

东方电气2021环境、社会及管治报告

DONGFANG ELECTRIC CO., LTD Environmental, Social and Governance (2021) Report

2021 环境、社会及管治报告
Environmental, Social and Governance Report



东方电气股份有限公司
DONGFANG ELECTRIC CO., LTD.

东方电气股份有限公司

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东方电气微信公众号



东方电气微博



东方电气抖音

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关于本报告

About the Report

时间范围

Reporting Period

2021年1月1日-12月31日，部分表述及数据适当追溯以前年份。

This report covers the period from January 1 to December 31, 2021. Part of the content is beyond the above time range.

发布周期

Reporting Cycle

本报告为年度报告，是东方电气股份有限公司自2017年以来发布的第6份环境、社会和管治报告。

This is an annual report. It is the sixth Environmental, Social and Governance (ESG) Report issued by Dongfang Electric Co., Ltd. since 2017.

编制依据

Preparation Basis

本报告参照国家标准《社会责任报告编写指南》(GB/T36001-2015)和香港联合交易所《环境、社会及管治报告指引》编写。

This report is prepared with reference to the *Guidance on Social Responsibility Reporting (GB/T 36001-2015)* and the *Environmental, Social, and Governance (ESG) Reporting Guide* by The Stock Exchange of Hong Kong Ltd.

称谓说明

Designations

为了便于表述和方便阅读，“东方电气股份有限公司”在本报告中也以“东方电气”“公司”表示。

In order to facilitate this presentation, "Dongfang Electric Co., Ltd." is also expressed as "DEC", or "the Company" throughout this report.

报告范围

Reporting Scope

东方电气股份有限公司及14家二级公司，40家三级公司。

Dongfang Electric Co., Ltd. and 14 secondary subsidiaries, 40 tertiary subsidiaries.

数据来源

Data Sources

本报告使用数据来自东方电气的内部资料和相关统计资料。

The data used in this report is from the internal data and relevant statistical data of Dongfang Electric Co., Ltd..

可靠性保证

Reliability Assurance

东方电气董事会及全体董事保证本报告内容不存在任何虚假记载、误导性陈述或重大遗漏，并对其内容的真实性、准确性和完整性承担个别及连带责任。

The Board of Directors and all directors of Dongfang Electric Co., Ltd. guarantee that there is no fictitious record, misleading statement, or material omission in this report, and are responsible for the authenticity, accuracy, and completeness of the content.

报告版本

Report Version

本报告为电子版。如需打印，请尽量选用可降解环保可再生纸。

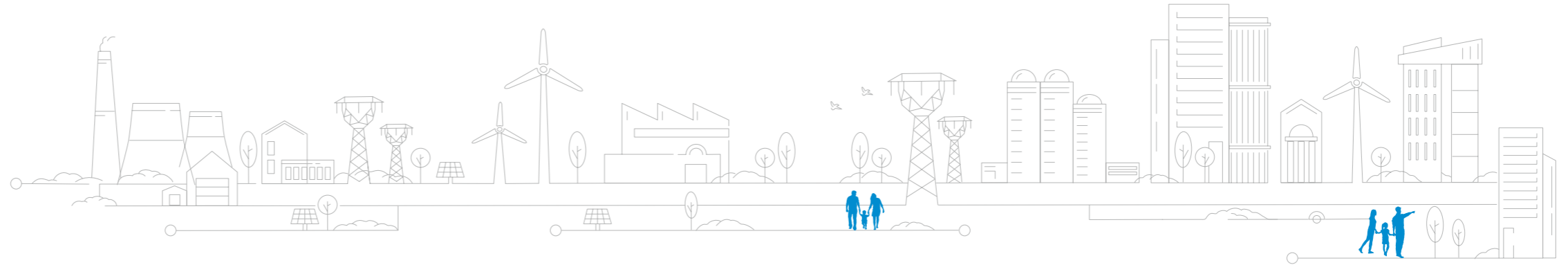
This report is available in electronic version. If you want to print it, please choose biodegradable environment-friendly recycled paper.

关于我们

About Us

公司简介

Company Profile



截至 2021 年底，东方电气累计生产发电设备已超过 6 亿千瓦 /600 GW

As of the end of 2021, the capacity of electric power generators produced by DEC has exceeded 6 billion kW /600 GW

6 亿千瓦 /600 GW

东方电气股份有限公司（以下简称东方电气），总部位于四川省成都市，是中国东方电气集团有限公司控股企业。历经 60 余年的发展，已成为全球最大的发电设备供应商和电站工程总承包商之一，分别在上海证券交易所（代码 600875）和香港联交所（代码 1072）上市。截至 2021 年底，东方电气累计生产发电设备已超过 6 亿千瓦，继续在全球同行业中保持领先地位。目前，东方电气的产品和服务已出口近 80 个国家和地区。

东方电气作为国家重大技术装备国产化基地、国家级企业技术中心，拥有中国发电设备制造行业中一流的综合技术开发能力。通过自主开发、产学研合作，形成了一批拥有自主知识产权的重大技术装备产品，具备了风电、太阳能、水电、核电、气电、火电等发电设备的开发、设计、制造、销售、设备供应及电站工程总承包能力。可批量研制 1,000 兆瓦等级水轮发电机组、1,000 兆瓦-1,750 兆瓦等级核电机组、1,350 兆瓦等级超超临界火电机组、重型燃气轮机设备、直驱、半直驱和双馈全系列风力发电机组、高效太阳能电站设备、氢能全产业链产品、大型环保及水处理设备、电力电子与控制系统、新能源电池及储能系统、智能装备等产品。

Dongfang Electric Co., Ltd. (hereinafter referred to as DEC), headquartered in Chengdu, Sichuan Province, is a large-scale enterprise held by Dongfang Electric Corporation. With the development of more than 60 years, DEC has become one of the world's largest suppliers of electric power generation equipment and general contractors of power station projects. Now it is listed on the Shanghai Stock Exchange (Stock Code: 600875) and the Stock Exchange of Hong Kong (Stock Code: 1072). As of the end of 2021, the capacity of electric power generators produced by DEC has exceeded 600 GW, which is top-ranked across the industry. To date, the DEC products and services have been exported to nearly 80 countries and regions.

DEC is recognized as a national strategic base for heavy-duty machinery and equipment, as well as a National Corporate Technology Center. The Company's comprehensive technical R&D abilities are among the best in Chinese manufacturers in electric power generators. Through ingenious development and industry-university-research cooperation, DEC now owns a quantity of heavy-duty machinery and equipment with proprietary intellectual property rights. DEC is capable of general-contracting projects in developing, designing, manufacturing, selling, and supplying wind power, solar power, hydropower, nuclear power, gas power, and thermal power generators. The Company is also able to batch develop 1,000 MW hydro turbines, 1,000MW-1,750MW nuclear power equipment, 1,350 MW ultra-supercritical thermoelectric generators, heavy-duty gas turbines, a whole series of direct-driven, semi-direct-driven and double-fed wind turbines, highly-efficient solar energy equipment, hydrogen industry chain products, large-scale environmental conservation and water treatment equipment, electric & electronic automatic control systems, new energy batteries and energy storage systems, intelligent equipment, etc.

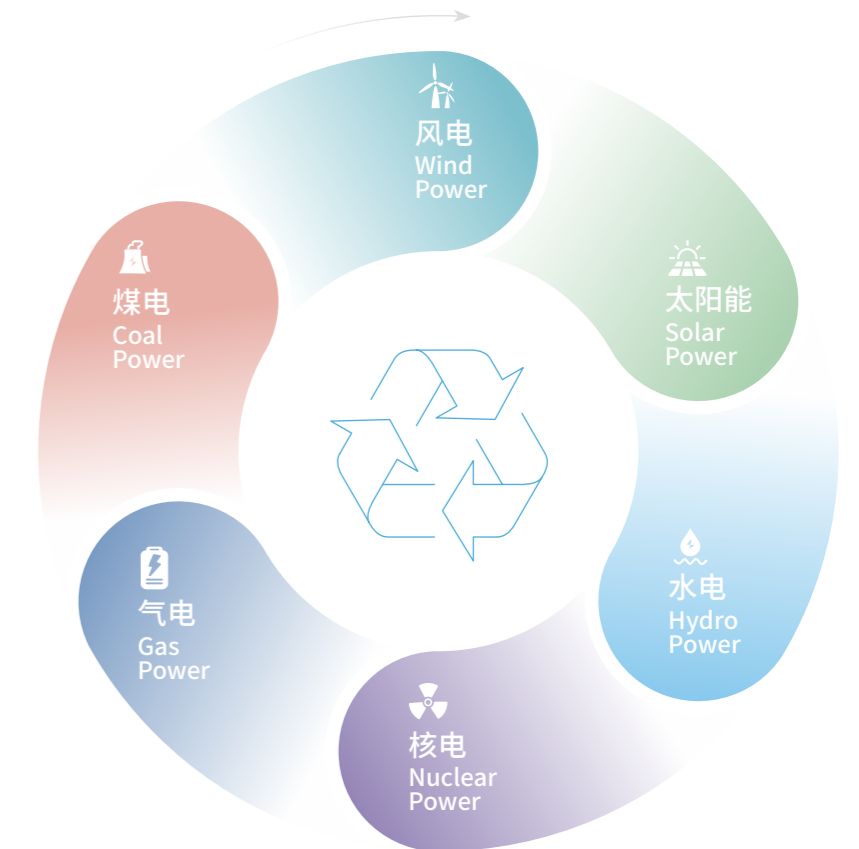


企业文化 Corporate Culture

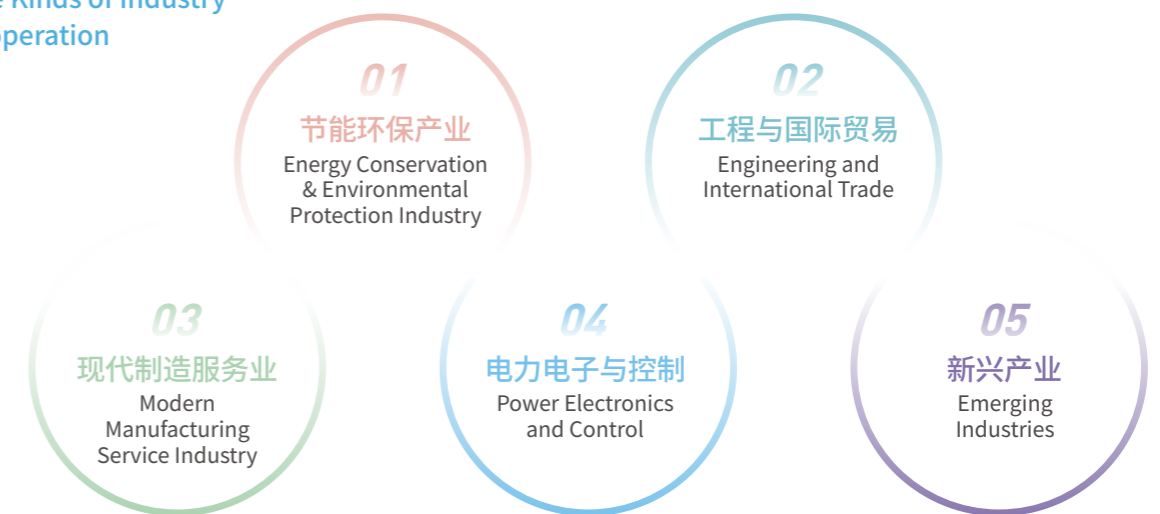


产业结构 Industrial Structure

六电并举 Six Kinds of Electricity Develop Simultaneously



五业协同 Five Kinds of Industry Cooperation



亮点绩效 Key Performance

经济绩效 Economic				
指标名称 Indicator	单位 Unit	2019 年 2019	2020 年 2020	2021 年 2021
营业总收入 Gross revenue	亿元 (RMB 100 million)	328.40	372.83	478.19
总资产 Total assets	亿元 (RMB 100 million)	896.19	977.95	1,031.05
净利润 Net profit	亿元 (RMB 100 million)	13.81	19.16	24.29
研发投入 R&D investment	亿元 (RMB 100 million)	18.88	20.03	27.22
拥有有效专利数 Total number of patents in force	件 (patent)	2,347	2,690	3,045
拥有发明专利数 Total invention patents	件 (patent)	922	999	1,106

环境绩效 Environmental				
指标名称 Indicator	单位 Unit	2019 年 2019	2020 年 2020	2021 年 2021
温室气体排放密度 GHG emission density	吨 / 万元 (ton / RMB 10,000)	0.081	0.068	0.051
二氧化硫排放量 Sulfur dioxide	吨 (ton)	208.4	196.5	175.4
氮氧化物排放量 Nitrogen oxide	吨 (ton)	370	351	273
危险废弃物排放密度 Hazardous waste emissions	吨 / 万元 (ton / RMB 10,000)	0.0009	0.0007	0.0004
万元产值综合能耗 Comprehensive energy consumption per RMB 10,000 of operating income	吨标准煤 / 万元 (TCE/RMB 10,000)	0.035	0.028	0.022
万元产值水资源消耗 Water resources consumption per RMB 10,000 of operating income	吨 / 万元 (ton / RMB 10,000)	1.186	0.993	0.758

社会绩效 Social				
指标名称 Indicator	单位 Unit	2019 年 2019	2020 年 2020	2021 年 2021
在岗员工 Total number of employees	人 (person)	17,360	17,336	16,969
社会保险覆盖率 Coverage of social insurance	%	100	100	100
安全生产投入 Work safety investment	万元 (RMB 10,000)	8,277.1	7,063.5	8,472.6
较大及以上生产安全事故 Major or serious work safety accidents	起 (accident)	0	0	0
员工志愿活动人次 Number of voluntary employees	人次 (person)	2,109	3,375	15,358
定点帮扶投入资金 Investment in targeted poverty alleviation	万元 (RMB 10,000)	2,577	2,768	2,650



ESG 管理

ESG Management

东方电气建立健全公司 ESG 管理机制，重视与利益相关方的沟通，持续完善 ESG 管理制度。

DEC has built a corporate ESG management mechanism, and continuously improves the system based on communications with the stakeholders.



ESG 管理机制

ESG Management System

东方电气董事会对环境、社会、治理策略及报告承担责任，负责评估有关 ESG 风险，针对可能影响本公司业务及运作、利益相关方关注的议题制定公司 ESG 管理方针、策略及目标，经理层及职能部门负责执行具体工作，推动各下属子企业在日常经营层面实施可持续发展，同时确保公司运营符合相关法律法规的规定。

The Board of Directors of DEC is fully responsible for ESG strategies and reports, and in charge of assessing ESG-related risks and formulating ESG management policies, strategies and goals targeting at issues that may affect the Company's business and operations and the concerns of stakeholders; the management and functional departments take concrete actions to promote sustainability of routine operations in all subsidiaries while seeing to it that the Company is running in compliance with applicable laws and regulations.

利益相关方沟通

Stakeholder Communication

东方电气高度重视各利益相关方的期望，根据各方需求不断搭建和完善沟通交流的渠道，以公开、透明的方式主动了解并及时回应利益相关方的诉求与期望，与利益相关方携手共促经济、社会、环境可持续发展。

DEC sets great store by communications with stakeholders. Via satisfactorily open and transparent channels built and improved for communications, the Company takes the initiative to understand and respond to requests and expectations of stakeholders in time, in a bid to fuel economic, social and environmental sustainability jointly with stakeholders.

实质性议题分析

Material Topics Analysis

东方电气依托于完善的利益相关方沟通机制，积极开展实质性议题分析，对照香港联交所《ESG 报告指引》要求，研究国家宏观经济政策、国内外社会责任标准要求和公司发展战略与规划，识别出应对气候变化、创造绿色装备、践行绿色发展、携手伙伴成长、增加员工福祉、投身社会公益等重要议题，作为 ESG 管理重点并在报告中进行披露。

DEC analyzes material topics relying on the complete stakeholder communication mechanism. In accordance with the *ESG Reporting Guide* released by the Stock Exchange of Hong Kong Ltd., the Company has identified important issues of climate change response, green equipment creation, green development, partnership & common growth, employee benefits, and contribution to public welfare, based on the macroeconomic policies of China, standards and requirements of social responsibilities at home and abroad, and strategies and planning for corporate development. Defined as priorities of ESG management, the topics are outlined in the report.

利益相关方 Stakeholders	期望与要求 Expectations and requirements	沟通渠道 Communication channels
政府 Government	<ul style="list-style-type: none"> 保障依法合规运营 Guaranteeing legal and compliant operation 加强环境治理 Strengthening environmental management 	<ul style="list-style-type: none"> 信息披露公告 Information disclosure announcement 专题报告 Project reports
投资者 Investors	<ul style="list-style-type: none"> 了解行业形势、相关政策及经济影响 Understanding the industry trend, relevant policies and economic impact 建立健全管理机制 Establishing and improving the management mechanism 开展装备技术创新 Equipment technology innovation 确保产品质量管控 Ensuring product quality control 	<ul style="list-style-type: none"> 股东大会 General meeting of shareholders 年报、季报业绩说明会 Annual report and quarterly report performance briefings 路演活动 Roadshow activities 咨询电话 Consultation telephone 电子邮件 E-mail 投资者来访 Investor visits 上证e互动 SSE E-interactive platform 公司网页 Company webpage 证监局投资者平台 Investor platform of China Securities Regulatory Commission
客户 Customers	<ul style="list-style-type: none"> 确保产品质量管控 Ensuring product quality control 客户隐私信息保护 Protecting customer privacy information 提升客户满意度 Improving customer satisfaction 	<ul style="list-style-type: none"> 客户在线服务平台 The online customer service platform 客户投诉处理 Customer complaint handling

利益相关方 Stakeholder	期望与要求 Expectations and requirements	沟通渠道 Communication channels
供应商 Suppliers	<ul style="list-style-type: none"> 确保产品质量管控 Ensuring product quality control 落实环境管理与排放物治理 Implementing environmental management and emission control 	<ul style="list-style-type: none"> 质量巡检 Quality inspection 交流培训 Communication and training 线上沟通 Online communication
员工 Employees	<ul style="list-style-type: none"> 建立健全权益保障制度 Establishing and improving the rights and interests protection system 确保员工健康安全 Ensuring the health and safety of employees 助力员工职业发展 Helping staff career development 落实员工薪酬福利 Providing compensation and benefits 	<ul style="list-style-type: none"> 员工培训 Staff training 员工劳动和技能竞赛 Employee labor and skills competition 员工活动 Staff activities 座谈会 Seminars 厂务公开栏 Column on transparency in factory affairs 情况通报会 Briefings 内部信息网络 Internal information network 微信公众号 WeChat official account
环境 Environment	<ul style="list-style-type: none"> 完善环境管理体系制度 Improving the environmental management system 加强排放物治理 Enhancing emission control 促进资源利用和保护 Promoting resource utilization and protection 	<ul style="list-style-type: none"> 信息披露公告 Information disclosure announcement 微信公众号 WeChat official account
社区 Communities	<ul style="list-style-type: none"> 助力乡村振兴 Supporting rural vitalization 开展志愿服务 Volunteer service 坚持海外履责 Fulfilling CSR overseas 	<ul style="list-style-type: none"> 志愿服务活动 Volunteer services 科普培训活动 Science popularization training activities 国企开放日 SOE Open Day 支持乡村振兴 Supporting rural vitalization 海外项目走访 Overseas project visits

ESG 报告原则回应 Response to ESG Reporting Principles

重要性原则 Materiality principle

东方电气按照香港联交所《ESG 报告指引》要求，同时参考国家标准《社会责任报告编写指南》（GB/T36001-2015）等标准，并通过与各类利益相关方进行不同形式的沟通与交流，识别并选择与本公司相关的 ESG 议题，并在本报告中针对实质性议题从机制完善、管理提升、行动实践及绩效等层面进行重点披露。

With reference to the *Guidance on Social Responsibility Reporting* (GB/T 36001-2015) and the *ESG Reporting Guide* by The Stock Exchange of Hong Kong Ltd., DEC identifies and chooses ESG topics in connection with the Company and discloses material topics in particular from perspectives of mechanism improvement, management elevation, practice and performance in this Report through communication with all stakeholders in various forms.

量化原则 Quantitative principle

东方电气对报告中所有“环境”范畴及部分“社会”范畴的量化关键披露指标进行定期统计，并于年末汇报、披露。并对部分 ESG 量化数据的统计范围和统计方法进行了说明。

DEC makes regular statistics on key quantitative indicators for disclosure specified within "environmental" and "social" domains, which are reported and disclosed at the end of each year. Relevant scope of statistics and statistical methods for part of ESG quantitative data are also specified therein.

平衡性原则 Balance principle

东方电气将其所面临的挑战以及负面信息在报告中进行了披露，客观反映公司的环境、社会及管治表现。

DEC discloses the challenges and negative information in the report, besides a fair reflection of the Company's ESG performance.

一致性原则 Consistency principle

本报告相对东方电气往年 ESG 报告披露范围并无重大调整，且使用了一致的披露统计方法，并进一步细化了部分港交所 ESG 报告指引对应披露类别。

Relative to prior DEC ESG reports, this Report makes no substantial adjustments to scope of disclosure; ensuring consistency of the statistical approach in disclosure, DEC further classifies some types specified in *ESG Reporting Guide* by The Stock Exchange of Hong Kong Ltd.

我们同创可持续环境

Cohesion & Creation for a Sustainable Environment



环保总投入

5,960 万元

spending on environmental protection

RMB **59.6** million

较大突发环境污染事件为

0

major emergency environmental pollution accidents

0

东方电气坚持创造绿色动力、驱动绿色发展，积极响应“双碳”目标，牢牢把握能源发展趋势，构建清洁低碳、安全高效的现代能源体系，鼎力同创可持续环境，为经济社会发展注入“绿色动能”。

Consistently creating green power, powering green development, and responding to "carbon peaking and carbon neutrality" goals in concrete action, DEC keeps abreast of the latest developments in energy industry to establish a clean, low-carbon, safe and efficient modern energy system. Pooling all forces for creating a sustainable environment, the Company provides a "green impetus" to economic and social development.

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抓实环境管控 Strengthen Environmental Regulation

东方电气秉持“绿色动力 驱动未来”理念，夯实环境保护管理基础。2021 年，发布公司生态环境保护“十四五”规划，压紧压实环境保护主体责任，环保总投入 **5,960** 万元，较大突发环境污染事件为 **0**。

Upholding the philosophy "Shape the Future with Green Power", DEC lays a solid foundation for management of environmental protection. In 2021, the Company's ecological/environmental protection plan during the period of "The 14th Five-Year Plan" was promulgated, providing for the primary responsibility for environmental protection, RMB **59.6** million spending on environmental protection and **0** major emergency environmental pollution accidents.

◎结合环境保护法律法规要求，制定环境保护专项督导检查清单

Work out a checklist for supervision of environmental protection in accordance with environmental protection laws and regulations



◎建立绿色车间评价体系，推动所属企业开展绿色车间建设

Establish a system for green workshop assessment to advance green workshop building in the enterprise

◎组织开展碳足迹、碳管理先期探索工作

Perform preliminary exploration on carbon footprint and carbon management

◎从大气污染防治、水污染防治、固体废弃物污染防治、噪声污染防治等方面，在全公司范围内集中开展生态环境保护风险摸底排查

Carry out an intensive ecological/environmental survey within the scope of the Company for identifying and preventing hazards of air pollution, water pollution, solid waste pollution and noise pollution

◎对发现的问题逐项制定风险防范措施、明确整改时限、按期推进整改

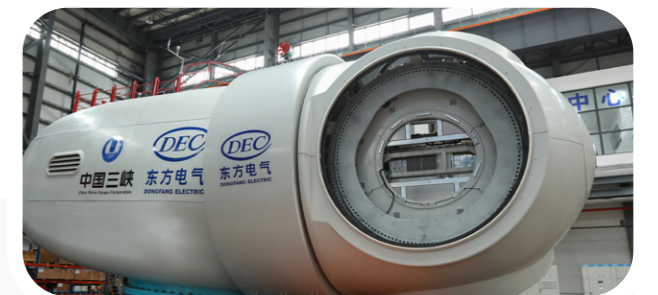
Define precautions for the problems found, set deadlines for rectifications and propel the rectifications as scheduled

制造绿色装备 Manufacture Green Equipment

2021 年，东方电气在新能源领域持续发力，狠抓清洁高效先进发电技术攻关，推动绿色装备新产品研发，潜心绿色工程打造，促进清洁能源的全方位发展，国内国际业务绿色低碳转型成效显著。

In 2021, DEC redoubled its efforts in new energy. With technical breakthroughs made in efficient and advanced power generation using clean energy, DEC concentrated on green engineering and boosted the all-around development of clean energy by vigorously promoting the R&D of new green equipment products. As a result, remarkable progress was made in green and low-carbon transformation of its national/international services.

风电 Wind Power



◎自主研发的 13 兆瓦抗台风型海上风电机组单台机组每年可输出清洁电能

5,000 万度

The self-developed 13MW anti-typhoon offshore wind turbine can generate 50 million kWh of clean electricity per unit

◎可减少燃煤消耗

1.5 万吨

Reducing coal consumption by 15,000 tons

◎减少二氧化碳排放

3.8 万吨

Reducing carbon dioxide emissions by 38,000 tons

太阳能 Solar Power



◎与同等规模的火力发电相比，每年可节约标煤

6.19 万吨

◎相当于减排二氧化碳

15.48 万吨

Compared with thermal power generation projects of equivalent size, it can annually save 61,900 tons of standard coal consumption, equivalent to reduction of 154,800 tons of carbon dioxide emissions

◎为新疆哈密 50 兆瓦塔式光热发电项目提供核心系统与设备

Provided core systems and devices for the Xinjiang Hami 50MW Tower CSP Project

◎14,500 面大镜子“逐日聚光”

Equipped with 14,500 heliostats

水电 Hydro Power

◎金沙江白鹤滩水电站首批机组于 2021 年 6 月 28 日安全准点投产发电
The first unit of Jinshajiang Baihetan Hydropower Station was put into operation on June 28, 2021

◎承担研制的左岸 8 台 100 万千瓦水轮发电机组水轮机原型效率超 **96%**
The prototype efficiency of the eight 1 million kilowatt hydro-generator sets on the left bank undertook by the Company is more than 96%



◎发电机额定效率超 **99%**，为世界最高
The generator is rated at over 99% efficiently, the highest in the world
◎所有产出重大部件和投运机组精品率达 **100%**
100% of all major components produced and put into operation

核电 Nuclear Power

◎“华龙一号”每台机组装机容量 **116.1** 万千瓦
"Hualong One" with an installed capacity of 1.161 GW per unit

◎每年发电近 **100** 亿度
Generating nearly 10TWh of electricity every year

◎能够满足中等发达国家 **100** 万人口的年度生产和生活用电需求
Meeting the production and life electricity demands for 1 million people in a middle-sized developed country

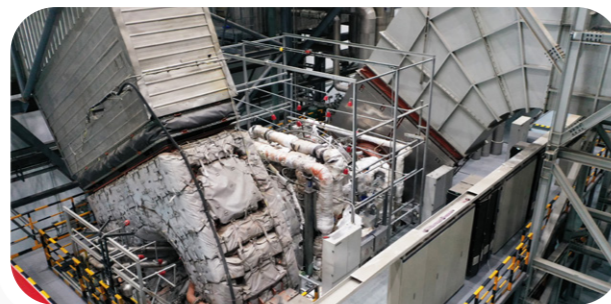


◎相当于每年减少标准煤消耗 **312** 万吨
The contribution to energy conservation equals reducing 3.12 million tons of standard coal consumption every year
◎减少二氧化碳排放 **816** 万吨
Reducing 8.16 million tons of carbon dioxide emissions every year
◎相当于植树造林 **7,000** 多万棵
Equalling planting over 70 million trees

气电 Gas Power

◎自主研发国内首台 F 级 **50** 兆瓦重型燃气轮机与同等功率的进口燃机相比，整机制造成本可大幅降低

Compared with imported gas turbines of the same power, The manufacturing cost of the self-developed China's first F-Class 50 MW heavy-duty gas turbine can be greatly reduced



◎运行与维护价格可节省近一半
The operation and maintenance fee can be cut by 50%

煤电 Coal Power

◎罗源湾工程 1 号机组于 2021 年 12 月 13 日运行
Luoyuanwan Project put No.1 unit into commercial operation on December 13, 2021

◎烟尘排放浓度为 **0.9** mg/m³
Smoke emission concentration: 0.9mg/m³

◎二氧化硫排放浓度为 **5.9** mg/m³
Sulfur dioxide emission concentration: 5.9mg/m³

◎氮氧化物排放浓度为 **15.9** mg/m³
Nitrogen oxide emission concentration: 15.9mg/m³



◎远低于国家超低排放标准
Far below the national ultra-low emission standard
◎供电煤耗为 **271.2**g/kW·h
Coal consumption for power generation amounting to 271.2g/kWh

氢能 Hydroelectricity

◎成都大运会氢燃料电池通勤车首批 **40** 台完成交付
The first fleet of 40 new hydrogen-powered buses for the Chengdu Universiade was delivered

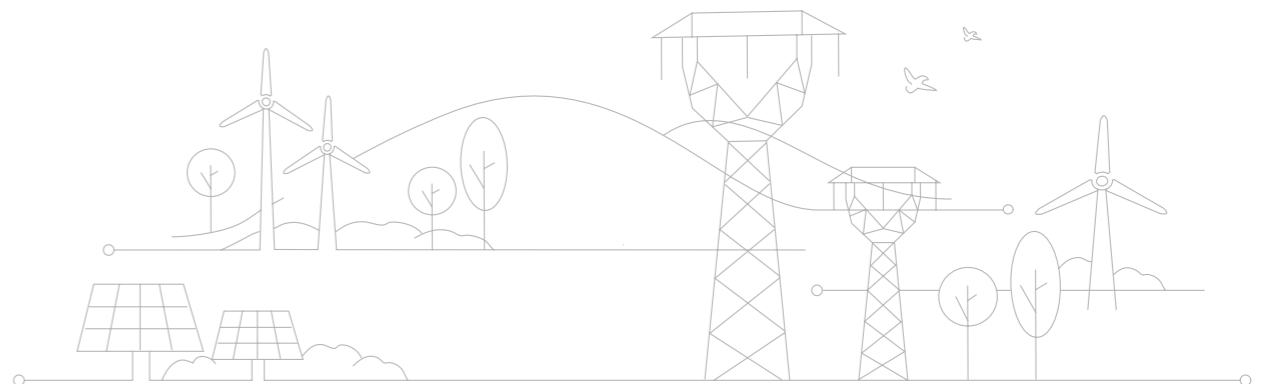
◎在成都、德阳、西昌、贵阳等地已有 **140** 辆氢燃料电池公交车投入示范运行
140 hydrogen-powered buses went into use for demonstration in Chengdu, Deyang, Xichang, Guiyang and elsewhere nationwide

◎累计运行里程超过 **1,200** 万公里
Cumulative mileage of over 12 million km

◎与燃油车相比减少二氧化碳排放 **8,000** 余吨
Compared to fuel vehicles, they can reduce roughly 8,000 tons of carbon dioxide emissions



◎单车最高运营里程超 **20** 万公里
Running over 200,000 km in the maximum
◎膜电极功率密度、耐久性等各项指标达到行业先进水平
Having industry-leading membrane electrodes, power density and durability



推动节能减排 Promote Energy Conservation and Emission Reduction

东方电气坚持绿色发展，深入推进污染防治攻坚，助力碳达峰、碳中和目标实现。

Centered around green development, DEC overcomes difficulties in pollution prevention and control with strenuous efforts, so as to realize the "carbon peaking and carbon neutrality" goals.

推进“三废”治理 Propel Treatment of "Three Types of Waste"

东方电气严格遵守相关法律法规，将污染防治纳入《安全生产专项整治三年行动实施方案》，积极推动“三废”治理，各项污染物排放量持续下降。

DEC strictly abides by relevant laws and regulations, incorporates environmental pollution prevention and control into the "Three-year Action Implementation Plan for Special Rectification of Safe Production", solid progress has been seen in treatment of "three types of waste", and the emissions of various pollutants continue to decline.

加强污染防治：动态辨识重要环境污染源，加强污染源头防治，严把固定资产投资项目能耗、污染物排放审查关，从源头上控制污染物的产生和排放。

Enhance pollutant prevention & control: DEC dynamically identifies important environmental pollution sources, while strengthening the prevention and control of pollutants at the source. Being a gatekeeper of fixed-asset investment projects in terms of energy consumption and pollutant discharge, the Company controls the generation and discharge of pollutants from the very beginning.

落实“三同时”规定：严格执行建设项目环境影响评价制度，落实污染防治设施“三同时”规定。

Implement "Design, construction and operation at the same time": DEC follows the environmental impact assessment system while constructing the projects. Based on related regulations, the Company ensures that pollution prevention and other environmental protection facilities are designed, constructed, and put into operation at the same time as the main project.

环保设备运维管理：加强环保设备设施的运维管理，确保环保设备设施有效运行，各类污染物达标排放。

Environmental protection equipment O&M: DEC enhances the operation and maintenance of environmental protection equipment, ensuring the effective operation of environmental protection equipment and facilities, as well as the discharge of various pollutants up to standards.

环境污染风险排查：制定专项检查清单，集中开展生态环境保护风险摸底排查，形成问题清单，制定风险防范措施按期推进整改。

Environmental pollution risk investigation: DEC drafts special checklists for intensive ecological/environmental risk investigation. The Company lists problems and works out risk precautions for advancing rectifications as scheduled.

废气排放量 Waste gases				
指标名称 Indicator	单位 Unit	2019年 2019	2020年 2020	2021年 2021
二氧化硫 Sulfur dioxide	吨 (ton)	208.4	196.5	175.4
二氧化硫排放密度 Sulfur dioxide emission density	吨/万元 (ton/RMB 10,000)	0.00006	0.00005	0.00004
氮氧化物 Nitrogen oxide	吨 (ton)	370	351	273
氮氧化物排放密度 Nitrogen oxide emission density	吨/万元 (ton/RMB 10,000)	0.00011	0.00009	0.00006
废水排放量 Waste water				
指标名称 Indicator	单位 Unit	2019年 2019	2020年 2020	2021年 2021
废水排放量 Waste water	万吨 (10,000 tons)	165.7	153.9	143.7
废水排放密度 Waste water discharge density	吨/万元 (ton/RMB 10,000)	0.5046	0.4128	0.3005
COD COD	吨 (ton)	381	367	295
COD 排放密度 COD discharge density	吨/万元 (ton/RMB 10,000)	0.00011	0.00010	0.00006
氨氮 Ammonia nitrogen	吨 (ton)	88.9	83.5	76.1
氨氮排放密度 Ammonia nitrogen discharge density	吨/万元 (ton/RMB 10,000)	0.00003	0.00002	0.00002
废弃物排放量 Solid waste				
指标名称 Indicator	单位 Unit	2019年 2019	2020年 2020	2021年 2021
危险废弃物排放量 Hazardous wastes	吨 (ton)	2,996	2,826	2,329
危险废弃物排放密度* Hazardous wastes emission intensity*	吨/万元 (ton/RMB 10,000)	0.0009	0.0007	0.0004
无害废弃物排放量 Non-hazardous wastes	吨 (ton)	30,100	35,800	26,773
无害废弃物排放密度 Non-hazardous wastes emission intensity	吨/万元 (ton/RMB 10,000)	0.0092	0.0072	0.0051
回收废弃物总量 Recyclable wastes	吨 (ton)	22,300	29,000	24,423

*：危险废弃物排放密度 = 排放量 / 营业收入，意为每一单位营业增长同期的污染排放。

Hazardous wastes emission intensity = emission volume/revenue, which refers to the pollutant emissions per unit of business growth over the same period.

节约能源资源 Conservation of Energy and Resources

东方电气完善能源管理相关制度，积极从工艺改进、设备节能改造、高耗能落后设备淘汰、节能产品推广等多方面开展节能工作，持续提升能源管理绩效。

DEC improves the energy management systems. The Company actively carries out energy conservation from various aspects such as process improvement, equipment energy-saving transformation, and environmental-friendly product promotion, so as to improve energy management performance constantly.

能源管理 Energy Management

东方电气动态辨识、评价能源因素，制定并实施相关措施计划；开展能源管理体系内外评审；强化节能基础管理，进一步规范能耗数据监测、计量、统计等基础工作。

DEC dynamically identifies and assesses of energy factors and drafts carries out relevant action plan; the Company carries out the internal and external reviews on energy management systems. By doing so, the Company reinforces underlying management of energy conservation, further standardizes energy consumption data monitoring, measurement, statistics and other basic work.

用水管理 Water Management

东方电气组织重点用能单位编制节水自查报告，开展设备节能改造，东方锅炉对车间循环水池进行改造，每月可节约用水 30 吨左右；同时倡导绿色低碳生产生活方式，传递绿色节能理念。

DEC organizes key energy-using entities to prepare self-inspection reports on water conservation, along with energy-saving retrofitting of equipment, e.g., circulating pools in the workshop of DEC Boiler are upgraded to save roughly 30 tons of water on a monthly basis; and the Company promotes green and low-carbon production and lifestyle, and communicates the green and energy-saving philosophy.

包装减量 Packaging Minimalism

东方电气持续减少不必要的包装，包装材料优先选用环保材料，积极促进包装材料减量化。

DEC continuously reduces unnecessary packaging, and prioritizes eco-friendly materials for packaging, so as to minimize packaging materials.

资源消耗情况 Resource consumption

指标名称 Indicator	单位 Unit	2019 年 2019	2020 年 2020	2021 年 2021
综合能耗 Comprehensive energy consumption	吨标准煤 (TCE)	102,153	98,673	93,391
万元产值综合能耗 Comprehensive energy consumption per RMB 10,000 of operating income	吨标准煤 / 万元 (TCE/RMB 10,000)	0.035	0.028	0.022
电力 Electricity	万千瓦时 (10,000 kWh)	35,827	32,783	31,802
天然气 Natural gas	万立方米 (10,000 m ³)	3,856	3,809	3,771
汽油 Gasoline	吨 (ton)	805	756	655
柴油 Diesel	吨 (ton)	777.4	741.6	690.8
水资源消耗 Water consumption	万吨 (10,000 tons)	390	370	369
万元产值水资源消耗 Water resources consumption per RMB 10,000 of operating income	吨 / 万元 (ton / RMB 10,000)	1.186	0.993	0.758

包装材料使用情况 Use of packaging materials

指标名称 Indicator	单位 Unit	2019 年 2019	2020 年 2020	2021 年 2021
包装材料消耗 Consumption of packaging materials	吨 (ton)	8,861	13,507	15,150
包装材料消耗密度 Consumption intensity of packaging materials	吨 / 万元 (ton / RMB 10,000)	0.0027	0.0041	0.0032
木箱 Wooden box	吨 (ton)	4,616	8,182	9,687
纸箱 Carton	吨 (ton)	125	126	80
塑料 Plastic	吨 (ton)	332	158	175
槽钢 Steel channel	吨 (ton)	3,732	4,527	4,754
其他材料 Other materials	吨 (ton)	56	514	454

践行绿色发展 Carry out Green Development

东方电气贯彻落实国家“碳达峰”“碳中和”决策部署，坚持走绿色发展道路，切实践行绿色发展理念，坚持人与自然和谐共生，为应对气候变化贡献力量。

DEC resolutely implements China's decisions and deployments of "carbon peaking" and "carbon neutrality", and unwaveringly follows the path of green development. Putting the concept of green development into practice, the Company seeks the harmonious coexistence between human and nature, so as to contribute to the response to climate change.

温室气体减排 Reduce GHG Emission

东方电气大力发展水电、风电、核电等新能源产业，绿色低碳转型步伐加快。

DEC uses its best endeavor to develop new energy industries, such as hydro power, wind power and nuclear power, the Company is speeding up its green and low-carbon transformation.

温室气体排放情况 Greenhouse gas emissions				
指标名称 Indicator	单位 Unit	2019 年 2019	2020 年 2020	2021 年 2021
温室气体排放量 GHG emission volume	万吨 (10,000 tons)	26.5	25.2	24.1
直接排放 (范围 1) Direct emissions (Range 1)	万吨 (10,000 tons)	26.5	25.2	24.1
间接排放 (范围 2) * Indirect emissions (Range 2)*	万吨 (10,000 tons)	—	—	—
温室气体排放密度 GHG emission density	吨 / 万元 (ton / RMB 10,000)	0.081	0.068	0.051
温室气体减排量 Reduction of GHG emissions	万吨 (10,000 tons)	2.2	1.3	1.1

*: 温室气体间接排放量将尽快建立碳排放管理体系进行核算。

Indirect GHG emissions will be incorporated into carbon emissions management system for accounting as soon as possible.

减少环境影响 Minor Environmental Impact

东方电气严格执行建设项目环境影响评价制度，为实现电力装备产品绿色化和低碳化提供支撑。

DEC follows the environmental impact assessment system while constructing the projects to lay a solid foundation for delivering green and low-carbon electric power equipment products.

绿色文化 Green Culture

东方电气以“双碳”目标为引领，大力倡导绿色低碳生产生活方式。2021 年，公司积极推进 LED 照明节能产品、工艺节能技术、余热再利用等应用，加强绿色办公；利用线上“学习云”平台、宣传片、六五环境日专题宣传展板等多种渠道。全年组织近 3,000 名员工线上参与节能低碳专题培训，总学习人次达 15,570 余人次。

Heading for goals of "carbon peaking and carbon neutrality" goals, DEC spares no efforts to promote green and low-carbon production and lifestyle. In 2021, the Company created a green workplace with efforts to LED lights with energy-conserving products, energy-conserving technologies, waste heat recycling, etc.; the Company uses all sorts of channels, like online "cloud learning" platform, promo video, and June 5 Environment Day display boards. Nearly 3,000 employees are involved in annual energy-saving and low-carbon training, indicating 15,570 trainees so far in aggregate.

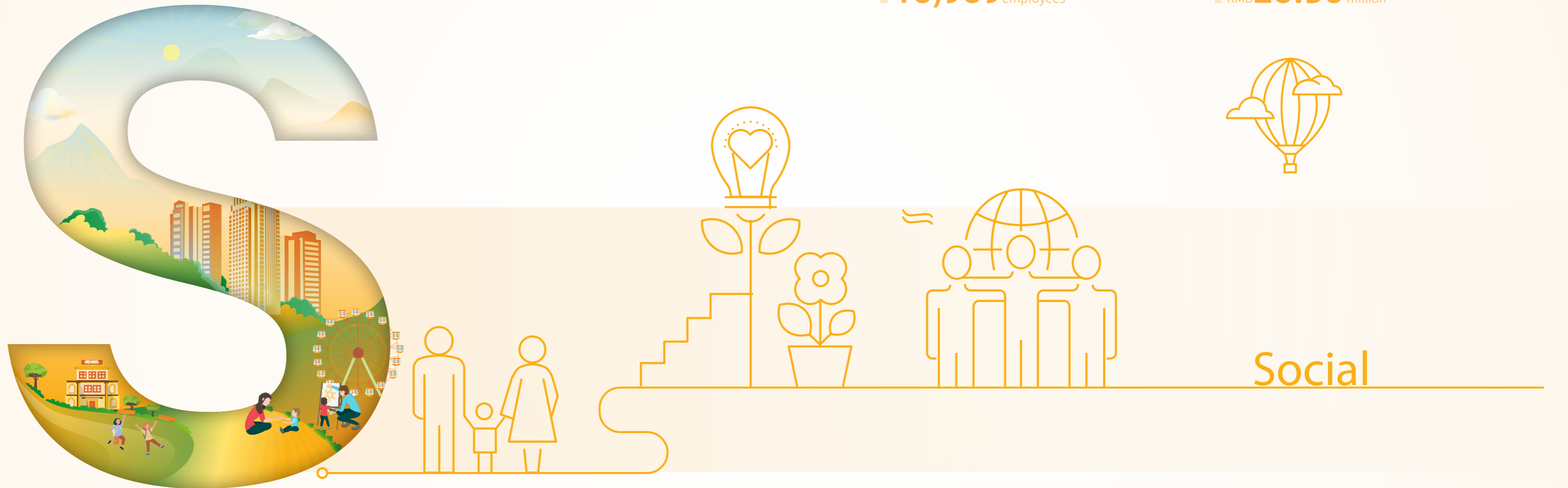


▲制作环境专题宣传展板普及环保知识

Display boards fabricated for publicity to knowledge on environmental protection

我们同创友好型社会

Cohesion & Creation for a Friendly Society



公司在岗员工

16,969人

the Company had

16,969 employees

在定点帮扶地区共投入直接帮扶资金

2,650万元

Direct support funds were invested in the targeted areas

RMB **26.50** million



东方电气秉承“共创价值，共享成功”的核心价值观，为员工提供开放包容、平等尊重、健康安全的工作环境，携手伙伴共创价值，真诚回馈推动社区发展，竭力同创友好型社会，共享和谐幸福生活。

DEC adheres to core values of "Value Co-creation for a Shared Prosperity" to create an open, inclusive, healthy and safe workplace with equality and respect for employees while joining hands with partners to create value and contribute to community development. Together, we contribute to a friendly society and enjoy a harmonious and happy life.

增加员工福祉	27
Improve Employee Well-being	
携手伙伴成长	37
Growth with Partners	
投身社会公益	41
Engage in Social Welfare	

增加员工福祉 Improve Employee Well-being

东方电气全面贯彻落实新时代人才工作的新理念、新战略、新举措，坚持人才引领，保障员工权益，扎实推进人才队伍建设，关心关爱员工，提升员工归属感、幸福感。截至 2021 年底，公司在岗员工 **16,969** 人（中国籍），外籍人员 24 人。

DEC carries out new ideas, new strategies and new moves of talent work in the new era in all respects and follows a talent-led approach. Apart from safeguarding rights and interests of employees and promoting talent team building with concrete efforts, the Company also shows care for employees, in a bid to promote their senses of belonging and happiness. Up to the end of 2021, the Company had **16,969** employees (Chinese nationality) and 24 foreign employees.

权益保障 Rights and Interests

东方电气高度重视员工权益保障，严格遵守相关法律法规，坚持平等雇佣，加强本地化用工管理，杜绝雇佣童工与其他强制性劳动，持续完善薪酬福利体系，尊重员工隐私和参与权，重视民主沟通，积极构建和谐稳定的劳动关系。截至 2021 年底，公司女性管理者比例达 17.35%，社会保险覆盖率 100%，劳动合同签订率 100%。

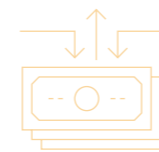
DEC attaches great importance to safeguarding rights and interests of employees. Strictly in compliance with applicable laws and regulations, the Company secures equity of employment, and tightens local labor management by saying no to use of child labor and other types of forced labor and improving the remuneration system. With respect for privacy and right of participation of employees and focus on democratic communication, the Company makes great efforts to build a harmonious and steady employment relationship. By the end of 2021, the Company's female management accounted for 17.35%, along with 100% coverage of social insurance and 100% conclusion of employment contracts.



员工招聘 Recruitment

东方电气带头稳岗扩就业，大力引进博士毕业生等高层次人才。2021 年，精准引进急需紧缺的创新领军及科研领域博士等高层次人才 16 名，校园招聘签约本科以上学历毕业生 530 人。

DEC takes the lead in keeping the payroll stable, and creating more jobs and greatly absorbing doctors and other high-level talents. In 2021, the Company brought in 16 urgently needed high-level talents, including leaders of innovation and doctors in scientific research field, and signed employment contracts with 530 graduates with the bachelor's degree or above through campus recruitment.



薪酬福利体系建设 Remuneration and Welfare System Construction

东方电气推进收入分配市场化改革，提升薪酬分配差异化水平，制定 2021 年专项奖励实施方案；提升中长期激励广度和力度，修订公司中长期激励管理办法，制定公司 2021 年中长期激励实施计划；优化员工福利保障管理，提升企业年金监管效率。

Propelling market-oriented reform in income distribution and promoting differentiation of salary distribution, DEC worked out the 2021 special rewarding implementation plan; concurrently, the Company revised the measures for management of medium- and long-term incentives and drafted the 2021 implementation plan for medium- and long-term incentives for enhancing effects of relevant incentives in both breadth and intensity; other measures included optimizing management of staff benefits and streamlining regulation of annuities.



民主管理 Democratic Management

东方电气切实关心员工最现实利益，通过职工代表大会、座谈会、总经理接待日、职工代表提案、谈心谈话、合理化建议等渠道，广泛征求广大职工群众意见建议，充分保障员工知情权、参与权和表达权。

DEC is literally concerned with the most practical benefits of employees. Through meetings of employee representatives, discussions, GM reception day, proposals by employee representatives, open talks, submission of reasonable suggestions, etc., the Company solicits advice from employees extensively to ensure employees' rights to know, participate, and express.



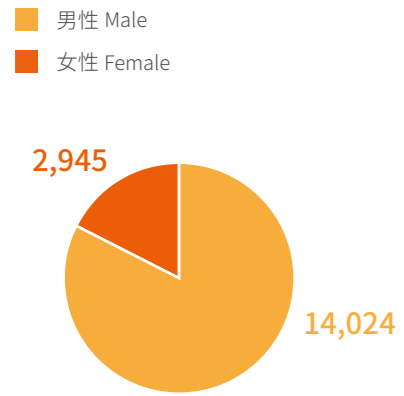
▲ 12月8-10日，东方电气组织开展“国聘行动”暨博士专场招聘活动，邀请部分博士生代表走进企业现场，近距离了解大国重器，感受科技之美

On December 8-10, 2021, DEC staged the "national recruitment campaign" and doctor recruitment, where some doctors were provided a glimpse into China's rapid advances in science and core technologies during a visit to the Company

雇员人数 (单位: 人)
Total employees (Unit: headcount)

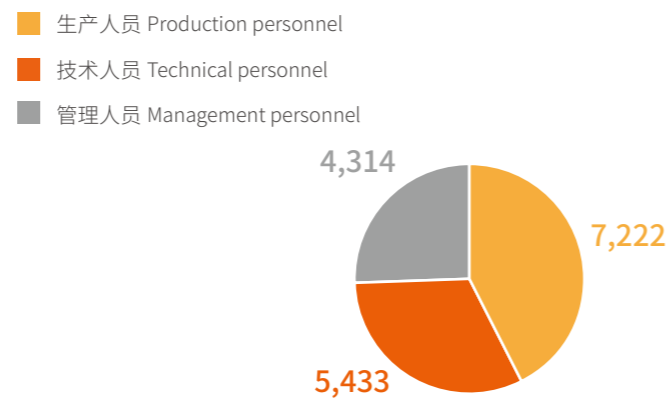
2021 年在职员工 (按性别划分)

2021 total employees (by gender)



2021 年在职员工 (按雇佣类型划分)

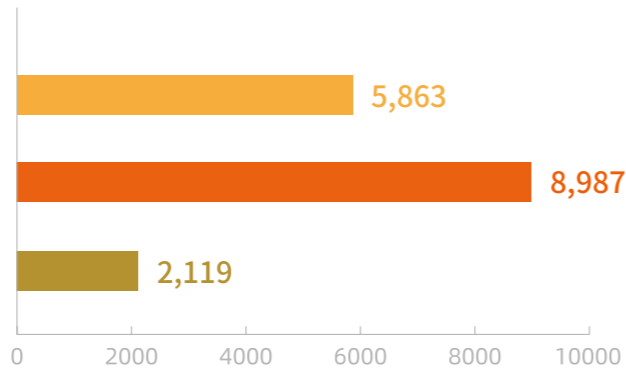
2021 total employees (by employment type)



2021 年在职员工 (按年龄划分)

2021 total employees (by age)

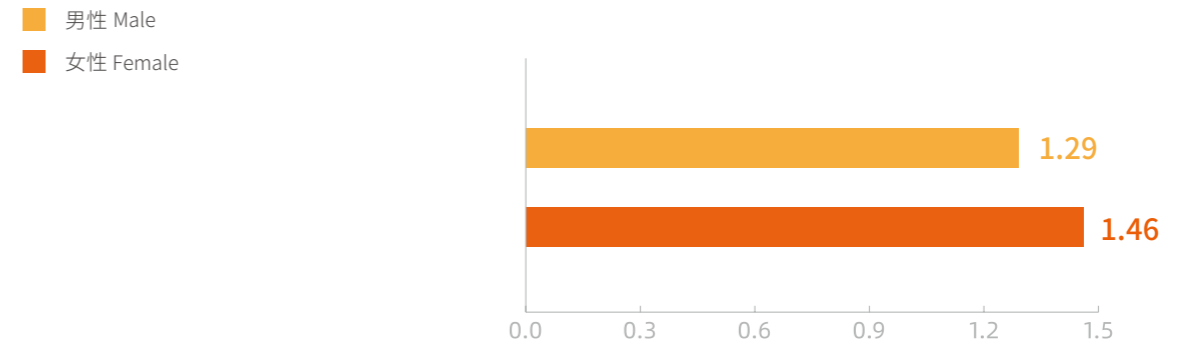
- 35 岁及以下 35 years old and under
- 36-49 岁 36-49 years old
- 50 岁及以上 50 years old and older



员工流失率 (单位: %)
Employee turnover (Unit: %)

2021 年员工流失率 (按性别划分)

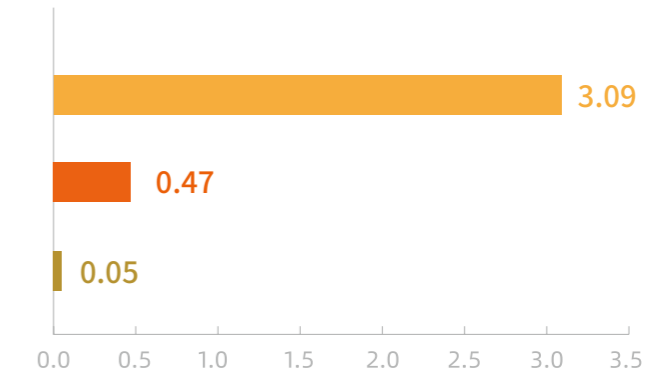
2021 employee turnover (by gender)



2021 年员工流失率 (按年龄划分)

2021 employee turnover (by age)

- 35 岁及以下 35 years old and under
- 36-49 岁 36-49 years old
- 50 岁及以上 50 years old and older



健康安全 Health and Safety

东方电气关注员工健康与安全，紧抓安全生产，筑牢疫情防控安全网，为公司“十四五”高质量跨越发展开好局、起好步创造良好安全环境。

DEC attaches great importance to staff health and safety. With a view to work safety, the Company strengthens the safety net for pandemic prevention and control, in a bid to kick off a good start to our efforts of attaining high-quality development in leaps and bounds and creating a sound and secure environment during the period of "The 14th Five-Year Plan".

安全生产 Work Safety

东方电气牢固树立“安全第一 生命至上”的安全理念，切实有效防范化解各类安全风险，推动安全生产工作再上新台阶。

2021 年，公司较大生产安全事故为 0、较大火灾事故为 0、较大突发环境污染事件为 0，安全生产形势稳定受控。

With the philosophy of "Safety First, Life Supreme", DEC practically and effectively prevent all kinds of safety risks and bring work safety to a new level.

In 2021, the Company took work safety situation under steady control, with no major work safety accidents, no major fire accidents and no major environmental pollution accidents.

◎安全体系建设

发布员工安全技能提升三年行动计划（2021～2023 年），制定“智慧安全”转型行动方案。

Safety system construction: DEC has published a three-year (2021-2023) action plan for enhancing safety skills of employees, entailing an action plan for transformation towards "smart safety".

◎安全生产专项整治

扎实开展三年行动“集中攻坚”，制定安全管理现状检查评价标准，开展安全现状评价画像，组织排查整治问题隐患。

Special rectification of work safety: solid progress has been made in the three-year action, which is attributable to DEC's efforts in setting a criterion for inspection and assessment of actualities of safety management, portraying current safety situations and identifying problems and potential threats to safety.

◎安全宣教

提升安全意识，编制《生产安全事故典型案例选编》，广泛开展安全生产相关培训及宣传，采用“线上+线下”教育模式开展安全教育。

Safety education: DEC prepared the *Collection of Typical Work Safety Accident Cases* and involves employees in work safety-related training and publicity via "online + offline" channels for enhancing their safety awareness.

安全生产绩效 Performance of work safety

指标名称 Indicator	单位 Unit	2019 年 2019	2020 年 2020	2021 年 2021
安全生产投入 Work safety investment	万元 (RMB 10,000)	8,277.1	7,063.5	8,472.6
安全生产培训人次 Number of employees in work safety training	人次 (person)	27,100	17,306	14,173
较大及以上生产安全事故 Major or serious work safety accidents	起 (accident)	0	0	0
因工亡故员工人数 Number of work-related fatalities	%	0	1	0
因工亡故员工比率 Rate of work-related fatalities	%	0	0.0054	0
因工损失工作日数 * Lost days due to work injury*	人日 (day)	190	6,000	90

*: 工伤损失工作日参照《企业职工伤亡事故分类标准》（GB 6441）、《事故伤害损失工作日标准》（GB/T 15499）的标准进行统计。The number of lost workdays due to work-related injury was calculated according to the standards of the *Classification for Casualty Accidents of Enterprise Staff and Workers* (GB 6441) and the *Lost Workdays Standard for Injury Accident* (GB/T 15499).

职业健康 Occupational Health

东方电气不断提升职业健康管理，不断优化工作环境，进一步规范职业健康管理，组织开展职业健康体检。2021 年，公司重大职业病危害事故为 0，员工体检覆盖率 100%。

DEC perfects occupational health management with unremitting efforts in optimizing the workplace, standardizing occupational health management and performing occupational health examinations. In 2021, the Company involved all its employees in physical examination with no major work-related injury accidents occurred.

疫情防控 Pandemic Prevention and Control

东方电气坚持科学防控、精准施策、有效应对，动态调整疫情防控措施；排查重点风险人群，及时化解关联风险；积极推进新冠疫苗接种，“应接尽接”全程接种率近 100%；加强疫情防控责任及防控措施落实监督检查，牢牢守住不发生疫情聚集性的底线。

DEC takes a scientific, targeted and effective approach in pandemic prevention and control with dynamic adjustments in this respect; the Company also prioritizes key groups at risk in the survey for resolving risks of virus transmission in time; the Company advances COVID-19 vaccination, ensuring all employees eligible for vaccination have access to it; by putting into practice duties and measures of pandemic prevention and control in conjunction with tightened supervision and inspection, the Company well guards the line of defense against cluster of infections.

职业发展 Occupational Development

东方电气深入贯彻中央人才工作会议精神，坚持人才第一资源，扎实推进总部及子公司人才队伍建设。开展各类培训，畅通员工职业发展通道，进一步加大高层次人才引进力度，拓宽员工发展空间。2021 年，公司开展员工培训 65 项，参与员工 122,777 人次。

DEC resolutely follows the spirit of the central conference on talent-related work and prioritizes talents over other resources, driving forward talent team building in the HQ and subsidiaries with concrete action. Apart from launching various training programs and clearing obstacles for employees' career development, the Company also makes greater efforts in introducing high-level talents and expanding room for staff development. In 2021, the Company engaged 122,777 employees in 65 training programs.

人才选拔培养 Talent Selection and Training

东方电气搭建技能专家人才选拔培养通道，加强高层次人才引进，制定人才培养、选用系列措施，不断加强实现科技人员占比超过 30%，副高级以上专业技术人员占科技人员比例超过 30%。

全面启动年度职业技能等级认定工作，制定公司青年技能拔尖人才支持培养管理办法和高水平技能人才培养方案，选拔首席技术专家 5 人，有突出贡献优秀专家 19 名，有突出贡献高技能人才 10 人。

In addition to building channels for selecting and training experts and talents with expertise, DEC devotes greater efforts to introduction of high-level talents, formulate a package of measures of talent training and selection. Tech professionals represent over 30% of the staff headcount and over 30% of the tech professionals bear a title of deputy senior professional post or above.

With annual occupational skill level certification got underway in all respects and measures for management of support and training of top skilled young talents and program for high-level skilled talent training laid down, the Company has finalized 5 chief technical experts, 19 experts with outstanding contribution and 10 high-level skilled talents with outstanding contribution.



▲ 6 月至 9 月，东方电气举办首届职工职业技能大赛，进一步激励广大职工走技能成才、技能报国之路，培养造就更多高素质高技能人才

Between June and September, DEC, with a view to foster more highly skilled and high-quality talents, hosted the first Staff Occupational Skill Competition, as an act of motivating employees to become skilled talents serving the country

◎东方电机建立核心技术岗位“学习地图”，搭建青年训练营、技能人才训练队等练兵平台，技能人才技能水平快速提升。

By plotting the "learning map" for core technical posts and setting up youth training camp, skilled talent training team and other platforms concerned, DEC Machinery sees a rapid elevation in talents' level of skills.

◎东方锅炉实施“业务、职业”双导师制度，构建新型人才培养模式，促进新员工快速成长和全面发展。

DEC Boiler adopts the "dual-mentor" system (business/career development) and initiates a new talent training model, in a bid to spur growth and all-around development of new entrants.

◎东方重机采用“工学一体、校企双师”方式大力开展新型学徒制培训。

DEC Heavy Machinery performs apprenticeship-based training in bold and resolute actions, which is characterized by "study and practice integration and supervision by teachers and masters".

◎东方武核首次开展 TTT 内训师专项培训，选拔公司内部讲师。

DEC Nuclear Equipment pilots the Training the Trainer to Train (TTT) for selecting trainers in the company.

◎东方国际打造“博约讲坛”，创新“互联网+”培训思维，实现“送培训到现场”，创建学习型组织氛围。

DEC International unveils "Boyue Forum". With an inventive "Internet+" training mindset, the company "makes on-site training a reality" and creates a learning organization.



▲ 12 月 16 日，东方电气举行第二届“青年创新创效大赛”，集中展示了新时代青年创新创效成果，进一步激发了青年创新创效的热情。On December 16, the second DEC Innovation and Efficiency Contest was held, which was a showcase of innovation and entrepreneurship achievements of young people in the new era with enthusiasm of youth in innovation and entrepreneurship further inspired

干部人才管理 Leader Management

领导人员队伍结构持续优化。加大领导人员调整力度，进一步优化领导人员队伍年龄结构、专业结构和经历来源结构。公开选拔优秀年轻干部，新提拔的 15 名总部部门中层领导人员中 40 岁以下占比 93.3%。

The management team is structurally optimized with continuous efforts. Greater adjustments are made to the leader management, from perspectives of age, profession and working experience structures. Moreover, DEC publicly selects young and excellent leaders. Of all 15 leaders promoted in the middle management, 93.3% are aged 40 or below.

领导人员素质能力持续提升。联合中国大连高级经理学院举办中青年领导人员经营管理专题培训班，举办新任中层领导人员培训班、中层领导人员调训班等，加强领导人员素质培养，完善领导人员知识结构。

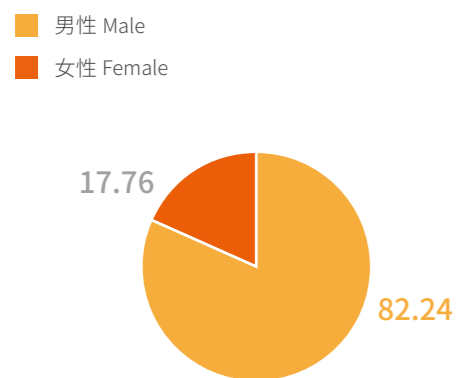
DEC secures continuity of enhancements to capabilities of the management. DEC has also co-hosted a training program on business management targeting middle-aged and young management with China Business Executive Academy, Dalian, along with new middle management training program and middle management training program. With quality training on the management reinforced, DEC takes aim at broadening horizon of the management.

领导人员激励约束持续强化。制订实施关于进一步激励各级领导人员担当作为的“十条措施”，刚性落实企业经理层任期首个年度业绩考核薪酬兑现规则。持续开展个人有关事项报告、领导人员经商办企业规范等专项清理，使干部始终置于组织的有效监督之下，以严格的管理体现对干部真正的爱护。

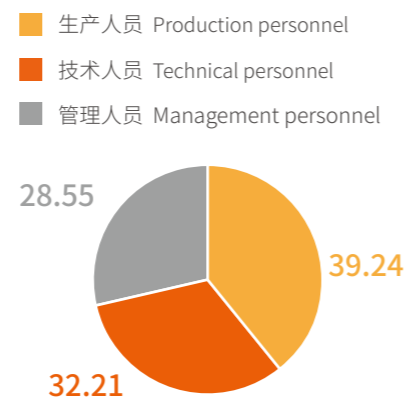
Incentives and restraints to the management are constantly intensified. DEC drafts and carries out "Ten Measures" for further inspiring management at all levels to take accountability while putting into practice the first regulation on annual performance assessment and compensation payment which applies to the management. With crackdown on violators of regulations on reporting of relevant personal affairs and business operation of the management with continuous efforts, the management are supervised in a well-organized and effective manners. Stringent management boils down to care and love to employees in real means.

员工培训比例（单位：%） Employee training percentage (Unit:%)

2021 年员工培训比例（按性别划分）
2021 employee training percentage (by gender)



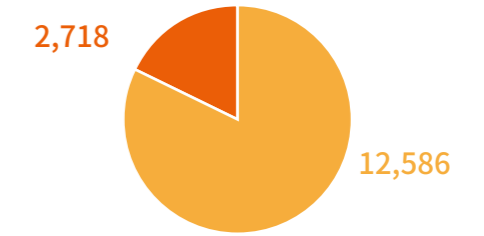
2021 年员工培训比例（按雇佣类型划分）
2021 employee training percentage (by employment type)



员工培训人数（单位：人次） Employee training headcount (Unit: person)

2021 年员工培训人数（按性别划分）
2021 employee training headcount (by gender)

■ 男性 Male
■ 女性 Female



平均培训时数（单位：小时） Average training hours (Unit: hour)

	类别 Type	2019 年 2019	2020 年 2020	2021 年 2021
性别 Gender	男性 Male	66.81	67.03	68.62
	女性 Female	68.05	69.86	71.04
雇佣类型 Employment type	生产人员 Production personnel	62.95	64.08	62.28
	技术人员 Technical personnel	66.98	67.67	72.48
	管理人员 Management personnel	69.48	70.14	76.37

员工关怀 Employee Care

东方电气坚持以人为本，持续开展节日慰问、夏季送清凉、运动比赛等丰富多彩的员工活动，平衡员工工作与生活；坚持推进关心困难员工、离退休员工、女性员工等举措，让员工切实体会到公司的温暖与关怀，进一步提升员工幸福指数。

Putting people first, DEC stages all sorts of employee activities including care during festivals and holidays, summer care, sports contests, etc., to help employees well balance work and life; the Company also provides targeted assistance to employees in need, retired and female. These efforts have brought employees warmth and love, greatly improving happiness quotient of employees.



▲慰问老领导、技术专家、一线员工、员工家属等
Care sent to former management, technical experts, primary employees and relatives thereof



▲庆祝建党 100 周年环园区健身跑活动
Circum-park health run for celebrating the 100th birthday of the CPC

携手伙伴成长 Growth with Partners

东方电气与伙伴携手前行，构建完善的供应链管理体系，持续推动供应链履责，积极与各方开展交流合作，探索多元化合作模式，实现强强联合、优势互补、互利共赢发展新格局。

Joining hands with partners on the way forward, DEC has built a sound supply chain management system with continuous efforts in promoting fulfillment of supply chain duties. Engaged in communication and cooperation with all parties concerned, the Company probes into diversity of cooperation models, in a bid to create new development pattern featuring a mutually beneficial and win-win alliance of powers complementing each other's strengths.

供应商管理 Supplier Management



东方电气通过建立集中、高效、透明的集中采购管理平台，对供应商注册、准入、评审、评价、退出全流程全生命周期在线管理、动态调整，全面提升采购招标业务质效。截至 2021 年底，共有合格供应商 **13,323** 家，其中国外供方 **637** 家，国内供方 **12,686** 家。

Through the establishment of a centralized, efficient and transparent centralized procurement management platform, DEC has comprehensively improved the quality and efficiency of procurement bidding business by online management and dynamic adjustment of the whole process of supplier registration, access, review, evaluation and withdrawal. As of end of 2021, DEC has **13,323** qualified suppliers, including **637** foreign suppliers and **12,686** domestic suppliers.



供应商管理绩效 Performance of supplier management

指标名称 Indicator	单位 Unit	2019 年 2019	2020 年 2020	2021 年 2021
报告期内审查的供应商个数 Number of suppliers screened within the reporting period	个 (supplier)	8,789	20,543	13,323
报告年度供应商新增总数 Number of new suppliers within the reporting period	个 (supplier)	2,204	5,740	5,254

推动供应商履责 Promote Suppliers' Fulfillment of Duties

东方电气在供应商管理过程中，注重供应商的环境管理和职业健康安全管理，逐步建设将绿色制造、低碳环保、资源节约、健康安全协调统一的供应链体系。

For supplier management, DEC ascribes great importance to suppliers' environmental management and occupational health and safety management. As a result, a supply chain system is taking shape step by step, with characteristics of green manufacturing, low-carbon environmental protection, conservation of resources, and coordination and unification of health and safety.

供应商培训绩效 Performance of supplier training				
指标名称 Indicator	单位 Unit	2019年 2019	2020年 2020	2021年 2021
供应商守法合规及风险培训次数 Number of sessions of training for suppliers in terms of compliance with laws and regulations and risk	次 (session)	8	13	15
供应商守法合规及风险培训人次 Number of persons involved in training for suppliers in terms of compliance with laws and regulations and risk	人次 (person)	779	2,319	1,998

行业交流 Industrial Exchange

东方电气与国内外市场需求保持同频共振，致力于将最新科技创新成果以及绿色低碳能源装备产品推向市场，助推构建国际国内“双循环”发展格局。

DEC has kept abreast of national and international market demands, with a view to unveiling the latest technical innovation achievements and green and low-carbon energy equipment products on market and establishing a "dual circulation" development pattern both at home and abroad.



▲ 9月2日，东方电气参展2021年中国国际服务贸易交易会
DEC attended the 2021 China International Fair for Trade in Services (CIFTIS) on September 2



▲ 9月16日，东方电气参展第十八届中国西部国际博览会
DEC attended the 18th Western China International Fair (WCIF) on September 16

战略合作 Strategic Cooperation

东方电气积极与各级政府、企业、科研机构等多方开展精诚合作、共创共享、互利共赢，助力国家、地区和行业可持续发展。2021年，东方电气与各界伙伴达成战略合作协议，共同服务国家战略落地，共同促进高质量发展。

Seeking win-win cooperation with government agencies at all levels, enterprises, and scientific research institutions, DEC co-creates value for a shared prosperity with its partners, in a bid to contribute to national, regional and industrial sustainability. In 2021, DEC entered into a strategic cooperation agreement with partners from all sectors. Promoting implementation of national strategies with concerted efforts, the partnership is expected to boost high-quality development.

政府合作 Government Cooperation



▲与海宁市人民政府签订合作框架协议
Conclusion of a cooperation framework agreement with Haining Municipal People's Government



▲与遵义市人民政府签订战略合作协议
Conclusion of a strategic cooperation agreement with Zunyi Municipal People's Government

企业合作 Enterprise Cooperation



▲与中国石化签订战略合作框架协议
Conclusion of a strategic cooperation framework agreement with Sinopec



▲与苏州创元集团、金龙汽车集团签订战略合作协议
Conclusion of a strategic cooperation agreement with Suzhou Chuangyuan Group and King Long Motor Group

投身社会公益 Engage in Social Welfare

东方电气全面推进乡村振兴，巩固拓展脱贫攻坚成果，同时积极服务社会经济发展大局，积极参与搭建社会事务平台，关注社会民生问题，真诚回馈社会。

Advancing rural vitalization comprehensively, DEC consolidates and expands poverty alleviation achievements while actively serving the overall social and economic development situation and setting up platforms for addressing social affairs. Attaching great importance to issues concerning livelihoods of people, the Company gives back to society deep down.

乡村振兴 Rural Vitalization

东方电气在巩固拓展脱贫攻坚成果基础上，接续推进脱贫地区发展和群众生活改善，坚持做好定点帮扶工作，扎实推进各项帮扶举措，助力定点帮扶的四川省昭觉县和山西省吉县脱贫基础更加稳固、脱贫成效更可持续。

While consolidating and expanding poverty alleviation achievements, DEC constantly promotes development of poverty-stricken areas and improvement of livelihoods of local residents. Solid progress has been made in a whole package of targeted assistance measures. In Zhaojue County, Sichuan Province and Jixian County, Shanxi Province, the Company has laid a solid foundation for poverty alleviation with ensured continuity of effectiveness in this regard.

帮扶管理 Management of Targeted Assistance

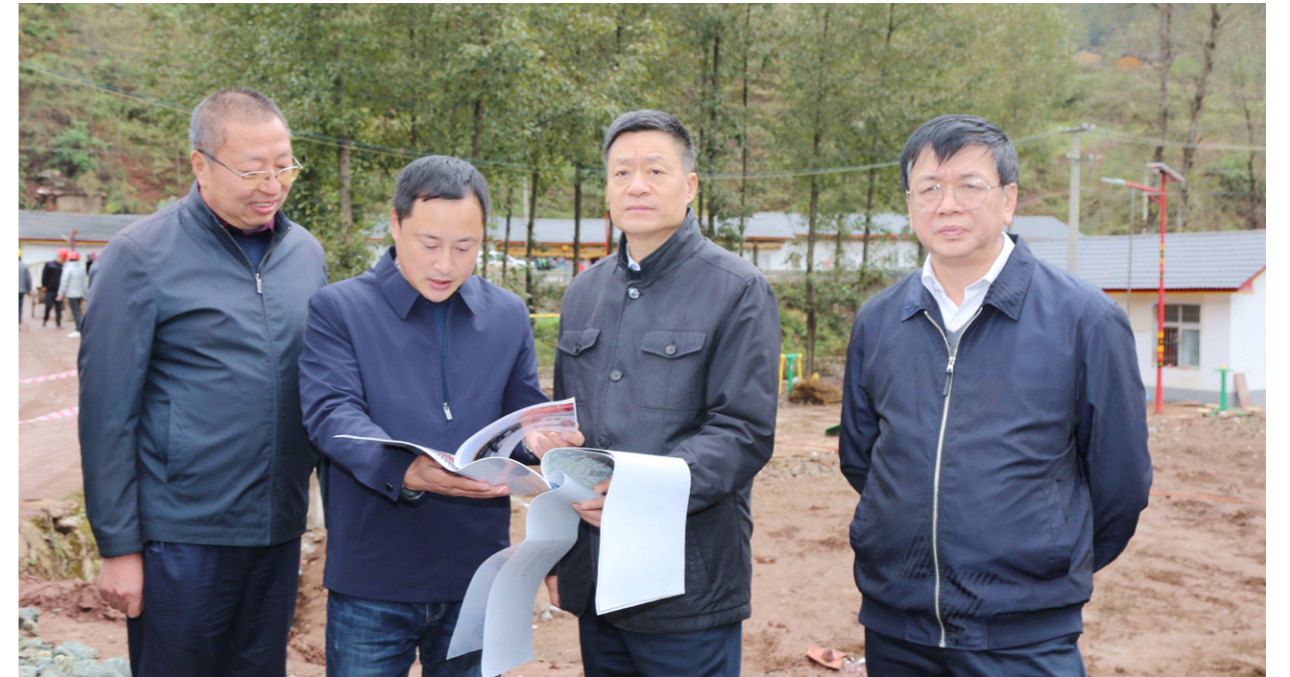
东方电气高度重视新时期定点帮扶工作，建立健全总部统筹谋划决策、企业对口帮扶实施、挂职干部前线攻坚、干部职工广泛参与的新时期乡村振兴定点帮扶工作管理格局。

DEC attaches great importance to targeted assistance in the new era. The Company has built and improved a targeted assistance management pattern for rural vitalization in the new era, featuring overall planning, plotting and decision-making, enterprise pairing and assistance, management assigned to temporary posts working on poverty alleviation and extensive participation of the management and employees.



制定“十四五”乡村振兴定点帮扶工作规划、推进巩固拓展脱贫攻坚成果同乡村振兴有效衔接的实施意见、2021年定点帮扶工作计划等。

DEC lays down the plan on targeted assistance for rural vitalization during the period of "The 14th Five-Year Plan", guidelines on the alignment of efforts to consolidate and expand achievements in poverty alleviation with efforts to promote rural revitalization and 2021 working plan on targeted assistance.



▲到四川省昭觉县开展调研
Conducted surveys in Zhaojue County, Sichuan Province



▲召开帮扶工作会暨挂职干部座谈会
Hold targeted assistance work meeting and a forum for leaders assigned to temporary posts working on poverty alleviation

帮扶实践 Practice of Targeted Assistance

东方电气以助力定点帮扶地区产业、人才、文化、生态、组织全面振兴为总体目标，通过各项帮扶措施有效推进，切实增强帮扶地区经济活力和发展后劲。

Taking aim at comprehensive revitalization of targeted rural areas from perspectives of industry, talent, culture, ecology and organization, DEC takes multi-pronged measures effectively to reinforce vigor and momentum of local economic growth.

产业振兴 Industrial Revitalization

- 支持定点帮扶县产业园建设，提升产业产品品质，帮扶产业产品品牌化打造，开展配套设施建设，丰富产品种类和销售渠道，带动相关产业发展。

With support to industrial park building, product quality enhancing and brand building in targeted counties, DEC erects supporting facilities and diversifies product categories and marketing channels, so as to drive relevant industries to burgeon.

- 帮助吉昌镇上东村“东方时光-儿童主题乐园”建设，预计每年可为村集体带来50余万元收入，带动553户、1,483人增收致富。

DEC assists in building a "Dongfang Times--Children's Amusement Park" at Shangdong Village, Jichang Town, which is projected to bring in revenue of roughly RMB 500,000 to the village per year and help 1,483 persons from 553 households increase revenue and become prosperous.

人才振兴 Talent Revitalization

- 加强人才培养及培训，支持开展奖助学金、奖教金评比，完善教学设施设备建设，提高帮扶群众就业技能水平，拓宽就业门路。

DEC strengthens talent fostering and training. By offering scholarships/student grants and faculty incentives and building a full range of teaching facilities and devices, the Company is aimed at raising the level of working skills of local people who will thus be granted more job options.

- 选派优秀技能专家在壤塘县开展电工技能培训班，第八期和第九期共培训85名农牧民。

A total of 85 farmers and herdsmen took the eighth and ninth sessions of the electrician skill training program sited in Rangtang County under the instruction of skilled experts.

文化振兴 Culture Revitalization

- 支持特布洛乡等开展“移风易俗专项评比表彰”，用好“爱心超市”积分换购制度，推进移风易俗。

"Appraisal and commendation for abandoning undesirable habits" using points redeemed for consumption in "public service market" is performed to imbue rural society with a greater degree of civility in Tebuluo Township.

生态振兴 Ecology Revitalization

- 围绕昭觉县特布洛乡特布洛村开展整体规划设计，实施乡村照明亮化工程，紧急向吉县捐赠100万元救灾资金和30万元的救灾物资，用于支持吉县抗灾救灾。

In line with overall planning and design of Tebuluo Village, Tebuluo Township, Zhaojue County, DEC carries out a rural lighting project; and the Company also donates RMB 1 million and relief materials worth RMB 300,000 to Jixian County as an act of disaster relief.

组织振兴 Organization Revitalization

- 打造坚强有力基层党组织，开展党建结对共建，以组织振兴带动和保证乡村振兴帮扶工作落实。

By shaping formidable primary party organizations and pairing for joint party building, DEC institutionally steers and puts into practice rural vitalization and assistance.



▲东方电气在凉山州昭觉县捐建十所幼教点，为乡村幼儿提供优质学前教育服务
DEC furnishes rural children with quality preschool education services via ten preschool education service centers in Zhaojue County, Liangshan Prefecture

帮扶成效 Achievements of Assistance

2021年，公司在定点帮扶地区共计投入直接帮扶资金2,650万元，实施帮扶项目37项，为当地引进帮扶资金50.4万元，干部职工捐款捐物折合10.5万元，转移就业60人，下属企业直接招聘9人，统筹三项培训758人，完成以购代捐1,918.8万元，帮助销售1,805万元。

In 2021, DEC invested RMB 26.5 million of direct support funds in the targeted areas, along with 37 support projects landed, RMB 504,000 invested as support funds without compensation, and RMB 105,000 donated by the management and employees. Besides, 60 persons were helped with transfer employment, in addition to 9 persons recruited by enterprises under the DEC and 758 persons cumulatively trained in three programs. Furthermore, RMB 19.188 million was spent on agricultural products. And agricultural products worth RMB 18.05 million from targeted counties were sold with our help.

社区发展 Community Development

东方电气与地方党政机关、企事业单位、城乡社区等合作联动，打造共建共治共享的社会治理格局，积极投身公益志愿活动、抗洪救灾等公益事业中。2021 年，公司累计对外捐赠总额 3,346.65 万元。

Allying with local party organizations and government agencies, enterprises and public organizations, urban and rural communities, DEC is intended to create a social governance model based on collaboration, participation, and common interests. Besides, the Company actively devotes to voluntary services and flood relief among other public welfare undertakings. In 2021, DEC made a donation amounting to RMB 33,466,500.

志愿服务 Volunteer Services

东方电气充分发挥“党建带团建”优势，结合“我为群众办实事”活动，成立志愿服务队，打通担当央企社会责任的“最后一公里”。2021 年，公司共开展志愿活动 1,923 次，参与志愿服务 15,358 人次。

Exploiting the potential of "inspiring league building by party building", DEC established volunteers team to resolve "last-mile" problems for CSR fulfillment in the campaign of "doing practical work for helping the public". In 2021, 1,923 voluntary activities were organized, involving 15,358 volunteers.



▲开展环保志愿活动
Carry out environmental volunteer activities

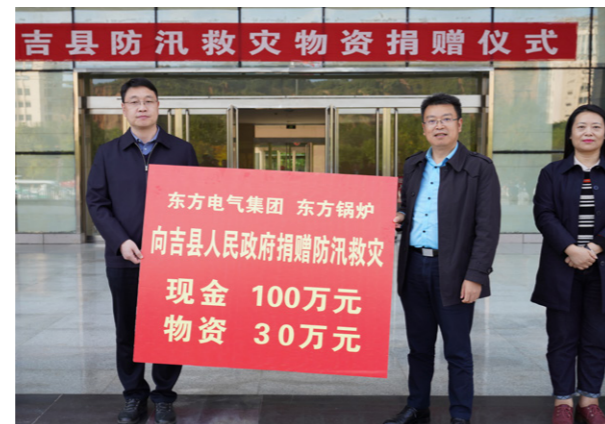
抗洪救灾 Flood Relief

东方电气针对遭遇强降雨侵袭，出现严重洪涝灾害的地区进行捐赠救灾，助力抗击灾情。

With donation to areas wrecked by heavy rainfall and flood, DEC has helped local residents tide over the disaster.



▲东方电气捐款 500 万元用于支援河南受灾地区抢险救灾和灾后重建工作，同时积极组织在豫企业开展防汛工作
Allotting RMB 5 million for disaster relief and post-disaster reconstruction in the disaster-affected area of Henan Province, the Company spared no efforts on flood prevention through cooperation with local enterprises



▲东方电气心系定点帮扶的山西吉县受灾群众，向吉县人民政府捐赠防汛救灾款人民币共计 100 万元，救灾物资 30 万元助力抗击灾情
Sympathizing with disaster victims in Jixian County, Shanxi Province, DEC donated RMB 1 million funds and RMB 300,000 disaster relief supplies to Jixian County People's Government

海外履责 CSR Practices Overseas

东方电气积极履行海外社会责任，构建人类命运共同体，将公司发展融入当地经济社会发展中，共同促进当地社区繁荣发展。

DEC takes the initiative to perform its corporate social responsibility (CSR) overseas. Dedicated for building a community with shared future for human, the Company aligns business development with local economic and social development and contributes to prosperity of local communities with joint efforts.

提供就业机会 Provide Local Employment

东方电气通过为当地人员提供就业机会等方式，支持当地经济发展。

By providing employment opportunities for local personnel and other means, DEC drives local economy to take off.



◀厄瓜多尔芦苇桥风电项目是厄瓜多尔目前在建的最大风电项目
Ecuador Minas de Huascachaca Wind Power Project, the largest wind power plant under construction in the country

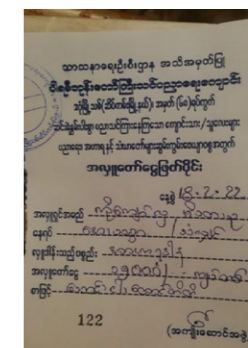
促进当地发展 Promote Local Development

东方电气大力支持海外社区发展，开展协助当地公共设施建设、开展捐资助学、助力疫情防控等多种形式的活动。

DEC takes multi-pronged measures to power development of overseas communities, such as assistance to local public infrastructure construction, funding of schooling and contribution to local pandemic prevention and control.



▲乌兹别克斯坦扎尔乔布二级水电站完工庆典现场，项目部向扎尔乔布项目所在地萨里亚西亚 48 所学校捐赠了文体用品，助力当地教育事业
At the ceremony for completion of the Uzbekistan Zarchob-2 Hydropower Station, the DEC Project Department donated stationery and sports articles to 48 schools in Surkhandarya, the site of the project, to spur local education



▲丰益缅甸项目位于仰光东南部，生活区附近有较多贫民，东方国际参与当地有慈善组织开展的募捐活动，资助当地贫民
Fengyi Myanmar Project is located in southeastern Rangoon. Within territory of its living quarters, there are a flock of poor people. DEC International is engaged in fund-raising activities organized by local charity organizations to provide financial aid to local people

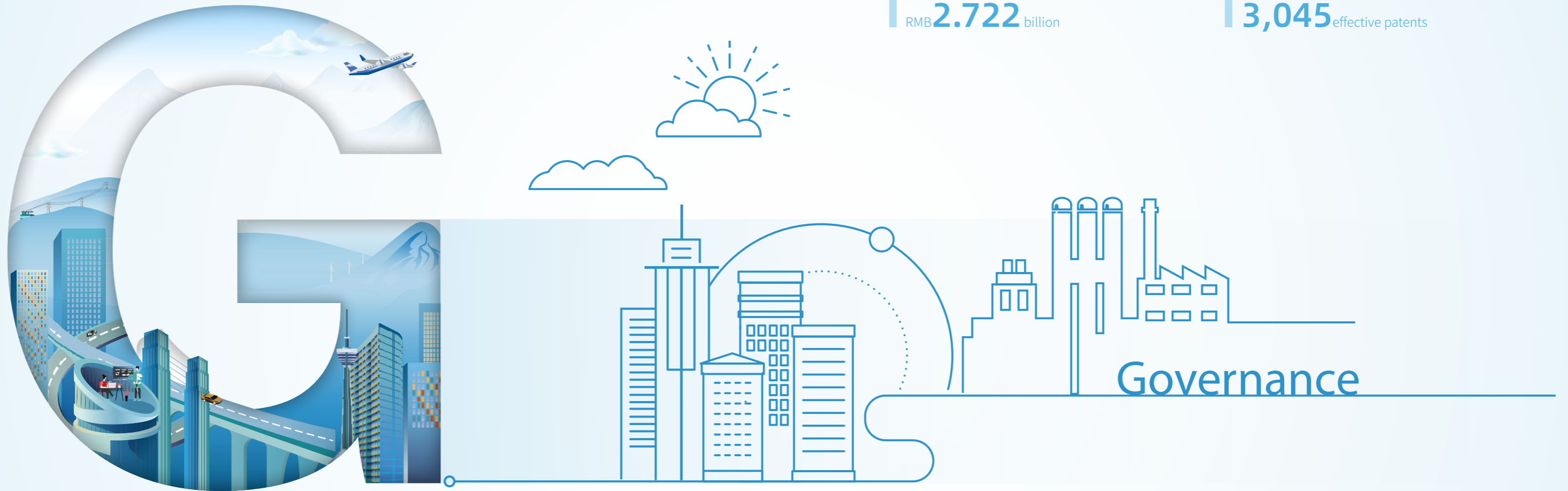


为印度当地支援的抗疫物资制氧机

▲印度公司在印度第二波疫情暴发、医疗资源告急的形势下，紧急从国内采购一批制氧机，支援印度博物馆、泰戈尔故居等单位
The second wave of the pandemic broke out in India. Confronted with short supply of medical supplies, the Dongfang Electric (India) Private Co., Ltd. procured and delivered some oxygen generators from China to India Museum, Tagore's former residence and other places

我们同创高水平治理

Cohesion & Creation for High-Standard Governance



公司研发投入

27.22 亿元

the Company allotted for research & development

RMB **2.722** billion

拥有有效专利

3,045 件

the Company has possessed

3,045 effective patents

东方电气恪守同心守正，始终坚持守法合规，持续推进反腐败，全面开展深化改革，强化质量管控，持续提供优质服务，谋定高质量发展，保障企业持续稳健发展，尽力同创高水平治理，不断提升公司核心竞争力。

By adhering to "Integrity in Unity", DEC works in solidarity and compliance with laws and regulations in the anti-corruption combat. By comprehensively deepening reforms, and tightening quality regulation, the Company ensures continuity of quality services. In quest for high-quality development, the Company secures steady business growth and pools together resources for attaining high-standard governance and enhancing core competitiveness continuously.

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聚焦稳健前行 Focus on Steady Growth

东方电气坚持守法合规经营，不断完善公司治理体系，高度重视法治建设，严格按照《公司法》《证券法》《上市公司治理准则》等上市公司治理的法律法规要求，筑牢风险防线，规范信息披露，坚持廉洁致远，持续提升公司经营治理水平。

In compliance with laws and regulations, DEC keeps refining the corporate governance system. Laying an emphasis on the rule of law, the Company enhances a line of defense against risks and standardizes disclosure of information in strict accordance with laws and regulations, including the *Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, and the Code of Corporate Governance for Listed Companies in China*. By insisting on "Honesty Lasts Long", the Company makes unremitting efforts in elevating its level of business management.

完善治理 Improve Governance

东方电气及时修订“三重一大”决策管理制度，推动治理主体协调运作。管理水平不断提升，建立董事会授权机制，推动治理主体协调运作。董事会成员共6名，其中独立非执行董事3名，董事会下设战略发展委员会、审计与审核委员会、薪酬与考核委员会、提名委员会及风险管理委员会。公司董事知识结构及专业领域既具有专业性又互为补充，呈现多元化的特征，保障了决策科学性。

With Timely amending decision management systems of "making decisions over major events, appointing/dismissing major management personnel, making investment decisions over major projects, and deploying hefty amount of funds", DEC makes governance entities function in a coordinated manner. With management continuously improved, DEC sets up a board authorization mechanism while propelling governance entities to function in a coordinated manner. The board of directors is composed of 6 members including 3 independent non-executive directors, which administers the strategic development committee, audit and review committee, compensation and assessment committee, nomination committee and risk management committee. With sound structure of knowledge and expertise in relevant realms, directors complement each other and take on diversified characteristics, ensuring to make scientific decisions.



- 建立子企业董监事会应建尽建标准，实现全级次子企业董监事会应建尽建完成率达到 100%。
DEC subsidiaries and branch companies at all levels eligible for founding a board of directors and board of supervisors 100% establish their own board of directors and board of supervisors.
- 在已建立董事会的企业中，实现外部董事占多数、集团外派董事中专职董事占多数的企业占比达到 100%。
At each enterprise with a board of directors, outsider directors are in the majority; and each subsidiary board of directors is 100% predominated by full-time directors appointed by DEC.

董事会多元化结构 Diversified board structure

任命职位 Designation			专业 Specialty		
董事长 Chairman	董事 Director	独立非执行董事 Independent non-executive director	工程 Engineering	管理 Management	会计 Accounting
1	2	3	3	2	1

依法合规 Compliance with Laws and Regulations

东方电气持续强化公司法治工作的体系化建设。2021 年，研究制定了《章程制定管理规定》《法律审查指引》及实施细则等制度文件，持续健全依法治理体系。突出学习习近平法治思想，落实《民法典》普法学习，全面夯实企业法治文化。2021 年，公司持续开展法治合规宣传教育，全年累计培训 11,200 人次。



DEC persists in systematic planning for corporate governance infrastructure. In 2021, the Company deliberated and drafted the *Regulation on Formulation of Articles of Association, Guide on Legal Review* and relevant rules for implementation thereof among other institutional documents and perfecting the system by rule of law. Involving employees in learning the Xi Jinping's thinking on the rule of law and *Civil Code*, the Company consolidates the culture of rule of law in all respects. With continuous efforts on propaganda and education of compliance with laws and regulations, the Company cumulatively trained 11,200 employees in 2021.

风险防控 Risk Prevention and Control

东方电气系统整合风险、合规及内控管理体系，健全完善内部评价指标体系，优化覆盖全公司的风险预警体系。组织制定《内部控制体系工作手册》《违规经营投资责任追究管理规定》，筑牢防范风险的制度体系。切实发挥董事会审计与审核委员会管理和指导作用，提升风险防范的针对性和有效性。2021 年，公司共组织完成审计及评价项目 83 项，新增重大风险事件为 0。



Apart from integrating risk, compliance and internal control management system and improving internal evaluation indicator systems, DEC also optimizes the company-wide risk warning system to utmost endeavor. *Work Manual on Internal Control Systems and Regulation on Management of Accountability in Illegal Operation and Investment* laid down build a robust system for risk prevention and control. With each board's audit and review committee playing a great role in management and instruction, DEC takes effective and targeted precautions against all sorts of risks. In 2021, 83 audit and assessment programs were completed, along with 0 major risk events incurred.

投资者关系管理 Investor Relations Management



东方电气严格遵守上市规则和相关的法律法规，落实信息披露工作，与投资者建立良好的沟通关系。持续组织年报、季报业绩说明会和路演活动，主动与投资者沟通交流；通过咨询电话、电子邮件、接待投资者来访、上证 E 互动平台、公司专页、证监局投资者平台等，做好与投资者的日常沟通，并进一步规范投资者接待安排流程。2021 年，共召开股东大会 2 次，举办业绩说明会和路演活动 4 次，通过公开渠道信息披露 227 项（其中上交所 95 项，联交所 132 项），连续 7 年获得上交所信息披露工作 A 级评价。

Stringently in line with IPO regulations and applicable laws and regulations, DEC performs information disclosure while maintaining healthy communications with investors. Organizing briefings of annual reports and quarterly performances, as well as roadshows, the Company is proactive in getting touch with investors; through various channels including consultation hotlines, emails, investor visits, SSE E-interactive platform, the company webpage, and investor platforms under the investor platform of China Securities Regulatory Commission, the Company keeps in touch with investors and further standardizes the procedures for investor receptions. In 2021, the Company convened 2 general meetings of stockholders and 4 performance briefings and roadshows. A total of 227 pieces of information were disclosed (95 to the Shanghai Stock Exchange and 132 to the Hong Kong Stock Exchange) in the year. For 7 straight years, the Company has been rated A by Shanghai Stock Exchange for information disclosure.



▲东方电气投资者交流会
DEC Investor Exchange



▲东方电气 2020 年度业绩说明会
DEC 2020 Performance Briefing

反腐败 Anti-corruption



东方电气高度重视反腐败工作，建立完善的廉洁从业体系，防范腐败或损害公司利益事件的发生，制定修订相关制度文件，各部门、子公司结合实际，实现廉洁从业制度的全覆盖；逐级压实责任，签订《廉洁从业承诺书》；扎实开展监督检查，健全业务监督、职能监督、执纪监督“三道防线”，聚焦采购营销领域开展采购招标专项治理；深入推进廉洁文化建设，发布“同心守正 廉洁致远”廉洁理念，召开警示教育大会、组织开展党风廉洁讲座、观看警示教育片等活动，提升廉洁从业意识，不断筑牢拒腐防变的思想防线，营造风清气正的经营环境。

DEC gives anti-corruption a high profile. Complementing a well-established honest working system for avoidance of corruption or any other incidents that impair interests of the Company are relevant institutional documents formulated and revised in due course. All DEC departments and subsidiaries make full coverage of the honesty working system a reality according to their realities; responsibilities are sorted level by level, along with the signing of *Commitment to Honest Practice*; carrying out supervision and inspection in concrete actions, the Company consolidates the "three lines of defense", namely, business supervision, functional supervision and discipline supervision, and highlights special management of procurement bidding in purchasing and marketing; moving forward with renewed efforts to build incorruptible culture, the Company proposes the integrity principle of "Integrity in Unity, Honesty Lasts Long". Via cautionary education conference, clean party conduct lecture, cautionary education video and other activities, the Company promotes staff awareness of honest practice and makes resisting corruption and preventing moral decline embedded in the minds of employees, so as to create a clean and fair operating environment.

反腐败培训绩效 Performances in anti-corruption

指标名称 Indicator	单位 Unit	2019 年 2019	2020 年 2020	2021 年 2021
反腐败培训次数 Number of anti-corruption training sessions	次 (session)	110	103	85
反腐败培训参与人数 Number of participants in anti-corruption training	人次 (person)	8,388	12,501	9,221
报告期内审结的贪污诉讼案件数 Number of corruption lawsuits closed within the reporting period	个 (lawsuit)	2	2	2

- 2021 年度，未发现任何因违反贿赂、勒索、欺诈及洗黑钱等方面的法律法规而对东方电气造成严重影响的情况。
In 2021, no case was found when DEC was serious impacted due to violations of laws and regulations such as bribery, extortion, fraud, and money laundering.
- 2021 年度，提出贪污诉讼案件：2 件。
In 2021, 2 corruption lawsuits were filed.
- 2021 年度，已审结的贪污诉讼案件：2 件，涉事员工均已被司法机关依法处理。
In 2021, two corruption lawsuits were closed. All the employees involved have been dealt with by the judicial organs according to law.

持续深化改革 Continuously Deepening Reforms

东方电气以国企改革三年行动为抓手，抓重点、补短板、强弱项，推进企业高质量发展。

With a view to implement the three-year action plan for SOE reform, DEC focuses on priorities, addresses inadequacies, and shores up points of weakness, for promoting high-quality development.

深化改革三年行动 Three-year Action for Deepening Reform

东方电气全面推进经理层成员任期制和契约化管理，全面实现各级次经理层成员年度个性化业绩考核；持续建立完善中国特色现代企业制度，构建“一横一纵”治理制度体系，推进“两非”剥离和低效产能退出，促进资源优化配置，推进混合所有制改革和综合性示范改革。深化改革三年行动总体完成进度已达到 86.4%，重点任务实现“三个全覆盖、三个 100%、多个专项突破”，2021 年度主要经济指标同比大幅增长。

DEC fully implements the term system and contractual management for the management. DEC annual tailored performance assessment on executives at all levels; with unremitting efforts in building and improving the modern corporate system with Chinese characteristics, the Company constructs a "horizontal-vertical" governance institution. Completing the tasks of relieving SOEs of their obligations to operate social programs and of resolving other longstanding problems concerning SOEs and eliminating low efficiency production capacity, the Company optimizes allocation of resources and sees pleasant progress made in the mixed-ownership reform and comprehensive demonstration reform. The three-year action for deepening reform has been 86.4% completed, with "coverage in three respects, three 100% indicators and a plurality of special breakthroughs" attained in key tasks therein. The Year 2021 also witnessed the sharp increase of key economic indicators.

落实对标管理 Implement Benchmark Management

东方电气全面落实对标世界一流管理提升行动，狠抓对标提升工作清单整改落实，努力提升精益管理水平，截至 2021 年底，公司对标提升清单目标完成率达到 92.9%。

DEC takes concrete actions to benchmark the world-class companies against best corporate management and complete the list of revamps, in an attempt to elevate the level of lean management. By the end of 2021, the Company hit 92.9% of targets listed.



强化战略引领和战略 管控能力 Strengthen Strategic Guidance and Control

- 制定发布公司“十四五”战略规划纲要及相应子规划。

DEC has outlined and published the strategic planning during the period of "The 14th Five-Year Plan" and relevant plans.

- 系统构建“两级三类”发展规划体系。

A system of integrated plans for "overall planning, special planning and regional planning at the national and local levels" is being put in place.

- 强化战略研究能力建设，建成公司专业化战略研究体系，为强化战略引领提供有效支撑。

DEC bolsters strategic guidance with greater capabilities of strategic research and a professional strategic research system.

提升精益管理水平 Improve Lean Management

- 组织实施精益改善项目 128 个，实现直接经济收益 4,000 万元。

128 lean improvement projects have been carried out, realizing direct economic revenue of RMB 40 million.

- 东方风电推进全价值链成本管理，全年实现降本超 7,000 万元。

By boosting cost management in full industry chain, DEC Wind has lowered annual cost by over RMB 70 million.

- 东方电机推进精益供应链管理，全年实现财务收益超 1,500 万元。

Tightening lean supply chain management, DEC Machinery has realized annual financial income of over RMB 15 million.

强化科技创新 Enhance Technology Innovation

东方电气坚定不移贯彻创新驱动发展战略，聚焦产业链供应链自主可控，深化产学研结合，强化国家战略科技力量，勇于攻坚，高度重视科技创新工作。

Unswervingly upholding the innovation-driven development strategy, DEC focuses on securing independent controllability of industry chain and supply chain. Through industry-university-research cooperation, the Company takes technology innovation as a priority to reinforce China's strategic science and technology capabilities and make breakthroughs in key and core technologies, attaches great importance to scientific and technological innovation work.

科技创新体系 Technology Innovation System

东方电气持续加大研发投入，健全科技创新体制机制，不断激发科技创新内生动力。2021年，公司研发投入 **27.22** 亿元，研发人员 **4,122** 人，主持制定或修订 3 项国家标准，参与制定或修订国家标准 35 项，主持制定或修订行业标准 6 项，参与制定或修订行业标准 48 项。



With increasingly investing in R&D and fully setting mechanisms and systems for technology and innovation, DEC keeps unleashing the endogenous motivation in this respect. In 2021, the Company allotted RMB **2.722** billion for research & development and employed **4,122** R&D professionals. Concurrently, the Company initiated the formulation or amendment of 3 national standards and 6 industrial standards while participating in draft or revision 35 national standards and 48 industrial standards.

●东方汽轮机中标工信部国家新材料示范平台。

DEC Turbine won the MIIT bid for the national new materials demonstration platform.

●能源装备工控网络安全四川省重点实验室获批。

DEC Laboratory for Security of Industrial Control Network of Energy Equipment was rated a key laboratory in Sichuan Province.

建设科技创新平台

Technology Innovation Platform

●加强两级研发体系和创新资源统筹，联合产业链创新链上下游 70 余家企业，组建先进电力装备等四个创新联合体，构建完善产学研用相融合的开放协同创新体系。

Stepping up overall planning of two-level R&D systems and innovative resources, DEC has co-founded four innovation consortia for advanced electric power equipment, etc., with over 70 enterprises upstream and downstream the industry chain and innovation chain. As a result, an open and collaborative innovation system featuring industry-university-research-application integration has taken shape.

先进电力装备研制与应用创新联合体

Innovation consortium for advanced electric power equipment development and application

中小功率等级天然气燃气轮机和氢燃气轮机创新联合体

Innovation consortium for medium- and low-power-grade natural gas combustion turbines (NGCT) and hydrogen-fired gas turbines

海上风电机组研制与应用创新联合体

Innovation consortium for offshore wind turbine development and application

氢能及燃料电池技术创新联合体

Innovation consortium for hydrogen and fuel cell technology

完善开放协同创新体系

Open and Collaborative Innovation System

●制定发布公司“十四五”科技创新规划和 2021 年度科技创新计划。

DEC has worked out and delivered the technology innovation plan during the period of "The 14th Five-Year Plan" and 2021 technology innovation plan.

●发布实施《科学技术奖评选管理办法》《科技项目管理办法》等 10 余项制度。

DEC has promulgated and enforced 10 systems, such as *the Measures for Management of Selection and Appraisal of Science & Technology Awards and Measures for Management of Science & Technology Projects*.

●加强科技成果转化机制建设，对标一流企业，探索成果转化收益分享机制。

Apart from institutionalizing the commercialization of scientific and technological achievements, DEC has also aligned itself with the best performers in the industry to delve into mechanisms for distribution of shares in the proceeds from the commercialization of scientific and technological achievements.

科技创新机制建设

Technological Innovation Mechanism Construction

●建立重大项目攻关“揭榜挂帅”机制。

DEC implements the open competition mechanism to select the best candidates for major research projects.

●继续推进中长期激励向科研一线骨干倾斜，限制性股票、员工持股计划中科研人员比重超过 60%。

DEC continues to privilege primary key scientific research leaders in medium- and long-term incentives and tech professionals account for over 60% in the restricted stock program and employee stock ownership plan (ESOP).

●持续推进科技成果转化专项奖励。

DEC rewards commercialization of scientific and technological achievements with continuous efforts.

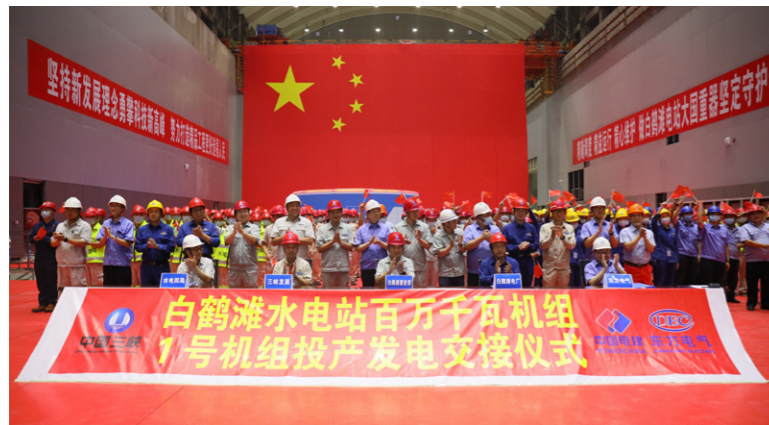
加大科技人才激励

Strengthen Tech Talent Incentive

重大科技成果 Major Scientific and Technological Achievements

东方电气全面落实关键核心技术攻关年度目标任务。2021 年，公司关键核心技术攻关成效突出，重大科技成果捷报频传，获国家科技进步奖二等奖，省部级奖项 29 项，入选中央企业科技创新成果目录 2 项。

DEC uses its best endeavor to accomplish the annual task of intensifying research on key technologies. In 2021, major achievements were registered in research on core technologies in key fields, along with a steady flow of science and technology feats. DEC won the Second Prize of the National Science and Technology Award and 29 provincial and ministerial awards and had 2 projects included into the list of scientific and technology innovation achievements of central enterprises.



◀白鹤滩百万千瓦水机组性能优异，东方电气助力首批机组安全准点投产发电
DEC delivered and put into use the first 1GW unit with outstanding performance for power generation on time in the Baihetan Hydropower Station



◀东方电气为世界最高海拔风电场——西藏措美县哲古分散式风电项目提供的 5 台 2.X-131 型永磁直驱超高海拔风电机组全容量并网发电
5 DEC 2.X-131 permanent magnetic direct drive wind turbines applicable to regions of ultra-high attitude were put into grid-connected power generation at full capacity in the world's highest-altitude wind power project—a distributed wind farm located at Zhegu, Cuomei County, Tibet

数字化转型 Digital Transformation

东方电气扎实推进信息与数字化工作，大力推动数字化转型。2021 年，公司发布网络安全和信息化“十四五”规划，持续建立健全网信工作机制，有序开展智能制造转型工程、网信项目建设及网络安全保护工作，赋能公司数字化水平大幅提升。

DEC propels application of information and digital technologies and promotes digital transformation. In 2021, the Company built and improved ITS working mechanisms for cybersecurity and IT application and took steps to implement intelligent manufacturing transformation project, cybersecurity and IT application project and cybersecurity protection work pursuant to "The 14th Five-Year Plan" for cybersecurity and IT application. With such efforts, the Company has seen its proficiency of digital application improved in leaps and bounds.

●首套智慧电厂市场化项目圆满落地，形成示范应用。

The first market-oriented smart power plant project has been completed, demonstrating effects in this respect.

产品服务数字化
Digitalization of
Product/Service

制造数字化
Digitalization of
Manufacturing

●建成数字化车间 7 个、无人车间 1 个，推动绿色工厂改造升级。

With 7 digital workshops and 1 unattended workshop built in place, DEC promotes refurbishing of green factory.

●财务共享服务系统费用报销业务全面上线。

DEC has launched a shared financial service system for reimbursement of expenses in all respects.

●客户关系管理、智慧客户服务系统等 8 个系统陆续试点上线。

8 systems, including customer relation management system and smart customer service system etc., have been piloted successively.

●组织发布 8 项数据标准和 1 项技术标准，推动主数据在 28 个系统的落地应用，主数据专项治理取得阶段性成果。

In line with 8 data standards and 1 technical standard released, implementation of master data in 28 systems materializes with staged progress in master data-based governance.

管理数字化
Digitalization of
Management



▲自主研发蛇形管附件焊接机器人系统、行业首台大型高压容器全自动激光封口焊上线，锅炉集箱高速数控钻成功实现“双机合璧”
The self-developed coiled pipe fitting welding robot system and industry's first full-auto laser sealing and welding machine for large-sized HP vessels form an immaculate pair with high-speed CNC drilling machine for boiler containers



▲定子冲片“无人车间”
"Unattended workshop" for stator punching

知识产权保护 IPR Protection



作为国家首批创新型企业、国家技术创新示范企业，东方电气遵守《专利法》《著作权法》《反不正当竞争法》等法律法规，逐步完善企业知识产权管理体系，不断加强知识产权风险防控，公司知识产权创造、运用、保护、管理能力显著增强。

2021 年，新增有效专利 401 件，其中发明专利 86 件；截至 2021 年底，共拥有有效专利 **3,045** 件，其中发明专利 1,106 件，发明专利占比 37%。

As one of the First National Innovative Enterprises and the National Tech Innovation Demonstration Enterprises, DEC complies with the *Patent Law of the People's Republic of China*, *Copyright Law of the People's Republic of China*, *Anti-Unfair Competition Law of the People's Republic of China*, and other applicable laws and regulations. Taking a stepwise approach to perfect the IPR management system, the Company has remarkably reinforced its capabilities of IPR creation, application, protection and management.

DEC gained 401 new effective patents in 2021, including 86 invention patents. As of the end of 2021, the Company has possessed **3,045** effective patents, including 1,106 invention patents, which accounts for 37%.

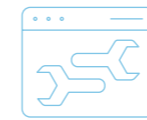


做优客户服务 Optimize Customer Services

东方电气坚持“24 小时服务精神”，始终关注用户需求，不断提升产品质量，创新服务模式，为客户提供贴心服务。

Adhering to the spirit of "24-hour service spirit", DEC invariably pays attention to users' requirements by promoting product quality, innovating service models and delivering considerate customer services.

质量管控 Quality Control



东方电气持续深化“遵章守规、一次做好、精益求精、客户满意”的质量方针，发布公司“十四五”质量发展规划，强化质量战略引领。2021 年，重大质量事故、重大质量管理问题、客户重大质量投诉均为 0。在中国电力企业联合会评选的年度火电机组可靠性总体排名中，持续保持国内领先。

DEC carries forward the establishment of a quality policy that emphasizes "compliance with rules and regulations, one-and-done, pursuit of excellence and customer satisfaction". The Company has also laid down "The 14th Five-Year Plan" for quality development, providing a strategic guidance for quality assurance. In 2021, the Company remained its leading position in annual thermal power generator set reliability rankings of the China Electricity Council (CEC), with no major quality accidents, major quality management problems or major customer complaints.

完善质量管理 Quality Management Improvement

2021 年，东方电气持续完善公司质量管理体系，修订《质量管理体系成熟度评价标准》《质量文化建设成熟度评价标准》等制度，完成三体系内部审核，升级《质量管理手册》；统筹推进公司质量管理信息化建设，提升全流程质量管理效能。

In 2021, DEC continued to work on refinement of quality management systems by amending the *Criterion for Evaluation of Maturity of Quality Management Systems*, *Criterion for Evaluation of Maturity of Quality Culture Establishment*, and other systems; upon completion of internal review on three systems, the Company ameliorated the *Quality Management Manual*; through coordinated efforts of promoting IT application in quality management, the Company enhanced efficiency of total quality management.

建设质量文化 Quality Culture Establishment

东方电气发布《2021-2023 年质量培训滚动计划》，通过系统化质量培训，补强全员质量管理知识短板；开展 4 期质量大讲堂，持续开展各企业一把手讲质量课；实施各级领导人员质量文化测评、组织典型质量案例质量月图片展及举办 QC 成果发表赛等举措深化质量文化建设，营造人人关心质量良好氛围。2021 年，开展质量培训 416 次，培训覆盖 30,068 人次。

In accordance with the *2021-2023 Rolling Plan for Quality Training* published, DEC systematizes 4 sessions of quality training, strengthening the weak link in staff awareness of quality management knowledge, where principal leaders of all enterprises expounded on quality management; the Company has also created a good atmosphere where quality is a top concern by taking multi-pronged measures for building quality culture, including quality culture assessment on the management at all levels, monthly photo exhibition regarding typical quality cases, QC outcome presentation, etc. In 2021, DEC engaged 30,068 persons in 416 quality training sessions.



▲为及时解决客户关注的质量问题，提升客户满意度，东方电气组织开展老区电厂“质量万里行”活动
DEC carried out the "Quality Walking Miles" activities in old revolutionary base areas, in a bid to address quality concerns of customers for utmost customer satisfaction

质量管理绩效 Performance of quality management				
指标名称 Indicator	单位 Unit	2019年 2019	2020年 2020	2021年 2021
已售或已运送产品总数中因安全与健康理由而须回收的比例 Percentage of total products sold or shipped subject to recalls for safety and health reasons	%	0	0	0
重大质量事故及重大客户投诉数 Major quality accidents and customer complaints	起 (accident)	0	0	0

客户服务 Customer Service

东方电气不断做优客户服务，始于需求，终于满意，始终以优质的服务持续提升用户体验，提升服务品质，以优质高效的服务为客户创造更大价值。

DEC is constantly building up the quality of customer services. To meet customers' needs, the Company ends up winning customer satisfaction. With unremitting efforts of promoting user experience and service quality, the Company aspires for creating greater value for customers.

提升客户满意度 Improve Customer Satisfaction

东方电气定期面向客户开展满意信息收集，从各个方面了解客户的意见，不断提升客户满意度，形成良好的客户口碑。

By collecting customer satisfaction information, DEC gets the picture of customer feedback in all respects for constant enhancement to customer satisfaction and high reputation by word of mouth.

客户投诉处理流程 Process for Customer Complaint Handling

东方电气建立公司统筹协调、各子企业参与的客户投诉处置机制，接收到客户投诉信息后将组织相关部门开展原因分析，提出改进措施并实施改进，必要时按照《质量事件管理办法》报送相关部门，根据要求处理并跟踪，协调相关企业及时处理，并定期上报主管领导。

We establish a complaint handling mechanism specially for customers with the Company making the overall plan and all subsidiaries participate in the complaint handling process. Upon receipt of any customer complaint information, relevant departments will be organized to make cause analysis, propose and carry out measures for improvement. If necessary, complaints will be reported to relevant departments as per the *Measures for Management of Quality Events* before being handled and tracked as required, and related subsidiaries may be required to deal with the complaints in time and regularly report to the leader in charge.

客户信息保护 Customer Information Protection

东方电气对客户或供应商的知识产权、商业机密等隐私严格按照要求进行保护，防止误用、滥用、超许可范围使用或泄露给第三方。全面实施客户资产管理，对客户及供应商的实物资产和信息资产进行建账管理，若发生丢失、损坏、变质或其他异常情况，第一时间向客户或供应商报告。

We firmly protect the intellectual property rights, trade secrets, and other private information of customers and suppliers in line with relevant requirements, and avoid any misuse, abuse, or use beyond the permitted scope of such information by or disclosure of such information to any third party. Besides, we strictly implement customer asset management and keep meticulous records of the physical and information assets of customers and suppliers. In case of losses, damage, deterioration or other abnormal conditions, we report to the customers or suppliers in the first place.

●2021年，东方电气总体客户满意度为 **92.4%**。
In 2021, DEC landed itself **92.4%** in customer satisfaction.



◀东方电机获中国宝武钢铁集团“优秀供应链合作伙伴”殊荣
DEC Machinery was awarded "Excellent Supply Chain Partner" by China Baowu Steel Group Corporation Limited



◀东方风电获五星级运维能力评估符合证明
DEC Wind was honored the certificate of conformity in five-star-level O&M capacity assessment

未来展望

Outlook



2022年是“十四五”承上启下的关键之年,更是东方电气发展再上新台阶之年。东方电气将坚定不移走好可持续发展道路,齐心协力创享美好未来。

我们将全力驱动绿色发展。肩负国家能源战略重任,深入贯彻落实碳达峰、碳中和决策部署,牢牢把握新能源供给能力、消纳能力建设发展机遇,坚持“绿色智造”转型方向,坚持走生态优先、绿色低碳的发展道路,擦亮高质量发展底色。

我们将尽力赋能和谐发展。全面保障员工权益,注重人才培养,坚持“动力与温暖同在,梦想与责任同行”,稳步推进区域战略布局,支持乡村振兴,积极投身公益事业,继续努力回馈社会。

我们将竭力推进稳健发展。践行“稳字当头、稳中有进”,以管理提升夯实基础,深入对标一流,加快推动改革工作落地见效,提升产品技术与质量水平、科技创新能力、成本管控能力以及风险防控能力等,确保发展再上新台阶,为稳定宏观经济作出更大贡献。

脚下征途漫漫,心中志气长存。我们瞄准全面决战决胜再上新台阶,紧盯目标任务,立足新发展阶段,贯彻新发展理念,构建新发展格局,以实际行动履行环境与社会责任,为实现经济、环境与社会可持续发展贡献力量。

The Year 2022 is a crucial year for implementing "The 14th Five-Year Plan" when DEC will move towards a new level. With determination, we will follow the path of sustainable development and create a bright future with concerted efforts.

We will power green development at full throttle. Shouldering the great responsibility of fulfilling the national energy strategy, we carry out major decisions and plans on carbon peaking and carbon neutrality. Seizing the opportunity of building up capacity of new energy supply and uptake, we prioritize ecological conservation and pursue green and low-carbon development in transformation towards "environment-friendly and intelligent manufacturing". By doing so, we take aim at "burnishing" the defining feature of high-quality development.

We will empower harmonious development to our utmost endeavor. We do everything within our power to safeguard rights and interests of our employees with focus on talent training. Adhering to the philosophy of "incorporating warmth into impetus, and dreams into responsibilities", we establish and improve a regional strategic layout progressively, support rural vitalization and contribute to public welfare undertakes in return to society.

We will strain every sinew to secure steady growth. "Making stability the top priority and seeking progress while maintaining stability", we consolidate the foundation with more exacting management. Benchmarking the best performers, we ensure effective implementation of reform measures at a faster pace, raise standards of product technology and quality, and promote capabilities of technology innovation, cost control and risk prevention & control. Bringing development to a new level, we will make greater contribution to stabilizing macro economy.

The journey will be long, but all we can do is keep fighting and pushing forward with ambition. Aimed at winning a decisive victory and taking the Company onto a new stage, we will ensure genuine implementation of target tasks. Standing grounded in the new development stage, applying the new development philosophy, creating a new pattern of development, we will take concrete actions in fulfilling environmental and social responsibilities and contributing to economic, environmental and social sustainability.



附录

Appendix

关键绩效表

Table of Key Performance

环境绩效				
Environmental				
一级指标	二级指标	2019年	2020年	2021年
Primary indicator	Secondary indicator	2019	2020	2021
温室气体 GHG	温室气体排放量 (万吨) GHG emission volume (unit: 10,000 tons)	26.5	25.2	24.1
	其中: 直接排放 (范围 1) (万吨) wherein: Direct emission (scope 1) (unit: 10,000 tons)	26.5	25.2	24.1
	间接排放 (范围 2) (万吨) Indirect emission (scope 2) (unit: 10,000 tons)	—	—	—
	温室气体排放密度 (吨 / 万元) GHG emissions intensity (unit: ton/RMB 10,000)	0.081	0.068	0.051
	温室气体减排量 (万吨) Reduction of GHG emission volume (unit: 10,000 tons)	2.2	1.3	1.1
废气 Waste gas	二氧化硫 (吨) Sulfur dioxide (unit: ton)	208.4	196.5	175.4
	二氧化硫排放密度 (吨 / 万元) Sulfur dioxide emission density (unit: ton/RMB 10,000)	0.00006	0.00005	0.00004
	氮氧化物 (吨) Nitrogen oxide (unit: ton)	370	351	273
	氮氧化物排放密度 (吨 / 万元) Nitrogen oxide emission density (unit: ton/ RMB 10,000)	0.00011	0.00009	0.00006
废水 Waste water	废水排放量 (万吨) Waste water emission volume (unit: 10,000 tons)	165.7	153.9	143.7
	废水排放密度 (吨 / 万元) Waste water discharge density (unit: ton/RMB 10,000)	0.5046	0.4128	0.3005
	COD (吨) COD (unit: tons)	381	367	295
	COD 排放密度 (吨 / 万元) COD discharge density (unit: ton/ RMB 10,000)	0.00011	0.00010	0.00006
	氨氮 (吨) Ammonia nitrogen (unit: ton)	88.9	83.5	76.1
	氨氮排放密度 (吨 / 万元) Ammonia nitrogen discharge density (unit: ton/ RMB 10,000)	0.00003	0.00002	0.00002
废弃物 Solid waste	危险废弃物排放量 (吨) Hazardous wastes emission volume (unit: ton)	2,996	2,826	2,329
	危险废弃物排放密度 (吨 / 万元) Hazardous waste emission intensity (unit: ton/RMB 10,000)	0.0009	0.0007	0.0004
	无害废弃物排放量 (吨) Non-hazardous wastes emission volume (unit: ton)	30,100	35,800	26,773
	无害废弃物排放密度 (吨 / 万元) Non-hazardous waste emission intensity (unit: ton/RMB 10,000)	0.0092	0.0072	0.0051
	回收废弃物总量 (吨) Total volume of recyclable waste (unit: ton)	22,300	29,000	24,423

环境绩效				
Environmental				
一级指标	二级指标	2019年	2020年	2021年
Primary indicator	Secondary indicator	2019	2020	2021
能耗 Energy consumption	综合能耗 (吨标准煤) Comprehensive energy consumption (unit: TCE)	102,153	98,673	93,391
	万元产值综合能耗 (吨标准煤 / 万元) Comprehensive energy consumption per RMB 10,000 of operating income (unit: TCE/RMB 10,000)	0.035	0.028	0.022
	电力 (万千瓦时) Electricity (unit: 10,000 kWh)	35,827	32,783	31,802
	天然气 (万立方米) Natural gas (unit: 10,000 m ³)	3,856	3,809	3,771
	汽油 (吨) Gasoline (unit: ton)	805	756	655
	柴油 (吨) Diesel (unit: ton)	777.4	741.6	690.8
水资源 Water resource	水资源消耗 (万吨) Water consumption (unit: 10,000 tons)	390	370	369
	万元产值水资源消耗 (吨 / 万元) Water resources consumption per RMB 10,000 of operating income (unit: ton/RMB 10,000)	1.186	0.993	0.758
包装物料 Packaging materials	包装材料消耗 (吨) Consumption of packaging materials (unit: ton)	8,861	13,507	15,150
	包装材料消耗密度 (吨 / 万元) Consumption intensity of packaging materials (unit: ton/RMB 10,000)	0.0027	0.0041	0.0032
	木箱 (吨) Wooden box (unit: ton)	4,616	8,182	9,687
	纸箱 (吨) Carton (unit: ton)	125	126	80
	塑料 (吨) Plastic (unit: ton)	332	158	175
	槽钢 (吨) Steel channel (unit: ton)	3,732	4,527	4,754
	其他材料 (吨) Other materials (unit: ton)	56	514	454
环保投入 Environmental protection investment	环保资金投入 (万元) Funds of environmental protection investment (unit: RMB 10,000)	2,349	3,033	5,960
生态保护 Ecological protection	重大环境污染事故 (起) Major environmental pollution accidents (unit: accident)	0	0	0
	环保培训人次 (人次) Number of employees in environmental protection training sessions(unit:person)	27,100	17,306	14,173
	环保培训覆盖率 (%) Coverage of environmental protection training (unit: %)	100	100	100

社会绩效 Social				
一级指标 Primary indicator	二级指标 Secondary indicator	2019 年 2019	2020 年 2020	2021 年 2021
雇佣 Employment	员工总人数 (人) Total number of employees (unit: person)	17,360	17,336	16,969
	女性员工人数 (人) Number of female employees (unit: person)	3,145	3,003	2,945
	女性管理者比例 (%) Percentage of female management (unit: %)	18.12	17.32	17.35
	男性管理者比例 (%) Percentage of male management (unit: %)	81.88	82.68	82.65
	劳动合同签订率 (%) Percentage of employment contracts signed (unit: %)	100	100	100
	社会保险覆盖率 (%) Coverage of social insurance (unit: %)	100	100	100
	健康与安全 Health and safety	安全生产投入 (万元) Work safety investment (unit: RMB 10,000)	8,277.1	7,063.5
安全生产培训人次 (人次) Number of employees in work safety training (unit: person)		27,100	17,306	14,173
较大及以上生产安全事故 (起) Major or serious work safety accidents (unit: accident)		0	0	0
因工亡故员工人数 (人) Number of work-related fatalities (unit: person)		0	1	0
因工亡故员工比率 (%) Rate of work-related fatalities (unit: %)		0	0.0054	0
因工损失工作日数 (人日) Lost days due to work injury (unit: day)		190	6,000	90
员工体检覆盖率 (%) Coverage of physical examination (unit: %)		100	100	100
发展与培训 Development and training		员工培训投入 (万元) Staff training investment (unit: RMB 10,000)	3,525.7	3,770.2
	参与培训员工人数 (人次) Number of employees trained (unit: person)	116,395	154,409	122,777
供应链管理 Supply chain management	报告期内审查的供应商个数 (个) Number of suppliers screened within the reporting period (unit: supplier)	8,789	20,543	13,323
	报告年度供应商新增总数 (个) Number of new suppliers within the reporting period (unit: supplier)	2,204	5,740	5,254
	供应商守法合规及风险培训次数 (次) Number of sessions of training for suppliers in terms of compliance with laws and regulations and risk (unit: session)	8	13	15
	供应商守法合规及风险培训人次 (人次) Number of persons involved in training for suppliers in terms of compliance with laws and regulations and risk (unit: person)	779	2,319	1,998
社区投资 Community investment	定点帮扶资金投入 (万元) Investment in targeted poverty alleviation (unit: RMB 10,000)	2,577	2,768	2,650
	员工志愿活动次数 (次) Number of voluntary activities (unit: activity)	359	465	1,923
	参与志愿活动人次 (人次) Number of voluntary employees (unit: person)	2,109	3,375	15,358
	对外捐赠总额 (万元) Total amount of donation (unit: RMB 10,000)	2,363	5,116	3,347

管治绩效 Governance				
一级指标 Primary indicator	二级指标 Secondary indicator	2019 年 2019	2020 年 2020	2021 年 2021
守法合规 Compliance with laws and regulations	守法合规培训人次 (人次) Number of persons involved in training in terms of compliance with laws and regulations and risk (unit: person)	6,700	9,600	11,200
反贪污 Anti-corruption	反腐败培训次数 (次) Number of anti-corruption training sessions (unit: session)	110	103	85
	反腐败培训参与人数 (人次) Number of participants in anti-corruption training (unit: person)	8,388	12,501	9,221
	报告期内审结的贪污诉讼案件数 (个) Number of corruption lawsuits closed within the reporting period (unit: lawsuit)	2	2	2
科技创新 Technology innovation	研发投入 (亿元) R&D investment (unit: RMB 100 million)	18.88	20.03	27.22
	研发人员 (人) Total number of R&D professionals (unit: person)	3,528	3,615	4,122 ¹
	拥有有效专利数 (件) Total number of patents in force (unit: patent)	2,347	2,690	3,045
产品责任 Product responsibility	拥有发明专利数 (件) Total invention patents (unit: patent)	922	999	1,106
	已售或已运送产品总数中因安全与健康理由而须回收的比例 (%) Percentage of total products sold or shipped subject to recalls for safety and health reasons (unit: %)	0	0	0
	重大质量事故及重大客户投诉数 (起) Major quality accidents and customer complaints (unit: accident/complaint)	0	0	0

¹ 2021 年数据为科技人才数量，即科技活动人员，指直接从事科技活动以及专门从事科技活动管理和为科技活动提供直接服务的人员。2019 年及 2020 年数据为研发人员数量，指从事基础研究、应用研究和试验发展三类活动的直接参加人员及这类项目的管理和服务人员。

2021 data indicate the number of tech talents, i.e., personnel engaged in science and technology, specifically defined as those directly engaged in scientific and technological activities and specialized in management of scientific and technological activities and delivery of direct services for scientific and technological activities. 2019 and 2020 figures indicate the number of R&D professionals, referred to as those directly engaged in foundation research, application research and experimental development as well as management and service providers for projects of the description.

ESG 指标索引

ESG Index

议题 Topics	绩效指标 KPIs	对应页码 Page(s)
主要范畴 A——环境 Scope A-Environmental		
A1 排放物 A1 Emissions	一般披露：有关废气及温室气体排放、向水及土地的排污、有害及无害废弃物的产生等的： (a) 政策；及 (b) 遵守对发行人有重大影响的相关法律及规例的资料。 General Disclosure: Information relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste, on the (a) policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	P19-24
	A1.1 排放物种类及相关排放数据。 KPI A1.1 The types of emissions and respective emissions data.	P19-24
	A1.2 直接及能源间接温室气体排放量（以吨计算）及（如适用）密度（如以每产量单位、每项设施计算）。 KPI A1.2 Direct and energy indirect greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	P23
	A1.3 所产生有害废弃物总量（以吨计算）及（如适用）密度（如以每产量单位、每项设施计算）。 KPI A1.3 Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	P19-20
	A1.4 所产生无害废弃物总量（以吨计算）及（如适用）密度（如以每产量单位、每项设施计算）。 KPI A1.4 Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).	P19-22
	A1.5 描述所订立的排放量目标及为达到这些目标所采取的步骤。 KPI A1.5 Description of emission target(s) set and steps taken to achieve them.	P19-22
	A1.6 描述处理有害及无害废弃物的方法，及描述所订立的减废目标及为达到这些目标所采取的步骤。 KPI A1.6 Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	P19-22
	一般披露：有效使用资源（包括能源、水及其他原材料）的政策。 General Disclosure: Policies on the efficient use of resources (including energy, water and other raw materials).	P21-22
	A2.1 按类型划分的直接及 / 或间接能源（如电、气或油）总耗量（以千个千瓦时计算）及密度（如以每产量单位、每项设施计算）。 KPI A2.1 Direct and/or indirect energy consumption by type (e.g., electricity, gas or oil) in total (kWh in '000s) and intensity (e.g., per unit of production volume, per facility).	P22
	A2.2 总耗水量及密度（如以每产量单位、每项设施计算）。 KPI A2.2 Water consumption in total and intensity (e.g., per unit of production volume, per facility).	P22
A2.3 描述所订立的能源使用效益目标及为达到这些目标所采取的步骤。 KPI A2.3 Description of energy use efficiency target(s) set and steps taken to achieve them.	P21-22	

议题 Topics	绩效指标 KPIs	对应页码 Page(s)
主要范畴 A——环境 Scope A-Environmental		
A2 资源使用 A2 Use of resources	A2.4 描述求取适用水源上可有任何问题，以及所订立的用水效益目标及为达到这些目标所采用的步骤。 KPI A2.4 Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	P21-22
	A2.5 制成品所用包装材料的总量（以吨计算）及（如适用）每生产单位占量。 KPI A2.5 Total packaging material used for finished products (in tonnes) and if applicable, with reference to per unit produced.	P22
A3 环境及天然资源 A3 Environment and natural resources	一般披露：减低发行人对环境及天然资源造成重大影响的政策。 General Disclosure: Policies on minimizing the issuer's significant impacts on the environment and natural resources.	P23-24
	A3.1 描述业务活动对环境及天然资源的重大影响及已采取管理有关影响的行动。 KPI A3.1 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	P23-24
A4 气候变化 A4 Climate change	一般披露：识别及应对已经及可能会对发行人产生影响的重大气候相关事项的政策。 General Disclosure: Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	P23-24
	A4.1 描述已经及可能会对发行人产生影响的重大气候相关事项，及应对行动。 KPI A4.1 Description of the significant climate-related issues which have impacted, and those which may impact the issuer, and the actions taken to manage them.	P23-24
主要范畴 B——社会 Scope B--Social		
雇佣及劳工常规 Employment and labor routine		
B1 雇佣 B1 Employment	一般披露：有关薪酬及解雇、招聘及晋升、工作时间、假期、平等机会、多元化、反歧视以及其他待遇及福利的： (a) 政策；及 (b) 遵守对发行人有重大影响的相关法律及规例的资料。 General Disclosure: Information relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare, on the: (a) policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	P27-30
	B1.1 按性别、雇佣类型（如全职或兼职）、年龄组别及地区划分的雇员总数。 KPI B1.1 Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.	P29
	B1.2 按性别、年龄组别及地区划分的雇员流失比率。 KPI B1.2 Employee turnover rate by gender, age group and geographical region.	P30

议题 Topics	绩效指标 KPIs	对应页码 Page(s)
主要范畴 B——社会 Scope B--Social		
雇佣及劳工常规 Employment and labor routine		
	<p>一般披露：有关提供安全工作环境及保障雇员避免职业性危害的： (a) 政策；及 (b) 遵守对上市公司有重大影响的相关法律及规例的资料。 General Disclosure: Information relating to providing a safe working environment and protecting employees from occupational hazards, on the:</p> <p>(a) policies; and (b) compliance with relevant laws and regulations that have a significant impact on the listed company.</p>	P31-32
B2 健康与安全 B2 Health and safety	<p>B2.1 过去三年（包括汇报年度）每年因工作亡故的人数及比率。 KPI B2.1 Number and rate of work-related fatalities occurred in each of the past three years (including the reporting year).</p>	P32
	<p>B2.2 因工伤损失工作日数。 KPI B2.2 Lost days due to work injury.</p>	P32
	<p>B2.3 描述所采纳的职业健康与安全措施，以及相关执行及监察方法。 KPI B2.3 Description of occupational health and safety measures adopted, how they are implemented and monitored.</p>	P31-32
	<p>一般披露：有关提升雇员履行工作职责的知识及技能的政策。描述培训活动。 General Disclosure: Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.</p>	P33-36
B3 发展与培训 B3 Development and training	<p>B3.1 按性别及雇员类别（如高级管理层、中级管理层等）划分的受训雇员百分比。 KPI B3.1 The percentage of employees trained by gender and employee category (e.g., Senior management, middle management).</p>	P35-36
	<p>B3.2 按性别及雇员类别划分，每名雇员完成受训的平均时数。 KPI B3.2 The average training hours completed per employee by gender and employee category.</p>	P36
	<p>一般披露：有关防止童工或强制劳工的： (a) 政策；及 (b) 遵守对发行人有重大影响的相关法律及规例的资料。 General Disclosure: Information relating to preventing child and forced labor, on the:</p> <p>(a) policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer</p>	P27-28
B4 劳工准则 B4 Labor standards	<p>B4.1 描述检讨招聘惯例的措施以避免童工及强制劳工 KPI B4.1 Description of measures to review employment practices to avoid child and forced labor.</p>	P27
	<p>B4.2 描述在发现违规情况时消除有关情况所采取的步骤。 KPI B4.2 Description of steps taken to eliminate such practices when discovered.</p>	P27

议题 Topics	绩效指标 KPIs	对应页码 Page(s)
主要范畴 B——社会 Scope B--Social		
营运惯例 Operation practice		
	<p>一般披露：管理供应链环境及社会风险的政策。 General Disclosure: Policies on managing environmental and social risks of the supply chain.</p>	P37-39
	<p>B5.1 按地区划分的供应商数目。 KPI B5.1 Number of suppliers by geographical region.</p>	P38
B5 供应链管理 B5 Supply chain management	<p>B5.2 描述有关聘用供应商的惯例，向其执行有关惯例的供应商数目以及有关惯例的执行及监察方法。 KPI B5.2 Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.</p>	P37-39
	<p>B5.3 描述有关识别供应链每个环节的环境及社会风险的惯例，以及相关执行及监察方法。 KPI B5.3 Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.</p>	P39
	<p>B5.4 描述在拣选供应商时促使多用环保产品及服务的管理，以及相关执行及监察方法。 KPI B5.4 Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.</p>	P39
	<p>一般披露：有关所提供产品和服务的健康与安全、广告、标签及隐私事宜以及补救方法的： (a) 政策；及 (b) 遵守对发行人有重大影响的相关法律及规例的资料。 General Disclosure: Information relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress, on the:</p> <p>(a) policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer</p>	P60-62
B6 产品责任 B6 Product responsibility	<p>B6.1 已售或已运送产品总数中因安全与健康理由而须回收的百分比。 KPI B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons.</p>	P61
	<p>B6.2 接获关于产品及服务的投诉数目以及应对方法。 KPI B6.2 Number of products and service related complaints received and how they are dealt with.</p>	P61-62
	<p>B6.3 描述与维护及保障知识产权有关的惯例。 KPI B6.3 Description of practices relating to observing and protecting intellectual property rights.</p>	P59
	<p>B6.4 描述质量检定过程及产品回收程序。 KPI B6.4 Description of quality assurance process and recall procedures.</p>	P60-61
	<p>B6.5 描述消费者资料保障及隐私政策，以及相关执行及监察方法。 KPI B6.5 Description of consumer data protection and privacy policies, and how they are implemented and monitored.</p>	P62

议题 Topics	绩效指标 KPIs	对应页码 Page(s)
主要范畴 B——社会 Scope B--Social		
营运惯例 Operation practice		
	一般披露：有关防止贿赂、勒索、欺诈及洗黑钱的： (a) 政策；及 (b) 遵守对发行人有重大影响的相关法律及规例的资料。 General Disclosure: Information relating to bribery, extortion, fraud and money laundering, on the: (a) policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	P49-52
B7 反贪污 B7 Anti-corruption	B7.1 于汇报期内对发行人或其雇员提出并已审结的贪污诉讼案件的数目及诉讼结果。 KPI B7.1 Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	P52
	B7.2 描述防范措施及举报程序，以及相关执行及监察方法。 KPI B7.2 Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	P52
	B7.3 描述向董事及员工提供的反贪污培训。 KPI B7.3 Description of anti-corruption training provided to directors and staff.	P52
社区 Communities		
	一般披露：有关以社区参与来了解发行人营运所在社区需要和确保其业务活动会考虑社区利益的政策。 General Disclosure: Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	P41-46
B8 社区投资 B8 Community investment	B8.1 专注贡献范围（如教育、环境事宜、劳工需求、健康、文化、体育）。 KPI B8.1 Focus areas of contribution (e.g., education, environmental concerns, labor needs, health, culture, sport).	P41-46
	B8.2 在专注范围所动用资源（如金钱或时间）。 KPI B8.2 Resources contributed (e.g., money or time) to the focus area.	P44-45

意见反馈 Feedback Form

尊敬的读者 /Dear Readers:

您好！感谢您阅读《东方电气 2021 年环境、社会及管治报告》。我们非常重视并期望聆听您对东方电气环境、社会及管治报告的反馈意见。您的意见和建议，是我们持续推进企业社会责任管理和实践的重要依据。您可以复制、填写、裁剪下表，通过邮件、传真反馈给我们，我们非常欢迎并由衷感谢您提出宝贵意见！

Thank you for reading our *Environmental, Social and Governance (2021) Report*. We highly value and are looking forward to receiving your feedback on our ESG report. Your suggestions and comments are valuable basis for us to continue to improve our quality of information disclosure on corporate social responsibility and to promote our corporate social responsibility management and practices. You can copy, fill in and cut out the following form, and feed back to us by email or fax. We sincerely thank you for your valuable comments!

选择题（请在相应的位置打“√”） Choice Questions (Please tick the corresponding option)

1. 您认为本报告是否能反映东方电气对经济、社会和环境的重大影响？

是 一般 否

2. 您认为本报告识别出的利益相关方及其与东方电气关系的分析是否准确、全面？

是 一般 否

3. 您认为本报告披露的信息是否全面？

是 一般 否

4. 您认为本报告披露的信息是否具有可读性？

是 一般 否

1. Do you think this report can reflect the significant impact of DEC on economy, society and environment?

Yes Fair No

2. Do you think the analysis of the stakeholders identified in this report and their relationship with DEC is accurate and comprehensive?

Yes Fair No

3. Do you think the information disclosed in this report is comprehensive?

Yes Fair No

4. Do you think the information disclosed in this report is readable?

Yes Fair No

开放性问题 Open Questions

1. 您认为还有哪些您关注的信息未在本报告中披露？

1. What other information do you think you are concerned about are not disclosed in this report?

2. 您认为本报告还有哪些可以改进的地方？

2. What else do you think can be improved in this report?

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