

# Living Harmoniously with the Earth to Secure the Future

NEC engages in environmental management in order to realize a sustainable society as put forth in the NEC Way. As part of its corporate responsibility, NEC seeks to reduce the environmental burden of its activities not only in terms of climate change but also with regard to water, resource recycling, chemical substances, biodiversity, and other matters. In particular, we have strengthened our efforts concerning climate change by setting an ambitious target in September 2022 to reduce CO<sub>2</sub> emissions from our entire supply chain to zero by 2040. We also help reduce the environmental burden of our customers and society on the planet by providing environmentally friendly products and services that utilize ICT and our own unique technologies. In addition, we have established the NEC Environmental Policy and ensure that all actions of employees and corporate officers comply with this policy and engage in activities with consideration for the environment.

## NEC: A Futuristic Glimpse into the Ideal 2030

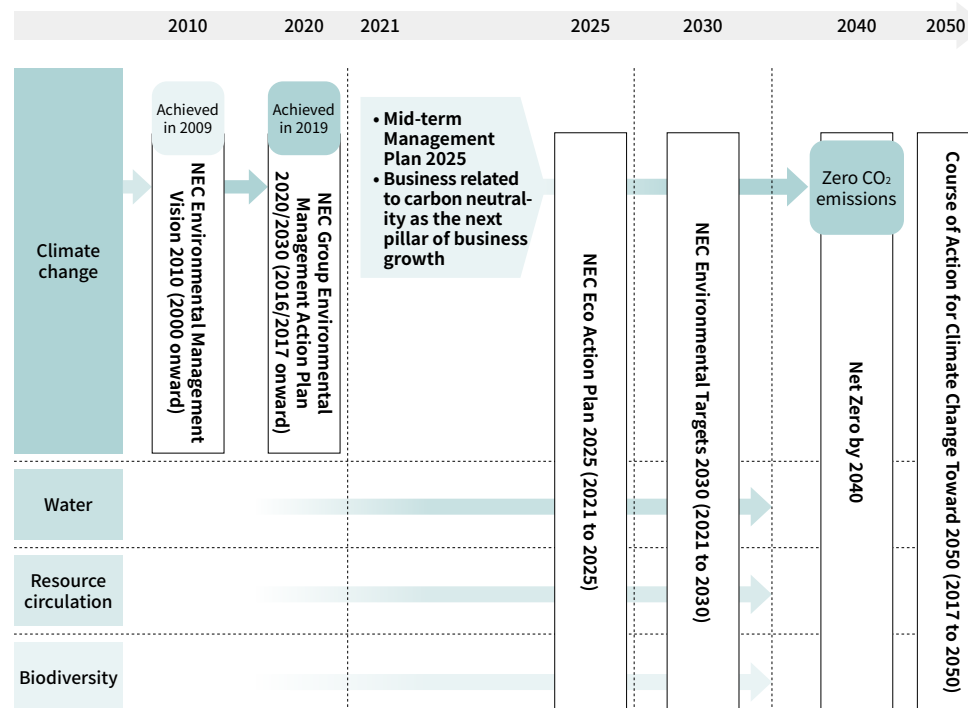
In the NEC 2030VISION, we have positioned the environment as the basis of all our activities. To realize the vision for society we have set forth, we will continue to provide value as we strive to improve and resolve environmental issues.

### NEC Environmental Policy

NEC views the operation of business in harmony with the environment as one of its top priority issues and is committed to reducing the environmental impact of the entire global supply chain and contributing to a sustainable society.

1. We will create social value focused on delivering ICT solutions and services leveraging advanced technologies to contribute to their adaptation, and we will contribute to the reduction of the environmental burden on customers and the global environment and to the mitigation of the impacts of climate change.
2. We will assess the environmental impact throughout the entire life cycle of ICT solutions and service development with considerations for reducing environmental burden.
3. We will comply with environmental laws and regulations associated with our business activities, honor agreements with stakeholders, and strive to conserve energy, save resources, and prevent environmental pollution caused by chemical substances and waste along the entire supply chain.
4. We will prioritize the procurement of environmentally friendly hardware, software, and services.
5. We will disclose environmental information regarding our business activities, ICT solutions, and services to our stakeholders.
6. We will raise the environmental awareness of each and every one of our employees worldwide and contribute to the conservation of the global environment through the promotion of climate change action, resource circulation, and biodiversity.
7. We will strive to improve an environmental management system with environmental targets and conduct periodic reviews to realize continual improvement.

### Environmental Initiatives for Realizing a Sustainable Society



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## Climate Change: Reducing NEC's CO<sub>2</sub> Emissions to “Effectively Zero” by 2040

### Climate Transition Plan

NEC has formulated a climate transition plan that combines existing guidelines and initiatives to transition to a business model aimed at carbon neutrality by 2040 in line with the goals of the Paris Agreement. The process involves a PDCA cycle that includes future forecasting via scenario analysis, clarification of business risks

and opportunities, formulation of a medium- to long-term plan, and implementation and evaluation of measures. In addition, we report on the progress of these initiatives to the Board of Directors and disclose information in line with TCFD recommendations.

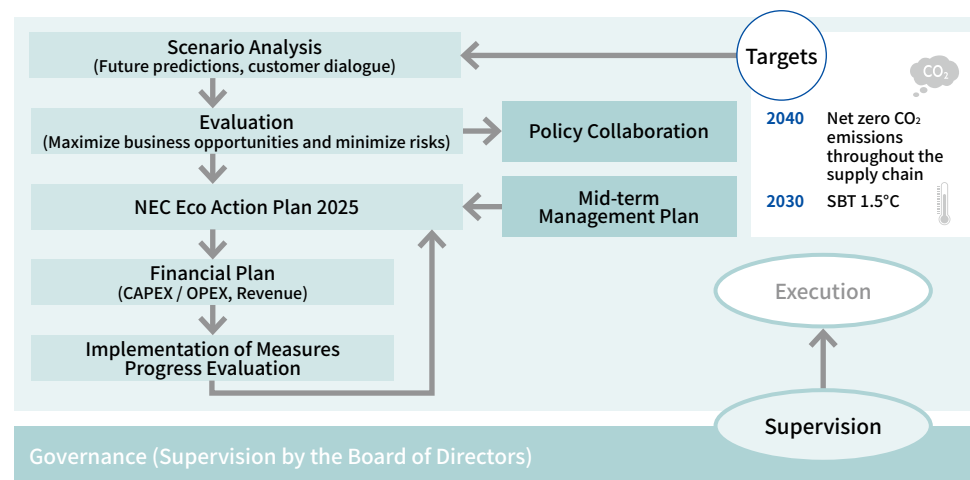
**E** For more details, please refer to “Outline of Initiatives Based on TCFD Recommendations” on page 20 of the *NEC ESG Databook 2023*.

### Long-term CO<sub>2</sub> Emissions Reduction Targets

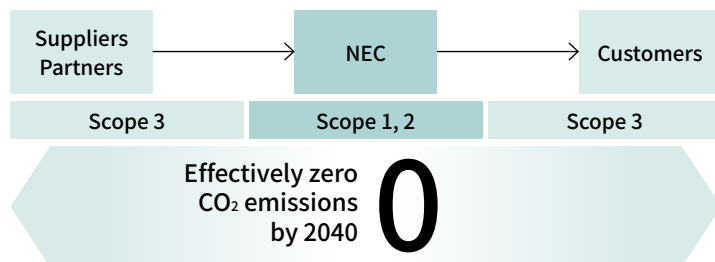
In 2017, NEC formulated its Course of Action for Climate Change Toward 2050. In September 2021, NEC became a signatory to Business Ambition for 1.5°C and declared that it will aim for net zero CO<sub>2</sub> emissions for Scope 1, 2, and 3 by 2050. This means that, in addition to its previous target for the Company's business activities

(Scope 1 and 2), NEC is aiming for net zero emissions for Scope 3, which includes its entire supply chain. In September 2022, NEC became a signatory to The Climate Pledge, which is a commitment to achieving net zero carbon emissions by 2040, 10 years earlier than the target set forth in the Paris Agreement.

### NEC's Climate Transition Plan



### “Effectively Zero” CO<sub>2</sub> Emissions from Entire Supply Chain



Scope 1: Direct emissions of greenhouse gases generated from emission sources owned or controlled by businesses  
 Scope 2: Indirect emissions of greenhouse gases from the use of electricity, steam, and heat  
 Scope 3: All indirect emissions (other than Scope 1 and 2) that occur throughout a company's supply chain

 <b>SBT 1.5°C</b> Recertified in May 2021	 SCIENCE BASED TARGETS DRIVING AMBITIOUS CORPORATE CLIMATE ACTION	Scope 1 and 2: 55% reduction (compared with fiscal 2018) by 2030 Scope 3: Reduce Category 1 (purchased goods and services), reduce Category 3 (fuel- and energy-related activities not included in Scope 1 or Scope 2), and reduce Category 11 (use of sold products) by 33% (compared with fiscal 2018) by 2030. Scope 3 coverage: 35% of Category 1, 100% of Category 3, and 100% of Category 11
 <b>RE100</b> Joined in May 2021	 RE100 CLIMATE GROUP   CDP	Switch to renewable energy for 100% of the electricity consumed at locations inside and outside Japan by 2050
 <b>BA 1.5°C</b> Became a signatory in September 2021	 BUSINESS AMBITION FOR 1.5°C	Net zero greenhouse gas emissions from the entire supply chain by 2050
 <b>THE CLIMATE PLEDGE</b> Became a signatory in September 2022	 THE CLIMATE PLEDGE	Net zero greenhouse gas emissions from the entire supply chain by 2040

**E** For more details, please refer to “Participation in Initiatives Related to Climate Change” on page 19 of the *NEC ESG Databook 2023*.

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**Scenario Analysis**

NEC believes that a company cannot continue to exist and grow without analyzing scenarios for climate change. Among recent global risks, climate change risks are numerous and could have an extremely large impact on not only corporate business activities and earnings but also our lives. No matter what future is in store for us, based on multiple scenarios, NEC will examine steps that should be taken to realize a safe and secure society while ensuring NEC's survival and growth. In 2019, we conducted a Company-wide scenario analysis, and in two different scenarios, we analyzed potential changes in risks and opportunities for NEC.

NEC engages in a variety of businesses globally, from the floor of the ocean to the far reaches

of outer space. The risks and opportunities related to climate change differ by business field, so talking about future risks and opportunities related to climate change for the NEC Group as a whole is not necessarily the best approach. Therefore, NEC has been conducting scenario analyses for each of its businesses since fiscal 2022.

In fiscal 2023, NEC used scenarios to analyze the digital transformation (DX) of domestic public administration and the transition to a decarbonized society in 2030 (the 1.5°C and 4°C scenarios) in the context of digital government, which is a strategic area of the Mid-term Management Plan 2025. The Company then analyzed the business opportunities presented therein.

**E** For more details, please refer to "Scenario Analysis" on page 21 of the *NEC ESG Databook 2023*.

**Examples of Implications Presented by the Scenario Analysis**

- Opportunities will arise in regional energy management in the 1.5°C scenario, in regional disaster prevention and infrastructure development in the 4°C scenario, and in healthcare in both scenarios.
- To meet these needs, it is highly likely that the NEC Group will be able to provide value by developing and combining its existing services.
- In both scenarios, the building of data platforms (standardization and unification) will continue, requiring a shift from traditional business models.

**Evaluating the Scenario Analysis: Risks and Opportunities**

Risks	Description	Risk Management and Countermeasures
<b>Transition risk</b>	Risks from carbon pricing • Assuming all of NEC's Scope 1 and Scope 2 emissions (about 164,000 t-CO <sub>2</sub> ) upon achievement of new targets in fiscal 2031 toward net zero CO <sub>2</sub> emissions by 2040 are subject to carbon pricing (US\$130/t-CO <sub>2</sub> ), costs will increase by ¥2.8 billion (assuming ¥130/US\$1) • Assuming impact from higher costs in upstream and downstream supply chains	Increase use of renewable energy and achieve thorough gains in efficiency to achieve net zero CO <sub>2</sub> emissions target by 2040 (ongoing efforts in supplier engagement and to improve energy-saving performance of products)
<b>Physical risk</b>	Possible disruption of the supply chain due to weather-related disasters (floods, landslides, water shortages, etc.), long-term outages of lifelines such as electricity, gas, and water	Risk assessment of the entire supply chain, BCP measures (installing flood gates and moving power supply equipment) with provisions for weather-related disasters, such as river flooding, and strengthening of power generation in data centers

Opportunities	Description	Creation and expansion of opportunities
<b>Value provided in transition risk countermeasures (Mitigation)</b>	Development of low-emission transport infrastructure	Logistics visualization and route optimization driven by AI and IoT; EV/PHV charging cloud
	Support for expanding renewable energy use	Virtual power plants, management of power supply and demand, commercialized resource aggregation (RA) for the supply and demand adjustment market, energy management systems (xEMS), provision of data center services that use renewable energy, etc.
	Support for reducing energy use	Process reforms using DX initiatives (work automation, smart factories, supply and demand optimization), products, and technologies that help data centers save energy (phase change cooling, new refrigerants, etc.)
<b>Value provided in physical risk countermeasures (Adaptation)</b>	Preparation for increase in weather-related disasters	• Pre-disaster detection using AI, IoT, image analysis, flood simulation, evacuation support, etc. • Visualization of the amount of future CO <sub>2</sub> reduction through disaster preparedness and mitigation, and consideration of mechanisms that promote investment in disaster preparedness and mitigation by transforming them into financial products
	Preparation for increase in forest fires	Forest fire monitoring and quick response systems, disaster monitoring by satellite, etc.
	Preparation for changes in areas suitable for agricultural production	Simulations that forecast effects and changes in agriculture, agriculture-oriented ICT solutions, etc.
	Preparation for the spread of infection	Infectious disease countermeasure solutions, preparation of a logistics information management platform in the event of the emergence of a global infectious disease, remote work, telemedicine support, education clouds, etc.

**E** For more details, please refer to "Risks and Opportunities Presented by Scenario Analysis" on page 22 of the *NEC ESG Databook 2023*.

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## Progress and Review of NEC Eco Action Plan 2025

We have compiled the NEC Eco Action Plan 2025, a medium-term action plan for promoting Group-wide initiatives to achieve the goals set within our long-term environmental policy, and we are expanding this plan to each business unit and Group company.

We determined priority initiatives from the following three perspectives.

- 1. Reduce own risks and environmental footprint
- 2. Increase contributions through businesses
- 3. Build foundations to promote environmental management

### 1. Reduce own risks and environmental footprint

	Themes		Indicators	Fiscal 2023 targets	Fiscal 2023 results	Evaluation	Fiscal 2024 targets	Fiscal 2026 targets
(1)	Reduce CO <sub>2</sub> emissions	Scope 1, 2	Reduce total emissions (absolute value) (Science Based Target [SBT])	Reduction rate of energy-derived CO <sub>2</sub> emissions (absolute value) (compared with fiscal 2018)	-21.9%	-45%	Achieved	-15% -25%
(2)			Expand use of renewable energy	Amount of electric power used from renewable energy (MWh)	74,000	180,072	Achieved	
(3)		Scope 3	Reduce Category 1 emissions (SBT)	Reduction rate (compared with fiscal 2018)	-3%	+5%	Not achieved	Higher targets based on the results of full-scale introduction by Group companies and The Climate Pledge membership. 70% 80%
(4)			Reduce Category 11 emissions (SBT)	Improvement rate of product energy efficiency (compared with fiscal 2014 products)	75%	61%	Not achieved	
(5)	Reduce water usage		Reduction rate (compared with fiscal 2019)	-2.0%	-25%	Achieved	-9.5%	-10.5%
(6)	Reduce waste emissions		Reduction rate (compared with fiscal 2019)	-2.7%	-9.9%	Achieved	-3.4%	-4.8%
(7)	Encourage recycling of plastic resources (newly itemized targets from fiscal 2024)		Reduce plastic waste output	Reduction target (compared with FY2020)		—	-2.8%	-4.2%
				Information disclosure		—	Disclosure	

### 2. Increase contributions through businesses

	Themes	Fiscal 2023 targets	Evaluation	Fiscal 2024 targets	Fiscal 2026 targets
(8)	Manage environmental assets and encourage eco appeal	<ul style="list-style-type: none"> <li>• Update environmental assets (as needed, with an annual review)</li> <li>• Encourage eco appeal (manage outcomes)</li> </ul>	Achieved	Ongoing targets	
(9)	Create new environmental solutions and create new themes for R&D	Conduct at least one workshop for evaluating environmental businesses	Achieved	Ongoing targets	

### 3. Build foundations to promote environmental management

	Themes	Indicators	Fiscal 2023 targets	Fiscal 2023 results	Evaluation	Fiscal 2024 targets	Fiscal 2026 targets
(10)	Increase environmental awareness among all employees	Attendance rate	Japan	95% or more	96.6%	Achieved	At least 95%
				International	90% or more	95.3%	Achieved

### Management Items

To advance environmental management, NEC has defined “priority items” in addition to “management items,” which are geared toward improving the level of activities that do not necessarily require targets and plans. For further details, please refer to the link below.

**E** For more details, please refer to “Medium-term Environmental Plan Progress: Management Items” on page 15 of the *NEC ESG Databook 2023*.

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## Products and Services That Help to Mitigate Climate Change

### ESG Consulting Services Aimed at Realizing Carbon Neutrality

Leveraging the knowledge we have gained from our own initiatives, we help customers work toward carbon neutrality by providing consulting services for defining overall ESG issues, formulating overall strategies, and implementing

measures. In addition, we provide solutions that underpin the implementation of these measures, thus providing total support for resolving various customer issues.

NEC's ESG management consulting services	Define overall ESG issues	Formulate overall strategic plan	Implement measures	Share information
	Analyze and evaluate ESG and management strategy issues and identify specific options	Overall strategic plan for carbon neutrality and its impact and transformational vision  Purpose-driven design mindset	DX strategy and decarbonized business model transformation support  New business start-up and scale-up consulting  Carbon neutral action for branding	

Carbon solutions that underpin execution	Use of renewable energy	Data centers that use 100% renewable energy NEC Cloud IaaS and Hybrid Cloud					
	Visualization	Resource aggregation NEC Cloud Service for Energy Resource Aggregation	Industry-specific solutions				
	Business transformation	Visualization of CO <sub>2</sub> emissions throughout the supply chains GreenGlobeX	Manufacturing Smart factories	Logistics Raise logistics efficiency Visualize logistics	Local governments Green procurement solutions	Energy management Various X EMS	Transportation EV charging cloud service

**E** For more details, please refer to "Examples of NEC Group Environmental Solutions" on page 23 of the *NEC ESG Databook 2023*.

### ESG Consulting Approach: Steps to Achieve Decarbonization

Full support for customers throughout the issue resolution process, including steps to achieve decarbonization

Process for resolving customer issues	Steps to achieve decarbonization	Promote carbon neutrality						
	Description	Define overall ESG issues	Formulate overall strategic plan for carbon neutrality	Implement measures			Disclose information Share information	
		Plan	Do	Check	Act			
		Define company issues • Visualize greenhouse gases • Analyze issues in promoting decarbonization • Environmental and scenario analyses (identify risks and opportunities)	Formulate a Company-wide decarbonization strategy • Formulate overall measures for net zero emissions • Formulate roadmap • Create framework and carry out system design • Participate in initiatives, etc.	Confirm current situation • Formulate GHG reduction measures • Prioritize measures • Transition risks and opportunities Risk: Transformation of existing businesses Opportunity: New business proposals	Implement GHG reduction measures • Specify requirements • Compare and select from options • Install and launch	Evaluate GHG reduction measures • Monitor • Analyze and simulate • Evaluate	Review GHG reduction plan and measures • Suggest policy improvements • Update roadmap • Consider emissions and credit trading	• Integrated report • ESG Databook • CDP and other ESG surveys

NEC service menu	Strategic consulting	Definition of ESG management issues	Formulation of overall strategies	DX strategy consulting and decarbonization simulation	Examination of prioritization of measures	Analysis of outcomes of measures	Examination of improvements to measures	Information disclosure and reporting support
	Support for implementation of measures	Assessment of carbon neutrality and calculation of implementation outcomes	Creation of decarbonized businesses	Introduction of measures	Verification of outcomes of measures	Examination of new measures and formulation of implementation plan	Carbon neutral action for branding	
		Fixed menus and packages for each issue	Visualization tool (GreenGlobeX)	Resource circulation solutions	Funding			
		Quick start menus	Decarbonized energy solutions	Supply and demand forecasting solutions				

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### Water Risk Management and Effective Use of Water Resources

NEC complies with environmental laws and regulations and promotes reduction efforts in its water usage and environmental impact. We are

also employing water risk management practices, which include addressing the issues of water shortages, water pollution, and flooding.

Risk / Opportunity	Description	Risk reduction measures / Specific opportunities
Risk	Droughts and disaster-related water outages may affect business continuity and cause delay or tie-ups in production.	Business continuity plan (BCP) measures have been implemented at each site to prepare for water outages.
Opportunity (economic value)	There is growing market demand for disaster preparedness-related businesses to minimize damage from typhoons and other storms.	Expanded introduction of river water level prediction and other flood control support systems has begun.

### Resource Circulation and Pollution Prevention

NEC is working on consistent resource recycling from production to use and recycling, and reducing environmental impacts such as the amount of waste generated during each process. In particular,

hardware products that our customers have used consume a lot of resources, so we carry out initiatives to make effective use of limited resources by collecting and recycling them.

Risk / Opportunity	Description	Risk reduction measures / Specific opportunities
Risk	Tighter relevant regulations in Japan and abroad require time and resources to appropriately address. A delay in responding may affect NEC's competitiveness and reputation.	Collect information before the enactment of relevant laws and regulations to facilitate an early response.
Opportunity (economic value)	Market expansion of circular economy-related businesses continues to progress and new markets continue to open up.	Demand is growing for NEC bioplastic products, and for AI tools for food loss countermeasures.

### Natural Capital and Biodiversity

NEC strives to minimize the impact of business activities and employees' lives on living organisms, and to actively encourage activities that contribute to biodiversity and the provision of ICT solutions. In recent years, a variety of initiatives related to nature and biodiversity have been launched around the world amid climate change, and such initiatives are likely to be rolled out further and gain momentum over the next few years. In fiscal 2022, NEC participated in two international initiatives that are expected to have an impact in the business world, namely, Science Based Targets (SBTs) for Nature<sup>1</sup> and the Taskforce on Nature-related Financial Disclosures (TNFD),<sup>2</sup> as a corporate member at the initial framework consideration stage.

On July 10, 2023, we released a report disclosing business risks and opportunities related to natural capital, including biodiversity, in

reference to the TNFD Risk & Opportunity Management and Disclosure Framework (v0.4 Beta Release) issued by the TNFD.<sup>3</sup> This report is the first in Japan to disclose information based on the v0.4 Beta Release.

1 SBTs for Nature: Company participation program Science-based goals designed to ensure that companies and municipalities act within the limits of the planet. A nature-based version of the SBT that promotes a 1.5°C target for climate change. SBTs for Nature plans to release its target-setting method step by step from 2023 onward.  
 2 Taskforce on Nature-related Financial Disclosures: TNFD Forum  
 Established as a framework for corporate disclosure of nature-related financial information in order to direct the flow of global funds to activities that conserve and restore nature. The framework is scheduled for launch in 2023.  
 3 [https://framework.tnfd.global/wp-content/uploads/2023/03/23-24287-TNFD\\_v0.4\\_Short\\_Summary-JA\\_FINAL.pdf](https://framework.tnfd.global/wp-content/uploads/2023/03/23-24287-TNFD_v0.4_Short_Summary-JA_FINAL.pdf)

Risk / Opportunity	Description	Risk reduction measures / Specific opportunities
Risk	Alterations to the land at production sites, as well as underground and surface water usage, wastewater, and gas emissions and waste at production sites, may affect biodiversity in their respective areas.	Since NEC's business sites use organic solvents and acidic/alkaline materials, we carry out measures and training to prevent leakage into wastewater, the atmosphere, and soil.
Opportunity (social value)	Efforts to protect biodiversity around bases and neighboring areas will lead to cooperation with a variety of stakeholders and improve brand value, which may create business opportunities.	Engage in activities to conserve biodiversity such as the protection of endangered species, and paddy field development through exchange activities with the local community.

**E** For more details, please refer to "Biodiversity" on page 30 of the *NEC ESG Databook 2023*.

### External Evaluations Regarding the Environment

NEC was named to the CDP "A List" 2022 for its efforts to address climate change and protect water security, marking four consecutive years of inclusion.

For the third consecutive year, NEC was also listed on the CDP's Supplier Engagement Leaderboard, the highest rating conducted by the CDP for supplier engagement.

