力产业的发展提供参考与建议。

Desk analysis: based on the collected information, summarize and analyze, select key areas and key enterprises, conduct in-depth research on the development status and trend of green power enterprises involved in each link through vertical and horizontal comparison, location distribution perspective, index comparison and analysis, analyze the advantages and disadvantages of industrial development, and provide reference and suggestions for the development of green power industry in Chongqing.



### 调研思路

#### Research Path

本次调研将围绕“绿色电力”产业链中的上游、中游、下游三个关键环节展开。绿色电力产业链的上游承载原料即太阳能、风能、生物质能和电热能及设备即发电机、汽轮机、焚烧炉和风轮，下游衔接电力输送与工业用电、商业用电、居民用电。整条产业链的传导作用自下而上，即下游需求影响绿色电力产量，进而影响对于上游生产电力的需求。

This survey will focus on the upstream, midstream and downstream three key links in the "green power" industry chain. The upstream of the green power industry chain carries raw materials such as solar energy, wind energy, biomass energy and electrothermal energy and equipment such as generators, turbines, incinerators and wind turbines, while the downstream connects power transmission with industrial power, commercial power and residential power. The transmission effect of the whole industrial chain is bottom-up, that is, downstream demand affects green power production, and then affects the demand for upstream production power.

## 绿色电力产业链

### Green power industry chain

### 上游 Upstream

可再生能源及发电设备：太阳能、风能、生物质能、电热等再生资源以及发电机、汽轮机、焚烧炉、风轮等设备。

Renewable energy and power generation equipment: solar energy, wind energy, biomass energy, electric heating and other renewable resources, as well as generators, steam turbines, incinerators, wind turbines and other equipment.

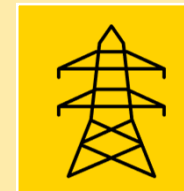


### 中游 Midstream

### 中游 Midstream

绿色电力的生产：太阳能发电、风能发电、生物质能发电、地热能发电等。

Production of green power: solar power generation, wind power generation, biomass power generation, geothermal power generation, etc.



### 下游 Downstream

电力的输送与使用：电网企业以及工业用电、商业用电、居民用电等。

Transmission and use of electric power: power grid enterprises and industrial, commercial and residential electricity.



我们将围绕绿色电力产业链上中下游相关情况，结合调研问卷反馈和实地走访情况，分析重庆绿色电力的发展情况，梳理亮点成绩、发展趋势，同时发现短板。并结合企业调研与分析结果，为重庆绿色电力发展提供建议。

We will analyze the development of green power in Chongqing around the upstream, downstream and related situations of the green power industry chain, combined with the feedback of survey questionnaires and field visits, sort out the highlights and development trends, and find the shortcomings. Combined with the results of enterprise investigation and analysis, some suggestions are provided for the development of green power in Chongqing.

同时，我们将选取部分国内典型城市，从绿电发展、绿电交易、政策支持情况等角度进行横向对比，以反映当前绿色电力产业发展的总体情况与区域差异。

At the same time, we will select some typical cities to make horizontal comparison from the perspective of green power development, green power trading and policy support, so as to reflect the overall situation and regional differences of the current development of green power industry.

# 绿色电力全产业链图

## The Whole Industry Chain Diagram of Green Power

绿色电力产业链包括上游原料与设备、中游电力生产和下游电力应用三个主要环节。

The green power industry chain includes three main segments: upstream raw materials and equipment, midstream power production and downstream power application.

**上游：**绿色电力的上游环节包括原材料和设备的供应。原材料方面涉及太阳能、风能、生物质能及地热能等可再生能源的开发与利用；设备方面包括发电机、燃烧炉、气轮机和风轮等。这一环节是产业链的基础，负责将自然资源转化为可利用的能源形式。

Upstream: The upstream segment of green power includes the supply of raw materials and equipment. In terms of raw materials, it involves the development and utilization of renewable energy sources such as solar, wind, biomass, and geothermal energy; in terms of equipment, it includes generators, combustion furnaces, gas turbines, and wind wheels. This segment is the foundation of the industry chain, responsible for converting natural resources into usable forms of energy.

**中游：**中游环节主要集中在绿色电力的生产与发电。核心技术包括太阳能发电、风能发电、生物质能发电及地热能发电等。这一阶段将上游的能源资源加工为电力，是绿色电力生产的关键环节，技术水平对发电效率和环保效果具有重要影响。

Midstream: The midstream segment primarily focuses on the production and generation of green electricity. Core technologies include solar power generation, wind power generation, biomass power generation, and geothermal power generation. This stage processes upstream energy resources into electricity and is a crucial link in green power production, with the level of technology significantly affecting generation efficiency and environmental protection outcomes.

**下游：**下游环节是绿色电力的最终应用，主要面向工业用电、商业用电和居民用电等领域。这一阶段注重能源的分配与优化，通过绿色电力满足用户对清洁能源的需求，并推动全社会能源结构的可持续转型。

Downstream: The downstream segment is the final application of green electricity, mainly targeting industrial power consumption, commercial power consumption, and residential power consumption. This stage emphasizes the distribution and optimization of energy, meeting users' demand for clean energy through green electricity, and promoting the sustainable transformation of the entire society's energy structure.



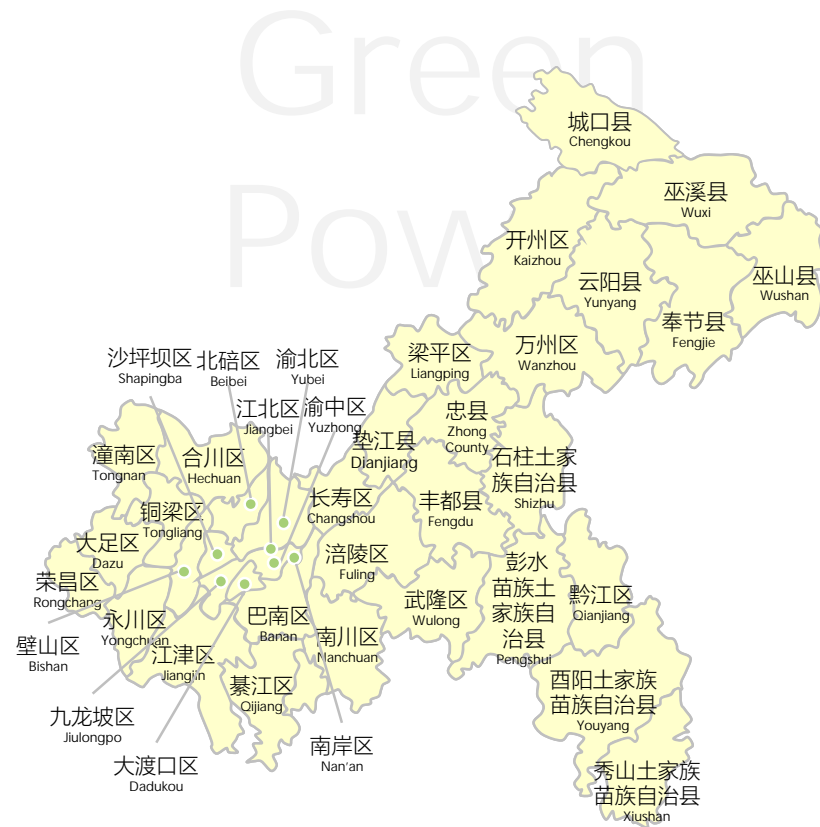
# 重庆绿色电力产业链重点企业分布图

## Distribution of Key Enterprises in Chongqing's Green Power Industry Chain

### 简介 Introduction

针对重庆市绿色电力产业链，我们共分析了139家代表性企业，并选取其中60家企业整理制作了重庆市绿色电力产业链上中下游企业分布图。

We analyzed a total of 139 representative enterprises in the green power industry chain in Chongqing, and selected 60 of them to compile a distribution map of upstream, midstream, and downstream enterprises in the green power industry chain in Chongqing.



这139家企业广泛分布于重庆39个地区，其中，渝北区、九龙坡区、南岸区数量最多。这139家企业中约38%的企业分布于重庆中心城区，另外有大量企业位于璧山区、江津区、万州区等多个重庆周边区县。

These 139 enterprises are widely distributed across 39 areas in Chongqing, with the largest numbers found in Yubei District, Jiulongpo District, and Nanan District. Approximately 38% of these 139 enterprises are located in Chongqing's central urban area, while a significant number are situated in surrounding districts and counties such as Bishan District, Jiangjin District, and Wanzhou District.



# 中国绿色电力（绿证）消费TOP100企业

## Top 100 Chinese Green Power (Green Certificate) Consumption Enterprises

序号	企业名称	序号	企业名称
1	国家能源投资集团有限责任公司 CHN Energy	26	华晨宝马汽车有限公司 BMW Brilliance Automotive Ltd
2	国家电力投资集团有限公司 China Power Investment Corporation	27	河北纵横钢铁集团有限公司 Hebei Zongheng Steel & Iron Group Co., Ltd
3	中国石油化工集团有限公司 Sinopec Group	28	中国第一汽车集团有限公司 China FAW Group Corporation Limited
4	中国石油天然气集团有限公司 China National Petroleum Corporation	29	张家口思达柯数据有限公司 Zhangjiakou Sidake Data Co., Ltd
5	中国宝武钢铁集团有限公司 China BAOWU Steel Group Corporation Limited	30	科思创聚合物(中国)有限公司 Covestro (China) Co., Ltd
6	中国海洋石油集团有限公司 China National Offshore Oil Corporation	31	浙江省黄龙体育中心 Huanglong Sports Center
7	阿里巴巴集团 Alibaba Group Holding Limited	32	奥特斯中国 AT&S (China) Co., Ltd
8	国家电网有限公司 State Grid Corporation of China	33	中伟新材料股份有限公司 CNGR Advanced Material Co., Ltd
9	河钢集团有限公司 HBIS	34	承德建龙特殊钢有限公司 Chengde Jianlong Special Steel Co., Ltd
10	中国电信集团有限公司 ChinaTelecom	35	中国建材集团有限公司 China National Building Material Group Co., Ltd
11	中国铝业集团有限公司 Aluminum Corporation of China Limited	36	浙江吉利控股集团有限公司 Zhejiang Geely Holding Group Co., Ltd
12	富士康科技集团有限公司 Hon Hai Precision Industry Co., Ltd	37	陕西煤业化工集团有限责任公司 Shaanxi Coal and Chemical Industry Group Co., Ltd
13	新疆东方希望有色金属有限公司 OriensSpes Limited	38	唐山榕威管业有限公司 Tangshan Rongwei Pipe Industry Co., Ltd
14	河北津西钢铁集团股份有限公司 Hebei Jinxin Iron And Steel Group Co.,Ltd	39	湖北宜化集团有限责任公司 Hubei Yihua Group Limited Liability Company
15	伯恩光学(中国)有限公司 BIEL	40	河北港口集团有限公司 Hebei Port Group Co., Ltd
16	鹏鼎控股(深圳)股份有限公司 Abary Houlding (Shenzhen) Co.,Ltd	41	上海德龙钢铁集团有限公司 Shanghai Delong Steel Group Co., Ltd.
17	中国国家铁路集团有限公司 China State Railway Group Co.,Ltd	42	河北燕山钢铁集团有限公司 Hebei Yanshan Iron and Steel Group Co., Ltd.
18	青海丽豪半导体材料有限公司 Qinghai Lihao Semiconductor Materials Co., Ltd	43	百威投资(中国)有限公司 Anheuser-Busch InBev Investment (China) Co., Ltd.
19	河北文丰实业集团有限公司 Hebei Wenfeng Industrial Group Co., Ltd	44	唐山市春兴特种钢有限公司 Tangshan Chunxing Special Steel Co., Ltd.
20	立讯精密工业股份有限公司 Luxshare Precision Industry Co., Ltd	45	青岛啤酒股份有限公司 Tsingtao Brewery Company Limited
21	腾讯控股有限公司 Tencent Holdings Limited	46	江西铜业集团有限公司 Jiangxi Copper Corporation Limited
22	京津冀润泽(廊坊)数字信息有限公司 Jingjinji Runze (Langfang) Digital Information Co., Ltd.	47	巴斯夫(中国)有限公司 BASF (China) Co., Ltd.
23	河北安丰钢铁集团有限公司 Hebei Anfeng Iron & Steel Co., Ltd	48	中信泰富特钢投资有限公司 Citic Pacific Special Steel Group Co.,Ltd.
24	晶科能源股份有限公司 Jinko Solar Co., Ltd	49	江西赣锋锂业集团股份有限公司 Ganfeng Lithium Group Co., Ltd.
25	比亚迪集团 BYD Company Limited	50	广西钢铁集团有限公司 Guangxi Iron and Steel Group Co., Ltd.

序号	企业名称	序号	企业名称
51	国家石油天然气管网集团有限公司 National Petroleum and Natural Gas Pipeline Network Group Co., Ltd.	76	万华化学集团股份有限公司 Wanhua Chemical Group Co., Ltd.
52	青海省国有资产投资管理有限公司 Qinghai State-owned Assets Investment and Management Co., Ltd.	77	中国南方电网有限责任公司 China Southern Power Grid Co., Ltd.
53	北京汽车集团有限公司 Beijing Automotive Group Co., Ltd.	78	广西来宾广投银海铝业有限责任公司 Guangxi Laibin Guangtou Yinhai Aluminum Industry Co., Ltd.
54	承德京城矿业集团有限公司 Chengde Jingcheng Mining Group Co., Ltd.	79	海南钧达新能源科技股份有限公司 Hainan Drinda New Energy Technology Co., Ltd.
55	北京金隅集团股份有限公司 BBMG Corporation	80	诺力昂化学品(宁波)有限公司 Nouryon Chemicals (Ningbo) Co., Ltd.
56	杭州市地铁集团有限责任公司 Hangzhou Metro Group Co., Ltd.	81	湖北森泰冶金有限责任公司 Hubei Sentai Metallurgy Co., Ltd.
57	中国兵器工业集团有限公司 NORINCO	82	爱森(中国)絮凝剂有限公司 SNF (China) Flocculant Co., Ltd.
58	营口忠旺铝材料有限公司 Yingkou Zhongwang Aluminum Materials Co., Ltd.	83	新城控股集团股份有限公司 Seazen Group Limited
59	蓝思科技股份有限公司 Lens Technology Co., Ltd.	84	上海华谊控股集团有限公司 Shanghai Huayi Holding Group Co., Ltd.
60	滦平县伟源矿业有限责任公司 Luanping County Weiyuan Mining Co., Ltd.	85	河北承大环保科技有限公司 Hebei Chengda Environmental Protection Technology Co., Ltd.
61	米亚精密金属科技(东莞)有限公司 Mega Precision Technology (Dongguan) Limited	86	唐山首唐宝生功能材料有限公司 Tangshan Shoutangbaosheng Functional Materials Co., Ltd.
62	青海华晟铁合金冶炼有限责任公司 Qinghai Huasheng Iron and Steel Alloy Smelting Co., Ltd.	87	广西金桂浆纸业有限公司 Guangxi Jingui Pulp & Paper Co., Ltd.
63	福建省能源石化集团有限责任公司 Fujian Energy Petrochemical Group Co., Ltd.	88	长春化工(盘锦)有限公司 Chang Chun Petrochemical (Panjin) Co., Ltd.
64	河北天宝投资有限公司 Hebei Tianbao Investment Co., Ltd.	89	瑞浦兰钧能源股份有限公司 RuiPu LanJun Energy Co., Ltd.
65	安捷利美维电子(厦门)有限责任公司 AKM Meadville Electronics (Xiamen) Co., Ltd.	90	浙江荣盛控股集团有限公司 Zhejiang Rongsheng Holding Group Co., Ltd.
66	华为投资控股有限公司 Huawei Investment & Holding Co., Ltd.	91	格尔木藏格钾肥有限公司 Zangge Mining Company Limited
67	上海商盛投资管理咨询有限公司 Shanghai Shangsheng Investment Management Consulting Co., Ltd.	92	中达电子(江苏)有限公司 Delta Electronics (Jiangsu) Ltd.
68	万国数据服务有限公司 Global Data Solutions Limited	93	中国五矿集团有限公司 China Minmetals Corporation
69	民和天利硅业有限责任公司 Minhe Tianli Silicon Industry Co., Ltd.	94	唐山国鑫新能源有限公司 Tangshan Guoxin New Energy Co., Ltd.
70	华通精密线路板(惠州)股份有限公司 Compeq Technology (Huizhou) Co., Ltd.	95	青海盐湖元品化工有限责任公司 Qinghai Salt Lake Yuanpin Chemical Co., Ltd.
71	内蒙古伊利实业集团股份有限公司 Inner Mongolia Yili Industrial Group Co., Ltd.	96	青海盐湖镁业有限公司 Qinghai Salt Lake Magnesium Co., Ltd.
72	江西蓝星星火有机硅有限公司 Jiangxi Bluestar Xinghuo Silicones Co., Ltd.	97	万力轮胎股份有限公司 Wanli Corporation
73	秦皇岛宏兴钢铁有限公司 Qinhuangdao Hongxing Iron & Steel Co., Ltd.	98	贵州茅台酒股份有限公司 Kweichow Moutai Co., Ltd.
74	苹果公司 Apple Inc.	99	廊坊市讯云数据科技有限公司 Langfang Xunyun Data Technology Co., Ltd.
75	鞍钢集团有限公司 Ansteel Group Corporation	100	青海烨华硅业有限公司 Qinghai YeHua Silicon Industry Co., Ltd.

\*资料来源：中国电力企业联合会、北京电力交易中心、广州电力交易中心、国家可再生能源信息管理中心联合发布

\*Source: Jointly released by China Electricity Council, Beijing Electric Power Trading Center, Guangzhou Electric Power Trading Center, and National Renewable Energy Information Management Center

# 中国绿色电力（绿证）消费TOP100企业

## Top 100 Chinese Green Power (Green Certificate) Consumption Enterprises



排名前30的企业大多是大型国企或行业领导者，例如国家电力投资集团、国家能源投资集团等。这些榜单企业绿电消费较高主要原因有：企业规模大：大型能源、制造、互联网和服务企业用电需求旺盛，资金实力雄厚，能承受绿电较高采购成本；企业注重社会责任：为实现碳中和和满足ESG目标，这些企业积极调整能源结构，通过增加绿电采购提升品牌形象和社会责任感；国内政策驱动，央企国企承担“双碳”目标责任，政府优先分配绿电指标；以及行业特色驱动等等。前十企业中，多数总部位于北京，反映出央企和能源企业在绿色转型中的主导作用；此外，阿里巴巴总部位于杭州，体现了互联网企业在推动绿色发展方面的积极探索。

The top 30 companies are mostly large state-owned enterprises or industry leaders, such as State Power Investment Group, State Energy Investment Group, etc. The main reasons for the high green power consumption of enterprises on these lists are: large scale of enterprises: large energy, manufacturing, Internet and service enterprises have strong demand for electricity, strong financial strength, and can withstand the high procurement costs of green power; Enterprises focus on social responsibility: In order to achieve carbon neutrality and meet ESG goals, these enterprises actively adjust their energy structure and enhance their brand image and social responsibility by increasing green power procurement; Driven by domestic policies, central and state-owned enterprises bear the responsibility of the "dual carbon" target, and the government prioritizes the allocation of green electricity quotas; And driven by industry characteristics, etc. Among the top ten enterprises, most of them are headquartered in Beijing, reflecting the leading role of central enterprises and energy companies in green transformation; In addition, Alibaba is headquartered in Hangzhou, which reflects the active exploration of Internet enterprises in promoting green development.

尽管绿色电力已经成为中国能源转型的核心方向，但在2023年发布的“中国绿色电力（绿证）消费TOP100企业”榜单中，没有重庆企业入选，这反映出重庆在绿色电力消费与产业链发展方面尚存在一定差距。结合现状分析，重庆在绿色电力领域面临的主要问题包括：

Although green power has become the core direction of China's energy transformation, no Chongqing enterprise was selected in the "Top 100 Enterprises in China's Green Power (Green Certificate) Consumption" list released in 2023, reflecting that Chongqing still has a certain gap in green power consumption and industrial chain development. Based on the current situation analysis, the main problems faced by Chongqing in the field of green electricity include:

- ▶ **企业参与度不足：**榜单中无重庆企业入选，说明重庆的企业在绿色电力消费及绿证认购方面的参与度较低。一方面可能是企业的绿色电力意识薄弱，另一方面可能与绿色电力成本较高、绿证激励政策不到位有关。

Low Enterprise Participation: The absence of Chongqing enterprises on the list indicates a lack of participation in green power consumption and green certificate (green energy credit) purchases. On one hand, this may result from weak awareness of green energy among enterprises; on the other hand, high costs of green power and insufficient incentive policies for green certificates could also be factors.

- ▶ **技术与创新能力不足：**相比国内先进地区，重庆在绿色电力相关技术研发、装备制造、新能源存储等领域的竞争力较弱，缺乏行业标杆企业引领。

Lack of Technical and Innovation Capabilities: Compared with more advanced regions in China, Chongqing shows weaker competitiveness in areas such as green power-related technological research and development, equipment manufacturing, and energy storage. There is also a lack of leading enterprises to spearhead industry development.

- ▶ **区位与自然资源限制：**重庆位于内陆地区，远离大型用电负荷中心（如东部沿海工业区），且太阳能和风能资源相对有限，这对绿色电力发展形成一定制约。

Geographical and Natural Resource Limitations: Located inland, Chongqing is far from major electricity demand centers (such as industrial zones in eastern coastal areas), and its solar and wind resources are relatively limited, posing constraints to green power development.



## 针对重庆绿色电力产业发展的建议

### Suggestions for the development of green power industry in Chongqing

为了推动重庆绿色电力产业的发展，重庆需从政策、技术、产业、市场等多方面入手，突破现有短板。In order to promote the development of Chongqing's green power industry, Chongqing needs to start from multiple aspects such as policies, technology, industry, and market, and break through the existing shortcomings.

#### 1. 提升企业绿色意识 Enhance the green awareness of enterprises

为解决企业参与度低的问题，重庆需开展绿色电力普及和宣传活动，提升企业绿色意识：

To address the issue of low corporate participation, Chongqing needs to carry out green electricity promotion and publicity activities to enhance corporate green awareness:

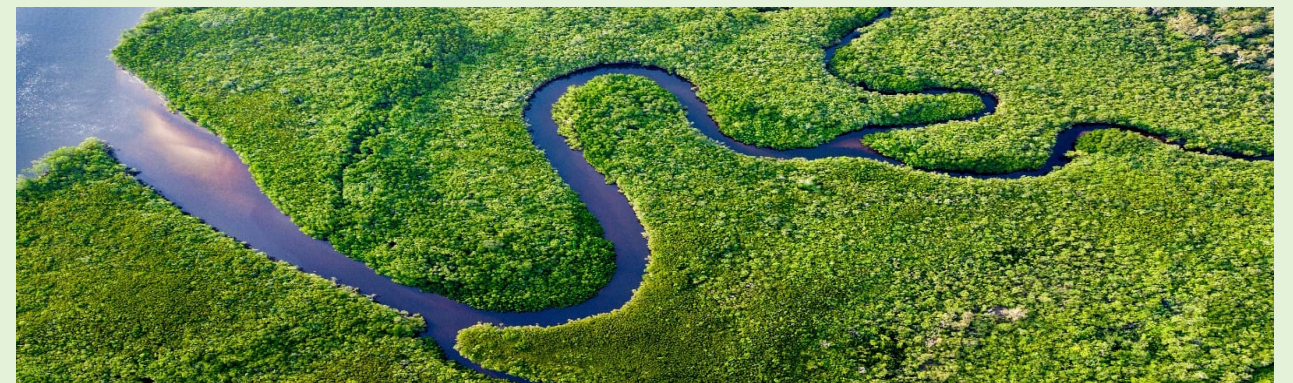
- ▶ **建立企业绿色电力消费评价体系，并定期发布重庆绿色电力消费企业榜单。**  
Establish an evaluation system for green electricity consumption in enterprises and regularly release a list of green electricity consumption enterprises in Chongqing.
- ▶ **举办绿色电力论坛、培训班等活动，提升企业对绿色电力的认知和使用意愿。**  
Organize green power forums, training courses, and other activities to enhance enterprises' awareness and willingness to use green power.
- ▶ **鼓励企业在ESG（环境、社会和治理）报告中披露绿色电力消费数据。**  
Encourage companies to disclose green electricity consumption data in their ESG (Environmental, Social, and Governance) reports.

#### 2. 加强区域协同发展 Strengthen regional coordinated development

重庆可与四川等周边地区加强能源合作，共建绿色电力区域协作机制：

Chongqing can strengthen energy cooperation with surrounding areas such as Sichuan and jointly establish a regional cooperation mechanism for green power:

- ▶ **与四川联动开发水电资源，构建跨区域电力输配体系。**  
Collaborate with Sichuan to develop hydropower resources and establish a cross regional power transmission and distribution system.
- ▶ **与贵州等省份合作，优化区域风电、光伏项目布局，发挥协同效应。**  
Cooperate with provinces such as Guizhou to optimize the layout of regional wind and photovoltaic projects and leverage synergies.
- ▶ **借助成渝双城经济圈建设契机，共建绿色电力产业高地。**  
Taking advantage of the construction of the Chengdu Chongqing economic circle, we will jointly build a highland for the green power industry.



# 国内地区总体政策对比

## Comparison of Overall Policies in Domestic Regions

综合发展情况、地理位置等因素，我们选取以下代表性地区，总结相关政策进行对比。各地政府结合资源禀赋和产业特点，均制定差异化的绿色电力政策。北京、上海聚焦市场化交易，鼓励企业购买绿电并提供政策激励；广东推动可再生能源消纳责任制，促进市场交易；四川、云南、贵州依托水电优势，加强跨区域输送，并探索“水风光储”协同发展；重庆则侧重绿色电力交易和基础设施建设。整体而言，各地通过政策引导和市场机制，共同推动绿色电力高质量发展，助力低碳转型。

Taking into account factors such as comprehensive development and geographical location, we have selected the following representative regions to summarize and compare policies. Local governments formulate differentiated green power policies based on resource endowments and industrial characteristics. Beijing and Shanghai focus on market-oriented transactions, encourage enterprises to purchase green electricity, and provide policy incentives; Guangdong promotes the responsibility system for renewable energy consumption and facilitates market transactions; Sichuan, Yunnan, and Guizhou rely on their hydropower advantages to strengthen cross regional transportation and explore the coordinated development of "water, wind, and solar energy storage"; Chongqing focuses on green electricity trading and infrastructure construction. Overall, various regions have jointly promoted the high-quality development of green electricity and assisted in low-carbon transformation through policy guidance and market mechanisms.

### 北京 (Beijing)

北京市积极推进绿色电力交易，发布了《北京市2025年电力市场化交易实施方案》，明确了绿色电力交易的目标和路径。该方案强调通过市场化手段促进绿色电力消费，鼓励企业参与绿色电力交易，并提出了相应的激励措施。此外，北京市还加强了绿色电力证书（绿证）的推广应用，推动可再生能源的消费和发展。

Beijing is actively promoting green power trading, having issued the "2025 Beijing Power Marketization Trading Implementation Plan," which clarifies the goals and pathways of green power trading. The plan emphasizes using market mechanisms to drive green power consumption, encourages enterprises to participate in trading, and introduces incentive measures. Additionally, Beijing has strengthened the promotion of green power certificates (GECs) to enhance renewable energy consumption and development.

**政策特点：**市场化交易与政策激励并重，强调绿色电力消费的市场引导作用。

**Feature:** Combines market-oriented trading with policy incentives, emphasizing market-driven green power consumption.

### 上海 (Shanghai)

上海市致力于构建绿色低碳的能源体系，积极开展绿色电力交易试点。上海电力交易中心组织了多次绿色电力交易，吸引了众多企业参与。同时，上海市政府出台了相关政策，鼓励企业购买绿色电力，并对购买绿证的企业给予一定的政策支持，推动全市绿色电力消费比例的提升。

Shanghai is committed to building a green and low-carbon energy system and has actively conducted green power trading pilots. The Shanghai Power Exchange has organized multiple green power trading events, attracting numerous enterprises to participate. Moreover, the Shanghai government has introduced policies to encourage enterprises to purchase green power and provides certain support for purchasing GECs, increasing the city's overall green power consumption.

**政策特点：**率先试点绿色电力交易机制，重点通过交易中心推动绿色电力消费。

**Feature:** Pioneers green power trading mechanisms, focusing on promoting green power consumption through trading platforms.

### 广东 (Guangdong)

广东省作为中国制造业中心，对绿色电力需求旺盛，政府积极推动可再生能源消纳和市场化交易。广东电力交易中心建立了绿色电力交易平台，促进企业自愿购买绿电。近年来，广东还试点“可再生能源消纳责任权重”制度，要求企业和电网公司提高绿电采购比例，并探索绿电认证机制，以提升清洁能源利用率。

As the manufacturing center of China, Guangdong Province has a strong demand for green electricity, and the government actively promotes the consumption and market-oriented trading of renewable energy. The Guangdong Electric Power Trading Center has established a green electricity trading platform to promote voluntary purchase of green electricity by enterprises. In recent years, Guangdong has also piloted the "Renewable Energy Consumption Responsibility Weight" system, requiring enterprises and power grid companies to increase the proportion of green power procurement and explore green power certification mechanisms to improve the utilization rate of clean energy.

**政策特点：**依托市场交易机制，结合制造业需求，推动可再生能源消纳责任制度。

**Feature:** Based on the market trading mechanism and combined with the demand of the manufacturing industry, promote the responsibility system for the consumption of renewable energy.

### 重庆 (Chongqing)

重庆市积极响应国家“双碳”目标，推动绿色电力发展。市发改委发布《关于推进绿色电力交易的实施意见》，明确交易目标与实施路径。政策鼓励企业通过市场化机制购买绿色电力，提高可再生能源消费比例，并推进绿电证书交易。市政府加强风电、光伏等基础设施建设，优化电网调度，提升绿电供应能力，确保全市绿色电力稳步增长。

Chongqing actively responds to the national "dual carbon" target and promotes the development of green electricity. The Municipal Development and Reform Commission has issued the "Implementation Opinions on Promoting Green Power Trading", clarifying the trading objectives and implementation path. The policy encourages enterprises to purchase green electricity through market-oriented mechanisms, increase the proportion of renewable energy consumption, and promote the trading of green electricity certificates. The municipal government will strengthen the construction of infrastructure such as wind power and photovoltaics, optimize power grid scheduling, enhance green power supply capacity, and ensure steady growth of green power throughout the city.

**政策特点：**结合西部资源禀赋，聚焦基础设施建设和企业绿色电力交易推广。

**Feature:** Leverages western resource advantages, focusing on infrastructure development and promoting enterprise participation in green power trading.

### 四川 (Sichuan)

四川省水电资源丰富，是中国最大的水电生产基地之一。四川省政府制定了《四川省可再生能源电力消纳行动方案》，加快水电外送通道建设，推动“西电东送”战略。此外，四川大力发展“水风光储”综合能源项目，提升水电在低碳经济体系中的作用，并积极探索“绿电绿证”交易，推动绿色电力市场化。

Sichuan Province is rich in hydropower resources and is one of the largest hydropower production bases in China. The Sichuan Provincial Government has formulated the "Sichuan Province Hydropower Consumption Action Plan" to accelerate the construction of hydropower transmission channels and promote the "West East Power Transmission" strategy. In addition, Sichuan is vigorously developing "hydro, wind, and solar energy storage" comprehensive energy projects, enhancing the role of hydropower in the low-carbon economic system, and actively exploring the trading of "green electricity and green certificates" to promote the marketization of green electricity.

**政策特点：**以水电为核心，推动外送与本地消纳并举，并探索“水风光储”协同发展。

**Feature:** Taking hydropower as the core, promoting the simultaneous development of external transmission and local consumption, and exploring the coordinated development of "water, wind, solar and storage".

### 贵州 (Guizhou)

贵州省水电和风电资源丰富，政府推动可再生能源高比例发展，并建立区域性绿色电力交易平台。贵州省出台了《贵州省能源发展“十四五”规划》，明确提出提高绿色电力消纳比例，支持新能源项目建设，并优化电网调度机制。此外，贵州省正加快建设水电与储能融合项目，以提高可再生能源的稳定性。

Guizhou Province has abundant hydropower and wind power resources, and the government is promoting the high proportion of renewable energy development and establishing a regional green power trading platform. Guizhou Province has issued the "14th Five Year Plan for Energy Development in Guizhou Province", which clearly proposes to increase the proportion of green electricity consumption, support the construction of new energy projects, and optimize the power grid dispatch mechanism. In addition, Guizhou Province is accelerating the construction of integrated hydropower and energy storage projects to improve the stability of renewable energy.

**政策特点：**推动区域绿电交易，优化调度机制，发展水电与储能一体化。

**Feature:** Promote regional green electricity trading, optimize scheduling mechanisms, and develop the integration of hydropower and energy storage.

### 云南 (Yunnan)

云南省水电资源丰富，积极推进绿色电力消纳。云南省能源局响应了《关于做好可再生能源绿色电力证书全覆盖工作的通知》，要求全省可再生能源发电企业参与绿证核发和交易。同时，云南省加强绿色电力外送通道建设，推动省内绿电输送至周边省份，促进区域绿色电力的协同发展。

Yunnan Province has abundant hydropower resources and actively promotes the consumption of green electricity. The Yunnan Provincial Energy Bureau has issued a notice on achieving full coverage of renewable energy green power certificates, requiring renewable energy power generation enterprises in the province to participate in the issuance and trading of green certificates. At the same time, Yunnan Province is strengthening the construction of green power transmission channels, promoting the transmission of green power from the province to surrounding provinces, and promoting the coordinated development of regional green power.

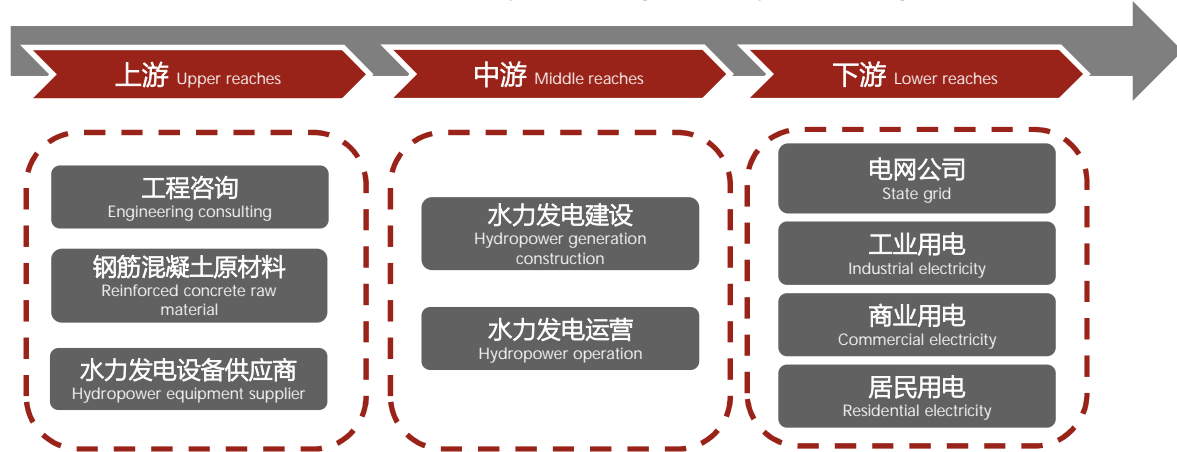
**政策特点：**以水电为核心，注重区域绿色电力协同与外送发展。

**Feature:** Focusing on hydropower as the core, emphasizing the coordinated development of regional green power and external transmission.

# 水力发电

## Hydropower generation

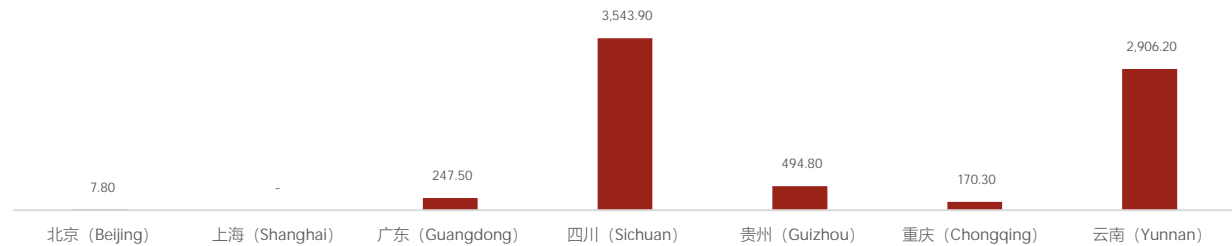
### 水力发电全产业链图 The complete industry chain diagram of hydropower generation



### 国内地区相关数据对比\* Comparison of Domestic Regions\*

根据现行公开数据，我们整理了国内部分地区2024年1-11月水力发电量（单位：亿千瓦时）的水力量数据，直观地对比各城市目前水力发电的现状。

Based on current public data, we have compiled water power data for hydroelectric power generation (in billions of kilowatt hours) in some regions of China from January to November 2024, and visually compared the current status of hydroelectric power generation in various cities.



\*数据来源：国家统计局  
\*Data source: National Bureau of Statistics

从水力发电量数据来看，四川、贵州、云南占据明显优势，三省均拥有丰富的水资源，是中国水力发电的核心地区。四川（3,543.90亿千瓦时）和云南（2,906.20亿千瓦时）的政策侧重于提升大规模水电站效率，并支持水电外送以满足其他地区需求。贵州（494.80亿千瓦时）注重中小型水电站的开发与生态保护相结合。

From the hydroelectric generation data, Sichuan, Guizhou, and Yunnan dominate, with abundant water resources forming the backbone of China's hydropower. Sichuan (354.39 billion kWh) and Yunnan (290.62 billion kWh) focus on enhancing large-scale hydropower efficiency and exporting electricity to other regions. Guizhou (49.48 billion kWh) emphasizes small and medium hydropower development with ecological protection.

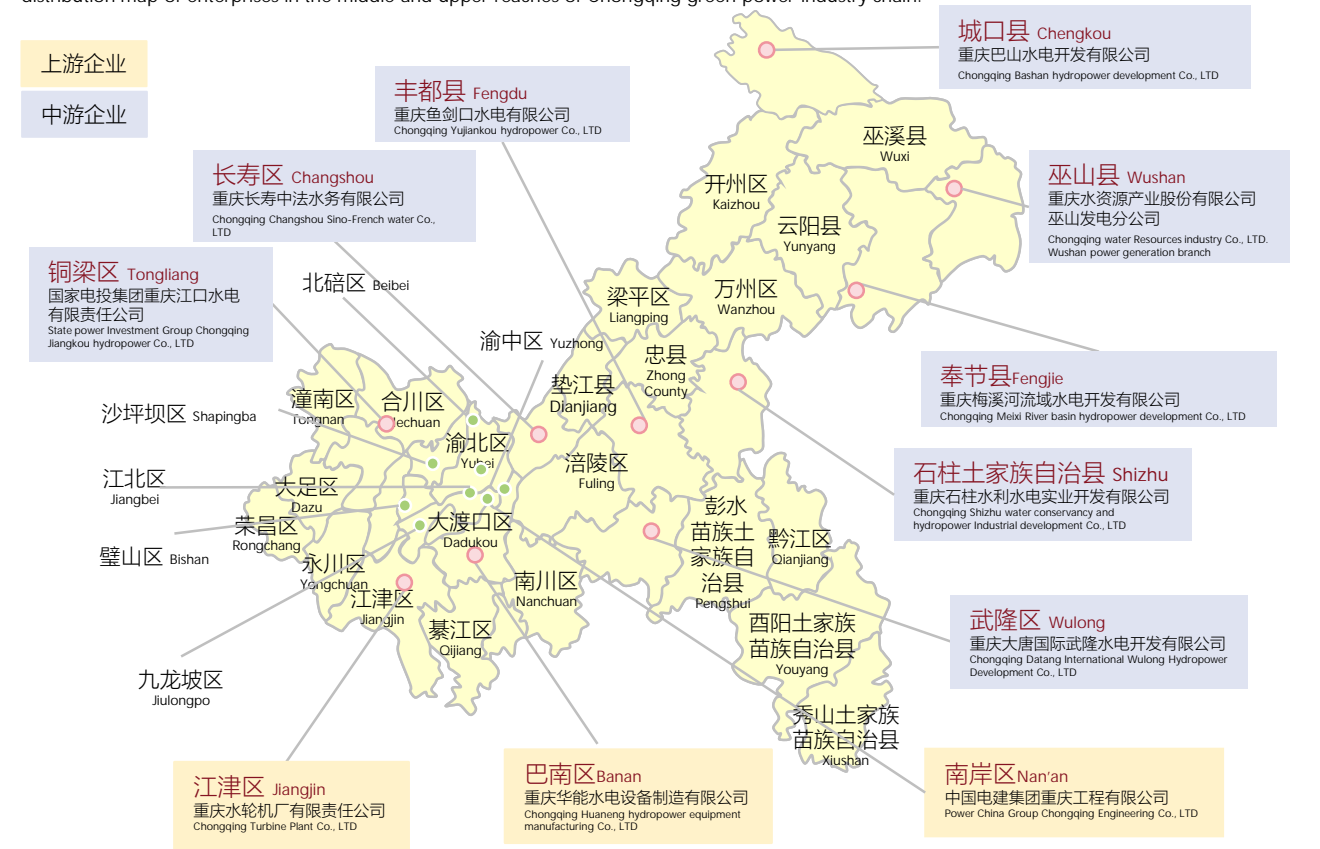
广东（247.50亿千瓦时）主要依赖清洁能源进口，水力发电政策较弱，更侧重于新能源综合发展。重庆（170.30亿千瓦时）虽然水资源丰富，但河流的流量和落差并不总是能够满足高效发电的需求；河流的流量和落差也会受到气候、季节等因素的影响；所以重庆结合地形特点发展小型和中型水电站，政策重点在于区域电力平衡。北京和上海由于地理条件限制，水力发电规模较小，更倾向于依赖外部电力供应，政策重心在于推动清洁能源消费和电力交易机制的建设。

Guangdong (24.75 billion kWh) relies on clean energy imports and emphasizes integrated new energy development. Although Chongqing (17.03 billion kWh) has abundant water resources, the flow and elevation of its rivers do not always meet the demand for efficient power generation; The flow rate and drop of rivers are also influenced by factors such as climate and season; So Chongqing develops small and medium-sized hydropower stations based on its terrain characteristics, with a policy focus on regional power balance.

### 上中游企业分布图 Upper and middle reaches enterprise distribution map

针对重庆市水力发电产业链，我们共分析了38家代表性企业，并选取了其中11家企业整理制作了水力发电产业链的上中游企业分布图。

Aiming at Chongqing hydropower industry chain, we analyzed a total of 36 representative enterprises, of which 11 were selected to sort out the distribution map of enterprises in the middle and upper reaches of Chongqing green power industry chain.



### 企业声音

#### Enterprise voice

重庆企业认为，水力发电对区域清洁能源供应至关重要，但现有资源开发接近饱和，亟需通过智能化改造和技术升级提升效率。例如，重庆能投等企业通过建设“智慧电厂”，在优化电力调度和设备管理方面取得成效。此外，加快特高压输电通道建设被视为解决能源输入问题的关键。

Chongqing enterprises view hydropower as vital for regional clean energy supply, but existing resources are nearing saturation. They emphasize the need for efficiency improvements through smart upgrades and technological innovation. For example, companies like Chongqing Energy Investment have achieved success in optimizing power dispatch and equipment management via "smart plants." Accelerating ultra-high-voltage transmission projects is seen as key to addressing energy input challenges.

### 安永建议

#### EY Recommendation

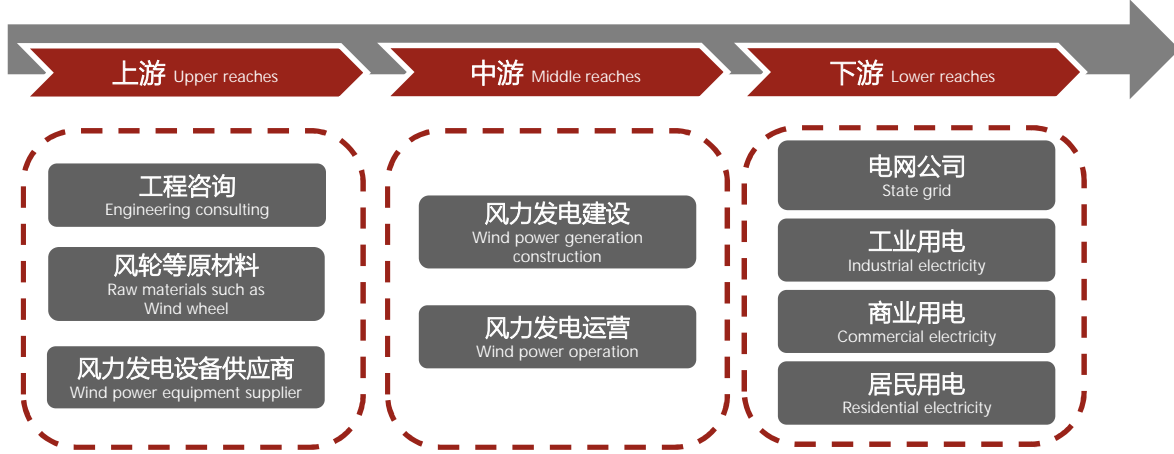
为应对重庆水力发电资源接近饱和的现状，安永建议采取以下措施：首先，推动现有中小型水电站的智能化升级，采用大数据和物联网技术优化电力调度与设备管理；其次，加快推进区域内特高压输电通道建设，提升电力外送能力，促进区域电力资源共享；此外，鼓励企业探索“水电+”模式，例如结合光伏、风电或储能技术，提高能源利用效率；最后，推动绿色金融支持，例如发行绿色债券，为智能化改造和基础设施建设提供资金支持；此外，安永建议加强与周边省份的电力合作，优化跨区域水电调度，同时探索水电与储能技术的结合以提升供电稳定性。

To address the nearing saturation of hydropower resources in Chongqing, EY recommends the following measures: First, modernize small and medium-sized hydropower plants with smart technologies like IoT and big data to optimize power dispatch and equipment management. Second, expedite the construction of ultra-high-voltage transmission channels to enhance power export capacity and regional energy sharing. Third, encourage enterprises to explore "hydropower+" models, integrating solar, wind, or energy storage for improved efficiency. Finally, promote green financing, such as issuing green bonds, to support smart upgrades and infrastructure development. Additionally, EY suggests strengthening power cooperation with neighboring provinces, optimizing cross-regional hydropower dispatch, and exploring integration with energy storage to enhance supply stability.

# 风力发电

## Wind power generation

### 风力发电全产业链图 The complete industry chain diagram of Wind power generation



### 国内地区相关数据对比\* Comparison of Domestic Regions\*

根据现行公开数据，我们整理了国内部分地区的风力发电新增项目数量、风力发电量、绿证历史期间累计成交量及挂牌量数据，直观地对比各城市目前风力发电的现状。

We have collected data on the number of new wind power projects, wind power generation, cumulative trading volume and listed volume during the green certificate history in some parts of China, which can directly reflect the current status of wind power in Chongqing.

地区 district	绿证历史期间累计成交量 (个) Green card history during the cumulative volume	绿证历史期间累计挂牌量 (个) Total number of listings during the history of green certificate	2024年风力发电量 (亿千瓦时) Wind power generation by 2024	2024年5-11月新增风力发电项目统计 (个) Statistics of new wind power generation projects from 2024.05-11
广东	2,746,958	14,125,098	339.10	21
上海	1,282,184	9,503,823	22.70	6
北京	1,109,288	16,817,332	1.20	0
重庆	74,392	979,758	42.50	7
贵州	24,382	1,186,193	120.20	4
四川	20,046	4,440,082	170.50	10
云南	4,963	1,928,481	337.5	15

\*数据来源: 国家统计局、国家能源局、中国绿色电力证书交易平台

\* Data sources: National Bureau of Statistics, National Energy Administration, China Green Power Certificate Trading Platform

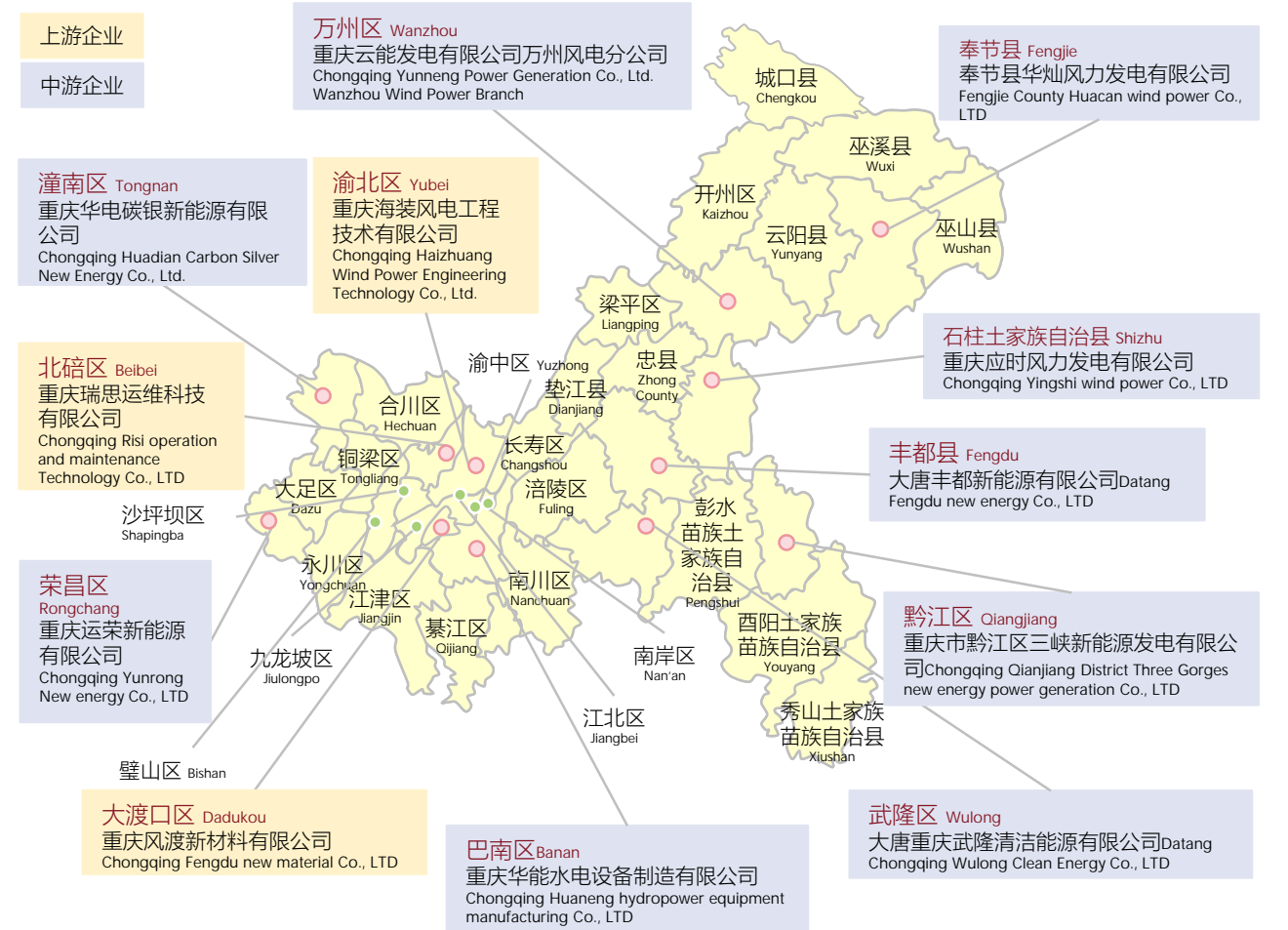
重庆上述数据均居于7个地区的中等水平。得益丰富的海上风能资源，广东和上海建设了丰富的海上风电场，在风里发电方面数据整体排名靠前。重庆2022年颁布了《重庆市能源发展“十四五”规划（2021—2025年）》，重庆2024年风力发电进程持续推进，同时，有关部门开展了风电场技改扩能“退旧换新”，推动一批风电项目于2024年4月30日前核准（备案）、9月30日前开工，确保风电项目于2025年12月31日前建成投产。

The above data of Chongqing are in the middle level of the 7 regions. Benefiting from abundant offshore wind energy resources, Guangdong and Shanghai have built a wealth of offshore wind farms, ranking high in the overall wind power generation data. In 2022, Chongqing promulgated the "14th Five-Year Plan for Chongqing Energy Development (2021-2025)", and the wind power generation process in Chongqing 2024 continued to advance, at the same time, relevant departments carried out the wind farm technical transformation and expansion "old and new", and promoted a number of wind power projects to be approved (filed) before April 30, 2024, and started before September 30, 2024. Ensure that the wind power project is completed and put into operation before December 31, 2025.

### 上中游企业分布图 Upper and middle reaches enterprise distribution map

针对重庆市风力发电产业链，我们共分析了32家代表性企业，并选取了其中12家企业整理制作了水力发电产业链的上中游企业分布图。

Aiming at Chongqing Wind power generation industry chain, we analyzed a total of 32 representative enterprises, of which 12 were selected to sort out the distribution map of enterprises in the middle and upper reaches of Chongqing green power industry chain.



### 安永建议

#### EY Recommendation

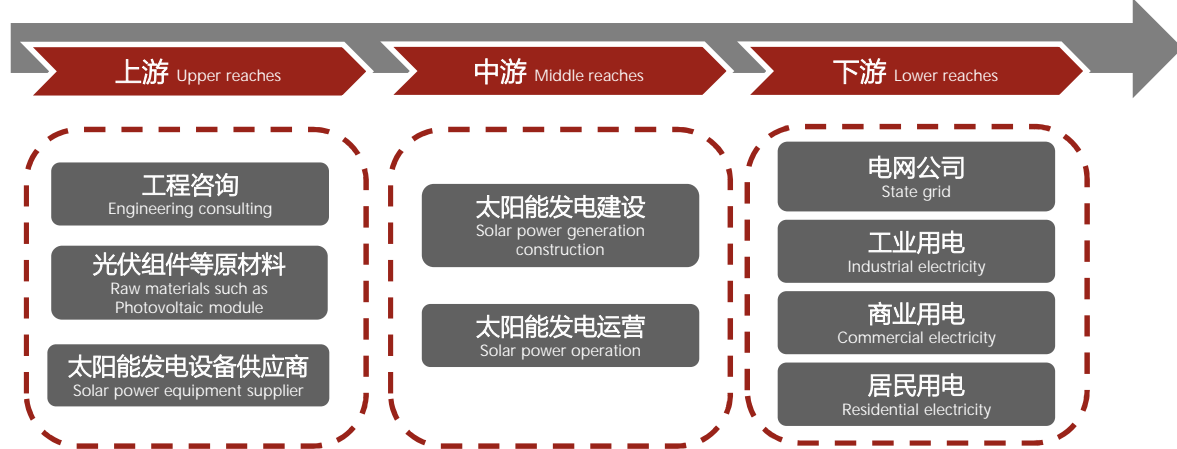
重庆风能资源相对较弱，主要集中在渝东北、渝东南的高海拔山区，可以借鉴贵州低风速风电场建设经验，鼓励采用先进技术建设低风速大功率装机风电场；重庆可利用地形复杂、人口密集的特点，发展分散式风电项目；建议进一步扶持本地风电产业链，推动高校、研究机构与企业合作；重庆部分风电场已运行多年，设备老化，可借鉴北京的经验，对老旧风电机组进行“上大压小”改造，提升发电能力，同时利用已投产的煤电、水电、抽水蓄能电站与风电资源进行互补性开发。

Chongqing's wind energy is limited, mainly in high-altitude areas of the northeast and southeast. It should use advanced technologies to build high-capacity wind farms, as done in Guizhou. Decentralized wind projects can fit its complex terrain and dense population. Local enterprises are already involved in wind power development, and further support for the local industry chain and collaboration among universities and businesses is needed. Some wind farms are outdated, so upgrading them, as done in Beijing, can improve efficiency. Integrating coal, hydro, pumped storage, and wind power can also boost complementary development.

# 太阳能发电

## Solar power generation

### 太阳能发电全产业链图 The complete industry chain diagram of Solar power generation



### 国内地区相关数据对比\* Comparison of Domestic Regions\*

根据现行公开数据，我们整理了国内部分地区的太阳能发电新增项目数量、风力发电量、绿证历史期间累计成交量及挂牌量数据，直观地对比各城市目前风力发电的现状。

We have collected data on the number of new wind power projects, Solar power generation, cumulative trading volume and listed volume during the green certificate history in some parts of China, which can directly reflect the current status of wind power in Chongqing.

地区 district	绿证历史期间累计成交量 (个) Green card history during the cumulative volume	绿证历史期间累计挂牌量 (个) Total number of listings during the history of green certificate	2024年太阳能发电量 (亿千瓦时) Solar power generation by 2024	2024年5-11月新增太阳能发电项目统计 (个) Statistics of new Solar power generation projects from 2024.05-11
广东	2,875,795	15,769,992	127.20	11958
上海	1,960,447	8,043,122	7.19	342
北京	701,007	8,636,930	1.72	349
重庆	57,652	1,478,725	6.46	244
贵州	55,738	833,649	142.22	105
四川	32,257	2,633,352	72.09	90
云南	29,523	8,308,397	250.50	1442

\*数据来源: 国家统计局、国家能源局、中国绿色电力证书交易平台

\* Data sources: National Bureau of Statistics, National Energy Administration, China Green Power Certificate Trading Platform

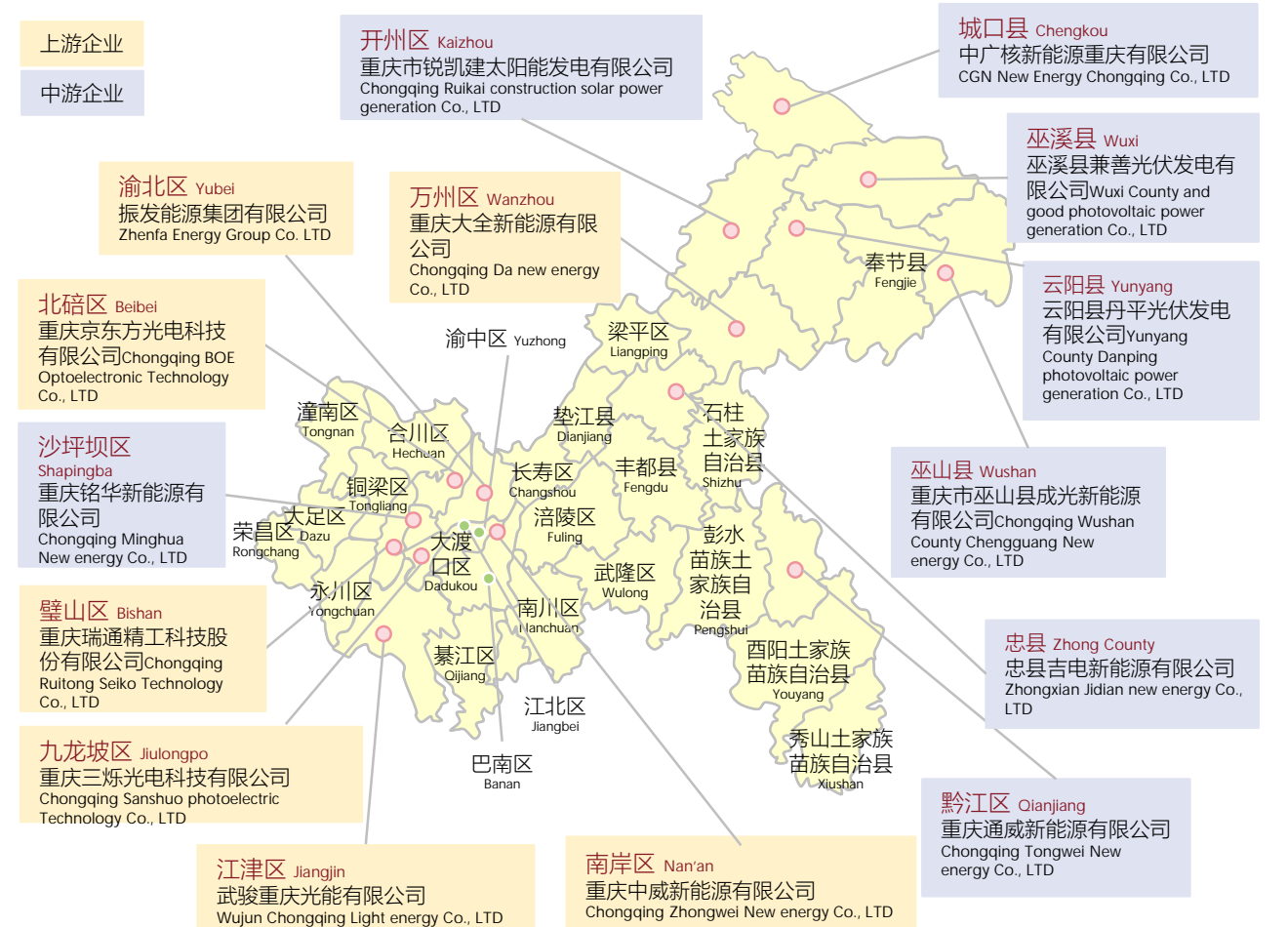
受光能资源限制，重庆上述数据均居于7个地区的中等水平。近年来，重庆各区县因地制宜，利用具备条件的园区厂房、大型商业体等建筑屋顶资源，落实电网接入条件，引导分布式光伏发电项目发展。上述其他地区也针对太阳能发电制定了诸多计划，北京、上海、四川制定了光电装机规模目标；广东力争新建厂房屋顶光伏覆盖率到2025年达到50%、2030年实现全覆盖；云南集中构建“组件+配套产业+光伏电站”的光伏全产业链。

Due to the limitation of light energy resources, the above data of Chongqing are in the middle level of the 7 regions. In recent years, various districts and counties in Chongqing have adapted to local conditions, using the roof resources of buildings such as park plants and large commercial buildings with the conditions to implement grid access conditions and guide the development of distributed photovoltaic power generation projects. The other regions above have also made many plans for solar power generation, Beijing, Shanghai and Sichuan have set targets for photovoltaic installed capacity; Guangdong strives to achieve 50% rooftop photovoltaic coverage in 2025 and full coverage in 2030; Yunnan concentrated on the construction of "module + supporting industry + photovoltaic power station" photovoltaic industry chain.

### 上中游企业分布图 Upper and middle reaches enterprise distribution map

针对重庆市太阳能发电产业链，我们共分析了35家代表性企业，并选取了其中15家企业整理制作了水力发电产业链的上中游企业分布图。

Aiming at Chongqing Solar power generation industry chain, we analyzed a total of 35 representative enterprises, of which 15 were selected to sort out the distribution map of enterprises in the middle and upper reaches of Chongqing green power industry chain.



### 安永建议

#### EY Recommendation

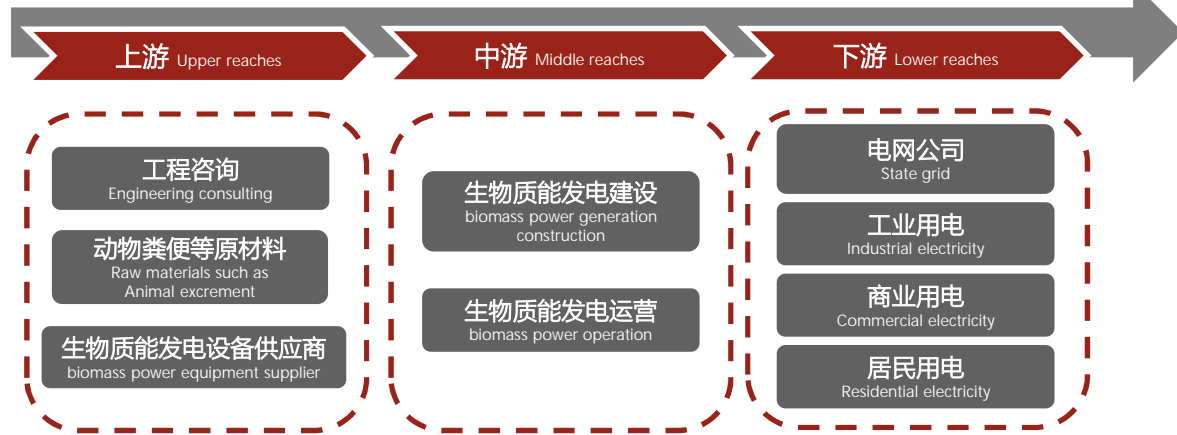
重庆属于太阳能资源一般地区，年平均日照小时数约1100小时，分布式光伏发电项目更适合重庆；重庆应充分利用公共区域、产业园区等建筑屋顶资源，发展分布式光伏发电项目；应加快用户侧光伏和储能项目的建设，推进“光储”一体化应用，通过储能技术，解决光伏发电的间歇性和不稳定性问题，提高电网消纳能力；优化光伏项目的核准（备案）和并网手续，推行“一站式”服务，简化并网流程；在具备日照条件的扶贫地区，编制分布式光伏扶贫实施方案，推动光伏项目与乡村振兴相结合；重庆可借鉴云南构建“组件+配套产业+光伏电站”的全产业链模式，推动本地光伏产业的协同发展。

Chongqing has average solar energy resources with about 1,100 annual sunshine hours, making distributed photovoltaic (PV) projects well-suited for the region. It should utilize building roofs in public areas and industrial parks for PV development. Accelerate user-side PV and energy storage projects to address the intermittency of solar power and boost grid absorption. Streamline approval and grid-connection procedures with "one-stop" services. In sunny poverty areas, develop PV poverty alleviation plans to support rural revitalization. Chongqing can learn from Yunnan to build the whole industrial chain model of "module + supporting industry + photovoltaic power station" to promote the coordinated development of the local photovoltaic industry

# 生物质能发电

## Biomass power generation

### 生物质能发电全产业链图 The complete industry chain diagram of Biomass power generation



### 国内地区相关数据对比\* Comparison of Domestic Regions\*

根据现行公开数据，我们整理了国内部分地区的生物质能发电新增项目数量、风力发电量、绿证历史期间累计成交量及挂牌量数据，直观地对比各城市目前风力发电的现状。

We have collected data on the number of new wind power projects, Biomass power generation, cumulative trading volume and listed volume during the green certificate history in some parts of China, which can directly reflect the current status of wind power in Chongqing.

地区 district	绿证历史期间累计成交量 (个) Green card history during the cumulative volume	绿证历史期间累计挂牌量 (个) Total number of listings during the history of green certificate	2024年5-11月新增生物质能发电项目统计 (个) Statistics of new Biomass power generation projects from 2024.05-11
北京	1,120	455,709	5
广东	339	266,934	44
贵州	236	64,201	2
四川	216	49,772	1
云南	112	57,365	0
重庆	103	63,524	4
上海	23	165,965	8

\*数据来源: 国家统计局、国家能源局、中国绿色电力证书交易平台

\* Data sources: National Bureau of Statistics, National Energy Administration, China Green Power Certificate Trading Platform

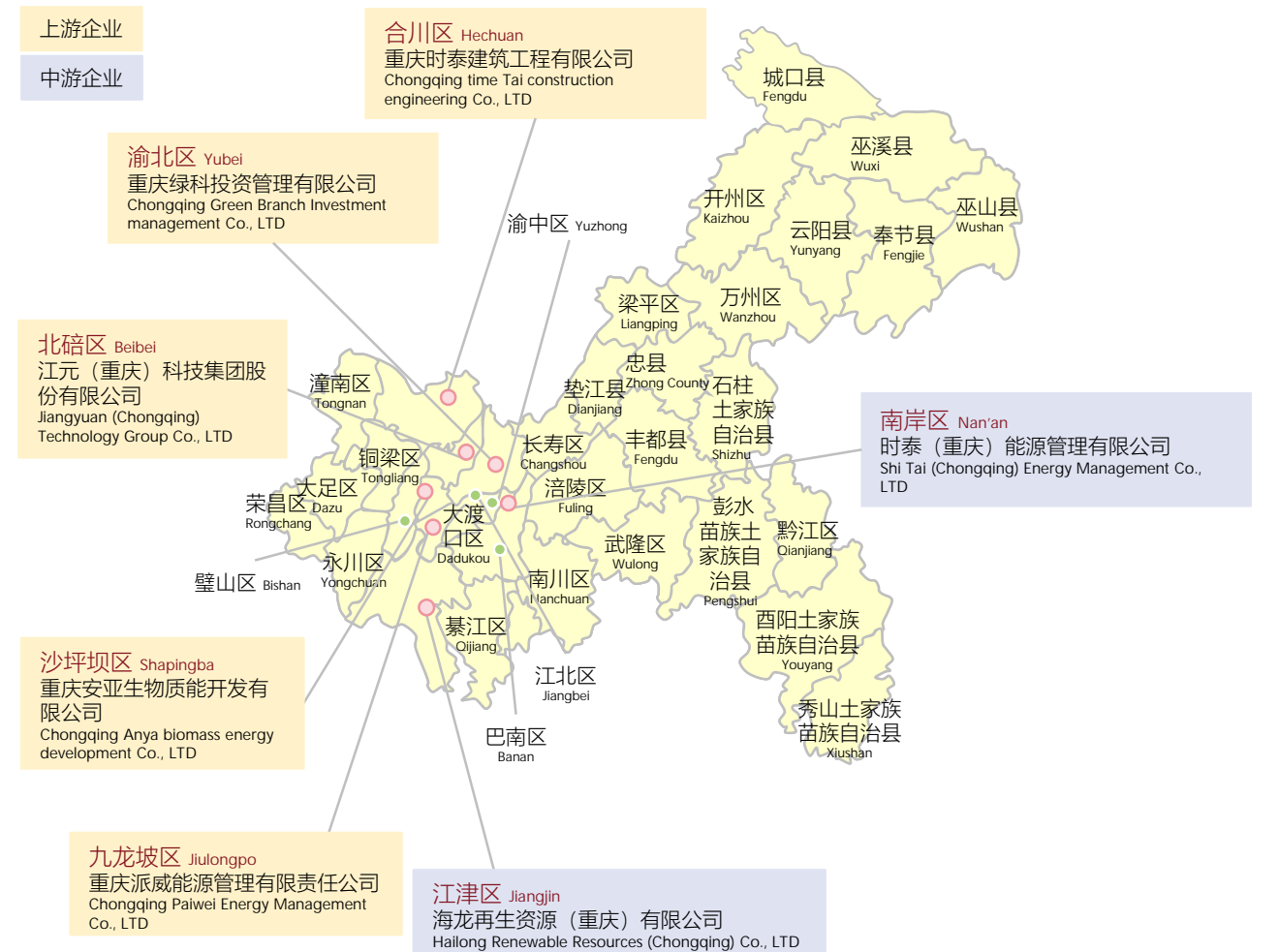
重庆上述数据居于7个地区的中下水平，与领先地区仍有一定差距。重庆就近利用农作物秸秆、畜禽粪便等生物质资源，发展农村可再生能源，积极稳妥推进散煤替代；稳步发展城镇生活垃圾焚烧发电，发展农林生物质发电和沼气发电。北京和广东在政策方面制定了详细的生物质能发电发展目标；此外，广东还推动“邻利型”服务设施建设；云南启动了一批生物质能热电联产等试点示范项目，重庆可以借鉴其他地区的经验。

The above data of Chongqing is in the middle and lower level of the 7 regions, and there is still a certain gap with the leading regions. Chongqing uses biomass resources such as crop straw and animal manure nearby, develops rural renewable energy, and actively and steadily promotes the replacement of loose coal. Steady development of urban solid waste incineration power generation, development of agricultural and forestry biomass power generation and biogas power generation. In terms of policy, Beijing and Guangdong have set detailed development targets for biomass power generation. In addition, Guangdong also promotes the construction of "neighborly" service facilities; Yunnan has launched a number of pilot demonstration projects such as biomass cogeneration, and Chongqing can learn from the experience of other regions.

### 上中游企业分布图 Upper and middle reaches enterprise distribution map

针对重庆市生物质能发电产业链，我们共分析了9家代表性企业，制作了水力发电产业链的上中游企业分布图。

Aiming at Chongqing Biomass power generation industry chain, we analyzed a total of 9 representative enterprises to sort out the distribution map of enterprises in the middle and upper reaches of Chongqing green power industry chain.



### 安永建议

#### EY Recommendation

重庆应充分利用农作物秸秆、畜禽粪便、林业剩余物等生物质资源，因地制宜发展农村可再生能源；同时，结合《重庆市生活垃圾焚烧发电中长期专项规划（2021—2035年）》，推进相关项目建设；重庆可借鉴广东经验，推动“邻利型”服务设施建设，减少公众抵触情绪，如在项目中提供就业机会和环境教育，提升项目的社会接受度；重庆应通过政策支持和技术创新，推动生物质能发电项目的实施，通过完善补贴政策，降低项目投资成本；鼓励科研机构与企业合作，研发高效、环保的生物质能利用技术。

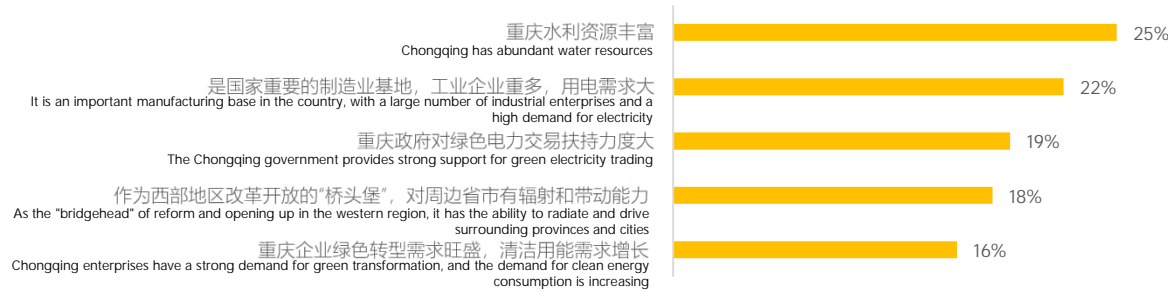
Chongqing should use local biomass resources like crop straw, livestock manure, and forestry residues to develop rural renewable energy. It should also advance projects based on the "Chongqing Municipal Solid Waste Incineration Power Generation Medium and Long-term Special Plan (2021-2035)." Learning from Guangdong, Chongqing can build "neighborliness" facilities to reduce public resistance by offering jobs and environmental education. Policy support and technological innovation should drive biomass power projects, with subsidies lowering costs and research institutions partnering with businesses to develop efficient and eco-friendly technologies.

# 问卷调查结果分析

## Analysis of Questionnaire Survey Results



### 贵企业认为重庆开展绿电交易的优势 Viewsight on the advantages of green power trading in Chongqing

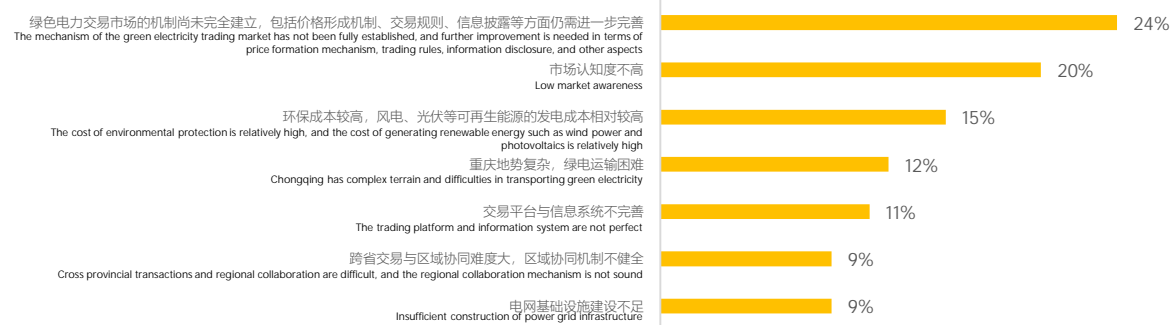


调查结果显示，25%的受访企业认为重庆水力资源丰富，具备明显的电力生产优势；22%的受访企业指出重庆是国家重要的制造业基地，工业集中、用电需求大；19%的受访企业认为重庆政府对绿色电力交易的支持力度较大。这些优势为绿色电力交易的推进提供了良好的基础，促进了该领域的快速发展。

The survey results show that 25% of the respondents believe that Chongqing is rich in hydropower resources and has obvious advantages in power production; 22% of the respondents point out that Chongqing is an important manufacturing base in the country, with a high concentration of industries and a high demand for electricity; and 19% of the respondents believe that the Chongqing government is more supportive of green power trading. These advantages provide a good foundation for the advancement of green power trading and promote the rapid development of the field.



### 贵企业认为重庆开展绿电交易的劣势 Viewsight on the disadvantages of green power trading in Chongqing

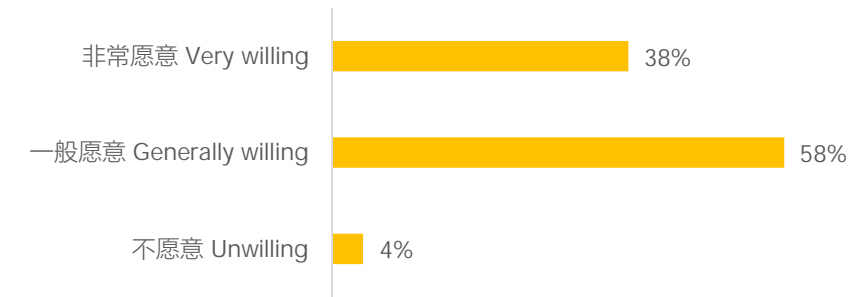


调查结果显示，24%的受访企业认为需要进一步完善绿色电力交易市场机制，包括制度建设和交易流程的规范化。20%的受访企业指出市场认知度不高，认为公众和企业对绿色电力交易的理解和参与度有待提高；15%的受访企业提到环境成本较高，可能影响市场的可持续发展。其他方面包括供需匹配困难、政策支持不足以及电网建设提速不足等，这些挑战和障碍为相关政策的制定和市场的发展提供了参考。

The survey results show that 24% of the surveyed companies believe that further improvement of the green power trading market mechanism is needed, including system construction and standardization of the trading process; 20% of the surveyed companies point out that market awareness is not high, and believe that the public's and companies' understanding of and participation in the green power trading needs to be improved; and 15% of the surveyed companies mention that the high environmental costs may affect the sustainable development of the market. Other aspects include difficulties in matching supply and demand, insufficient policy support, and insufficient acceleration of grid construction, etc. These challenges and obstacles inform the formulation of relevant policies and the development of the market.



### 贵公司是否有意愿参与绿色电力交易 The willing to participate in green power trading

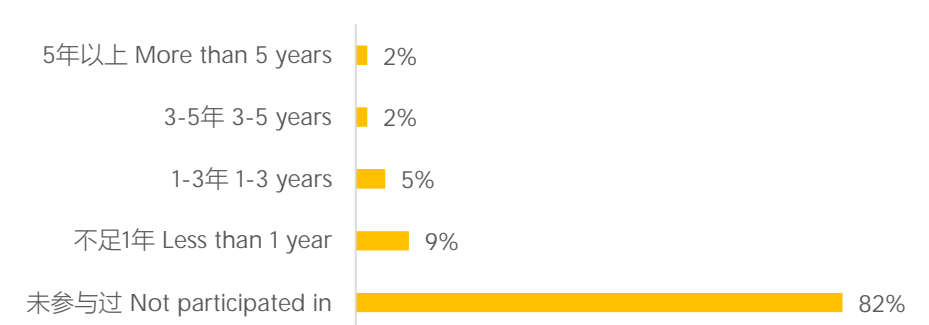


调查结果显示，38%的受访企业表示非常愿意参与，显示出对绿色电力交易的强烈支持；58%的受访企业表示一般愿意参与，表明他们对参与持开放态度；仅有4%的受访企业表示不愿意参与。整体来看，大多数受访企业对绿色电力交易持积极态度，这为推动绿色电力的发展奠定了良好的基础。

The survey results show that 38% of the respondents indicated that they were very willing to participate, showing strong support for green power trading; 58% of the respondents indicated that they were generally willing to participate, indicating that they were open to participation; and only 4% of the respondents indicated that they were not willing to participate. Overall, most of the respondents have a positive attitude towards green power trading, which lays a good foundation for promoting the development of green power.



### 贵公司参与绿色电力交易的时间长度 Length of time your company has participated in green power trading



82%的受访企业表示未参与过绿色电力交易，显示出较低的参与率；9%的受访企业参与时间不足1年，表明刚刚开始接触该领域；5%的受访企业参与了1-3年；而3-5年和5年以上的参与者各占2%。整体来看，大多数受访企业尚未参与绿色电力交易，这为未来的推广和发展提供了改进的空间。

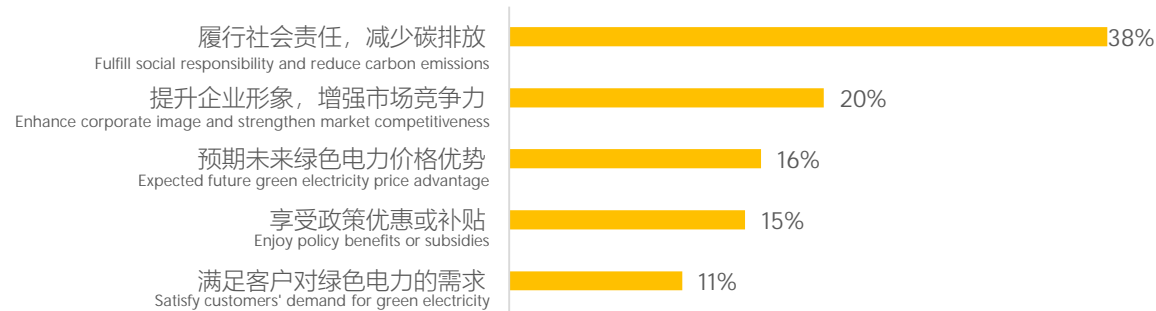
82% of the respondents indicated that they had not participated in green power trading, showing a low participation rate; 9% had been involved for less than one year, indicating that they had just started to engage in the field; 5% had been involved for 1-3 years; and 2% of the participants had been involved for 3-5 years and 2% for more than 5 years each. Overall, the majority of surveyed companies have not yet participated in green power trading, which provides room for improvement in future promotion and development.

# 问卷调查结果分析

## Analysis of Questionnaire Survey Results



### 贵公司参与绿色电力交易的主要动机是什么 The main motivations for your company to participate in green power trading

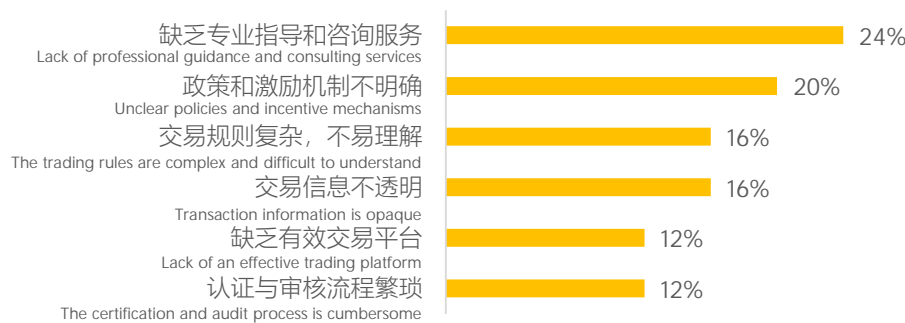


调查结果显示，根据这张统计图的数据，受访企业参与绿色电力交易的主要动机如下：38%的受访企业认为履行社会责任、减少排放是最主要的动机；20%的受访企业希望通过参与提高企业形象，增强市场竞争力；16%的受访企业预期未来绿色电力将具有价格优势。其他动机还包括享受政策优惠（15%）和满足客户对绿色电力的需求（11%）。整体来看，社会责任和市场竞争力是推动企业参与绿色电力交易的核心因素。

The results of the survey show that, according to the data in this statistical chart, the main motives of the respondents for participating in green power trading are as follows: 38% of the respondents believe that fulfilling their social responsibility and reducing emissions are the most important motives; 20% of the respondents hope to improve their corporate image and enhance their competitiveness in the market through their participation; and 16% of the respondents anticipate that they will have a pricing advantage for green power in the future. Other motivations include enjoying policy incentives (15%) and meeting customer demand for green power (11%). Overall, social responsibility and market competitiveness are the core factors driving companies to participate in green power trading.



### 您认为目前贵公司参与绿色电力交易面临的主要挑战是什么 The main challenges currently facing your company's participation in green power trading



调查结果显示，24%的受访企业指出缺乏专业指导和咨询服务是最大的挑战；20%的受访企业表示政策环境不够明确，影响了参与决策；16%的受访企业提到交易规则复杂、不易理解，造成参与困难。此外，16%的受访企业认为交易信息不透明，12%的受访企业提到缺乏有效交易平台，以及12%的受访企业关注认证与审核流程的复杂性。整体来看，缺乏专业支持和政策不明确是企业参与绿色电力交易中遇到的主要困难。

According to the survey results, 24% of the respondents pointed out the lack of professional guidance and consulting services as the biggest challenge; 20% of the respondents indicated that the policy environment was not sufficiently clear, which affected the decision to participate; and 16% of the respondents mentioned that the complexity of the trading rules was not easy to understand, which made participation difficult. In addition, 16% of respondents believe that trading information is not transparent, 12% mention the lack of effective trading platforms, and 12% are concerned about the complexity of the certification and auditing process. Overall, lack of professional support and unclear policies are the main difficulties encountered by enterprises in participating in green power trading.



### 贵公司将如何规划自身绿电交易方案 How your company will plan its own green power trading program



调查结果显示，22%的受访企业表示将进行全面梳理，精确了解企业碳排放量；17%的受访企业强调合理购买绿色电力和绿色证书的重要性；16%的受访企业计划对绿色电力交易进行行情及市场化分析。此外，15%的受访企业将定期对交易结果进行量化分析，15%的受访企业会对市场展现趋势进行分析，8%的受访企业则会制定交易风险控制计划，7%的受访企业关注实施高效的监测方式来优化内部管理。整体来看，精确的碳排放梳理和合理的绿色电力采购是企业规划交易方案的核心策略。

According to the survey results, 22% of the respondents indicated that they will conduct a comprehensive sorting to accurately understand their carbon emissions; 17% of the respondents emphasized the importance of rationally purchasing green power and green certificates; and 16% of the respondents plan to analyze the market situation and marketability of green power trading. In addition, 15% of respondents will conduct regular quantitative analysis of trading results, 15% will analyze market trends, 8% will develop trading risk control plans, and 7% are concerned with implementing efficient monitoring methods to optimize internal management. Overall, accurate carbon emissions sorting and rational green power procurement are the core strategies for enterprises to plan their trading programs.

### 企业意见及安永建议

#### Enterprise opinions and EY Recommendation

调查结果显示，重庆市企业对绿色电力发展的意见集中在加强宣传与政策透明度、降低工业用电成本、提供财政补贴、尽快上线绿色电力交易，以及希望建立有效的交易机制和政策咨询窗口，以支持绿色转型和提升市场参与度。总的来说，企业呼吁更多的政策支持和信息指导。

The survey results show that Chongqing enterprises focus on enhancing publicity and policy transparency, reducing industrial electricity costs, providing financial subsidies, and establishing an effective trading mechanism and policy consultation window for green power development. Overall, they call for more policy support and information guidance.

安永建议开展定期的培训和信息分享会，提升企业对绿色电力及相关政策的认知。同时，建议政府与企业建立更为直接的沟通渠道，定期收集反馈和需求，以迅速调整政策。此外，推动绿色电力交易的数字化，简化交易流程，以提高用户体验，吸引更多企业参与。还应设计合理的激励政策，包括财政补贴，促进企业积极参与绿色电力交易。最后，建立透明的评估体系，确保各类绿色电力项目的规范化和有效性，增强市场信心，以实现经济与环境的双赢。

EY proposes regular training to boost enterprises' knowledge of green power and policies. The government should establish direct communication channels to collect feedback for policy adjustments. It also recommends digitizing green power trading, simplifying processes to attract more participants, and designing incentive policies with subsidies. Lastly, a transparent assessment system should be set up to standardize green power projects and boost market confidence, achieving economic and environmental benefits.

# 小结

## Summary

随着全球对气候变化和环境保护意识的增强，绿色电力产业的重要性日益突显。其不仅涉及可再生能源的开发和利用，还与经济可持续发展、社会责任和科技创新等多个方面密切相关。绿色电力产业的发展具有重要的经济、社会、环境等多方面意义。它不仅能够为全球应对气候变化和环境污染提供解决方案，还能促进经济增长、技术创新和社会公平。未来，各国政府、企业和公众应共同努力，推动绿色电力产业的进一步发展，实现人类可持续发展的美好愿景。

With the global awareness of climate change and environmental protection increasing, the importance of green power industry is increasingly highlighted. It is not only related to the development and utilization of renewable energy, but also closely related to sustainable economic development, social responsibility and scientific and technological innovation. The development of green power industry has important economic, social and environmental significance. It can not only provide global solutions to climate change and environmental pollution, but also promote economic growth, technological innovation and social equity. In the future, governments, enterprises and the public should work together to promote the further development of green power industry and realize the beautiful vision of sustainable development of mankind.

近年来，中国在绿色电力发展方面取得了显著进展，积极推动可再生能源的开发与利用。中国已成为全球最大的太阳能和风电发电国，投资和建设了大量风电和光伏发电项目。同时，政府通过补贴、税收优惠等政策，鼓励企业和个人参与绿色电力的生产与消费。此外，中国还积极参与国际合作，推动全球能源转型，共同应对气候变化挑战。这些努力不仅促进了国内能源结构的转型，也为全球可持续发展做出了重要贡献。

In recent years, China has made remarkable progress in green power development and actively promoted the development and utilization of renewable energy. China has become the world's largest solar and wind power producer, investing in and building a large number of wind and photovoltaic power projects. At the same time, the government encourages enterprises and individuals to participate in the production and consumption of green power through subsidies, tax incentives and other policies. In addition, China has actively participated in international cooperation to promote global energy transformation and jointly address the challenges of climate change. These efforts not only contributed to the transformation of the domestic energy structure, but also made important contributions to global sustainable development.

与此同时，重庆市在绿色电力的发展方面也交出了优秀答卷，积极推动可再生能源的利用与发展。重庆市大力发展水电、风电和太阳能等可再生能源，风电和光伏发电也在快速增长。重庆市近年出台了一系列政策和规划，支持绿色电力的发展，制定《重庆市可再生能源发展规划（2021-2025年）》，为可再生能源发展指明方向，鼓励企业和个人投资绿色电力项目。随着绿色电力的推广，公众的环保意识不断增强，越来越多的企业和居民积极参与绿色电力的使用，推动了低碳生活方式的普及。

At the same time, Chongqing has also achieved a lot in the development of green power, actively promoting the use and development of renewable energy. Chongqing has made great efforts to develop renewable energy such as hydropower, wind power and solar energy, and wind power and photovoltaic power generation are also growing rapidly. In recent years, Chongqing has introduced a series of policies and plans to support the development of green power, formulated the Chongqing Renewable Energy Development Plan (2021-2025), pointed out the direction of renewable energy development, and encouraged enterprises and individuals to invest in green power projects. With the promotion of green power, the public's environmental awareness is increasing, more and more enterprises and residents actively participate in the use of green power, which promotes the popularization of low-carbon lifestyle.

我们对绿色电力产业进行了深入研究，结合重庆市绿色电力产业链情况以及政策发展进行分析。经调研发现，重庆市在水能、风能以及生物质能等方面具备丰富的自然资源，具备绿色电力产业发展的基础。重庆市绿色电力产业相关企业区域分布广泛，产业布局实现均衡发展。与此同时，重庆市绿色电力产业部分行业仍存在缺乏专业指导和咨询服务、政策和激励机制不明确、缺乏有效交易平台等问题。安永基于调研结果为重庆各类型绿色电力能源的发展提供建议，以期推动该产业实现更优发展。

We have conducted an in-depth study of the green power industry, combined with the Chongqing green power industry chain and policy development analysis. After investigation, it is found that Chongqing has rich natural resources in hydropower, wind energy and biomass energy, and has the foundation for the development of green power industry. Chongqing green power industry related enterprises have a wide regional distribution, and the industrial layout has achieved balanced development. At the same time, some industries of green power industry in Chongqing still have problems such as lack of professional guidance and consulting services, unclear policies and incentive mechanisms, and lack of effective trading platforms. Based on the research results, EY provides suggestions for the development of various types of green power energy in Chongqing, with a view to promoting the better development of the industry.



# 结束语

Ending



本报告通过对重庆市外商投资企业经营环境、发展状况的深入分析，以及对绿色电力产业的探讨，全面展现了重庆市在外资投资企业和绿色电力方面的发展状况。作为中国西部地区的重要经济中心，重庆市凭借其独特的区位优势、完善的产业基础、不断优化的营商环境以及强有力的政策支持，已成为外商投资的热土。

Through in-depth analysis of the operating environment and development status of foreign-invested enterprises in Chongqing and discussion of the green power industry, this report comprehensively demonstrates the development status of foreign-invested enterprises and green power in Chongqing. As an important economic center in western China, Chongqing has become a hot spot for foreign investment thanks to its unique location, perfect industrial foundation, continuously optimized business environment and strong policy support.

近年来，重庆市在外资引进规模、产业结构优化以及外资企业满意度等方面均取得了显著成效，为区域经济高质量发展提供了强劲动力。与此同时，在国家“双碳”战略的推动下，重庆市绿色电力产业快速发展，风电、光伏等清洁能源装机容量持续增长，能源结构不断优化，为外资企业提供了绿色转型的新机遇，也为区域经济可持续发展奠定了坚实基础。

In recent years, Chongqing has achieved remarkable results in the scale of foreign capital introduction, the optimization of industrial structure and the satisfaction of foreign enterprises, which has provided a strong impetus for the high-quality development of regional economy. At the same time, under the promotion of the national "double carbon" strategy, the green power industry in Chongqing has developed rapidly, the installed capacity of clean energy such as wind power and photovoltaic has continued to grow, and the energy structure has been continuously optimized, which provides new opportunities for green transformation for foreign enterprises and lays a solid foundation for the sustainable development of regional economy.

展望未来，重庆市应继续深化改革开放，进一步优化外商投资环境，提升服务效能，打造更加国际化、法治化、便利化的营商环境，吸引更多高质量外资项目落地。同时，应紧抓绿色电力产业发展机遇，加快能源结构转型，推动绿色技术创新，构建更加完善的绿色产业链，为外资企业提供更加低碳、可持续的发展空间。此外，重庆市还应加强区域协同发展，深化与成渝地区双城经济圈其他城市的合作，共同打造绿色低碳产业集群，提升区域整体竞争力。

Looking forward to the future, Chongqing should continue to deepen reform and opening up, further optimize the foreign investment environment, improve service efficiency, create a more international, legalized and convenient business environment, and attract more high-quality foreign investment projects. At the same time, we should seize the development opportunities of green power industry, accelerate the transformation of energy structure, promote green technology innovation, build a more perfect green industry chain, and provide more low-carbon and sustainable development space for foreign-funded enterprises. In addition, Chongqing should also strengthen regional coordinated development, deepen cooperation with other cities in the Chengdu-Chongqing Economic Circle, jointly build a green low-carbon industrial cluster, and enhance the overall competitiveness of the region.

相信在政策支持、产业升级和外资企业的共同努力下，重庆市将成为西部地区外商投资的高地和绿色发展的典范，为区域经济高质量发展贡献更大力量。未来，重庆市有望在绿色电力产业领域实现更大突破，成为全国乃至全球绿色能源技术创新的重要策源地，为全球可持续发展贡献“重庆智慧”和“重庆方案”。

With the joint efforts of support, industrial upgrading and foreign-funded enterprises, Chongqing will become a highland of foreign investment and a model of green development in the western region, contributing more to the high-quality development of regional economy. In the future, Chongqing is expected to achieve greater breakthroughs in the field of green power industry, become an important source of green energy technology innovation nationwide and even globally, and contribute "Chongqing Wisdom" and "Chongqing Plan" to global sustainable development.

