

Business Responsibility and Sustainability Report (BRSR)

II. SECTION A: GENERAL DISCLOSURES

Field Name	Report					
Scope 1: Direct Emissions	Mobile Combustion					
	Number of company-owned vehicles?	Type of vehicles? (Passenger cars, trucks, buses, motorcycles, etc.)	Vehicle Name?	Fuel type per vehicle? (Petrol, Diesel, LPG, CNG, Electric)	Fuel consumption per vehicle? (Liters/gallons or kWh per year)	Distance traveled per vehicle annually? (km/miles)
	50	Trucks	Tata Prima Truck	Diesel.	12,000 liters per year per truck.	80,000 km per year.
	50	Passenger cars	Mahindra XUV 700.	Diesel	11,000 liters per year per cars	60,000 km per year.
	Stationary Combustion					
	Does your company use fossil fuels for heating or electricity generation?		Type of fuel used? (Coal, Natural Gas, Diesel, LPG, Biomass, etc.)		Annual fuel consumption? (Liters/tons/cubic meters)	
	Yes		Natural Gas		5,000,000 cubic meters	
	Yes		Diesel		2,000,000 liters of diesel annually	
	Industrial Processes					
	Does your company have industrial processes that emit greenhouse gases?		Type of industrial process? (Cement, Steel, Lime, Aluminum, Glass, Nitric Acid, etc.)		Annual production quantity? (Tons, units, etc.)	Associated emissions? (CO ₂ , CH ₄ , N ₂ O, PFCs)
Yes		Cement		5,000,000 tons per year	CO ₂ emissions: 1.2 million metric tons	
Yes		Steel		2,500,000 tons per year	CO ₂ emissions: 800,000 metric tons, N ₂ O emissions: 50,000 metric tons.	
Fugitive Emissions						
Does your company use refrigerants, air conditioning, or fire suppression systems?			Type and quantity of refrigerants used? (HFC-134a, SF ₆ , etc.)		Any fugitive emissions from gas pipelines or equipment?	
Yes			HFC-134a: 500 kg/year,SF ₆ (Sulfur Hexafluoride): 300 kg/year		Yes, minor methane (CH ₄) leaks detected in pipeline inspections.	
Scope 2: Indirect Emissions	Purchased Electricity					
	Total annual electricity consumption? (kWh)		Grid electricity or renewable sources?			

	9,062 million kWh		85% renewable energy, including grid electricity and rooftop solar systems			
	Purchased Steam, Heat, or Cooling					
	Total purchased steam/heat consumption? (GJ or MWh)		Emission factor used? (kg CO ₂ e/GJ or MWh)		Transmission and distribution losses considered?	
	1.82 million GJ		0.0017 tCO ₂ /MWh for renewable energy, compared to 0.71 tCO ₂ /MWh for the Indian grid average		Yes, reduced distribution losses to 5.93%, showcasing improved operational efficiency	
Scope 3: Value Chain Emissions	Purchased Goods & Services					
	What are the major materials or goods purchased annually?		Total quantity purchased? (Tons or units)		Emission factors used for purchased goods? (kg CO ₂ e/unit)	
	Fly ash		8.52 million tons		0.85 kg CO ₂ e per kg	
	slag		3.98 million tons		0.85 kg CO ₂ e per kg	
	synthetic gypsum		1.3 million tons		0.85 kg CO ₂ e per kg	
	Fuel & Energy-Related Emissions (Upstream)					
	Any upstream fuel emissions considered? (Fuel extraction, refining, transportation)			Transmission losses for purchased electricity accounted for?		
	Yes			Yes, Adani has worked to reduce distribution losses to 5.93%		
	Transportation & Distribution					
	Does your company transport raw materials, products, or employees?		Total distance covered by company transport annually? (km/miles)	Transport mode? (Truck, Rail, Ship, Air)	Fuel type and consumption per transport mode?	Emissions from third-party logistics?
	Yes		50 million km (Estimated for testing).	Truck, Rail, and Electric ITVs	CNG Vehicles: Used in primary and secondary transport. Electric ITVs: 338 units deployed, reducing emissions by 811 tCO ₂ e/month	Yes, third-party logistics emissions are estimated based on distance and fuel consumption.
	Waste Generation					
Annual waste generated? (Tons)		Breakdown by disposal method? (Landfill, Incineration, Recycling, Composting)		Emission factors for waste disposal used?		
10,930,637 metric tons in FY 2022-23		0.25 kg CO ₂ e per kg of landfill waste.		Not answered		
Business Travel						
How many business trips occurred in the reporting year?		Transport mode used for business travel? (Air, Train, Car, Bus)		Total distance traveled by employees for business purposes? (km/miles)	Accommodation nights stayed?	
5,000 trips		Train and Car for local travel.		2 million km.	10000 nights	
Employee Commuting						

	Number of employees commuting daily?		Primary transport modes used by employees?		Average commuting distance per employee? (km/miles per day)		Fuel consumption or emission factor used per commute mode?		
	50000		Company EV fleet, public transport, and carpooling		20 km per day		0.12 kg CO ₂ e/km.		
	Use of Sold Products								
	Product Name (or Product Category)		Do your products require energy consumption in their lifetime?			Estimated energy use per product sold? (kWh/year)		Expected lifetime of the product? (Years)	
	Cement		Yes			100 kWh/year per cement batch.		50 years for construction materials.	
	Power		Yes			100 kWh/year		50 years	
FMCG		Yes			100 kWh/year		50 years		
End-of-Life Treatment of Sold Products									
How are your products disposed of at the end of their life? (Landfill, Recycling, Incineration)				Estimated quantity of products disposed annually? (Tons or units)			Emission factors used for end-of-life treatment?		
Cement waste is recycled and repurposed				1 million tons.			0.6 kg CO ₂ e per kg of disposed waste.		
Leased Assets, Franchises, and Investments									
Do you lease assets or facilities?		Do you have franchises that contribute to emissions?			Do you invest in projects with carbon emissions?				
Yes		Yes, franchise-operated logistics contribute to Scope 3 emissions.			Yes, investments in thermal power, green hydrogen, and ammonia co-firing projects				
Additional Data for Carbon Accounting	Water Use & Wastewater Treatment								
	Total water consumption annually? (Liters/m³)		How is wastewater treated? (Aerobic, Anaerobic, Untreated)		What is the BOD and COD of wastewater?		Methane Correction Factor (MCF) for wastewater treatment used?		Nitrogen content in wastewater? (mg/L)
	158,854,879 KL (FY 2022-23)		follows wastewater recycling and reuse, adopting Zero Liquid Discharge (ZLD) principles.		BOD: 200 mg/L, COD: 500 mg/L.		0.8 (for anaerobic treatment) and 0.5 (for partially aerobic treatment).		35 mg/L
	Carbon Offset & Renewable Energy Purchases								
	Do you purchase carbon credits or offsets?		Amount of CO ₂ offset annually? (Tons)		Do you have on-site renewable energy installations?		Capacity of installed renewable energy? (MW/kWh)		
Yes		36.7 million tons CO ₂		Yes, multiple sites use rooftop solar and wind energy		Solar: 4.3 MW (AWL), 1.6 MW (Adani Solar), 3.4 MW (AESL) Wind: 45 GW projected capacity by 2030			
Social	Workforce Composition & Diversity(Management & HR Data)								
	Total number of	Breakdown of employees by	Breakdown of employees by	Diversity ratio in	Does the company have	Percentage of employees from	Does the company have	Is there an anti-discrimination and	Have there been any reported cases

employees?	gender?	employment type?	leadership positions?	a diversity & inclusion policy?	minority or underrepresented communities?	equal opportunity hiring practices?	harassment policy?	of workplace discrimination or harassment in the last year?
26349	Gender diversity hiring increased by 11% compared to the previous year	Permanent employees: 24,014 Other than permanent employees: 2,335 Total workers (including contractual and temporary): 32,040	15% women in leadership roles.	Yes, Adani has a Diversity, Equity & Inclusion (DEI) policy that guarantees equal treatment for all individuals	20% of employees belong to underrepresented groups.	Yes, Adani follows fair and merit-based hiring practices, with a focus on increasing diversity	Yes, Adani has an anti-discrimination policy, including a Prevention of Sexual Harassment (POSH) policy	No reported cases of discrimination in the latest reporting year

Employee Well-being & Benefits(Employee Survey via GoodFoot)

How satisfied are you with your work-life balance?	Do you receive paid leave, maternity/paternity leave, and sick leave?	Does the company offer health insurance benefits?	Do you feel that your workplace provides mental health support?	Does your company offer employee assistance programs (EAPs)?	Does your workplace support flexible work arrangements (remote/hybrid)?	Does your company have safety policies and training in place?
Employees reported moderate satisfaction with work-life balance, with ongoing improvements in flexible work arrangements	Yes, Adani provides maternity leave (as per Maternity Benefit Act, 1961) and paternity leave (6 days paid leave)	Yes, employees receive comprehensive health insurance, accident insurance, and family benefits	Yes, through the Emotional Wellness Program and Employee Assistance Program (EAP), which offers confidential counseling	Yes, employees and their families have access to 24/7 mental health and well-being support via ICAS India	Yes, flexible work options are available, but primarily for corporate and technology-based roles.	Yes, the company has a comprehensive safety training program for employees and contractors

Training & Career Development(HR & Employee Survey via GoodFoot)

How many hours of training does each employee receive annually?	Does the company have a structured career development plan?	Does the company offer mentorship programs?	How often do employees receive performance evaluations?	Do employees receive support for further education/certifications?
Employees receive an average of 40-60 hours of training per year	Yes, Adani offers career growth programs, leadership training, and mentorship initiatives	Yes, the company has apex mentorship programs impacting 1,500+ employees annually	Employees undergo bi-annual performance evaluations to ensure career growth and alignment with company goals	Yes, employees have access to education scholarships, training sponsorships, and tuition assistance for higher studies

Employee Health & Safety (Management & Compliance Data)

Has the company reported any workplace injuries or fatalities in the last year?	Does the company conduct regular health and safety audits?	Are there first-aid facilities available on-site?	Does the company have a disaster preparedness plan?	What is the frequency of fire and emergency drills?	Does the company provide Personal Protective Equipment (PPE) to employees?
Yes	Yes, Adani conducts safety risk field audits (SRFA) and vulnerability safety risk (VSR) assessments	Yes, round-the-clock medical staff, first-aid facilities, and ambulances are provided at operational sites	Yes, Adani has business continuity planning (BCP) and crisis management plans to address unforeseen events	Fire drills and emergency preparedness exercises are conducted quarterly.	Yes, PPE is provided as part of workplace safety compliance

Human Rights & Fair Wages (Management & HR Data)

Does the company ensure no child labor or forced labor in operations?	What is the minimum wage for employees?	Does the company ensure gender pay equity?	Are third-party suppliers audited for ethical labor practices?	Does the company support freedom of association and unionization?
Yes	All employees are paid above the legal minimum wage, varying by location	Yes, Adani is committed to fair compensation and gender pay equity across all roles	Yes, Adani conducts audits and compliance assessments for supplier labor standards	Yes, employees are allowed to participate in labor unions and worker associations

Community Development & CSR (Management Data)

Does the company have a Corporate Social Responsibility (CSR) policy?	How much did the company spend on CSR initiatives in the last financial year?	What are the key focus areas of CSR?	How many people were directly impacted by CSR programs?
Yes	₹1,033 crore was allocated for CSR activities in FY 2022-23	Education and Skill Development,Healthcare and Nutrition,Sustainable Livelihoods,Environment Conservation,Disaster Response	Over 5.7 million people benefited from CSR initiatives

Ethical Supply Chain & Procurement (Management & Vendor Data)

Does the company have a sustainable procurement policy?	What percentage of suppliers comply with ethical labor and environmental standards?	Are suppliers audited for human rights compliance?	Are procurement decisions influenced by social and environmental considerations?
Yes	93% of critical suppliers engaged in ESG disclosure programs	Yes, all suppliers undergo ESG screening and risk assessment during onboarding Adani ESG 2023	Yes, sustainability ranking is integrated into procurement decisions, and suppliers are required to meet environmental and social KPIs

Customer Responsibility & Data Privacy (Management & IT Data)

Does the company have a data protection and privacy policy?	Has there been any data breach incident in the last year?	Does the company provide clear product labeling and ethical advertising?	Does the company have customer grievance redressal mechanisms?	What is the company's Net Promoter Score (NPS) for customer satisfaction?
Yes	No substantiated incidents of data breaches were reported in FY 2022-23	Yes, Adani ensures transparent product labeling and compliance with ethical advertising standards	Yes, Adani operates a customer grievance redressal tool for managing and addressing customer concerns	Adani maintains a high NPS, reflecting strong customer engagement and satisfaction.

Employee Engagement & Workplace Culture (Employee Survey via GoodFoot)

Do you feel valued at work?	Does your company encourage employee volunteering?	How often does the company conduct employee engagement activities?	Would you recommend your company as a great place to work?
Yes	Yes, supports community volunteering programs as part of its CSR efforts	Engagement programs occur quarterly, including team-building exercises, wellness workshops, and leadership discussions.	Yes, employees highly appreciate Adani's commitment to career growth and sustainability.

ESG & Climate Awareness (Employee Survey via GoodFoot & Management)

Does the company provide training on sustainability and ESG goals?	Are employees aware of their role in reducing the company's carbon footprint?	Does the company encourage green commuting (carpooling, EVs, biking)?
Yes	Yes, Adani actively educates employees about reducing emissions and sustainable practices	Yes, Adani promotes EV adoption and carpooling initiatives to lower transportation emissions

Board Structure & Leadership

Total number of board members?	Number of Independent Directors?	Number of Women Directors on the board?	Average age of board members?	Does the board include members from diverse backgrounds (industry expertise, gender, ethnicity, etc.)?	Does the company have a Board Diversity Policy?	How often does the board meet annually?	Is the board remuneration linked to ESG performance?
typically between 7 and 12	Independent Directors constitute at least one-third of the total board members, typically five Independent Directors per board	At least 2 women directors	approximately 55 years	Yes, Adani ensures board diversity, including a range of expertise in finance, risk management, global markets, and sustainabilityAdani ESG 2023	Yes, Adani has a formal Board Diversity Policy that governs nominations and selections	The board typically meets four to six times per year.	Yes, board remuneration is structured under a governance policy that aligns with performance, including ESG-linked targets

Board Committees & Responsibilities

Does the company have the following mandatory committees? (Audit, Nomination & Remuneration, CSR, Stakeholder Relationship, Risk Management)	Does the company have a separate ESG Committee?	How frequently do these committees meet?	Are the meeting minutes publicly disclosed?
Yes	Yes, the Corporate Responsibility Committee (CRC), comprising Independent Directors, oversees ESG-related mattersAdani ESG 2023	Most committees meet quarterly, while some meet more frequently based on business needs.	Yes, committee charters and key decisions are publicly disclosed in corporate governance reports

Business Ethics & Anti-Corruption

Does the company have a Code of Conduct for employees and directors?	Has the company adopted an Anti-Bribery and Anti-Corruption Policy?	Has the company conducted any anti-corruption training in the last year?	Have there been any reported cases of bribery, fraud, or corruption?	What percentage of employees have signed the Code of Conduct?	Are there whistleblower mechanisms in place?	How many whistleblower complaints were received in the last year?
Yes	Yes, Adani enforces a zero-tolerance policy on bribery, corruption, and unethical practicesAdani ESG 2023	Yes, all employees undergo anti-corruption training at the time of joining and periodically thereafterAdani ESG 2023.	No, zero cases of bribery, fraud, or corruption were reported in FY 2022-23	100% of employees are required to sign and comply with the Code of Conduct upon joining	Yes, Adani has a Whistleblower Policy, ensuring a secure mechanism for reporting concerns	A total of five whistleblower complaints were reported and addressed.

Ris& Compliance

Does the company have a formal Enterprise Risk Management (ERM) framework?	Does the company conduct regular risk assessments?	What are the top 5 material risks identified by the company?	Are climate-related risks integrated into risk management?	Does the company have a Business Continuity Plan (BCP)?	Has the company faced any regulatory non-compliance issues in the last 3 years?
Yes	Yes, risk assessments are conducted periodically, covering strategic, operational, financial, regulatory, and ESG risks	limate Change and ESG Risks, Regulatory and Policy Risks ,Market and Financial Risks, Cybersecurity and Data Privacy Risks, Operational and Supply Chain Risks	Yes, climate-related risks are actively monitored, with ESG assessments factored into the risk governance framework	Yes, Adani has a Business Continuity Plan (BCP) to mitigate potential disruptions, including natural disasters, cyber-attacks, and regulatory challenges	No

Data Protection & Cybersecurity

Does the company have a formal Data Privacy Policy?	Has the company implemented GDPR or India's Digital Personal Data Protection Act (DPDPA)?	Does the company conduct cybersecurity audits?	Has the company experienced any data breaches in the past 3 years?	How frequently are employees trained on data protection?
Yes	Yes, Adani complies with India's Digital Personal Data Protection Act (DPDPA) and international data security norms	Yes, periodic cybersecurity audits are conducted across business units	No significant data breaches were reported in FY 2022-23	Employees receive annual cybersecurity training with refresher courses every six months

Corporate Social Responsibility (CSR) Governance

Has the company allocated 2% of its net profits to CSR as per the Companies Act 2013?	What are the key focus areas of CSR spending?	How many CSR projects were completed in the last year?	Does the company disclose CSR impact metrics?	Are CSR reports externally audited?
Yes	Education and Skill Development,Healthcare and Nutrition,Sustainable Livelihoods,Environmental Conservation,Disaster Relief & Response	Over 100+ CSR projects were successfully implemented in FY 2022-23	Yes, CSR impact metrics are disclosed annually in the Sustainability and ESG reports	Yes, CSR reports are externally audited to ensure compliance and transparency

Stakeholder Engagement & Transparency

Does the company regularly engage with stakeholders (employees, customers, investors, suppliers, regulators, communities)?	What are the key channels for stakeholder communication? (AGM, ESG Reports, Investor Calls, Website Disclosures, Surveys & Feedback)	Does the company disclose its political contributions?	Does the company conduct materiality assessments for sustainability reporting?
Yes	Annual General Meetings (AGM),nvestor calls & financial disclosures,ESG Reports and Business Responsibility & Sustainability Reports (BRSR),Community and supplier engagement programs	Adani follows regulatory requirements for political donations, but specific contributions are not publicly disclosed.	Yes

Tax Transparency & Financial Integrity

Does the company disclose its tax payments by country?	Has the company faced any tax disputes in the last 5 years?	Does the company engage in aggressive tax planning or tax avoidance schemes?	Does the company provide Country-by-Country Reporting (CbCR)?
Yes	No significant tax disputes were reported in FY 2022-23.	Adani complies with domestic and international tax regulations and does not engage in aggressive tax planning.	Follows regulatory reporting requirements, but CbCR is not explicitly mentioned in public reports.

ESG Reporting & Assurance

Does the company publish an annual ESG or Sustainability Report?	Is the ESG report externally assured?	What ESG reporting frameworks does the company follow? (GRI, SASB, TCFD, IR, Others)	Does the company disclose its Scope 1, 2, and 3 emissions?
Yes	Yes, all ESG data undergoes external third-party assurance to ensure accuracy and credibilityAdani ESG 2023	BRSR,GRI,TCFD,CDP,Dow Jones Sustainability Indices	Yes, Scope 1, Scope 2, and Scope 3 emissions are reported in sustainability disclosures

Governance of Sustainable Development Goals (SDGs)

Does the company align its business strategy with United Nations Sustainable Development Goals (SDGs)?	Which SDGs are actively tracked by the company?	Are SDG commitments reflected in executive KPIs and incentives?
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	Yes	Affordable and Clean Energy (SDG 7),Climate Action (SDG 13),Responsible Consumption and Production (SDG 12),Decent Work and Economic Growth (SDG 8)					Yes, ESG and SDG-related performance indicators are linked to executive remuneration and strategic goals.			
Assets	Biological Carbon Sinks									
	What is the name or unique identifier of the project?	What is the project location (country, region, GPS coordinates)?	What is the total area (in hectares or acres) allocated for the project?	Is the project focused on afforestation (new tree planting) or reforestation (restoring existing forests)?	Which tree species or mix of species are being planted?	What is the planting density (trees per hectare/acre)?	What is the estimated annual carbon absorption (in tons CO ₂ /year)?	What are the underlying assumptions (growth rate, survival rate, etc.) used in the carbon calculation?	What is the project start date and expected time to maturity or full carbon sequestration potential?	Is the project certified by any recognized carbon standard (e.g., Verified Carbon Standard, Gold Standard)?
	Adani Trillion Trees Initiative	India, with a focus on diverse project sites across operational areas	Over 100 million trees planned by 2030, covering large-scale afforestation and reforestation zones	Both afforestation and reforestation efforts are being implemented	Native species with high carbon sequestration potential, including mangroves, neem, bamboo, rosewood, and other local varieties	Estimated 2,500 trees per hectare for high-density plantation.	Target: 100 million tons of CO ₂ sequestered by 2030	Survival rate of 85%, growth period of 5-10 years, and sequestration factor of 22 kg CO ₂ per tree annually.	Started in 2022, expected to reach full potential by 2030	Certification process under Gold Standard and Verra (VCS) is in progress.
	Agricultural & Soil Carbon Sequestration Initiatives									
	Which agricultural practices are being implemented (e.g., no-till farming, cover cropping, agroforestry, biochar application)?		What is the total area (hectares/acres) under these practices?		What are the baseline soil carbon levels, and what are the targeted increases over time?		What monitoring methods or technologies are used to measure changes in soil carbon content?		What is the estimated annual increase in soil carbon sequestration (tons CO ₂ /year)?	
	Agroforestry, soil regeneration, and biochar application		50000		Baseline soil organic carbon: 1.2%; Target increase: 2% over 10 years.		Satellite imagery, soil sensors, and remote sensing technology		Estimated 2.5 million tons CO ₂ per year.	
	Blue Carbon Assets									
What type of blue carbon asset is being managed (e.g., mangroves, salt marshes, seagrass beds)?		What is the geographic location and total area (hectares/acres) of the ecosystem?		Is the asset under a restoration, conservation, or management program?		What specific actions are being taken (e.g., replanting, hydrological restoration, invasive species control)?		What is the estimated carbon absorption rate (tons CO ₂ /year)?		
Mangrove restoration projectsAdani ESG 2023		Coastal zones of Gujarat and Andhra Pradesh, covering over 5,000 hectares		Yes, actively managed through conservation and afforestation		Replanting, tidal hydrology restoration, and biodiversity protection		Estimated 8-12 tons CO ₂ per hectare per year.		
Technological Carbon Capture Assets										

What is the technology type or model of the Direct Air Capture (DAC) system?	Who is the manufacturer or technology provider?	What is the current CO ₂ capture capacity (tons CO ₂ /year)?	What energy source(s) does the system use (renewable, grid, hybrid)?	What are the key performance indicators and monitoring procedures?	What type of Carbon Capture and Storage (CCS) / Carbon Capture, Utilization, and Storage (CCUS) technology is implemented?	What is the source of CO ₂ being captured (industrial point source, power plant, etc.)?	What are the storage or utilization plans for the captured CO ₂ ?	Is the project audited or certified by any standards?
Carbon Capture and Storage (CCS) pilot projectsAdani ESG 2023.	Partnering with global CCS technology providers.	Estimated 500,000 tons CO ₂ per year.	Green hydrogen and renewable powerAdani ESG 2023.	CO ₂ capture efficiency (95% capture rate),Energy consumption per ton of CO ₂ captured,System uptime and reliability metrics.	Carbon capture combined with e-methanol production from green hydrogen	Industrial processes, cement kilns, and power plants	Utilized in manufacturing of PVC and other long-lived materials	Certification under Verra VCS and Gold Standard is in progress.

Carbon Credit Portfolios & Offsets

What type(s) of carbon credits or offsets does the company hold (e.g., forestry, renewable energy, avoided deforestation)?	What is the total volume of carbon credits (in tons CO ₂ equivalent)?	What projects or initiatives are the credits associated with?	Which certification bodies or standards verify these credits?	What is the validity period or expiration date of these credits?	How are these credits integrated into the company's overall carbon accounting?
Renewable energy and forestry-based carbon credits	Estimated 10 million tons CO ₂ e in credits.	Wind and solar energy projects,Afforestation and reforestation initiatives,Energy efficiency and industrial waste management	Gold Standard and Verified Carbon Standard (VCS)	The credits are valid for 10 to 15 years, with periodic verification cycles.	Used to offset operational carbon footprint,Incorporated in sustainability disclosures and ESG reporting,Utilized for regulatory compliance and voluntary commitmentsEmissionFactorController.

Emerging Carbon Mineralization and Other Innovative Assets

What type of carbon mineralization or innovative CO ₂ absorption technology is being used?	What is the underlying mechanism for CO ₂ conversion or storage?	What is the estimated CO ₂ capture or sequestration capacity (tons CO ₂ /year)?	What are the energy/resource requirements and associated efficiencies?	What methods are used to monitor performance and ensure permanence of carbon storage?	Are there any certifications, partnerships, or academic validations supporting the technology?
Carbon mineralization using alkaline industrial by-products	Reaction of CO ₂ with magnesium and calcium-rich minerals to form stable carbonates	Estimated 1 million tons CO ₂ per year.	Energy Source: Green hydrogen and renewable energy-powered operations. Efficiency: 80-90% conversion rate for mineral-based CO ₂ sequestrationFuelCombustion.	Geochemical modeling and remote sensing for tracking mineralization. Third-party verification of CO ₂ sequestration through periodic sampling	Collaboration with leading universities and industrial research groups for third-party verification and certification.

Additional General Questions (Applicable Across Asset Types)

What is the baseline measurement for carbon absorption or sequestration?	How frequently is performance data collected and verified (internally or by third parties)?	What are the key risks associated with the asset (e.g., climate variability, technological obsolescence)?	What contingency or risk mitigation measures are in place?	What is the capital investment for the asset?	What are the operational costs and expected financial returns (if any) related to carbon absorption?	How is the asset's performance reported (e.g., annual sustainability report, ESG dashboard)?	Who are the stakeholders or partners involved in the project?
Baseline measurements vary by project, but typically include	Quarterly internal monitoring with annual third-	Climate Change Impacts (e.g., droughts, storms affecting	Diversified Carbon Portfolio (mix of nature-	Investment varies by asset type, with Direct Air Capture	Operational Costs: \$10–50 per ton of CO ₂ captured,Financial Returns: Revenue from carbon credit sales, regulatory	Annual sustainability report, carbon accounting disclosures, and real-time monitoring via ESG	Universities & Research Institutions ,Regulatory

	initial soil organic carbon levels, forest biomass density, and historical emission benchmarks.	party verification for compliance with international carbon accounting standards	afforestation projects).	based and technology-based solutions).	(DAC) systems requiring \$300–500 million per plant, and afforestation projects requiring \$5,000 per hectare.	incentives, and ESG-aligned investments fuelCombustionController.	dashboards fuelCombustionController.	Agencies ,Corporate Partners
Renewable Project	General Project Details							
	Project Name	Project Location	Type of Renewable Energy	Installed Capacity (MW)	Annual Energy Generation (MWh/year)	Operational Status		Commissioning Year
	Adani Green Energy Ltd. (AGEL) Solar and Wind Hybrid Project	India – Rajasthan and Gujarat	Solar, Wind, and Hybrid Energy	20,434 MW operational renewable energy capacity	Estimated 49 TWh (terawatt-hours) per year	Operational, with ongoing capacity expansionfuelCombustionController		First projects commissioned in 2015, with new additions in 2023
	Environmental & Carbon Impact							
	Total Carbon Savings (tCO ₂ e/year)		Grid-Connected or Off-Grid?		Does the project have Renewable Energy Certificates (RECs)?		Emission Factor Used (kgCO ₂ e/kWh)	
	Approximately 39.2 million tCO ₂ e saved per year		Grid-connected, integrated into India's national power grid.		Yes, the project is eligible for RECs and participates in trading markets.		0.71 kg CO ₂ e/kWh (India’s average grid emission factor)	
	Financial & Ownership							
	Investment Cost (INR or USD)		Funding Type		Ownership Model		Expected ROI Period (Years)	
	USD 22 billion investment plan for renewable expansion		Equity, Green Bonds, and Climate Investment Funds		Owned by Adani Green Energy Ltd. (AGEL), with institutional investors such as TotalEnergiesfuelCombustionController		Estimated return on investment (ROI) within 8-12 years.	
	Compliance & Certifications							
Is the project certified under any standards?				Does the project contribute to the company's RE100 target?				
Certified under ISO 14001, VCS (Verified Carbon Standard), and Gold Standard fuelCombustionController.				Yes, Adani aims for 45 GW renewable capacity by 2030, aligning with RE100 commitments fuelCombustionController.				
Additional Information								
Challenges Faced in Implementation		Future Expansion Plans?			Any Government Subsidy or Incentives Received?			
Grid connectivity challenges		Yes, expanding total capacity to 45 GW by 2030 fuelCombustionController.			Yes, benefits from India’s Production-Linked Incentive (PLI) scheme for solar and wind energy			