

东方日升能源管理政策

Risen Energy Energy Management Policy

东方日升坚持将能源绩效改进纳入生产经营和低碳转型管理，通过明确责任、设定目标、实施节能项目、使用清洁和绿色能源、加强技术投入与员工培训，持续提高能源利用效率。

Risen Energy integrates energy performance improvement into its operations and low-carbon transition. The Company improves energy efficiency through clear accountability, quantified targets, energy-saving projects, clean and green energy use, technology investment and employee training.

目的与适用范围 | Purpose and Scope

本政策用于规范公司能源管理工作，推动能源消费控制、能源效率提升和能源结构优化，为能源目标制定、项目实施、绩效评价和信息披露提供统一依据。

This Policy sets consistent requirements for energy consumption control, energy efficiency improvement and energy mix optimization, and provides a common basis for target setting, project implementation, performance evaluation and disclosure.

本政策适用于公司及纳入管理范围的子公司、生产基地、办公场所、仓储设施、自有或自用能源设施，以及与公司运营有关的主要用能设备、系统和流程。各单位应结合所在地法律法规、能源结构、生产工艺和经营实际制定相应的实施要求。

This Policy applies to the Company and the subsidiaries, production sites, offices, warehouses, self-owned or self-used energy facilities, and major energy-using equipment, systems and processes within its management boundary. Each entity shall translate these requirements into local procedures in line with applicable laws, local energy structures, production processes and operating conditions.

对供应商、承包商、物流服务商及其他业务合作伙伴，公司根据业务关系和能源影响程度，在采购、合同、项目管理或评价过程中传递相关节能和低碳要求。

For suppliers, contractors, logistics providers and other business partners, the Company communicates relevant energy-efficiency and low-carbon requirements through procurement, contracts, project management or performance evaluation, according to the nature of the business relationship and its energy impact.

能源管理承诺 | Energy Management Commitments

- 遵守适用的能源法律法规、标准及其他要求，并将其落实到制度、计划和运营控制中。

Comply with applicable energy laws, standards and other requirements, and incorporate them into procedures, plans and operational controls.

- 明确能源管理责任，配置必要的人员、技术和资金资源，定期审议能源绩效和重点项目进展。

Define accountability for energy management, provide appropriate people, technology and financial resources, and periodically review energy performance and key projects.

- 以能源数据和实际运行情况为基础，设定可衡量的节能目标，制定行动计划并评价实施前后的变化。

Set measurable energy-saving targets based on energy data and operating conditions, implement



action plans and evaluate performance before and after implementation.

- 持续改进工艺、设备、设施和公共动力系统，优先识别并控制主要用能环节。

Continually improve processes, equipment, facilities and utility systems, with priority given to significant energy uses.

- 结合业务条件提高可再生能源和其他清洁、绿色能源的使用比例。

Increase the use of renewable and other clean or green energy where business conditions allow.

- 在政策复核、目标制定和重大节能项目推进中，适当听取监管机构、客户、供应商、行业组织、专业机构及其他相关方的意见。

Where appropriate, consider input from regulators, customers, suppliers, industry bodies, professional institutions and other relevant stakeholders when reviewing this Policy, setting targets and advancing major energy-saving projects.

- 开展与岗位职责相匹配的能源效率培训和宣传，鼓励员工参与节能改善。

Provide role-appropriate energy-efficiency training and communication and encourage employee participation in energy-saving improvements.

治理与职责 | Governance and Responsibilities

公司执行管理层批准本政策，对能源管理方向、目标及重大事项进行监督和审议。战略与可持续发展办公室/ESG 执行组会同能源管理相关部门，统筹政策更新、目标跟踪、项目汇总、绩效复盘和信息披露。

Executive Management approves this Policy and oversees the Company's energy management direction, targets and material matters. The Strategy and Sustainability Office / ESG Working Group, together with relevant energy management functions, coordinates policy updates, target tracking, project consolidation, performance review and disclosure.

能源管理专项小组及相关职能部门负责能源评审、能源数据管理、节能项目推进和效果验证。各生产基地和业务部门负责落实本单位的用能控制、设备运行管理、数据报送、现场改善和岗位培训。

The energy management team and relevant functions are responsible for energy reviews, energy data management, project implementation and result verification. Production sites and business departments implement local energy-use controls, equipment operation management, data reporting, on-site improvements and job-specific training.

能源管理要求 | Energy Management Requirements

• 能源审计、能源评审与主要用能识别 | Energy Audits, Energy Reviews and Significant Energy Uses

公司按照计划开展能源审计或能源评审，以能源消费数据、生产负荷、设备运行参数、计量记录、现场检查及其他有效证据为基础，识别主要用能环节、异常能耗、低效运行点以及能源绩效改进机会。

The Company conducts planned energy audits or energy reviews using energy consumption data, production loads, equipment parameters, metering records, site inspections and other relevant evidence to identify significant energy uses, abnormal consumption, inefficient operations and opportunities to improve energy performance.

对识别出的改进机会，责任部门应明确实施范围、能源基准、预期成效、责任人、进度和验证方法，



并根据项目条件纳入年度能源管理计划。

For identified opportunities, the responsible department shall define the scope, energy baseline, expected result, owner, timeline and verification method, and include the project in the annual energy management plan where appropriate.

• 目标与行动计划 | Targets and Action Plans

公司结合运营边界、能源结构、主要产品和生产工艺设定能源目标。节能目标应明确基准、指标、目标值和完成期限，并分解到相关单位或项目。温室气体减排目标与能源消费降低目标分别管理，避免以排放目标替代直接节能目标。

The Company sets energy targets with regard to its operational boundary, energy mix, key products and production processes. Energy-saving targets shall specify the baseline, indicator, target value and completion date and be assigned to relevant entities or projects. Greenhouse gas targets are managed separately from direct energy consumption reduction targets.

指标类别 / Indicator	目标 / Target	跟踪方式 / Tracking
单位产品耗电量 / Product electricity intensity	以上一年度实际值为基准，每瓦异质结(HJT)电池耗电量每年下降 5%。 Reduce electricity consumption per watt of HJT cell produced by 5% each year against the previous year's actual value.	结合产量、产品结构、设备运行和能耗数据进行年度评价。 Evaluate annually using output, product mix, equipment operation and energy data.
可再生能源使用 / Renewable-energy use	到 2030 年，可再生能源使用占比达到 20%；到 2050 年达到 100%。 Increase the share of renewable energy use to 20% by 2030 and 100% by 2050.	按统一口径记录绿电、绿证或能源属性凭证及分布式光伏自用量。 Track green electricity, certificates or energy attributes, and self-consumed distributed PV using consistent methods.
相关气候目标 / Related climate target	到 2030 年，范围 1 和范围 2 温室气体排放较 2023 年下降 50%；到 2050 年实现全价值链净零排放。 Reduce Scope 1 and Scope 2 emissions by 50% from 2023 by 2030 and achieve net-zero emissions across the value chain by 2050.	通过年度温室气体核算和目标复盘跟踪；该目标不替代直接节能目标。 Track through annual GHG accounting and target review; this does not replace direct energy-saving targets.

• 节能项目与运行控制 | Energy-saving Projects and Operational Controls

公司根据能源审计、能源评审和日常监测结果，实施有针对性的节能措施，包括工艺参数优化、设备更新、设施改造、公共动力系统优化、照明和空调管理、设备启停与负荷控制、配电网络优化、能源损失排查以及数字化能源管理。

Based on energy audits, energy reviews and routine monitoring, the Company implements targeted measures such as process optimization, equipment upgrades, facility retrofits, utility-system improvements, lighting and air-conditioning controls, equipment start-stop and load management, distribution-network optimization, energy-loss inspections and digital energy management.

新建、改建和扩建设施、设备、系统及用能过程，应在设计、论证、采购、建设和验收阶段考虑能源绩效、运行维护、现场可再生能源利用和较低污染能源选择。

New, modified and expanded facilities, equipment, systems and energy-using processes shall consider



energy performance, operation and maintenance, on-site renewable energy and lower-pollution energy options during design, feasibility assessment, procurement, construction and acceptance.

• 数据监测、进展评价与效果验证 | Monitoring, Progress Evaluation and Result Verification

公司系统收集和复核电力、燃料、热力及其他适用能源数据，并记录绿电采购、能源属性凭证、分布式光伏发电和自用情况。能源数据通过计量记录、业务台账、采购或财务数据以及现场核验等方式进行交叉校验。

The Company systematically collects and reviews electricity, fuel, heat and other applicable energy data and records green-electricity procurement, energy attribute certificates, distributed PV generation and self-consumption. Energy data are cross-checked against metering records, operational ledgers, procurement or financial data and site verification.

节能项目应在可行情况下比较实施前后的能源消费或能源绩效，评价节能量、单位产品能耗、设备效率、运行时间、运行稳定性、成本影响和目标完成情况。未达到预期效果的，应分析原因并采取调整措施。

Where feasible, energy-saving projects shall compare energy consumption or energy performance before and after implementation and assess energy savings, product-level energy intensity, equipment efficiency, operating hours, operational stability, cost impact and target achievement. Projects that do not achieve the expected result shall be reviewed and adjusted.

• 清洁和绿色能源 | Clean and Green Energy

公司通过分布式光伏、绿电采购、符合要求的绿证或能源属性凭证、光储系统及其他适用方式，逐步提高自身运营中的可再生能源使用比例。相关数据按统一口径计量、记录和复核，并纳入能源结构和目标管理。

The Company progressively increases renewable-energy use in its own operations through distributed PV, green-electricity procurement, eligible green certificates or energy attribute certificates, PV-storage systems and other applicable approaches. Relevant data are measured, recorded and reviewed using consistent methods and incorporated into energy-mix and target management.

• 技术投入与研发 | Technology Investment and R&D

公司将能源绩效要求纳入相关设施、设备、系统和用能过程的设计与采购，并结合经营需要支持工艺优化、节能设备更新、公共动力系统改善、能源与碳管理数字化、光储应用以及高效低耗产品和技术研发。具体投入和项目进展以已实施、正在实施或已批准并具有明确实施内容的项目为依据。

The Company incorporates energy performance requirements into the design and procurement of relevant facilities, equipment, systems and energy-using processes. Subject to business needs, it supports process optimization, energy-efficient equipment, utility-system improvements, digital energy and carbon management, PV-storage applications, and R&D for high-efficiency, low-consumption products and technologies. Reported investments and progress are based on projects that have been implemented, are under implementation, or have been approved with a defined scope.

• 员工培训与参与 | Employee Training and Participation

公司根据岗位职责和能源影响程度开展能源效率培训和宣传。培训对象包括能源管理人员、设备工程



师、生产班组、采购与供应链人员及办公人员；内容可包括能源目标、主要用能环节、岗位节能要求、异常能耗识别、设备启停和参数管理、照明与空调节能、空压和制冷系统节能、绿色能源基础知识以及能源数据填报。

The Company provides energy-efficiency training and communication according to job responsibilities and energy impact. Participants may include energy management personnel, equipment engineers, production teams, procurement and supply-chain personnel and office employees. Topics may cover energy targets, significant energy uses, job-specific controls, abnormal-consumption identification, equipment start-stop and parameter management, lighting and air-conditioning efficiency, compressed-air and refrigeration efficiency, green-energy fundamentals and energy data reporting.

相关部门保留培训计划、材料和完成记录，并通过班组沟通、现场实践、日常检查和改善建议机制，推动员工参与能源绩效改进。

Relevant departments retain training plans, materials and completion records and encourage employee participation through team communication, on-site practice, routine inspections and improvement suggestions.

记录与信息披露 | Records and Disclosure

公司保留能源审计和能源评审记录、能源基准和能源绩效参数、能源消费数据、节能项目立项及实施记录、实施前后对比数据、清洁和绿色能源使用记录、目标评价、培训记录及责任部门确认材料，用于内部管理、审计核验和信息披露。

The Company retains energy audit and review records, energy baselines and performance indicators, energy consumption data, project approval and implementation records, before-and-after comparisons, clean and green energy records, target evaluations, training records and confirmations from responsible departments for internal management, audit verification and disclosure.

公司通过可持续发展报告、年度报告、公司出版物或官网披露能源目标、管理项目、节能行动、进展评价、清洁和绿色能源使用、技术投入、培训和年度实施成效。具体内容以公司公开发布的《东方日升能源管理项目与实施情况说明》及其他正式披露文件为准。

The Company discloses energy targets, management programs, energy-saving actions, progress evaluation, clean and green energy use, technology investment, training and annual results through sustainability reports, annual reports, company publications or the corporate website. Detailed information is provided in the publicly released Risen Energy Management Programs and Implementation Statement and other formal disclosures.

