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 • Temperature extremes Transition risk • Technology
Medium impact	Physical risk • Coastal flooding Transition risk • Reputation
Low or no impact	Physical risk • Drought and tropical cyclone

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 • Temperature extremes Transition risk • Technology
Medium impact	Physical risk • Coastal flooding Transition risk • Reputation
Low or no impact	Physical risk • Drought and tropical cyclone

In calculating the risks, the Climanomics 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.

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.

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.