Energy: Electric and Gas Utilities

Sustainable Development Analysis Framework

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Date: July 2018

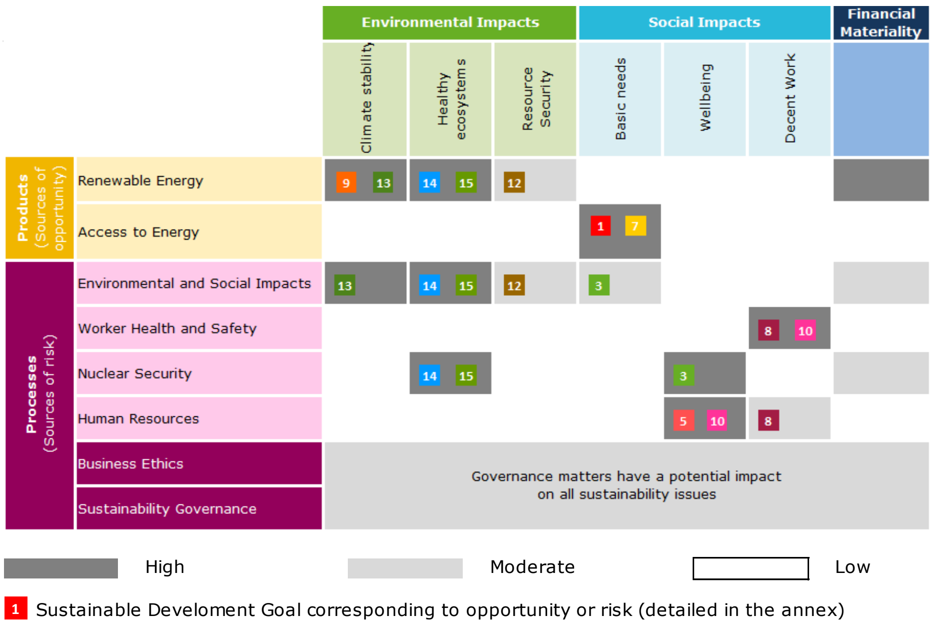
Sectors: Production, generation, transmission, distribution, sales, or trade of electricity and/or gas

This is a methodological document aimed at clarifying how Mirova takes into account sustainable development issues in the framework of the environmental, social and governance analysis of each sub-sector of activity.

Electric and gas utilities face a complex energy landscape currently characterized by structural changes and impending growth. Greenhouse gas regulation, decarbonization objectives, changes in commodity prices, and shifting public perceptions have put the sector's traditional business model at risk despite growing global energy and electricity demand. Utilities must now find a way to continue to reliably produce and distribute energy while simultaneously lowering their carbon footprint.

So, decreasing the use of fossil fuels and increasing the share of renewables in the generation mix – all while managing worker health and safety, environmental impacts, nuclear security, and more - are the major levers for action within a sector seeking to ensure its place in a volatile energy environment.

Major sustainability challenges for the sector



Source : Mirova, 2018

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Sustainability Opportunities

E Renewable Energy

Avoiding the potentially catastrophic physical, social, environmental, and economic effects of unchecked climate change requires limiting global average temperature rise to 1.5-2°C above pre-industrial levels. This means that carbon dioxide emissions must be reduced to the maximum extent possible over the shortest feasible timeframe.

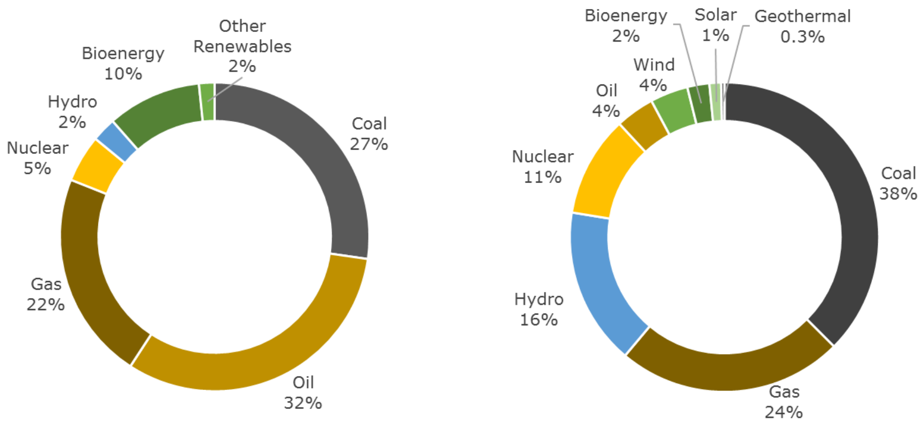
~ 100%

decarbonization required in the power sector in order to achieve the ≤2°C target

(IEA, 2017)

In the context of utilities, it is important to keep in mind the difference between energy and electricity mixes. An energy mix includes all energy use, including the fuel burned by cars, used for heating and cooling, used directly in industry, and used indirectly as electricity. The electricity mix is a part of the energy mix and represents just the fuels used to generate electricity. For example, the large share of oil in the global energy mix below represents the high oil consumption of the transportation sector. Then, its relative absence in the electricity mix reflects oil's lesser role in power generation.

Figure 1: **Global Energy Mix, 2016** **Global Electricity Mix, 2016**



Hydro, renewables, nuclear, and a large part of coal's share in the energy mix are largely dedicated to electricity. The remaining coal is used directly in industrial processes (i.e. steel, concrete). Bioenergy is renewable includes biofuels, often used with or instead of oil in the transportation sector; biomass, often used to replace coal in electricity generation; and biogas, which can substitute gas. All come from renewable sources. Natural gas is used for both electricity and directly consumed in buildings for heating; its share in transportation is currently small.

Source: (IEA, 2017)

Utilities focused on electricity produce, transmit, and deliver electricity produced via their electricity mix to their customer, while gas utilities transport gas from its producer to the industrial, commercial, and residential sectors.

So, while it is difficult to substitute fossil fuels in the industrial processes that rely on them directly (i.e. coal in steel/concrete or gas in chemicals) or to replace gas for utilities that operate gas transmission and distribution infrastructure, electric utilities do have several viable options to reduce the share of fossil fuels in their electricity mix without impeding reliable power generation. The main alternatives are renewables: wind, solar, hydropower, geothermal, and bioenergy. Two other replacement options exist, though neither are considered renewable: nuclear power, which has climate impacts as positive as renewables but is associated with substantial social risk; and natural gas, which is not nearly as climate-friendly as renewables or nuclear, but can halve the emissions per unit of power generated when it replaces coal.

So, we believe the most important metric for assessing opportunities for utility companies is the carbon intensities of the fuels in their energy mix, i.e. how much carbon is emitted per kilowatt-hour produced.

Carbon Intensities of Fuels

Fuel	Generation Carbon Intensity ($gCO2/kWh$) (50^{th} percentile)	Lifecycle Carbon Intensity ($gCO2/kWh$) (25^{th}-75^{th} percentile)
Wind	0	8-20
Solar PV	0	29-80
Hydropower	0	3-85
Geothermal	0	20-57
Biomass	0	37-360
Nuclear	0	8-45
Gas	400	422-548
Coal	945	877-1130

Source: http://www.ipcc-wg3.de/report/IPCC_SRREN_Annex_II.pdf

1.1.1 Wind Power

Windpower comes in two forms: turbines installed on land (onshore) or on platforms at sea (offshore). Both lead to very few greenhouse gas emissions, totaling zero during operation and relatively few from the supply chain.

Furthermore, the economics of windpower have improved substantially in recent years, mostly because of scale effects in the industry and fierce competition between manufacturers, encouraged by the emerging preeminence of wind capacity auctions. In regions with reasonably good wind resource, onshore wind is now competitive with fossil fuels. Offshore wind is a mature market in Europe, and though its average costs remain higher than onshore, installations are expected to increase globally as learning effects and infrastructure develop.

In our view, windpower represents substantial climate benefit with low associated environmental and social risks; it is a good choice for utilities looking to decarbonize their energy mix.

1.1.2 Solar Power

Solar power uses the semiconductor properties of silicon to generate electricity from sunlight. It is the newest of all the energy systems, and unique in its suitability for decentralized power generation and the ongoing price reduction potential due to learning effects.

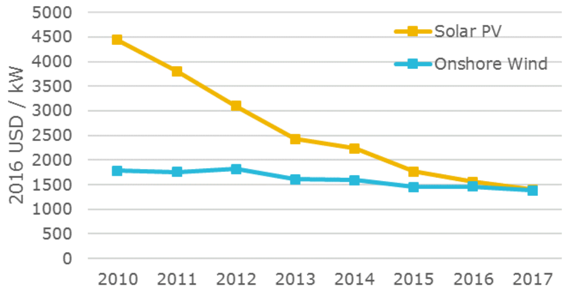
Solar emits zero carbon during electricity generation, with the supply chain and maintenance contributing relatively few emisions also. Efficiencies of the panels are improving with time, further contributing to improving economics. Solar power is expected to experience enormous growth in the coming years, not only because it can be put nearly anywhere, but also because its decreasing prices imply competitivity with fossil fuels in the near future.

Because solar power’s high climate benefit and minimal impacts throughout its lifecycle, it is also considered to constitute high investment opportunity.

73% *: the decrease in the lifetime cost of utility-scale solar between 2010 and 2017*

(IRENA, 2018)

Figure 2: **Total installed costs of onshore wind and solar PV projects (global weighted average, 2010-2017)**



Note that the costs of wind and solar power have yet to fully take into account the intermittency of these energy systems, which may require adapting the grid and/or substantial investments in storage to manage. *Source : Mirova / (IRENA Renewable Cost Database, 2018)*

1.1.3 Hydropower and Geothermal

Hydro and geothermal power both emit near-zero carbon over their lifecycles and are very location-dependent: unlike the wind and the sun, neither geothermal resource nor suitable rivers are present everywhere. Since these technologies are very mature, countries with hydro and geothermal resource have largely implemented these energy systems in most available sites.

As a result, hydro and geothermal exhibit relatively low growth potential in Europe, China, and the United States. In developing countries, some potential remains for large hydropower plants, which provide large amounts low-carbon energy, but they tend to be met with opposition. Large dams can displace local populations, disrupt ecosystems, and lead to negative climate impact in tropical regions as plants decompose and emit methane, a potent greenhouse gas.

Because of their positive carbon impacts – in line with those of wind and solar - hydro and geothermal power are considered sources of opportunity. Even so, the risk management practices of new hydro projects must be assessed case-by-case to verify the absence of negative ecosystem or human rights impacts.

1.1.4 Biomass

Bioenergy refers to plant-based matter used as an energy source. Biomass, usually agricultural waste or wood pellets from forestry by-products, can be used to replace coal. Biogas produced from sewage, landfills, or other sources of waste can be used to replace natural gas in power generation. Bioenergy has the advantage of being readily substitutable for fossil fuels with only slight changes needed to the infrastructure.

Biofuels are considered carbon-neutral because trees/crops store carbon throughout their life, which is then liberated by burning or decomposition. This means that biomass does emit carbon when it is used to produce power, but the carbon had been absorbed from the air during the plant’s lifetime. It is thus crucial the the sustainability of the biomass supplies is assured; agricultural and forestry waste is ideal since it does not imply burning wood that could otherwise be used to continue to stock carbon, and bioenergy-dedicated crops should not displace food crops.

In general, adopting bioenergy as a fuel source is considered an opportunity for utilities when reasonable assurance of sustainable sourcing is in place, and especially so when it replaces coal.

FOCUS: GAS

When burned, natural gas emits about half as much carbon as coal, but still substantially more than renewables. It is often considered a "bridge" fuel for the energy transition as it leads to positive climate benefit when it replaces coal.

Natural gas is mostly made up of methane, which is a highly potent greenhouse gas (32 times more potent than CO_2 over a 100-year period). As a result, relatively small methane leaks throughout the supply chain can call into question gas' true climate benefit; at a 3% leakage rate, the two fuels are considered to have similar carbon impacts. And while the official leakage figures released by companies and governments are nearly always far below the 3% threshhold, studies have suggested that they are systematically underestimated (Alvarez, 2018). Avoiding lock-in to fossil fuels is also important, developing new natural gas capacity does not necessarily lead to positive long-term climate impacts either if it impedes the development of renewables.

Our view is therefore that gas needs to be assessed in context. It is not considered a de-facto source of opportunity, but we recognize the role it can play – when methane escape rates are well managed, an issue particularly difficult to manage in the context of shale gas – in decarbonizing countries with substantial coal generation. In countries that already have low-carbon energy mixes, we usually do not consider natural gas a suitable way to address the Sustainable Development Goals.

FOCUS: NUCLEAR

Looking exclusively at nuclear's carbon impacts, it seems an excellent choice for decarbonization. It emits zero carbon and zero pollutants during electricity generation, it produces large, stable amounts of power, and its supply chain is not emissive. However, nuclear power leads to substantial long-term social risks, namely long-term waste storage and the potentially wide reach of accidents. Managing these risks is highly dependent on local regulator quality, company practices, quality control throughout the supply chain, and physical plant location; many factors that vary substantially from place to place and can thus be difficult to assess externally.

Following the Fukushima accident in 2011, the economics of nuclear have become more complicated in Europe and the U.S. due to tightening regulation, new reactor types, decreased public support, and greater competition from renewables and natural gas. As a result, nuclear's position as a low-cost energy source is no longer assured; growth has stagnated in these markets. Lower-cost nuclear builds have been achieved in China, which anticipates high growth in its nuclear capacity in the mid-term, though concerns still loom over safety.

While we acknowledge the climate benefits of nuclear power, the social and economic issues surrounding it remain consequential. Companies are not disqualified from investment if a share of their mix is nuclear-derived, but strong risk management plans and measures should be in place.[1]

[1] *For more information about Mirova's position on nuclear power, please see:* https://www.mirova.com/sites/default/files/2020-08/2016NuclearsUnclearFuture.pdf

Finally, it will be necessary to adapt the existing transmission and distribution infrastructure so that it is more flexible and capable of handling intermittent and decentralized power sources like wind and solar. Companies which invest substantially in smart grids, whether via demand management solutions, storage, or specialized cabling can also be exposed to sustainability opportunities.

In the context of the global transition to a low-carbon energy mix, utilities must decrease their emissions and reduce their dependence on fossil fuels. We believe that renewables like wind, solar, hydro, geothermal, and biomass are the best choices for reducing this dependence.

Utilities which endeavor to reduce their carbon intensity by producing energy from renewable sources (wind, solar, hydropower, geothermal, and biomass) offer investment opportunity, particularly in highly fossil-fuel dependent regions.

Development of grid solutions to facilitate the large-scale implementation of these energy sources can also be considered opportunity.

Key indicators

- Carbon intensity of power generation
- Revenues generated from transmission / distribution of renewable energy
- CapEx / part of the R&D budget dedicated to renewables / grid solutions

S Access to Energy

14% of the world's population is without electricity

(IEA, 2017)

95% of those without electricity live in sub-Saharan Africa or developing Asia

(IEA, 2017)

Secure access to energy and electricity benefits development by providing lighting, heating, cooking, and more, but 1.1 billion people across the globe do not currently have access to electricity. Increasing generation capacity and transmission and distribution infrastructure could therefore have substantial, positive impacts on development, especially in rural areas in developing Asia and sub-Saharan Africa (IEA, 2017). These markets also represent a large, yet-untapped group of consumers for utilities companies.

It should be noted that while expanding access to energy is an opportunity regardless, capacity development should be considered in an environmental context; efforts should be made to reduce path-dependency on fossil fuels, especially coal.

We look for companies strongly positioned to provide widespread access to energy, especially in underserved markets.

Key indicators

- CapEx/part of the R&D budget dedicated to expanding access to energy

Exposure to Opportunities

	Indicators considered : - **Integrated and upstream**: Fuel mix breakdown (in reserves and production) - **Downstream**: Portion of refining capacity dedicated to alternative fuels - **Equipment/Service:** Portion of revenues destined for fossil fuel sector - **All:** Portion of capital expenditures and R&D dedicated to alternative fuels and renewables	
High exposure	• >50% dedicated to renewables, advanced biofuels, or other low-carbon fuels • <20% coal/oil	Strategic commitments (and evidence thereof) will also be considered on a qualitative basis. This assessment is based on capex planned and realized, acquisitions and divestments, and other efforts to align products and practices with a 2°C climate scenario.
Significant exposure	• 20%-50% dedicated to renewables, advanced biofuels, or other low-carbon fuels • <20% coal/oil	
Low or no exposure	• 80%-100% gas • Diversified equipment/services companies (<50% of revenues from fossil fuel sector)	
Negative exposure	• >20% oil/coal • Dedicated equipment/services companies (>50% of revenues from fossil fuel sector)	

Environmental and Social Risk

42% of global GHG emissions arise from electricity generation

(IEA, 2017)

73% of SOx and 20% of NOx emissions in the U.S. come from fossil fuel combustion at power plants

(United States Environmental Protection Agency, 2015)

E/S Impacts of Power Systems

Utilities' environmental and social risks vary by energy source, both in breadth and in width. Utilities that rely on fossil fuels, for example, are particularly exposed to risks associated with regulating greenhouse gas emissions and air pollution, and those involved in gas transmission or which have vertically integrated to include extraction of fossil fuels must further monitor the environmental impacts of these activities, as well as those arising from generation and distribution. Gas extraction and transmission may lead to methane emissions in quantities signicant enough to negate any potential for positive impact. Effects on the aquatic table due to fracking, oil spills, and degradation of land associated with coal mining are additional examples. The high stakes nature of climate change and land degradation associated with these activities require particularly stringent environmental and social management systems.

Utilities that operate large hydropower plants must act proacticely to avoid negative biodiversity impacts and human rights violations (i.e. displacement of populations and destruction of livelihoods). Those using bioenergy must pay attention to the sustainability of their biomass supply chain to ensure that their source material is derived from waste and does not replace food crops. Wind and solar operators face must ensure limited biodiversity effects, minimal noise pollution, and sufficient consultation of local populations.

Energy efficiency is another important way utilities can mitigate their environmental impacts; by improving the energy efficiency of thermal generation and providing incentives to promote efficiency by consumers, companies can reduce their carbon footprint substantially.

Effective monitoring and management of environmental and social impacts leads to a more sustainable business model. Conversely, inadequate management can lead to steep costs from regulatory action or litigation.

First, utilities should reduce their environmental footprint by acknowledging climate change, creating GHG and pollutant inventories, and setting targets to reduce these emissions. Next, they should move toward a more sustainable generation mix, particularly through adding renewables and improving efficiency.

Environmental impacts can also be managed by protecting biodiversity in hydropower projects and transmission infrastructure. Risk can be further mitigated by preventing leakage from gas transmission and distribution systems through stringent compliance to regulations and monitoring procedures.

Key indicators

- Existence of company policies with focus on environmental management, efficiency, and compliance, including performance indicators and quantified objectives (energy, GHG emissions, water, etc.)
- Evolution of environmental impacts over previous years (GHG / other pollutant emissions, water use, etc.)

S

Worker Health and Safety

The utilities sector entails a slew of dangerous activities, and the health and safety of all workers, employees and contractors, is paramount.

The majority of accidents take place by electrocution during installation of electrical components, construction, and maintenance of power lines. Utilities which vertically integrate to include mining in their value chain must also pay attention to latent risks of fire, asphyxiation, and mine collapse.

We primarily look for health and safety policies that cover the entire workforce.

In addition, we seek a company culture of safety comprised of procedures, directives, concrete actions, plus a clear indication of increasing health and safety standards.

Key indicators

- Formal health and safety policy, performance indicators and quantified objectives
- Significant performance improvement over the previous years

E/S

Nuclear Security

€200 billion in costs estimated due to the Fukushima accident in 2011

(Gunderson & Caldicott, 2012)

250,000 years must pass before nuclear waste is no more dangerous than mined uranium

(World Nuclear Association, 2016)

Though nuclear power is a low-carbon energy source, it presents a unique set of social risks. The principal areas of concern are worker safety, plant security, and waste disposal.

Exposure to radioactive materials, like those resulting from nuclear power generation, can have severe health effects including cancer and genetic mutations. Contamination of water resources would also have wide-reaching effects. Chemical and radiation risks to workers must be managed on a daily basis, as well as for inhabitants of the surrounding area in case of an accident.

Spent fuel could also be repurposed for use as weapons. As a result, companies operating nuclear plants are responsible for ensuring that fissile materials remain secured and well-contained, away from workers, the general populace, security threats, and the environment.

In addition, the question of waste disposal remains problematic. Planning for long-term storage typically calls for creation of repositories in geologically stable areas and requires joint efforts between companies and governments. Short-term storage methods are often onsite and relatively unsecured. Finally, decommissioning also necessitates large funds to cover decontamination and dismantling costs, typically mandated by regulation and consequentially set aside by plant owners and operators. These can be sizeable liabilities which stress balance sheets, but are essential in order to assure that the plant will leave minimal traces after it ceases to produce power.

These risks underscore the necessity of strong regulatory frameworks in areas where nuclear power plants are present. Plants operating in countries without strong regulatory bodies face inherent social and environmental risks tied to the lack of oversight by national safety agencies. .

We look for safety measures specific to the risks associated with nuclear power: strict monitoring of safety compliance, potential security weaknesses and demonstrated attention to the problem of nuclear waste.

If flaws are identified in the reactor's construction or operation, we hope to see companies actively investigate and rectify the issues.

We also prefer to see a strong regulatory framework mandating clear risk management protocols.

Key indicators

- Policies for nuclear risk management and compliance, including quantified objectives
- Continuous improvement in social metrics (safety and security)
- Located in regions with strong regulatory bodies and oversight
- Budget related to back-end of fuel cycle, including R&D and decommissioning provisions

S Human Resources

The existing business model of utilities is being challenged by decentralized generation and renewables. The business model of utilities is based on demand and the marginal cost of generation; since renewables have minimal operating costs and are thus prioritized on the grid, fossil-fired plants' margins are squeezed. The subsequent low electricity prices can strain the sector's profitability, which is already sensitive to numerous macroeconomic conditions, including commodity prices, and regulation. As a result, restructuring and/or layoffs are common.

German utilities, for instance, have been under regulatory pressure to reduce or eliminate their coal and nuclear operations in order to comply with the country's energy transition goals. Meanwhile, dropping electricity prices due to the subsidization and implementation of renewables have led revenues for fossil-focused utilities to fall. Restructuring has eliminated thousands of jobs as a result.

Large-scale layoffs can be problematic as social stability is a prerequisite for long-term growth. When restructuring and job cuts do take place, however, providing assistance in finding alternative employment, providing reasonable severance pay, and consulting with unions/employees all represent socially responsible restructuring practices.

We encourage companies to restructure responsibly if it is not possible to anticipate market changes and adapt the skills of the existing workforce.

Key indicators

- Policies relating to responsible restructuring
- Mechanisms to attract and retain workers

G Business Ethics

The nature of generation, transmission, and distribution infrastructures for both electricity and gas means that utilities often have monopolistic market positions. These companies must resist the temptation to entrench themselves in market manipulation or unfair business practices. Investors and communities must remain vigilant in holding utilities accountable.

Anti-trust and anti-market manipulation laws attempt to limit such behavior, but these vary from country to country. The responsibility therefore falls on each company to ensure its practices are ethical and compliant with local laws and regulations. This includes transparency regarding generation mix, strategy, price policy and rate structure, and ensuring good practices in client relations. Any regulatory changes must be reflected in utilities' governance, while the companies' governance must also fall under the regulators' purview.

Market manipulation, fraud, profiteering, and antitrust activities can lead to costs and liabilities from regulatory enforcement, criminal or civil sanctions, ongoing compliance costs or recurring fees, negative effects on the company's reputation and intangible assets, or higher costs of capital due to higher risk premiums.

Generally, a high level of transparency tends to indicate good management of ethics risks. Companies should go beyond regulatory requirements in product and service quality while implementing risk management processes and monitoring marketing practices.

How frequently a company is involved in a controversy, as well as its ability to respond responsibly, are part of our analysis.

Key indicators

- Antitrust litigation and fines paid
- Significant ethical controversy and company response

G Sustainability Governance

Corporate governance practices can have an impact on a company's performance; more democratic and stakeholder-focused practices ensure that corporate strategy is aligned with the best interests of its shareholders while taking into account environmental and social concerns.

Creating dedicated committees for corporate social responsibility, facilitating shareholder participation, divulging remuneration schemes, and disclosing fiscal strategy are some of the ways utilities can demonstrate their commitment to sustainable development.

Analysis of responsible governance practices should include: a review of board structure, namely the separation between supervision and management; independent audit, compensation, and sustainability committees; a review of shareholder democracy, including voting rights; and ability to introduce resolutions; and a review of executive remuneration, specifically whether compensation schemes are transparent, and ESG objectives are integrated.

Key indicators

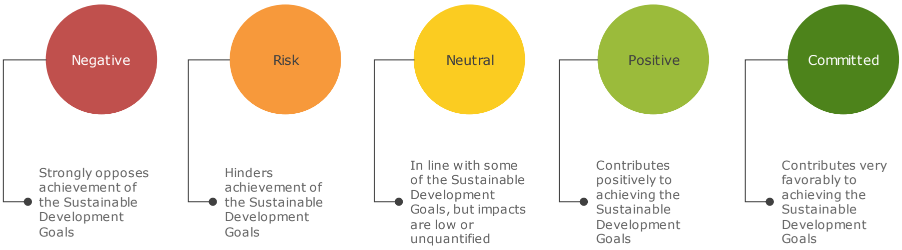
- Fiscal strategy and tax rate
- Governance of corporate social responsibility

Risk Assessment

	Criteria
Positive	Does not meet "risk" criteria AND - Comprehensive policy for reduction of environmental impacts: formalization of environmental risk assessment and management procedures, fuel-dependence and efficiency of operating plants, verified inventories and closely-followed environmental performance indicators AND - Satisfactory management of worker health and safety AND - Satisfactory management of nuclear risks (if applicable) AND - Comprehensive code of ethics plus adequate response to ethical controversies
Neutral	All other cases
Risk	- Repeated ethical controversies with inadequate or insufficient company response OR - Activities with high health/safety risks for workers, and lack of health/safety management (indicators related to health/safety performance) OR - Activities with significant safety or security risk, specifically applied to nuclear power, with lack of adequate management / regulatory framework OR - Activities with significant direct environmental impact and absence of advanced management (following environmental indicators)

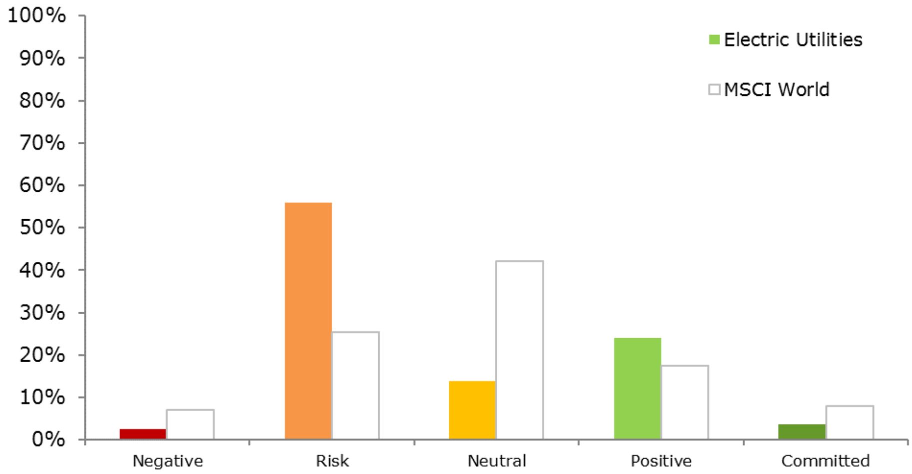
Opinion Breakdown

Based on this framework of analysis, a "Sustainability Opinion" on a six-level scale is defined for each issuer/project.



The following figure illustrates the distribution of Mirova's Sustainability Opinions for the companies in this sector found in the MSCI World index, compared to the index as a whole.

Figure 3: Sustainability Opinions of the Electric Utilities Sector vs. the MSCI World Index



Source: Mirova

The distribution of opinions for the Electric & Gas Utilities sector skews towards "Risk" opinions, reflecting the high share of American utilities in the MSCI World (approximately 60%). American utilities tend to be more coal-reliant than their European counterparts, with lower levels of disclosure around their environmental, social, and governance practices. As a result, 77% of American utilities are rated "Risk," reflecting their limited contribution to decarbonization objectives, their limited approach to sustainability risk management, or both.

European utilities, which comprise 27% of the MSCI World index, have undergone a transformation in recent years. Several have made the energy transtition the cornerstone of their strategy, and most have reasonably good disclosure and management of their sustainability risks. As a result, European utilites as a whole are well-rated, with most either "Positive" (64%) or Neutral (24%).

Finally, the companies generally considered to be "Committed" in the sector – renewable energy pure-plays - tend to be small and/or unlisted; as a result, they are not a part of the MSCI World and are not a part of the figure above.

Conclusion

Electric utilities are at the forefront of the environmental transition: they can aid in achieving a quick decarbonization by substituting fossil fuels in their generation mix with renewables. Facilitating access to energy, while not sufficiently addressed by most utilities today, could be another source of opportunity. Companies strongly positioned in these activities are considered positively within the scope of our responsible investment policy.

Utilities are also evaluated based on the risks inherent to their activities, including reduction of environmental impacts, worker health and safety, security of nuclear plants, and business ethics. For companies not positioned to take advantage of the aforementioned opportunities, exceptionally strong risk management indicates a sustainable buisness model, which is also favorable in our view.

On the contrary, a company can be excluded from investment if its risk management is deemed inadequate, especially if engagement fails to rectify deficiencies. In cases where transparency is not sufficient to obtain a nuanced understanding of the company's strategy and practices, we open dialogue.

As the energy sector evolves, utilities must evolve too. They are especially key players in the shift to a lower carbon energy system, with a pivotal role to play in achieving the goals of the Paris Agreement. We, as investors, seek to support this transition by preferentially allocating capital to the most actively participating utilities.

Sustainable Development Goals

1. End poverty in all its forms everywhere

2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

3. Ensure healthy lives and promote well-being for all at all ages

4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

5. Achieve gender equality and empower all women and girls

6. Ensure availability and sustainable management of water and sanitation for all

7. Ensure access to affordable, reliable, sustainable and modern energy for all

8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

10. Reduce inequality within and among countries

11. Make cities and human settlements inclusive, safe, resilient and sustainable

12. Ensure sustainable consumption and production patterns

13. Take urgent action to combat climate change and its impacts

14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

http://www.un.org/sustainabledevelopment/sustainable-development-goals/

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