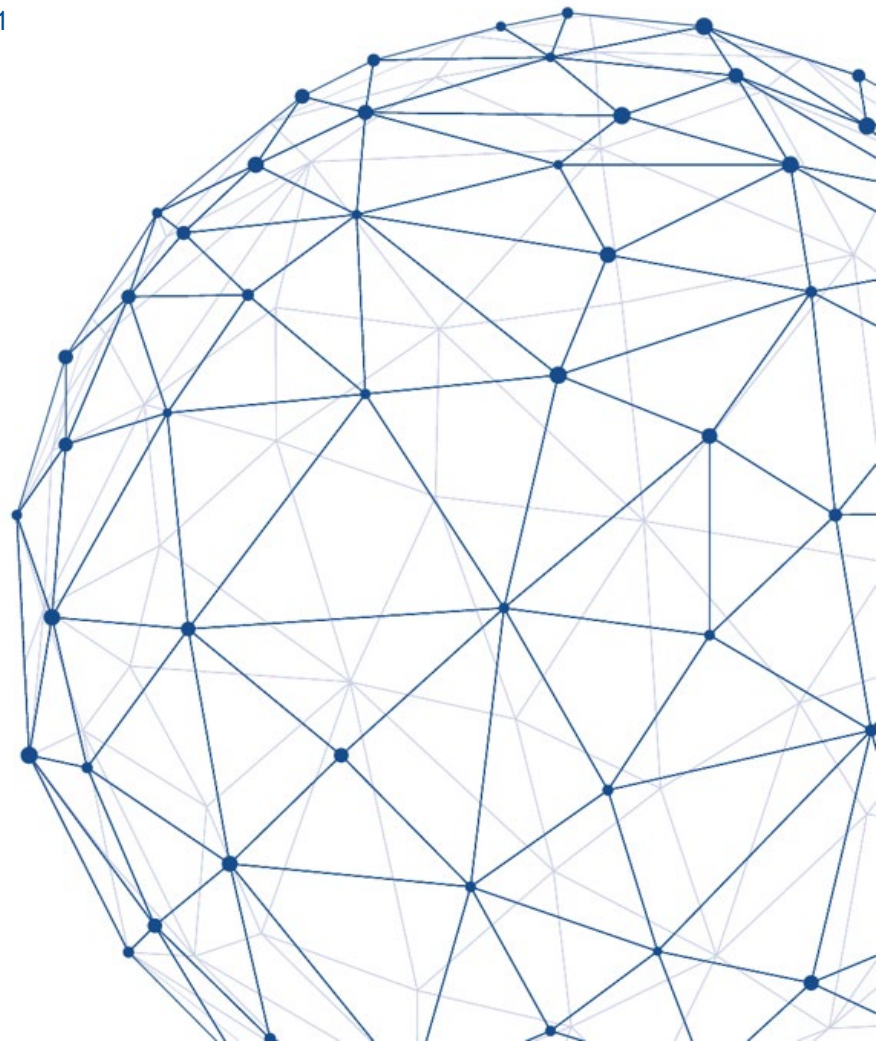


ESG considerations for the credit ratings of utilities

Europe's utilities play a crucial role in combating climate change while also expanding the electrification and digitalisation of the region's economies. The companies are under increased scrutiny for sustainability aspects from different stakeholders, regulators, policymakers and the general public. The sector's transformation towards a more sustainable industry goes hand in hand with massive capital expenditure and more complex funding requirements. Some of the challenges may significantly impact a utility's creditworthiness. This document explains Scope's view on the most relevant ESG factors for utilities' credit ratings.

Scope Ratings GmbH, 23 April 2021



1. General ESG framework at Scope

Our ESG framework evaluates the extent to which ESG factors are credit-relevant for different industries. We also provide an overview of how ESG factors are integrated into our credit analysis. Our evaluations are not mutually exclusive or collectively exhaustive as these factors overlap and evolve. We aim to update the framework on a regular basis, as the reporting standards of these factors are seeing an important evolution, shedding ever more light on stakeholders' understanding and expectations of ESG.

Our corporate credit rating analysis remains focused on credit quality and credit assessment drivers. We only consider an ESG factor relevant to our credit rating process if it has a ubiquitously discernible and material impact on the rated entity's cash flow profile and, by extension, its overall credit quality. Contrary to ESG ratings, which are largely based on quantitative scores for different rating dimensions, credit-relevant ESG drivers are mostly of a qualitative nature. Hence, identified ESG rating factors are based on an opinion in a relative context (factors are ordinal rather than cardinal).

The importance/relevance of certain ESG factors is specific to each rated entity, industry and region, except for the dimension of governance, which is universally applicable across all industries. For example, the risk of pollution and environmental damage is important in the utilities, chemicals and natural resources industries but less relevant to the retail sector, where governance and social factors are much more relevant. The same applies to an assessment of ESG-related factors that might have a significant impact on a company located in western Europe but no effect on an eastern Europe corporate with a similar business model. A good example is the impact of regulatory risks, which may be significantly greater in some jurisdictions.

Governance is an indication of how well a corporation is controlled and directed and the extent to which the interests of different stakeholders are safeguarded, including the payment of all due amounts on time and in full. Governance is thus relevant to all rated entities. In contrast, environmental and social variables capture risks and opportunities that are often specific to the activities of a company and the industry in which it operates. All such factors may have a direct or indirect impact on a rated entity's market position and its financial performance.

ESG-related factors can directly or indirectly affect all the rating elements which make up our assessment of an issuer's business risk profile, financial risk profile and supplementary rating drivers. We provide a list of ESG factors that we normally consider for a given industry, although only some of the factors listed are likely to apply and be relevant to any given company.

ESG rating drivers are part of the rating framework that is outlined in our [general rating approach](#) and particularly for utilities in our [rating methodology for European utilities](#).

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2. Important ESG themes in the European utility industry

Few industries have changed as radically over the past few years as the utilities sector. The transformation is set to intensify in the coming years. Take the example of Ørsted. The Danish company was until 2010 a traditional utility whose cash flowed mostly from fossil fuel-based power-generation assets. Today, Ørsted is the world's leading off-shore wind-power producer, with limited residual exposure to electricity generation from coal and natural gas. Europe's utilities, while undergoing a huge change themselves, also face competition in power generation and supply from newcomers and outsiders as trends beyond the sector have created opportunities for rival business models. The main driver of the sector's 'great transformation' is the economics of climate change. Shifting patterns in energy demand and consumer expectations are also important, as is technological innovation. Some utilities are in the vanguard of this transformation, but others are in danger of being left behind as they struggle to adapt to powerful trends in the sector.

For those utilities unwilling or reluctant to put greater focus on the long-term sustainability of their business, the implications for their creditworthiness are significant only if their approach impairs their competitive position and/or financial risk profile and cash flow – today or in the future. More restricted access to capital markets as demand surges for sustainability-linked investments is another potential danger. By the same token, those utilities which have made long-term sustainability a priority might be able to strengthen their credit profiles and enhance their access to capital-market financing. However, these utilities' credit profiles will not necessarily improve materially if, in the cause of sustainability, their transformed business does not lead to better profit margins and cash flow.

We have identified the following four main themes relevant for the utilities industry as a whole and for our environmental and social assessment that could affect a utility's creditworthiness:

- Energy transition
- Digitalisation
- Efficiency
- Regulation, incentivisation and political intervention

All of these themes are interdependent, so cannot be examined in isolation. We recognise that there are other important issues with relevance to utilities – workplace diversity, a changing work environment, demographic shifts and urbanisation – but they will have less impact on a utility's credit strength in the foreseeable future.

2.1 Energy transition: balancing competitiveness and capital expenditure

Decarbonisation and 'denuclearisation'

Questions of sustainability in the utilities sector centre on the material exposure to green-house gas emissions, effluents and waste, particularly in electricity generation. The shift towards green energy is accelerating¹. European utilities are steadily moving away from coal- and gas-based power generation, and in many cases reassessing nuclear power², to focus on electricity generation based on renewables. The sector as a whole has made significant progress in 'greening' power-generation portfolios over recent years, if not decades. However, it remains a huge task for European utilities to contribute to the Paris Agreement's long-term goals³, including a **reduction on the forecasted increase in the global temperature through net-zero emissions and climate neutrality by 2050** – also the EU target. The reality is that 60% of European electricity production is still based on fossil fuels or nuclear power while around 25% of CO₂ emissions come from the energy sector.

Europe's utilities are under pressure to further clean up their electricity-generation portfolios. Not doing so could have severe financial implications: lower top-line growth, narrower achievable profit margins and the loss of competitiveness and market share to independent power producers and industry outsiders such as integrated oil

¹ EU target: share of energy from renewables of at least 32% of the Union's gross final energy consumption in 2030 from roughly 20% in 2020 (energy = electricity, heat, fuels). This target implies a share of 57% of electricity generation from renewables within electricity generation.

² Phase-out nuclear: 2022 for Germany, 2025 for Belgium, 2030 for Spain, and a reduction in France by 2035 to half of its electricity mix

³ Keeping the increase in global average temperature to well below 2°C (3.6°F) above pre-industrial levels and seeking to limit the increase to 1.5°C, recognising that this would substantially reduce the risks and impacts of climate change.

and gas companies (IOCs). Policy makers' preference for renewables represents additional risk factors for carbon-intensive power generators, in both the short and the long term, for example, in the form of rising prices for CO₂ emissions, adverse regulatory changes and more scepticism among investors – all of which could contribute to higher operational and financing costs. Operators of nuclear power stations are in a special category. The technology involves very low CO₂ emissions, and the industry is likely to be included in the EU Taxonomy on Sustainable Finance, but it remains vulnerable to political and regulatory change.

The accelerated energy transition highlights the utility sector's significant exposure to the cost of decommissioning legacy power-generation assets, the timeframe for which is narrowing. Besides the proper handling of hazardous waste and the dismantling of mothballed power plants likely to be under intense public scrutiny, the urgency of how to fund decommissioning is growing for those utilities which have not set aside dedicated funds that partially or fully cover the expense.

Ultimately, utilities also need to consider the future of their own employees in the energy transition: as carbon-intensive assets are decommissioned and investment accelerates in renewable-energy assets, utilities have to reassess the skills they need and accordingly retrain (reskill and upskill) staff as they adapt their organisations to a restructured industry.

Decentralisation

Today's energy system is still largely centralised, with generation of electricity concentrated in a limited number of high-capacity power plants. The electricity is then transported to consumers through national or cross-border grid networks. However, a more decentralised energy system is emerging as the number of sources of renewable energy grows in addition to progress with small-scale combined heat and power (CHP). This shift poses new challenges on multiple levels for the electricity sector: generation, transmission, distribution, storage and supply. One challenge in particular is the greater volatility in power generation as Europe's economy relies increasingly on more intermittent sources of power, such as wind and sun, which are not necessarily – if at all – in sync with peaks and troughs in demand. Such divergence can have a significant impact on achievable selling and procurement prices for generators and suppliers and put a strain on grid and network operators. Regional differences between generation and consumption are another source of divergence between supply and demand.

Generators and suppliers need to be prepared for further decentralisation, adapting to it to defend market share and handle the added volatility in electricity supply. The same is true for grid operators which need to invest heavily in expanding and upgrading transmission corridors and strengthening distribution networks to ensure the seamless integration of decentralised generation capacity and smooth out increasingly volatile electricity flows.

Relevance to our rating approach:

Our focus when we look at the credit implications for utilities from the energy transition is, first, the rated entity's cash flow exposure to power generation and, secondly, any future capex associated with the transition in generation, transmission and/or distribution. We include the materiality of a utility's overall cash flow profile, looking at the assets that could pose material risks (e.g. environmental, reputational, regulatory, political, black swan risks). If deemed material, our rating analysis incorporates i) the vulnerability of recurring cash flows to a potential fuel switch; ii) the risk of stranded assets; iii) the pressure of increased capex for adaptation aimed at necessary maintenance, expansion and replacement; and iv) the funding required for asset retirements.

Remediation costs or carbon-offset efforts can be expensive and adversely affect future profitability. Significant capital expenditures for adaptation are likely to help protect future revenues but may have an adverse financial impact in the near term. If the benefits of such investments are only realised over the long term, the costs of such investments may have a credit-negative impact in the short term. Overall, utilities with limited 'clean-up' risk – both from an operational and a liability management perspective – are likely to benefit from better funding conditions, also considering that some prominent banks have shown limited willingness to provide future funding to companies that need external financing for maintaining 'dirty' infrastructure assets, let alone for expanding them.

However, the energy transition can imply credit support for well-positioned utilities, namely those with a limited cash flow exposure to remediation costs, an advanced position in the transition to a lower-carbon business model and the possibility of landing windfall profits from the position of their generation assets within the merit order.

2.2 Efficiency: energy-, resource-, cost- and asset-efficiency to determine business models

Sustainable development is by definition all about efficiency. Three trends related to efficiency developments are material for the utility industry's cash flow and credit profile:

Society's ambitions related to reducing energy consumption

Gradually increasing energy efficiency of end-use sectors (such as industry, households, transportation and services) through technological innovation is changing consumption behaviour, shifting power generation towards decentralised systems, and determining the balance between power supply and demand. The EU climate and energy framework for 2030 envisages a 32.5% decline in primary and final energy consumption from a 2007 baseline. Over 1990-2016, the energy efficiency of end-use sectors improved by 30% in the EU-28 countries at an annual average of 1.4% (source: European Environment Agency). However, such efficiency gains are partly offset by growing energy use, primarily among households through not only the increasing number of electrical appliances and larger homes but also the increasing electrification of individual transport. A long-term trend of reduced power demand from efficiency gains can shape demand patterns and thus can have a material impact on supply and transmission/distribution. The same applies to the effect on gas and heat consumption.

Efficiency measures

The more efficient use of resources – whether tangible or intangible – that follows best practice is an increasingly common goal for managers across economic sectors. The management of utilities is no exception. Operating existing infrastructure assets in a safe, efficient and reliable way and investing in new, more efficient assets is the focus of management and, increasingly, of regulators, the wider public and stakeholder groups such as creditors. The same applies to an efficient use and fair treatment of staff.

Likewise, cost-efficiency and asset efficiency/reliability are also growing in importance as regulators benchmark the companies they supervise and adopt quality standards concerning grid and network operators. Similarly, resource-efficiency plays a vital role for power generators seeking the best and commercially viable utilisation of generation assets.

Product innovation

Creating and restructuring a business model to ensure it is competitive – not just today but well into the future – involves more than a utility’s efforts to adopt a low-carbon and more efficient business model. The evolution of products and services stands to have major long-term financial effects on utility operators. They include those related to energy management and energy efficiency (e.g. smart grids, intelligent software, big-data business modelling), power-to-X technologies and e-mobility infrastructure. New and improved technologies in energy storage, particularly for electricity, will be an integral part of future grid networks. They will help lower the capacity needed from the grid during peak demand and contribute to more reliable supply and less volatile electricity prices. Utilities with a sustainable business model tend to focus on improving and/or replacing existing products and technologies in the energy industry’s value chain. They are also typically service-oriented, with customer satisfaction and retention among their priorities.

Relevance to our rating approach:

We believe those utilities that have demonstrated a capacity for ‘thinking outside the box’ will be best positioned to meet the industry’s forthcoming challenges and take on competitors from both inside and outside of their sector. There is a clear correlation between resource- and cost-efficiency on the one hand and financial performance on the other. Those utilities which are evidently leading on efficiency measures are more likely to maintain if not improve recurring cash flow. Similarly, innovative utilities which integrate practices and technologies that promote efficiency across the whole industry value chain will likely broaden and strengthen cash flows and their business models in contrast with competitors sticking to legacy business models.

2.3 Digitalisation: electrification and digitalisation presents opportunities and threats

As with efficiency measures, digitalisation (e.g. robotics, big data usage and artificial intelligence) will likely be crucial for utilities to remain competitive, safe and resilient in a transforming industry confronting disruptive innovations, changing patterns for energy demand and supply, new business models and new threats to infrastructure safety. Digitalisation will create new opportunities for utilities, regulators, and consumers to enhance performance, transparency, and control but also safety, efficiency and sustainability. Digitalised energy systems (e.g. smart meters, virtual power plants, intelligent home systems and other connected devices, and smart car battery loading stations) may be able to identify who needs energy and deliver it at the right time, in the right place and at the lowest cost. Such technologies could reduce the energy intensity of some goods and services but also induce rebound effects that increase overall energy use. Digitalisation could widely affect total energy demand, demand volatility and achievable prices for base-, mid- and peak-load power. More data and more powerful analytical tools might help utilities better understand their own businesses and take more informed decisions, while giving regulators more insight into evaluation and benchmarking industry participants.

On the downside, more digitalised systems pose new risks to utilities – notably cyber threats – which can disrupt operations and lead to significant extra costs. Utilities managers need a comprehensive understanding of a company’s cyber footprint to avoid the risk of production interruptions or network outages and regulatory penalties.

Relevance to our rating approach:

Further digitalisation of a utility’s business model can improve resource-, asset-, energy- and cost-efficiency, but also enhance the safety of infrastructure assets, protecting a company’s competitive position and cash flows. Smart integration of connected devices and electric vehicles, exploiting big data and deploying artificial intelligence can ensure the least possible impact on a utility’s cash flow profile, such as raising additional revenues or avoiding or reducing specific costs.

Utilities with a good grasp of digitalisation tend to be better at strategic planning, reacting to changes in demand, and improving performance at new and existing infrastructure assets, thereby protecting if not boosting cash flow, which could be seen credit-positive.

2.4 Regulation, incentivisation and political intervention: brighter public spotlight on utilities

Utilities are typically tightly regulated entities or often affected by national and supranational policy making. Secure, reliable, affordable electricity is the focus of EU and national regulations in Europe, as is the smooth integration of new capacity.

The sector also tends to be under greater political scrutiny than other parts of the economy, particularly as the energy transition has risen up Europe's policy-making agenda. The most prominent examples here include:

- The phasing-out of nuclear and coal-fired power plants in numerous jurisdictions;
- Hefty subsidies for renewable energy with mandatory feed-in tariffs and fixed remuneration of generated electricity, but also periodic retroactive tariffs cuts for subsidised power generation;
- The creation of the EU's CO₂ emissions trading scheme and the planned Carbon Border Adjustment Mechanism;
- The provisioning and funding for decommissioning power plants and related waste disposal;
- Geopolitical concerns raised by cross-border, gas-pipeline construction.

Prices of crude oil, natural gas and coal to which the utilities sector is sensitive are notoriously beholden to politics and trade disputes. Political interference in and influence over energy markets can have favourable or unfavourable consequences for utilities, affecting revenues, cash flow, capex and debt management. Prudent regulation and political decisions can support industry financing and protect or stabilise business models.

In Europe, utilities can look forward to a prolonged period of easy financing conditions as they confront the demands of the energy transition. The sector is likely to benefit from low interest rates and/or investment grants to help transform and/or stabilise businesses as the European Commission pushes ahead with its 'green deal'. Environmental projects of all kinds will benefit from the EUR 750bn Next Generation EU post-pandemic recovery plan, with a quarter of its funds earmarked for climate-change mitigation.

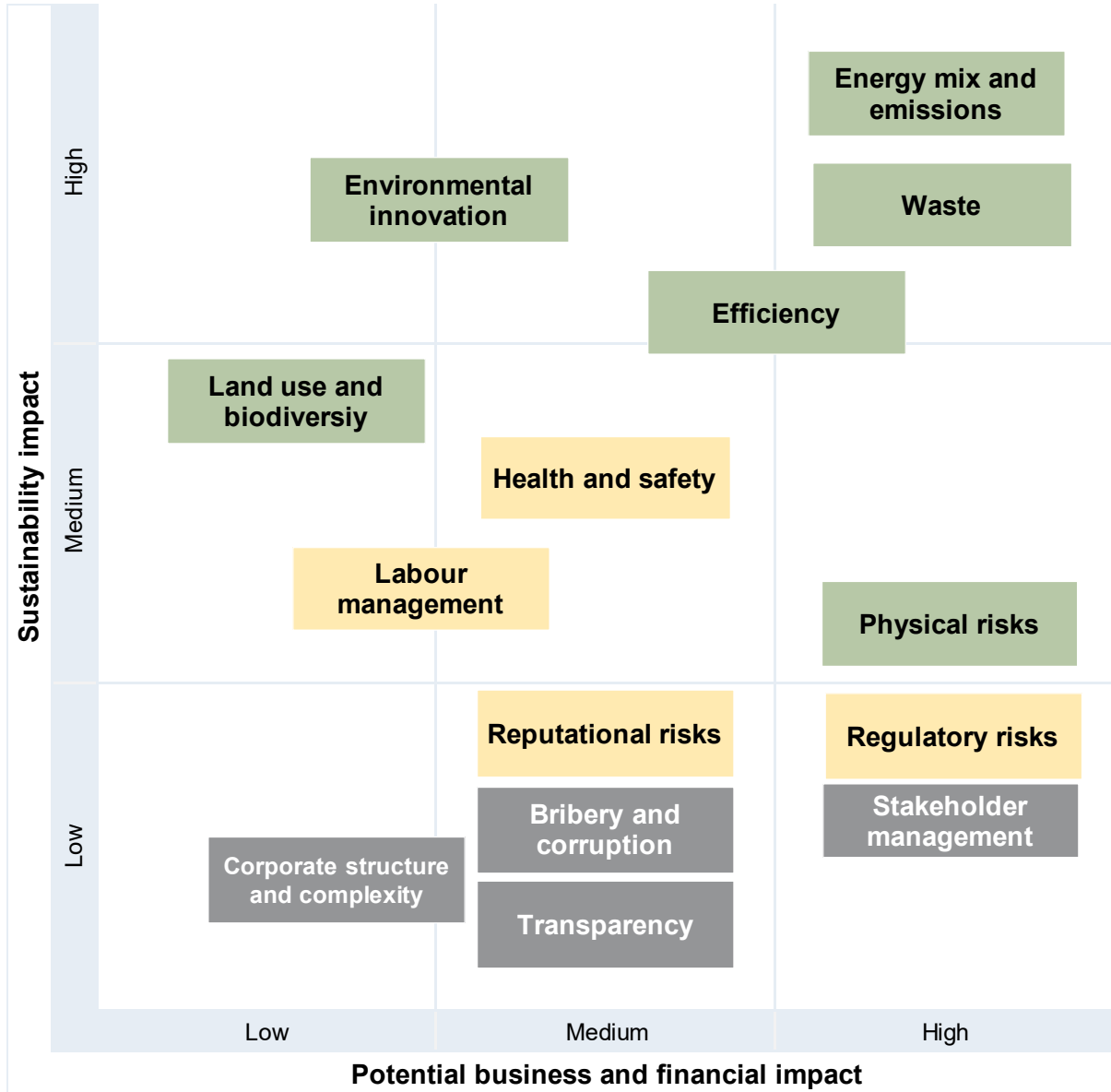
Relevance to our rating approach:

The regulatory framework and exposure to political intervention is important when assessing a utility's credit risk. Tariffs and cost regulation may impact utilities' cash generation directly, while energy, environmental and tax policies affect it indirectly. Moreover, government intervention may affect issues relevant to the rating such as the power-generation mix and the risk of stranded assets, changes in the procedure of tariff setting, new safety requirements or the approach to the timing of cost recovery.

Regulations may impact a utility's business model positively on the revenue side by creating high entry barriers (electricity grids/gas and heat networks), through price stability (renewable energy regulations) or investment safety. But regulations or political intervention can also impose heavy burdens on a utility's credit quality. Examples would include cases when regulations are unstable and do not provide a timely cost recovery, are very challenging regarding cost or operating efficiency, or impose high investment requirements (maintenance of grids and power plants). In analysing a utility's credit quality, we assess how a utility's regulatory framework may impact and support stability and the predictability of its cash flow generation. Entities with strong credit quality operate in markets characterised by a supportive institutional framework that creates stable and protective regulations, as well as environments with minimal political interference. Our rating analysis incorporates the risks but also the tailwinds stemming from regulatory and political changes and intervention and the preparedness of utilities to tackle and comply with changes. Our assessment is based on, but not limited to, the impact of these changes on i) a rated entity's cash generation capability; ii) the cost of money; iii) the development of a company's non-discretionary capital expenditure; and iv) the need to build debt-like provisions. In addition, we look closely at subsidy risk: if/when subsidies decline or phase out, as companies will have to deal with merchant-based contracts and market risks.

3. Materiality of the ESG factors on the utility industry

Within our ESG framework we look at various broader categories related to E, S and G. We seek to differentiate the sustainability impact of the companies' internalities and externalities, between what is considered sustainable (sustainability impact) and the potential business and financial (credit) impact of ESG factors. Not all ESG factors influence an issuer's creditworthiness to the same extent.



4. Typical ESG factors in utilities

Governance is generic to all industries and is therefore more important in terms of how it is measured. The E and the S are meant to depict a realistic image on the risks and opportunities that a utility might face. The list is therefore non-exhaustive and expected to evolve over the next years.

Environment			
	Sub-indicator	Measurement/Indicator	Credit impact
Resource management	Consumption of natural resources, i.e. water, energy	<ul style="list-style-type: none"> Extent of fuel and own energy consumption for operations Water consumption in water supply business and leakages Exposure to hydro capacities that are dependent on water reservoirs Usage of land for greenfield investments for new power plants Exposure to usage of commodities that are scarce in nature or impacted by disruptions/geopolitics 	<ul style="list-style-type: none"> Reduced total energy and water consumption lowers service charges, supporting high cash generation from increased net operating income. Reduced likelihood for operational disruptions
	Circular economy	<ul style="list-style-type: none"> Exposure to uncovered environmental remediation, asset retirement obligations and potential scrap values for retired assets Own energy consumption for power generation (absolute and like-for-like) 	<ul style="list-style-type: none"> Significant exposure to remediation expenses can weigh on achievable profitability, leverage and may be coupled with significant unexpected cost overruns. Limited procurement of energy needed for own operations from external suppliers may enhance profitability and reduces non-controllable risks.
	Energy mix	<ul style="list-style-type: none"> Specific carbon footprint of power generation fleet (kg CO₂/kWh) Percentage of CO₂ certificates from total material costs Deployment of renewable energy and combined heat and power generation Capex earmarked for investments in clean energy as of total investments in power generation 	<ul style="list-style-type: none"> Smaller CO₂ footprints lead to smaller 'clean-up' risk – both from an operational and a liability-management perspective. This feeds through to capex requirements and external funding needs.
	Exposure to waste and hazardous waste	<ul style="list-style-type: none"> Percentage of generation portfolio that creates such exposure Exposure to waste production and recycling Provisions and provision coverage by dedicated assets 	<ul style="list-style-type: none"> High exposure to hazardous and non-hazardous waste adversely affects operating profitability, raises the exposure of debt-like asset retirement obligations, contingencies and increases the risk of reputational damage.
Efficiencies	Internal production process	<ul style="list-style-type: none"> Load factors of power generation assets (%) 	<ul style="list-style-type: none"> Power generators that display persistently below-average and/or volatile load factors for generation assets face a lower return on capital employed, higher cash flow volatility and the risk of stranded assets.
	Efficiency of power transmission and distribution	<ul style="list-style-type: none"> Technical and commercial losses (%) Percentage share of balancing cost from total cost 	<ul style="list-style-type: none"> Grid operators with comparatively high technical or commercial grid losses may face regulatory pressure to invest in grid updates and/or countermeasures to reduce

Environment			
	Sub-indicator	Measurement/Indicator	Credit impact
			commercial losses. This will weigh on operating margins and increase pressure on FOCF. High balancing cost might point to high reinvestment needs.
	Operating efficiency against the benchmark	<ul style="list-style-type: none"> Efficiency factor in regulations 	<ul style="list-style-type: none"> Grid operators whose regulator benchmarks a utility's cost-efficiency against other national or international peers may risk less than full cost recovery through regulated tariffs, which will weigh on achievable margins and lead to pressure to restructure or reinvest.
	External efficiencies	<ul style="list-style-type: none"> Pace in the development of energy savings through more energy-efficient devices 	<ul style="list-style-type: none"> As appliances get more efficient the entire sector is negatively exposed to energy efficiency, if not offset by growing energy needs for increasingly electrified society.
Product innovation	Product innovation	<ul style="list-style-type: none"> Share of renewable energies in generation and supply Roll-out of smart metering Revenue and earnings growth stemming from innovative business areas and technologies such as power-to-X, green and blue gas, virtual power plants, CHP usage, charging stations for electric vehicles Total R&D expenses or funding of research to external partners, suppliers or academic research 	<ul style="list-style-type: none"> Innovative power companies reduce the risk of stranded assets and asset impairments. Forward-looking utilities seek new revenue opportunities by exploring the delivery of sustainable products and services using intelligent information, smart grid and energy management technologies. Capacity for innovation will become an increasingly important profit driver as utilities meet changing consumer expectations.
Physical risks	Energy mix and local concentrations and force majeure risks	<ul style="list-style-type: none"> Exposure to run-of-river and pumped-storage plants, development of nuclear utilisation as a consequence of forced shutdowns Asset exposure that can be negatively affected by extreme weather events/natural disasters, e.g. storms, wildfires, flooding 	<ul style="list-style-type: none"> High exposure to regions that suffer from extreme weather events or natural disasters leads to higher insurance premiums, higher likelihood of non-performance of assets and increased capex.

Social			
	Sub-indicator	Measurement/Indicator	Credit impact
Labour management	Workforce metrics	<ul style="list-style-type: none"> Employee retention and turnover Employee participation in executive board 	<ul style="list-style-type: none"> The higher the employee satisfaction and inclusion, the lower the costs related to staff turnover and training (lower one-off items associated with restructuring and litigation costs). Similarly, strikes, disruptions of operations and general wage renegotiations can be avoided.
Health & safety	Health & safety	<ul style="list-style-type: none"> Lost time to injury Downtimes of power plants 	<ul style="list-style-type: none"> Low exposure to activities vulnerable to accidental

Social			
	Sub-indicator	Measurement/Indicator	Credit impact
		<ul style="list-style-type: none"> Number of incidents related to asset quality or operations Total spending on product safety/revenue Extent of hazardous activities in the business mix Compliance with health standards; presence of a safety-conscious culture supported by employee training and rigorous policies; proactive deployment of protective technologies Economic age of operating assets 	<ul style="list-style-type: none"> disruptions or environmental accidents, including spills, leaks and pollutant releases, reduces adverse effects on operating profitability, likelihood of penalties, reputational damage or regulatory pressure for reinvestment and extra capex. Strong operating performance reduces insurance premiums. Heavy reliance on outdated infrastructure could lead to extra investment.
Clients and supply chain	Customer retention	<ul style="list-style-type: none"> Percentage of new customers as of total customers Average length of time of customer relationship in years 	<ul style="list-style-type: none"> Displaying low churn rates and high customer retention is a good signal of an established market position and recurring cash flow.
	Procurement	<ul style="list-style-type: none"> Supply chain management – diversity, reputation, legality and social acceptability of dealings with suppliers, susceptibility to regulatory or geopolitical change 	<ul style="list-style-type: none"> Smooth procurement processes and little to no disputes with suppliers are good signals of business continuity and satisfactory margins for buyers and sellers.
Regulatory & reputational risk	Reversal on policy promises and regulatory intervention	<ul style="list-style-type: none"> Reversal on policy promises and regulatory inconsistency Legal and regulatory actions against the company 	<ul style="list-style-type: none"> Utilities are tightly regulated: taxation, subsidies, tariff setting, asset retirement, and emission goals. We tend to negatively assess utilities exposed to jurisdictions which have shown or are deemed to apply regulatory inconsistencies, regular changes and a tendency for enacting retroactive regulations or require the forced mothballing of assets without adequate compensation. We hold a more favourable view if a utility's business is supported by robust, consistent political and regulatory framework which provides transparency on cash flow and market position. High exposure to legal and regulatory action points to a potential lack of resource-, cost- or asset-efficiency, usually weighs on operating cash flow and can suggest the need for more capex.
	Community disruption	<ul style="list-style-type: none"> Significant construction delays Significantly negative press sentiment Frequency of strikes 	<ul style="list-style-type: none"> The failure to manage stakeholder expectations can lead to social resistance, project delays, increased project costs and challenges to a company's reputation that can undermine a company's market position and operating cash flow.

Governance			
	Sub-indicator	Measurement/Indicator	Credit impact
Company control	Board structure and effectiveness	<ul style="list-style-type: none"> Board independence. Competency and diversity of board members Effectiveness of oversight, risk management and internal control mechanisms Sustainability targets at board and executive management level 	<ul style="list-style-type: none"> Ineffective board or lack of controls can result in poor decision-making and failure to achieve strategic goals. Fraud, theft, or misapplication of company resources can damage performance and ruin management reputation.
	Risk management	<ul style="list-style-type: none"> Risk management framework and culture Risk-adjusted return/performance measures 	<ul style="list-style-type: none"> Risk awareness and focus at all levels of an organisation is key to effective strategic, operational and financial risk mitigation.
	Bribery and corruption	<ul style="list-style-type: none"> Frequency and magnitude of bribery and corruption incidents. 	<ul style="list-style-type: none"> Adverse reputational consequences, leading to regulatory reprimands or fines, and ultimately the loss of assets or the licence to operate.
Clarity/transparency	Financial disclosure	<ul style="list-style-type: none"> Timeliness and quality (GAAP) of disclosures. Comprehensiveness of disclosure (e.g. on terms of loan agreements, contingent liabilities, related-party transactions and ownership structure). Consistency in reporting formats 	<ul style="list-style-type: none"> Rapid and comprehensive financial reporting instils confidence and signals strong and effective internal controls. Conversely: slow and incomplete reporting may signal weak controls, incompetence or an attempt to conceal poor performance, or an act of fraud through creative accounting.
	Transparency of communication	<ul style="list-style-type: none"> Earnings call and investor presentations that help stakeholders understand the drivers of company performance, its strategy and direction. Risk factor (including ESG-related risks) and sensitivity analysis 	<ul style="list-style-type: none"> Transparency is often associated with strong governance. Understanding and openness about risk factors allows a company to hedge against risks and prepare mitigation strategies.
Corporate structure	Complexity	<ul style="list-style-type: none"> Complex and non-transparent ownership structure (nominee holdings hiding true owners) Complex group structure Complex debt structure Significant related-party transactions Aggressive tax optimisation strategies History of frequent legal or regulatory infractions 	<ul style="list-style-type: none"> Opaque company ownership, cross holdings, and significant minority interests may hide conflicts of interest. Complex debt structures can result in unexpected events of default and cross-acceleration. Related-party transactions can disguise an inappropriate diversion of company assets. Aggressive tax strategies can backfire and result in unexpected tax penalties, negative publicity, and reputational damage.
Stakeholder management	Stakeholder relations	<ul style="list-style-type: none"> Respect and balance of interests of all stakeholders 	<ul style="list-style-type: none"> Stakeholder disputes may have negative reputational and financial consequences.
	Shareholder distributions	<ul style="list-style-type: none"> Financial policy clarity, consistency, credibility, and track record Board level endorsement of financial policy 	<ul style="list-style-type: none"> A clear and credible financial policy helps steer a company towards its strategic targets and manage stakeholder expectations.



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