



中国电建  
POWERCHINA

上海电力设计院有限公司  
POWERCHINA Shanghai Electric Power  
Engineering Co., Ltd.

# 2021 社会责任报告 CORPORATE SOCIAL RESPONSIBILITY REPORT



中国电建  
POWERCHINA

上海电力设计院有限公司  
POWERCHINA Shanghai Electric Power  
Engineering Co., Ltd.



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# 前言

## Preface

### 报告概况

本报告为上海电力设计院有限公司（以下简称“公司”）第十次公开发布年度社会责任报告。

### 报告范围

组织范围：上海电力设计院有限公司所有部门

时间范围：2021年1月1日至2021年12月31日。

### 报告频次

一年1次，每年上半年发布上一年度社会责任实践状况。

### 报告编制依据

- 中国工业经济联合会《中国工业企业及工业协会社会责任指南实施手册》(GSRI-CHINA 2.0)
- 上海市精神文明建设委员会办公室《上海市文明单位社会责任报告指导手册》
- 上海市经济团体联合会《企业社会责任指南》(SEO-CSR1.0)
- 国际标准化组织 ISO26000《社会责任指南》

### 报告形式

本报告以纸质、电子文档形式发布。

### 报告反馈

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A large white offshore wind turbine dominates the left side of the frame, with its nacelle and hub visible. The background shows a vast blue ocean under a clear blue sky, with several other wind turbines visible in the distance. The overall scene is bright and clean, emphasizing renewable energy.

01

基础信息

BASIC INFORMATION

# 领导致辞

Message from the Chairman

## 砥砺廿载致万里 逐梦十年奏华章

2021年，是上海电力设计院有限公司企业改制20周年，也是加入中国电建10周年。在中国共产党百年华诞之际，上海电力设计院有限公司迈入“十四五”新发展阶段的开局之年，开启建设绿色能源与智慧城市领域一流的科技型工程咨询公司起步之旅。公司贯彻落实习近平总书记重要指示批示，持续推动企业向高质量发展，结合国家“双碳”系列政策、国企改革三年行动计划、中国电建“十四五”规划等，构建完整的“十四五”规划体系，以顶层设计引领企业发展基业长青。截至2021年底，公司党建引领、深化改革、业务布局、市场开拓、管理提升、科创革新取得跨域式发展，党的领导和党的建设取得新成果，深化改革取得新成效，生产经营再创历史新高。国家火炬计划重点高新技术企业、上海市高新技术企业、全国文明单位、上海市长质量奖、全国青年文明号……展开波澜壮阔的昔日画卷，历史透过一个个重要时刻，为上海院标注下鲜明的历程印记。

### 这十年，科学谋划发展战略，步步为营扎实推进

公司借助加入中国电建走上市场化发展之路的东风，紧抓发展机遇，坚持以提高企业发展质量和经济效益为中心，以“做精、做强、做大”为目标，大力推进市场营销、生产管理、人才培养、技术创新体制机制改革和企业文化建设，核心竞争力不断增强，城市输变电和新能源工程设计技术水平进入国内先进行列，取得显著成效。

### 这十年，市场区域多点布局，新兴业务升级拓展

国内市场布局卓有成效，增长强劲，国外市场深耕细作重点国别，高端市场取得突破——从以上海单一市场业务，发展为立足上海、雄安两座城，深耕华东、华北、西北、华南四大区的全国布局，业务遍布全国31个省、市、自治区，36个国家和地区，“全国化+国际化”已成为新常态。

### 这十年，业务领域动态调整，“电力”到“能源”业务变迁

公司从电网、新能源两翼齐飞，到电网、新能源、大型隧道（管廊）、直流配网、储能、综合能源，多领域协同并进，积极探索增长方式新极点。2021年公司开启新一轮五年规划期，“十四五”期间被赋予全新使命、愿景、价值观和战略定位，明确“双域五化”新总体战略，吹响加速发展奋进的集结号、冲锋号。

### 这十年，“文”以载道“化”鱼为龙，海纳百川命运与共

公司坚持以企业文化建设为改革转型、高质量发展注入动力和活力，形成完整的企业文化体系，培育独具特色、识别度高、凝聚力强、上下同欲的企业文化，持续履行结对共建、科技扶贫、爱心捐赠、捐资助学、志愿者服务队等社会责任，将其转化为促进企业生产经营、员工服务客户、成就多方命运共同体的生动实践和行动指南。

砥砺廿载，上海院人在公司变革发展浪潮中刻下了属于自己的奋斗印记；逐梦十年，上海院人写下了催人奋进、勇往直前的壮阔征程——这是砥砺奋进、逐梦前行的两个“十年”接力新征程。回首来路，我们驰骋广袤天地，建树山川湖海，尽精微而致广大，我们坚持以开放前瞻的广阔视野谋篇布局，以自我革新的文化沉淀凝心聚力，以坚韧不拔的坚强意志开疆拓土，以不骄不躁的精神品质传承发展。展望前程，上海院人必将以更大的勇气和智慧，稳步推进公司改革创新，加快发展成为“绿色能源与智慧城市领域一流的科技型工程咨询公司”。



党委书记 董事长 何 晖  
总经理 党委副书记 蔡光宗

# 关于我们

## About Us

上海电力设计院有限公司（英文名称：POWERCHINA Shanghai Electric Power Engineering Co.,Ltd. 简称 SEPD）于 2001 年由上海电力设计院改制成立，是中国电力建设股份有限公司控股子公司。

公司拥有国家电力行业勘测、设计、咨询甲级及发输变电工程咨询甲级资质，是以提供电力工程建设咨询、设计和总承包及相关服务为主业的科技型能源工程咨询企业。公司业务遍及全国 31 个省、市、自治区，并远涉亚洲、欧洲、美洲、非洲多个国家地区。公司在城市电网和新能源工程的规划、咨询、设计等领域，拥有独具特色的核心技术，其中风光储联合发电系统设计技术，超高压、高压地下变电站设计技术，超高压、高压电缆设计技术，建筑一体化的太阳能光伏发电设计技术拥有国际领先水平。

公司连续 18 年获得“上海市高新技术企业”称号，截止 2021 年，公司编写国家标准 16 项，行业 and 上海市标准 53 项；获得专利授权 282 项，其中发明专利 55 项；工程设计、咨询项目共获得省部级及以上荣誉 179 项，其中省部级一等奖及以上奖项 66 个；获省部级及以上科技进步奖 61 项；每年立项科技项目 100 余项，承担国家级科技项目 5 项，在研项目 1 项。一年来，公司继续保持安全生

产零伤亡、零事故，重大质量问题零发生、零投诉，牢牢守住企业发展的底线。

作为“全国文明单位”，连续 24 年蝉联“上海市文明单位”称号，全年获得国家级优秀咨询成果奖 1 项、省部级优秀设计奖 7 项、省部级科技进步奖 2 项、集团级科技进步奖 3 项；党群工作部荣获“上海市巾帼文明岗”，多名女员工荣获“上海市三八红旗手”、“市经信系统巾帼建功标兵”；多名公司青年被评为中国电建、上海市优秀共青团员、上海市经信系统青年岗位能手。这些省部级、集团级、行业荣誉都是对上海院的社会贡献和企业形象的全面肯定。

在高质量发展的同时，公司积极履行社会责任，秉持“我们更够做得更好”的企业理念，保持良好的企业效益，同时重视关注社会生态效益，创造了数个社会效益明显的品牌项

目，逐渐打造出“光伏领跑者”、“新能源领跑者”、“绿色智慧能源”企业品牌。先后获评中国电建“社会责任管理工作优秀单位”；参加“社会责任优秀案例征集评选”，获一等奖、二等奖，入选出版物《树责任品牌 讲电建故事》社会责任优秀案例集。荣获上海市精神文明建设委员会办公室、上海市慈善基金会第十届上海市“慈善之星”提名奖，被上海市经济团体联合会、上海市工业经济联合会评为“上海市企业社会责任报告发布杰出企业”。

未来，公司将秉承“诚信担当、开拓创新、共生共赢”的核心价值观，努力建设绿色高效能源，持续服务智慧城市。

# 60年

60 年发展史



员工持股企业



# 10+

10+ 项资质



# 3倍

3 倍人均利润占行业标准水平



# 31个

31 个国内业务涉及省、市、自治区



# 36个

36 个海外业务涉及国家



# 10年

连续 10 年公开发布《社会责任报告》



# 80+项

80+ 项省部级以上工程设计奖项



# 1000+项

1000+ 项太阳能、风电项目

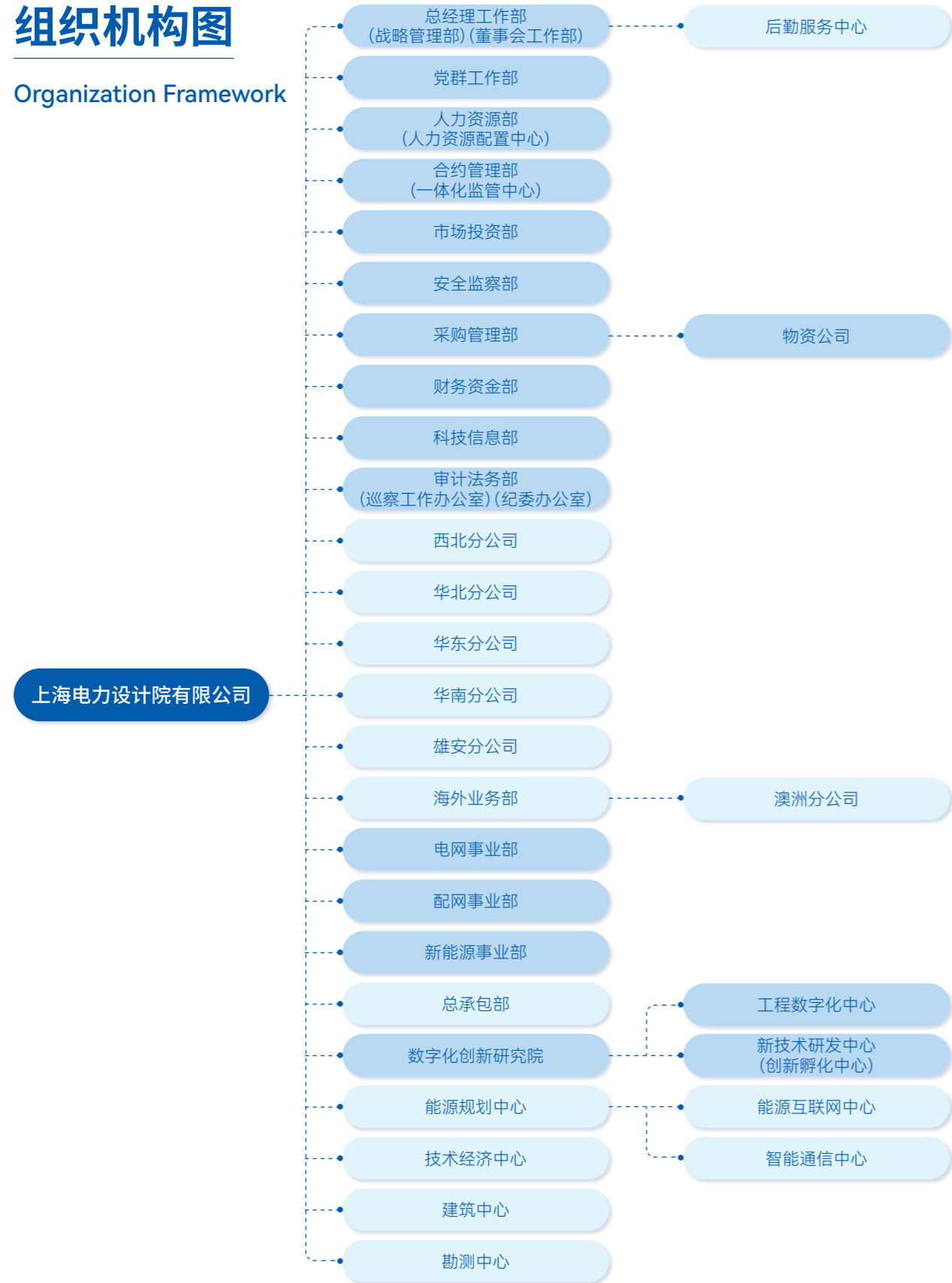


# 100+项

100+ 项工程数字化设计

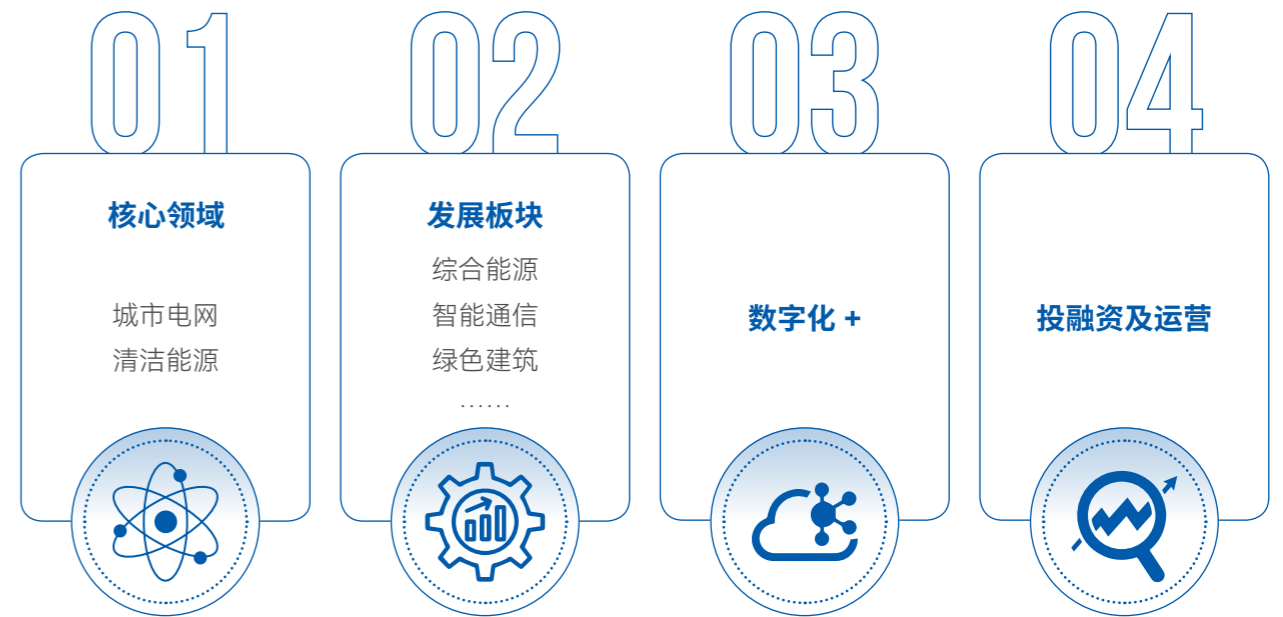
# 组织机构图

Organization Framework



# 业务板块

Business Segments



全生命周期服务，一体化综合解决方案



设计平台 管理平台 智慧运营……

新能源开发 合同能源管理……

# 业绩分布

## Business Distribution

2021 年，公司业务市场遍及全国 31 个省、市、自治区以及 36 个国家。

### 美洲地区

多米尼加 阿根廷 委内瑞拉  
哥伦比亚 智利

### 非洲地区

埃及 埃塞俄比亚 尼日利亚  
加纳 南苏丹 加蓬  
乌干达 肯尼亚 刚果(金)  
卢旺达 莫桑比克 马拉维  
津巴布韦 赞比亚

### 欧洲地区

英国  
法国  
马耳他  
土耳其

### 亚洲地区

新加坡 菲律宾  
日本 科威特  
吉尔吉斯斯坦 巴基斯坦  
印度 缅甸  
老挝 关岛  
印度尼西亚 沙特阿拉伯

### 中国地区

#### 主要业务区

上海 江苏 浙江 内蒙古  
河北 山西 山东 青海  
甘肃 辽宁 黑龙江 陕西  
广东 广西 安徽 西藏  
江西 湖北

#### 业务辐射区

天津 北京 四川 云南  
河南 宁夏 福建 重庆  
新疆 吉林 贵州 海南  
湖南

### 大洋洲地区

澳大利亚





# 02

## 战略管理

STRATEGIC MANAGEMENT

公司“十四五”战略升级全新的使命、愿景、价值观和战略定位，明确“十四五”期间“双域五化”的总体战略，绘就新时期新阶段的战略目标、发展思路和实施步骤。

### 战略定位

绿色能源发展领域的创新引领者，智慧城市建设领域的重要参与者，为客户提供智慧化综合解决方案。

### 战略目标

至十四五末，发展成为系统集成解决方案能力一流，数字化创新驱动显著，资源整合优势明显，多业务板块协同发展，运营管理精益高效，行业内最具高质量发展特征的领军型企业。进入 ENR 中国工程设计企业 60 强和工程承包商 80 强。

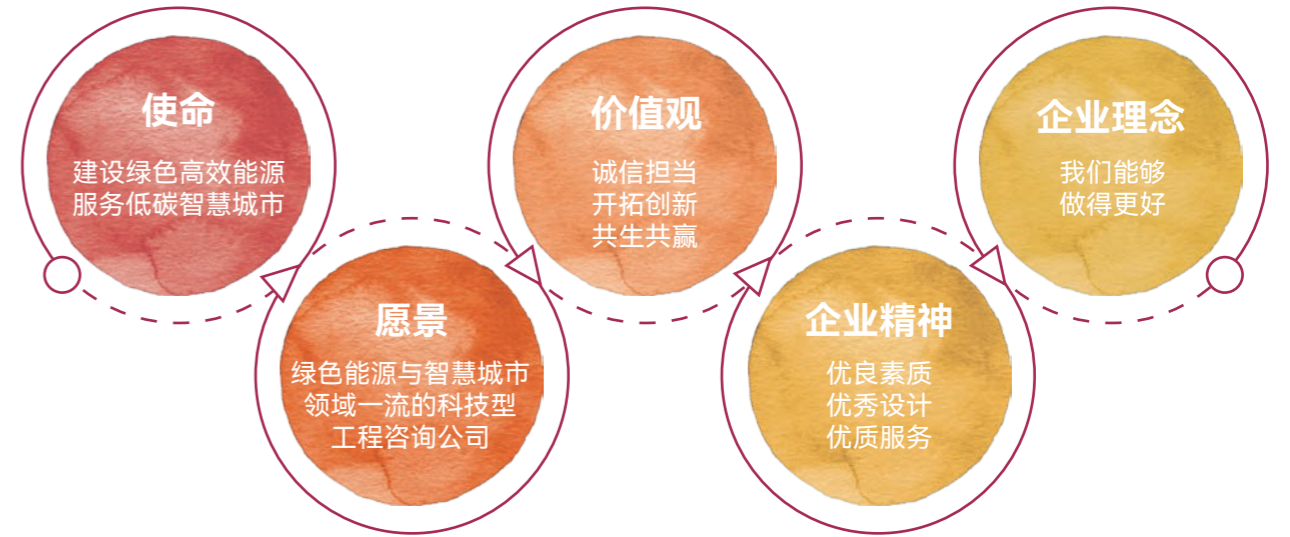
### 发展思路

“双域五化”战略：聚焦“能源”与“城市”两大业务领域，深入实施“数字化”、“多元化”、“一体化”、“精益化”与“平台化”等关键战略。



## 企业文化

### Corporate Culture



戮力同心齐进取，守正创新勇担当，在奋进的道路上更高质量发展  
2021 年干部大会暨年中工作会议



03

# 责任实践与绩效

RESPONSIBLE PRACTICE AND PERFORMANCE

围绕“科学发展、诚信与公平运营、环保节约、安全生产、经济责任与顾客权益、合作共赢、员工与和谐劳动关系、社会共建”八项核心主题践行社会责任，携手合作伙伴，稳健推进行业技术革新，努力推进业务创新，加强业务合作，为客户提供优质、高效、经济、可靠的技术支撑，持续提升优质服务水平，努力向实现“绿色能源与智慧城市领域一流的科技型工程咨询公司”的企业愿景迈进。

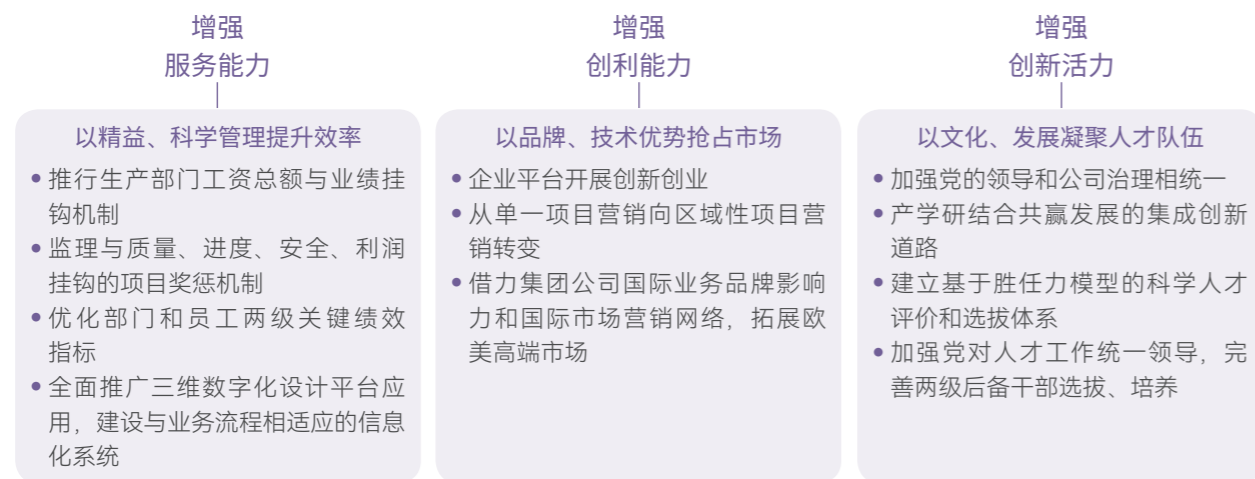
# 科学发展

## Responsible Practice and Performance

### 科学规划

公司坚持以促进转型升级为目标，以满足客户需求、为客户创造价值为导向，以质量效益为中心，以培育和发现新业务为增长点，以发挥优秀企业文化的融合、凝聚作用为保障，将社会责任、服务和谐社会的战略理念融入在贯彻执行公司发展战略的过程中，推动企业取得新的突破，实现新的发展。

### 持续创新



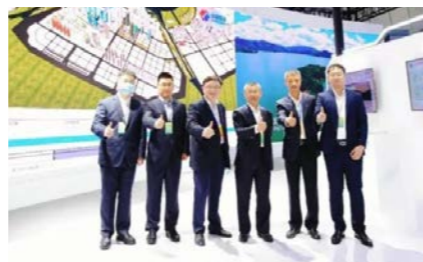
公司拥有上海市高新技术企业称号，在研国家重点研发计划项目 1 项，上海市科委重点项目 1 项；获批上海市科委项目 1 项、中国电建重大专项 1 项，重点项目 4 项，8 个重点项目被中国电建鉴定为国际领先、国际先进或国内领先。获得国家级咨询成果 1 项、省部级工程勘测 1 项、集团级科技进步奖 3 项，其中省部级工程设计 7 项通过编制科技成果汇编、启用知识管理平台等手段，提高了科技成果在公司生产中的应用水平。

### 2021 年科技投入

# 11,158.7

 万元

中国电建科技创新先进集体



参展第四届数字中国建设成果展

2021 年获得专利授权 28 项，其中发明 5 项，实用新型 23 项；申报专利 60 项，其中发明 32 项，实用新型 28 项；发表论文 71 篇（其中：SCI 期刊 3 篇，EI 会议 12 篇，北大核心 9 篇）。公司共编制各类标准 53 项。其中发布《风光储输联合发电站设计规范》、《建筑光伏系统应用技术规范》等国家标准 2 项，发布《电力建设工程工程量清单计算规范变电工程》、《电缆输电线路工程技术经济指标编制导则》等行业标准 7 项；完成国家标准《电化学储能电站施工及验收规范》和行业标准《城市电力电缆线路设计技术规定 英文版》的报批工作。

2021 年获得专利授权

# 28

 项

上海市高新技术企业证书

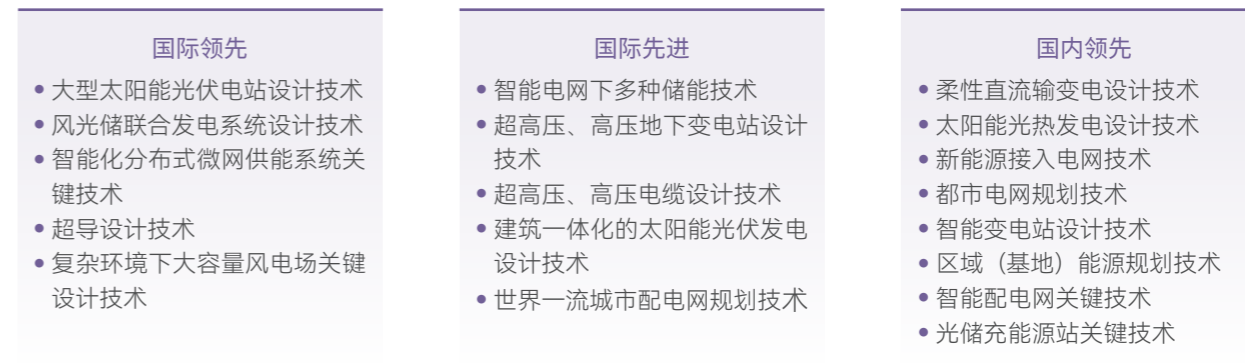


“张江科学城综合能源规划”摘取全国高端咨询桂冠获 2020 年度全国优秀工程咨询成果一等奖



造价信息化平台 (PCM) 启动上线

## 主要领先技术



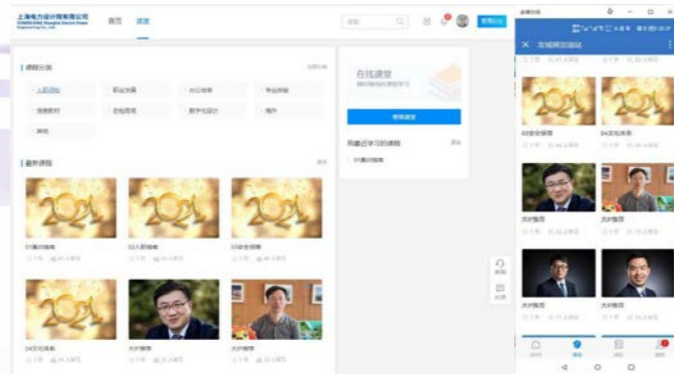
## 知识管理体系

企业级知识库： 梳理内外部知识，建立 7 大类、730 小类

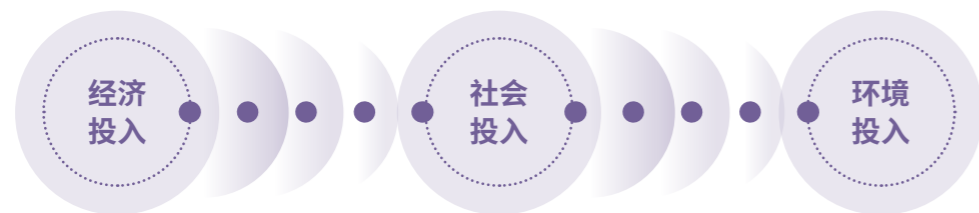
知识问答专家库： 专家解答技术问题，共享隐性知识

知识共享平台： 建立历史获奖项目库、专利、专有技术、论文库等，提供知识成果、最佳实践的共享平台。

知识视频库： 丰富知识形态、引入多模态知识形态，攻城狮加油站建立 10 大类 23 小类知识视频，“PC 端 + 移动端”结合，随时随地收听、收看最新知识。



## 发展投入



关注行业与民生结合  
推动地区发展

关注国内外行业前沿技术  
推动科技发展

关注生态平衡与可持续发展  
推动和谐生态发展

### 经济投入

提质增效基础管控成果明显，大力投入质量管理平台建设及运行管理；总承包项目管理通过领导挂帅、高频跟踪等手段，最大程度降低项目风险，提升管理质量和效率。

## 社会投入

市场布局呈现巩固上海、发展雄安，各地区域积极扩张态势；海外业务聚焦重点国别、紧跟重点客户。

## 环境投入

助力国家新能源发展事业，践行习总书记“绿水青山就是金山银山”理念，参与鄂尔多斯市和达拉特旗、杭锦旗、伊金霍洛旗、鄂旗、鄂前旗等多个市县的国家大型传统能源基地新能源规划。

### 案例

#### 京能康保风电项目

项目是 2022 年北京冬奥会配套基础设施，承担着北京 - 张家口冬奥会绿电供应和首都清洁能源供热的重任，是高标准兑现绿色冬奥会可持续性承诺，是推动京津冀地区能源合作的重要举措。项目年上网电量约 10.4 亿千瓦时，每年可为电网节约标煤约 32 万吨、减排二氧化碳 85 万吨，节约大量传统电厂用水，减少排水等对水环境的污染。



### 案例

#### 张家口云顶 110 千伏输变电工程项目

工程是 2022 年北京冬奥会张家口市崇礼赛区的重要供电保障项目。云顶站所在的崇礼地区为山地地形，公司克服地形复杂，选线困难等不利因素，运用三维设计等先进技术手段，保障北京冬奥会崇礼赛区的用电需求。

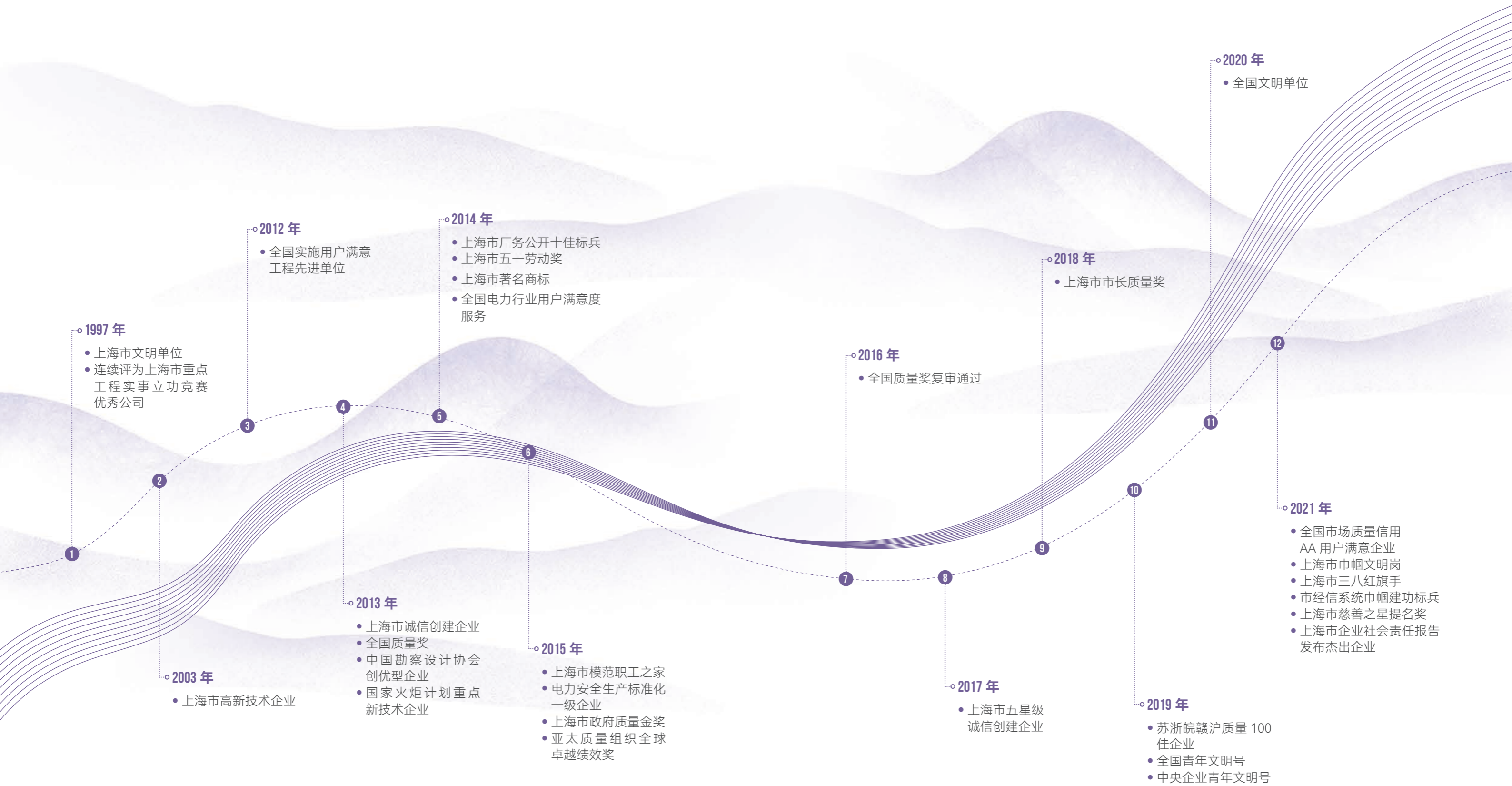


### 案例

#### 上海轨道交通建设工程

公司从 20 世纪 90 年代初就开始服务于上海轨道交通建设，承担了上海第一条轨道交通——1 号线 110kV 变电站的设计工作，至今承担了上海轨道交通所有运行及在建线路的主变电站的设计工作。2021 年承建了 14 号线工程封浜车辆段、金桥停车场、中宁路、歇浦路主变电所工程等上海市重大工程，将上海建设发展、真情回报社会作为政治任务，全面担当企业社会责任。





# 诚信与公平运营

## Good Faith and Fair Operation

公司始终坚持“弘扬法治精神，建设法治企业”理念，增强全员法制观念，严格遵守国家各项法律法规和政策，始终坚持依法治企、合规经营、诚信守法，把法治和诚信理念融入设计、管理，落实到员工行动，贯彻在每个环节。

### 员工普法宣传率 **100%** 强化法治观念

按照中国电建“三个不准、八个严禁”管理要求，有效将法治与风控管理融入业务源头，公司规章制度的发布、重大决策事项的通过、重大经济合同的签署，公司主要领导亲自部署、协调、督办，严禁违法违规行为发生。

### 员工劳动法知晓率 **100%** 依法合规经营

加强合规意识，把握合规重点、实施合规管理，发布合规管理办法，调整合规管理委员会，任命海外合规官及海外业务合规经理。建立投资业务法律风险管控制度和流程，健全并严格执行投资项目法律评审制度，通过聘请专项涉外律师，审查海外项目的合法性、合规性。

### 经营风险

组织开展 2021 年度公司层面重大风险评估工作，识别分析重要风险，制定防范措施；完成对重大、专项风险的动态管理，法律与合规专业人员全程参与项目前期风险评估、风险措施的制定、合同的执行、收款工作等环节，有效保证重大风险的实时监控。



微信公众号专栏“小郭说法”



在法律意义上就形成了一份电子合同

# 诚信经营与服务

## 诚信经营理念

讲诚信是公司应有的行为规范和应尽的社会责任，公司严格遵守社会公德、遵守市场秩序，以诚实守信、实践诺言为行为规范。公司提出“明确始终以诚实守信的态度、守法合规的行为、勇于担当的作风；脚踏实地、心无旁骛、攻坚克难，实现科学发展”的“诚信担当”内涵，在日常经营工作中认真贯彻执行国家法律、法规和政策，有针对性地进行法治、合规、风控宣传教育，提升员工诚信经营、遵纪守法理念。

## 合同管理规范

公司注重合同管理，《合同管理办法》覆盖全过程，结合信息系统全面管控。

合同履约率

**100%**



2020—2021 年度上海市守合同重信用企业



企业信用等级 AAA 级



2020—2021 年度合同信用等级认定书




2021 年全国市场质量信用 AA 用户满意企业

### 顾客投诉体系健全

为提高顾客满意程度，公司建立和实施顾客投诉处理程序和快速响应机制，回访投诉处理满意度。




### 财务管理规范

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加强建章立制，夯实会计基础，健全财务内控管理

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聚焦业财融合，完善信息系统，提升财务管理效能

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强化预算管理，着力过程控制，保障公司目标落地

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创新融资管理，保障资金需求，提升资金使用效率

### 公平竞争

公平竞争是市场经济的基本原则，是市场机制高效运行的重要基础。公司积极支持、贯彻落实国家公平、公正竞争的市场经济公共政策，以“优良素质、优秀设计、优质服务”的“三优”精神提升自身竞争力和综合实力，品牌知名度和美誉度显著提升。

#### 与合作商、分包商合作共赢

制定招投标管理制度，防止介入或陷入反竞争行为：



### 社会诚信形象

公司将诚信创建工作纳入内部管理，被评为上海市“五星级诚信创建企业”、获“诚信在线”信用标识。



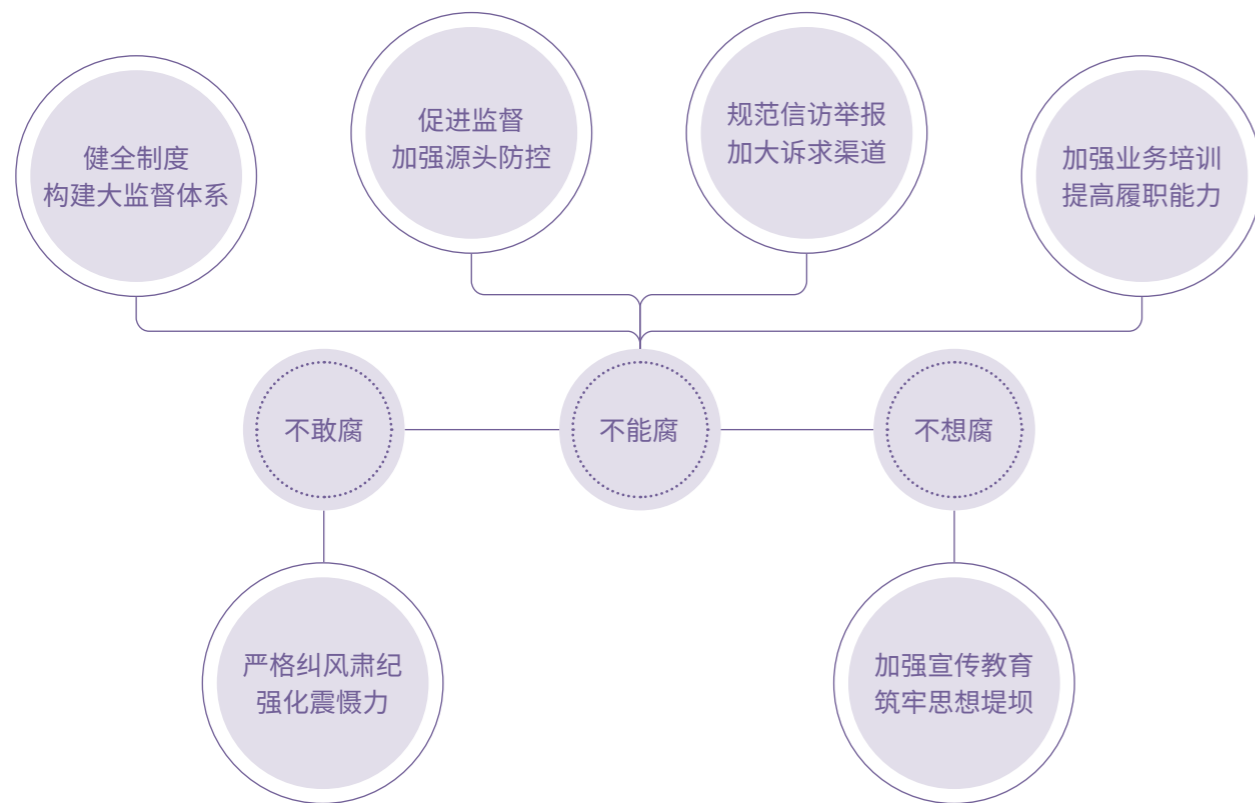


## 反对商业贿赂

公司健全“不能腐”制度，构建大监督体系，建立党风廉政建设和反腐败工作目标责任制，制定领导班子“一岗双责”责任清单和廉洁风险库。

- 发布并实施《全面监督管理办法》。
- 推进党风廉政建设和反腐败工作纵深发展、向一线延伸，党政领导班子与部门签署《2021 年度部门党风廉政建设和反腐败工作责任书》。
- 党风廉政建设和反腐败责任落实到一线工作岗位，员工培训覆盖率 100%，与供应商签署《廉洁协议》。
- 年内开展两轮巡察工作，实现巡察全覆盖，对党支部书记、部门主要负责人进行提醒谈话。员工违纪违规零记录。
- 开展内部审计工作，对公司重点项目采购管理、备用金管理、房屋租赁等方面管理情况进行审计检查。

“不能腐”体制机制



## 案例 巡察工作机制

深入贯彻上级党委巡察工作部署，建立健全巡察工作机制，成立由党委书记任组长的巡察工作领导小组，2021 年开展两轮巡察，实现巡察党组织全覆盖。

## 案例 风险管理机制

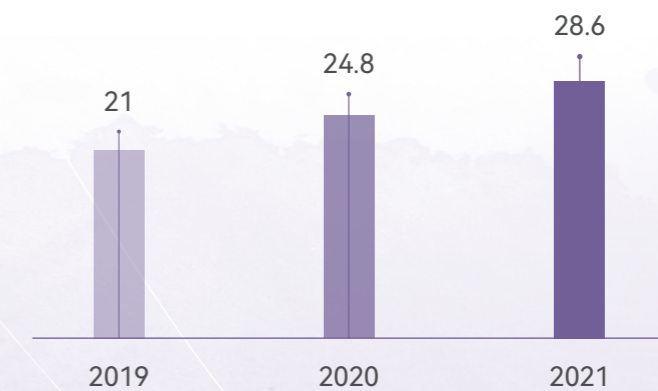
开展 2021 年度重大风险收集、评估工作，完成《2021 年度全面风险管控报告》，对公司重大风险进行动态跟踪管理。加强重点项目风险管理，针对重大经营风险项目开展风险识别、评价工作，加强重点项目风险管控。

## 尊重产权

### 维护知识产权

有效避免侵权行为，定期对产权有效性进行评估，由专业代理律师进行知识产权文献检索和“三性审查”（新颖性、创造性、实用性）。对于共同拥有的产权，严格遵守相关合同及国家法律法规，维护企业及利益相关方权利和利益。制定《知识产权管理办法》、《科技工作成果奖励办法》、《科技论文管理办法》知识产权相关政策规定。

知识产权维护费（万元）



## 推动行业健康持续发展

50 余项

2021 年参与国家、行业、地方标准等规范制定

公司根据相关行业标准和规范进行设计咨询活动，依据参考的标准规范约 500 多项，积极参与相关规范的编写，推动行业标准的进一步发展。

### 2021 年参与的行业标准及规范制定

标准名称	性质	主编或参编
电化学储能电站环境影响评价导则	国家	主编
风光储输联合发电站设计规范	国家	主编
电化学储能电站施工及验收规范	国家	参编
配电工程项目规范	国家	参编
全钒液流电池设计导则	国家	参编
城市电力电缆线路设计技术规定 英文版	行业	主编
电力储能术语	行业	主编
高渗透率分布式可再生能源发电集群规划设计规程	行业	主编
35kV 及以下交流超导电力电缆线路设计规程	行业	主编
电力建设工程工程量清单计算规范 变电工程	行业	主编
电缆输电线路工程技术经济指标编制导则	行业	主编
燃气分布式供能系统运行维护规程	地方	主编
10kV 预装式变电站应用设计规程	地方	主编
电动汽车充电基础设施建设技术标准	地方	主编

## 环保节约

### Environmental Protection and Energy Conservation

### 环境管理

#### 环境管理体系规范

建有完整的节能环保制度体系，公司发布执行《能源节约与生态环境保护责任制度》、《能源节约与生态环境保护管理办法》、《能源节约与生态环境保护统计监测制度》等节能环保管理制度，确保节能环保管理工作规范、有序；建立有《环境污染事件应急预案》，明确各级环境污染事件的应急响应和处置程序。

#### 2021 年顺利通过质量、环境、职业健康“三标”管理体系认证监督审核



#### 环保治理绩效

切实履行中央企业能源节约与生态环境保护主体责任，建设资源节约型和环境友好型企业，建章立制规范管理，建立完善的节能环保管理规章制度和有效预防污染事故发生的措施。

## 植入绿色理念



## 绿色技术与生产

咨询设计 充分考虑对生态环境的影响，响应资源节约型环境友好型的社会要求。

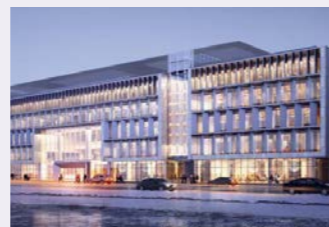
项目建设 严格按照生态环境主管部门要求，提供生态环境保护各项增值服务。

## 绿色工程

### 案例

#### 雄安电力调度大楼低碳智慧建筑示范项目

项目是助力国家电网实现“碳达峰，碳中和”目标，全力构建新能源为主体的新型电力系统基础上在全国开展的两个试点示范项目之一，对于各省电力公司小型基建的能耗改造、能碳升级具有重要的示范与引导作用。项目紧扣国家战略，打造超低能耗、近零能耗、低碳智慧建筑示范，大幅降低建筑负荷侧的能源消耗，并通过建筑光伏等可持续能源为建筑供能，经计算项目综合节能率大于 60%，每年可减少碳排 857.82 吨。



### 案例

#### 雄安新区郊野公园输变电工程

工程是以郊野游憩功能为主的京津冀地区生态旅游新地标、雄安新区北部森林后苑、城绿交融的特色村镇典范，聚焦生态文明建设，全面落实创新、协调、绿色、开放、共享五大新发展理念，统筹规划整体格局和蓝绿空间布局，提升整体形象，集中体现大型林地的生态屏障、水源涵养、休闲游憩功能，突出自然野趣，强化生态、自然、人文特色，助力绿色雄安新征程。



### 案例

#### 滨海湾新区“十四五”能源规划专题和集中供冷供热方案咨询

公司立足滨海湾新区经济和能源发展现状和趋势，从能源、供给、消费、存储、管理及服务方面提出六位一体的综合能源生态体系，为滨海湾新区落实“深入贯彻新发展理念，抢抓粤港澳大湾区建设战略机遇，建设新时代大湾区创新发展新高地”的战略定位提供了智力支持和政策建议。结合滨海湾新区作为东莞市双碳试点示范区的要求，实施集中供冷供热工程，为滨海湾新区的节能减排、能耗“双控”等工作做出重要贡献，相比常规分散制冷制热方式，每年节约标煤约 15.7 万吨，减少二氧化碳排放 43.0 万吨，也可有效削减空调电力负荷需求 36.9 万千瓦，为滨海湾新区未来发展腾出更大的电力裕度空间。



### 案例

#### 长三角生态绿色一体化发展示范区电网专项规划

2019 年 5 月，中共中央、国务院印发了《长江三角洲区域一体化发展规划纲要》；2019 年 10 月，国务院批复了《长三角生态绿色一体化发展示范区总体方案》，示范区执委会同步建立了示范区规划体系（1 个示范区总规 +1 个启动区总规 +N 个专项规划），并将《长三角生态绿色一体化发展示范区电网专项规划》纳入其中，电网专项规划成为唯一一个由企业牵头编制的专项规划。在支撑“双碳”目标方面，以两个“替代”为抓手，开创电网大范围资源优化配置、以区外清洁能源供应为主体的崭新模式，打造能源供给多元化、清洁化、低碳化，能源消费电气化的能源清洁转型方案，助力政府“双碳”目标实现；在满足用户需求方面，通过推动示范区新型电力系统建设，顺应“用好电”向“用好能”转变的能源消费趋势，打造高质量、一体化的能源体系，构建高效、绿色、智能、安全的基础设施网络，搭建定制化、个性化的能源服务场景，为示范区各类用户提供更加便捷、低碳、开放、共享的多元化能源服务，提供更加灵活、互动的用能体验；在促进产业发展方面，通过推动电网向能源互联网全面升级，促进电网与新型数字化基础设施融合，加快示范区数字化转型，技术创新发展和绿色生态构建，带动示范区产业转型发展。规划以能源数字转型发展牵引示范区融合型数字经济、以能源技术创新带动示范区前沿型创新经济、以能源绿色高效支撑生态型湖区经济快速发展，整体服务示范区产业高质量发展。

### 案例

#### 申能横沙岛渔光互补分布式光伏项目

项目是上海首个可再生能源电力零碳供给“零碳岛”实施计划首批实施项目，助力国家碳达峰、碳中和目标。板上可发电，板下养鱼蟹，一块块架在鱼塘上方的光伏板，一边发电、一边为鱼蟹提供阴凉，创新技术发展“光伏+”，把光伏发电与现代农业相结合，实现绿电覆盖整座岛屿，以实际行动助力上海市“十四五”规划和二〇三五年远景目标中 2025 年前实现碳排放达峰的计划，以及全面加快农业农村现代化发展。



案例

广州保利洲际酒店中央空调系统优化节能项目

广州保利洲际酒店位于总高 176 层塔楼的广州琶洲地标建筑。公司基于“消除浪费，风水联控，提高能效”的优化节能策略，将空调冷源和末端风系统联合进行整体优化控制，全面优化暖通空调的风平衡、水平衡，控制湿度水平，提高酒店舒适度，显著降低酒店全年能耗。通过对酒店中央空调风-水系统智慧节能改造后，总节能效益 135.7 万元/年，节标煤 521 吨/年，节碳排 1426 吨/年。



绿色研发

公司积极开拓新能源市场，配合城市轨道交通建设配套电力工程项目，促进环境友好型城市发展，积极探索城市电动汽车充换电技术，缓解传统汽车对环境的影响，加大科技投入和技术攻关力度，推动风电、太阳能等清洁能源设计，带动产业内整体节能。

绿色考核

践行绿色责任，成就企业可持续发展，公司将能源节约管理全面纳入年度工作考核，提高资源利用率，履行社会责任，提升企业绿色竞争力，推动企业与自然的和谐发展。努力建设资源节约型和环境友好型企业，建立健全能源节约工作的组织体系和管理制度，连续多年万元营业收入能耗呈下降趋势。

绿色行动

开展“世界环境日”、“全国低碳日”、“节能宣传周”活动，促进员工树立环保意识，养成良好节能习惯，倡导节能、低碳、环保生活。推广“美丽中国，我是行动者”主题，组织绿色出行城市定向活动、节能宣传周活动，向群众宣传绿色出行观念，为绿色发展贡献力量。



安全生产

Safety Production



安全创造财富，安全带来幸福!



安全生产管理

安全生产责任体系



安全生产与职业健康

公司建立健全安全生产制度体系，现有 32 项安全生产与职业健康管理制，不断完善安全生产重要岗位履职清单，覆盖公司、部门、项目部三级共计 76 个岗位，充分体现“横向到边、纵向到底”范围覆盖。

安全生产与职业健康

安全团队对口服务机制

建立专职安全管理人员与项目部安全管理人员对口服务工作机制，对项目一线人员进行全方位指导，找准现场安全管理的痛点和难点，上下联动共同推进主体责任落实到现场。

“安全为群众办实事”活动

开展《总承包项目安全管理制度模板库》《总承包项目安全文明施工指导手册》安全管理课题研究，为进一步规范提升总承包项目安全管理夯实基础。

事故隐患分类考核

对一般隐患进行分类管理，将关键隐患纳入部门组织绩效考核指标，狠抓整改质量，对整改回复及时性、首次提交质量、回退次数等进行评估打分，对未按时完成整改的隐患进行挂牌督办。

HSE 信息化系统

成立专项工作小组，编制发布试运行方案，组织开展分级培训，明确资源投入配置要求，通过线上督查、现场督导、周报通报、专题工作会推进等多种方式，有效推动信息化系统的顺利使用。

## 安全生产投入

建立《安全生产、能源节约与生态环境保护费用管理办法》，费用提取和使用纳入年度财务预算。

### 提供安全所需资源

制度：梳理内外部知识，建立 7 大类、730 小类。

检查：专家解答技术问题，共享隐性知识。

配备：建立历史获奖项目库、专利、专有技术、论文库等，提供知识成果、最佳实践的共享平台。

信息：综合微信、短信、网站、消息系统等沟通工具。

物资：办公场所购置应急物资，偏远地区项目部与当地气象、消防部门建立联系，确保事故预警信息的及时传递、事故灾害的预防准备。

#### 案例

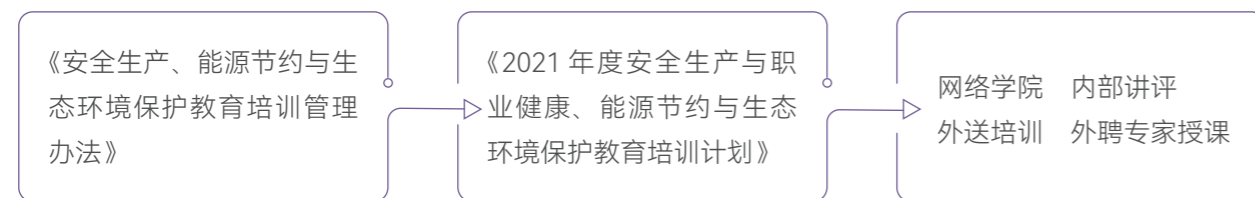
##### 中移动扩容项目抗击台风“烟花”全力以赴

2021 年 6 号强台风“烟花”来临之际，第一时间发布预警信息、分发应急物资，相关地区总承包项目迅速落实防台专项工作，确保汛期安全。

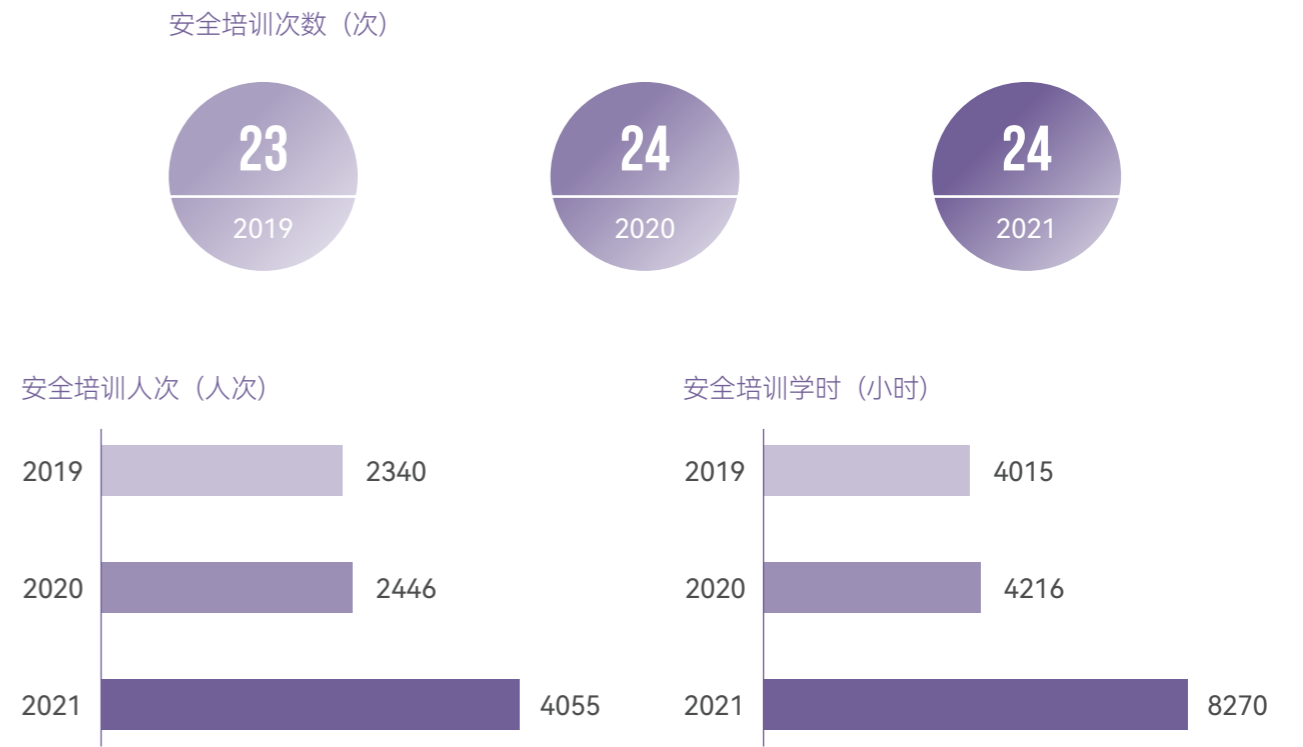


## 安全生产教育和培训

### 安全生产培训制度与方式



## 安全培训情况三年对比示意图



董事长安全公开课



总经理安全公开课

### 增强预防和应急处理能力

开展专业化安全教育活动，逃生疏散演习找消防、新交规解惑找交警、健康咨询找医生、政策解读找安监等，提升安全教育培训专业性和权威性。

## 安全生产检查

### 安全生产检查机制

2021 年组织开展公司级安全检查 **22** 次

公司董事长带队 **3** 次

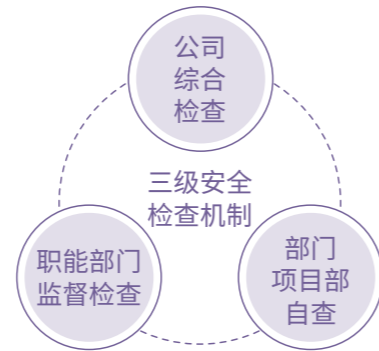
其中拉网式全覆盖安全检查 **2** 次

总经理带队 **3** 次

吊装专项隐患排查 **3** 次

分管领导带队 **7** 次

总承包项目安全检查覆盖率 **100%**



公司领导带队检查总承包项目

### 消除社会安全隐患

按照排查治理流程对隐患进行闭环管理:



### 安全生产事故处理

建立以 **1** 个综合预案、**21** 个专项预案、**9** 个现场处置方案组成的应急预案体系。

## 经济责任与顾客权益

### Economic Responsibility and Customers' Rights and Interests

### 利润与经济效益

主营业务收入 **62.50** 亿元

资本保值与增值率 **126.93%**

利润总额 **2.93** 亿元

净资产收益率 **37.32%**

资产负债率 **79.16%**

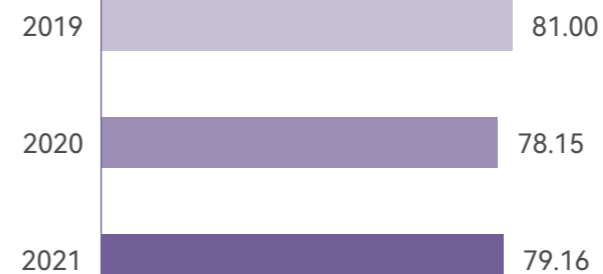
经济增加值 EVA **2.73** 亿元

### 近三年主要财务指标

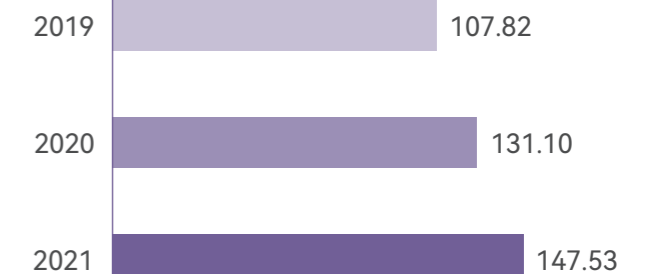
利润总额 (亿元)



资产负债率 (%)

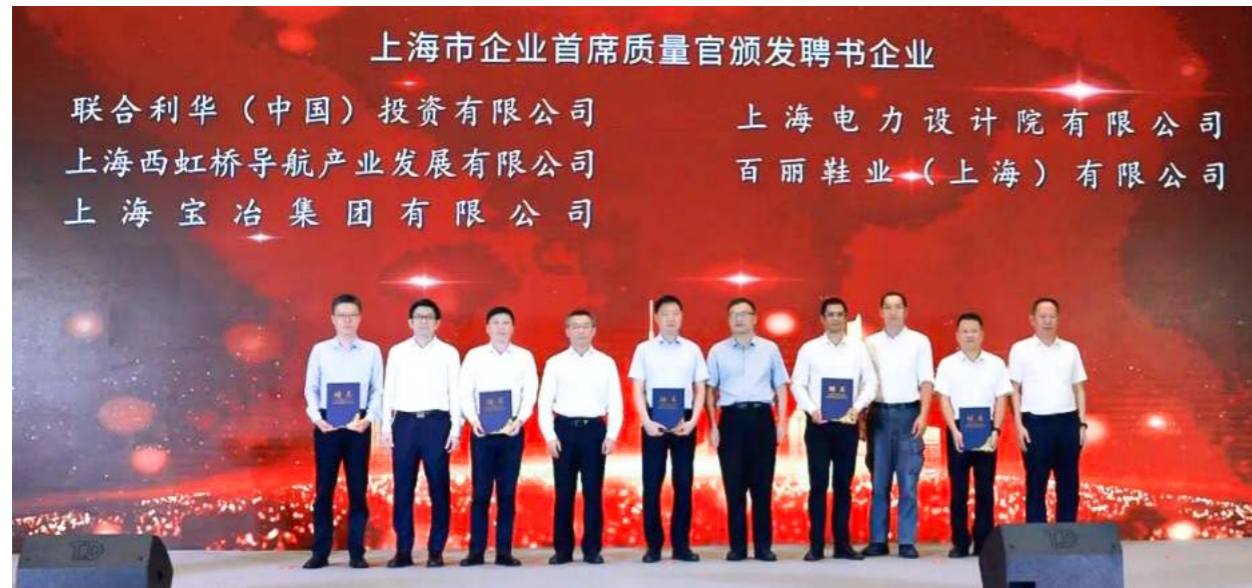


全员劳动生产率 (万元/人)



## 产品与服务

公司树立以卓越绩效标准测量、评价一切生产、经营和管理活动过程和成果的思维模式，进一步完善整合型管理体系建设，把公司产品、服务和管理工作质量提高到新水平。



上海市“质量月”启动仪式暨上海市政府质量奖二十年宣传活动

### 建立客户管理档案

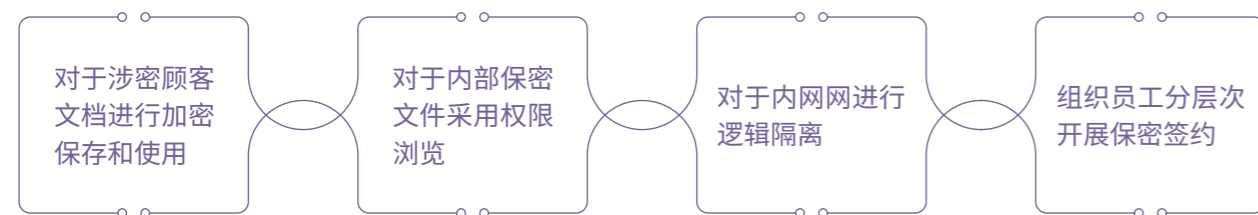
建立客户管理档案，完善客户意见反馈机制、投诉处理机制和快速响应机制，委托第三方开展顾客满意度测评工作，测评报告显示满意度有所提升。

### 快速响应客户意见

提高咨询设计项目管理能力，完善公司项目经理制和项目管理评价体系，健全差异化项目管理模式，规范业务流程，分层级开展顾客服务和回访，制定满意度提升具体措施，提高项目管理工作水平。

### 保护客户信息安全

以“守法重道、严守秘密”为原则，秉持守法、自律的职业操守和专业精神，持续健全保密工作责任体系，制定《保密工作条例》，严格执行中国电建《涉密移动存储介质保密管理暂行办法》、《信息安全管理规定》。



## 创新产品服务

重视顾客的感受和意见，结合新市场形势和关键顾客需求，对重点项目开展全覆盖的设计质量征询。

### 提升总承包全过程管理

加强项目全过程全要素管理，涵盖投标、勘测、设计、采购、实施、收尾等关键环节，全年新编 3 项、修订 10 项总包管理制度，使公司总包现行管理制度扩充到 38 项。全覆盖开展技术施工方案评审，形成总承包项目经济技术指标体系，有效指导和监控后期项目实施。

## 对供应链伙伴的责任

### 维护企业产权人权益

制定《集中采购管理办法》、《勘察设计分包及供应商管理办法》、《合格供应商管理办法》，以公开、公平、公正的原则实施采购，实现采购合规性与经济合理性。通过项目群集中采购、年度框架采购等方式，提高采购效率；采用供应商分级制度，培养核心供应商体系，合作共赢。

### 遵守利益保障措施

遵守与供应商签订的合同及内部制定的结算办法，通过采购合同审核会签保障合同的公平有效；有效控制资产负债率，保障企业良好运转，保障债权人的利益。

### 健全采购责任制度



### 及时公开政策及承诺

公司将所有采购制度、年度供应商评价报告、年度框架邀标结果在公司信息系统中进行信息公开。

# 合作共赢

## Win-Win Cooperation

### 服务国家战略

公司“智慧平台”团队、“典型设计”团队在雄安新区高起点规划的理念指导下，持续深入开展雄安新区电网规划及技术相关专题研究。2021年，剧村 220 千伏输变电项目、河西 110 千伏输变电项目、剧村周边“1+5+x”附属电力设施项目、河西-奥威 110 千伏线路四项工程建成投运；雄安新区首座智慧标杆站—南郑 110 千伏输变电工程开工建设，标志着雄安标准在电力行业的试探达到了新的阶段；配合国网河北省电网有限公司雄安新区供电公司制定电力设计地方标准，为电网规划、安全、电力设施与城市景观融合献计献策，从全电压等级助力雄安城市建设，为绿色能源点亮雄安做出贡献。



公司设计的雄安新区首个目标配网双环网架项目投运



公司设计的国内首座下沉庭院式变电站——雄安新区 110 千伏河西站成功投运



公司在雄安开展的国内首个负碳建筑咨询项目

#### 案例

##### 雄安站站房屋面分布式光伏发电项目

项目是雄安新区首个重大基础设施项目，绿色发展理念贯穿始终，雄安站站房外观呈水滴状椭圆造型，采用“青莲滴露”的主题，设计理念以雄安水文化为灵感。项目总装机容量约 6MWp，光伏组件数量约 1.77 万块，铺设面积达到 4.2 万平方米，年平均上网电量约 582 万千瓦时，实现自发自用、余电上网，每年可为电网节约标煤约 1800 吨，减少二氧化碳排放量 4900 吨，被誉为“会发电的高铁站”。



#### 案例

##### 雄安新区容东（剧村）220 千伏输变电工程

工程不仅是公司在雄安新区电网首个项目，同时也是雄安新区电网首个开工建成投运的规划电网项目，契合雄安新区绿色、环保、开放、共享、协调的建设发展理念，形成利用周边公园绿地起坡，公园覆土上引至变电站屋顶高度，使得变电站与公园融为一体，并利用周边坡地下的空间引入电力配套设施的创新方案，获得“2020 年度电力行业优秀工程咨询成果一等奖”、“首届工程建设行业 BIM 大赛一等奖”，被评为国网河北省电力公司“最美变电站”评选雄安新区在建已建组第一名。



#### 案例

##### 容东片区 G 组团安置房及配套设施项目输变电工程

项目是公司首个雄安新区 EPC 总承包项目，也是雄安新区首个投运的住宅电力配套项目，作为容东片区 G 组团安置房及配套设施项目的电力配套项目，投运的配电室接入容量达 98580 千伏安，承担着为 G 组团 126 栋建筑、6759 户居民供电的任务。项目是雄安地区首次大批量采用环保气体绝缘环网型断路器柜，并在柜内安装局放在线监测、机械特性在线监测等物联网设备；变压器全部采用 SCB13 能效等级干式变压器，在提高电网运行可靠性的同时，积极响应国家“十四五”规划“碳达峰、碳中和”目标。

### 推动城市发展

2021 年，公司“十四五”战略定位调整为“绿色能源发展领域的创新引领者，智慧城市建设领域的重要参与者，为客户提供智慧化综合解决方案。”公司争做上海城市发展的推动者，争当城市电力工程的示范引领者和实践者，打造精品工程；积极参与上海可再生能源的开发和利用，用风能发电、太阳能发电、热电联供、集中供热等方式来满足上海经济发展的需要；继续推进输变电设施建设向人性化、智能化、环保型方向发展；倡导“互利合作、和谐共赢”的服务境界，努力营造良好的社会环境；注重公共关系建设，与用户进行良好的沟通，了解重点客户的工程建设需求，配合推进电网建设前期工作不断向纵深发展。

#### 案例

##### 推动上海市能源结构优化调整

为谋划“十四五”和中长期上海市外来清洁电力资源和输电通道，公司承接了上海市发改委“陇电入沪”规划的上海市外清洁电力基地研究工作，年内完成基地选址，形成四个专题报告，获上海市发改委高度信任。项目对推动上海市能源结构优化调整，强化电力供应保障，同时对助力甘肃省清洁能源资源开发、资源优势转化，具有良好的经济和社会效益。



案例

打造上海科技园区“样板”

上海正在建设全球科技创新中心，新片区是习近平总书记交给上海的重大任务之一。公司成立专项攻坚团队开展对口服务，妙香 220 千伏输变电、奉贤海上风电等工程 2021 年建成投运，为新片区注入一波强大动力。同时开展祝桥 220 千伏输变电工程、海滨电厂 220 千伏送出工程、高效低碳燃气轮机项目、220 千伏芦三变电站等项目的设计工作。



临港新片区新布局

案例

张江科学城空间战略规划综合能源专题研究

为建设具有全球影响力的科技创新策源地、卓越城市示范区，推动张江科学城从“园区”到“城区”转变，张江科学城建设管理部门决定开展张江科学城空间战略规划 - 综合能源专题研究。公司结合张江科学城扩区规划、产业规划等相关要求，通过分析张江科学城能源发展现状、存在问题及未来需求，基于张江科学城综合能源发展理念，创造性地提出了包含一条主线、三个阶段、四项特征、三层体系、九大模块的“13439”综合能源发展总体架构，充分发挥能源基础支撑、产业创新以及城市服务三大要素功能，保障张江科学城产业发展和人民生活的需求，推动张江科学城能源领域的数智创新，支撑张江科学城的高质量发展，展现了未来综合能源供应、配置、消费和服务的新形态，具有良好的示范效应，对未来综合能源与城市协同发展具有较强的宏观指导意义。



案例

升级国际大都市形象

公司自 2018 年开始参与上海市重点工程“上海市架空线入地项目”，消灭“城市蜘蛛网”，建设融健康休闲与历史风貌于一体的“网红打卡道路”。在核心区进行改造就像在跳动着的心脏上做手术，牵一发而动全身。截至 2021 年，公司完成了徐汇架空线路入地范围涉及田林路、徐家汇等街道 6 个城市分区，普陀架空线路入地范围涉及长征、长风等 5 个城市分区的架空线入地工作。公司获得国网上海市电力公司上海市南供电公司的感谢信，“新速度、心服务”青年突击队被评为“2019 年度上海市青年突击队”。



上海市架空线入地项目

共创技术高地

公司先后承担国家重点研发计划项目《新型光伏中压发电单元模块化技术及装备》、上海市科技项目《深远海域风电场电缆路由条件评估与动态海缆应用环境分析》《数字全息城市能源互联网态势感知与高效运维技术研究及应用》等，获批中国电建重大科技专项课题 1 项，完成重点研究专项课题 25 项。

结合企业生产、经营和管理发展，公司通过开展合理化建议、技术改进、技术攻关、技术革新等活动，为企业解决技术难题、节约成本作出贡献。深化设计生产、科研“双优”人才培育机制，创立数字化研究院，建立半工半研科研方式。公司以人为本，在特定的研究领域构建一支相对固定的研究团队，先后开展“数字化设计研究小组”、“储能技术研究小组”、“海上风电技术研究小组”等专项科研工作，以科技创新引领企业发展，为提升公司的整体实力和综合水平奠定基础。



公司参与设计的全国首个竞争性配置海上风电项目全容量并网



公司主编的我国关于风光储联合发电领域的第一部国家标准《风光储联合发电站设计标准》正式发布



上海市科委社会发展领域项目管理中心柴梅副部长、上海新能源科技成果转化与产业促进中心总工程师罗永浩教授至公司政企携手，共话碳中和

案例

上海电网 35 千伏超导电缆试验示范工程

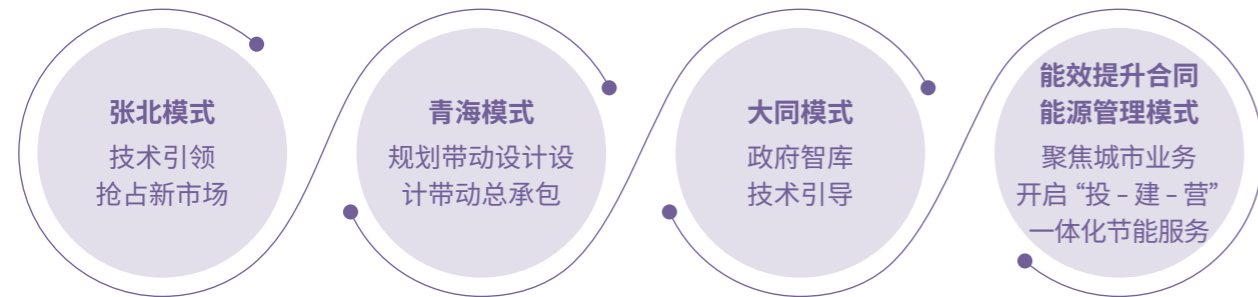
工程是目前世界上输送容量最大、距离最长、接头数量最多、唯一全程排管敷设的超导电缆工程，是国内首个采用全国产二代带材的 35 千伏公里级高温超导电缆示范工程。工程在上海中心城区挂网运行，标志着全球第一条撑起超大城市骨干电网的超导电缆正式登上历史舞台，对超导输电技术的产业化具有重要意义，在城市电网改造、综合管线入地、狭窄走廊主干电网、交/直流互联电网、重负荷高能耗用电企业等场景发挥重要作用，其在电力系统中的应用有助于改变电网的生态，对于新型电力系统超安全智能电网的建设、助力电网双碳目标的达成具有里程碑意义。



公司设计的世界首条 35 千伏公里级超导电缆示范工程正式投运

## 探索商业模式

公司坚持以企业品牌优势和技术优势赢得客户信赖，从“张北模式”“青海模式”“大同模式”到“能效提升合同能源管理模式”，勾勒出业务模式从技术引领、规划先行到投资带动的创新之路。



### 案例

#### 雄电电力调度生产运维中心近零能耗咨询项目

项目是公司首个全过程咨询业务，标志着上海院在城市绿建新业务开拓中取得突破性成果。



### 案例

#### 上海财大豪生大酒店综合智慧节能改造项目

公司自主投资、设计、建设、运营的首个综合智慧节能项目试运行，在原有的城市电网、清洁能源业务基础上，战略性地开始拓展需求侧的智慧节能业务，以此为切入点拓展城市低碳类业务。项目采用高效空气源热泵提供生活热水、热力站节能优化控制、水泵变流量控制和空调箱优化控制四项智慧节能措施，对酒店进行整体能源优化，通过“能源系统优化+数字化管控”实现节能增效，实现锅炉系统综合节能率超过25%，总节费46.7万元/年，节标煤157吨/年，实现多方共赢。



### 案例

#### 乌图美仁项目开创国内光伏组件专列运输的先例

公司总承包的乌图美仁项目在公铁联运模式之后，创新采用中国首个光伏专列进行组建运输，铁路专列模式采用专车、专轨道，大大缩短了运输等待时间，提高了整个流程的运输效率。



## 提升公司品牌影响力

制定品牌建设规划，着力打造电力勘测设计行业“特、优、强”品牌形象。



阿根廷胡胡伊省高查瑞 300 兆瓦光伏电站项目获能源国际合作最佳实践案例奖



海外总承包项目新加坡 LTA C9355 屋顶光伏项目圆满完成

## “两商”权益保障

### 保障“两商”合法权益，公开对“两商”的承诺

与供应商的合作以共同发展为原则，本着公平、平等、互利的要求，明确双方的权利义务，明确分包商、供应商相应的合法权益，通过合作协议等形式公开对分包商和供应商的承诺。

### 将道德、环境等社会责任融入企业采购、分包过程

公司采购合同附有廉洁协议，明确双方责任与义务；定期对采购部门进行风险防控检查，确保采购廉政廉洁性。对合格供应商进行年度评价，涵盖供应商产品或服务的过程对环境、社会的正向影响。

### 监测“两商”社会责任实践

供应商、分包商准入评审时，对其资质资格、财务状况、信誉荣誉、企业业绩、三标体系、各类处罚等进行全方位评审，实现对供应商的事前监管。



## 企业员工命运共同体

### 推行员工持股计划

作为业内唯一一家实行员工持股计划的电力设计企业，逐步建立起以产权多元化为特点的现代企业制度，不断完善法人治理结构和股权激励机制，员工通过职工会持股会持有企业 40% 股权，企业与员工以产权为纽带形成利益共同体，发挥企业职工主人翁意识，形成企业与员工共同发展良好格局，实现企业资产的保值增值。



公司股东会及董事会优化经营决策流程



公司被评为“上海市厂务公开民主管理工作先进单位”

## 员工与和谐劳动关系

### Employees and Harmonious Labor Relations

### 员工录用

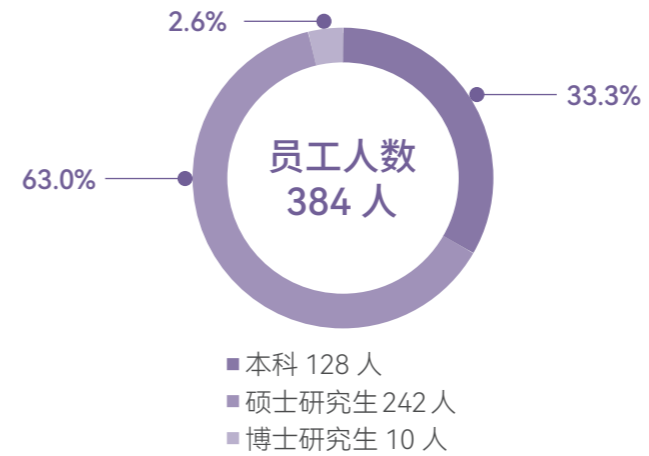
#### 录用程序规范、透明

用工规范，以法律为底线，以社会责任为己任，公开录用标准，制度面前人人平等，决不会出现性别歧视、民族歧视、种族歧视、宗教歧视。

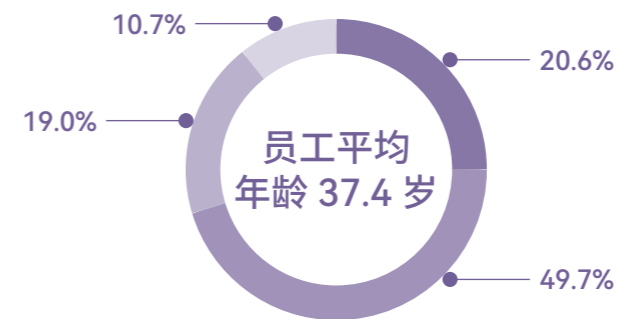
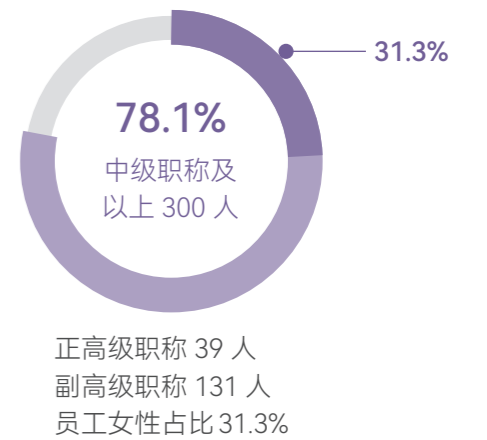
劳动合同签订率 **100%**

### 员工构成

#### 学历



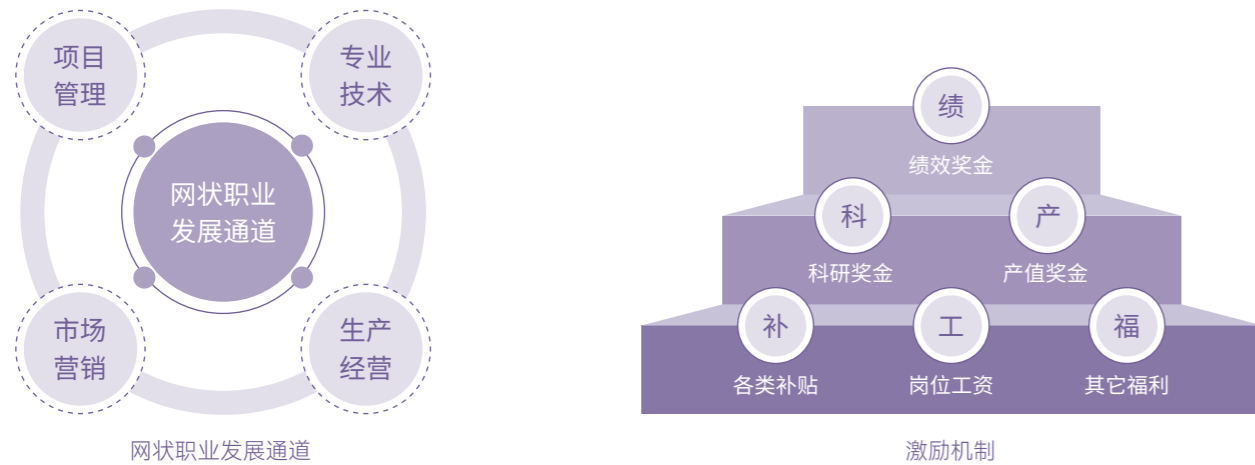
#### 职称



# 员工成长

## 科学规划职业发展

建设岗位主发展通道四条，设立职业发展网，每一条通道均制定薪酬制度。建立“三鹰”及后备人才培养体系，通过体系化、系统化培养使员工成长为有担当、有技能、有品德的复合型人才。



## “三鹰”及后备人才培养体系

### 雏鹰人才：专业技术能力

通过专业能力培养，夯实员工的基础专业技术能力，使员工具备良好的职业素养和专业素质。

### 飞鹰人才：项目管理能力

通过项目管理能力培养，提升项目管理从需求到交付的端到端流程能力，促进项目管理绩效。

### 雄鹰人才：领导能力

通过综合管理能力培养，提升培训对象团队管理和激励能力，促进团队融合，提升团队绩效。

### 后备人才：创新与变革能力

以“一线岗位成长”为主线，培养具有全球化的视野，具备处理复杂问题和应对迅速变化的能力，并善于管理与创新的后备人才梯队。

# 职业健康安全

## 安全宣传教育氛围良好

三标整合型管理体系中，环境和职业健康安全管理有效运行，各项管理活动符合国家法律法规和标准要求。

员工年度健康体检（全体员工）**82.89** 万元

女职工专项体检（全体女员工）**5.35** 万元

职业健康体检（相关岗位人员）**1.37** 万元



项目现场质量、环境、职业健康安全管理体系检查

## 职业健康安全教育活动



2021 年安全生产月启动仪式



组织员工赴上海市公共安全实训基地进行学习体验



安全生产宣传咨询日直播



总承包项目现场安全生产月活动



触电伤亡事故实操应急演练



安全文明施工摄影大赛

## 培训与教育

### 员工培训

144.73 万元

2021 年教育培训总支出

4295 元

2021 年人均使用

100 %

2021 年员工培训覆盖率

- 新员工入职培训
- 雏鹰计划
- TTT 培训
- BIM 样板培训
- 网络学院培训
- 其他培训
- 网络平台升级
- 基础课件扩容
- 管理制度升级



跨部门讲座



雏鹰计划开营仪式



部门开放日



素质拓展



线上培训



BIM 样板培训



新员工培训逐梦起航“狮”舞飞扬

## 权益保护

### 社会保障与保险实施

严格按国家规定为员工缴纳五险一金，购置意外险，员工工作生活更添保障。

- 上海市职工保障互助会“在职住院基本保障 A0”“在职住院加强保障 A3”“特种重病加强保障 B2”3 类新险种
- 《上海市退休职工住院补充医疗互助保障计划》
- 上海工会会员服务卡基本保障计划



项目现场慰问

### 案例

#### 为员工提供员工宿舍

为应届毕业在沪无固定房产的员工提供环境良好的员工宿舍，降低员工生活成本，助力人才发展，将公司对员工关怀延伸至工作 8 小时外。



## 民主管理

### 信息公开民主集中管理

坚持信息公开长效机制，涉及员工切身利益的重大问题经由职代会或民主管理综合小组审议，审议过程、意见反馈、执行情况、执行效果等全过程通过相关渠道公开。公司规章制度、重大事项、岗位公式、工会活动等门户网站同步公示。

探索职工参与民主管理的有效方式，从职工切身利益出发，倾听职工心声，广纳一线建言，扎实做好职工思想工作，传承调研、家访、谈心等传统方式，加强与职工面对面、心贴心的沟通交流。



公司七届五次职代会、职代会、四届五次职工持股会员代表大会暨 2021 年工作会议

## 员工沟通 and 关爱

### 引导员工参与国际文化大都市建设



2020 年度上海市重点工程实事立功竞赛 优秀公司 2020 年度上海市重点工程实事立功竞赛优秀团队及个人

### 推进社会主义核心价值体系建设

● 全面开展全国、上海市文明单位创建工作



全国文明单位



2019—2020 年度上海市文明单位

● 开展庆祝建党 100 周年暨先进表彰大会、党的十九届六中全会精神宣讲，深入开展党史学习教育，打造“十大”学习套餐，将党史学习融入推进改革和高质量发展的全过程，弘扬爱国主义精神。



“奋斗百年路，启航新征程”建党 100 周年暨先进表彰大会

党组织建设示范点“巡展评”

● 开展“责任讲堂”、“智汇学堂”等形势任务教育、专题党课，树立品牌文化，统一党员群众思想，激发改革创新动力。



责任讲堂



智汇学堂

● 抓好员工素质工程，提高岗位技能、市场竞争能力。



何仲都市电网变电工程劳模创新工作室



市经信团工委青年党史学习教育 工作交流优秀奖



公司首届质量月脱口秀



上海院“攻城狮”足球队参加中国电建团委“青年杯”足球赛

● 学习先进人物，弘扬肯于吃苦、乐于奉献、勇于创新精神。



2021 年度上海市巾帼文明岗



2021 年度上海市三八红旗手



2021 年度上海市经信系统巾帼建功标兵

### 引导员工践行社会主义荣辱观



集中观看建党百年庆典



“建功山海风光，志在天地四方”  
2021 年“公司日”

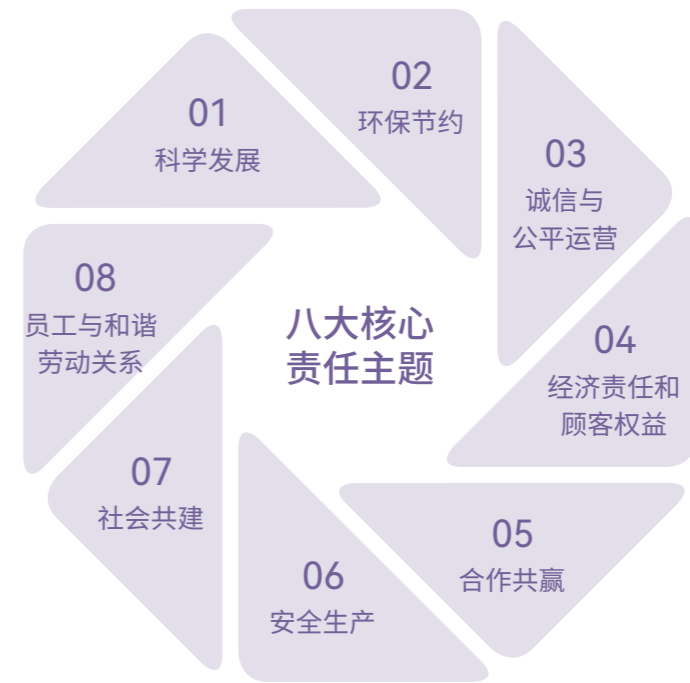


与农行上海黄浦支行联动开展  
“学党史，重历百年征程”党史主题活动

## 社会参与和发展

Social Participation and Development

### 履责核心



### 社会责任观

公司以“责任”、“发展”为主线，立足业务特点，构建三个层面管理体系，紧密围绕八大主题，聚焦社会需求，将社会问题转化为发展动力，为社会、政府以及客户提供绿色、安全、高效的电力能源规划和工程咨询、设计及建设总承包全过程服务，持续提高经济、社会、环境综合价值创造能力。



## 疫情防控 复工复产

做好疫情防控，有序推进复工复产。组织全体员工进行新型冠状病毒肺炎疫苗接种，全年累计集中组织开展疫苗接种 1205 人次，形成疫情防控常态化、精准化管理机制，有效保障重点项目、重大活动疫情防控平稳有效开展，对海外项目人员实行“一对一”联络机制，全年未出现新冠肺炎疑似或确诊病例。



“留沪不留单”活动为留沪群体送上春节问候



复工防疫抓严抓实不放松



海外人员严格按照规定进行防护



保障员工防疫生活物资

## 社会建设

企业是社会的经济细胞，也是社会的重要成员，关注民生、回报社会是且应尽的责任和义务。公司倡导“爱心、诚信、平安、和谐”理念，积极发挥企业优势和员工积极性，营造和谐共赢企业氛围，建设和谐文明社区环境。

### 捐助活动

序号	捐助对象	捐助方式	单位	金额
1	上海市慈善基金会	捐款	万元	8.50
2	响应上海市“结对百镇千村·助推乡村振兴”行动计划，与崇明竖南村签订城乡党组织结对帮扶（共建）协议，开展“五联创建”结对帮扶	捐赠	万元	10.00
3	助力湖北省特色农产品	经济扶持	万元	13.88
4	助力云南省剑川县和新疆自治区民丰县全面打赢打好脱贫攻坚战	经济扶持	万元	28.00
5	贫困助学	党员募集 公司捐款	万元	1.45

### 案例

组织员工参加“双百爱心”活动，以实际行动采办定点扶贫的云南省剑川县和新疆自治区民丰县，助力脱贫攻坚。

### 案例

积极履行央企社会责任，结合业务特色和地域需求，积极响应上海市实施“结对百镇千村·助推乡村振兴”行动计划，持续落实与崇明竖南村城乡党组织结对帮扶（共建）协议工作，开展“五联创建”结对帮扶，通过经济支持、党支部联合党课、走访慰问等方式，为结对村镇的经济、文化带来新契机。



持续与竖南镇竖南村开展城乡党组织结对帮扶共建  
出资修建改造老年活动中心



参与竖南村党史学习教育唱红歌活动



## 志愿服务

开展助残阳光行动主题活动 **37** 次 参与 **300** 余人次

党团员参与率 **95** % 员工覆盖率 **58** %

### 志愿服务与 VR 技术结合

在建党百年之际开展赴打浦桥街道阳光之家、宝山区大场党群服务中心开展“庆建党百年，做时代先锋”主题志愿服务活动，关注、服务弱势群体，将上海院先进 VR 技术带进社区群体，普及行业知识，展现企业形象，坚持传承雷锋精神，坚持传递正能量，履行企业社会责任，向社会传递爱和阳光。



三五学雷锋 VR 体验活动入社区



社区阳光之家、日托所慰问活动



员工每年参加义务献血





04

# 社会责任 十年回顾

REVIEW OF TEN YEARS OF  
SOCIAL RESPONSIBILITY

### 十年社会履责里程碑

年度社会责任报告 (2012—2021)



每年获得上海质量体系审核中心第三方评价证书

上海市经济团体联合会、上海市工业经济联合会“上海市企业社会责任报告发布会”发布证书



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原公司党委书记、董事长余寅受邀在第五届“上海市企业社会责任报告发布会”发言，展示公司改革发展成果和社会履责成效

上海市杨浦区第五届“慈善之星”优秀集体



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中国电建“社会责任优秀案例征集评选”

《“领跑者”背后的领跑者》一等奖

《把光伏扶贫这种切实可行的事抓紧做起来》二等奖

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第十届上海市“慈善之星”提名奖





05

责任展望

PROSPECTS FOR RESPONSIBILITY



以史为鉴，开创未来，埋头苦干，毅勇前行。公司将坚持可持续发展的理念，以科学发展为主题，积极主动致力于社会责任的履行和宣传，努力构建以人为本、清洁环保、和谐发展的良好生态环境。

聚焦高质量发展。以市场为导向，发展优势，不断提升企业价值创造和效益，以公司战略和企业转型发展为指引，建设适应公司战略发展的全员营销管理体系和机制。

锻造服务质量品牌。以加强服务质量、提高管理能力为目标，加强项目社会责任管理工作，提升客户满意度，增强品牌影响力。

创新驱动行业发展。不断攀升技术高端，增强公司核心竞争力和发展新动力，加强与政府、高校技术合作，国际技术交流，内部技术论坛建设。

扩宽人才成长通道。提升人力资源管理水平，积极探索员工职业发展导向体系。制订和实施适应公司战略发展的人力资源规划。完成适应公司组织机构调整，促进市场拓展、科技发展和服务客户的组织机制。建设并实施员工职业发展导向体系，促进专家型、复合型人才队伍建设。

打造低碳绿色家园。倡导员工和相关方开展保护和谐生态系统行动，将节能减排理念融入设计、施工、建造、运行全过程，进一步为推动行业节能减排、生态保护、绿色发展做贡献。

以共生共赢导向，引导相关方参与社会责任实践，积极了解客户及利益相关方期望、诉求，共同构建清洁、环保、节能生态环境，营造良好内外部环境，实现利益各方共同发展。



中国电建  
POWERCHINA

上海电力设计院有限公司  
POWERCHINA Shanghai Electric Power  
Engineering Co., Ltd.

# 2021 SOCIAL RESPONSIBILITY REPORT



中国电建  
POWERCHINA

上海电力设计院有限公司  
POWERCHINA Shanghai Electric Power  
Engineering Co., Ltd.



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01

BASIC INFORMATION

## ABOUT US

POWERCHINA Shanghai Electric Power Engineering Co., Ltd. (SEPD, English name: POWERCHINA Shanghai Electric Power Engineering Co., Ltd., hereinafter referred to as "the Company") is a holding subsidiary of Power Construction Corporation of China.

The Company has Grade A qualifications for the survey, design and the consulting of national electric power industry and consultation for power generation, transmission and transformation engineering. As a technology-based energy engineering consulting firm, the Company mainly concentrates on providing consultation, design and general contracting and related services for electric power engineering construction. The Company operates in 31 provinces, cities and autonomous regions throughout China, and develops business across many countries in Asia, Europe, America, Africa, etc. The Company has unique core technologies in planning, consultation and design for urban power grid and new energy engineering, etc., reaching the international leading level in the design technologies of wind/photovoltaic/energy storage hybrid power system, UHV/HV underground substation, UHV/HV cables and building-integrated solar photovoltaic power generation.

Over the years, the Company has been awarded "the Outstanding Company of Excellent Performances in Key Projects in Shanghai" and "Shanghai Hi-tech Enterprise", and has won honors including "Shanghai Mayor Quality Award", "International Asia Pacific Quality Award" and "National Quality Award" and "National Civilized Unit" so on, in 2021, the Company was awarded "Outstanding Enterprise of Shanghai Corporate Social Responsibility Report Conference".

As of 2021, the Company has compiled 16 national standards, 53 industry standards and Shanghai standards, has been granted 282 patents, including 55 invention patents, has been granted 179 honors at the provincial or ministerial level and above in engineering design and consulting projects, including 66 awards above the first prize at the provincial or ministerial level, has won 61 Technology Progress Awards at the provincial or ministerial level and above, and has achieved approval of more than 100 science and technology projects each year. Moreover, the Company has undertaken 5 national science and technology projects and 1 project under research.



### National Wind/Photovoltaic/Energy Storage and Transmission Demonstration Project

The world's largest renewable energy comprehensive utilization project integrating wind power, photovoltaic power, energy storage and smart transmission.



### Transmission Line Project of 110kV Step-down Station in Yangshan DeepWater Port

Project of the world's longest high voltage cable crossing the bridge



### 500kV HONGYANG Underground Substation

The world's first 500kV substation project integrated with office buildings



### Solar Photovoltaic Power Generation Project of Shanghai Hongqiao Station of Beijing-Shanghai Express Railway

Asian largest BIPV (Building Integrated Photovoltaics) power generation project

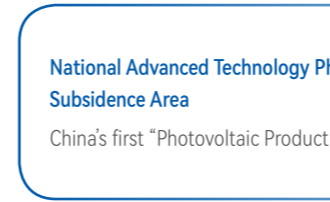
### Transmission Line Project of 500kV WORLD EXPO Substation and Transmission Line Project of 500kV HONGYANG Substation

China's two longest 500kV tunnel cable line projects



### Solar Photovoltaic Demonstration Project of Chongming Qianwei Village

China's first megawatt-class photovoltaic power generation project with grid-connected energy sale put into commercial operation



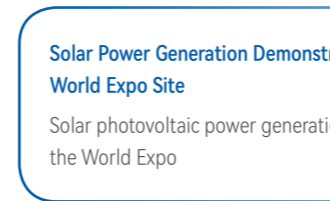
### National Advanced Technology Photovoltaic Demonstration Base in Shanxi Datong Coal Mining Subsidence Area

China's first "Photovoltaic Product Top-Runner Certification Scheme" project



### 220kV Chongming Interconnection Project

The bridge and tunnel integrated project with the world's longest high-voltage cable



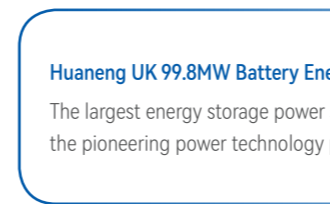
### Solar Power Generation Demonstration Project of China Pavilion and Theme Pavilion of Shanghai World Expo Site

Solar photovoltaic power generation plant to power the China Pavilion and Theme Pavilion of the World Expo



### Shanghai Central 110kV Substation EPC Project

China's top highrise, the key municipal project of Shanghai



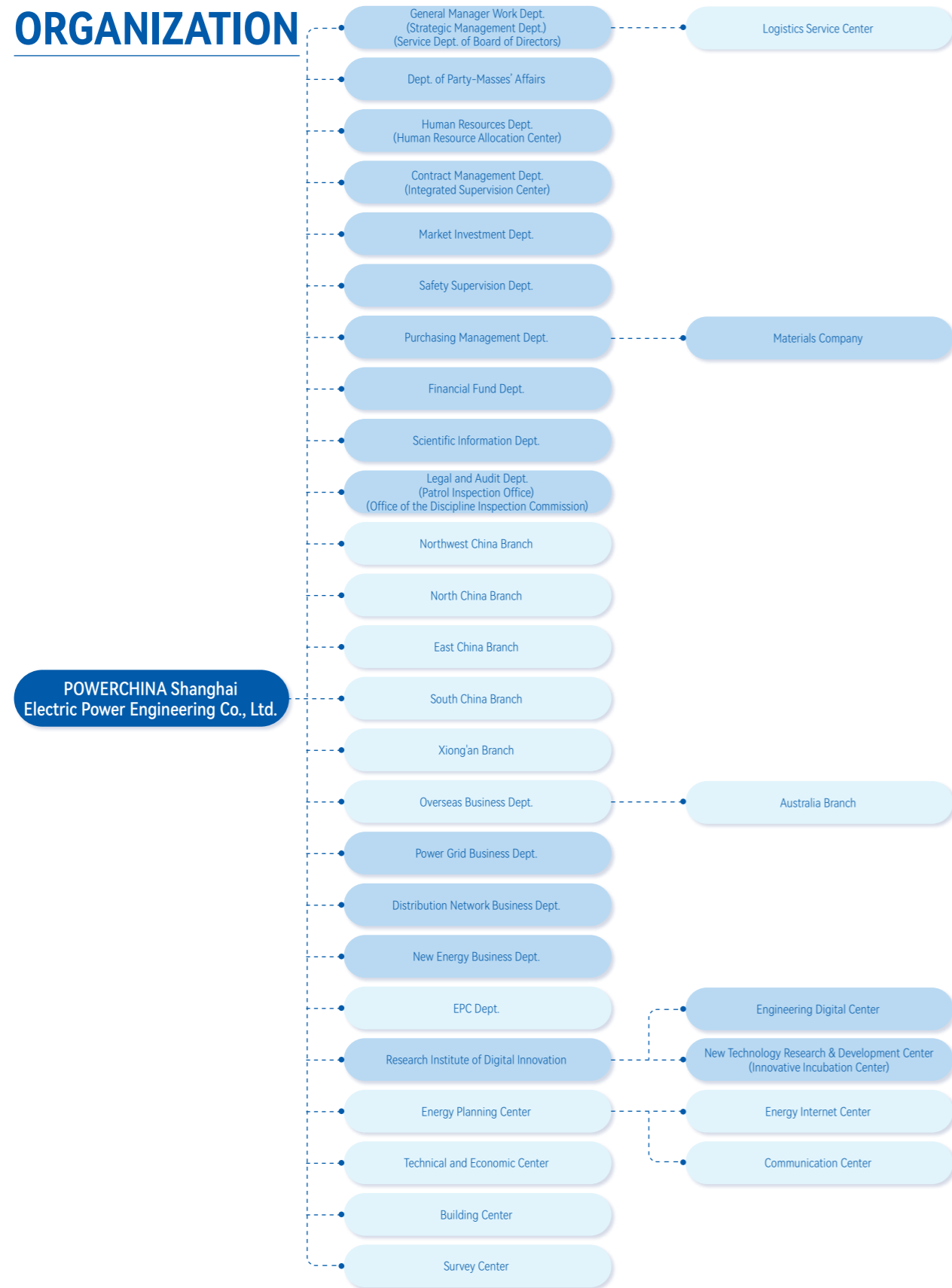
### Huaneng UK 99.8MW Battery Energy Storage Station Engineering Survey and Design Project

The largest energy storage power station in the United Kingdom and even in Europe, the pioneering power technology project located in London.

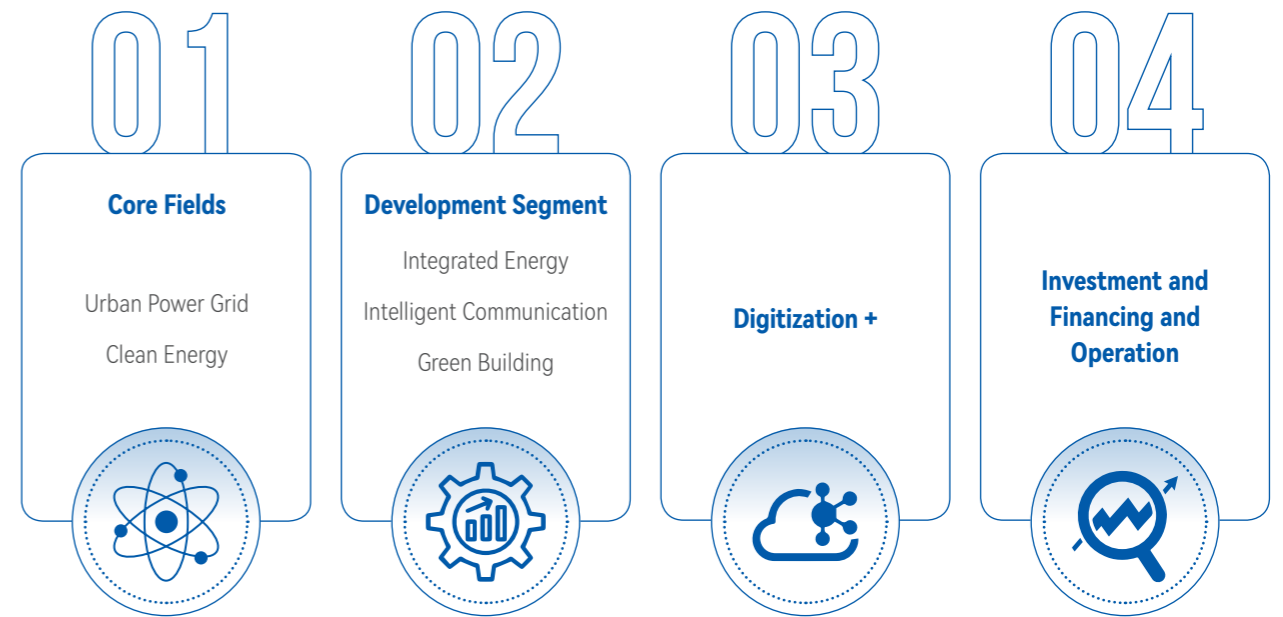




# ORGANIZATION



# BUSINESS SEGMENTS



Full life cycle services, integrated solutions



Design platform/management platform/Smart Operation ...

New energy development/Contract energy management ...

# BUSINESS DISTRIBUTION

As of 2021, the corporate business is distributed throughout 31 provinces, cities, autonomous regions across China and 36 countries.

### Americas

- Dominica
- Argentina
- Venezuela
- Colombia
- Chile

### Africa

- Egypt
- Ethiopia
- Nigeria
- Ghana
- South Sudan
- Gabon
- Uganda
- Kenya
- Congo (Kinshasa)
- Rwanda
- Mozambique
- Malawi
- Zimbabwe
- Zambia

### Europe

- The United Kingdom
- France
- Malta
- Turkey

### Asia

- Singapore
- Philippines
- Japan
- Kuwait
- Kyrgyzstan
- Pakistan
- India
- Myanmar
- Laos
- Guam
- Indonesia
- Saudi Arabia

### China

#### Main business area

- Shanghai
- Jiangsu
- Zhejiang
- Inner Mongolia
- Hebei
- Shanxi
- Shandong
- Qinghai
- Gansu
- Liaoning
- Heilongjiang
- Shaanxi
- Guangdong
- Guangxi
- Anhui
- Tibet
- Jiangxi
- Hubei

#### Business covering area

- Tianjin
- Beijing
- Sichuan
- Yunnan
- Henan
- Ningxia
- Fujian
- Chongqing
- Xinjiang
- Jilin
- Guizhou
- Hainan
- Hunan

### Oceania region

- Australia



# 02

## STRATEGIC MANAGEMENT

The Company issued the “14th Five-Year Plan” strategy, upgraded the brand-new mission, vision, values and strategic positioning, clarified the overall strategy of focusing on the two business areas of “energy” and “city”, and deeply implementing the key strategies of “digitization”, “diversification”, “integration”, “leanness” and “platformization”, and drew up the strategic objectives, development ideas and implementation steps in the new period and new stage.

## Strategic Positioning

As an innovation leader in the field of green energy development and an important participant in the field of smart city construction, the Company provides customers with intelligent comprehensive solutions.

## Strategic Objective

By the end of the 14th Five Year Plan, it has developed into a leading enterprise with first-class system integration solution capability, significant digital innovation drive, obvious resource integration advantages, coordinated development of multiple business sectors, lean and efficient operation and management, and the highest quality development characteristics in the industry. Enter ENR China's top 60 engineering design enterprises and Top 80 engineering contractors.

## Development Ideas

The overall strategy of focusing on the two business areas of "energy" and "city", and deeply implementing the key strategies of "digitization", "diversification", "integration", "leanness" and "platformization".

## CORPORATE CULTURE

### Mission

Building green and efficient energy; Serving low carbon smart city

### Vision

First class scientific and technological engineering consulting company in the field of green energy and smart city

### Value

Honesty, innovation, symbiosis and win-win

### Enterprise Spirit

High quality, excellent design, first-rate service

### Corporate Philosophy

We do it better





03

**RESPONSIBLE PRACTICE AND  
PERFORMANCE**

# SCIENTIFIC DEVELOPMENT

## MAIN TECHNOLOGIES

### International Leading

- Design technology of large scale solar photovoltaic power station
- Design technology of wind/photovoltaic/energy storage hybrid power system
- Key technologies of intelligent distributed microgrid energy supply system
- Design technology of superconducting
- Key design technology of large capacity wind farm in complex environment

### International Advanced

- Multiple energy storage technologies in Smart Grid
- Design technology of UHV/HV underground substation
- UHV/HV cable design technology
- Design technology of Building-integrated solar photovoltaic power generation
- Planning technology of World-class urban grid

### Domestic Leading

- Design technology of flexible DC transmission and transformation
- Design technology of solar thermal power generation
- New energy grid connection technology
- Planning technology of Urban grid
- Design technology of smart substation
- Planning technology of regional (base) energy
- Key technologies of intelligent distribution network
- Key technologies of optical energy storage and charging station



The Company has the title of Shanghai High-tech Enterprise, 1 national key R&D project under research and 1 key project of The Science and Technology Commission of Shanghai Municipality (STCSM); 1 project of STCSM, 1 major project of China Power Construction, and 4 key projects were approved. 8 key projects were appraised by Power Construction Corporation of China as internationally advanced, internationally advanced or domestically advanced. The Company has 1 national consulting achievement, 1 provincial and ministerial engineering survey and 3 group-level scientific and technological progress awards, of which 7 provincial and ministerial engineering designs have improved the application level of scientific and technological achievements in the company's production by compiling scientific and technological achievements and enabling knowledge management platform.

Science and technology investment in 2021

**11,158.7** million yuan



Power Construction Corporation of China Science and Technology Innovation Advanced Collective



The 4th Digital China Construction Achievement Exhibition

In 2021, 28 patents were granted, including 5 inventions and 23 utility models. The Company has applied for 60 patents, including 32 inventions and 28 utility models; The Company has published 71 papers (including 3 enrolled in SCI, 12 in EI and 9 in Peking University core periodical catalogue). The company has compiled 53 items of standards. The Company issued 2 national standards, such as Design Code for Wind-Solar Storage-Transportation Combined Power Station and Application Technical Code for Building Photovoltaic System. The Company issued 7 industry standards such as Code for Calculation of Bill of Quantities of Electric Power Construction Projects, Substation Engineering and Guidelines for Compilation of Technical and Economic Indicators of Cable Transmission Line Engineering. The Company has completed the approval of the national standard Code for Construction and Acceptance of Electrochemical Energy Storage Power Station and the industry standard Technical Regulations for Design of Urban Power Cable Lines in English.

Patents were granted in 2021

**28** term



Certificate of Shanghai High Tech Enterprise

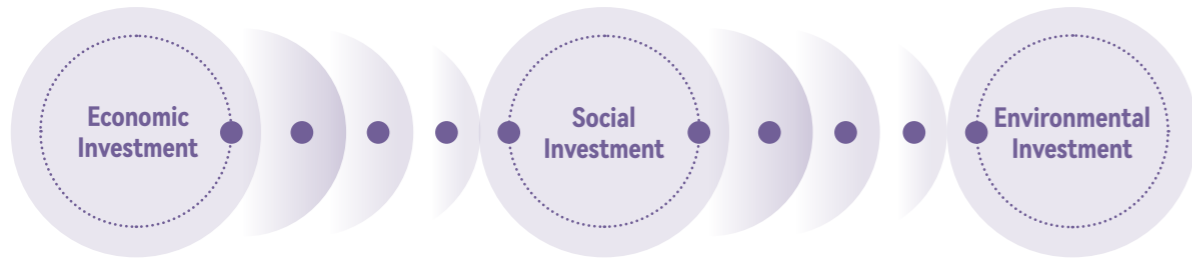


"Zhangjiang Science City Comprehensive Energy Planning" won the first prize of 2020 National Excellent Engineering Consulting Achievement Award



Cost information platform (PCM) was launched online

## DEVELOPMENT INVESTMENT



Focusing on the combination of the industry and people's livelihood to promote regional development

Focusing on the cutting-edge technology of the industry at home and abroad to promote the development of science and technology

Focusing on ecological balance and sustainable development to promote the harmonious development of the ecology

### Cases

#### JingnengKangbao Wind Power Project

As the supporting infrastructure for the Beijing 2022 Winter Olympics, it is responsible for green electricity supply for the Beijing-Zhangjiakou Winter Olympics and clean heating for the capital. It is an important measure to fulfill the commitment of sustainability of the green Winter Olympics with high standards and promote energy cooperation in the Beijing-Tianjin-Hebei Region. The annual electricity consumption of the project is about 1.04 billion kWh, which can save about 320,000 tons of standard coal and 850,000 tons of carbon dioxide for the power grid every year, save a lot of traditional power plant water and reduce water pollution such as drainage.



### Cases

#### Yunding, Zhangjiakou 110 kV Transmission and Transformation Engineering Project

It is an important power supply guarantee project for Chongli competition area of Zhangjiakou City, Beijing 2022 Winter Olympics. The Chongli area where Yunding Station is located is mountainous terrain. The company overcomes the unfavorable factors such as complex terrain and difficult route selection, and uses advanced technical means such as 3D design to ensure the electricity demand of Chongli competition area of Beijing Winter Olympics.

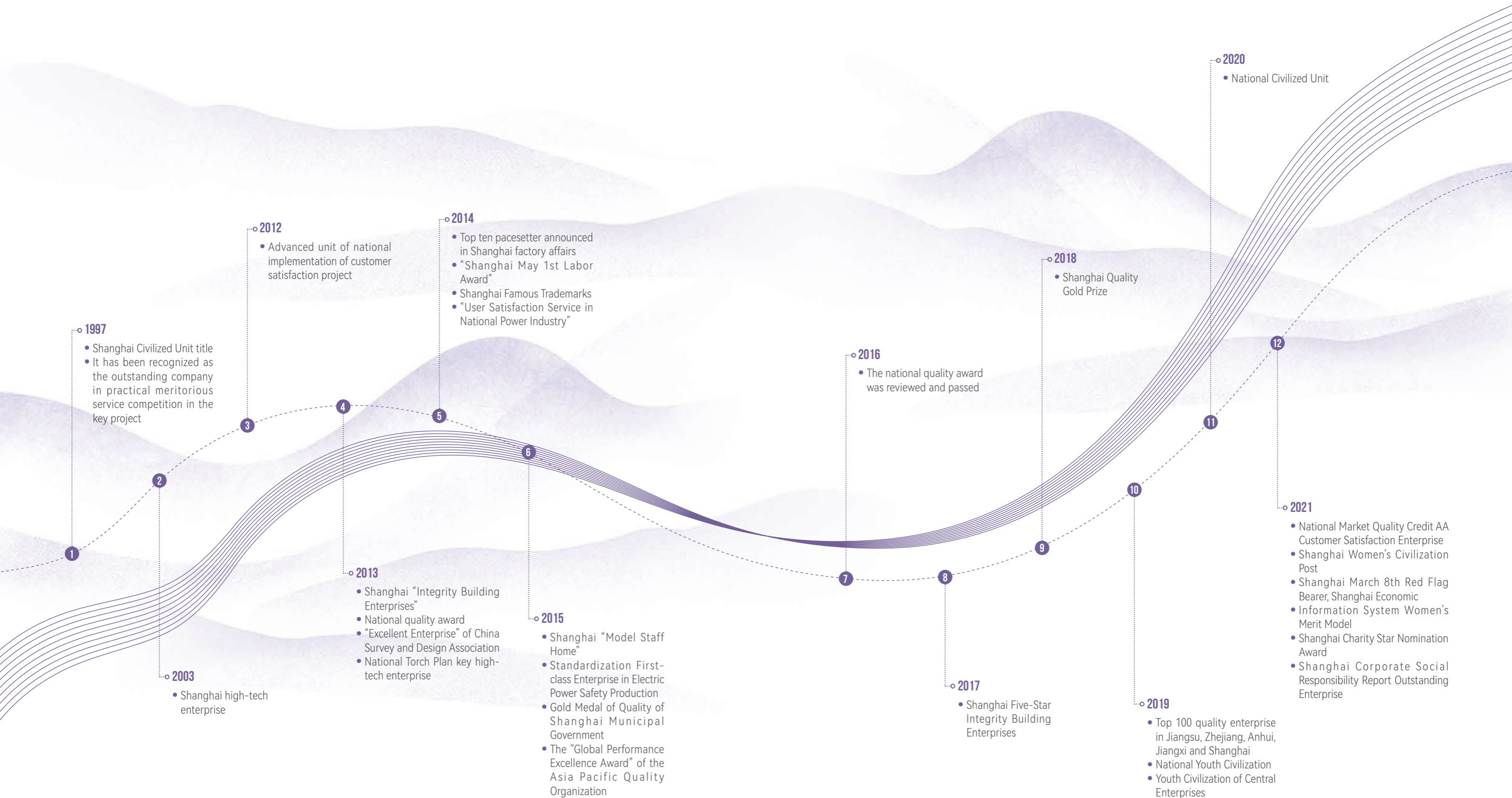


### Cases

#### Shanghai Rail Transit Construction Project

Since the beginning of the 1990s, the Company has been serving the construction of Shanghai Rail Transit, undertaking the design of 110kV substation of Line 1, the first rail transit in Shanghai, and has undertaken the design of main substations of all lines in operation and under construction in Shanghai rail transit. In 2021, the company has undertaken major projects in Shanghai, such as Fengbang depot main substation of line 14, Jinqiao Parking Lot main substation, Zhongning Road main substation, Xiepu Road main substation, etc. It takes Shanghai's construction and development as a political task, pays attention to the harmonious development of society and enterprises, and fully assumes corporate social responsibility.







# GOOD FAITH AND FAIR OPERATION

The contract performance rate is

**100** %

The Company pays attention to contract management, and “Contract Management Measures” covers the whole process, combined with comprehensive management and control of information system.



Contract Abiding and Credit Respecting Enterprise in Shanghai



Company Credit Rating: AAA



Contract Credit Rating: AAA



2021 National Market Quality Credit AA Customer Satisfaction Enterprise

## Sound Customer Complaint System



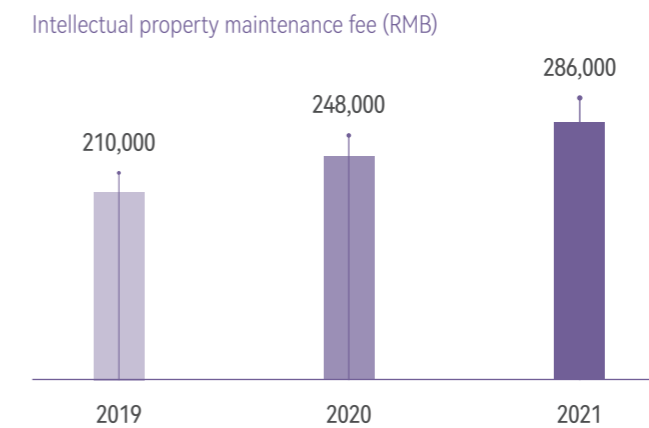
# Financial Management Standards

- Strengthen the establishment of rules and regulations, consolidate the accounting foundation, and improve the financial internal control management.
- Focus on the integration of industry and finance, improve the information system, and improve the efficiency of financial management.
- Strengthen budget management, focus on process control, and ensure the implementation of the company's goals.
- Innovate the financing management, guarantee the capital demand and improve the efficiency of capital use.

# RESPECT FOR PROPERTY RIGHTS

## Intellectual Property Protection

Avoid infringement effectively, evaluate the validity of property rights regularly, and conduct intellectual property literature retrieval and “three nature review” (novelty, creativity and practicability) by professional lawyers. For jointly owned property rights, strictly abide by relevant contracts and national laws and regulations, and safeguard the rights and interests of enterprises and stakeholders. Formulate relevant policies and regulations on intellectual property rights in the Measures for the Administration of Intellectual Property Rights, the Measures for the Award of Scientific and Technological Achievements, and the Measures for the Administration of Scientific and Technological Papers.



## PROMOTE THE HEALTHY AND SUSTAINABLE DEVELOPMENT OF THE INDUSTRY

50 term

participates in the formulation of 50 national, industrial and local standards and specifications in 2021

The Company carries out design consulting activities according to relevant industry standards and specifications, and actively participates in the compilation of relevant specifications according to more than 500 referenced standards and specifications, so as to promote the further development of industry standards. In 2021, it participated in the formulation of 50 national, industrial and local standards and specifications.

### Participating in the Formulation of Industry Standards and Norms in 2021

Name of Standards	Nature	Editor-in-chief or Editor
Guidelines for Environmental Impact Assessment of Electrochemical Energy Storage Power Plants	National	Chief Editor
Design Code for Design of Wind-Photovoltaic-Energy Storage & Transmission Power State	National	Chief Editor
Code for Construction and Acceptance of Electrochemical Energy Storage Power Station	National	Participant
Code for Power Distribution Engineering Project	National	Participant
Design Guide of Vanadium Flow Battery	National	Participant
Technical regulation for design of urban power cable lines (English Version)	Industry	Chief Editor
Terms of electric energy storage	Industry	Chief Editor
Code for Planning and Design of Distributed Renewable Energy Power Cluster with High Permeability	Industry	Chief Editor
Code for Design of AC Superconducting Power Cable Lines up to 35kV	Industry	Chief Editor
Code for Calculation of Bill of Quantities of Electric Power Engineering (Substation Engineering)	Industry	Chief Editor
Guidelines for Compiling Technical and Economic Indexes of Transmission Line Engineering	Industry	Chief Editor
Specification for operation and maintenance of gas distributed energy supply system	local	Chief Editor
Installation Design Code for 10kV Prefabricated Substations	local	Chief Editor
Technical Standard for Electric Vehicle Charging Infrastructure Construction	local	Chief Editor
.....		

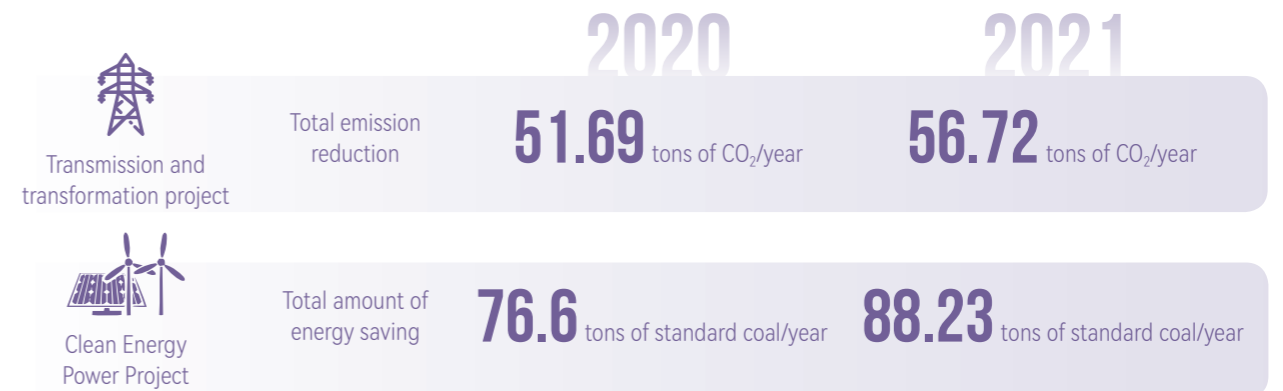
## ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION

In 2021, the Company successfully passed the “three standards” management system certification, supervision and audit of quality, environment and occupational health



## PERFORMANCE OF ENVIRONMENTAL PROTECTION AND GOVERNANCE

### Embedded Green Concept



## GREEN TECHNOLOGY AND PRODUCTION

- Consultation and design** To respond to the requirements of a resource-saving and environmental-friendly society with full consideration of the impact on the environment.
- Project construction** To provide value-added services for environmental protection in strict accordance with the requirements of the environmental protection department.

## GREEN ENGINEERING

Cases

### Demonstration Project of Low-carbon Intelligent Building in Xiong'an Power Dispatching Building

The project is one of the two pilot demonstration projects carried out nationwide on the basis of helping the state grid achieve the goal of "emission peak, carbon neutrality" and building a new power system with new energy as the main body. It plays an important role in demonstrating and guiding the energy consumption transformation and energy and carbon upgrading of small-scale infrastructure of power companies in various provinces. The project closely follows the national strategy, builds an ultra-low-energy, near-zero energy consumption and low-carbon smart building demonstration, greatly reduces the energy consumption on the load side of the building, and supplies energy for the building through sustainable energy such as building photovoltaic. According to the calculation, the comprehensive energy saving rate of the project is more than 60%, and the annual carbon emission can be reduced by 857.82 tons.



Cases

### Power Transmission and Transformation Project in Xiong'an New District of Country Park

It is a new landmark of eco-tourism in Beijing-Tianjin-Hebei region, a model of characteristic villages and towns in northern Xiong'an New District, where rural recreation is the main function. It focuses on the construction of ecological civilization, comprehensively implements the five new development concepts of innovation, coordination, green, openness and sharing, makes overall plans for the overall pattern and blue-green spatial layout, and enhances the overall image. It embodies the ecological barrier, water conservation, leisure and recreation functions of large-scale forest land, highlights natural wild interests, strengthens ecological, natural and humanistic characteristics, and helps the green Xiong'an new journey.



Cases

### Guangzhou InterContinental Central Air Conditioning System Optimization and Energy Saving Project

Guangzhou InterContinental is located in Pazhou, Guangzhou, a landmark building with a total height of 176 stories. Based on the optimized energy-saving strategy of "eliminating waste, controlling wind and water jointly, and improving energy efficiency", the Company jointly optimizes and controls the cold source and the end air system of the air conditioner, comprehensively optimizes the air balance and water balance of HVAC, controls the humidity level, improves the comfort of the hotel, and significantly reduces the annual energy consumption of the hotel. After the intelligent energy-saving transformation of the air-water system of the central air-conditioning in the hotel, the total energy-saving benefit is RMB1.357 million/year, saving 521 tons/year of standard coal and 1,426 tons/year of carbon emission.



## SAFETY PRODUCTION

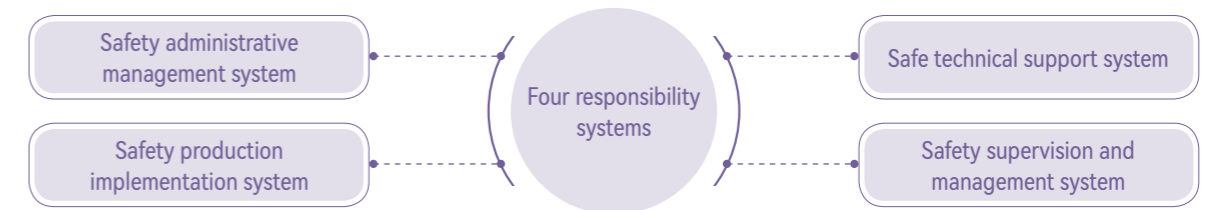


Safety concept: safety creates fortune and happiness!



## SAFETY PRODUCTION MANAGEMENT

### Sound Safety Production Responsibility System



### Safety Production and Occupational Health

The company has established and improved the safety production system, with 32 existing safety production and occupational health management systems, and constantly improved the duty list of important safety production posts, covering a total of 76 posts at the three levels of the company, department and project department, which fully reflects the "horizontal and vertical to the end" coverage.

### Enhance the Ability of Prevention and Emergency Response

The company conducts professional safety education activities, such as fire fighting for escape and evacuation drills, traffic police for new traffic regulations, doctors for health consultation, safety supervision for policy interpretation, etc., to enhance the professionalism and authority of safety education and training.

Cases

### China Mobile's Expansion Project Goes all out to Fight Severe Typhoon In-Fa

On the occasion of the No.6 Severe Typhoon In-Fa in 2021, early warning information and emergency materials were released as soon as possible, and general contracting projects in relevant areas quickly implemented special work on typhoon prevention to ensure safety in flood season.



## SAFE PRODUCTION

### Carry Out Safety Production Inspection

In 2021, the Company organized **22** company-level safety inspections

There were **2** narrow safety inspections of full coverage with dragnet

There were **3** special hidden danger inspections for hoisting

The safety inspection coverage rate of the total contracted project is **100 %**

The chairman of the Company led the team **3** times

The general manager led the team for **3** times

The leader in charge led the team for **7** times



The Company's leaders led the team to inspect the general contracting project



## HANDLING OF WORK SAFETY ACCIDENTS

Establishes an emergency plan system consisting of **1** comprehensive plan, **21** special plans and **9** on-site disposal plans.

## ECONOMIC RESPONSIBILITY AND CUSTOMERS' RIGHTS AND INTERESTS

### PROFIT AND ECONOMIC BENEFIT

Revenue from main business: RMB **62.50** billion

Total profit: RMB **0.293** billion

Asset-liability ratio: **79.16 %**

Capital preservation and appreciation ratio: **126.93 %**

Return on equity: **37.32 %**

Economic value added EVA: RMB **0.273** billion

### Main Financial Indexes in the Past Three Years

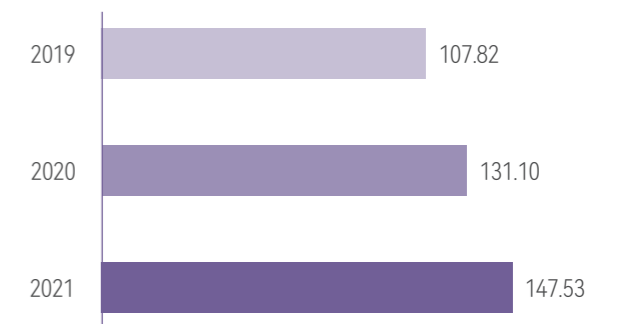
Total profit (RMB Hundred-million)



Asset-liability ratio (%)

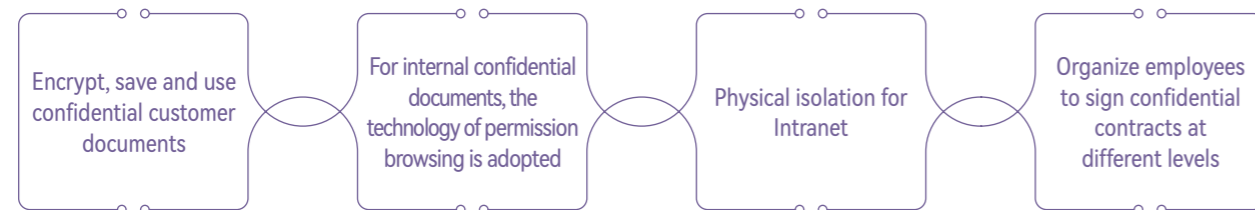


Overall labor productivity (RMB Ten-thousand/person)



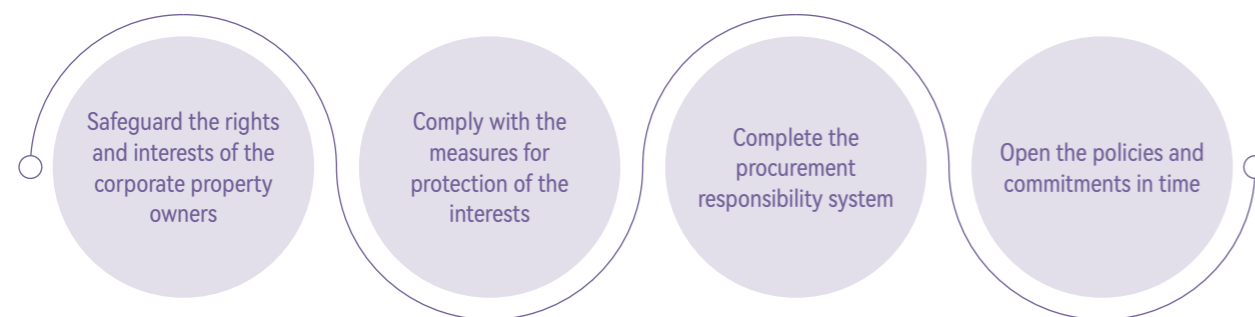
## PRODUCTS AND SERVICES

Establish customer management files; Quick response to customers' opinions; Protecting customer information security.



Launching Ceremony of Shanghai "Quality Month" and 20-year Publicity Activities of Shanghai Municipal Government Quality Award

## RESPONSIBILITY TO SUPPLY CHAIN PARTNERS



## WIN-WIN COOPERATION

### SERVING THE NATIONAL STRATEGY

The Company's "Intelligent Platform" team and "Typical Design" team, under the guidance of Xiong'an New District's concept of high starting point planning, continue to carry out in-depth research on power grid planning and technology related topics in Xiong'an New District. In 2021, four projects, namely, 220kV Power Transmission and Transformation Project in Jucun, 110kV Power Transmission and Transformation Project in Hexi, "1+5+x" Auxiliary Power Facilities Project around Jucun and 110kV Line in Hexi-Aowei, were completed and put into operation; the construction of Nanzheng 110kV Power Transmission and Transformation Project, the first intelligent benchmarking station in Xiong'an New District, marks that the trial of Xiong'an standard in the power industry has reached a new stage; the Company cooperated with Xiong'an New District Power Supply Company of State Grid Hebei Power Grid Co., Ltd. to formulate local standards for electric power design, offered suggestions for the integration of power grid planning, security, electric facilities and urban landscape, helped Xiong'an city construction from full voltage level, and made contributions to green energy lighting Xiong'an.



The first target distribution network double-loop network frame project in Xiong'an New District designed by the Company was put into operation

Xiong'an New District 110kV Hexi Station, the first sinking courtyard substation in China designed by the Company, was successfully put into operation

The company's first domestic negative carbon building consulting project by the Company in Xiong'an New District

#### Cases

#### House Surface Distributed Photovoltaic Power Generation Project of Xiong'an Station

The project is the first major infrastructure project in Xiong'an New District, and the concept of green development runs through the whole process. The appearance of the station building of Xiong'an Station is shaped like a drop of water, with the theme of "Green Lotus Drops", and the design concept is inspired by Xiong'an water culture. The total installed capacity of the project is about 6MWp, the number of photovoltaic modules is about 17,700, the laying area is 42,000 square meters, and the annual average on-grid electricity consumption is about 5.82 million kWh. It realizes spontaneous self-use and the surplus electricity is connected to the Internet, which can save about 1,800 tons of standard coal and 4,900 tons of carbon dioxide emissions for the power grid every year. Xiong'an Station is known as "high-speed railway station that can generate electricity".



#### Cases

#### Rongdong (Jucun) 220kV Transmission and Transformation Project in Xiong'an New District

The project is not only the Company's first project in the power grid of Xiong'an New District, but also the first planned power grid project in the power grid of Xiong'an New District. It conforms to Xiong'an New District's concept of green, environmental protection, openness, sharing and coordinated construction and development, and makes use of the surrounding parks and green spaces to start slopes. The park is covered with soil to the roof height of the substation, so that the substation and the park are integrated, and the surrounding slope underground space is used to introduce the electric power supporting facilities. It won the "First Prize of 2020 Excellent Engineering Consulting Achievements in Electric Power Industry" and "First Prize of the First BIM Competition in Engineering Construction Industry", and was awarded the first place in the "Most Beautiful Substation" of Hebei Electric Power Company of State Grid in Xiong'an New District.



Cases

**Power Transmission and Transformation Project of Block G Resettlement House and Supporting Facilities Project in Rongdong Area**

It is the first EPC general contracting project of the Company in Xiong'an New District and the first residential power supporting project put into operation in Xiong'an New District. As an electric power supporting project for the resettlement houses and supporting facilities of Block G in Rongdong District, the put-into-operation power distribution room has an access capacity of 98,580 kVA, which undertakes the task of supplying power to 126 buildings and 6,759 households of Block G. The project is the first time in Xiong'an that environmental protection gas insulated ring network circuit breaker cabinets are adopted in large quantities, and Internet of Things devices such as online monitoring of partial discharge and online monitoring of mechanical characteristics are installed in the cabinets; all transformers are dry-type transformers with SCB13 energy consumption grade, which can improve the reliability of power grid operation and actively respond to the goal of "peak carbon dioxide emissions, carbon neutrality" in the 14th Five-Year Plan of China.

**PROMOTE URBAN DEVELOPMENT**

Cases

**Promote the Optimization and Adjustment of Shanghai's Energy Structure**

In order to plan the external clean power resources and transmission channels in Shanghai during the 10th Five-Year Plan and the medium and long term, the company undertook the research work of the clean power base outside Shanghai in the plan of "Longdian to Shanghai" of Shanghai Municipal Development & Reform Commission, and completed the site selection within this year, forming four special reports, which was highly trusted by Shanghai Municipal Development & Reform Commission. The project has good economic and social benefits in promoting the optimization and adjustment of Shanghai's energy structure, strengthening the power supply guarantee, and helping Gansu Province to develop clean energy resources and transform its resource advantages.

Cases

**Create a "Model" of Shanghai Science and Technology Park**

Shanghai is building a global science and technology innovation center, and the new area is one of the three new major tasks assigned to Shanghai by General Secretary Xi Jinping. The Company set up a special tackling team to carry out counterpart services. Miaoxiang 220 kV Power Transmission and Transformation Project and Fengxian Offshore Wind Power Project were completed and put into operation in 2021, which injected a strong power into the new area. At the same time, the design of Zhuqiao 220 kV Power Transmission and Transformation Project, Haibin Power Plant 220 kV Transmission Project, High-efficiency Low-carbon Gas Turbine Project, 220 kV Lusan substation and other projects were carried out.



Cases

**Special Study on Comprehensive Energy of Zhangjiang Science City's Spatial Strategic Planning**

In order to build a globally influential source of scientific and technological innovation, an excellent city demonstration area, and promote the transformation of Zhangjiang Science City from "park" to "urban area", the construction management department of Zhangjiang Science City decided to carry out the special research on spatial strategic planning-comprehensive energy of Zhangjiang Science City. Combining with the expansion planning and industrial planning of Zhangjiang Science City and other related requirements, through analyzing the current situation, existing problems and future demand of energy development in Zhangjiang Science City, and based on the concept of comprehensive energy development in Zhangjiang Science City, the overall framework of "13439" comprehensive energy development, including one main line, three stages, four characteristics, three-tier system and nine modules, was creatively put forward. It gives full play to the functions of the three elements of energy basic support, industrial innovation and urban service, ensures the industrial development of Zhangjiang Science City and the needs of people's life, promotes the intellectual innovation in the energy field of Zhangjiang Science City, and supports the high-quality development of Zhangjiang Science City. It shows a new form of comprehensive energy supply, allocation, consumption and service in the future, which has a good demonstration effect and has a strong macro and micro guiding significance for the coordinated development of comprehensive energy and cities in the future.



Cases

**Upgrade the Image of an International Metropolis**

Since 2018, the company has participated in the key project of Shanghai "Project to Transform Shanghai's Overhead Lines into Underground Buried Lines", eliminating the "urban spider web" and building the "Internet celebrity punch card road" which integrates health, leisure and historical features. Remodelling the core is like surgery on a beating heart, where tiny parts of the operation affect the whole.



**CO-CREATE TECHNOLOGICAL HIGHLAND**

The Company has undertaken the national key R&D project "Modularization Technology and Equipment of New Photovoltaic Medium Voltage Power Generation Unit", Shanghai science and technology project "Evaluation of Cable Routing Conditions of Wind Farm in Deep Sea Area and Analysis of Dynamic Submarine Cable Application Environment" and "Research and Application of Digital Holographic Urban Energy Internet Situation Awareness and Efficient Operation and Maintenance Technology", etc., and has been approved as one major science and technology special project of Power Construction Corporation of China, and completed 25 key research special projects. Establish a digital research institute, establish a research mode of half-work and half-research, and take people as oriented to carry out special research work such as Digital Design Research Group, Energy Storage Technology Research Group and Offshore Wind Power Technology Research Group.



The Company participated in the design of the nation's first competitive offshore wind power project with full capacity grid connection



The first national standard in the field of wind-solar-storage combined power generation in China, *Standard for Design of Wind/PV/Storage Power Plant*, which was edited by the Company, was officially released



Experts from STCSM and Shanghai New Energy Center for Technology Transfer and Industry Promotion visited the company and exchanged ideas with the Company

Cases

Shanghai Power Grid 35 kV Superconducting Cable Test Demonstration Project

At present, the project is the superconducting cable project with the largest transmission capacity, the longest distance, the largest number of joints, and the only whole-process pipe laying in the world. It is the first demonstration project of 35kV km high-temperature superconducting cable in China using the second-generation tapes produced in China. The operation of the project in the central city of Shanghai marked that the world's first superconducting cable supporting the backbone power grid of megacities was officially on the historical stage, which was of great significance to the industrialization of superconducting transmission technology. It plays an important role in urban power grid reconstruction, integrated pipeline underground, narrow corridor trunk power grid, AC/DC interconnection ring network, heavy-load and high-energy power consuming enterprises and other scenes. Its application in power system is helpful to change the ecology of power grid, which is a milestone for the construction of super-safe smart grid of new power system and the achievement of double-carbon goal of power grid.



The world's first demonstration project of 35kV km superconducting cable designed by the Company was officially put into operation

EXPLORE BUSINESS MODEL



300 MW Photovoltaic Power Station Project in Cauchari, Jujuy, Argentina "Best Practice Case Award for International Cooperation in Energy"

Cases

Consulting Project of Near-zero Energy Consumption of Xiong'an Power Dispatching, Production and Operation Center

The Company's first full-process consulting business.



Cases

Comprehensive Intelligent Energy-saving Renovation Project of Howard Johnson Caida Plaza Shanghai

The first comprehensive intelligent energy-saving project independently invested, designed, constructed and operated by the Company.



Cases

Wutu Meiren project

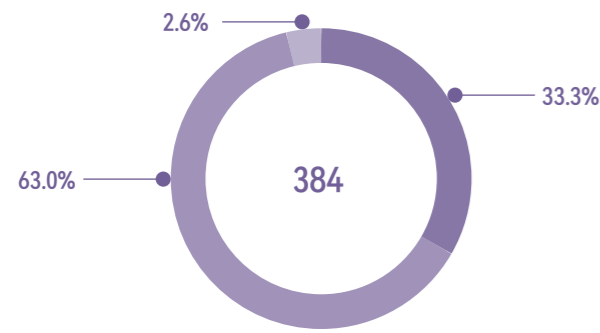
It created a precedent for special train transportation of photovoltaic modules in China.



# EMPLOYEES AND HARMONIOUS LABOR RELATIONS

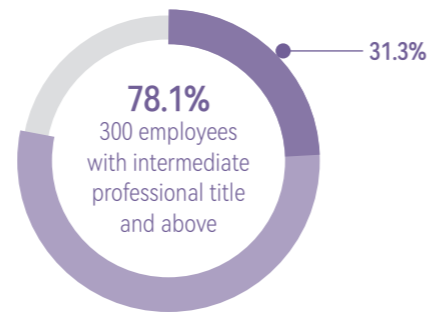
## Composition of Employees

Education background

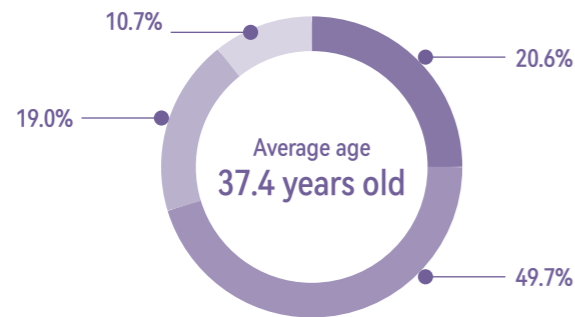


- 128 employees with Bachelor's Degree
- 242 employees with Master's Degree
- 10 employees with Doctor's degree

Title



- 39 professor level senior engineers
- 131 sub-senior engineers
- The female employees accounts for 31.3%



- 79 employees aged 29 and below
- 191 employees aged 30 to 39
- 73 employees aged 40 to 49
- 41 employees aged 50 to 60



Launching Ceremony of Safety Production Month in 2021



Organize Staff to Study and Experience in Shanghai Public Safety Training Base



The Company Day



"City Lions" Football Team Participated in the "Youth Cup" Football Match



Staff Quality Development

# SOCIAL PARTICIPATION AND DEVELOPMENT

## Donation Activities (RMB)

S/N	Donation Target	Donation Method	Amount
1	Shanghai Charity Foundation	Donation	85,000
2	In response to the action plan of "pairing hundreds of towns and thousands of villages to boost rural revitalization" in Shanghai, the company signed a pairing assistance (co-construction) agreement with urban and rural party organizations in Shunan Village of Chongming, and carried out "five joint establishment" pairing assistance	Donation	10,000
3	Help to develop characteristic agricultural products in Hubei Province	Economic support	138,800
4	Help Jianchuan County of Yunnan Province and Minfeng County of Xinjiang Autonomous Region win the battle of poverty alleviation in an all-round way	Economic support	28,000
5	Support for Poverty Students	Party members raise money Corporate donations	14,500



It carried out urban and rural party organizations to help build and contribute to the construction of elderly activity centers



It participated in the study and education of the Party's history and revolutionary songs singing in Shunan Village



It brought advanced VR technology into community groups and popularized industry knowledge



Spring Festival greetings to employees





04

REVIEW OF  
THE DECADE OF  
SOCIAL  
RESPONSIBILITY

# 2012-2022 10-Year Milestone of Social Responsibility



The company has obtained the third-party evaluation certificate from Shanghai Quality System Audit Center every year

The certificate was issued by Shanghai Federation of Economic Organizations and Shanghai Federation of Industrial Economics at the "Shanghai Corporate Social Responsibility Report Conference"



"GALAXY Gold Award" in the 26th Annual Excellent Product and Service Marketing International Appraisal



Chairman of the company was invited to speak at the 5th Shanghai Corporate Social Responsibility Report Conference

The 5th "Charity Star" Excellent Collective in Yangpu District, Shanghai



Shanghai Corporate Social Responsibility Report Conference "Overseas Development Award"

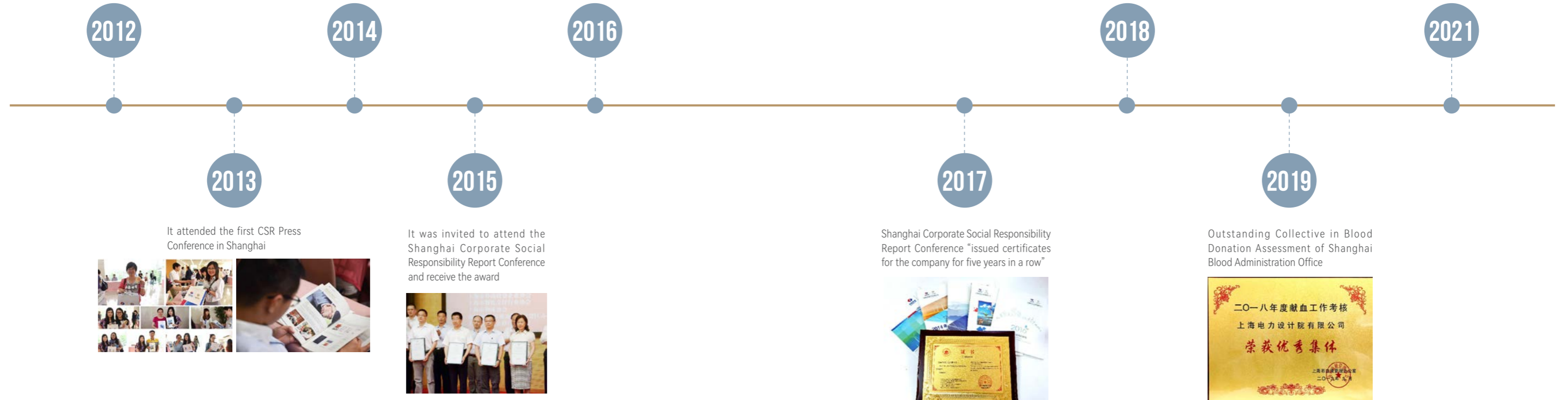
First Prize of "Collection and Selection of Excellent Cases of Social Responsibility" of Power Construction Corporation of China

Enrolled in the publication "Excellent Case Collection of Social Responsibility-Building a Responsible Brand and Telling the Story of Power Construction Corporation of China"



Outstanding Enterprise of Shanghai Corporate Social Responsibility Report Conference

Nomination Award at The 10th Shanghai Charity Star





05

PROSPECTS FOR  
RESPONSIBILITY



Adhering to the philosophy of sustainable development and targeting the theme of scientific development, We are actively committed to the fulfillment and publicity of social responsibilities, and dedicated to creating a pleasant ecological environment based on caring for people, protecting environment and developing harmonious society.

Focus on high-quality development and continuously improve the value creation and performance of enterprises. Forge service quality brand and enhance brand influence. Drive industry development with innovation and build Company's "hard nuclear technology". Broaden the channels of talent growth and build the team of expert and compound talents. Build a green and low-carbon society and integrate the concept of energy conservation and emission reduction into the whole process of design, construction and operation.

Finally, we will focus on all-win harmony to strengthen exchanges and communication, guide the related parties to be engaged in social responsibility practices and actively learn about the expectations and demands of customers and other stakeholders. In this way, we can build a clean, friendly and energy-saving ecological environment, create an excellent internal and external corporate environment and achieve common development of all stakeholders.