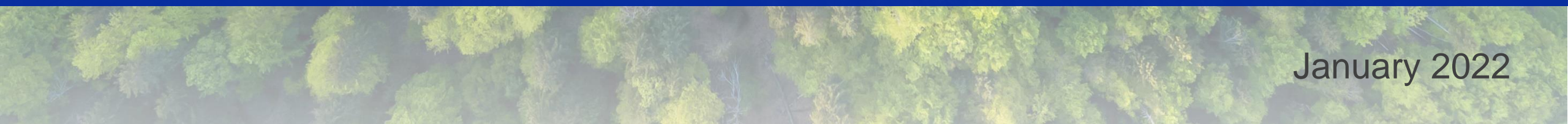




Regulated Networks and Unregulated Utilities

ESG Issuer Profile Scores and Credit Impact Scores



January 2022

Agenda

1. MIS ESG Integration into Credit
2. ESG Issuer Profile Scores and Credit Impact Scores for Regulated Networks and Unregulated Utilities
3. Case Studies



MIS ESG Integration into Credit

SECTION ONE

Four Components to MIS Integration of ESG

New ESG scores will assist in transparently and systematically demonstrating the impact of ESG on credit ratings



Credit Ratings & Research

How is ESG integrated into credit ratings?

ESG factors taken into consideration for all credit ratings. Greater transparency in PRs, as well as Credit opinions. Credit Impact Score (CIS) is an output of the rating process that indicates the extent, if any, to which ESG factors impact the rating of an issuer or transaction.



ESG Scores

How is a specific issuer exposed to ESG risks/benefits?

Issuer Profile Scores (IPS) are issuer-specific scores that assess an entity's exposure to the categories of risks in the ESG classification from a credit perspective. IPSs, where available, are inputs to credit ratings.



ESG Classification

What is ESG?



Our classification reports describe how we define and categorize E, S and G considerations that are material to credit quality. New environmental classification sharpens focus on physical climate risks.

Heat Maps

Is ESG material to credit quality?



Heat maps provide relative ranking of various sectors along the E and S classification of risks.

ESG Classification System Incorporates Credit Relevant Considerations

Our assessment of ESG risks is framed by the classification



Environmental

Physical climate risks
Carbon transition
Water management
Waste and pollution
Natural capital



Social

Private sector	Public sector
Customer relations	Access to basic services
Demographic and societal trends	Demographics
Human capital	Education
Health and safety	Health and safety
Responsible production	Housing
	Labor and income



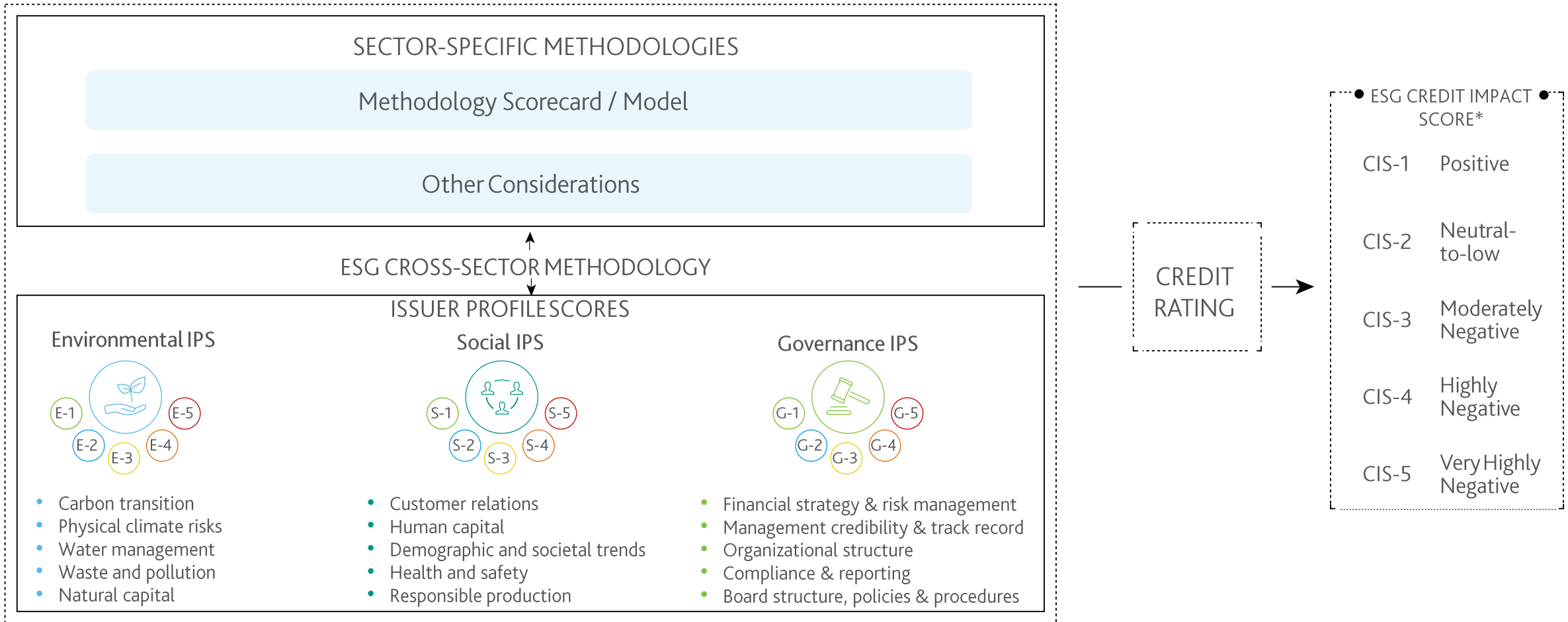
Governance

Private sector	Public sector
Financial strategy & risk management	Institutional structure
Management credibility & track record	Policy credibility and effectiveness
Organizational structure	Budget management
Board structure, policies & procedures	Transparency and disclosure
Compliance & reporting	

Source: Moody's Investors Service

ESG Integration into Credit Analysis

Our rating analysis considers all material credit considerations, including ESG



The ESG credit impact score (CIS) is an output of the rating process that more transparently communicates the impact of ESG considerations on the credit rating of an issuer or transaction.

What the Moody's ESG scores are – and are not

The Issuer Profile Scores incorporate:






- A credit perspective ✓
- Analysis of ESG issues material to credit risk ✓
- Emphasis on the most material credit risks ✓
- Global and cross-sector comparability ✓
- Management's actions to specifically address Issues ✓
- ESG risks and opportunities ✓

The Issuer Profile Score is not an opinion about:

- ✗ A company's sustainability performance
- ✗ The impact of sustainability practices on stakeholders
- ✗ The quality of a company's ESG disclosures
- ✗ Alignment with specific goals and targets such as the UN SDGs
- ✗ The impact of ESG on the credit rating: this is shown instead by the Credit Impact Score

E, S and G Issuer Profile Scoring Scale

Assessed on a five-point scale from positive to negative exposure

	Score	Definition
 <p>POSITIVE</p>	<p>E-1</p> <p>S-1</p> <p>G-1</p>	<p>Issuers or transactions with a Positive E or S issuer profile score typically have exposures to E or S issues that carry material credit benefits.</p> <p>For G, issuers or transactions typically have exposure to G considerations that, in the context of their sector, positions them strongly, with material credit benefits.</p>
 <p>NEUTRAL-TO-LOW</p>	<p>E-2</p> <p>S-2</p> <p>G-2</p>	<p>Issuers or transactions with a Neutral-to-Low E or S issuer profile score typically have exposures to E or S issues that are not material in differentiating credit quality. In other words, they could be overall slightly credit-positive, credit-neutral, or slightly credit-negative. An issuer or transaction may have a Neutral-to-Low score because the exposure is not material or because there are mitigants specifically related to any E or S risks that are sufficient to offset those risks.</p> <p>Issuers or transactions with a Neutral-to-Low G issuer profile score typically have exposure to G considerations that, in the context of their sector, positions them as average, and the exposure is overall neither credit-positive nor negative.</p>
 <p>MODERATELY NEGATIVE</p>	<p>E-3</p> <p>S-3</p> <p>G-3</p>	<p>Issuers or transactions with a Moderately Negative E or S issuer profile score typically have exposures to E or S issues that carry moderately negative credit risks. These issuers may demonstrate some mitigants specifically related to the identified E or S risks, but they are not sufficiently material to fully offset the risks.</p> <p>Issuers or transactions with a Moderately Negative G issuer profile score typically have exposure to G considerations that, in the context of the sector, positions them below average and the exposure carries overall moderately negative credit risks.</p>
 <p>HIGHLY NEGATIVE</p>	<p>E-4</p> <p>S-4</p> <p>G-4</p>	<p>Issuers or transactions with a Highly Negative E or S issuer profile score typically have exposures to E or S issues that carry high credit risks. These issuers may demonstrate some mitigants specifically tied to the E or S risks identified, but they generally have limited effect on the risks.</p> <p>Issuers or transactions with a Highly Negative G issuer profile score typically have exposure to G considerations that, in the context of their sector, positions them weakly and the exposure carries overall highly negative credit risks.</p>
 <p>VERY HIGHLY NEGATIVE</p>	<p>E-5</p> <p>S-5</p> <p>G-5</p>	<p>Issuers or transactions with a Very Highly Negative E or S issuer profile score typically have exposures to E or S issues that carry very high credit risks. While these issuers or transactions may demonstrate some mitigants specifically related to the identified E or S risks, they are not meaningful relative to the magnitude of the risks.</p> <p>Issuers or transactions with a Very Highly Negative G issuer profile score typically have exposure to G considerations that, in the context of their sector, positions them very poorly and the exposure carries overall very high credit risks.</p>

Source: Moody's Investors Service

What the Moody's ESG scores are – and are not

The Credit Impact Score:

Reflects the impact of ESG on the credit rating



Indicates the extent to which the credit rating would have been different in the absence of ESG issues



Places ESG in the context of other rating considerations



The Credit Impact Score:



Is not the combination of the E,S and G IPS scores








Does not have a systematic relationship to the credit rating



Does not have a systematic relationship to the IPS scores

ESG Credit Impact Score (CIS) Scale

	Score	Definition
 <p>POSITIVE</p>	CIS-1	For an issuer scored CIS-1 (Positive), its ESG attributes are overall considered as having a positive impact on the rating. The overall positive influence from its ESG attributes on the rating is material.
 <p>NEUTRAL-TO-LOW</p>	CIS-2	For an issuer scored CIS-2 (Neutral-to-Low), its ESG attributes are overall considered as having a neutral-to-low impact on the current rating; i.e., the overall influence of these attributes on the rating is non-material.
 <p>MODERATELY NEGATIVE</p>	CIS-3	For an issuer scored CIS-3 (Moderately Negative), its ESG attributes are overall considered as having a limited impact on the current rating, with greater potential for future negative impact over time. The negative influence of the overall ESG attributes on the rating is more pronounced compared to an issuer scored CIS-2.
 <p>HIGHLY NEGATIVE</p>	CIS-4	For an issuer scored CIS-4 (Highly Negative), its ESG attributes are overall considered as having a discernible negative impact on the current rating. The negative influence of the overall ESG attributes on the rating is more pronounced compared to an issuer scored CIS-3.
 <p>VERY HIGHLY NEGATIVE</p>	CIS-5	For an issuer scored CIS-5 (Very Highly Negative), its ESG attributes are overall considered as having a very high negative impact on the current rating. The negative influence of the overall ESG attributes on the rating is more pronounced compared to an issuer scored CIS-4.



Environmental Risks

SECTION TWO

Heat Map Scores

Environmental Risk Heat Map

Unregulated Utilities and Power Companies



Regulated Electric and Gas Networks/Utilities with no Generation



Carbon Transition



Physical Climate Risks



Water Management



Waste and Pollution



Natural Capital



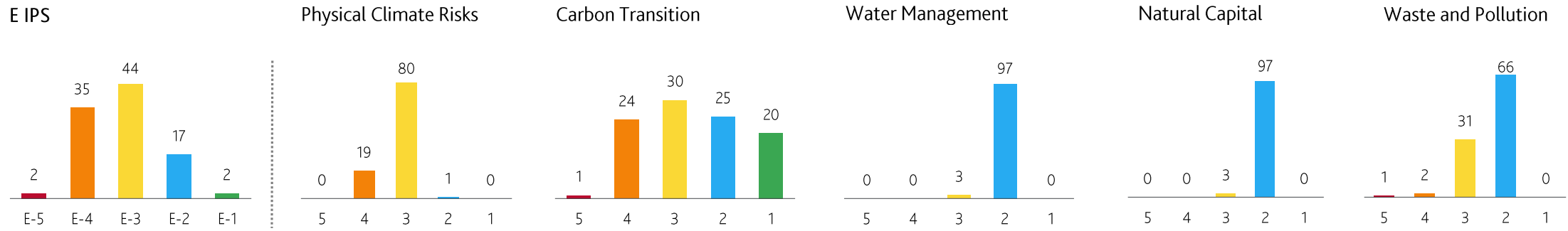
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Source: [ESG – Global: Environmental heat map: Updates to scores for certain sectors](#), 28 October 2021

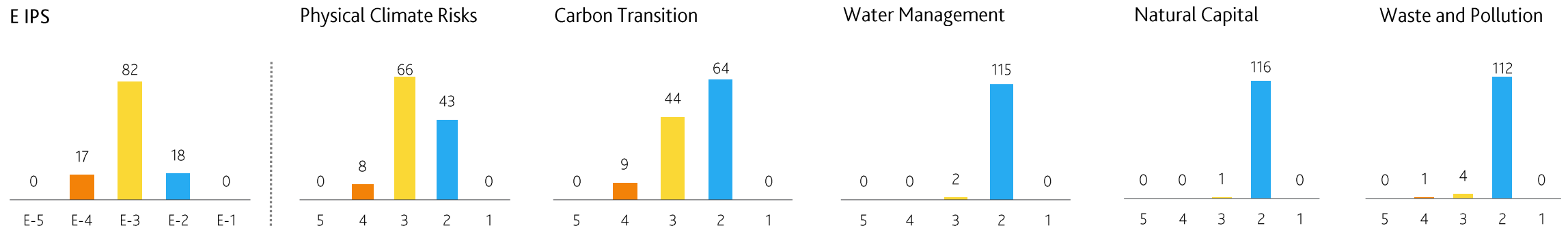
Environmental Issuer Profile Score (E IPS)

Unregulated Utilities and Power Companies



Source: Moody's Investors Service

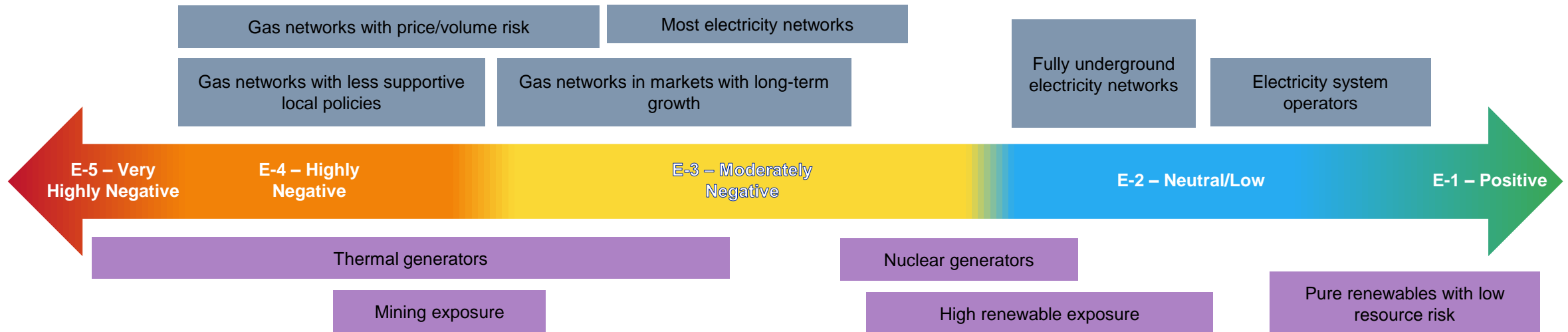
Regulated Networks and Regulated Utilities Without Generation



Source: Moody's Investors Service

Spectrum of Environmental Risks

Regulated Networks and Regulated Utilities Without Generation



Unregulated Utilities and Unregulated Power Companies



Social Risks

SECTION THREE

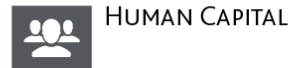
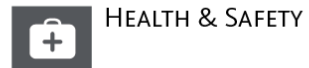
Heat Map Scores

Social Risk Heat Map

Unregulated Utilities and Power Companies



Regulated Electric and Gas Networks/Utilities with no Generation



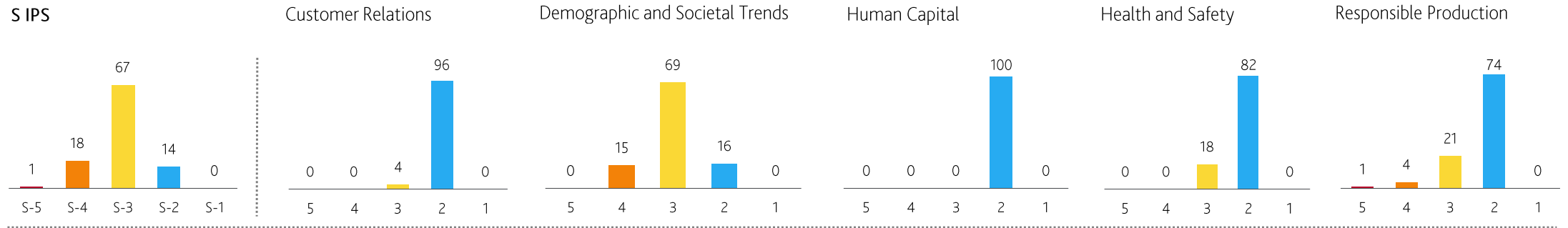
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Source: [ESG – Global: Social heat map: Updates to scores for certain sectors](#), 28 October 2021

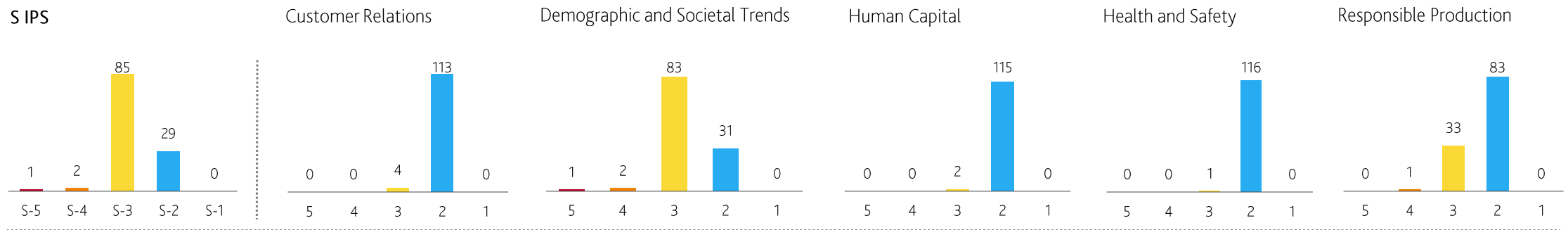
Social Issuer Profile Score (S IPS)

Unregulated Utilities and Power Companies



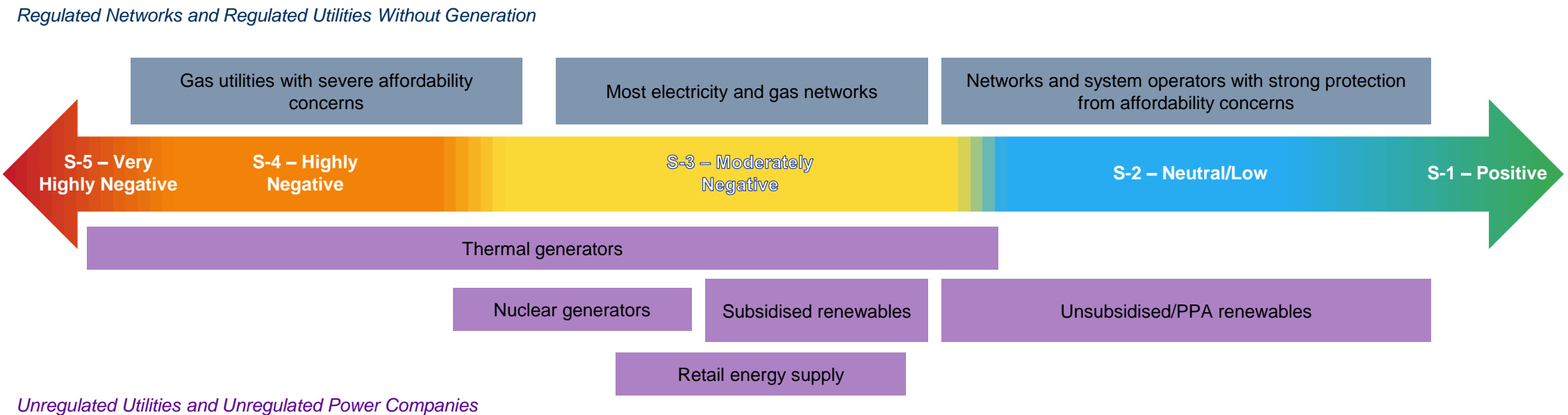
Source: Moody's Investors Service

Regulated Networks and Regulated Utilities Without Generation



Source: Moody's Investors Service

Spectrum of Social Risks



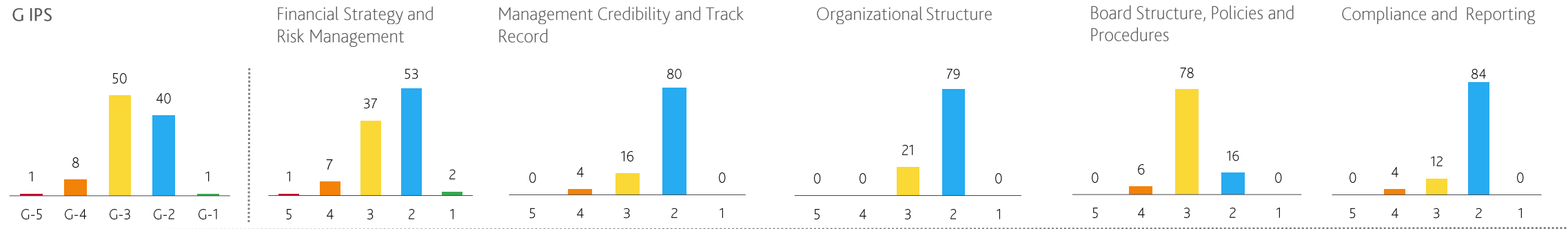


Governance Risks

SECTION FOUR

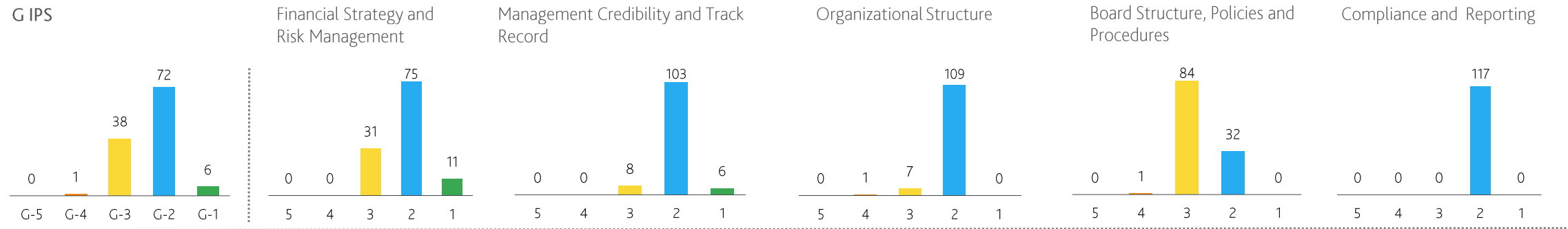
Governance Issuer Profile Score (G IPS)

Unregulated Utilities and Power Companies



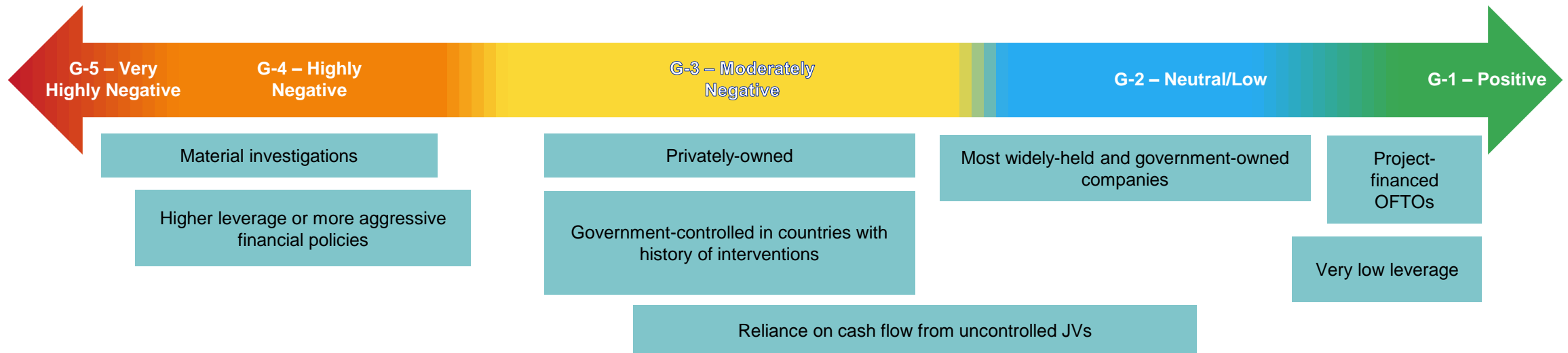
Source: Moody's Investors Service

Regulated Networks and Regulated Utilities Without Generation



Source: Moody's Investors Service

Spectrum of Governances Risks



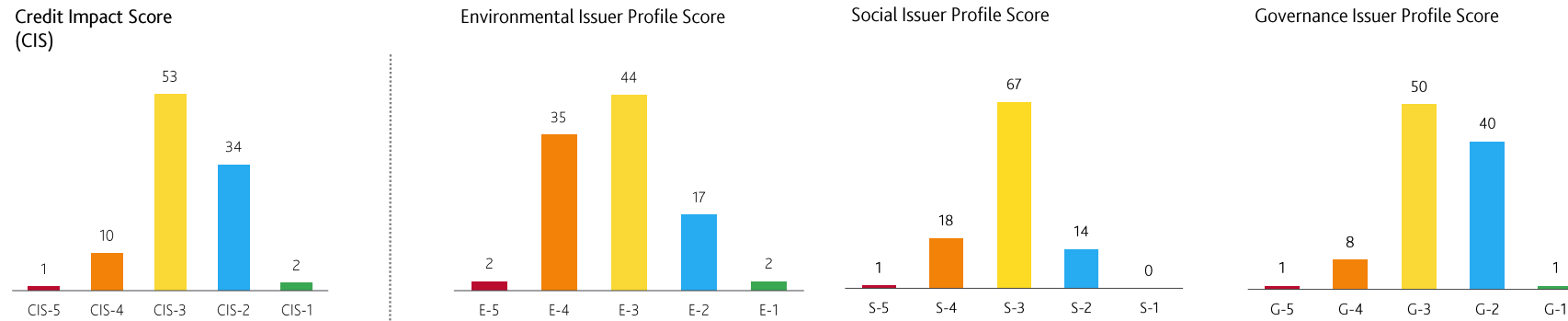


Credit Impact

SECTION FIVE

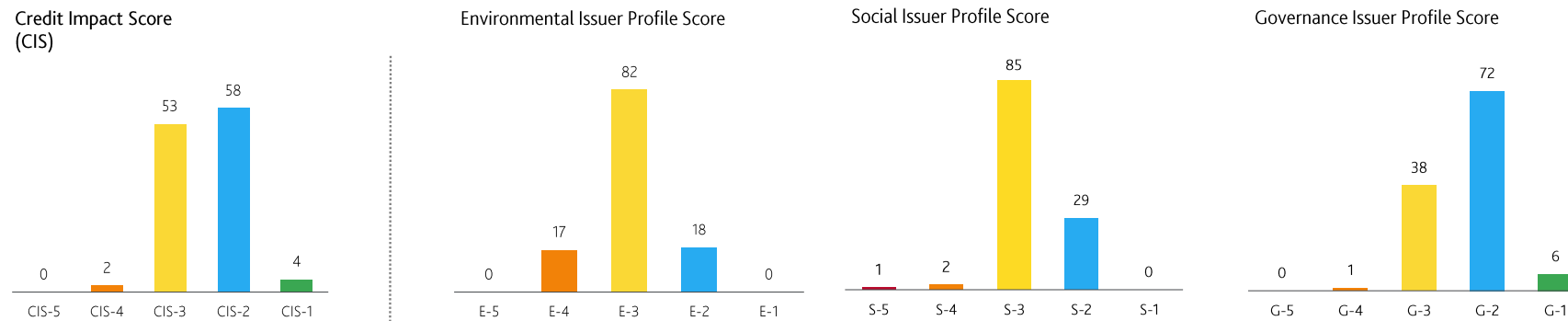
Risk Category Distribution by CIS

Unregulated Utilities and Power Companies



Source: Moody's Investors Service

Regulated Networks and Regulated Utilities Without Generation



Source: Moody's Investors Service



Case Studies

SECTION SIX

Abu Dhabi Future Energy Company PJSC (Masdar) (A2)

Environmental Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
High	Physical Climate Risks	3		
High	Carbon Transition	1		
Moderate	Water Management	2		
Moderate	Natural Capital	2		
High	Waste and Pollution	2		
Environmental IPS		E-1		
Social Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
Moderate	Customer Relations	2		
High	Demographic and Societal Trends	3		
High	Health and Safety	2		
Low	Human Capital	2		
High	Responsible Production	2		
Social IPS		S-3		
Governance Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
	Financial Strategy and Risk Man...	1		
	Management Credibility and Tra...	2		
	Organizational Structure	3		
	Compliance and Reporting	2		
	Board Structure and Policies	3		
Governance IPS		G-2		

- » **CIS-1.** Masdar's ESG Credit Impact Score is positive (CIS-1), indicating that its ESG attributes have a positive impact on its rating. Its score reflects positive exposures to environmental factors, moderate social risk and low governance risk. Masdar's role as a vehicle for Abu Dhabi's domestic decarbonisation policy and international climate diplomacy underpins its strategic importance to its holding company and the state, which is reflected in the uplift to the rating for potential extraordinary support.
- » **E-1.** Masdar's positive environmental risk (E-1 issuer profile score) reflects the growing demand for renewable electricity to achieve national targets and international commitments, which enable the company to secure subsidies, offtake agreements and financing on commercially attractive terms. Masdar City attracts tenants because of its sustainability credentials and the Government of Abu Dhabi's support for the city as a hub for innovation in water and energy efficiency. More generally, the company's credit quality benefits from ongoing support from the Government of Abu Dhabi as it seeks to reduce the city's dependence on the hydrocarbon sector and associated environmental risks (reflected in Abu Dhabi's E-4 issuer profile score). Individual assets, particularly the core North Sea windfarms, face risk of damage from severe storms, but this risk is mitigated by the company's increasing geographic diversification.
- » **S-3.** Although the global shift to less carbon-intensive sources of energy is a positive societal trend for Masdar, its moderate social risk (S-3) reflects the risk that concerns about the affordability of renewables, particularly in lower-income countries, could create pressure to renegotiate offtake agreements to Masdar's detriment.
- » **G-2.** Governance risks are neutral/low (G-2), reflecting Masdar's conservative financial strategy and risk management, including the absence of debt at the holding company level, balanced by its reliance on cash flow from associated companies that it does not fully control or that have significant debt of their own. Some debts of associated companies are guaranteed by Masdar. Because the company is wholly owned by Mamoura and all directors are appointed by the Government of Abu Dhabi, including several government ministers, we regard board structure as relatively weak, although this is consistent with local practice and the company's strategic importance to the state. Risks associated with board structure are also mitigated by a clearly defined Delegation of Authority policies.

Electric Reliability Council of Texas, Inc. (A1)

Environmental Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
Moderate	Physical Climate Risks	2		
Moderate	Carbon Transition	2		
Low	Water Management	2		
Low	Natural Capital	2		
Low	Waste and Pollution	2		
Environmental IPS		E-2		
Social Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
Moderate	Customer Relations	2		
Moderate	Demographic and Societal Trends	2		
High	Health and Safety	2		
Moderate	Human Capital	2		
Moderate	Responsible Production	4		
Social IPS		S-4		
Governance Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
	Financial Strategy and Risk Man...	2		
	Management Credibility and Tra...	3		
	Organizational Structure	2		
	Compliance and Reporting	2		
	Board Structure and Policies	2		
Governance IPS		G-3		

- » **CIS-4.** ERCOT's ESG Credit Impact Score is high (CIS-4), where its ESG attributes are overall considered as having a discernible negative impact on the current rating. We view ESG factors as a material driver of the increase in ERCOT's risk profile and the associated rating downgrade in March 2021. In particular, the power outages and resulting controversy have raised ERCOT's social risk because we regard responsible production, which includes supply cost and reliability and community relations, as a key component of social risk within our ESG analytical framework.
- » **E-2.** ERCOT's exposure to environmental risk is low to neutral (E-2 Issuer Profile Score). As an independent system operator, the company's primary assets are control centers and computer software and hardware. As a result, it does not have any emissions, and its exposure to physical climate risk is minor.
- » **S-4.** ERCOT's exposure to social risk is highly negative (S-4 issuer profile score) because the independent system operator was blamed by political leaders for a major grid outage in February 2021. We regard responsible production, which includes supply cost and reliability and community relations, as a key component of social risk within our ESG analytical framework.
- » **G-3.** ERCOT's exposure to governance risks is moderately negative (G-3 issuer profile score), reflecting its blemished track record in managing communication and relationship with political leaders and general public during the winter storm of February 2021. We view ERCOT's board structure and composition to be sound even though it experienced a large amount of turnover following the winter storm.

Electricite de France (A3)

Environmental Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
High	Physical Climate Risks	3		
High	Carbon Transition	2		
Moderate	Water Management	3		
Moderate	Natural Capital	2		
High	Waste and Pollution	3		
Environmental IPS		E-3		
Social Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
Moderate	Customer Relations	2		
High	Demographic and Societal Trends	3		
High	Health and Safety	2		
Low	Human Capital	2		
High	Responsible Production	3		
Social IPS		S-3		
Governance Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
	Financial Strategy and Risk Man...	2		
	Management Credibility and Tra...	2		
	Organizational Structure	2		
	Compliance and Reporting	2		
	Board Structure and Policies	3		
Governance IPS		G-3		

- » **CIS-2:** EDF's ESG Credit Impact Score is neutral to low (CIS-2), indicating that the overall influence of its ESG attributes on the rating is non-material. This reflects moderately negative environmental and social risks and low to neutral governance risks. The effect of these considerations on the rating is mitigated by the expectation that EDF will receive a structural relief to support any acceleration in the development of new capacities, including renewables.
- » **E-3.** EDF's exposure to environmental risks is moderately negative (E-3 issuer profile score) driven by moderate exposure to physical climate risks associated with the group's French electricity distribution assets (which contributes to 32% of EBITDA in 2020) and to Waste and Pollution risks given the material costs associated with nuclear decommissioning and nuclear waste treatment, albeit largely covered by a sizeable dedicated asset portfolio. It also captures the exposure of the group's nuclear fleet (c. 60% of the total installed capacities in 2020) to moderate risks of water management, in the event of restricted access to water induced by regular heat waves over summers. The profile also incorporates a large investment programme to increase the share of power output from renewables (excluding hydro).
- » **S-3.** Moderately negative social risks for EDF (S-3 issuer profile score) reflects the fundamental utility risk that demographics and societal trends could include public concerns over affordability, public expectation that utilities act as public service, utility's reputational risk. These pressures could turn into adverse political intervention. This also includes nuclear exposures and associated risk to public health.
- » **G-3.** EDF's governance risks are moderately negative (G-3 issuer profile). This assessment takes into account neutral to low scores on financial strategy and risk management, management credibility and track record, organizational structure, compliance and reporting, which counterbalance the moderate risk associated with board structure policies and procedures, resulting from having a majority owner (French State owns over 83% of the capital). EDF's board has implemented measures to bolster its balance sheet including the €4 billion capital increase in 2016 and scrip dividend over the last six years. At the same time, the company has also acted to support other parts of the nuclear industry to the detriment of its credit quality.

Tokyo Electric Power Company Holdings, Inc. (Ba1)

Environmental Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
High	Physical Climate Risks	4		
High	Carbon Transition	2		
Moderate	Water Management	2		
Moderate	Natural Capital	2		
High	Waste and Pollution	5		
Environmental IPS		E-5		
Social Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
Moderate	Customer Relations	2		
High	Demographic and Societal Trends	3		
High	Health and Safety	2		
Low	Human Capital	2		
High	Responsible Production	5		
Social IPS		S-5		
Governance Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
	Financial Strategy and Risk Man...	3		
	Management Credibility and Tra...	4		
	Organizational Structure	2		
	Compliance and Reporting	4		
	Board Structure and Policies	3		
Governance IPS		G-4		

- » **CIS-4.** Tokyo Electric Power Company Holdings' (TEPCO, Ba1 stable) ESG Credit Impact Score is highly negative (CIS-4), indicating that its ESG attributes resulting from by the Fukushima nuclear disaster have a profound negative impact on its rating. Government support remains critical to meet its Fukushima-related obligations.
- » **E-5.** TEPCO's very highly negative environmental risks (E-5 issuer profile score) is driven primarily by its exposure to waste & pollution. TEPCO is responsible for decontaminating the surroundings of the Fukushima nuclear plant and removing hazardous debris from the reactors. In addition, in April 2021, the government decided to release water containing radioactive materials, and there are concerns about ocean contamination and reputational damage to marine products. Also, TEPCO is subject to severe typhoons and other natural disasters that could become more frequent and severe as a consequence of climate change. Carbon transition risk is modest among Japanese electric utilities because the company owns only nuclear, hydro and renewable generation assets. JERA, a joint venture on which TEPCO relies for almost all its electric supply, has relatively low exposure to coal.
- » **S-5.** TEPCO's social risk exposure is very highly negative (S-5 issuer profile score) considering its ¥3.9 trillion obligation to compensate victims of the Fukushima disaster. We also take into account significant investments to meet the more stringent safety standards that apply to nuclear plants. Public opposition to nuclear power generation remains strong nationwide, making nuclear restarts uncertain. Also, shrinking demand for TEPCO's services from a declining population and intensifying competition could encourage the company to invest in new, riskier businesses.
- » **G-4.** TEPCO's governance risk is highly negative (G-4 issuer profile score), reflecting its weak management credibility and track record, as well as weakness in internal controls. Several governance issues at its Kashiwazaki-Kariwa nuclear plant were recently exposed. In April 2021, the Nuclear Regulation Authority (NRA) issued a corrective action order. the company overlooked unauthorized entries to the central control room at the plant and announced the completion of required nuclear safety projects before they were done. Also, TEPCO's retail subsidiary received an administrative penalty from the Consumer Affairs Agency and was ordered to suspend telemarketing sales from June to December 2021. These issues have hurt TEPCO's reputation, significantly deterred its efforts to restart its nuclear reactors and chart a plan for financial improvement and future growth.

SNAM S.p.A. (Baa2)

Environmental Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
Moderate	Physical Climate Risks	2		
Moderate	Carbon Transition	3		
Low	Water Management	2		
Low	Natural Capital	2		
Low	Waste and Pollution	2		
Environmental IPS		E-3		
Social Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
Moderate	Customer Relations	2		
Moderate	Demographic and Societal Trends	3		
High	Health and Safety	2		
Moderate	Human Capital	2		
Moderate	Responsible Production	3		
Social IPS		S-3		
Governance Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
	Financial Strategy and Risk Man...	3		
	Management Credibility and Tra...	2		
	Organizational Structure	2		
	Compliance and Reporting	2		
	Board Structure and Policies	3		
Governance IPS		G-3		

- » **CIS-2.** SNAM's ESG Credit impact Score is neutral/low (CIS-2) because the rating is constrained by that of the Government of Italy and ESG considerations do not currently influence materially the rating.
- » **E-3.** SNAM's environmental risks are moderately negative (E-3) reflecting its moderate carbon transition risks, including methane leakage, given the group's focus on gas infrastructure. SNAM's exposure to water management, waste and pollution and natural capital risks is credit neutral.
- » **S-3.** SNAM's social risks are moderately negative (S-3) reflecting the risk, common to all regulated energy networks, that public concern over environmental, social or affordability issues could lead to adverse regulatory or political intervention, and moderately negative responsible production risks, due to the inherent explosion risks common to all gas networks. These risks are balanced by neutral to low risks to health and safety, human capital, and customer relationship.
- » **G-3.** SNAM's governance risks are moderately negative (G-3), because of management's tolerance for risk taking through M&A outside its core regulated business, as exemplified by the acquisition of DE NORA, and risks related to board structure, policies and procedures, given concentrated ownership structure. These risks are balanced by neutral to low risks related to management credibility and track record, organizational structure, and compliance and reporting.

Iberdrola S.A.

Environmental Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
High	Physical Climate Risks	3		
High	Carbon Transition	2		
Moderate	Water Management	2		
Moderate	Natural Capital	2		
High	Waste and Pollution	2		
Environmental IPS		E-3		
Social Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
Moderate	Customer Relations	2		
High	Demographic and Societal Trends	3		
High	Health and Safety	2		
Low	Human Capital	2		
High	Responsible Production	3		
Social IPS		S-3		
Governance Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
	Financial Strategy and Risk Man...	2		
	Management Credibility and Tra...	2		
	Organizational Structure	3		
	Compliance and Reporting	3		
	Board Structure and Policies	2		
Governance IPS		G-2		

- » **CIS-3.** Iberdrola's ESG Credit impact Score is moderately negative (CIS-3), indicating that its ESG attributes have a limited impact on its rating, with greater potential for future impact. Its score reflects moderate environmental and social risks, and low to neutral governance risks.
- » **E-3.** Iberdrola's environmental risks are moderately negative (E-3) reflecting the group's physical climate risks, including the risks that extreme or unusual weather events could damage physical assets. Carbon transition risks for Iberdrola are credit neutral, given the group's material exposure to electricity networks and renewables. Iberdrola's exposure to water management, waste and pollution and natural capital risks is also credit neutral.
- » **S-3.** Iberdrola's social risks are moderately negative (S-3) reflecting the risk, common to all unregulated utilities, that public concern over environmental, social or affordability issues could lead to adverse regulatory or political intervention, as demonstrated by recent decisions in Spain related to CO2 and gas related clawbacks on Iberdrola's nuclear and hydro power generation assets. Also Iberdrola features moderate responsible production risks, due to its nuclear generation exposure in Spain. These risks are balanced by neutral to low risks to health and safety, human capital and customer relationship.
- » **G-2.** Iberdrola's governance risks are low to neutral (G-2). While the group demonstrates potential weakness in terms of internal control, given ongoing espionage and bribery litigation, and exhibits moderate organizational structure risks related to subordination, Iberdrola's score is supported by neutral to low scores on financial strategy and risk management, management credibility and track record, and board structure policies and procedures.

Empresa Distribuidora de Electricidad Salta (Ca)

Environmental Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
Moderate	Physical Climate Risks	3		
Moderate	Carbon Transition	2		
Low	Water Management	2		
Low	Natural Capital	2		
Low	Waste and Pollution	2		
Environmental IPS		E-3		
Social Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
Moderate	Customer Relations	3		
Moderate	Demographic and Societal Trends	5		
High	Health and Safety	2		
Moderate	Human Capital	2		
Moderate	Responsible Production	2		
Social IPS		S-5		
Governance Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
	Financial Strategy and Risk Man...	3		
	Management Credibility and Tra...	2		
	Organizational Structure	2		
	Compliance and Reporting	2		
	Board Structure and Policies	3		
Governance IPS		G-3		

- » **CIS-2.** Empresa Distribuidora de Electricidad Salta S.A. (EDESA) ESG Credit Impact Score is neutral-low (CIS-2) because the rating is constrained by that of the Government of Argentina and ESG considerations do not currently influence materially the rating.
- » **E-3.** EDESA's moderately negative environmental risk (E-3 issuer profile score) reflects the company's moderate exposure to physical climate risks that are common for regulated utilities. The company's carbon transition exposure is neutral given it does not own generation assets.
- » **S-5.** EDESA's social risk is very highly negative (S-5 issuer profile score), reflecting the high risk that public concern over affordability issues could lead to adverse regulatory or political intervention given that the company's operations are based in Argentina, amid difficult economic conditions, increasing social demands, falling purchasing power and increasing poverty and unemployment. EDESA has a track record of deteriorating margins and delays in cost recovery in face of insufficient and untimely tariff adjustments.
- » **G-3.** Governance risks for EDESA are moderately negative (G-3 issuer profile score) because of the adverse financing conditions prevailing in Argentina. High inflation and interest rates as well as the risks of a deep devaluation of the local currency are key considerations negatively impacting Argentine companies' financial policies. Adding to these adverse conditions, the Argentine Central Bank has imposed FX controls that prevent companies to make payments on their foreign currency debt obligations. As a consequence of these controls, EDESA was forced last year to reschedule its dollar denominated debt maturities through a distressed debt exchange that allowed the company to extend its debt maturities and to get to a more comfortable debt profile.

Empresas Publicas de Medellin E.S.P (Baa3)

Environmental Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
High	Physical Climate Risks	4		
High	Carbon Transition	2		
Moderate	Water Management	2		
Moderate	Natural Capital	3		
High	Waste and Pollution	2		
Environmental IPS		E-4		
Social Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
Moderate	Customer Relations	2		
High	Demographic and Societal Trends	3		
High	Health and Safety	2		
Low	Human Capital	2		
High	Responsible Production	4		
Social IPS		S-4		
Governance Categories			NEGATIVE EXPOSURE	POSITIVE EXPOSURE
	Financial Strategy and Risk Man...	3		
	Management Credibility and Tra...	3		
	Organizational Structure	2		
	Compliance and Reporting	3		
	Board Structure and Policies	3		
Governance IPS		G-3		

- » **CIS-4.** Empresas Publicas de Medellin E.S.P's (EPM) ESG Credit Impact Score is highly negative (CIS-4), reflecting highly negative environmental and social risks and moderate governance risks. The effect of ESG risks to the rating is partially mitigated by the expectation that its government shareholder would support the company if necessary.
- » **E-4.** EPM's highly negative environmental risk (E-4 issuer profile score) reflects the company's 36 hydro generation plants that represent 87% of its installed capacity. While risks are partially mitigated by EPM's climate risk insurance policy, the company's cash flow and operating margin are exposed to seasonal rainfall and prolonged droughts that impact energy spot prices. Additionally, EPM could face potential penalties related to the emergency event on the Ituango hydroelectric project in April 2018. At this stage, EPM is still determining the environmental impacts caused by this contingency, because the possible effects would become more visible only as long-term biological and geomorphological processes conclude. EPM is implementing measures to transition to net zero emissions by 2025.
- » **S-4.** EPM's social risk is highly negative (S-4), reflecting the risk of adverse regulatory decisions or political interference due to tariff affordability concerns and environmental-social considerations. These risks, which are common to electricity companies operating in Latin America, are balanced by neutral to low risks to health and safety, human capital, and customer relationships. EPM, in particular, faces relatively higher social risks as related to the Ituango in order to continue protecting the communities downstream of the hydroelectric project.
- » **G-3.** Governance risks are moderately negative (G-3). Corporate governance risk for EPM arises from political interference as EPM is strategically important to the local economy of the City of Medellin, which is the sole owner. On August 11, 2020, EPM announced that eight of the company's nine board members resigned after the mayor (the ninth board member) decided to pursue contractual reimbursement from the Engineering, Procurement and Construction (EPC) contractors and the insurance company, without submission to the board, for the cost overruns and lost profit of the Ituango hydro project.

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