东方日升实质性议题分析报告

Materiality Analysis Report

东方日升每年开展一次重要性议题分析，确保公司于本报告中重点披露的议题具有实质性，契合公司战略方向、可持续发展趋势以及利益相关方期许。（实质性矩阵结果详见《东方日升 2024 年可持续发展报告》）

Risen Energy conducts a material issue analysis annually to ensure that the issues highlighted in this report are material, aligned with the company's strategic direction, sustainable development trends, and stakeholder expectations.

■ 对标分析参考依据 Reference Basis for Benchmarking Analysis

- 《深圳证券交易所上市公司自律监管指引第 17 号——可持续发展报告（试行）》
  Shenzhen Stock Exchange Guidelines for Self-Regulation of Listed Companies No. 17 – Sustainability Reports (Trial)
- 《GRI 3：重大主题》
  GRI 3: Material Topics
- 《欧洲可持续报告准则（ESRS）》
  European Sustainability Reporting Standards (ESRS)
- 《国际财务报告可持续披露准则第 1 号——可持续相关财务信息披露一般要求 (IFRS S1）》 等最新国际报告披露标准
  "IFRS S1 – General Requirements for Disclosure of Sustainability-related Financial Information" and other latest international reporting and disclosure standards

■ 议题筛选 Topic Screening

结合利益相关方群体的诉求以及公司和所在行业的业务活动情况，辅以外部专业机构的意见，在议题库中识别出 23 项高相关度议题。

Combining the demands of stakeholder groups, the business activities of Risen and its industry, and supplemented by opinions from external professional institutions, 23 highly relevant topics were identified from the topic pool.

■ 利益相关方沟通 Stakeholder Communication

通过问卷的方式邀请利益相关方针对各议题的影响重要性进行评估，并邀请内部财务专家、高级管理人员评估各议题的财务重要性

Stakeholders are invited to assess the impact materiality of each topic through questionnaires, and internal financial experts and senior management are invited to assess the financial materiality of each topic.

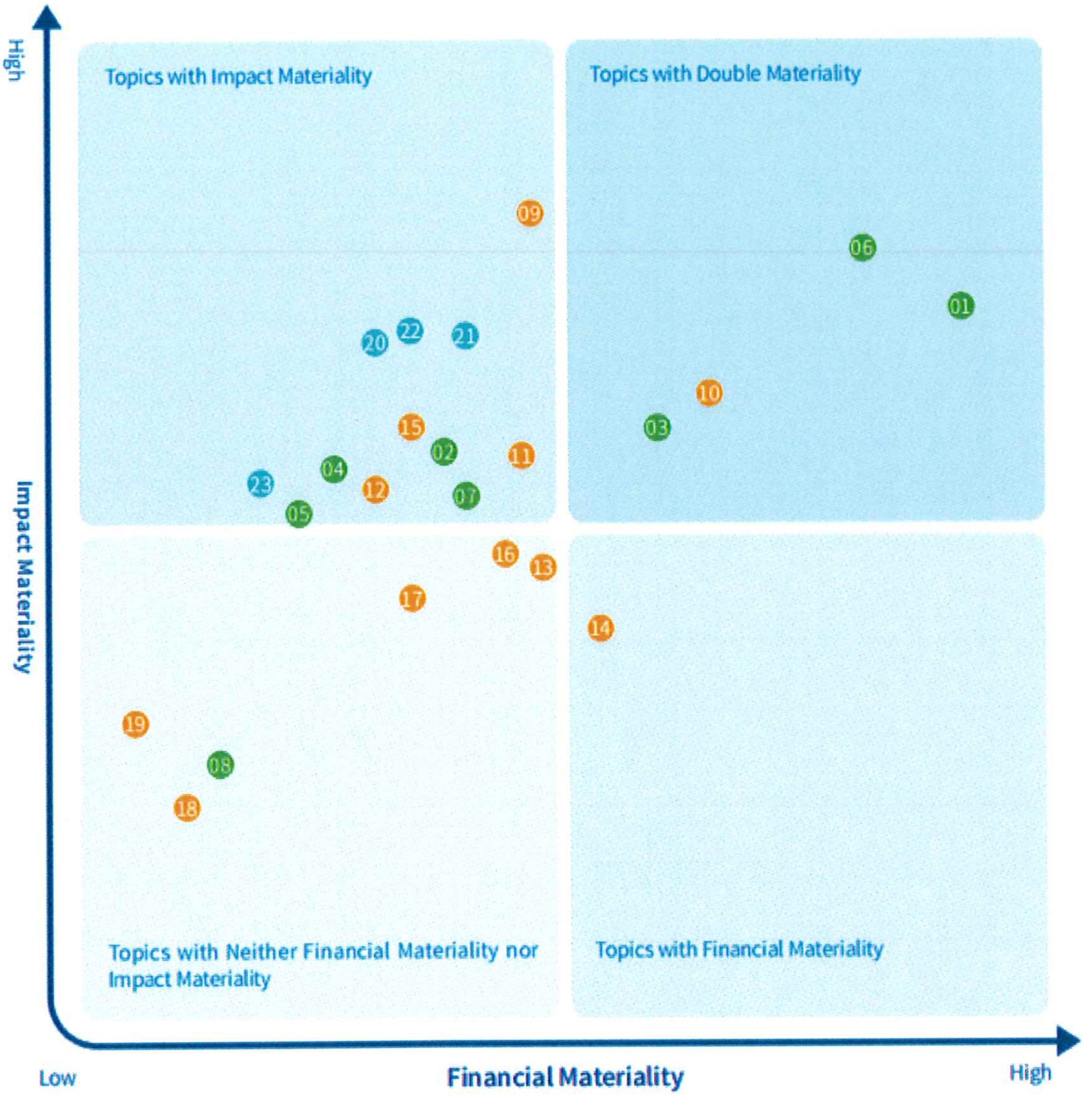
在影响重要性方面，我们邀请利益相关方在评估时充分考虑影响的规模、范围、不可补救性和发生的可能性
In terms of impact materiality, we invite stakeholders to fully consider the scale, scope, irreparability and likelihood of occurrence of impacts during their assessment.

在财务重要性方面，针对每个议题，我们从“营运风险”与“营运机遇”两个维度进行评判，若管理不善是否可能带来较高成本，以及若管理完善是否将带来收入增加等营运机遇
In terms of financial materiality, for each topic, we evaluate it from two dimensions: "operational risks" and "operational opportunities", i.e., whether poor management may lead to higher costs, and whether good management will bring operational opportunities such as increased revenue.

我们考虑了每个议题产生相应的风险或机遇在短期、中期或长期对公司商业模式、业务运营、发展战略、财务状况、经营成果、现金流、融资方式及成本产生的影响，以此对财务重要性结果进行量化分析
We consider the impact of the corresponding risks or opportunities arising from each topic on the company's business model, business operations, development strategy, financial condition, operating results, cash flow, financing methods and costs in the short, medium or long term, so as to conduct a quantitative analysis of the financial materiality results.

- **确认优先级和议题矩阵 Confirmation of Priorities and Topic Matrix**

根据影响重要性、财务重要性两方面的评估结果形成 2024 年度重要性议题矩阵，并由财务部、董事会办公室、 战略与可持续发展办公室、战略与可持续发展委员会及董事会审确认一致。
Based on the assessment results of impact materiality and financial materiality, the 2024 material topic matrix is formed, which is reviewed and confirmed by the Finance Department, Board Office, Strategy and Sustainability Office, Strategy and Sustainability Committee, and the Board of Directors to reach a consensus.



Risen Energy's 2025 ESG Materiality Matrix

Environmental Topics

- 01 Climate Change Response
- 02 Product Lifecycle Management
- 03 Energy Management
- 04 Environmental Management System
- 05 Water Stewardship
- 06 Clean Technology Opportunities
- 07 Waste and Hazardous Emissions Management
- 08 Ecosystem and Biodiversity Conservation

Social Topics

- 09 Product Quality and Safety
- 10 Technological Innovation
- 11 Human Capital Development
- 12 Employee Rights and Interests Protection
- 13 Occupational Health and Safety
- 14 Supply Chain Management
- 15 Customer Relationship Management
- 16 Digital Transformation
- 17 Information Security and Privacy Protection
- 18 Community Contribution and Philanthropy
- 19 Rural Revitalization

Corporate Governance Topics

- 20 Corporate Governance
- 21 Risk Management
- 22 Compliant Operations
- 23 Business Ethics

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■ 与公司业绩影响相关的议题 Material Issues for Enterprise Value Creation

重大风险和机遇 Material Risk or Opportunity	供应链管理 Supply Chain Management	环境政策及管理 Environmental Policy & Management	可持续产品服务 Sustainable Product Service
重大影响性描述 Business Case	1、原材料价格波动直接影响光伏产品的生产成本，进而影响公司的盈利能力。 Fluctuations in raw material prices directly impact the cost of PV solar products, which in turn influences profitability. 2、原材料质量不达标，影响产品质量，进而造成市场竞争力不足，品牌价值受损。 Substandard raw materials hurt product quality, reduce competitiveness, and damage brand value 3、供应商不能及时满足行社会责任尽职要求，不符合准入条件，增加了供应链风险；同时影响公司 ESG 绩效，对吸引投资和开拓全球市场产生阻力。Supplier failures in social responsibility and qualification requirements heighten supply chain risks, impacting our ESG performance and hindering investment attraction and global market growth.	1.固废、废水废气、危险化学品等污染物排放管理不当导致环境污染、违规处罚或运营中断 Improper management of pollutant emissions such as solid waste, wastewater, exhaust gas, and hazardous chemicals may lead to environmental pollution, violation penalties, or operational disruptions. 2.缺乏体系化管理可能导致系统性环境风险及不符合监管要求 Lack of systematic management may lead to systemic environmental risks and non-compliance with regulatory requirements. 3.员工环保意识不足或操作不当引发环境事故 Insufficient environmental awareness of employees or improper operations may trigger environmental accidents.	1、市场份额：清洁能源技术的普及和应用，为公司提供了更多的市场需求；同时，更多的也面临着来自同行更大的竞争压力。 Market share: The growth and widespread adoption of green energy technology increased demand, but also intensify competitive pressures from peers in the market. 2、品牌影响力：清洁能源技术的使用将减少环境污染，符合全球可持续发展的要求，公司作为清洁能源技术的代表，将因参与全球清洁能源转型而获得更高的社会认可。 Adopting clean energy technology mitigates environmental pollution, aligning with global sustainable development goals. As a leading company, we have earned significant recognition.
影响类型 Type of Impact	☐收入 Revenue ☐风险 Risk ☑成本 Cost ☐机遇 Opportunity	☐收入 Revenue ☑风险 Risk ☐成本 Cost ☐机遇 Opportunity	☑收入 Revenue ☐风险 Risk ☐成本 Cost ☐机遇 Opportunity

应对战略 **Business Strategies**	1、建立原材料价格监测机制，及时调整采购策略，降低成本风险。 Establish a raw material price monitoring mechanism to adjust the procurement strategy in a timely manner and reduce cost risks. 2、优化供应商特别是核心（主材）供应商结构，降低供应链风险。 Optimize the structure of suppliers, especially core (primary material) suppliers, to reduce supply chain risks 3、建立严格的供应商准入及审核机制，并定期复查，确保供应商提供稳定、一致的原材料质量。 Establish strict supplier qualification and audit mechanism, and regular review to ensure that the quality of raw materials is stable and consistent 4、完善供应链追溯机制，采用先进的数字管理系统，对来料质量以及供应商运营状况进行实时监控、数据分析，及时发现、处理异常。 Improve the supply chain tracking mechanism and adopt advanced digital management system to conduct real-time monitoring and data analysis on the quality of raw materials and the operation status of	1.建立内部专项检查机制与接受外部环保审核，及时识别问题并闭环整改 Establish an internal special inspection mechanism and accept external environmental protection audits to promptly identify issues and implement closed-loop rectification. 2.推进 ISO 14001 环境管理体系认证，确保环境管理制度化、标准化 Promote the certification of ISO 14001 environmental management system to ensure the institutionalization and standardization of environmental management systems. 3.定期开展环保专项培训，提升员工合规意识和操作规范性 Conduct regular environmental protection special training to enhance employees' awareness of compliance and operational standardization.	1、技术创新战略：持续加大投入研发，推动清洁能源技术的创新和进步，提高公司产品的技术含量和竞争力。 Technology innovation strategy: Continuously increase investment in R&D to advance clean energy technology innovation, enhance Risen Energy’ s technological competitiveness, and drive progress in our products. 2、市场拓展战略：把握全球清洁能源市场的机遇，积极开拓国内外市场，扩大公司的市场份额。 Market expansion strategy: Seize global clean energy market opportunities, expand domestic and international markets, and grow the company's market share. 3、可持续发展战略：打造全生命周期绿色低碳产品和绿色工厂；将清洁能源技术纳入公司的长期发展规划，致力于实现公司和社会的可持续发展。 Sustainable development strategy: Create green, low-carbon products and implement green manufacturing practices throughout the entire lifecycle. Integrate clean energy technology into Risen Energy’ s long-term development strategy to achieve sustainable growth for both the company and society.

	suppliers, so as to detect and deal with abnormalities in a timely manner. 5、要求所用供应商签署《供应商行为准则》、质量保证协议》、《社会责任承诺书》等相关承诺、协议文件，确保供应商尽职履责。 Require suppliers to sign the Supplier Code of Conduct, Quality Warranty Agreement, Social Responsibility Commitment and other relevant documents to ensure that suppliers fulfill their responsibilities. 6、根据就近原则，建立以国内供应商为主的多元化原材料供应渠道，提高容错率，降低供应端风险。 Suppliers are selected based on proximity and diversification principles, focusing on domestic sources to mitigate supply chain risks associated with raw materials. 7、加强沟通与合作：与供应商建立密切的沟通合作机制，及时了解供应商生产过程中出现的问题，并与供应商共同解决，确保原材料质量的稳定性。 Strengthen communication and cooperation by establishing a mechanism to promptly address production issues with suppliers, ensuring stable raw material quality.		

目标/指标 Target/Metric	1、原材料供应商质量审核覆盖率 100% 100% coverage of quality audits of raw material suppliers 2、100%不采购冲突矿产 100% no purchase of conflict minerals 3、对所有主材供应商开展 ESG 培训 Conduct ESG training for all primary material suppliers 4、始终保持适用环境标准筛选的供应商比例 100% 100% of suppliers are selected by ESG standards (上述 1~4 目标的基准年均为 2023 年) (the target year for the above goals from 1 to 4 is 2023) 5、到 2025 年实现核心供应商 ESG 尽职调查全覆盖 By 2025, conduct ESG due diligence on all critical suppliers 6、到2035年实现供应商ESG 尽职调查全覆盖。 By 2035, conduct ESG due diligence on all suppliers	1.审核问题整改率=100% The rectification rate of audit issues = 100% 2.主要运营点 100%通过 ISO 14001 认证 100% of major operation sites have passed ISO 14001 certification 3.每年开展覆盖 100%核心岗位员工的专项培训 Special training covering 100% of core position employees is conducted every year.	1、技术研发目标：在未来 5 年内，实现电池光电转化效率提升 6%。 Technology research and development goal: In the next 5 years, realize the battery conversion efficiency increased by 6%。 2、市场拓展目标：在未来 5 年内，清洁能源产品市场份额提高 15%，并在欧美市场建立稳定的销售渠道。 Marketing expansion goal: In the next 5 years, increase the market share of clean energy products by 15%, and establish stable sales channels in the European and US markets. 3、可持续发展目标：通过研发低碳工艺、节能技术、使用绿电等手段，2030 年，自身运营温室气体排放（范围 1、范围 2）下降 50%；到 2050 年，实现全价值链净零排放 Sustainable development goal: Through research and development of low-carbon techniques, and energy-saving technologies, and green electricity consumption to reduce GHG emission from Scope 1 and Scope 2 by 50% by 2030; and achieve net-zero emissions across the entire value chain by 2050

目标进展 **Progress**	In 2025： 1、原材料供应商质量审核覆盖率 100% The coverage rate of quality audits for raw material suppliers is 100% 2、100%不采购冲突矿产 100% of conflict minerals are not purchased. 3、主材供应商 ESG 培训覆盖率 100% The coverage rate of ESG training for main material suppliers is 100%. 4、始终保持适用环境标准筛选的供应商比例 100% The proportion of suppliers screened in accordance with applicable environmental standards is always maintained at 100%. 5、核心供应商 ESG 尽职调查覆盖率：100% The coverage rate of ESG due diligence for core suppliers: 100%. 6、所有供应商 ESG 尽职调查全覆盖率：9% The full coverage rate of ESG due diligence for all suppliers: 9%.	In 2025 1.开展内部检查 24 次，累计发现问题 138 项；接受外部审核 19 次，发现 10 项问题；全部整改完成率 100% Conducted 24 internal inspections and accepted 19 external audits, identified 148 issues in total, with a 100% rectification completion rate. 2.15 个主要运营点均通过 ISO 14001 认证. All 15 major operation sites have passed ISO 14001 certification. 3.共开展 28 场环保培训，累计 29 小时，覆盖 1141 人次 A total of 28 environmental protection training were carried out, accumulating 29 hours and covering 1141 person-times.	In 2025 1、技术研发目标：HJT 电池平均量产效率达到 26.61%，较 2024 年提升 0.38 个百分点。 2、The average mass-production efficiency of HJT cells reached 26.61%, an increase of 0.38 percentage points from 2024 2、市场拓展目标： 2025 年，公司持续拓展伏曦 HJT 产品的全球市场，报告期内 HJT 产品出货量同比增长超过 100%，创历史新高。截至 2026 年 5 月，伏曦系列产品累计出货量已超过 10GW。 In 2025, the Company continued to expand the global market for its Hyper-ion HJT products. During the reporting period, HJT product shipments increased by more than 100% year on year, reaching a record high. As of May 2026, cumulative shipments of the Hyper-ion series had exceeded 10GW. 3、可持续发展目标：2025 年，公司自身运营温室气体排放总量为 153,805.54 吨二氧化碳当量；受产能调整影响，较 2024 年的减排量相当于 2023 年基准年排放量的 74%， In 2025, the Company’s total operational greenhouse gas emissions amounted to 153,805.54 tCO_2e. Due to capacity adjustments, the reduction from 2024 was equivalent to 74% of the 2023 baseline emissions.

高管绩效挂钩 Executive Compensation	The company has integrated ESG performance into its annual evaluation system, using a "5S" model—Sensitivity (risk/opportunity), System (governance), Strive (practices), Succeed (results), and Sustain (improvement)—to assess executive directors and senior management. ESG indicators account for at least 10% of the overall performance score, covering impacts across economic, environmental, social, and human rights dimensions. The evaluation also includes policy updates, action plans, implementation processes, goal achievement, continuous improvement efforts, and key metrics such as ESG ratings. 公司将 ESG 表现纳入年度工作绩效考核体系，建立了 “5S” ESG 考核评价模型，明确将风险 / 机遇评估（Sensitivity）、治理 （System）、实践（Strive）、结果（Succeed）、改善（Sustain）作为公司执行董事和高管 ESG 绩效考核维度。在考核方案中， ESG 指标占年度工作绩效考核的比重不低于 10%，考核内容涵 盖经济、环境、社会、人权的实际和潜在的正 / 负面影响，以 及制度文件更新、行动计划建立、措施流程实施、目标指标达成、 持续改善计划等内容，并将 ESG 评级等关键事项纳入其中。

■ **外部利益相关者关注的议题 Material Issues for External Stakeholders**

重要议题 Material Issue	**气候转型和物理风险 Climate Transition & Physical Risks**	**产品质量 Product / Service Quality**
影响原因 Cause of the Impact	☑自身营运 Operations ☐产品/服务质量 Products/Services ☑供应链 Supply chain 影响评估范围覆盖所有运营活动 Business activity coverage is 100%	☐自身营运 Operations ☑产品/服务质量 Products/Services ☐供应链 Supply chain 影响评估范围覆盖所有运营活动 Business activity coverage is 100%
影响范围 External Stakeholders /Impact Area Evaluated	☑环境 Environment ☐社会 Society ☑客户 Consumers/end-users ☑供应链 Supply chain	☑环境 Environment ☐社会 Society ☑客户 Consumers/end-users ☑供应链 Supply chain

相关性分析 **Topic Relevance on External Stakeholders**	1、环境：积极应对气候变化，有助于减少温室气体排放，改善生存环境。 Environmental: Addressing climate change helps to reduce greenhouse gas emissions and improve the living environment 2、客户：积极应对气候变化，帮助客户实现整体降碳目标，并保障客户订单准时完成； Consumers/end-users: Addressing climate change helps clients achieve their carbon emission reduction goals and also ensures that their orders are completed on time 3、供应链：积极应对气候变化，有助于推动供应链降碳目标实现；并通过自身产量的稳定拉动上游经济增长。 Supply chain: Addressing climate change helps suppliers achieve their carbon emission reduction goals and also stimulates upstream economic growth through the stabilization of production	1、环境：通过科技创新，降低光伏设施成本，推广新能源使用，促进世界向可持续世界转变。 Environmental: Lower the cost of PV facilities through technological innovation, thereby promoting the widespread adoption of new energy and facilitating the world's sustainable transition. 2、供应链条：通过降本增效拉动上下游向可回收、可追溯的产品模式转变，并拉动经济增长。 Supply chain: Drive towards a recyclable and traceable product model throughout the upstream and downstream processes by focusing on cost reduction, efficiency improvement, and fostering economic growth. 3、客户：降低新能源设备使用门槛，推动更多的人可以负担的起绿色能源。 Consumers/end-users: Reduce the barriers to adopting new energy equipment, making green energy accessible and affordable to a broader population.
影响类型 **Type of Impact**	☐正面 Positive ☐负面 Negative ☑都有 Both combined	☑正面 Positive ☐负面 Negative ☐都有 Both combined
直接影响指标 **Output Metric**	二氧化碳排放量 Carbon dioxide emissions	设备单瓦成本降低百分比 Percentage reduction in equipment cost per watt

影响评估 **Impact Valuation**	类别：环境价值影响（正向） Type of impact: Environmental Valuation (positive) 2025 年，公司在各主要生产基地实施多项节能及清洁能源利用措施，合计减少外购电约 1,817.82 万千瓦时，按基地所在地电力排放因子估算，减少温室气体排放约 10,784.87 吨二氧化碳。按各项目已披露或测算口径汇总，实现经济收益及成本节约约 787.15 万元。 In 2025, the Company implemented energy-saving and clean energy initiatives across its major production sites, reducing purchased electricity by approximately 18.18 million kWh and avoiding an estimated 10,784.87 tonnes of CO_2 emissions. Based on disclosed or estimated project data, these initiatives generated approximately RMB 7.87 million in economic benefits and cost savings.	类别：人均可支配收入增加（正向） Type of impact: Increase in disposable income per capita (positive) 使用 Impact Beacon 对东方日升科技创新成果对社区及当地经济产生影响作量化展现，结果显示：未来 5 年，每千瓦时成本下降 1%将增加用电家庭 4.07 美元的可支配收入。 Using Impact Beacon to quantify the impact of the company's technological innovations on the community and local economy reveals that a 1% reduction in the cost of every kWh of electricity over the next 5 years will increase disposable income by $4.07 for households using electricity.
间接影响指标 **Impact Metric**	碳的社会成本 Social cost of carbon	家庭可支配收入 Household disposable income

总裁/签名（**President** Signature）：

日期（Date）： July 2026