ESG Research

ESG Materiality Map
Utilities Networks

May 18, 2022

Climate physical and transition risks are the most material from both a credit and stakeholder perspective given the sector's critical role in the energy value chain, where decarbonization efforts from generators have knock-on effects for networks and where physical climate risks affect service delivery. Climate risks also have spillover effects that elevate the materiality of other factors, including access and affordability.

This report does not constitute a rating action

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In line with the research report "Materiality Mapping: Providing Insights Into The Relative Materiality Of ESG Factors," published on May 18, 2022, S&P Global Ratings is publishing research on the ESG materiality map for the utilities networks sector. We provide an illustration, at a point in time, of our findings on the relative materiality of certain environmental and social (E&S) factors, from both the stakeholder and credit perspectives, for the sector. The materiality map research does not represent any new analytical approach to the treatment of E&S factors in our credit ratings. See our ESG criteria for more information on how we incorporate the impact of ESG credit factors into our credit ratings analysis.

Utilities Networks Sector

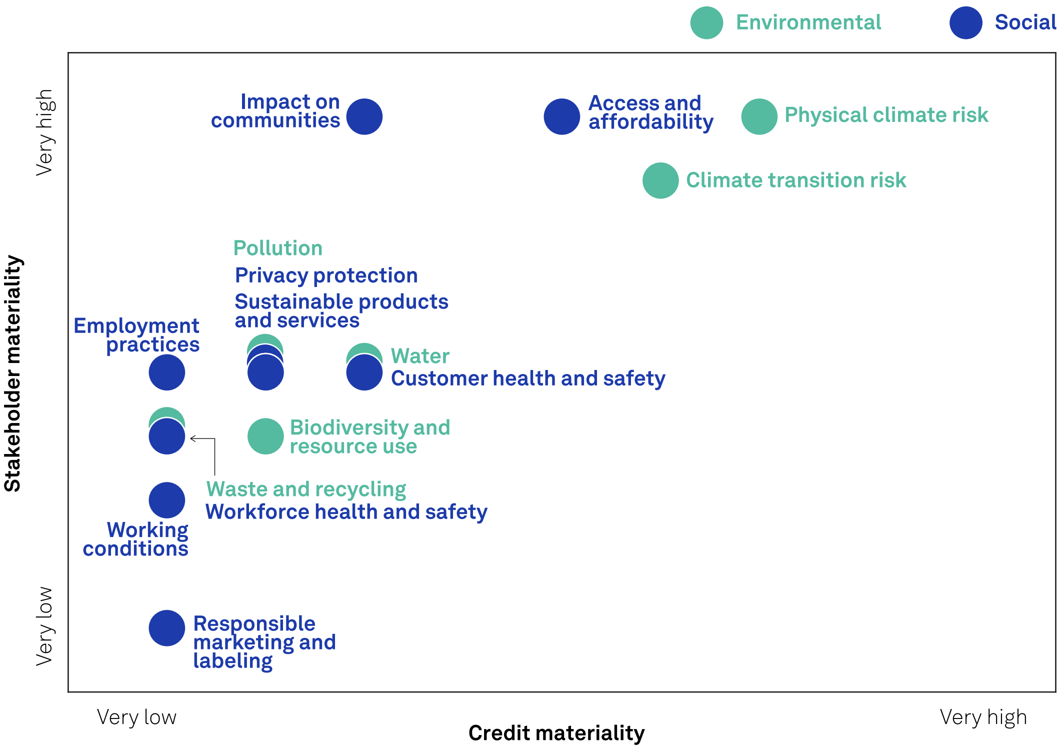
Utility networks include electric grids, gas utilities, and water utilities. The electric grid subsector comprises companies that operate regulated electricity transmission and distribution networks. Gas utilities deliver natural gas to residential, industrial, and commercial customers through a network of distribution and transmission pipelines. Water utilities deliver freshwater and provide sanitation services to residential, industrial, and commercial customers.

Key Takeaways

- Climate physical and transition risks are the most material from both a credit and stakeholder perspective given the sector's critical role in the energy value chain, where decarbonization efforts from generators have knock-on effects for networks and where physical climate risks affect service delivery. Climate risks also have spillover effects that elevate the materiality of other factors, including access and affordability.
- The integration and essentiality of utility networks for customers and communities underpin the relatively higher stakeholder materiality across multiple factors, including impact on communities, whereas the credit impacts tend to be more muted due to regulatory protections and other mitigants, such as insurance, that help to preserve credit quality.
- Customer health and safety has moderate stakeholder and credit impacts. High-impact safety events can severely affect customers given how close network systems are to population centers. Power disruptions can also be life threatening, but these occur relatively infrequently and tend to be localized. For credit, we expect regulatory protections and cost recovery to continue to help bolster credit quality.

See materiality map on the following page.

ESG Materiality Map For The Utilities Networks Sector



The materiality map provides an illustration at a point in time, of our findings on the relative materiality of certain environmental and social (E&S) factors, from both the stakeholder and credit perspectives, for the sector. It does not represent any new analytical approach to the treatment of E&S factors in our credit ratings. See our ESG Criteria for more information on how we incorporate the impact of ESG credit factors into our credit ratings analysis. Source: S&P Global Ratings.

How To Read The ESG Materiality Map

The stakeholder materiality (Y axis) reflects our assessment of the relative level of impacts and dependencies of the sector on the environment, society, and economy.

The credit materiality (X axis) reflects our assessment of the relative level of potential and actual credit impact for the sector. The credit implications for the factors positioned on the left side to the middle of the X-axis would be more limited and absorbable. On the right side, there is higher potential for these implications to be more disruptive. We assess credit implications for an entity based on its individual characteristics.

Assessing E&S factors' materiality: We consider both the likelihood of the impact from a given factor, as well as the magnitude of the impact. The materiality of the factors varies depending on the perspective (stakeholder or credit) as well as the evolving and dynamic interactions between these two dimensions.

The main areas of the map:

- The upper-right quadrant displays the most material, on a relative basis, E&S factors identified for the sector from both a stakeholder and credit perspective.
- The upper-left quadrant presents factors that are more material from a stakeholder than credit perspective. These factors have the potential to become more material from a credit perspective.
- The bottom-left quadrant shows factors that are less material for both stakeholders and credit. Their materiality may evolve over time and this dynamic may not be linear.

Examples Of Material Factors

Below we provide the rationale of some of the material factors to illustrate the above findings.

Physical climate risk

Physical climate risk is the most material factor for both stakeholders and credit. Networks operate fixed assets that span large service territories, making them highly exposed to physical climate risks. These events, which are becoming more frequent and severe, can cause network service disruptions for large populations, elevating stakeholder materiality. Credit quality has been impaired by wildfires, hurricanes, and winter storms. During these events, the utility incurs higher costs, which typically leads to higher leverage.

Climate transition risk

Climate transition risks are highly material to stakeholders and credit but tend to have more bearing on electricity and gas networks given their critical role in the energy delivery value chain and their direct exposure to upstream generators, which are a leading cause of climate change. These drivers make the sector highly susceptible to growing public, political, legal, and regulatory pressure to accelerate climate goals and are highly relevant for stakeholders globally. From a credit perspective, the ongoing decarbonization of the energy sector requires a tripling of renewable power, which comes with significant grid expansion. As such, network capital budgets are near record highs, leveraging their balance sheets and pressuring credit quality. In the gas network sector, continued focus on reducing reliance on methane-emitting natural gas could diminish growth prospects, making it more difficult to effectively manage regulatory risk.

Access and affordability

The affordability and reliability of networks are under pressure from climate-related risks, exacerbating the materiality for stakeholders. While these risks are also material for credit, we view them as more moderate. Energy and water are essential services supporting human health and well-being and global economic development. Service disruptions or steep price increases are likely to be amplified by the energy transition and physical climate risks. These dynamics can affect households' purchasing power and the competitive strengths of local industries, which make this highly material for stakeholders. Additionally, for water utilities, pollution in source water can affect the availability and useability of supply. However, the industry's reliability remains high, and we expect this to continue given that water utilities use long term-integrated resource planning, which accounts for these risks. Moreover, while utility bills are rising, regulators continue to allow utilities to use mechanisms to smooth volatility and to offer income assistance programs, which will underpin a more moderate credit impact.

Impact on communities

Community impacts are more acute for stakeholders given how close networks are to where people live and work and that energy and water services are essential for community health and well-being globally. Stakeholder impacts arise from the construction and siting of lines--especially in areas unaccustomed to industrial development and in indigenous territories--which is accelerating to meet climate goals and where eminent domain is granted by local governments. Moreover, service disruptions, fires, gas explosions, inadequate or contaminated drinking water, and untreated wastewater pose severe, and sometimes irreversible, community health and safety hazards. Water utilities also manage shared water resources where drought conditions can introduce tough trade-offs among community stakeholders and wastewater treatment plants, which release unpleasant odors and are often located in disadvantaged communities. From a credit perspective, insurance and regulatory mechanisms such as cost recovery will continue to help to preserve credit quality, making it less material.

Pollution And Customer health and safety

These factors have a moderate impact on stakeholders, but less for credit. Globally, high quantities of untreated wastewater are released into the environment where it can contaminate water bodies, making pollution a material stakeholder concern for water utilities. They also manage toxic pollution from agricultural runoff and industrial discharge in water basins. Contaminated water and poor sanitation systems in turn contribute to long-term health conditions, and these customer health and safety events can, when severe, undermine public trust. Power service disruptions can also be life threatening, primarily for certain vulnerable groups, but utilities typically ensure adequate back-up power. The credit impact is low largely due to regulatory protections and cost recovery, which we expect will continue. Customer safety is slightly more credit material than pollution, as these impacts span all subsectors.

What is our approach to research on the ESG materiality map?

Referring to the research report "Materiality Mapping: Providing Insights Into The Relative Materiality Of ESG Factors," published on May 18, 2022, this research is built on the ESG materiality concept that considers ESG issues as material when they could affect stakeholders, potentially leading to material direct or indirect credit impact on entities. It considers that all businesses, through their activities and interactions, impact and depend, directly or indirectly, on stakeholders such as the environment (natural capital), society (human and social capital), and economy (financial capital). Using this ESG materiality concept, S&P Global Ratings has worked toward identifying a common, global, cross-sector set of E&S factors that we believe are material to stakeholders, and either are already, or have the potential to become, credit material for entities. The materiality map we propose provides an illustration at a point in time, of our findings on the relative materiality of those factors, from both the stakeholder and credit perspectives.

How does the sector ESG materiality map relate to credit ratings or ESG evaluations?

The sector materiality map is a visual representation of the factors that we consider impactful to the sector from a stakeholder and credit perspective for the purposes of this research. It does not represent any new analytical approach to the E&S factors in our credit ratings.

The relative materiality of the factors indicated on the materiality maps may inform the E&S Risk Atlas scores and the weights of the E&S factors used in ESG evaluations.

They may also inform our discussions with issuers on those factors' existing or potential credit materiality.

Related Research

- Materiality Mapping: Providing Insights Into The Relative Materiality Of ESG Factors, May 18, 2022
- Environmental, Social, And Governance Principles In Credit Ratings, Oct. 10, 2021
- ESG Evaluation Analytical Approach, Dec. 15, 2020