

Adani
Enterprises
Limited

adani



Task Force on Climate-related Financial Disclosures Report

www.adanienterprises.com



Contents

1. Key Highlights	4	
2. Structure and Approach of the TCFD Report	5	
3. Executive Summary	8	
4. Operational Businesses	10	
5. Governance	14	
Role of Board of Directors	14	
Oversight	14	
Board Committees	16	
Assurance Protocol	16	
Role of Management	18	
6. Strategy	20	
Climate-related risks and opportunities	20	
Opportunities associated with the risks	22	
Impacts on Business, Strategy, and Financial Planning	25	
Assessment of Climate-related Scenarios	27	
Physical Risks for AEL BUs	30	
		Climate-related Scenarios and their Impacts on the AEL's Strategy and Financial Planning
		Resilience of the Organization's Strategy (2°C or Lower Scenario)
		Transition Risks
		7. Risk Management
		Process for Identifying and Assessing Climate-related Risks
		Process for Prioritizing Climate-related Risks
		Integration of Climate-Related Risks into Overall Risk Management
		Mitigate, Transfer, Accept and Control climate-related risks
		8. Metrics and Targets
		Incorporation of Performance Metrics into Remuneration Policies
		Methodologies Used to Calculate or Estimate Climate-related Metrics
		Methodology to Calculate GHG Emissions

List of Tables

Table 1: Short, Medium & Long-Term Time Horizons	20
Table 2: Financial Planning with respect to climate-related issues	26
Table 3: Risk intensity range obtained through an assessment of global risk intensities	29
Table 4: Assessment of Physical Risk Indicators and Climate Scenarios for Airport Facilities	31
Table 5: Assessment of Physical Risk Indicators and Climate Scenarios for Mining Facilities	32
Table 6: Assessment of Physical Risk Indicators and Climate Scenarios for Solar Facilities	33
Table 7: Assessment of Physical Risk Indicators and Climate Scenarios for RMRW	33
Table 8: Assessment of Physical Risk Indicators and Climate Scenarios for Data Centers	34
Table 9: Climate-related risks: Impacts & Mitigation Strategies	44
Table 10: Metrics & Commitments	55
Table 11: Targets & Action Plan	56

Abbreviation

5Ps :	People, Planet, Prosperity, Peace, and Partnerships
AEL :	Adani Enterprises Limited
AIM :	Adani Intelligent Mining
BUs :	Business Units
CEO :	Chief Executive Officer
CFO :	Chief Finance Officer
CNG :	Compressed Natural Gas
CPCB :	Central Pollution Control Board
CRC :	Corporate Responsibility Committee
CSO :	Chief Sustainability Officer
CTE :	Consent to Establish
CTO :	Consent to Operate
EBITDA :	Earnings Before Interest, Taxes, Depreciation, and Amortization
EC :	Environment Clearances
EMS :	Environmental Management System
ESG :	Environmental, Social, and Governance
GCM :	General Circulation Models
GHG :	Greenhouse Gas Emissions
IMS :	Integrated Management System
IPCC :	Intergovernmental Panel on Climate Change
KPIs :	Key Performance Indicators
LPG :	Liquefied Petroleum Gas
MD :	Managing Director
NDC :	Nationally Determined Contribution
OECD :	Organisation for Economic Co-Operation and Development
ORM :	Operational Risk Management
PCB :	Pollution Control Board
RCM :	Regional Climate Models
RCP :	Representative Concentration Pathways
RMC :	Risk Management Committee
RMRW :	Roads, Metro, Railway, Water
RRC :	Reputational Risk Committee
S & CC :	Sustainability and Climate Change-Related Events
SPCB :	State Pollution Control Board
STPs :	Sewage Treatment Plants
TCFD :	Task force on Climate-Related Financial Disclosures
ZLD :	Zero Liquid Discharge

Definitions

Adaptation	Adaptation refers to the adjustments and measures taken to cope with and reduce the risks and impacts of climate change. It involves building resilience, modifying practices and infrastructure, and implementing strategies to withstand the effects of a changing climate.
Business Ethics	Business ethics refers to the moral principles and values that guide a company's behaviour and decision-making. It involves conducting business ethically, upholding integrity, transparency, fairness, and adhering to legal and regulatory requirements.
Carbon Emissions Offsetting	Carbon emissions offsetting involves compensating for emissions by investing in projects that reduce or remove an equivalent amount of greenhouse gases from the atmosphere. This helps mitigate the environmental impact of emissions.
Circular Economy and Waste Management	Circular economy and waste management strategies aim to reduce waste generation, promote recycling and reuse, and minimize landfill disposal. They emphasize closed-loop systems and sustainable waste management practices.
Circular Economy	A circular economy aims to minimize waste and promote resource efficiency by reducing, reusing, and recycling materials. It focuses on maintaining the value of products and materials for as long as possible.
Climate Modelling	Climate models are critical instruments for enhancing our understanding and predictability of seasonal, yearly, decadal, and centennial climate behaviour. Models study whether observed climate changes are caused by natural variability, human activity, or a combination of the two.
Climate scenario Analysis	Scenario analysis is an approach for challenging received wisdom about the future and for critical strategic thinking. It creates fictitious development and conclusion paths while emphasising the primary forces behind those developments. Scenarios go beyond conventional forecasts and projections to explore other possibilities and plan for unpredictability.
ESG (Environmental, Social, and Governance)	ESG refers to the three key factors used to assess a company's sustainability and ethical impact. Environmental criteria focus on environmental impact; social criteria evaluate stakeholder relationships, and governance criteria assess internal policies and practices.
General Circulation Model	General Circulation models (GCMs) are mathematical representations of the climate system's dynamics. Climate models can be used to create projections about future climate, and the knowledge acquired can help policymakers make decisions concerning climate change.
Governance and Risk Management	Governance and risk management involve establishing structures, processes, and practices to set and monitor objectives and control risks. It ensures that effective governance, risk assessment methodologies, and internal controls are in place.
Green Energy	Green energy refers to energy generated from renewable sources with minimal or no negative environmental impact. Examples include solar power, wind power, hydropower, and geothermal energy.
Infrastructure Resilience	Infrastructure resilience involves designing and managing infrastructure to withstand and recover from disruptions, including those caused by climate change. It focuses on creating robust, adaptable systems that absorb and recover from shocks.
Low Carbon Economy	A low-carbon economy is one in which power is obtained predominantly from 'cleaner' or less carbon-intensive energy sources such as wind, solar, and hydroelectric power rather than from carbon-intensive sources such as fossil fuels.
Low-Emission Technology	Low-emission technologies produce fewer greenhouse gas emissions than conventional alternatives. Examples include renewable energy technologies, energy-efficient systems, and clean transportation solutions.

Nationally Determined Contribution (NDC)	NDC represents a country's commitment under the Paris Agreement to reduce greenhouse gas emissions and adapt to climate change impacts. It outlines specific goals, targets, and actions to address climate change.
Net Zero emission	A net zero state entails a situation in which human-caused greenhouse gas emissions are offset by reductions, so balancing their impact. While CO2 is still produced an equivalent quantity is removed from the atmosphere, resulting in no net increase in emissions.
Physical Risks	Physical risks are adverse impacts that arise from climate change, such as extreme weather events, rising sea levels, and changing precipitation patterns. These risks can affect a company's operations, infrastructure, and assets.
Proactive Risk Management	Proactive risk management involves taking pre-emptive measures to identify, assess, and address potential risks before they escalate. It includes implementing risk mitigation strategies, establishing early warning systems, and continuously monitoring risks.
Regional Climate Model	An RCM is a localised climate prediction model. It makes accurate predictions by using data from bigger models or observations, simulating atmospheric and terrestrial processes using high-resolution data, and requiring boundary conditions from larger models or observations.
Representative Concentration Pathways (RCPs)	RCPs are scenarios used to project future greenhouse gas concentrations and their impacts on global climate. Different RCPs represent various levels of emissions and provide insights into potential climate futures.
Resource Conservation	Resource conservation involves responsibly and efficiently using natural resources like water, energy, and raw materials. It aims to minimize waste, optimize resource utilization, and promote sustainable resource management.
Risk Management	The systematic process of identifying, assessing, and resolving possible risks in order to safeguard and enhance an organization's objectives, assets, and reputation is known as risk management. It entails putting in place structures, rules, and processes to manage risks efficiently.
Single Use Plastic	As per the August 2021 amendment to the PWM Rules by MoEF&CC, single-use plastic refers to disposable plastic items like packaging, cutlery, cups, and banners. Plastic or PVC banners with a thickness below 100 microns are also classified as single-use plastics. The rules aim to limit their usage, reduce environmental pollution, and encourage sustainability.
Stakeholder Engagement	Stakeholder engagement involves involving individuals or groups affected by a company's activities and seeking their input and feedback. It helps understand expectations, address concerns, and incorporate diverse perspectives in decision-making processes.
TCFD (Task Force on Climate-Related Financial Disclosures)	TCFD is an international initiative that provides guidelines for organizations to disclose climate-related risks and opportunities. It promotes consistent and effective reporting to help investors and stakeholders assess a company's resilience in the face of climate change.
Transition Risks	Transition risks refer to financial and operational risks associated with the transition to a low-carbon economy. These risks can include changes in market demand, technological advancements, reputational risks, and regulatory changes.
Low emission Technologies	Low-emission technologies produce fewer greenhouse gas emissions than conventional alternatives. Examples include renewable energy technologies, energy-efficient systems, and clean transportation solutions.
Proactive Risk Management	Proactive risk management involves taking pre-emptive measures to identify, assess, and address potential risks before they escalate. It includes implementing risk mitigation strategies, establishing early warning systems, and continuously monitoring risks.

1 Key Highlights



55%
Reduction in Emission
intensity (Per Rupee of
Turnover)

44%
Operational emissions
reduction in Adani
airports



28%
reduction in Water
intensity (Per Rupee of
Turnover)



18%
Total waste generation
reduction in ANIL
ecosystem



4 GW
Solar manufacturing
facility



17 MW
Data center
capacity



26%
Energy intensity
reduction (Per Rupee
of Turnover)

11%
Energy intensity
reduction in mining
services



13%
share of renewable
energy



82%
Waste avoided from
going to landfill



100%
Green electricity in
Mumbai International
Airport Limited (MIAL)

2

Structure and Approach of the TCFD Report



Adani Enterprises Limited considers climate-related risks & opportunities and associated financial materiality as a strategic topic in all aspects of business operations.

Adani Enterprises Limited considers climate-related risks & opportunities and associated financial materiality as a strategic topic in all aspects of business operations. Prioritizing the assessment and integration of climate risks is crucial for ensuring long-term business resilience and sustainable operations in the face of an evolving environmental landscape.

The structure of the report follows the TCFD guidelines. It has four sections, namely, Governance, Strategy, Risk Management, and Metrics & Targets.

Governance

Governance covers the integration of climate-related issues in the Board and Management, the responsibilities of the Board & Management and climate-related information flow.

1. Sustainability-Driven

Governance: AEL prioritizes sustainability governance for enduring value and responsible practices.

2. Committees for Oversight:

Independent board-led committees oversee policy execution, strategy alignment, and performance evaluation, shaping AEL's ESG roadmap.

3. Assured Data Integrity:

AEL ensures ESG reporting accuracy through rigorous internal and external assurance, enhancing transparency and accountability.

Strategy

The strategy section focuses on climate-related risk assessment and Scenario-analysis. In addition, it explains the methodology of physical risk assessment and its financial implications on the business units.

1. Strategic Climate Focus:

Climate risks and opportunities guide AEL's growth strategy, evident in green energy initiatives like Adani Solar.

2. Integrated Value Chain:

AEL drives a sustainable value chain for renewables, manufacturing components locally and emphasizing responsible sourcing.

3. Innovative R&D:

AEL invests in green energy R&D, notably through Adani New Industries Ltd. (ANIL) for solar, green hydrogen and battery manufacturing.

4. Tech-Driven Operations:

Technology boosts sustainability, from Adani Intelligent Mining (AIM) to

Adani Connex's renewable energy shift and CSMIA's carbon management.

5. Operational Sustainability:

CSMIA's "Transition" certification from ACA showcases AEL's commitment to carbon management and sustainable practices.

Risk Management

The Risk Management section elaborates on the integration of climate-related risks into the overall business risk management, mitigation & adaptation plans.

1. AEL employs a structured risk management approach to address climate-related and other risks. This involves both bottom-up analysis and top-down discussions with stakeholders.

2. Climate risks, such as reputation, regulation, technology, and market shifts, are evaluated. The impact of these risks, financially and strategically, is comprehensively assessed.

3. AEL conducts Climate Change Risk Assessment Studies based on scientific recommendations.

4. Identified risks shape strategic decisions and are integrated into the business plan for

continual monitoring and mitigation.

Metrics & Targets

The Metrics and Targets section provides information on climate-related metrics & calculation methodology, baseline data, historical data, and targets.

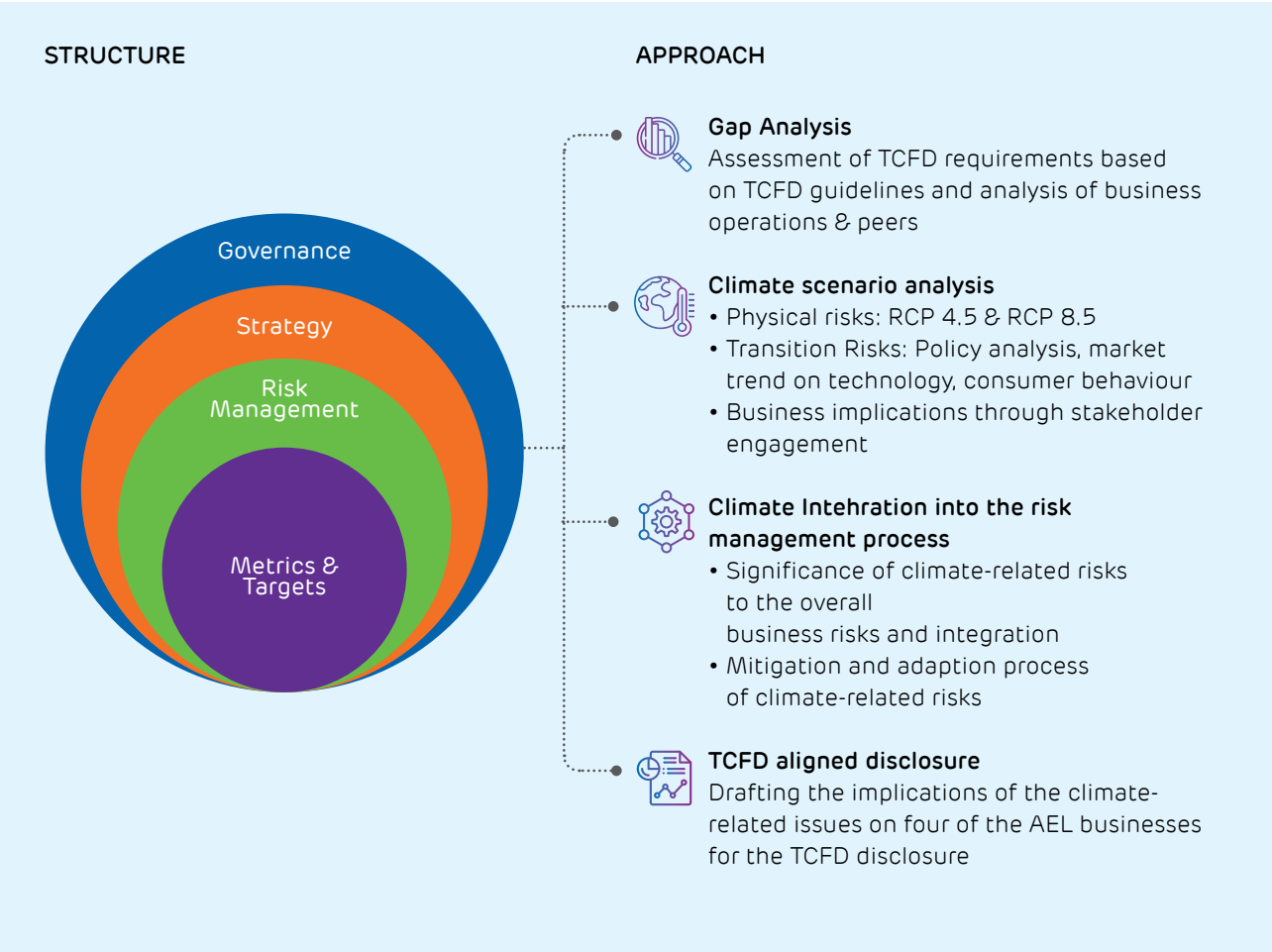
- 1. **Energy & Climate:** AEL aims to exceed India's NDC target, invest in a green transition, achieve operational net zero for the data center and airport business by 2030 and promote sustainable infrastructure.
- 2. **Circular Economy:** AEL strives for zero waste to landfill, focusing on strategies like

recycling and waste-to-wealth initiatives.

- 3. **Water Positivity:** AEL targets net water positivity by 2030 through reduced consumption, wastewater reuse, and innovative solutions.
- 4. **Biodiversity & Land Use:** AEL commits to biodiversity preservation, cultivating millions of trees, and achieving No-Net Loss through responsible land use.

The approach for drafting the TCFD report includes,

- 1. Gap analysis, assessed based on TCFD guidelines, AEL's business operations and relevant peers.
- 2. Climate Scenario Analysis, assessed the physical risks, transition risks, and their business implications through risk assessment tools and stakeholder engagement.
- 3. Climate integration, evaluated the significance of the climate-related issues and their feasibility of integration into the business operations concerning financial materiality.
- 4. TCFD-aligned disclosure containing the business implications and preparedness of the assessed climate-related issues on the Business Units such as Solar, Mining, Roads, Metro, Railways, & Water (RMRW) & Data Center, and Airports.



3

Executive Summary

In the realm of climate-conscious corporate strategies, Adani Enterprises Limited (AEL) emerges as a proactive steward of sustainability, leveraging a well-structured approach.

In a sustainability-driven business landscape, AEL is committed to assessing and addressing climate-related risks and opportunities to improve business resilience. This executive summary outlines the reporting approach and introduces the methodology for the risk assessment and scenario analysis, detailed further in the subsequent sections.

Integrated Approach for Sustainable Progress

AEL's forward-looking sustainability strategy integrates environmental stewardship, community well-being, and strong governance practices. Our actions, including carbon offsetting, resource optimization, and safety initiatives, showcase our dedication to the environment and society. This approach not only benefits stakeholders but also contributes

to India's sustainable growth and holistic prosperity.

Our strategy unites environmental care, community welfare, and effective governance, yielding positive results across multiple dimensions.

Embracing Climate Realities: AEL's Path to Resilience

In the realm of climate-conscious corporate strategies, Adani Enterprises Limited (AEL) emerges as a proactive steward of sustainability, leveraging a well-structured approach. By knitting together environmental, social, and governance (ESG) principles, AEL charts a comprehensive path that traverses its diverse business units.

The geographical sites and their respective coordinates for the

BUs (Mining, Solar, Data Center, Airports, and RMRW) were identified. Subsequently, a rigorous assessment of site-specific vulnerabilities was conducted using analytical tools and verified data sources. AEL's commitment to aligning with industry benchmarks and regulatory requirements is evident and in alignment with TCFD guidelines. This strategic approach ensures that the report's framework aptly communicates the spectrum of climate-linked risks and opportunities to its valued stakeholders.

Evaluating Climate-Related Physical Risks & Opportunities

Acknowledging the gravity of climate change, AEL executed a comprehensive climate scenario analysis. This assessment is focused on four critical risks:

chronic heat, flooding, severe drought, and shifting precipitation. Analytical tools¹ were leveraged to gain insights about the implications of these risks for the BUs. The identified risks were then mapped to potential impacts of climate change on the company's operational framework and assets.

In addition to the challenges presented by climate-related risks, significant opportunities for innovation in green technology and resource efficiency have emerged. The company's strategic focus is on water resource management, exemplified by attaining 100% water recycling in mining operations and reducing water consumption. Complementing this, the company is actively engaged in the creation of low-emission products and services, exemplified by initiatives such as solar PV manufacturing. AEL is equally committed to minimizing operational and scope 2 greenhouse gas emissions by substituting conventional grid electricity with renewables and by implementing smart technology within mining operations.

Climate Scenario Analysis

The analysis considers two representative concentration pathways (RCPs): RCP 4.5 and RCP 8.5. RCP 4.5 envisions a decline in emissions, aiming to cap global warming at 2°C by the century's end, with moderate sea-level rise and extreme weather events. In contrast, RCP 8.5, characterized

by rising emissions, foresees global warming exceeding 4°C, leading to more severe impacts including substantial sea-level rise and intensified extreme weather.

Identifying Vulnerabilities: Business Units in Focus

The report highlights vulnerabilities and potential impacts across Airport Business, Mining Business, RMRW, and Solar under the three climate scenarios (RCP 4.5, & 8.5) and three timeframes (Current, 2030, 2050). A snapshot of the business impacts of the assessed climate risks are presented below.

- 1. Precipitation:** Jaipur and Thiruvananthapuram airports exhibit medium-low vulnerability, while Lucknow airport and Gare Pelma III mining face medium precipitation risk by 2050.
- 2. Flooding:** Mumbai airport and Unnao locations confront medium flooding risk.
- 3. Exceptional Drought:** Jaipur airport faces medium-low risk, impacting water supply, infrastructure, and operations; other BU locations show low susceptibility.
- 4. Chronic Heat:** Lucknow, Jaipur, and Ahmedabad airports are highly vulnerable, affecting infrastructure and operational costs.

Proactive Measures for Resilience

AEL actively manages climate-related risks, ensuring sustainable operations and mitigating financial and reputational impacts. Adaptation recommendations encompass water-saving practices, low-emission technologies, renewables, flood mitigation plans, resilient infrastructure, and climate-resilient designs.

Paving the Path Ahead: AEL's Commitment

By conducting climate scenario analysis and integrating the recommendations in the business strategy, the company emphasizes its commitment to resilience and sustainability. The findings offer a foundation for proactive risk management, empowering the company to prepare for climate-related risks and capitalize on opportunities for long-term success. Adani Enterprises Limited (AEL) recognizes the critical importance of addressing climate change and embedding sustainability in its operations. This executive summary provides an overview of the TCFD report, including alignment with the TCFD guidelines, methodology, and summary. It also outlines the key steps and methodologies employed in assessing climate-related risks.

¹ Physrisk. Think Hazard

4

Operational Businesses



Adani Solar Manufacturing

Adani solar is India's first and largest vertically integrated solar module manufacturing company. Solar Manufacturing business operates through two entities namely, Mundra Solar PV Limited (MSPVL) and Mundra Solar Energy Limited (MSEL). With inception in 2017, the business has consistently been India's first largest and most trusted vertically integrated solar PV cells and modules manufacturer with capacity steadily increasing from 1.2 GW to 1.4 GW in 2019, 2 GW in 2021 and 4 GW in 2022. The business also has its own Research and Development (R&D) Center within the Electronic Manufacturing Cluster (EMC) facility at Mundra.

The business is building the world's 1st ever Fully Integrated and Comprehensive Ecosystem of Solar PV Manufacturing, with ultimate objective of producing world's low-cost green hydrogen at Mundra. This year, it has become the first Indian company to start the backward integration beyond solar cell manufacturing, by starting the pilot for Ingot and Wafer slicing lines. This pilot line is part of a planned 2 GW Wafer manufacturing setup that Adani Solar will soon dedicate to the country—the first such attempt in India.



Adani Airports Holdings Limited

In 2019, the Adani Group made its entry into the airports sector, consistent with the group's overarching vision of achieving global recognition as a leader in integrated infrastructure and transportation enterprises. Adani Airport Holdings Limited (AAHL) was incubated within the Group's flagship company and won the mandate to modernise and operate six airports—Ahmedabad, Lucknow, Mangaluru, Jaipur, Guwahati, and Thiruvananthapuram through a globally competitive tendering process conducted by the Airports Authority of India (AAI). The AEL has been granted the right to operate, manage, and develop all these airports for a period of 50 years.

The business' seven operational airports account for 23% of the total air traffic in India and control over 50% of the nation's top domestic routes. The business envisions the redefining of the city-airport relationship, building shared facilities that cater to the ever-evolving global travel, life and work requirements.





Adani Natural Resources (ANR)

Adani Natural Resources business comprises of Mining Services, Integrated Resource Management (IRM) and Commercial Mining. The Commercial Mining operation in India is yet to start. In the IRM segment, end-to-end procurement and logistics services are offered, including sourcing resources, sea-borne logistics, holding facilities at discharge ports, and delivering coal, commodities, power and other products to customers through door-to-door delivery. The Mining Services business was started as the link in ensuring energy security for India. It has emerged as a responsible player in India's coal mining industry, operating as one of the largest developers and operators of coal mines. The integrated business model involves developing mines and overseeing the entire upstream and downstream activities related to coal supply. Over the years, the company has evolved from a coal trading and importing Company to a comprehensive IRM enterprise. The company has a global presence, with operations in Indonesia and Australia. It also bridges the supply-demand gap through ethical mining practices and imports from various countries.



Roads, Metro, Rail and Water (RMRW)

In 2018, the company entered the Roads and Water sectors. The company aimed to contribute to the growth of national highways, expressways, tunnels, and water infrastructure in the country. The company's portfolio now consists of 14 road projects, covering over 5,000 lane km across 10 Indian states. In the water sector, the company has taken an initial step by securing the prestigious wastewater treatment, recycle, and reuse project at Prayagraj and Bhagalpur under 'Namami Gange' project. Additionally, the company will explore opportunities in the desalination water space.

Adani New Energy Ecosystem

Adani New Energy Ecosystem aims to provide an end-to-end energy supply chain solution and develop a large integrated platform that produces affordable green hydrogen. The ecosystem will undertake green hydrogen projects and manufacture key components for renewable energy generation such as solar cells cum modules, wind turbines, electrolyzers, batteries, fuel cells, and associated upstream and downstream products.



AdaniConneX

To meet the growing demand for high-quality and reliable IT infrastructure, the company has formed a joint venture with EdgeConneX called 'AdaniConneX'. This strategic partnership combines our infrastructure expertise with EdgeConneX's data center acumen, enable to develop a portfolio of data centers throughout the country. These data centers, ranging from hyperscale to hyperlocal, will predominantly rely on renewable energy sources.

The first data center in Chennai is now operational and the Noida and Hyderabad centers will be operational soon. With an expertise in resource management, renewable power, and infrastructure projects, the joint venture aims to provide sustainable data center solutions. The goal is to establish a 1 GW capacity data center by 2030.



Adani Defence and Aerospace

The portfolio of the business unit has strategically developed competencies across diverse domains, encompassing small arms, unmanned aerial systems, radars, defence electronics & avionics, and tactical communication systems. The company's objective is to strengthen India's self-reliance and enhance national security through cutting-edge defence manufacturing.

To promote self-reliance, an ecosystem of Indian suppliers has been cultivated to foster the development of unmanned aerial systems within the nation. A commitment is to invest in critical technologies and platforms, establishing manufacturing competence at the sub-system and component levels. The workforce is guided by an export-oriented perspective, following globally recognized processes, workflows, quality management, and ensuring timely zero-defect delivery.



5 Governance



The Board comprises of An Executive Chairman, a Managing Director, Director, Executive Director and five Independent and Non-Executive Directors.

AEL's business is grounded in strong governance, a bedrock for sustainable operations. The leadership is dedicated to enhancing governance for greater value creation and lasting business operations. The robust sustainability governance system facilitates in implementing sustainability actions across the business, manage goal-setting, reporting processes, strengthen relations with external and internal stakeholders and ensure overall accountability.

The Board, supported by Corporate Responsibility Committee (CRC), Corporate Social Responsibility Committee (CSRC), Stakeholder Relationship Committee (SRC) and Risk Management Committee (RMC), monitors performance, adheres to the standards and risks in the organisation. The Corporate Responsibility Committee (CRC) oversees the implementation of the ESG Strategy and policies, including the management of transition risks and delivery against ESG targets. Management of ESG priorities is embedded across business areas, corporate and business unit level, flowing from the Board. At the corporate level, CRC reviews performance against environmental and social metrics and develops a strategy while the ESG team develop the Company's ESG agenda and support business functions in driving implementation. An ESG committee with representations from sustainability heads of

individual AEL businesses has recently been formed to further strengthen the ESG governance and climate-related issues.

Role of Board of Directors

The Board of Directors strongly influences the effectiveness of the company's strategic vision. The directors serve as the strategic "pilots" of the growth journey, guiding the company's progress and making necessary adjustments. AEL places great importance on the composition of the company's Board, comprising accomplished individuals. 56% of the Board consists of Independent Directors, who possess the autonomy to express their views and influence strategic decisions.

The Board comprises of An Executive Chairman, a Managing Director, Director, Executive Director and five Independent and Non-Executive Directors. It holds the highest level of responsibility for setting the strategic direction, managing risks, and creating value for all stakeholders. Additionally, the Board is crucial in promoting good governance throughout the businesses by formulating policies that undergo periodic reviews.

Oversight

The Company's Board plays a pivotal role in driving and overseeing climate strategy, with a robust governance structure

in place. The robust governance structures facilitate proactive management and vigilant oversight of climate-related issues, ESG performance, and CSR activities, underscoring AEL's dedication to implementing impactful decarbonisation strategies and fostering sustainable practices as a testament to the companies' commitment to responsible corporate stewardship.

The Corporate Responsibility Committee (CRC) assist the Board of Directors in fulfilling its responsibilities to oversee the Company's significant strategies, policies, and programmes on social and public responsibility matters and for sustainability aspects with respect to the Company.

The Risk Management Committee oversees risk governance, including ESG risks and regulatory and policy risks related to climate change. It reviews the risk management framework, policies, practices, and procedures and obtains reasonable assurance from management regarding the identification, mitigation, and management of current and emerging risks.

A resolute Corporate Social Responsibility Committee ensures compliance with the Companies Act 2013 and the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulation, 2015.

Figure 2: Climate-change Governance Structure



Board Committees

Corporate Responsibility Committee (CRC)²

The Corporate Responsibility Committee (CRC) is a voluntary committee constituted by, and accountable to the Board of Directors of AEL. The role of the committee is to assist the Board of directors in fulfilling its responsibilities to oversee AEL's significant strategies, policies and programs related to social

and public responsibility matters and for sustainability and climate change aspects of aligning with the company. The committee also oversees the development of policies and supporting measures, aligning them with the UN SDGs 2030, and various national and global ESG reporting and rating disclosures.

Risk Management Committee (RMC)³

The Risk Management Committee

provides overarching governance and guidance for AEL's Climate related risk management and mitigation program and also oversee regulatory and policy risks related to climate change, including review of state and Central policies. The Committee (RMC) is responsible for framing, implementing, and monitoring the Company's risk management and mitigation program. RMC monitor the implementation of the risk management policy, including

evaluating risk management systems' adequacy. The committee obtains reasonable assurance from management that all known and emerging risks have been identified, mitigated and managed.

Reputational Risk Committee (RRC)⁴

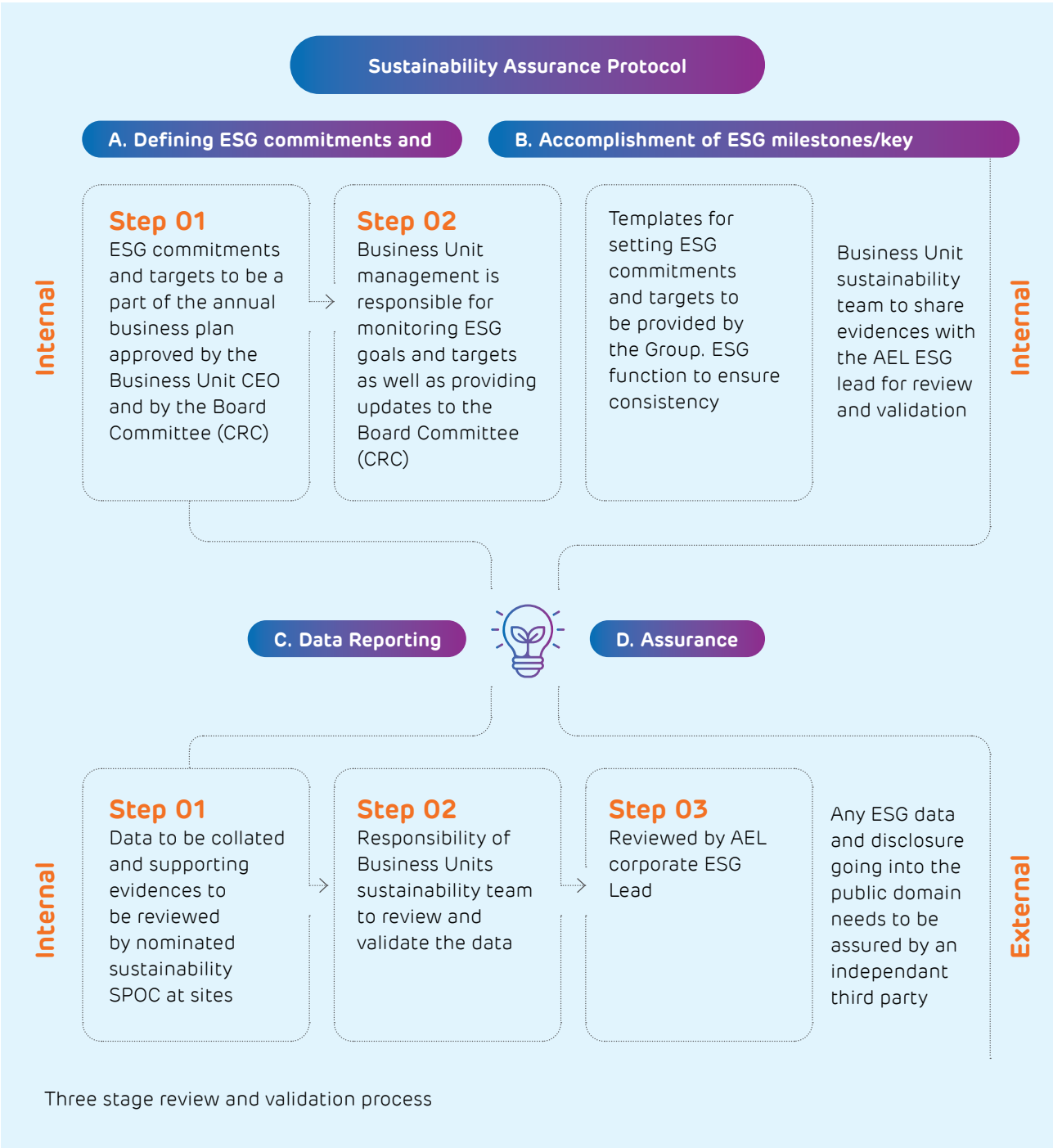
Established as a subcommittee of the Risk Management

Committee, the Reputational Risk Committee (RRC) is responsible to provide ongoing oversight of the reputational risk posed by global business scenario, functions, geographies, material legal changes, climate change or high-risk relationships / programs. The committee also recommends standard of social and ethical practices. RRC also reviews the

non-compliance which may cause loss to reputation of the company.

Assurance Protocol

AEL recognizes the paramount importance of data assurance before information to the public. The company implements a comprehensive approach that encompasses both internal and external validation processes.



² Corporate Responsibility Committee

³ Risk Management Committee

⁴ Reputational Risk Committee

At an internal level, a robust procedure is in place to scrutinize sustainability-related data at individual site levels. This method entails the appointment of dedicated Sustainability Single Points of Contact (SPOCs) stationed at each site. These SPOCs diligently analyze the corroborating evidence and details associated with the data. To conclude the internal data assurance process, the corporate Environmental, Social, and Governance (ESG) team undertakes a final review. Their goal is to guarantee the accuracy and unimpeachable nature of the sustainability data.

Furthermore, the company insists on independent third-party assurance for any data that it releases. This external validation is mandatory and serves as a vital checkpoint for any information disseminated by the company. By adhering to this rigorous external validation process, also ensures that the data shared with the public maintains its credibility and reliability.

Role of Management

The key management positions report to the Board of Directors on Climate-related issues. The Sustainability team reports the progress on climate-related commitments to the Corporate Responsibility Committee. CEOs of the respective businesses play a key role in the execution of internal controls for assessing and managing climate-related risks and opportunities. The CEOs oversee the development of strategies for transitioning to the low-carbon economy. Moreover, the CEOs also delegate responsibilities to the sustainability heads to ensure effective management and

integration of sustainability efforts into the overall business strategy.

Chief Financial Officer (CFO) along with the Corporate Responsibility Committee (CRC), Managing Director (MD), Chief Finance Officer (CFO), and Head of Group Climate Change and Sustainability, provide inputs on climate change and ESG-related risks.

The Chief Sustainability Officer (Sustainability Head) of respective businesses are responsible for strategizing sustainability and climate-related issues. The CSOs identify and implement the initiatives on climate-related issues. In addition, CSOs engage with stakeholders and raise awareness & capability building on sustainability.

The management, including the Chief Executive Officers (CEOs) and the Corporate Responsibility Committee (CRC), is informed of climate-related issues through regular reporting and discussions by the sustainability head (CSO) for each operational business working with the CEO and coordinating with the AEL sustainability head. Their responsibility is to execute climate-related commitments and programs.

The CEOs of each business vertical or constituent company within AEL report periodically (quarterly or more often) the Board of Directors on business growth, profitability, challenges, and opportunities, which includes updates on climate-related issues. Climate change is also a specific agenda item in the quarterly board meetings, where the respective business CEOs are required to present the progress made by their respective businesses on climate change targets and goals.

The management monitors climate-related issues through several mechanisms. In coordination with the board, the CEOs oversee the implementation of internal controls designed to identify and manage risks that are material to the company, including climate-related risks and opportunities. At the business level, AEL establishes climate change targets and regularly assesses progress on a regular basis. It evaluates environmental, social, and governance (ESG) and climate change-related performance through internal and external assessments.

The management's monitoring of climate-related issues involves regular reporting, discussions, target setting, progress review, and tracking of relevant data and sustainability key performance indicators (KPIs). Incentives for managing climate-related issues at AEL are based on the internal performance of each business unit's sustainability team. Energy efficiency and GHG emission reduction targets directly impact the incentives provided. AEL sustainability team collaborates with BU sustainability heads and stakeholders to drive initiatives. The performance of sustainability teams is linked to AEL's ESG and climate change ratings and defined performance indices. Incentives are also given to the Chief Sustainability Officer and Environment/Sustainability Manager, based on emissions reduction targets and company performance against a climate-related sustainability index. These incentives encourage achieving key performance indicators (KPI), such as emissions reduction projects and targets.

6 Strategy

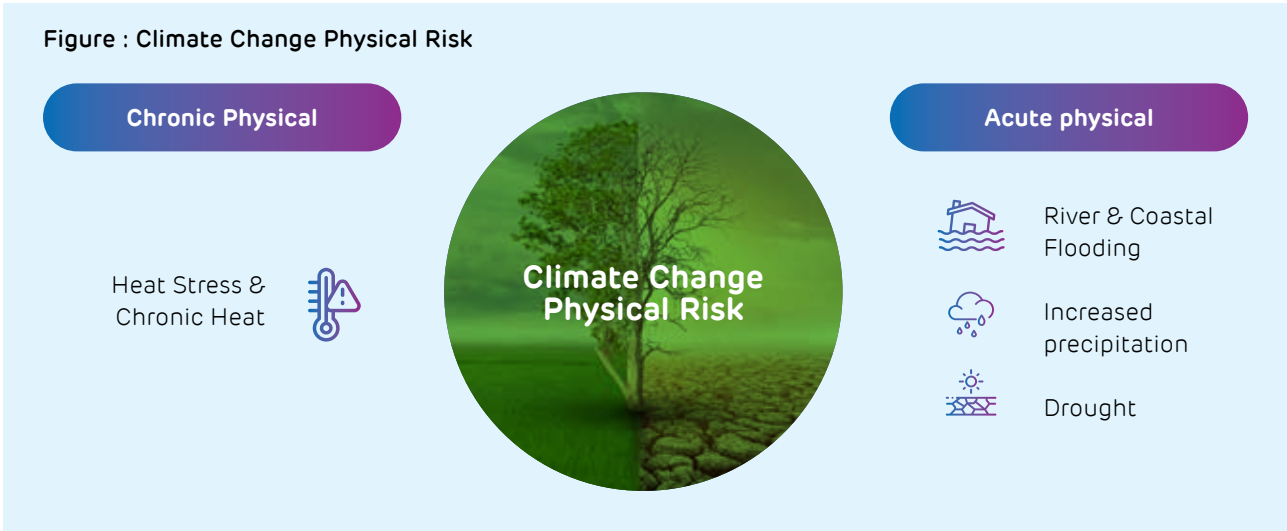


The company is committed to addressing climate-related risks and embracing opportunities for sustainable growth. This section of the Task Force on Climate-related Financial Disclosures (TCFD) report outlines the strategy concerning climate risks and opportunities and the impacts on business operations, strategy, and financial planning. Additionally, AEL assesses the resilience of the strategy in alignment with 2°C or lower scenarios.

Time Horizon	From (years)	To (years)	Description
Short-term	0	5	AEL considers short-term horizons of 0-5 years based on the severity and impact of physical and regulatory risks. The opportunities identified that can be realized within 0-5 years are categorized as short-term opportunities.
Medium-term	5	10	Risks and opportunities that may impact the company's operation in the near future (5-10 years) are categorized as medium-term.
Long-term	10	20	A long-term horizon is defined from 10 to 20 years. Climate-related issues relevant to the company after 10 years are defined as long-term risks or opportunities.

Climate-related risks and opportunities

Several climate-related risks are relevant to the Business Units of Adani Enterprises Limited (AEL). These risks fall into two main categories: physical and transition risks.



Physical Risks: Adapting to changing environmental conditions is crucial for the company's business. The company acknowledges the following physical risks:

1. Chronic Heat: Rising temperatures can negatively impact operations, particularly in areas with high ambient temperatures. This can lead to reduced productivity, increased cooling costs, and potential

employee health and safety concerns.

2. Drought: Water scarcity and drought conditions can affect operations, such as water availability for mining activities. This risk demands innovative water management strategies to ensure continuity and minimize disruptions.

3. Flooding: Susceptibility to flooding is a key business

risk. Flooding threatens the infrastructure and supply chain for products and services.

4. Increased precipitation: Excessive rainfall can lead to challenges, including flooding, landslides, and logistical disruptions. The company must adapt the infrastructure and operations to effectively manage these risks and mitigate any adverse impacts.



Transition Risks: The company recognizes the importance of transitioning to a low-carbon economy.

AEL has identified the following transition risks and opportunities:

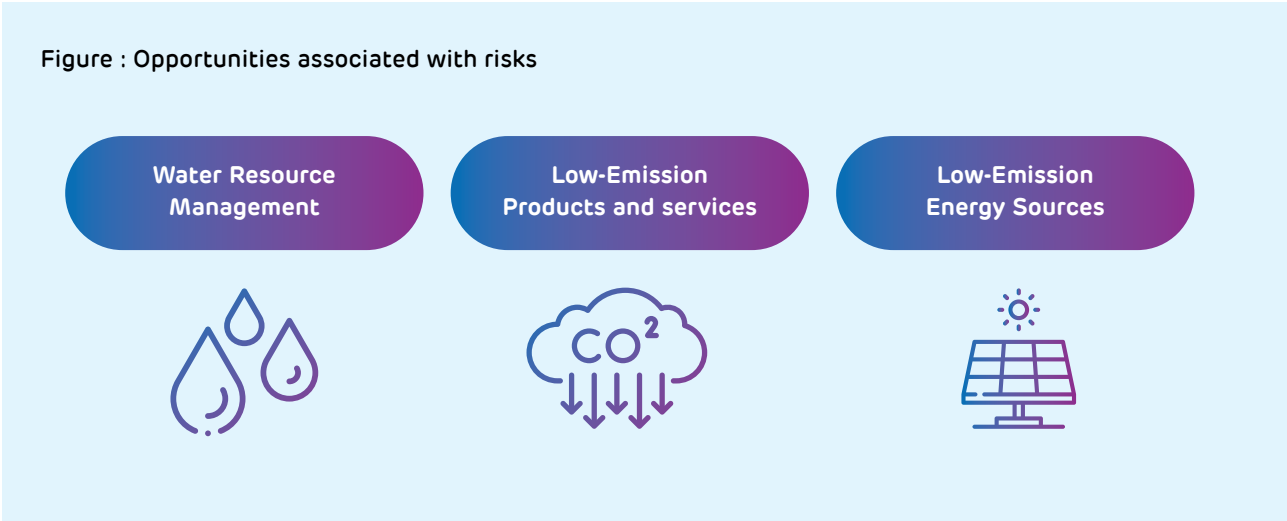
1. Market Risks: Increasing prices of input materials, such as energy, minerals, and commodities, can significantly affect the cost structure. Adapting to these changing

market dynamics and adopting resource-efficient practices are vital for maintaining competitiveness.

2. Current & Emerging Regulations: The company anticipates increased emissions reporting obligations and other regulatory changes. AEL aims to proactively adapt its operations to meet these evolving requirements while minimizing associated costs and risks.

3. Reputational Risks: The company's commitment to achieving publicly stated targets, such as emission reductions and sustainable practices, is essential for maintaining the trust and support of stakeholders. Failure to meet these targets could harm the reputation and impact the investors' confidence.

Opportunities associated with the risks





The transition to clean technology has created opportunities for businesses to produce low-emission goods and services.

Water Resource Management

Context: India has one of the highest populations in the world and is considered one of the most water stressed countries, with an average annual per capita water availability of 1,486 cubic meters in 2021, projected to decrease to 1,367 cubic meters in 2031. India consumes more groundwater than any other country in the world, with an estimated consumption of 250 billion cubic meters per year, surpassing the combined consumption of China and the US. India is facing a freshwater crisis due to having just 4% of the world's fresh water for a population that represents 16% of the world's population. More than 6% of the population lacks access to safe water, and 15% practice open defecation, leading to waterborne illnesses, stunting, and death. As a result, the water crisis in India is estimated to affect 6% of the country's GDP. India is expected to face a severe water scarcity in the future due to increasing population, industrialization, and waste generation. By 2030, around 40% of the population could have no access to drinking water, and there could be an imbalance between water demand and availability. This could result in a rise in the water requirement across all sectors, with an increase in sewage and industrial waste generation. (Source: Statista, Mc Kinsey, water.org, ide-india.org)

Opportunity: Water resource conservation & management is

a top priority for all BUs, and the company is instigating measures to encourage water-saving practices. The company's Water Stewardship Policy exhibits the commitment to reducing water consumption and implementing effectual water recycling techniques. The company achieved 28% reduction in Water intensity (Per Rupee of Turnover).

Creation of Low-Emission Products and Services

Context: The creation of low-emission products and services presents a significant opportunity for AEL. By developing innovative solutions that have reduced carbon footprints, AEL can contribute to both climate mitigation efforts and sustainable business growth. Opportunity: The transition to clean technology has created opportunities for businesses to produce low-emission goods and services.

• **Solar Manufacturing:** Adani Solar has played a pioneering role in solar manufacturing in India, expanding the largest integrated solar photo-voltaic plant from 1.2 GW capacity (cell and module) in 2016 to 4 GW module capacity and 2 GW cell capacity by 2023. The company possesses the largest market share in rooftop and KUSUM segment (Kisan Urja Suraksha Evam Utthan Mahabhiyan); it is the only domestic player Solar benefits adjudged among

the top three winners of the 13th Aegis Graham Bell Award 2023, supported by MeitY and NITI Aayog under Innovation in Manufacturing Category Received 7 (6 Excellence and 1 Distinguish) Awards at National Convention of Quality Concepts – 2022 in Quality circle, 5S (Sort, Set in Order, Shine, Standardise and Sustain) and Six Sigma category, organised by Quality Circle Forum of India Received Green Urja Award 2023 in the renewable energy manufacturer – Solar category at the 11th Green Energy Summit, organised by the Indian Chamber of Commerce Won Golden Peacock Award 2022 on Eco-Innovation Received Top Performer Award from PVEL, the only Indian company to win for six consecutive years 2018 to 2023 with a pilot line of ingot-wafer and under-construction 2 GW mass production line of TOPCon technology. Adani Solar also embarked on backward integration and is establishing a groundbreaking 2 GW ingot-wafer manufacturing plant, the first of its kind in the country. The company's manufacturing business thrives on continuous technology advancements, maintaining a sharp focus on cost efficiency and quality. Leveraging the advantages of geographical co-location, such as proximity to ports and excellent connectivity through air, rail and road networks, it strengthened the infrastructure supporting the solar ecosystem. The company will explore new technologies

and strengthen supply chains to reduce its dependence on other countries. It will seek vertical integration opportunities to reinforce its competitive advantage. The proposed manufacturing facility of ingot-wafer is a strategic move to strengthen the supply chain for competitive cell manufacturing.

• **Data Center:** The Adani Group is the largest private sector infrastructure group in India with an experience of 25 years in building robust infrastructure and delivering world-class assets. Leveraging Adani's proven infrastructure experience and EdgeConneX's data center record, the company intends to play a pivotal role in the digital revolution to empower the country to a USD 27 trillion economy two decades. The Company will offer a range of data center solutions by leveraging the expertise of both companies. AdaniConneX achieved a healthy order book and pipeline in the hyperscale

and enterprise segments in one-and-a half years of existence. The Company has set Operational Net Zero targets (Scope 1 & Scope 2) by 2030: A 4.5 MW Solar-Wind Hybrid power for Chennai Data Center has also been planned. Further, a PPA has been signed with AGEL to source 50% RE Power in this financial year. Finally, the company is also exploring the option to decarbonise the Data Center business through procurement of maximum renewable power in upcoming Data Centers at Noida and Hyderabad which are under construction.

• **Lower Emission Energy Sources** The company is dedicated to reducing operational and electricity-based greenhouse gas (GHG) emissions. To accomplish this, the company is substituting the grid electricity with renewable sources wherever possible, thus reducing Scope 2 emissions. The company's data centers are strategically established to enable a smooth

transition to clean energy, positioning the company as one of India's leading green data centers. In addition, the company is actively integrating advanced and interactive technology within its mining operations. Green hydrogen is one of the key decarbonisation avenues that the company is actively pursuing. By constructing a 30 GW green hydrogen facility at Khavda to ensure a fully built capacity for generating green hydrogen of 2.54 MMTPA of green hydrogen, the company aims to harvest the power of green hydrogen to replace conventional fossil fuel-based energy sources with a clean, sustainable alternative. AEL's execution capability and scale allows it to adopt globally leading best practice in sustainable mining and work towards decarbonisation by sourcing renewable electricity, electrification of operations and adopting green hydrogen in heavy mining machinery where electrification is not possible.



Impacts on Business, Strategy, and Financial Planning

The identified climate-related risks and opportunities significantly impact the business, strategy, and financial planning. The company recognises that integrating climate considerations into decision-making is fundamental to long-term resilience and value creation. The company is committed to mitigating risks, realising opportunities, and integrating the impact of climate risks into financial planning.

Figure : Impacts on Business, Strategy, and Financial Planning



The risks detailed in this document may potentially have a substantive impact on the finances and operations of the company's business units. The following table depicts the time horizons and financial planning input as per the definition used in this report and the 2023 CDP Climate Change. For assessing climate risks and opportunities, the company considers an impact equal to 1% of EBITDA as a substantive financial impact.

Table 2: Financial Planning with respect to climate-related issues

Time-Period	Inputs to Financial Planning
Short-Term Planning (0-5 years)	<p>Operational Risks</p> <ul style="list-style-type: none">Climate change events like extreme weather and natural disasters directly disrupt the company's operations & supply chain management which can lead to financial losses, increased costs, or temporary shutdowns.Financial planning should account for potential damage and associated risk mitigation measures. <p>Regulatory Changes</p> <ul style="list-style-type: none">The Government bodies are increasingly outlining policies and regulations addressing climate-change issues.Financial planning should consider the potential costs and benefits associated with compliance or non-compliance with changes associated with climate-related policies & regulations. <p>Insurance Costs</p> <ul style="list-style-type: none">Climate-related risks have the potential to increase the premium charges, particularly for industries located in high-risk areas.Financial planning should constitute potential increases in insurance costs to ensure adequate coverage and budget allocation. <p>Reputation and Consumer Preferences</p> <ul style="list-style-type: none">Climate-related issues are significant factors in the discission-making process for the consumer. If a company's environmental practices or products are not aligned with consumer expectations, the repercussions can negatively impact the company's reputation.Financial planning should be done keeping in mind the potential impact on sales and market share.
Medium-Term (5-10 years)	<p>Physical Risks</p> <ul style="list-style-type: none">Climate change leads to long-term shifts in weather patterns, sea-level rise, chronic heat and other physical risks.Financial planning should integrate adaptation and resilience measures into capital expenditure planning weighing the potential impact on physical assets. <p>Transition Risks</p> <ul style="list-style-type: none">With the transition into a low-carbon economy, companies may face risks associated with changing market dynamics, policy shifts, or technological disruptions.Financial planning should account for potential consumer preferences and asset valuation shifts. <p>Energy Transition Opportunities</p> <ul style="list-style-type: none">Investments in renewable energy, energy efficiency, or other sustainable technologies may generate long-term cost savings or revenue.Financial planning should consider the opportunities linked with the transition and the initial investments that are needed to put in.

Time-Period	Inputs to Financial Planning
Long-Term (10-20 years)	Physical and Transition Risks <ul style="list-style-type: none">Both physical and transition risks may manifest in the form of changing business models, shifts in market demand, or the need for significant capital investments to adapt or mitigate climate-related impacts.Long-term financial planning needs to consider the potential climate-related impacts of both risks.
	Investor Expectation <ul style="list-style-type: none">Investors and shareholders are increasingly considering climate-related risks and opportunities when making investment decisions.Financial planning should align with investor expectations, incorporating sustainability targets and disclosing relevant climate-related information in financial reports and disclosures.
	Scenario Analysis <ul style="list-style-type: none">Scenario analysis can help inform strategic decisions, risk management, and capital allocation.Long-term financial planning should include this to assess the potential financial implications of different climate-related scenarios, such as different temperature pathways or policy trajectories.

Climate-related issues play a significant role in the financial planning process, given the growing recognition of climate change as a significant risk to the business units. Here are some ways in which climate-related issues serve as inputs in the company financial planning process:

1. Risk Assessment: The company considers climate-related risks specific to its operations and industry. These risks may include extreme weather events impacting infrastructure, physical damage to facilities, disruptions in the supply chain due to climate-related factors, changes in regulations affecting the operations, and potential litigation related to environmental impacts. By understanding and assessing these risks, the company develops strategies to mitigate their potential impact on investments and financial goals.

2. Long-Term Financial Projections: Climate change has long-term implications for the business, including economic

growth, industry sectors, and asset valuations. The company incorporates climate-related scenarios and trends into their long-term financial projections. By considering different climate scenarios, the company makes more informed decisions and adapt their strategies to changing circumstances.

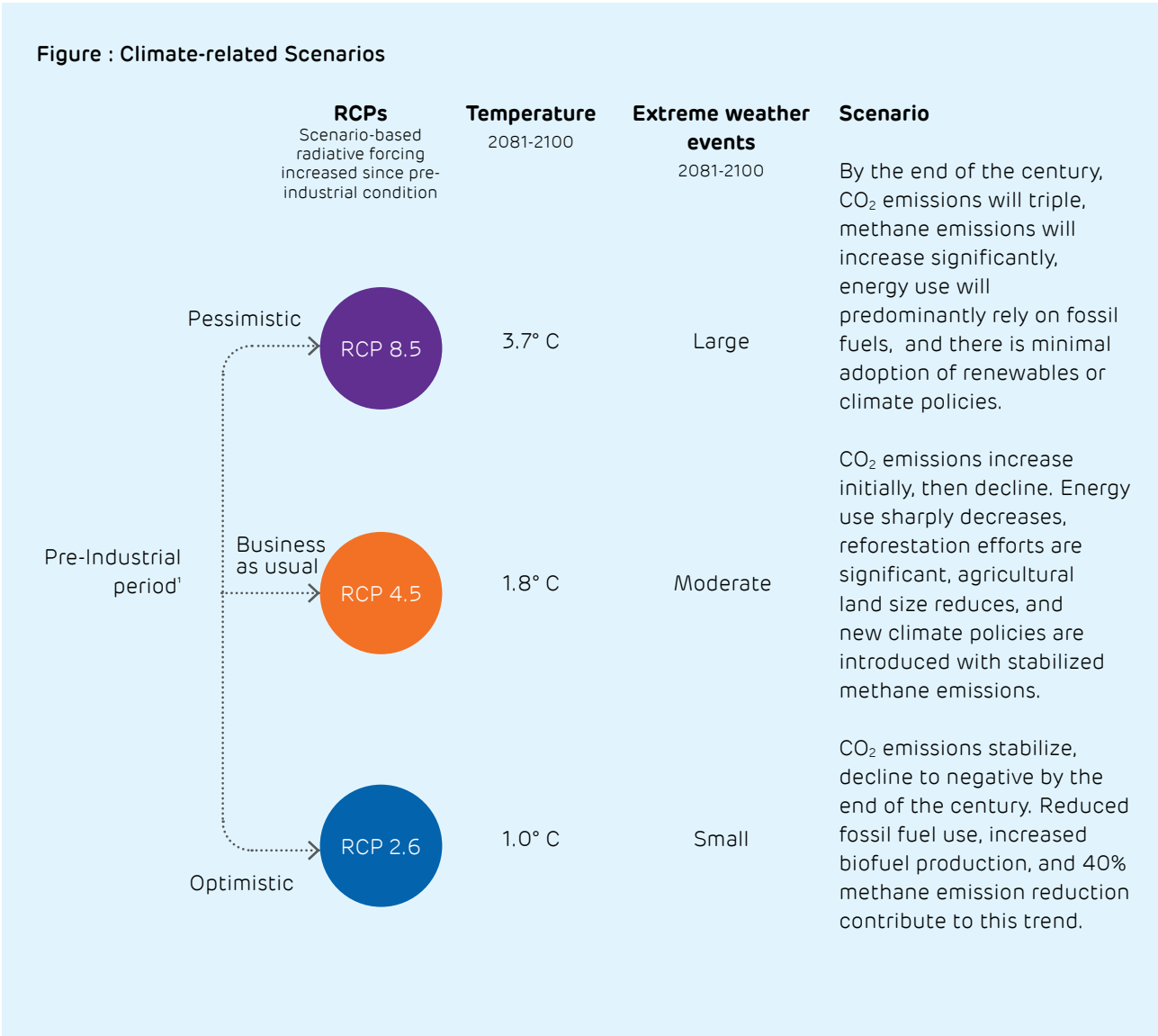
The company incorporates climate-related considerations throughout the time horizons, including short-term, medium-term, and long-term perspectives. Short-term impact may include sudden weather events affecting specific projects or policy changes impacting the operations. Long-term impacts involve broader trends such as changing consumer preferences, evolving regulations, or shifts in the energy sector that may impact the business strategy.

By integrating climate-related issues into its financial planning process, the company manages risks, identifies sustainable investment opportunities, and makes informed decisions to navigate the challenges and

capitalize on the opportunities presented by climate change.

Assessment of Climate-related Scenarios

Complex dynamic systems, including population development, socioeconomic progress, and technological advancement affect future greenhouse gas (GHG) emissions. Predicting their future trajectory is highly uncertain. Scenarios are valuable tools for analysing how driving factors impact emission outcomes and assessing associated uncertainties. They aid in climate change analysis, such as climate modelling, effects assessment, adaptation, and mitigation. However, the likelihood of any specific emission path occurring as depicted in scenarios is highly unlikely. During the 2015 Paris Conference, nations strengthened the United Nations Framework Convention on Climate Change by agreeing to limit the global average temperature increase to well below 2°C above pre-industrial levels and strive for a 1.5°C increase. In the strongest



¹ During the pre-industrial period, the radiative forcing was estimated to be approximately 1-2 W/m².
² Radiative forcing is calculated in watts per square meter, which represents the size of the energy imbalance in the atmosphere.

mitigation scenario (RCP 2.6) and a medium scenario (RCP 4.5), the probability of surpassing the thresholds and the timing of exceedance greatly depend on the pre-industrial baseline. For example, under RCP 2.6, the probability of exceeding 1.5°C by the end of the century ranges from 61% to 88% based on the baseline definition. In contrast, in the no-mitigation scenario (RCP 8.5), both thresholds will likely be surpassed by the mid-century, with the pre-industrial baseline definition being less significant.

This report presents a climate scenario analysis conducted for the company to assess the physical risks associated with climate change. The analysis focused on four key risks: chronic heat, combined inundation (flooding), exceptional drought, and precipitation.

The analysis utilized the open-source tools to assess insights into the potential impacts on AELs business units.

RCP 4.5
RCP 4.5 is a greenhouse gas

emissions scenario which assumes that global emissions peak around 2040 and then decline. This scenario is consistent with limiting global warming to 2 degrees Celsius above pre-industrial levels. Under RCP 4.5, the world is likely to see a gradual increase in average temperatures, with some areas experiencing more extreme weather events. Sea levels are also likely to rise but at a slower rate than under other emissions scenarios.

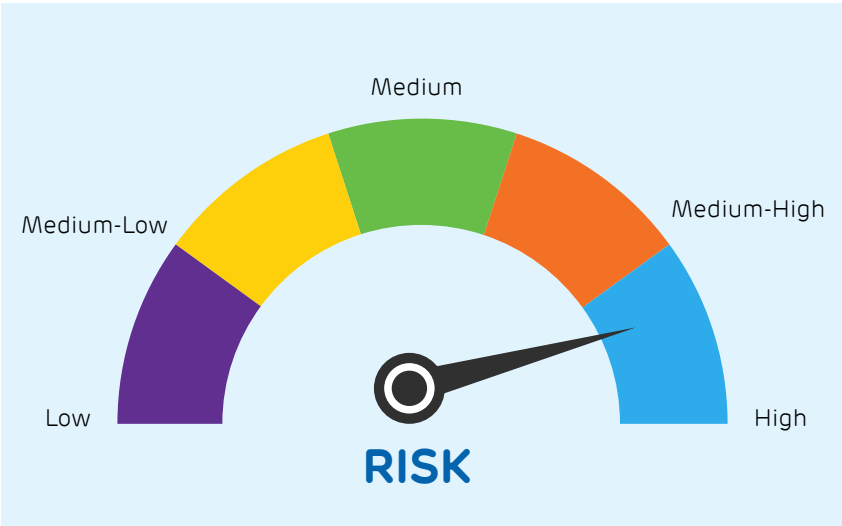
- Global average temperatures are likely to rise by 2 degrees Celsius by the end of the 21st century.

- Sea levels are likely to rise by 0.2 to 0.6 meters by the end of the 21st century.
- Extreme weather events, such as heat waves, droughts, floods, and wildfires, are likely to become more frequent and intense.

RCP 8.5
RCP 8.5 is a greenhouse gas emissions scenario that assumes that global emissions continue to rise throughout the 21st century. This scenario is consistent with global warming of 4 degrees Celsius or more above pre-industrial levels. Under RCP 8.5, the world is likely to see a dramatic increase in average temperatures, with more extreme weather events becoming the norm. Sea levels are also likely to rise rapidly, inundating coastal areas and displacing millions of people.

- Global average temperatures are likely to rise by 4 degrees Celsius by the end of the 21st century.
- Sea levels are likely to rise by 1.2 to 2.1 meters by the end of the 21st century.
- Extreme weather events are likely to become much more frequent and intense.

The company utilizes a range of climate change scenarios, such as RCP 4.5 and RCP 8.5. These scenarios are employed to assess the physical risks and



identify corresponding financial and operational risks as well as opportunities that have an impact on the company's performance in the current, short (till 2030) and long term (till 2050). The overarching objective is to ensure that the assets and operations are adequately prepared and capable of both mitigating climate-related risks and capitalizing on potential opportunities.

The impacts of climate change are already being felt around the world. These impacts are likely to become more severe in the future unless action is taken to reduce greenhouse gas emissions and adapt to the impacts that are already underway.

Physical Risks-Scaling Criteria
In assessing climate change risks

at the global scale, the company considers the lowest and highest values for each physical risk type, including Combined Flooding Intensity, Exceptional Drought Intensity, Precipitation Intensity and Chronic Heat Intensity. The company categorizes these values by dividing the range into five equal intervals: Low, Medium-Low, Medium, Medium-High, and High. This classification approach allows us to assign each hazard level a corresponding weightage category. The updated scales appropriately reflect the severity of climate change risks following an assessment of global-level minimum and maximum values for each risk, allowing for a more precise analysis and informed decision-making process. The following table presents a visual depiction of the customised risk intensity index. The tool provides an assessment

Table 3: Risk intensity range obtained through an assessment of global risk intensities

SCALE	Exceptional Drought Intensity (months/year)	Chronic heat Intensity (days/year)	Precipitation Intensity (mm)	Combined Flooding Intensity (Fraction of inundated land within 30 km of the site)
High	3.61-4.5	277-345	745-930	0.81-1
Medium-High	2.71-3.6	208-276	559-744	0.61-0.8
Medium	1.81-2.7	139-207	373-558	0.41-0.6
Medium-Low	0.91-1.8	70-138	187-372	0.21-0.4
Low	0 - 0.9	0-69	0-186	0-0.2

for RCP 2.6 and RCP 8.5. Furthermore, the company evaluates the RCP 4.5 scenario by assessing the risk intensity concerning either RCP 2.6 or RCP 8.5 scenarios. This process helps us understand how the RCP 4.5 scenario aligns with the lower and higher extremes of the physical risk levels.

Physical Risks for AEL BUs

The following tables depict the results of the physical risk assessment conducted using open-source tools. The results of four risk categories are presented in this report:

- Chronic Heat Intensity (days above 35 °C Wet Bulb Temperature/year)
- Exceptional Drought Intensity

- (months during which SPEI below -2/year)
 - Precipitation Intensity (mm)
 - Combined Flooding Intensity (Fraction of inundated land within 30 km of the site)
- The risk assessment results and the corresponding impacts on the BUs are described in the next section.

Airports: Assessing physical risks under RCP4.5 and RCP 8.5 scenarios

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
Airports						
AHMEDABAD INTERNATIONAL	Short	●	Chronic Heat	●	Chronic Heat	• Chronic heat is prevalent for the long-term time horizon for RCP 4.5 and RCP 8.5. Chronic heat has a significant impact on the following:
		●	Precipitation	●	Precipitation	
	Medium	●	Chronic Heat	●	Chronic Heat	Infrastructure: Prolonged exposure to high heat may lead to infrastructure deterioration, affecting various components, including electrical systems.
		●	Precipitation	●	Precipitation	
	Long	●	Chronic Heat	●	Chronic Heat	O&M: The operational and maintenance cost associated with cooling would also increase due to prolonged periods of increased temperature. Employees' Health and Safety Concerns: Increased frequency of extreme heat events may lead to heat stress among employees, affecting workforce productivity and safety.
		●	Precipitation	●	Precipitation	
						• Precipitation is more prevalent in this location for all the studied time horizons and RCP (4.5 and 8.5) and lies in the medium category. Precipitation has a significant impact on the following: Infrastructure: Ageing infrastructure may experience higher stress due to increased rainfall, necessitating regular maintenance and upgrades. Business Operations: Runways and taxiways could be susceptible to surface water accumulation, affecting flight operations and causing potential delays.

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
MUMBAI INTERNATIONAL	Short	●	Flooding	●	Flooding	<ul style="list-style-type: none">Flooding and Precipitation are prevalent in this location for all the studied time horizons and RCP (4.5 and 8.5) and lie in the medium category. Flooding has a significant impact on the following: Infrastructure: Flooding events pose a significant threat to airport infrastructure. Critical assets such as runways, taxiways, and airport facilities are vulnerable to inundation during intense rainfall or storm surges. Business Operations: Flooding events may lead to the temporary closure of runways and taxiways, impacting flight operations. Delays or cancellations of flights may result in revenue losses for the airport. Precipitation has a significant impact on the following: Infrastructure: Ageing infrastructure may experience higher stress due to increased rainfall, necessitating regular maintenance and upgrades. Business Operations: Runways and taxiways could be susceptible to surface water accumulation, affecting flight operations and causing potential delays.
		●	Precipitation	●	Precipitation	
	Medium	●	Flooding	●	Flooding	
		●	Precipitation	●	Precipitation	
	Long	●	Flooding	●	Flooding	
		●	Precipitation	●	Precipitation	
		●	Precipitation	●	Precipitation	
		●	Precipitation	●	Precipitation	
NAVI MUMBAI INTERNATIONAL	Short	●	Flooding	●	Flooding	<ul style="list-style-type: none">Flooding lies in the medium-low category for this location's time horizons and scenarios. Despite the business unit facing a low-medium level of flooding risk, regular maintenance and upgrading of drainage systems are essential to ensure smooth operations. <ul style="list-style-type: none">Precipitation is more prevalent in this location for all the studied time horizons and RCP (4.5 and 8.5) and lies in the medium category.
		●	Precipitation	●	Precipitation	
	Medium	●	Flooding	●	Flooding	
		●	Precipitation	●	Precipitation	
	Long	●	Flooding	●	Flooding	
		●	Precipitation	●	Precipitation	
		●	Precipitation	●	Precipitation	
		●	Precipitation	●	Precipitation	

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
LUCKNOW INTERNATIONAL	Short	●	Chronic heat	●	Chronic heat	Precipitation has a significant impact on the following: Infrastructure: Prolonged exposure to varying precipitation patterns may accelerate infrastructure deterioration, requiring significant investments in rehabilitation and upgrades. Business Operations: The business unit may face escalating costs for drainage system improvements, flood defenses, and emergency response measures to cope with more unpredictable precipitation events. Persistent heavy rainfall and flooding could lead to prolonged airport closures and service interruptions, affecting revenue and passenger confidence.
			Flooding	●	Flooding	
			Precipitation	●	Precipitation	
			Chronic heat	●	Chronic heat	
			Flooding	●	Flooding	
			Precipitation	●	Precipitation	
			Chronic heat	●	Chronic heat	
			Flooding	●	Flooding	
			Precipitation	●	Precipitation	
	Medium	●	Chronic heat	●	Chronic heat	<ul style="list-style-type: none">Chronic Heat lies in the medium-low risk category for all the time horizons and scenarios. Chronic heat has a significant impact on the following: Infrastructure: Prolonged exposure to high heat may lead to infrastructure deterioration, affecting various components, including electrical systems. O&M: The operational and maintenance cost associated with cooling would also increase due to prolonged periods of increased temperature. Employees' Health and Safety Concerns: Increased frequency of extreme heat events may lead to heat stress among employees, affecting workforce productivity and safety. <ul style="list-style-type: none">Precipitation is prevalent for RCP 8.5 for the long-term time horizon, where the level of risk is medium.
			Flooding	●	Flooding	
			Precipitation	●	Precipitation	
	Long	●	Chronic heat	●	Chronic heat	
			Flooding	●	Flooding	
			Precipitation	●	Precipitation	
		●	Precipitation	●	Precipitation	
			Precipitation	●	Precipitation	
			Precipitation	●	Precipitation	

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
MANGALORE INTERNATIONAL						<p>Precipitation has a significant impact on the following:</p> <p>Infrastructure: Ageing infrastructure may experience higher stress due to increased rainfall, necessitating regular maintenance and upgrades.</p> <p>Business Operations: Runways and taxiways could be susceptible to surface water accumulation, affecting flight operations and causing potential delays.</p> <ul style="list-style-type: none">Flooding lies in the medium-low risk category for all time horizons and scenarios. <p>Despite the business unit facing a low-medium level of flooding risk, regular maintenance and upgrading of drainage systems are essential to ensure smooth operations. However, it is important to note that such measures may lead to increased operational costs.</p>
	Short	●	Precipitation	●	Precipitation	<ul style="list-style-type: none">Precipitation is more prevalent in this location for all the studied time horizons and RCP (4.5 and 8.5) and lies in the medium category. <p>Precipitation has a significant impact on the following:</p> <p>Infrastructure: Ageing infrastructure may experience higher stress due to increased rainfall, necessitating regular maintenance and upgrades.</p> <p>Business Operations: Runways and taxiways could be susceptible to surface water accumulation, affecting flight operations and causing potential delays.</p>
	Medium	●	Precipitation	●	Precipitation	
	Long	●	Precipitation	●	Precipitation	

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
JAIPUR INTERNATIONAL	Short	●	Chronic Heat	●	Chronic Heat	<ul style="list-style-type: none">All the assessed risks – chronic heat, drought and precipitation lie in the low- medium risk category for all the estimated years and scenarios.
		●	Drought	●	Drought	
		●	Precipitation	●	Precipitation	
	Medium	●	Chronic Heat	●	Chronic Heat	<p>Chronic heat has a significant impact on the following:</p> <p>Infrastructure: Prolonged exposure to high heat may lead to infrastructure deterioration, affecting various components, including electrical systems.</p> <p>O&M: The operational and maintenance cost associated with cooling would also increase due to prolonged periods of increased temperature.</p> <p>Employees' Health and Safety Concerns: Increased frequency of extreme heat events may lead to heat stress among employees, affecting workforce productivity and safety.</p> <ul style="list-style-type: none">Precipitation is more prevalent in this location for all the studied time horizons and RCP (4.5 and 8.5) and lies in the medium category. <p>Precipitation has a significant impact on the following:</p> <p>Infrastructure: Ageing infrastructure may experience higher stress due to increased rainfall, necessitating regular maintenance and upgrades.</p> <p>Business Operations: Runways and taxiways could be susceptible to surface water accumulation, affecting flight operations and causing potential delays.</p> <p>Drought has a significant impact on the following:</p> <p>Increased Operation Cost: During exceptional droughts, the demand for water increases, and its availability decreases, leading to potential cost escalation in securing water resources. The airport may experience higher costs for obtaining water supplies and implementing water-saving measures to mitigate the impacts of water scarcity.</p>
		●	Drought	●	Drought	
		●	Precipitation	●	Precipitation	
	Long	●	Chronic Heat	●	Chronic Heat	
		●	Drought	●	Drought	
		●	Precipitation	●	Precipitation	

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
GUWAHATI INTERNATIONAL	Short	●	Flooding	●	Flooding	Despite the business unit facing a low-medium level of flooding risk, regular maintenance and upgrading of drainage systems are essential to ensure smooth operations. However, it is important to note that such measures may lead to increased operational costs.
		●	Precipitation	●	Precipitation	
	Medium	●	Flooding	●	Flooding	
		●	Precipitation	●	Precipitation	
	Long	●	Flooding	●	Flooding	• Precipitation is more prevalent in this location for all the studied time horizons and RCP (4.5 and 8.5) and lies in the medium category.
		●	Precipitation	●	Precipitation	
						Precipitation has a significant impact on the following: Infrastructure: Prolonged exposure to varying precipitation patterns may accelerate infrastructure deterioration, requiring significant investments in rehabilitation and upgrades. Flooding has a significant impact on the following: Business Operations: The business unit may face escalating costs for drainage system improvements, flood defenses, and emergency response measures to cope with more unpredictable precipitation events. Persistent heavy rainfall and flooding could lead to prolonged airport closures and service interruptions, affecting revenue and passenger confidence.

Table key/legend:

Time-horizon	2020	Short	Scale ● Medium ● Medium-Low ● Medium-High ● Low
	2030	Medium	
	2050	Long	

Solar: Assessing physical risks under RCP4.5 and RCP 8.5 scenarios

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
Solar						
ADANI SOLAR	Short	●	Precipitation	●	Precipitation	• Precipitation is more prevalent in this location for all the studied time horizons and RCP (4.5 and 8.5) and lies in the medium category. Precipitation has a significant impact on the following: Supply Chain Disruption: Severe precipitation events may cause disruptions in the supply chain, affecting the transportation of raw materials and finished products to and from the facility. O&M: Intense precipitation may lead to water ingress in the facility, causing damage to sensitive equipment and machinery. This may result in costly repairs or replacements, leading to downtime and reduced productivity. • Chronic heat is relevant for the long-term time horizon and RCP 8.5 scenario. Chronic heat has a significant impact on the following: Increased Cooling Demands: As the heat rises, the facility's cooling system demand may increase. This could lead to higher energy consumption and operational costs to maintain a suitable working environment for workers and equipment. Employees' Health and Safety Concerns: Working in a manufacturing environment with moderate heat levels may pose health risks to employees. Heat stress and related illnesses may become a concern. • This location lies in the low-medium category of flooding risk for all the assessed years and scenarios.
		●	Flooding	●	Flooding	
	Medium	●	Precipitation	●	Precipitation	
		●	Flooding	●	Flooding	
	Long	●	Precipitation	●	Chronic heat	
		●	Flooding	●	Precipitation	
				●	Flooding	

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
						<p>Flooding has a significant impact on the following:</p> <p>Infrastructure: Flooding events pose a significant threat to the solar manufacturing facility's infrastructure. Access roads and manufacturing units may be susceptible to inundation flooding. The exposure of critical assets to floodwaters may result in damage, disruptions to production, and expensive repair and recovery efforts.</p> <p>Production: Severe flooding may lead to disruptions in production activities at the facility. Floodwater ingress into production areas may necessitate temporary shutdowns, leading to production delays and financial losses.</p>

Table key/legend:

Time-horizon	2020	Short
	2030	Medium
	2050	Long

Scale

Medium

Medium-High

Medium-Low

Low

Mining: Assessing physical risks under RCP4.5 and RCP 8.5 scenarios

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
Mining						
PARSA EAST KENTE BASEN (PKEB)	Short	<div></div>	Precipitation			<ul style="list-style-type: none">Precipitation is more prevalent in this location for all the studied time horizons and RCP (4.5 and 8.5) and lies in the medium category. <p>Precipitation has a significant impact on the following:</p> <p>Infrastructure: Precipitation may increase the risk of landslides in mining areas, especially in regions with steep terrain and loose soil. Heavy rainfall may saturate the ground, leading to soil instability and an elevated risk of landslides. It may also increase wear and tear on mining infrastructure and disrupt operations.</p> <p>Employees' Health and Safety Concerns: Slippery surfaces and waterlogged areas may pose risks of accidents and injuries, demanding extra vigilance in ensuring a safe working environment.</p> <p>Supply Chain Management: There might be a disruption in the transportation routes, leading to delays in receiving critical supplies and shipping out products.</p> <ul style="list-style-type: none">Chronic heat is projected to have a medium-low effect with a long-term horizon at RCP 8.5. <p>Chronic heat has a significant impact on the following:</p> <p>Employees' Health and Safety Concerns: Heat-related illnesses and reduced productivity.</p> <p>Energy Consumption: High temperatures may increase energy demand for office cooling, leading to higher energy consumption.</p> <p>Water Resources: Chronic heat may exacerbate water scarcity and increase water demand for cooling and dust suppression, resulting in potential water shortages.</p>
	Medium	<div></div>	Precipitation	<div></div>	Precipitation	
	Long	<div></div>	Precipitation	<div></div>	Chronic heat	
				<div></div>	Precipitation	

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
GARE PELMA III (GP III)	Short	●	Chronic heat			• Chronic heat is predicted to be in the medium-low category at all the studied time horizons for both RCP 4.5 and RCP 8.5.
		●	Precipitation	●	Precipitation	
	Medium	●	Chronic heat	●	Chronic heat	Chronic heat has a significant impact on the following: Employees' Health and Safety Concerns: Heat-related illnesses among employees lead to reduced productivity and potential risks to their well-being. Energy Consumption: High temperatures may increase energy demand for office cooling, leading to higher energy consumption and potential cost implications. Water Resources: Chronic heat may exacerbate water scarcity and increase water demand for cooling and dust suppression, resulting in potential water shortages. • Precipitation is a medium at all the studied time horizons for RCP 4.5. However, it falls under the medium-low category for the short and medium time horizons, while it remains at the medium level for the long-time horizon. Precipitation has a significant impact on the following: Infrastructure: Infrastructure damage due to increased moisture and occasional heavy rainfall could lead to soil erosion, potential flooding, landslides, and wear and tear on roads, rail lines, and equipment, necessitating regular maintenance and repairs. Employees' Health and Safety Concerns: Slippery surfaces and waterlogged areas may pose risks of accidents and injuries, demanding extra vigilance in ensuring a safe working environment. Supply Chain Management: Supply chain routes may experience temporary closures or restricted access, and supplies may be delayed due to varying precipitation levels at different time horizons. Operations: Impact production schedules and overall efficiency.
		●	Precipitation	●	Precipitation	
	Long	●	Chronic heat	●	Chronic heat	
		●	Precipitation	●	Precipitation	

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
TALABIRA I & II	Short	●	Chronic heat	●	Chronic heat	• Chronic heat is projected to have a medium-low effect at all the studied time horizons and RCPs.
		●	Precipitation	●	Precipitation	
	Medium	●	Chronic heat	●	Chronic heat	Chronic heat has a significant impact on the following: Employees' Health and Safety Concerns: Heat-related illnesses among employees lead to reduced productivity and potential risks to their welfare. Energy Consumption: High temperatures may increase energy demand for office cooling, leading to higher energy consumption and potential cost implications. Water Resources: Chronic heat may exacerbate water scarcity and increase water demand for cooling and dust suppression, resulting in potential water shortages. • Precipitation is predicted to be in the medium category at all the studied time horizons for both RCP 4.5 and RCP 8.5. Precipitation has a significant impact on the following: Infrastructure: Medium precipitation levels may lead to flash floods, landslides, and soil erosion, causing significant disruptions to roads, rail lines, and mining facilities. The extent of infrastructure damage may be higher, necessitating more extensive repairs and longer downtime for mining operations. Employees' Health and Safety Concerns: Employee safety risks may escalate significantly. Flooded areas and waterlogged conditions may pose immediate hazards to workers, increasing the risk of accidents and injuries. Also, it may jeopardise employee safety, requiring stringent safety protocols and possible evacuation measures. Supply Chain Management: Road closures and transportation restrictions may persist for longer, leading to delayed shipments and challenges in receiving essential supplies. These disruptions may ripple through the supply chain, impacting production schedules and creating inventory shortages.
		●	Precipitation	●	Precipitation	
	Long	●	Chronic heat	●	Chronic heat	
		●	Precipitation	●	Precipitation	

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
						Water Management Challenges: Persistent precipitation may overwhelm existing water management systems, leading to flooding and waterlogging at the mining site. Proper water drainage may become a challenge, exacerbating the risks of water damage to equipment and infrastructure. Environmental and Ecosystem Impacts: Severe precipitation events may have significant environmental consequences. Excessive runoff from heavy rains may result in soil erosion and sedimentation in nearby water bodies, leading to water pollution and habitat degradation for aquatic life. Moreover, the risk of soil erosion may exacerbate the loss of fertile topsoil, impacting long-term land rehabilitation efforts.
SULIYARI P	Short	●	Chronic heat			<ul style="list-style-type: none">Chronic heat is projected to have a medium-low effect at all the studied time horizons and RCPs. Chronic heat has a significant impact on the following: Employees' Health and Safety Concerns: Heat-related illnesses among employees lead to reduced productivity and potential risks to their well-being. Energy Consumption: High temperatures may increase energy demand for office cooling, leading to higher energy consumption and potential cost implications. Water Resources: Chronic heat may exacerbate water scarcity and increase water demand for cooling and dust suppression, resulting in potential water shortages. <ul style="list-style-type: none">Precipitation is predicted to be in the medium category at all the studied time horizons and RCPs. Precipitation has a significant impact on the following: Infrastructure: Medium precipitation levels may lead to flash floods, landslides, and soil erosion, causing significant disruptions to roads, rail lines, and mining facilities. The extent of infrastructure damage may be higher, necessitating more extensive repairs and longer downtime for mining operations.
		●	Precipitation	●	Precipitation	
	Medium	●	Chronic heat	●	Chronic heat	
		●	Precipitation	●	Precipitation	
	Long	●	Chronic heat	●	Chronic heat	
		●	Precipitation	●	Precipitation	

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
						Employees' Health and Safety Concerns: Employee safety risks may escalate significantly. Flooded areas and waterlogged conditions may pose immediate hazards to workers, increasing the risk of accidents and injuries. Also, it may jeopardise employee safety, requiring stringent safety protocols and possible evacuation measures. Supply Chain Management: Road closures and transportation restrictions may persist for longer, leading to delayed shipments and challenges in receiving essential supplies. These disruptions may ripple through the supply chain, impacting production schedules and creating inventory shortages. Water Management Challenges: Persistent precipitation may overwhelm existing water management systems, leading to flooding and waterlogging at the mining site. Proper water drainage may become a challenge, exacerbating the risks of water damage to equipment and infrastructure. Environmental and Ecosystem Impacts: Severe precipitation events may have significant environmental consequences. Excessive runoff from heavy rains may result in soil erosion and sedimentation in nearby water bodies, leading to water pollution and habitat degradation for aquatic life. Moreover, the risk of soil erosion may exacerbate the loss of fertile topsoil, impacting long-term land rehabilitation efforts.
KURMITAR	Short	●	Precipitation	●	Precipitation	<ul style="list-style-type: none">Precipitation is predicted to be in the medium category at all the studied time horizons and RCPs. Precipitation has a significant impact on the following: Infrastructure: Medium precipitation levels may lead to flash floods, landslides, and soil erosion, causing significant disruptions to roads, rail lines, and mining facilities. The extent of infrastructure damage may be higher, necessitating more extensive repairs and longer downtime for mining operations.
	Medium	●	Precipitation	●	Precipitation	
	Long	●	Precipitation	●	Precipitation	

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
						<p>Employees' Health and Safety Concerns: Employee safety risks may escalate significantly. Flooded areas and waterlogged conditions may pose immediate hazards to workers, increasing the risk of accidents and injuries. Also, it may jeopardise employee safety, requiring stringent safety protocols and possible evacuation measures.</p> <p>Supply Chain Management: Road closures and transportation restrictions may persist for longer, leading to delayed shipments and challenges in receiving essential supplies. These disruptions may ripple through the supply chain, impacting production schedules and creating inventory shortages.</p> <p>Water Management Challenges: Persistent precipitation may overwhelm existing water management systems, leading to flooding and waterlogging at the mining site. Proper water drainage may become a challenge, exacerbating the risks of water damage to equipment and infrastructure.</p> <p>Environmental and Ecosystem Impacts: Severe precipitation events may have significant environmental consequences. Excessive runoff from heavy rains may result in soil erosion and sedimentation in nearby water bodies, leading to water pollution and habitat degradation for aquatic life. Moreover, the risk of soil erosion may exacerbate the loss of fertile topsoil, impacting long-term land rehabilitation efforts.</p>



















Table key/legend:

Time-horizon	2020	Short
	2030	Medium
	2050	Long

Scale

● Medium
 ● Medium-Low
 ● Medium-High
 ● Low

RMRW: Assessing physical risks under RCP4.5 and RCP 8.5 scenarios

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
RMRW						
UNNAO, UTTAR PRADESH	Short		Chronic heat		Chronic heat	<ul style="list-style-type: none">Operational unit of RMRW at Unnao business possess a medium-low risk of chronic heat for both the RCPs and time horizons.
			Precipitation		Precipitation	
			Flooding		Flooding	
	Medium		Chronic heat		Chronic heat	<p>Chronic heat has a significant impact on the following:</p> <p>Employees' Health and Safety Concerns: Heat stress negatively impacts workers' health and productivity, leading to lower efficiency, increased operating expenses, and workforce shortages during peak periods due to heat-related ailments.</p> <p>Infrastructure: High temperatures may damage infrastructure, requiring more upkeep and potentially impacting capital spending plans by increasing infrastructure maintenance and upgrades costs.</p> <p>Supply Chain Disruptions: Heat stress disrupts supply chains, affecting transportation, raw material supply and industry inputs, causing delays, increased prices, and potential product shortages.</p> <p>Energy Consumption: Rising temperatures increase cooling and air conditioning demand, potentially lowering energy expenses and impacting operating expenditures and financial performance.</p> <p>Regulatory and Legal Risks: Heat stress and climate change may require additional compliance requirements or carbon pricing systems, impacting financial and operational conditions; failure to comply may lead to legal consequences.</p> <ul style="list-style-type: none">The operational unit of RMRW at Unnao has medium precipitation risk for the scenarios RCP 4.5 and 8.5 and for all the time horizons.
			Precipitation		Precipitation	
			Flooding		Flooding	
	Long		Chronic heat		Chronic heat	
			Precipitation		Precipitation	
			Flooding		Flooding	

Business Units	Time Horizon	RCP 4,5	Risk	RCP 8,5	Risk	Impact
						<p>Precipitation has a significant impact on the following:</p> <p>Operational Disruptions: Precipitation disrupts road, metro, and rail operations, causing service suspensions, delays, and cancellations, limiting passenger and vehicle throughput, affecting revenue generation, and potentially resulting in contractual fines.</p> <p>Maintenance and Safety Concerns: Severe consequences arise from precipitation-related slippery surfaces, significantly elevating the risk of traffic accidents, resulting in legal liabilities, infrastructural damage, and substantial corporate reputation damage. Moreover, precipitation contributes to wear and tear, leading to heightened maintenance costs and potential challenges like potholes, track erosion, and critical electrical failures with considerable impact.</p> <p>Customer Satisfaction: The high severity of precipitation-induced service delays may cause widespread consumer dissatisfaction, leading to a decrease in ridership and a hindrance in attracting new customers, ultimately impacting loyalty and brand perception.</p> <p>Supply Chain Impact: The severity of precipitation disruptions significantly impacts supply chains, leading to delays in product deliveries, posing challenges in inventory management, and severely affecting the efficiency of transportation, metro, and rail businesses. Insurance Costs: Frequent weather-related incidents and damages may increase insurance premiums to protect the business against potential losses.</p> <ul style="list-style-type: none">• The operational unit of RMRW at Unnao business possesses a medium risk for flooding for the RCPs and all the time horizons.

Business Units	Time Horizon	RCP 4,5	Risk	RCP 8,5	Risk	Impact
						<p>Flooding has a significant impact on the following:</p> <p>Operational Disruptions and Revenue Risks: The high severity of flooding disrupts normal operations, causing interference with road and train services. These disruptions may lead to service suspensions, delays, or cancellations, posing significant hazards to revenue generation, reducing passenger or vehicle throughput, and resulting in substantial contractual penalties.</p> <p>Infrastructure Damage and Repair Costs: The impact of high-severity floodwaters is profound, resulting in substantial infrastructure damage that necessitates expensive repairs and time-consuming restoration efforts. The need for unplanned capital expenditures due to the damage may severely affect financial planning and resource allocation, creating challenges in maintaining budgetary stability and prioritizing other essential projects.</p> <p>Supply Chain Disruptions: Flooding disrupts supply chains, causing delays, increased costs, and potential input shortages, impacting suppliers in flood-prone areas.</p> <p>Insurance Costs and Coverage: Flooding events may increase insurance claims and premiums, exposing businesses to financial risks. Adequate insurance coverage and risk transfer mechanisms are crucial for managing potential losses.</p> <p>Regulatory and Permitting Risks: Flood damage may cause compliance challenges with regulations, requiring additional investments or alterations to infrastructure due to changes in permitting requirements.</p>

Business Units	Time Horizon	RCP 4,5	Risk	RCP 8,5	Risk	Impact
HARDOI, UTTAR PRADESH	Short	●	Chronic heat	●	Chronic heat	<ul style="list-style-type: none">Operational units of the RMRW business at Hardoi possess a medium-low risk of chronic heat for both the RCPs and short, medium and long-term time horizons. Chronic heat has a significant impact on the following: Employees' Health and Safety Concerns: Heat stress influences worker health and productivity, resulting in poorer efficiency, higher operational costs, and staff shortages during peak hours owing to heat-related illnesses. Infrastructure: High temperatures may wreak havoc on infrastructure, necessitating additional maintenance and even jeopardising capital investment plans by raising infrastructure maintenance and upgrade costs. Supply Chain Disruptions: Heat stress disrupts supply chains, affecting transportation, raw material supply and industry inputs, causing delays, increased prices, and potential product shortages. Energy Consumption: Rising temperatures boost cooling and air conditioning demand, potentially cutting energy costs while influencing operating expenses and financial performance. Regulatory and Legal Risks: Heat stress and climate change may need new compliance requirements or carbon pricing schemes, which may influence financial and operational circumstances; failure to comply may result in legal ramifications. <ul style="list-style-type: none">The operational unit of RMRW at Hardoi has medium precipitation risk for the scenarios RCP 4.5 and 8.5 and for all the time horizons.
		●	Precipitation	●	Precipitation	
		●	Flooding	●	Flooding	
	Medium	●	Chronic heat	●	Chronic heat	
		●	Precipitation	●	Precipitation	
		●	Flooding	●	Flooding	
	Long	●	Chronic heat	●	Chronic heat	
		●	Precipitation	●	Precipitation	
		●	Flooding	●	Flooding	

Business Units	Time Horizon	RCP 4,5	Risk	RCP 8,5	Risk	Impact
						Precipitation has a significant impact on the following: Operational Disruptions: In high-severity scenarios, precipitation severely disrupts road, metro, and rail operations, leading to service suspensions, delays, and cancellations. These disruptions limit passenger and vehicle throughput, adversely impacting revenue generation and potentially exposing operators to contractual fines for failing to meet service commitments. Maintenance and Safety Concerns: In high-severity situations, precipitation-related slippery surfaces contribute to a surge in traffic accidents, giving rise to legal liabilities, infrastructural damage, and detrimental impacts on corporate brand reputation. Moreover, precipitation accelerates wear and tear, leading to escalated maintenance expenses and the potential emergence of challenges like potholes, track erosion, and electrical failures, posing significant risks to infrastructure and public safety. Customer Satisfaction: Frequent service delays due to Precipitation may result in consumer unhappiness, lowering ridership, and recruiting new ones, affecting loyalty and brand image. Supply Chain Impact: Precipitation disruptions impact supply chains, causing product delivery delays, inventory management challenges and affecting business efficiency in transportation, metro, and rail. Insurance Costs: Frequent weather-related incidents and damages may increase insurance premiums to protect your business against potential losses.

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
						<div><div><div>• Operational sites under the RMRW business at Hardoi possess a Medium Low risk for flooding for the RCPs and all the time horizons.</div><div>Flooding has a significant impact on the following: Operational Disruptions and Revenue Risks: Flooding interrupts everyday operations by interfering with road and train services. Service suspensions, delays, or cancellations may result from disruptions, creating hazards to revenue production, lower passenger or vehicle throughput, and significant contractual penalties.</div><div>Infrastructure Damage and Repair Costs: Floodwaters cause significant infrastructure damage, requiring costly repairs and time-consuming restorations. Unplanned capital expenditures may impact financial planning and resource allocation.</div><div>Supply Chain Disruptions: Flooding disrupts supply chains, causing delays, increased costs, and potential input shortages, impacting suppliers in flood-prone areas.</div><div>Insurance Costs and Coverage: Flooding events may increase insurance claims and premiums, exposing businesses to financial risks. Adequate insurance coverage and risk transfer mechanisms are crucial for managing potential losses.</div><div>Regulatory and Permitting Risks: Flood damage may cause compliance challenges with regulations, requiring additional investments or alterations to infrastructure due to changes in permitting requirements.</div></div></div>

Table key/legend:

Time-horizon	2020	Short
	2030	Medium
	2050	Long

Scale

● Medium

● Medium-High

● Medium-Low

● Low

Data centre: Assessing physical risks under RCP4.5 and RCP 8.5 scenarios

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
Data Centre						
SIRUSERI (NEAR CHENNAI)	Short	●	Precipitation	●	Precipitation	<div><div><div>• Precipitation is predicted to be in the medium category at all the studied time horizons and RCPs.</div><div>Precipitation has a significant impact on the following: Infrastructure: Medium precipitation levels may lead to flash floods, landslides, and soil erosion, causing significant disruptions to roads, rail lines, and mining facilities. The extent of infrastructure damage may be higher, necessitating more extensive repairs and longer downtime for mining operations.</div><div>Employees' Health and Safety Concerns: Employee safety risks may escalate significantly. Flooded areas and waterlogged conditions may pose immediate hazards to workers, increasing the risk of accidents and injuries. Also, it may jeopardise employee safety, requiring stringent safety protocols and possible evacuation measures.</div><div>Supply Chain Management: Road closures and transportation restrictions may persist for longer, leading to delayed shipments and challenges in receiving essential supplies. These disruptions may ripple through the supply chain, impacting production schedules and creating inventory shortages.</div><div>Water Management Challenges: Persistent precipitation may overwhelm existing water management systems, leading to flooding and waterlogging at the mining site. Proper water drainage may become a challenge, exacerbating the risks of water damage to equipment and infrastructure.</div><div>Environmental and Ecosystem Impacts: Severe precipitation events may have significant environmental consequences. Excessive runoff from heavy rains may result in soil erosion and sedimentation in nearby water bodies, leading to water pollution and habitat degradation for aquatic life. Moreover, the risk of soil erosion may exacerbate the loss of fertile topsoil, impacting long-term land rehabilitation efforts.</div></div></div>
		●	Flooding	●	Flooding	
	Medium	●	Precipitation	●	Precipitation	
		●	Flooding	●	Flooding	
	Long	●	Precipitation	●	Precipitation	
		●	Flooding	●	Flooding	

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
						<ul style="list-style-type: none">Flooding is predicted to be in the medium-low category at all the studied time horizons and RCPs. <p>Flooding may have a medium to low impact on biodiversity, ecosystems, and water management challenges near data centres. Floodwaters may displace species and disrupt delicate ecosystems, impacting biodiversity in the long term. Additionally, water management systems may struggle to handle the excess water, potentially damaging critical data centre infrastructure.</p> <p>This could lead to service disruptions, data loss, and financial losses, affecting business operations and infrastructure.</p>
AHMEDABAD CORPORATE OFFICE	Short	●	Chronic heat	●	Chronic heat	<ul style="list-style-type: none">Chronic heat is projected to have a medium-low effect at all the studied time horizons and RCPs. <p>Chronic heat has a significant impact on the following:</p> <p>Employees' Health and Safety Concerns: Heat-related illnesses among employees lead to reduced productivity and potential risks to their well-being.</p> <p>Energy Consumption:</p> <p>High temperatures may increase energy demand for cooling, leading to higher energy consumption and potential cost implications.</p> <p>Water Resources:</p> <p>Chronic heat may exacerbate water scarcity and increase water demand for cooling and dust suppression, resulting in potential water shortages.</p> <ul style="list-style-type: none">Precipitation is predicted to be in the medium category at all the studied time horizons and RCPs. <p>Precipitation has a significant impact on the following:</p> <p>Infrastructure:</p> <p>Medium precipitation levels may lead to flash floods, landslides, and soil erosion, causing significant disruptions to roads, rail lines, and mining facilities. The extent of infrastructure damage may be higher, necessitating more extensive repairs and longer downtime for mining operations.</p>
		●	Precipitation	●	Precipitation	
		●	Flooding	●	Flooding	
	Medium	●	Chronic heat	●	Chronic heat	
		●	Precipitation	●	Precipitation	
		●	Flooding	●	Flooding	
	Long	●	Chronic heat	●	Chronic heat	
		●	Precipitation	●	Precipitation	
		●	Flooding	●	Flooding	

Business Units	Time Horizon	RCP 4.5	Risk	RCP 8.5	Risk	Impact
						<p>Employees' Health and Safety Concerns:</p> <p>Employee safety risks may escalate significantly. Flooded areas and waterlogged conditions may pose immediate hazards to workers, increasing the risk of accidents and injuries. Also, it may jeopardise employee safety, requiring stringent safety protocols and possible evacuation measures.</p> <p>Supply Chain Management:</p> <p>Road closures and transportation restrictions may persist for longer, leading to delayed shipments and challenges in receiving essential supplies. These disruptions may ripple through the supply chain, impacting production schedules and creating inventory shortages.</p> <p>Water Management Challenges:</p> <p>Persistent precipitation may overwhelm existing water management systems, leading to flooding and waterlogging at the mining site. Proper water drainage may become a challenge, exacerbating the risks of water damage to equipment and infrastructure.</p> <p>Environmental and Ecosystem Impacts:</p> <p>Severe precipitation events may have significant environmental consequences. Excessive runoff from heavy rains may result in soil erosion and sedimentation in nearby water bodies, leading to water pollution and habitat degradation for aquatic life. Moreover, the risk of soil erosion may exacerbate the loss of fertile topsoil, impacting long-term land rehabilitation efforts.</p> <ul style="list-style-type: none">Flooding is projected to have a medium-low effect at all the studied time horizons and RCPs. <p>Flooding may have a medium to low impact on biodiversity, ecosystems, and water management challenges near data centres. Floodwaters may displace species and disrupt delicate ecosystems, impacting biodiversity in the long term. Additionally, water management systems may struggle to handle the excess water, potentially damaging critical data centre infrastructure. This could lead to service disruptions, data loss, and financial losses, affecting business operations and infrastructure.</p>

Table key/legend:

Time-horizon	2020	Short
	2030	Medium
	2050	Long
Scale		
● Medium ● Medium-Low		
● Medium-High ● Low		

Climate-related Scenarios and their Impacts on the AEL's Strategy and Financial Planning

Mining: Within the mining sector, efforts are underway to tackle medium precipitation intensity risks through a strategic emphasis on infrastructure reinforcement and disaster preparedness. Furthermore, leadership in the integration of cleaner technologies, encompassing energy-efficient processes and low-emission equipment, is evident. The core priority remains the promotion of sustainable resource management practices, particularly in responsible waste management and water conservation.

Airports: The airport business is at risk of precipitation and flooding for most of the scenarios and the years assessed. These risks are being proactively managing through the implementation of resilience plans like stormwater management and sustainable drainage systems. Additionally, the company's commitment to sustainability is evident in its adoption of various measures, such as enhancing energy

efficiency, incorporating renewable energy sources, and practicing environmentally conscious waste management. An ambitious objective has been set to attain operational net-zero status by 2030, aligning with the expectations of stakeholders and regulatory bodies. Solar: The solar business within its purview is committed to fostering innovation, with a particular focus on enhancing panel efficiency and ensuring continuous production, even in adverse weather conditions. This business entity is strategically mapping an expansion plan to boost production capacity from 4 GW to 10 GW, positioning itself to seize opportunities within the rapidly growing low-carbon market.

Data Centers: The company is taking significant steps in slashing its carbon footprint. These efforts include integrating renewable energy sources and exploring green hydrogen as a backup power solution for data centers. Their commitment is to achieve operational net-zero status by 2030, driven by rising concerns regarding energy consumption and greenhouse gas emissions within the data center sector.

Resilience of the Organization's Strategy (2°C or Lower Scenario)

Chronic Heat Intensity
Chronic heat risk assesses prolonged exposure to high temperatures. The risk is analyzed using historical meteorological and climate model data. The assessment reveals that chronic heat is a significant concern across all BUs. Specifically, Lucknow and Jaipur airports face a medium-low risk in all scenarios and years assessed, while Ahmedabad airport is projected to have a medium risk by 2050, making it more vulnerable.

Within the mining sector, Kumitar mines have a low risk, whereas other mentioned mines fall in the medium-low category for heat risk. Regarding RMRW, all units exhibit a medium-low risk. Persistent high temperatures will lead to increased cooling energy demands in mines, surface facilities, and logistics, potentially impacting worker productivity. This prolonged exposure to heat may result in infrastructure degradation, particularly affecting electrical systems.

Figure : Ahmedabad Airport would suffer Medium risk due to chronic heat in 2050



Exceptional Drought Intensity
Exceptional drought poses a significant threat, exacerbating water scarcity concerns. The Climate tool assesses drought likelihood by analyzing data from hydrological models, satellite observations, and precipitation gauges. Also, it provides insights into exceptional drought impacts by evaluating monthly evapotranspiration and

the severity of below-average precipitation. The Standardized Precipitation-Evapotranspiration Index (SPEI) plays a pivotal role, marking a drought event when the SPEI remains consistently negative and reaches -1.0 or lower. Exceptional drought, the most severe category, occurs when precipitation falls within the lowest 2% of values

(SPEI < -2), typically once or twice a century. In the analysis, all BU locations except Jaipur international airport exhibit a low exceptional drought risk. Jaipur airport consistently shows a medium-low risk (Table), indicating potentially more significant impacts from exceptional drought than other airports.

Figure : Jaipur International Airport would face Medium-Low impact of exceptional drought intensity in 2050



Precipitation Intensity
Precipitation intensity, crucial in evaluating climate-related physical risks, may disturb ecosystems, water resources, and weather patterns. The tool used combines data from various sources to analyze precipitation trends and simulate future scenarios using climate models. Jaipur and Thiruvananthapuram

international airports face medium-low precipitation risk, indicating moderate vulnerability to intensity-related disruptions. In mining, Lucknow international airport and Gare Pelma III have a medium precipitation risk by 2050 (Table), implying potential long-term adverse effects. Increased precipitation intensity may pose challenges like construction costs,

delays, and maintenance expenses for infrastructure, particularly in the RMRW sectors. The solar business disrupts operations and supply chains and necessitates design considerations, affecting efficiency, costs, and customer satisfaction. Understanding and managing these risks is vital for infrastructure resilience among changing precipitation patterns.



Figure : Gare Pelma III would face Medium Risk due to precipitation in 2050

Flooding Intensity

Flood intensity, influenced by rainfall, drainage capacity, and geography, is exacerbated by global temperature rise and sea-level increase. OS-Climate utilizes the WRI Aqueduct flood model to assess flood risk. Among estimated locations, Navi Mumbai, Lucknow, Guwahati International Airports, Solar Business's MSPVL, and Hardoi, Uttar Pradesh (RMRW) have medium-low flood risk. In contrast, Mumbai International Airport and Unnao, Uttar Pradesh (RMRW) have a medium risk. Impact details are available in the table, with Mumbai International Airport having a higher vulnerability due to past flooding incidents. Flooding may result in property damage, business disruption, health and safety risks, downtime, revenue loss, and increased costs.

Transition Risks

Operating in a dynamic business environment, the company faces various risks that can impact its diverse portfolio of businesses, including Airports, Mining, RMRW, Data Centers, Defence and Aerospace and Solar. Key transition risks have been identified for ensuring sustainable growth and maintaining a competitive advantage. Market Risks, driven by fluctuating prices of input materials, pose challenges to cost structure and profitability. Evolving regulatory landscapes demand proactive adaptation to meet increasing emissions reporting obligations, which can result in associated costs and potential impacts on profitability.

Reputational Risks arise from the failure to achieve publicly stated climate-related targets, potentially harming reputation and impacting stakeholders' trust.

Market Risk: Fluctuating prices of input materials (energy, minerals, and commodities) pose a potential challenge to the cost structure.

- **Impact:** Medium. High input prices may lead to increased costs across the diverse businesses.
- **Time horizon:** short term
- **Likelihood:** More likely than not

Technology Risk: Investments are being directed towards establishing a comprehensive value chain encompassing green hydrogen, wind, and solar photovoltaics manufacturing within India. The highly specialized nature of these industries necessitates technology partnerships with leading global solutions providers. Since these technologies do not have the precedence of being implemented in India, there is a potential challenge in fully realizing the value of these technologies, which might result in project delays and disruptions. Further, the geopolitical contestation of resources may lead to challenges in realizing the full value of global technology partnerships for sustainable energy solutions.

- **Impact:** High. Technology is a key lever for enabling the successful execution of projects. Limited access to critical technology may affect project schedules, costs, and deliverables.

- **Time horizon:** Short-term
- **Likelihood:** Unlikely

Evolving Regulations Risk:

Anticipated regulatory changes and increased emissions reporting obligations necessitate proactive measures to facilitate compliance.

- **Impact:** High. Meeting evolving regulatory requirements will require investments in compliance measures and sustainable practices. This may lead to associated costs and potential impacts on profitability.
- **Time horizon:** short term
- **Likelihood:** Likely

Reputational Risks: Not achieving publicly stated targets, such as emission reductions and sustainable practices, could negatively impact organisation's reputation.

- **Impact:** High. An adverse effect on reputation could potentially influence stakeholder trust and investor confidence across various business sectors. This can have long-term implications for customer relationships, partnerships, and financial performance.
- **Time horizon:** short term
- **Likelihood:** Unlikely (AEL's climate reporting journey is in its second year. The process to achieve the business unit-level targets is underway. The financial implications of this reputational risk would only manifest in case of not achieving the target in the future.)

7

Risk Management



The Corporate Responsibility Committee (CRC), alongside the Managing Director, Chief Finance Officer, and Head of Group Climate Change and Sustainability, play pivotal roles by providing their insights into climate change and ESG-related risks.

Effective risk governance is a fundamental aspect of AEL's alignment with TCFD guidelines. This governance is facilitated through collaboration between various key stakeholders. The Corporate Responsibility Committee (CRC), alongside the Managing Director, Chief Finance Officer, and Head of Group Climate Change and Sustainability, play pivotal roles by providing their insights into climate change and ESG-related risks. These inputs contribute to a well-rounded understanding of the company's risk landscape.

Driving the risk governance framework is the Risk Management Committee (RMC), which assumes responsibility for overseeing AEL's risk management approach. This includes not only evaluating risk appetite but also reviewing the company's governance structure and risk management framework. In doing so, the RMC ensures that risk identification & assessment, and mitigation are comprehensive and robust. It evaluates risk-related policies, procedures, and plans, particularly those linked to regulatory and policy risks stemming from climate change. The outcomes of these evaluations, along with recommendations, are reported to the Board for transparency and strategic decision-making.

The risk management process adopted by AEL is multifaceted, with several key components:

- 1. Risk Identification and Assessment:** AEL employs a systematic approach to identify and assess risks across its operations. This involves recognizing various risks and analyzing their likelihood and potential impact. These risks span a wide spectrum, encompassing strategic, operational, financial, regulatory, environmental, and reputational dimensions.
- 2. Risk Mitigation Strategies:** Once identified, the company formulates comprehensive strategies to mitigate these risks effectively. This includes the implementation of appropriate controls, procedures, and policies aimed at minimizing the likelihood and potential impact of identified risks. The company takes a proactive stance by addressing challenges head-on.
- 3. Risk Monitoring and Reporting:** AEL maintains a robust system for continuous risk monitoring and reporting. This system allows for the timely detection of emerging risks and provides a means to assess the effectiveness of existing mitigation measures. Regular updates are provided to senior

management and the Board, ensuring transparency and facilitating informed decision-making.

- 4. Compliance and Regulatory Risk Management:** AEL places a strong emphasis on adherence to laws, regulations, and industry standards. The company has established a comprehensive framework to ensure compliance and mitigate regulatory risks. Regular assessments are conducted to identify potential compliance gaps, with necessary corrective actions taken.
- 5. Business Continuity Planning:** Recognizing the importance of business continuity, the company has implemented robust contingency plans. These plans are designed to ensure the uninterrupted operation of critical functions even in the face of unforeseen events such as natural disasters, cyberattacks, and emergencies.

This structured and comprehensive approach to risk management underscores AEL's commitment to proactive risk identification, assessment, mitigation, and governance in alignment with the principles advocated by the Task Force on Climate-related Financial Disclosures (TCFD).



Process for Identifying and Assessing Climate-related Risks

At AEL, a systematic and forward-looking process guides the identification of climate-related risks. This process aligns with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations and ensures a comprehensive understanding of potential impacts. Here's an overview of the structured approach:

1. Time Horizons for Risk Assessment

- **Short-Term (0-5 years):** Immediate risks are prioritized, considering physical and regulatory factors. Short-term opportunities are also identified to capitalize on the evolving landscape.
- **Medium-Term (5-10 years):** Anticipating potential business risks and opportunities within this time frame.
- **Long-Term (10-20 years):** Aligning with India's climate commitments,

particularly the 2030 and 2050 targets set in the Paris Agreement.

2. Defining Substantive Impact

- Substantive impact is classified as any event that affects earnings, cash flows, financial conditions, and business continuity.
- For assessment, a substantive impact is considered equivalent to 1% of Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA).

3. Utilizing Climate Modelling Tools

- Leveraging sophisticated climate modelling tools to identify, assess, and evaluate physical risks.
- Insights derived from these assessments are integrated into our risk management practices for enhanced decision-making.

4. Navigating Environmental Regulations

- AEL follows the environmental regulations set by regulatory bodies such as the Central

Pollution Control Board (CPCB) and State Pollution Control Board (SPCB).

- Adherence to environmental laws, including obtaining necessary clearances, is a priority.

5. Anticipating Future Regulatory Landscape

- Proactive preparation for forthcoming laws and regulations related to climate change, ensuring compliance and avoiding unexpected costs or operational disruptions.

6. Addressing Physical and Transition Risks

Mitigation Strategies for Physical Risks

- Transitioning to renewable energy sources to reduce emissions
- Developing climate-resilient infrastructure
- Creating an emergency plan to mitigate the impacts of chronic changes, such as rising sea levels
- Implementing improved water resource management techniques

Mitigation Strategies for Transition Risks

- Ensuring supply chain flexibility through diversification
- Investing in research and development for new, low-

- emission technologies
- Establishing a sustainable value chain for green technologies

7. Leveraging Innovation Opportunities

- Prioritizing green technology and resource efficiency for innovation
- Harnessing innovation to not only mitigate risks but also drive positive environmental outcomes

Table 9: Climate-related risks: Impacts & Mitigation Strategies

Climate-related Risks		Potential Impacts	Adaptation & Mitigation Strategies
Physical Risks Risks related to the physical impacts of climate change	Acute: Severity of extreme weather events (e.g., wildfires, cyclones, hurricanes, floods) Chronic: Longer-term chronic changes in mean values and ranges of fluctuation of various climate variables (e.g., temperature, precipitation, sea levels)	Climate <ul style="list-style-type: none">• Shifted rainfall patterns result in flash flooding and damage to lives and properties• Raised temperatures cause heat stress and also affect labour productivity in a negative manner• Raised up sea-level poses a threat to functional efficiency (e.g., natural disasters can cause the breakdown of equipment, damage infrastructure and delay operational processes) Financial Implications <ul style="list-style-type: none">• Reduced revenue and higher costs impact workforce efficiency (e.g., health, safety, absenteeism)	<ul style="list-style-type: none">• Renewable energy sources: The company is shifting towards green energy sources to reduce emissions.• Climate Resilient Infrastructure: Developing infrastructure to fulfil energy needs.• Enhanced Emergency Preparedness: AEL is opting for risk-free locations for business expansions and operations and devising an emergency plan for chronic changes like sea-level rising.• Water Resource Management: The company is ensuring better water recycling methods and employing better water management techniques.
	Policy and Legal: Higher costs associated with greenhouse gas (GHG) emissions, imposed mandates and regulations on existing products and services and increased the requirements for reporting emissions. Technology-driven: Substituting current products and services with lower-emission alternatives, Failed investment in new technologies and the cost of transitioning to lower-emission technologies Market-driven: Increased cost of raw materials and shifts in the customer demand Reputation: Negative perception associated with the sector, negative stakeholder feedback and fluctuations in consumer preferences.	<ul style="list-style-type: none">• Asset devaluation can also lead to the obsolescence of certain products or services• Operational inefficiencies, delays, or disruptions in the supply chain operations• Additional investments in research and development for new and/or alternative technologies• Rising production costs due to fluctuations in the input cost (e.g., energy, water) and output requirements (e.g., waste treatment)• Reduced revenue from decreased production capacity (e.g., delayed planning approvals, supply chain interruptions)	<ul style="list-style-type: none">• Supply Chain Flexibility: AEL chooses to have diversified suppliers, established contingency plans, and promote sustainable practices across the supply chain.• Innovation, Research & Development: The Company believes investing in research and development will improve production output, optimise the process and open doors to sustainable alternatives. It will keep us afloat in the competition in the changing landscape.• Integrated Value Chain: AEL is creating a sustainable value chain for green hydrogen, fuel cells, solar cells, and wind turbines, among different investments, in response to the climate risks faced by the company.



AEL employs a robust process to prioritize climate-related risks, ensuring efficient resource allocation and strategic decision-making.

Process for Prioritizing Climate-related Risks

AEL employs a robust process to prioritize climate-related risks, ensuring efficient resource allocation and strategic decision-making. Our approach involves evaluating identified risks based on their potential financial and strategic impacts. AEL defines substantive impact as an event that threatens business continuity, current and future performance, and brand image. For instance, an impact equal to 1% of EBITDA is considered substantial. We differentiate risks across short (0-5 years), medium (5-10 years), and long-term (10-20 years) horizons, aligning with India's climate commitments. By considering the severity and impact of these risks, we develop a comprehensive view of their influence on our operations and financial performance. This structured process enables us to prioritize and allocate resources effectively, focusing on mitigating risks that pose the greatest threat to our business and long-term sustainability.

Integration of Climate-Related Risks into Overall Risk Management

Achieving sustainable growth while effectively managing risks demands a strategic focus on

climate-related risks. Recognizing the significance of these risks for operational resilience and long-term value, this external sustainability consultancy offers insights into seamlessly weaving climate considerations into the broader risk management strategy, in line with the recommendations of the TCFD.

To ensure climate risks are well-handled within the existing risk framework, a structured approach is vital. Collaborative efforts involving the Corporate Responsibility Committee (CRC), key executives (Managing Director, CFO), and the Head of Group Climate Change and Sustainability, help in understanding climate impacts. Overseeing this integration is the Risk Management Committee (RMC), responsible for aligning the risk appetite, governance structure, and risk management practices. This committee ensures a coordinated approach to climate risk management, encompassing risk assessment, targeted mitigation strategies, and ongoing monitoring. The following considerations are relevant for incorporating climate risks into the existing risk management processes at the company.

1. Identifying and Assessing Risks: Thoroughly identifying and assessing climate risks across

operations forms the foundation. This involves evaluating various types of climate risks – from physical events to transitional shifts – to prioritize based on significance.

2. Mitigation Strategies: Once identified, these risks become part of comprehensive mitigation strategies. Controls, policies, and procedures are implemented strategically to reduce risk likelihood and impact, demonstrating a proactive stance.

3. Monitoring and Reporting: Robust monitoring detects emerging climate risks and assesses the effectiveness of mitigation measures. Regular updates on risk profiles, mitigation efforts, and changes in risk exposure are communicated to senior management and the Board.

4. Regulatory Compliance: Complying with climate-related regulations is essential. A comprehensive framework ensures alignment with these requirements. Regular reviews help identify any compliance gaps and take corrective actions.

5. Business Continuity Planning: Robust continuity plans ensure critical operations

continue during climate-related disruptions. These plans enhance resilience against unforeseen events like natural disasters or cyber incidents.

Following TCFD recommendations, the company is at the forefront of managing climate risks and integrating climate considerations into the business strategy and mitigation plans.

Mitigate, Transfer, Accept and Control climate-related risks

By accepting climate-related risks, the company has developed robust contingency plans and emergency response protocols to minimise climate-related impacts on operations and ensure business continuity. Implementing a comprehensive approach enables the company to ensure operational resilience against climate change for the BUs.

Climate Change Policy

The Climate Change Policy guides the company-wide commitment to managing greenhouse gas (GHG) inventories. The company assess climate-related risks, develops mitigation strategies, and strives to reduce emissions. The company tracks Scope 1 and 2 emissions internally and sets targets to lower carbon emissions in alignment with the Nationally Determined Contributions (NDCs). AEL is actively implementing emission reduction strategies across verticals and increasing the share of renewables in the energy mix.

Energy Management Policy

The Energy Management Policy serves as a guiding framework for AEL to manage energy consumption and reduce emissions. The company prioritises the integration of renewable energy sources wherever feasible and adopts efficient practices in energy usage. By actively monitoring energy

performance across all operating units, the company ensures accountability and identifies areas for improvement. Through the implementation of the Energy Management Policy, the company is committed to optimising energy efficiency, reducing carbon emissions, and driving sustainable practices throughout its operations.

Resource Conservation Policy

The company has adopted a Resource Conservation Policy that aims to conserve natural resources and reduce environmental impact. The policy sets out several measures to be implemented across the company's operations, including water conservation, energy conservation, waste minimisation, and pollution prevention. The company is committed to implementing the policy and achieving its goals. The benefits of AEL's Resource Conservation Policy include reduced costs, improved environmental performance, increased competitiveness, and enhanced reputation. The company is committed to implementing the policy and achieving its goals.

Waste Management Policy

The waste management policy aims to establish a commitment to sustainable waste management and to ensure compliance with all applicable regulations for different kinds of wastes being generated across the diverse business units. The company embraces sustainable waste management through a comprehensive policy. It ensures compliance with relevant waste regulations and integrates robust waste value chains across operations. The commitment extends to employing the 6R principles (refuse, reduce, reuse, recycle, recover, responsible disposal), targeting zero waste to landfill certifications, and striving for Single Use Plastic (SUP) elimination. The company

adopts circular economy principles, adheres to Extended Producer Responsibility (EPR) obligations, and sets measurable waste reduction goals. This policy encourages responsible waste handling, promotes recycled materials, and fosters innovation to minimize waste toxicity. Collaboration with external stakeholders underscores the company's dedication to sustainable waste management. Regular policy reviews ensure continued relevance and effectiveness.

Environment Policy

The Environment Policy aims at improving organisation's environmental performance and minimize any adverse environmental impacts. Further, adherence to all relevant regulations and compliances is also ensured. The company demonstrates a strong commitment to environmental responsibility through an encompassing environmental policy. AEL's approach involves adhering to applicable regulations, surpassing compliance standards, and actively addressing climate change impacts. This dedication extends across all operational facets, aiming for optimal resource use, waste reduction, and emission control. Biodiversity conservation, environmental assessments, stakeholder engagement, and audits further underline AEL's commitment. This policy is part of a comprehensive framework covering energy management, biodiversity, water stewardship, waste, resource conservation, climate change, and ESG. Regular reviews ensure policy relevance and effectiveness.

Water Stewardship Policy

AEL prioritises water conservation in all business verticals and actively implements measures to minimise water usage. The company-wide initiatives focus on reducing the water footprint and

complying with all the relevant state and central pollution control board regulations. AEL's Water Stewardship Policy guides the commitment to decreasing fresh water consumption, implementing recycling practices, and adopting strategies such as rainwater harvesting.

Below are the actions that AEL has already taken and will continue to take in line with the mentioned policies.

- AEL is committed to investing significant capital over the next decade to build India's leading green data center platform running on 50% green electricity

- AEL focuses on integrated renewable energy generation through solar and wind energy, which will be used to power the electrolyzers for producing green hydrogen.

- Adani Solar is India's largest integrated solar PV company. Currently, Adani Solar has 4 GW of solar cell and module manufacturing capacity.

- Wastewater generated at Chhatrapati Shivaji Maharaj International Airport is treated at state-of-the-art Sewage Treatment Plants (STPs). The treated water is used for flushing and cooling the terminal buildings.

- Adani Natural Resources has successfully implemented recycling measures for 100% of the water used in washing activities. A Zero Liquid Discharge (ZLD) water treatment process separates the slurry from the solution, enabling recycled water reuse for other activities.

- Mumbai International Airport (MIAL) is one of the few Single Use Plastic (SUP) free airports in the country, extensive projects and awareness activities are taken up to educate the customers/traveller's, visiting/using services at the airports regarding this initiative.



8

Metrics and Targets

AEL emphasizes sustainability, diversity, and inclusivity in all of their operations. The investments in renewable energy and sustainable transportation are aimed to reduce the environmental

impact. The company's dedication to innovation, research, and talent development are ensured to create long-term value for all stakeholders. AEL also collaborate with non-profits and businesses

to build a sustainable future. This framework promotes this commitment to people, planet, prosperity, peace, and partnership is visually represented in the infographic below.

Figure : 5Ps of People, Planet, Prosperity, Peace and Partnerships

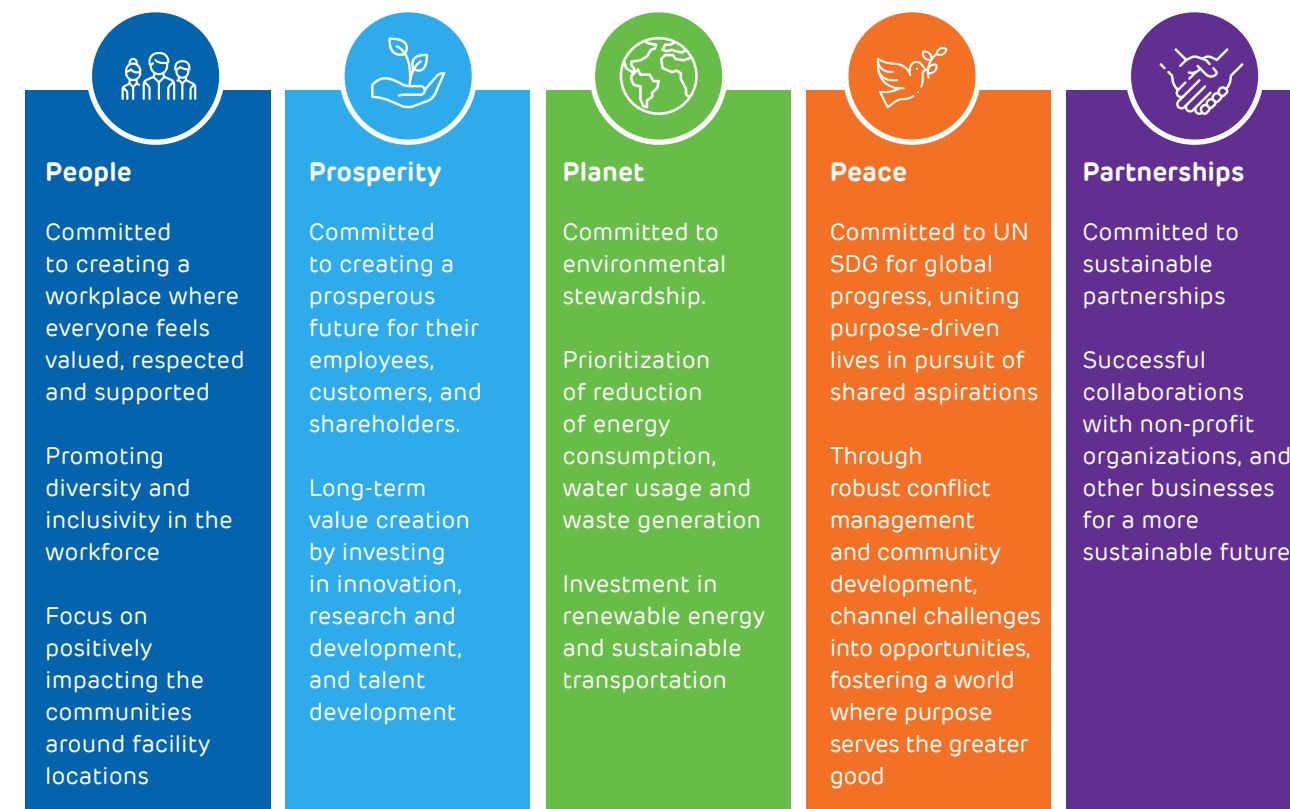


Table 10: Metrics & Commitments

Energy and Emissions Management

Topic	Metric	Unit	FY 22-23	FY 21-22	FY 20-21	Related commitment and targets
Energy	Total electricity consumption	Gigajoules (GJ)	10,34,946	8,22,344	2,98,601	Achieve operational net zero by 2030 for airport and data center businesses. Plan to purchase Certified Emission Reductions/ carbon credits in the short term to offset the residual Scope 1, 2, and part of Scope 3 (staff business travel-related emissions) from operations to achieve carbon neutrality at all airports.
	Total fuel consumption	Gigajoules (GJ)	23,58,588	15,71,670	7,82,899	
	Energy consumption through other sources	Gigajoules (GJ)	7,66,605	17,884	8,779	
	Energy intensity per turnover	GJ/Crores	229	309	217	
Emissions	Total Scope 1 emissions (direct)	Metric tonnes of CO2 equivalent	7,87,145*	6,92,537	4,72,445	
	Total Scope 2 emissions (indirect)	Metric tonnes of CO2 equivalent	1,67,163	2,14,762	1,02,141	
	Total Scope 1 and Scope 2 emissions per rupee of turnover	MTCO2e / crore rupees	53	116	114	

Note-
FY 20-21: The energy consumption details mentioned above for the FY 20-21 financial year are for Natural Resources and solar manufacturing businesses.

FY 21-22: The energy consumption details mentioned above for the FY 21-22 financial year are for Airports, Natural Resources and Solar Manufacturing operations only. The operational control of Airports was started in mid of FY 2020-21; hence the reported energy data is limited to the FY 21-22 financial year. Data Center

is yet to be operational, and for the Road business, the energy is mostly consumed in the value chain activities (Scope 3); hence the environment data presented in the report excludes these businesses.

FY 22-23: The energy consumption details mentioned above for the current financial year are for all the six operational businesses under scope, whereas the last financial year's information was limited to Natural Resources, Airports and Solar Manufacturing businesses. For all the Intensity calculations,

AEL considered the annual turnover for only those businesses whose Environmental data has been used for reporting purposes. The energy consumption through other sources includes heat, steam and energy from Renewable sources.

* 77% of our Total Scope - 1 emission is due to the fugitive emissions (methane) from our mining business. AEL is one of the few companies in the world to report on methane emissions from the mining operations

Water Management

Topic	Metric	Unit	FY 22-23	FY 21-22	FY 20-21	Related commitment and targets
Trends in Total Water Consumption	Surface water	Kilolitres (kL)	9,67,136	NIL	NIL	Water consumption intensity to 28% by FY 2024-25
	Groundwater	Kilolitres (kL)	45,78,313	21,75,126	26,02,635	
	Third-party water	Kilolitres (kL)	17,54,943	5,88,881	6,13,080	
	Seawater/ Desalinated water	Kilolitres (kL)	6,203	NIL	NIL	Achieve net water positivity by 2030.
	Others	Kilolitres (kL)	10,950	NIL	NIL	
	Water intensity per rupee of turnover	Water consumed, kL / turnover in Crore	403	562	639	

Note - FY 2022-23 data is for all the six operational businesses of AEL, namely Mining Services, Solar Manufacturing, Data Center, Airports, Roads and Water, and Defence and Aerospace. FY 2021-22 and FY 2020-21 data are for the Mining Services and Solar Manufacturing operational businesses. The data has been acquired from AEL Sustainability Report 2022-23.

Waste Management

Topic	Metric	Unit	FY 22-23	FY 21-22	FY 20-21	Related commitment and targets
Waste Generated	Total waste generated	Metric Tonne (MT)	1,41,684	1,09,414	4,15,78,287	Achieve Zero Waste to Landfill (ZWL) certification wherever possible
Waste (Recycle/ Reuse/ Recovery)	Recycled Waste	Metric Tonne (MT)	1,16,584	1,00,151	4,15,76,113	
Waste Disposed	Incineration	Metric Tonne (MT)	15	1	12	
	Other disposal operations	Metric Tonne (MT)	19,731	4,419	1,594	Achieve 'Single Use Plastic (SUP) Free' status.
	Waste to landfill	Metric Tonne (MT)	5,354	NIL	NIL	

Land use and biodiversity impact

- Become a signatory to India Business & Biodiversity Initiative (IBBI).
- No net biodiversity loss and 100% alignment with India Business & Biodiversity Initiative by 2030.
- Commitment to Net Positive Gain.
- Committed on the World Economic Forum's Trillion Trees Platform (1t.org) to facilitate the growth of 100 million trees by 2030. Aim is to cultivate 15.39 million trees through terrestrial plantations within the same timeframe.

Note- FY 20-21: The Waste Management details mentioned above for the FY 20-21 financial year are for Natural Resources and solar manufacturing businesses.
FY 21-22 & FY 22-23: The Waste Management details mentioned above for the FY 21-22 & FY 22-23 financial years are for AEL as reported in the AEL Sustainability Report FY 2022-23.

Table 11: Targets & Action Plan

SN	ESG Area	Targets & Commitments	Action Plan	
			Short Term (0-5 years)	Long Term (6-10 years)
1.	Energy, Emissions Management and Climate Change	<ul style="list-style-type: none">• Exceed India's NDC target of 45% energy intensity reduction (emissions per unit of EBITDA).• Achieve operational net zero by 2030 for airport and data center businesses.• Establish smart and sustainable buildings and infrastructure.	<ul style="list-style-type: none">• Assess AEL's carbon footprint continuously.• Align with TCFD recommendations.• Secure renewable energy partnerships.• Identify climate change vulnerabilities and develop risk mitigation plans.• Certify Adani data center, solar, and airport sites as green buildings when possible.	<ul style="list-style-type: none">• Adopt innovative green technology.• Increase operational efficiency through digitalisation and automation.• Design all new buildings and infrastructure according to green building norms.
2.	Circular Economy and Waste Management	Obtain zero waste to landfill certification for operational sites, including Airports, Adani Road Businesses, and other feasible locations.	<ul style="list-style-type: none">• Gain an understanding of waste sources, nature, and disposal methods across businesses.• Create a comprehensive waste management strategy incorporating the 5R hierarchy (Reduce, Reuse, Reprocess, Recycle, and Recover).• Identify landfill avoidance opportunities through recycling with authorised recyclers and implementing waste-to-wealth initiatives.	<ul style="list-style-type: none">• Reduce waste generation through collective strategies in product design and fabrication.• Adopt new technologies to prevent waste throughout the product life cycle.• Aim for Zero Waste certification at operational sites.
3.	Water Management	<ul style="list-style-type: none">• Water consumption intensity to 28% by FY 2024-25• AEL aspires for net water positivity by 2030.	<ul style="list-style-type: none">• Assess AEL's water footprint and identify risks.• Develop a water risk mitigation plan for net water positivity.• Reduce water consumption by eliminating freshwater use, treating and reusing wastewater, and increasing process efficiency.	<ul style="list-style-type: none">• Innovate and adopt technology to reduce freshwater use.• Enhance rainwater harvesting to compensate for water use intensity.
4.	Land Use and Biodiversity Impact	<ul style="list-style-type: none">• Achieve biodiversity preservation with full IBBI alignment.• Cultivate 15.39 million trees through terrestrial plantations	<ul style="list-style-type: none">• Become a signatory to IBBI• Comply with land management laws• Assess biodiversity risks• Develop conservation plans for threatened species• Facilitate the growth of 100 million trees	Achieve No-Net Loss by avoiding, minimising, restoring direct impacts, and offsetting residual impacts.

Incorporation of Performance Metrics into Remuneration Policies

All the Business Units (BUs) of AEL have their sustainability teams who drive the climate change strategy in their respective BUs. The sustainability heads (CSOs) of the various BUs of the company have emission reduction targets and sustainability performance indexes as part of their Key Responsibility Areas (KRAs). Their performance is linked to AEL's climate change and ESG ratings. In addition, they achieve the defined ESG and climate change performance indexes within stipulated timelines. Based on their performance and KPIs achievement, they receive variable-linked incentives. The implementation of sustainability performance-based incentives is exemplified through the initiatives of two AEL BUs- ANR and AAHL.

- **Mining (ANR):** The Mining Services has decreased its energy intensity (GJ/ metric ton) by 5% in FY 2022-23 as compared to FY 2021-22. In terms of afforestation, 10.39 lakh trees were planted and 9,378 trees were transplanted have been done till FY 2022-23

- **Airports (AAHL):** AAHL has achieved 40% absolute reduction in Scope 1 & scope 2 emissions in the FY 2022-23 with regards to FY 2021-22. While the transition to 100% green electricity at Mumbai International Airport Limited (MIAL) is achieved, the focus is on transition to 100% green electricity at all airports by 2026. In FY 2022-23, AAHL successfully transitioned 111 of our airport-owned conventional fossil-fuel based vehicles to EVs.

Methodologies Used to Calculate or Estimate Climate-related Metrics

Water, waste, and energy are considered climate-related metrics, and targets have been set.

- Water consumption is measured using water meters.
- Energy consumption is measured using fuel consumption data and electricity meters.
- Waste generation is measured using the metric system and following regulatory, statutory guidelines.

AEL is committed to reporting its GHG emissions in accordance with the GHG Protocol and ISO 14064. These are the most widely used standards for accounting and reporting for greenhouse gas (GHG) emissions. The GHG Protocol is a set of guidelines for quantifying and reporting GHG emissions, while ISO 14064 is an international standard for the same purpose. Both standards are recognized by the Task Force on Climate-related Financial Disclosures (TCFD), a group of experts that developed recommendations for companies to disclose climate-related risks and opportunities.

Methodology to Calculate GHG Emissions

To ensure accuracy in GHG emissions calculations, the estimation of GHG emissions follows the guidelines provided by the World Resource Institute's (WRI) Greenhouse Gas (GHG) Protocol. Relevant industry standard emission factors and emissions factors identified by the Intergovernmental Panel on Climate Change (IPCC) are utilized in the emissions calculation.

References

1. Physrisk. <http://physrisk-ui-latest-sandbox.apps.odh-cl1.apps.os-climate.org/>.
2. Think Hazard. <https://thinkhazard.org/en/>.
3. Christidis, N. et al. A New HadGEM3-A-Based System for Attribution of Weather- and Climate-Related Extreme Events. *J. Clim.* 26, 2756–2783 (2013).
4. Home. OS-Climate <https://os-climate.org/>.
5. Natural Catastrophe Risk Management and Modelling: A Practitioner's Guide | Wiley. Wiley. com <https://www.wiley.com/en-dk/Natural+Catastrophe+Risk+Management+and+Modelling+%3A+A+Practitioner%27s+Guide-p-9781118906040>.
6. Oasis Loss Modelling Framework | Open source catastrophe modelling platform. <https://oasislmf.org/>.
7. Bertram, C., Hilaire, J., Kriegler, E., Beck, T., Bresch, D., Clarke, L., Cui, R., Edmonds, J., Min, J., Piontek, F., et al. Ngfs climate scenarios database: Technical documentation.
8. Physical climate risk assessment: Practical lessons for the development of climate scenarios with extreme weather events from emerging markets and developing economies. Tech. rep., Network for Greening the Financial System, 2022.
9. ON THE PRICING OF CORPORATE DEBT: THE RISK STRUCTURE OF INTEREST RATES* - Merton - 1974 - The Journal of Finance - Wiley Online Library. <https://onlinelibrary.wiley.com/doi/10.1111/j.1540-6261.1974.tb03058.x>.
10. Access to data | Copernicus. <https://www.copernicus.eu/en/access-data>.
11. Data. World Resources Institute <https://www.wri.org/data>.
12. The shapefile used to identify administrative units (ADM2, ADM1 and ADM0) is adapted from the Global Administrative Unit Layers (GAUL) (v2015) implemented by FAO.
13. The informationa about climate indicators are obtained from the Climate Change Knowledge portal (CCKP) published by World Bank Group and from additional studies Licenses
14. Adani Annual Report 2022 - Google Search. <https://www.google.com/search?q=adani+annual+report+2022>
15. Adani Sustainability Report 2022 – Google Search.<https://www.google.com/search?q=adani+sustainability+report+2022>
16. Adaptation to Climate Change. https://climate.ec.europa.eu/eu-action/adaptation-climate-change_en.
17. Administration. "What Is a Low-Carbon Economy?" The Lighthouse, 15 Mar. 2019, <https://lighthouse.mq.edu.au/article/please-explain/march-2019/what-is-a-low-carbon-ecomony>.
18. AEL-2023.Pdf. <https://www.adanienterprises.com/-/media/Project/Enterprises/Investors/Investor-Downloads/Annual-Report/AEL-2023.pdf>.
19. Cpcb Single Use Plastic Ban - Google Search.
20. "Ethics in Business Communication: Examples, Types & Importance." Clearinfo, <https://clearinfo.in/blog/ethics-in-business-communication/>.
22. Regional Climate Model - Glossary of Meteorology. https://glossary.ametsoc.org/wiki/Regional_climate_model.
23. Risk-Management.Pdf. <https://www.adanienterprises.com/-/media/Project/Enterprises/Investors/Board-and-Committee-Charters/RiskManagement.pdf?la=en&hash=008A35B8324D3014B3ED586E77C11021>.
24. Setzer, Maria. Climate Modeling. <https://www.gfdl.noaa.gov/climate-modeling/>. World.
25. The Paris Agreement | UNFCCC. <https://unfccc.int/process-and-meetings/the-paris-agreement>.
26. "The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities." TCFD Knowledge Hub, <https://www.tcfdhub.org/scenario-analysis/>.
27. "Topic 2: Future Changes, Risks and Impacts." IPCC 5th Assessment Synthesis Report, http://ar5-syr.ipcc.ch/topic_futurechanges.php.
28. Topic 2: Future Changes, Risks and Impacts — IPCC. https://ar5-syr.ipcc.ch/topic_futurechanges.php.
29. US EPA, OLEM. What Is a Circular Economy? 3 Nov. 2021, <https://www.epa.gov/circulareconomy/what-circular-economy>.
30. "What Are Low-Carbon-Emitting Technologies? An Expert Explains." World Economic Forum, 3 Feb. 2022, <https://www.weforum.org/agenda/2022/02/what-are-low-carbon-emitting-technologies-an-expert-explains/>.
31. "What Does Net Zero Emissions Mean and How Can We Get There?" World Economic Forum, 9 Nov. 2021, <https://www.weforum.org/agenda/2021/11/net-zero-emissions-cop26-climate-change/>.
32. What Is a GCM? https://www.ipcc-data.org/guidelines/pages/gcm_guide.html.
33. Attribution: Figures 8-11 were sourced from PhysRisk & Mapbox. <http://physrisk-ui-latest-sandbox.apps.odh-cl1.apps.os-climate.org/>
34. <https://climateinformation.org/data-variables/what-do-different-rcps-mean/>
35. Moss et. Al (2008). Towards New Scenarios for Analysis of Emissions, Climate Change, Impacts, and Response Strategies. Technical Summary. IPCC Expert Meeting Rep.



B I L A N C I A

About Bilancia

Bilancia Consulting Private Limited provides advisory services and solutions to catalyse the fulfilment of our clients' sustainability aspirations in diverse sectors. We bring demonstrated expertise and excellence in various sustainability-linked business activities like developing ESG policies, analysis and drafting of sustainability disclosures, technical analysis for assessing the environmental footprint of products, and sustainable product development assessments. Our team represents the qualities imbibed through a holistic, rigorous, and analytical educational experience.

Bilancia Consulting Pvt. Ltd.
B-602, 6th floor, Shapath Hexa,
Near Gujarat High Court, SG Highway,
Sola, Ahmedabad - 380060.
general@bilanciaconsulting.co.in
+91 9510144494

Disclaimer: The TCFD report prepared by Bilancia Consulting for AEL is intended for informational purposes only and does not constitute professional advice or guarantee the accuracy of the information provided. The report may include data from third-party sources, and while efforts have been made to ensure its accuracy, Bilancia does not assume responsibility for any inaccuracies. Forward-looking statements and future projections are subject to uncertainties. Users of the report should exercise their own judgment, and Bilancia disclaims liability for any actions taken based on the report. The report may be subject to changes without notice.