

ESG Rating Rationale

NLC India Limited

NLC	Rating Score	Rating Symbol*	Rating Action
ESG Rating	55.8	CareEdge-ESG 3	Assigned

^{*} Please refer www.careedgeesg.com for detailed understanding of CareEdge-ESG's rating symbols and definitions.

Adequate position in managing ESG Risk through modest disclosures, policies, and performance



Please note: all scores mentioned in this document are on the scale of 0-100

Rating Rationale

The rating assigned to NLC India Limited (NLC) reflects its preliminary stage of ESG stewardship with modest disclosures, policies, and performance. The rating considers the company's robust initiatives on biodiversity conservation, efficient waste management, and sustainable technology development through its in-house research and development (R&D) centre. Its key successes include ensuring 100% safe waste disposal and completely utilising fly ash through strategic third-party partnerships. Its renewable energy share has increased in its energy production portfolio and the company has also set an ambitious target to expand renewable capacity from 1431 MW in FY24 to 10,110 MW by 2030. On the social front, the company follows health and safety protocols, including ISO 45001 certification and conducts regular internal audits. The company has also demonstrated strong commitment to employee welfare by extending comprehensive medical and other benefits to employees and their families. Its corporate social responsibility (CSR) initiatives not only meet but exceed regulatory

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requirements, benefiting marginalised communities through comprehensive programmes in healthcare, education, skill development, and women's empowerment. To steer its ESG strategy, the company has established a board-level ESG Committee alongside a management-level Sustainable Development Cell, ensuring strong oversight of ESG initiatives.

NLC's rating is muted by factors such as absence of quantified targets on key environmental metrics such as air pollution reduction, waste management, and energy efficiency. The company's operations are environmentally intensive, with sulphur oxides (SOx) emissions and Scope 1 and 2 emissions intensity significantly exceeding industry medians. Moreover, there is inadequate coverage of essential training programmes on prevention on sexual harassment (POSH), human rights, anti-corruption, and health and safety lack, leaving the organisation vulnerable to regulatory, ethical, and operational risks. The lack of standalone policies on critical ESG themes and insufficient board and committee independence have further adversely impacted its ESG score.

Overall, NLC's rating of 55.8 reflects an adequate position in managing its ESG performance. It has exhibited strong performance in the themes of waste management, climate change risk management, human capital, community support and development, and oversight on ESG. However, scope of improvement persists in themes of water usage and management, energy efficiency, human rights, and board composition.



The power sector has magnitudinal effect on the environment due to its large ecological impact associated with high emissions, substantial energy and water consumption, and significant waste generation. Hence, for the sector, the pillar carries a high weight of 45%. With an environmental score of 42.8 (industry

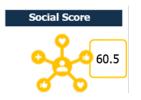
median: 40.1), the company has a scope of improving its environmental performance. NLC's overall environmental performance is muted due to factors such as the company's emission intensities which are higher than the industry medians. The company's total Scope 1 and 2 emission intensity (per million unit of electricity generated), and its Particulate Matter and SOx intensities, exceed industry medians. In FY24, water consumption and discharge intensities rose by 37% and 16%, respectively, compared to FY23, with water consumption intensity remaining above the industry median. NLC is yet to establish science-based quantifiable targets on critical environmental risks, and it has not conducted assurance of its carbon, energy, and water data. These gaps highlight the scope for more

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focused and measurable sustainability initiatives to enhance the company's environmental performance.

NLC's environmental score derives strength from the initiatives implemented by the company to conserve biodiversity, manage waste efficiently, and drive sustainable technology development through collaborations with industry associations and academia. The company has achieved notable successes including 100% safe waste disposal and complete utilisation of fly ash by partnering to third-party companies (brick and cement manufacturer, among others). The share of renewable energy in energy produced increased to 7.7% in FY24, and the company has set an ambitious target to expand its renewable capacity to 10,110 MW by 2030, up from 1,431 MW in FY24.



For the power sector, social pillar consists of high material themes of health and safety, community development, human capital, and human rights and carries a weightage of 30%. With a social score of 60.5, the company has scored above the industry median of 56.0. The company ensures safety in its operations by

implementing ISO 45001, conducting regular fire, safety, and health audits through its in-house dedicated health and safety teams. The company has also increased the cost incurred on the well-being of employees from 0.9% of the total revenue in FY23 to 1.5 % of the total revenue in FY24, which is significantly higher than the industry median of 0.2%. Demonstrating its commitment to community development, the company expended 2.25% (over the mandated 2%) of its average net profits on CSR in FY24. Its CSR projects are developed to largely benefit marginalised sections and encompasses in initiatives on areas such as healthcare, education, skill development, women's empowerment, and environmental sustainability.

However, the company's social performance is muted by inadequate coverage of training in critical areas such as health and safety, human rights, and POSH. While the company's average lost time injury frequency rate is lower than the industry median, its workforce fatality rate is 0.0001, which is above the industry median (median=0.00003). Moreover, the gender pay disparity is a significant concern with the female-to-male median pay ratio standing at 0.6, markedly lower than the industry medians of 0.8 for employees and 0.9 for workers. These gaps highlight the need for more robust interventions to enhance training programmes and ensure equitable compensation, strengthening the company's overall social performance.

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In the power sector, the governance pillar carries a weight of 25%. The company has scored 73.7, which is above the industry median of 65.5. The company demonstrates robust governance practices in its ESG oversight, through a board level ESG Committee steering its ESG strategy and management level Sustainable

Development Cell (SDC) overseeing the implementation of sustainability initiatives. Through extensive stakeholder consultation, the company has assessed its key ESG risks and in line with the industry's best practice, has reviewed its ESG policies through a third party. Demonstrating a strong commitment to sustainability, the company has allocated 24% of its total R&D budget and 93% of its total capital expenditure toward the development of sustainable solutions.

However, significant governance challenges persist, particularly in meeting regulatory requirements on board composition. The board of directors, and the Audit, Nomination and Remuneration, and Stakeholder Relationship Committees, do not meet the required thresholds for independent directors as set by the government. Fewer than 10% of employees have been trained on essential governance topics, including anti-corruption measures, the code of conduct, and whistleblower policies—which underscores the need to strengthen capacity building in these areas.

Strengths

Comprehensive oversight on ESG ensuring compliance and proactive initiatives

The company maintains robust oversight on ESG through a dedicated board level ESG Committee, management steered Sustainable Development Cell, and Environmental Cells at both the corporate and unit levels. At the board level, directors possess specialised expertise in sustainable development and in human resources, which helps in ensuring informed decision-making and proactive action across the three pillars of ESG. Demonstrating its commitment to ESG, the company has conducted third-party reviews of its ESG-related policies and has consistently earmarked funds for sustainability-focused capital expenditures.

Extensive strategies to ensure commitment and efficient management towards ESG

The company has established strategies pertaining to ESG pillars to ensure robust management of company's operations such as hazardous waste management, environmentally responsible products and services, human rights, community services, training, career development, diversity, inclusion,

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and stakeholder engagement. It has also implemented strategies through its broader policy commitments such as ESG policy and Corporate Environmental policy.

Extensive industry associations and collaborations driving R&D on sustainable solutions

One of the key areas of NLC's R&D strategy is focus on driving sustainable solutions in their mining and power operations. Through the Centre for Applied Research and Development (CARD), which is the company's in-house R&D centre established in 1958, the company focuses on sustainability, technological innovation, and the commercialisation of new technologies. Under the Atal Innovation Mission, NLC has launched an Innovation Incubation Centre in partnership with IISc Bangalore and Anna University, supporting startups and emerging technologies. Key incubation projects include advanced wastewater treatment, hydroponic farming in backfilled mines, eco-friendly geo-polymer bricks, and activated carbon development from lignite sludge. The company is also driving sustainable energy solutions, such as lignite-based semiconductors, a green hydrogen pilot plant, flash graphene for cement, and lignite-to-syngas power generation. These initiatives highlight NLC's commitment to enhancing operational efficiency while simultaneously advancing sustainability.

Robust approach to community development and social responsibility through CSR initiatives

NLC has demonstrated a strong commitment to community development through impactful CSR initiatives. In FY24, NLC allocated 2.25% of its average net profits (over the mandated 2%) to key areas such as healthcare, education, skill development, rural sports, women's empowerment, and environmental sustainability. The company has implemented robust measures to ensure that the targeted beneficiaries belong to marginalised sections and that 100% of its CSR funds are effectively utilised. Beyond its CSR initiatives, NLC deployed a 70-member team to assist the Chennai Corporation in flood relief efforts. The company partnered with the Institute of Public Enterprises (IPE) to conduct comprehensive evaluations of its CSR projects using the Organization for Economic Co-operation and Development's Development Assistance Committee (OECD DAC) framework, ensuring that its projects are relevant, effective, and impactful.

Comprehensive Waste Management Policy and initiatives to ensure safe disposal of waste

NLC has a comprehensive waste management policy defining scope, applicability, responsibilities, commitments, and applicable rules and disposal methodology for various types of waste. The waste

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generated by NLC is being sent to authorised recyclers/ dealers with facilities to treat and re-use the waste. The company has brought down its waste intensity (per MU of electricity generated) by 6% from FY23 to FY24 and disposes of its waste safely, with zero percent of the wastes going to landfills. Further, the company has achieved 100% fly ash utilisation, which has contributed to significantly reducing its environmental footprint.

Sustained efforts to expand the share of renewable energy in overall energy portfolio

NLC has been actively advancing renewable energy initiatives since 2015. The company's share of renewable energy in total energy production rose from 7.3% in FY23 to 7.7% in FY24. The company has also set an ambitious target of increasing its renewable capacity from 1431 MW in FY24 to 10,110 MW by 2030. Currently, the company operates 1,380 MW of solar power plants across Tamil Nadu's southern districts and the Andaman & Nicobar Islands, and a 51-MW wind power plant in Tamil Nadu's Tirunelveli district. Notably, NLC is the first Central Public Sector Enterprise (CPSE) to achieve over 1 GW of renewable energy capacity. The company has also joined the International Solar Alliance (ISA) as a member, reinforcing its dedication to global solar energy collaboration. To further its sustainability goals, the company has established two wholly owned subsidiaries: NLC India Renewables Limited (NIRL) for optimising and monetising existing renewable assets, and NLC India Green Energy Limited (NIGEL) to spearhead future renewable energy initiatives and drive portfolio expansion.

Increase in cost incurred on employee wellbeing

Demonstrating its commitment to employee welfare, the company has increased its cost on employee from 0.9% of the total revenue in FY23 to 1.5% of total revenue in FY24, which is significantly higher than the industry median of 0.2%. The company extends health and accident insurance to all employees and workers and extends medical benefits to employees and their families. In FY23-24, NLC disbursed ₹370.18 lakh in scholarships to 1,191 beneficiaries, including children of employees and contract workers pursuing higher education.

Sustainable initiatives for biodiversity management

NLC places a strong emphasis on biodiversity preservation and is committed to protecting local wildlife and diverse ecosystems surrounding its facilities. To support biodiversity conservation, NLC has implemented initiatives, including studying NLC's campus flora and fauna to enhance ecological diversity and develop habitat protection strategies, assessing environmental impact for NLC projects

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per Ministry of Environment guidelines, building artificial lakes as rainwater reservoirs in afforested mining areas, and providing substantial funding for wildlife conservation.

Efficient efforts to achieve water positivity and groundwater management

NLC is proactively undertaking initiatives to enhance water positivity and ensure effective groundwater management. These initiatives include developing recharge zones around mines by building structures such as check dams and wells to support groundwater replenishment, carrying out groundwater modeling studies to develop an optimal pumping strategy, gathering comprehensive data on water quality, water extraction volumes, and weather conditions to generate a water balance report, and conducting test pumping in new mining areas to assess groundwater conditions and refine pumping techniques.

Weaknesses

Absence of quantified targets on environmental performance

The company has not yet set defined science-based targets for key environmental aspects such as air pollutant emissions, Scope 1 & 2 emissions, waste management, water consumption, water discharge, energy efficiency, and raw materials usage. Establishing achievable targets with a clearly defined baseline is essential for effective goal setting. Proper measures must be implemented to monitor and track progress for each target. The absence of clear environmental goals may limit its ability to systematically improve its sustainability performance and could impact its progress in implementing more focused and streamlined sustainability initiatives.

Environmentally intensive operations leading to higher emissions

In FY24, the company's total air pollutant emissions, particularly SOx emissions, exceeded the industry median. NLC's SOx emissions were recorded at 5 metric tonnes per million units (MU) of electricity produced, double the industry median of 2.5 metric tonnes/MU. Its Scope 1 and 2 emissions intensity stood at 928.3 metric tonnes/MU, significantly surpassing the industry median of 643.3 metric tonnes/MU. With 60% of its capacity depending on lignite—characterised by lower energy content and higher ash and Sulphur levels, NLC must adopt more proactive measures to curb air pollution and accelerate its transition to cleaner energy sources.

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Inadequate coverage of essential training in employee health, ethical integrity, and safety of employees

The company's coverage of essential training programmes on POSH, code of conduct, whistleblower protection, and anti-corruption remains inadequate. Only 1.2% of employees have undergone POSH training, 1.8% have received human rights training, and 7.6% have participated in anti-corruption training, all significantly below industry medians. Only 3% of employees have attended health and safety training. These training programmes are crucial for fostering awareness of risk management practices. A lack of comprehensive training exposes the company to regulatory non-compliance, ethical breaches, and workplace risks, potentially impacting its reputation and operational integrity.

Absence of standalone policy on key ESG issues

The company does not have standalone policies on key environmental aspects such as energy efficiency, water management, and biodiversity, nor on critical social themes like human rights. While these issues are addressed within its broader ESG policy, the absence of dedicated policies with clearly defined performance metric, benchmarks, board approvals, and regular review mechanisms puts the company behind best-in-class peers. Establishing standalone policies would enhance accountability, transparency, and strategic focus, ensuring stronger governance, and measurable progress in these areas.

Lack of independence in Board Committee

The company is currently non-compliant with certain regulatory requirements on board composition, lacking sufficient independent directors. The Chairperson is an executive director, and only one-third of the board is independent instead of the mandated half. The Audit Committee, Nomination and Remuneration Committee (NRC), and Stakeholder Relationship Committee (SRC) also fail to meet SEBI LODR regulations on committee independence. The company attributes this to its status as a government entity, with director appointments controlled by the Government of India and the Ministry of Coal.



Key ESG Parameters of NLC

Parameters	Unit	FY2024
Environment		
Scope 1 & 2 intensity	tCO ₂ equivalent/MU of production	928.3
Renewable energy produced	% (of total energy produced)	~7.7%
Air emission intensity	MT/MU of production	6.0
Energy intensity	GJ/MU of production	9,172.1
Water intensity	KL/MU of production	3,354.2
Waste intensity	MT/MU of production	56.2
Social		
Employee turnover	%	2.4%
Female to male employees' ratio	Per 100 male employees	10
Female to male median pay	Per INR 100	62.8
Workforce Fatality rate	Total fatalities/total workforce	0.0001
Health & safety complaints	#	0.0
POSH complaints resolved over reported	X/Y	3/3
Governance		
No. of Females in board	#	2.0
No. of Females in SMPs	#	1.0
% board members trained on BRSR	%	100.0%
% KMPs trained on BRSR	%	100.0%
Income gap ratio (CMD pay to median pay)	X:Y	4.59:1

Data source: company, public sources, CareEdge-ESG research & analysis

MT=Metric Ton; MU=Million Units; GJ=Giga Joules; KL=Kilo Litres

Rating sensitivities

Positive factors

- Meeting regulatory requirements for board composition.
- Reduction in air pollutant emission intensities.
- Decrease in Scope 1 and 2 emissions.
- Implementation of zero liquid discharge practices.
- Improvement in female-to-male median pay ratio.
- Assurance of ESG data.
- Enhanced coverage of training programmes.

Negative factors

- Occurrence of health and safety incidents/complaints.
- Increase in waste intensity.
- Decline in the proportion of renewable energy within total energy production.
- Reduction in expenditure on employee wellbeing.
- Reduction in CSR budget utilisation.

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Analytical approach:

Rating boundary: CareEgde-ESG has considered standalone data of NLC for assessment. The same is in line with their disclosure in BRSR.

Methodology/Criteria: For detailed understanding on the criteria and methodology used by CareEdge-ESG, please refer to the methodology document available on the company's website www.careedgeesg.com

About the Company and industry

Established in 1956, NLC is a Navratna company under the Government of India with a 72% government shareholding. With its strong manufacturing base in Tamil Nadu, the company operates across a diversified revenue model, with ~75% of its revenue generated from electric power production and 25% from coal and lignite mining. As a key Central Public Sector Enterprise, NLC plays a crucial role in meeting the electricity needs of several states, including Tamil Nadu, Andhra Pradesh, Karnataka, Kerala, Telangana, Rajasthan, and parts of the Union Territories of Andaman and Puducherry. The company operates 15 power plants across India (including thermal power plants, wind, and solar plants) and has ownership of eight mines across various regions. The company has demonstrated by a 5-year compound annual growth rate (CAGR) of 7.36% in revenue. With a market capitalisation of ~INR 31,6290 million¹, NLC reported revenues of INR 105,186.4 million (standalone) in FY24.

The company is pursuing sustainability initiatives and has set an ambitious target to expand its renewable energy capacity to 10,110 MW by 2030. It has recently established two wholly-owned subsidiaries—NLC India Renewables Limited (NIRL) and NLC India Green Energy Limited (NIGEL)—to bolster its presence in the renewable energy sector. The company pursues community development through its CSR initiatives and has maintained a healthy track-record of efficiently utilising CSR allocations and conducting impact assessments of its CSR projects.

 $^{^{\}rm 1}$ Data as at $31^{\rm st}$ March 2024, as reported in Annual Report 2023-2024.

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Source of information

While assigning ratings, CareEdge-ESG has considered publicly available information such as annual reports of the company and other policies, sustainability reports, certifications, BRSR reports, additional information, and comments provided by the company.

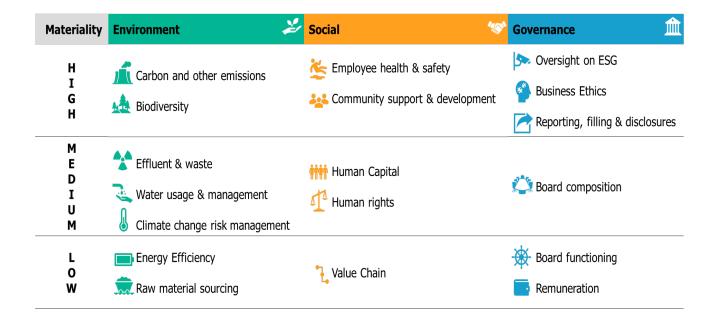
Status of non-cooperation with previous ERP: Not applicable

Rating history for the last three years:

Sr.	Name of Product	Current Rating		Rating history		
No.		Rating	Score	Date(s) & Rating(s) assigned in 2024-25	Date(s) & Rating(s) assigned in 2023-24	Date(s) & Rating(s) assigned in 2022-23
1	ESG Rating	CareEdge-ESG 3	55.8	-	-	-

Annexure: Graphical summary of key rating drivers²

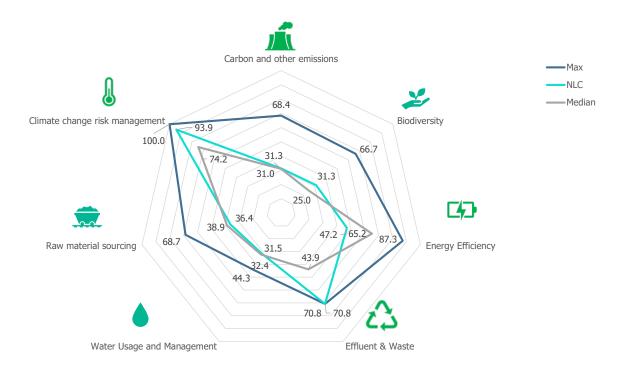
Hierarchy: While arriving at pillar level scores for NLC, CareEdge—ESG has assigned theme weights based on relative importance and sectoral hierarchy as depicted in the exhibit below.



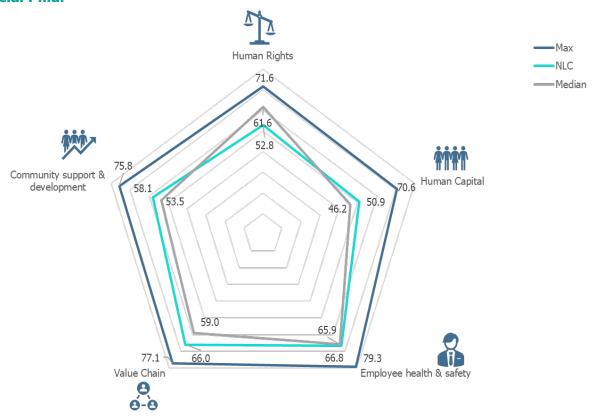
² Comprehensive analytical insights, inferences and benchmarking is provided in CareEdge-ESG's detailed ESG Report



Environment Pillar



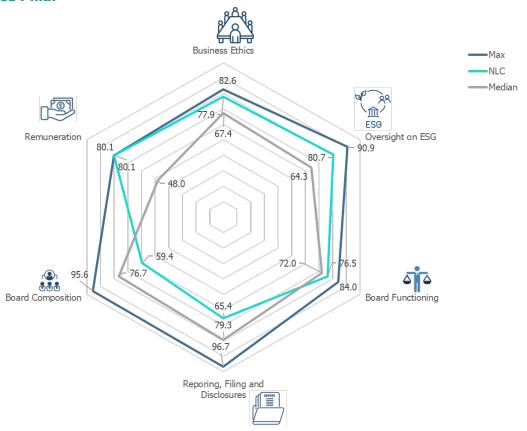
Social Pillar



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Governance Pillar



Summary Pillars and Theme Scores*

Theme	NLC	Industry Median	Industry Max
Biodiversity	31.3	25.0	66.7
Carbon and other emissions	31.3	31.0	68.4
Climate change risk management	93.9	74.2	100.0
Effluent & waste	70.8	43.9	70.8
Energy Efficiency	47.2	65.2	87.3
Raw material sourcing	36.4	38.9	68.7
Water usage & management	31.5	32.4	44.3
Total Environment Score	42.8	40.1	62.3
Human Rights	52.8	61.6	71.6
Human Capital	50.9	46.2	70.6
Employee health & safety	66.8	65.9	79.3
Value Chain	66.0	59.0	77.1
Community support & development	58.1	53.5	75.8
Total Social Score	60.5	56.0	71.0
Reporting, Filing and Disclosures	65.4	79.3	96.7
Remuneration	80.1	48.0	80.1
Business Ethics	77.9	67.4	82.6
Board Functioning	76.5	72.0	84.0
Board Composition	59.4	76.7	95.6
Oversight on ESG	80.7	64.3	90.9
Total Governance Score	73.7	65.5	80.2
Total ESG Score	55.8	48.0	64.6

^{*}Max score of each them and pillar represents different entities. Industry median may change as more companies in the peer group get rated by CareEdge-ESG as they will be able to provide non-public information as well for rating analysis.

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About:

CareEdge is a knowledge based analytical group that aims to provide superior insights based on technology, data analytics and detailed research. CARE ESG Ratings Limited (CareEdge-ESG) is one of the India's pioneer ESG rating provider fostering sustainability with ESG insights. With an aim of being a catalyst of change for a sustainable future with the most credible ESG assessments, CareEdge-ESG provides a 360-degree appraisal for the ESG performance benchmarking cum transition enabling ESG risk mitigation and enhanced decision-making capabilities for all stakeholders.

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