

Identifying and managing risk

ACEN's enterprise risk management framework

Our governance framework is constantly evolving to align with global best practices of transparency, integrity, and accountability. We continue to improve our internal governance infrastructure to satisfy the changing business environment and expectations of our regulators, shareholders, business partners, customers, suppliers, employees and other stakeholders.

As we embark on an aggressive growth strategy, we must ensure that we have the proper internal control environment to keep up with the rapid pace of our business expansion. With this, in 2022, ACEN appointed a Chief Risk Officer, decoupling the role from the Chief Finance Officer, who then set up the Risk and Insurance Management unit. Since then, ACEN has institutionalized the group's **Enterprise Risk Management Policy Statement**, which formalizes our commitment to incorporate the ERM processes into our core business and practices, not only to mitigate potential risks but also to identify viable opportunities. In addition, we formalized ACEN's **Risk Appetite Statement**, which provides guidance for management on how risks are identified, assessed, evaluated, and addressed. Both policy statements are approved by the Board of Directors.

The Board has established clear ownership of managing enterprise-wide risks with three different management levels, with delineation around three categories: strategic, operational and project or transaction risks. This is itemized in ACEN's **Risk Ownership Structure**.

In terms of risk management process, ACEN follows ISO31000:2019 Risk Management – Guidelines, which is conducted across its subsidiaries on an annual basis. To aid risk owners in the identification of enterprise-wide risks, ACEN created a Risk Universe that covers external risks, internal risks, and natural hazards.

ACEN conducts risk assessment exercises wherein risk owners assess risks under four categories: health and safety, environmental impact, financial impact, and reputational impact. In 2022, the Board's Risk Management and Related-Party Transaction Committee and senior management have reviewed the top five risks for ACEN. This aided management in prioritizing the monitoring of the risk factors and formulation and implementation of mitigation plans.



Regular workshops and dialogues with different internal teams ensure we mitigate the risks in our plant operations as we aggressively grow our renewables portfolio.

ACEN's top 5 risks in 2022

1. Organizational risks

Risk category: Internal

Description: As ACEN continues to grow its power generation portfolio in pursuit of its ACEN2030 Vision, the need to recruit and develop its employee base is critical.

Risk mitigation: For 2022, learning and development as well as recruitment, were major thrusts for ACEN's business units and HR team. In addition, initiatives to boost employee engagement were also given priority.

2. Scalability of processes and systems

Risk category: Internal

Description: ACEN management recognizes the need to upscale its business processes and systems to support the growing portfolio of operational assets, a global workforce, and an aggressive pipeline of development projects.

Risk mitigation: Mitigation actions for this risk include improving and streamlining business processes, deploying the appropriate technologies, and leveraging outsourced services.

3. Growth and market risks

Risk category: Internal and External

Description: Renewable energy is a growth sector and further accelerated by the energy transition movements due to the Ukraine crisis. While this is an opportunity for ACEN, this also presents challenges such as availability of supply, global logistics, commodity prices, and government regulations.

Risk mitigation: ACEN expanded its pipeline of development projects through strategic partnerships with global developers and strong local players.

4. Operational risks

Risk category: Internal

Description: As more and more development projects become operational, ACEN's ability to efficiently operate power generation assets will be put to the test.

Risk mitigation: Each project site deploys standard operating procedures that ensure asset availability, including the enhancement of the group's Business Continuity Management.

5. Regulatory and political risks

Risk category: External

Description: The global power industry is transitioning towards more carbon-friendly power generation options. While this generally presents opportunities, it also presents challenges as ACEN must align with the regulatory changes.

Risk mitigation: ACEN participates in consultative dialogues conducted by regulators to share our perspectives and stay informed of regulatory developments.

ACEN's Task Force on Climate-related Financial Disclosures (TCFD) report

Since 2021, ACEN has been a supporter of the **Task Force for Climate-Related Financial Disclosures** (TCFD), established by the Financial Stability Board to develop voluntary, consistent, climate-related financial disclosures to improve transparency on climate risks and opportunities. These disclosures revolve around four thematic areas: governance, strategy, risk management, and metrics and targets.



GOVERNANCE

Board oversight on climate governance

The Board plays an integral role in ACEN's climate agenda, including the increasing integration of climate-related issues into our broader corporate

strategy. In particular, the board reviews and approves major strategic decisions proposed by senior management around energy transition, decarbonization strategy, portfolio of top risks including climate, and medium and long-term climate targets. Further, the board reviews and approves management's specific responsibilities against ESG targets, including the development of science-based metrics and targets towards ACEN's Net Zero goal by 2050.

In recent years, key strategic decisions of the Board have had an increased focus on climate change. These include the establishment of ACEN's **Environmental and Social Policy in 2020**, which defines ACEN's transition to a low carbon portfolio and divestment of its coal plant by 2030, as well as the commitment to **Net Zero by 2050** announced in 2021. The board was likewise instrumental to the divestment of the South Luzon Thermal Energy Corporation coal plant through the landmark **Energy Transition Mechanism**. In addition, the Board supported management in developing **ACEN's long-term aspiration to reach 20 GW of attributable generating capacity by 2030**.



To sharpen its focus on ACEN's sustainability agenda, the Board created in 2022 the Sustainability Committee to review strategic objectives, monitor the progress of sustainability initiatives, including climate change, and lead all climate-related matters. Since its inception, the **Sustainability Committee** has provided oversight on ACEN's key climate initiatives: the Net Zero commitment, transition to a low carbon portfolio and carbon emission reduction targets.

Additionally, the Board's Risk Management and Related Party Transaction Committee has oversight of ACEN's **Enterprise Risk Management system**, which includes climate risks, as well as all material related party transactions.

Management oversight on climate governance

Management is primarily responsible for the execution of Board-approved climate-related strategies and monitoring of performance. In addition, it designs and implements an adequate and effective system of internal controls and risk management processes to ensure achievement of objectives while maintaining compliance with laws, rules, and regulations.

To facilitate the flow of strategic and operational information among key decision-makers, the Company has created in 2022 the ESG Committee at the executive level to review, monitor and aid senior management and the Board on policymaking and decision-making processes around ESG issues. The Committee is composed of the functional heads of governance and compliance, sustainability, investor relations and headed by the Chief Risk, Human Resources and Administrative Officer. In addition, ACEN created the Risk and Health and Safety Committee to provide oversight on operational safety and sustainability risks.

At the corporate level, the Sustainability team has oversight in managing sustainability initiatives, climate-related risks and opportunities, as well as climate-related disclosures. At the project level, project development leads proactively mitigate physical effects of climate change in the planning and design of new projects. The Sustainability team works closely with the project development teams to ensure that any environmental issues are adequately addressed. For operating plants, plant managers, as well as health, safety, security and environment teams work closely with the Sustainability team to address any environmental issues and manage physical risks of climate change.



Our CEO, Eric Francia, spoke at the Marsh Energy Industry Conference in Dubai, where he took a deep dive on ACEN's landmark Energy Transition Mechanism deal and talked about how it is changing the energy transition scene across the globe.

Know more about how our Sustainability Organizational Structure works. >

STRATEGY

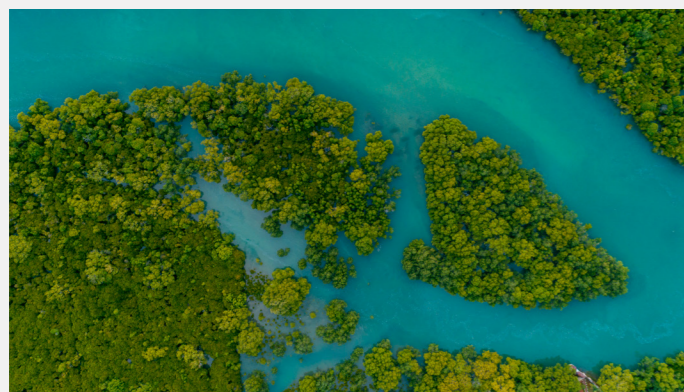
Climate risks and opportunities

Climate action is naturally ingrained into ACEN's long-term strategy—and not just adjacent to it. This enables us to play a leading role in the energy sector's transformation towards a low-carbon economy, which is in our **business model, outlook and strategy** included in this report.

Risks and opportunities related to climate change

ACEN engaged Aon Global Risk Consultants, which partnered with The Climate Service (TCS), to determine the methodology to evaluate and measure our climate risk factors. The study was conducted in 2022 involving 40 assets across ACEN's different markets. Since the time of the study, ACEN's portfolio has evolved, with new projects being added, while certain assets are no longer part of the group.

Using a long-term time horizon through the 2030s, we considered both a "high emissions" (RCP 8.5) and a "low emissions" scenario (RCP 4.5) to help provide a broader perspective from either potential outcome.



In Visayas, we work hand in hand with the local government to protect mangroves, helping rehabilitate over 90 hectares of fish sanctuary to become a source of livelihood for the community.

Climate-related risk summary for the 2030s

Risk trends at RCP 8.5

This "High Emissions" scenario assumes that no major global effort to limit greenhouse gas emissions will go into effect, leading to 4.2-5.4°C of warming by the end of the century.

| | |
|-------------------------|---|
| High impact | Physical risk <ul style="list-style-type: none"> • Temperature extremes Transition risk <ul style="list-style-type: none"> • Technology |
| Medium impact | Physical risk <ul style="list-style-type: none"> • Coastal flooding Transition risk <ul style="list-style-type: none"> • Reputation |
| Low or no impact | Physical risk <ul style="list-style-type: none"> • Drought and tropical cyclone |

Climate-related transition risks

Together with TCS, ACEN has identified and assessed transition risks around changing legal, regulatory and legal liabilities, reputational risks, new technologies and markets.

Modeled transition hazards

Regulatory and litigation: Costs to defend against climate-related claims including failure to mitigate, adapt and disclose risks in reference to various local and sovereign laws.

Technology: Extent to which new technologies affect competitiveness, production efficiency or demand.

Reputation: Perceptions of an organization's "social license to operate".

Market: Extent to which the transition to a low-carbon economy affects both the supply and demand for products and services.

Risk trends at RCP 4.5

This "Low Emissions" scenario implies coordinated action to limit greenhouse gas emissions to achieve a global temperature warming of ~2°C.

| | |
|-------------------------|---|
| High impact | Physical risk <ul style="list-style-type: none"> • Temperature extremes Transition risk <ul style="list-style-type: none"> • Technology |
| Medium impact | Physical risk <ul style="list-style-type: none"> • Coastal flooding Transition risk <ul style="list-style-type: none"> • Reputation |
| Low or no impact | Physical risk <ul style="list-style-type: none"> • Drought and tropical cyclone |

Climate-related physical risks

In an exercise with TCS, ACEN's physical risk assessment processes and analyzes atmospheric data related to temperature, precipitation, drought, wildfire, as well as other data related to coastal flooding, tropical cyclones, water stress and fluvial flooding in order to provide a rigorous estimate of risk under various conditions.

Modeled physical hazards

Temperature extremes: Changes in frequency of occurrence of temperature extremes.

Coastal flooding: Changes in frequency of coastal flooding of various magnitudes.

Drought: Changes in the frequency of drought conditions contributing to a period of abnormally dry weather long enough to cause a serious hydrological imbalance.

Wildfire: Changes in the annual probability of the 90th percentile wildfire conditions, as compared to the baseline period at the assets' location.

Tropical cyclone: Changes in the location and intensity of hurricanes or tropical cyclones, the general term for a strong, cyclonic-scale disturbance that originates over tropical oceans. This is currently available for the eastern Atlantic basin.

Water stress: Changes in the WRI Aqueduct water stress index from current values to future values out to the 2040s.

Fluvial flooding: The annual probability of a 100-year riverine flood, relative to the historical baseline of 1950-1999. This metric uses three climate variables and four topographic variables.

In calculating the risks, the Climonomics platform quantifies the financial impacts caused by climate change in a metric known as Modeled Average Annual Loss. This metric reports financial losses on an annual basis, providing decision-relevant insights for key financial metrics such as revenue.

Natural catastrophe analysis

ACEN's project development process includes a review of the topography, weather patterns, hydrological studies, seismological studies, volcanic activities and water levels of the site. As part of the insurance management process, ACEN avails of a **natural catastrophe study** for select projects called the Munich Re's NATHAN (or Natural Hazards Edition), a leading risk tool. These help ACEN during design and construction to include engineering solutions for major risks. The study, conducted by Munich Re, a leading global insurance provider, equips ACEN in determining the optimal construction design and engineering mitigation solutions.

Climate-related opportunities and response actions

The war in Ukraine triggered the current energy global crisis, which accelerated demand from governments, businesses and consumers for clean energy sources. With elevated fossil fuel prices, renewable energy has become a more sustainable alternative. This paves the way for the emergence of clean technology that is more efficient, cost-effective and reliable.

As an early mover in renewable energy in Southeast Asia, ACEN aims to capitalize on the enormous opportunities around energy transition. It has laid out an aggressive goal to accumulate **20 GW of renewables capacity by 2030**. To achieve this goal, ACEN will implement three key strategies: geographic expansion, new technologies and strategic partnerships.

ACEN's climate-related opportunities assessment focuses on energy efficiency, materials use efficiency, energy resilience, innovation in products and services and prospects in new markets.

| Transition risks | Opportunities | ACEN response actions |
|---------------------------|--|--|
| Market | <p>Global energy crisis accelerated the demand for governments and businesses to transition to a low-carbon economy.</p> <p>High fossil fuel prices triggered by the Ukraine war made renewables more competitive.</p> | <p>Launched in 2022 a long-term goal to build 20 GW of renewables capacity by 2030, focusing on three key strategies: geographic expansion, new technologies and strategic partnerships.</p> |
| Technology | <p>Strong emergence of clean technologies that are increasingly becoming more efficient, cost-effective and reliable, enabling renewables to become a scalable alternative to fossil fuels.</p> | <p>Continue to scale up ground-mounted solar wind and solar.</p> <p>Make headway into new technologies such as battery storage, offshore wind, and floating solar.</p> |
| Regulatory and litigation | <p>Structural changes taking place globally provide an enabling environment to ramp up renewables investments.</p> <p>Philippines</p> <ul style="list-style-type: none"> Tight power supply situation calls for greater investments in renewables Government targeting 35% share of renewables output, requiring ~18 GW of renewables capacity to be built across the industry <p>Australia</p> <ul style="list-style-type: none"> Closures of ~10 GW of coal-fired power plants expected by 2030, requiring ~25 GW of replacement renewable energy to be constructed <p>Vietnam</p> <ul style="list-style-type: none"> Government's Net Zero goal by 2050 entails a target of 70 GW of renewables capacity by 2030, requiring ~27 GW of new capacity to be installed <p>India</p> <ul style="list-style-type: none"> Government's Net Zero goal by 2070 entails a target of ~523 GW of renewables capacity, requiring ~300 GW of fresh capacity to be built <p>Indonesia</p> <ul style="list-style-type: none"> Government's Net Zero target for 2060 calls for a goal to reach ~29 GW of renewable energy by 2030, requiring ~21 GW in new capacity to be assembled | <p>Continue geographic expansion through its extensive project pipeline across its key markets in the Philippines, Australia, Vietnam, India and Indonesia.</p> <p>Continue to forge strategic partnerships with regional developers and strong local players in order to expand the project pipeline and accelerate project development.</p> <p>Leverage robust balance sheet to fund expansion plans, focusing on sustainable financing initiatives.</p> |
| Reputation | <p>Increasing awareness on the effects of climate change has emphasized the importance of clean energy, bringing renewable energy to an unprecedented level of importance. Failure to adapt can cost one's "social license to operate".</p> <p>Premium ascribed by investors to companies with robust climate strategy and climate-related risk management practices.</p> | <p>Continue regular engagement with key stakeholders through various channels on how decarbonization is integrated into the overall growth strategy.</p> <p>Continue to adhere to best practice reporting systems to enhance climate-related disclosures such as TCFD and CDP.</p> |

On managing and mitigating the physical risks of climate change impacting our business, we have a robust sustainability program that focuses on three focus areas: climate change, biodiversity and resource efficiency. More details can be found on [pages 23-29](#).



RISK MANAGEMENT

Climate-related risks are considered in ACEN's **Enterprise Risk Management** process, with climate-related physical and transition risks part of our Risk Universe. Identifying climate-related risks is embedded in our project development and operations management processes. During project development, we conduct topography, weather patterns, hydrological, seismological, volcanic activities and water levels studies.

In addition, our insurance management process includes the conduct of a natural catastrophe

study, the results of which are factored into the design, construction and project implementation. This also helps determining the appropriate insurance coverages for each asset.

To determine the tangible and measurable impact of climate-related risks to our business, we engaged TCS to conduct a climate analytics exercise considering RCP4.5 and RCP8.5 scenarios. The results of the study provided both climate-related risk and opportunities that ACEN management will be monitoring and mitigating or leveraging.



ACEN's 52 MW NorthWind in Bangui, Ilocos Norte is Southeast Asia's first utility scale wind farm.

METRICS AND TARGETS

As part of its **Net Zero journey**, ACEN has committed to 100% renewables generation by 2025, which will result in zero Scope 1 stationary GHG emissions from the company's generation

portfolio. Under this roadmap, ACEN established near-term scope 1, 2 and 3 greenhouse gas (GHG) emissions reduction targets, aligned with a 1.5°C pathway for the power sector.

Adopting the GHG Protocol's Corporate Accounting and Reporting Standard, ACEN validated and measured its 2021 GHG emissions¹ to serve as the baseline for our Net Zero targets and roadmap.

| Scope | Coverage | Tons CO ₂ e |
|---------|---|------------------------|
| Scope 1 | Combustion of fuel from sources where we have operational control | 184,052 |
| Scope 2 | Electricity consumption for own operations | 6,993 |
| Scope 3 | Indirect emissions from upstream and downstream activities | 4,870,476 |

1. Referencing SBTi's Net Zero standard guidelines, ACEN's 2021 GHG baseline emissions have been recalculated to reflect the divestment of SLTEC in 2022

[Read more](#) about our Net Zero strategy on [page 26](#). >