Climate Accountability Scorecard

Insufficient Progress from Fossil Fuel Companies
www.ucsusa.org/climatescorecard

Appendix A: Methodology

Union of Concerned Scientists

In 2016, the Union of Concerned Scientists (UCS) developed a methodology to evaluate fossil energy companies' performance and progress in meeting emerging societal and shareholder expectations for responsible action on climate change. UCS used that methodology to study the climate-related communications, positions, and actions of eight major investor-owned oil, gas, and coal companies and published the results as *The Climate Accountability Scorecard*. This document describes the methodology, as refined for a 2018 update to the scorecard study.

Scope

INVESTOR-OWNED FOSSIL FUEL COMPANIES STUDIED

Climate change is happening, and heat-trapping emissions from the burning of fossil fuels are the primary cause. A recent study demonstrated that over the past two and a half centuries, just 90 companies have produced and marketed the fossil fuels and cement responsible for almost two-thirds of the world's industrial carbon emissions. Fifty are investor-owned coal, oil, and natural gas companies (Heede 2014), of which we have focused on a sample of eight companies. These eight companies' products have contributed about 14 percent of global energy-related carbon dioxide and methane emissions driving disruptive climate change (Heede 2014). They are:

- The five leading investor-owned oil and gas companies, ranked here in order of greatest cumulative emissions: **Chevron**, **ExxonMobil**, **BP**, **Royal Dutch Shell**, and **ConocoPhillips**.
- The three leading investor-owned, US-based coal companies, ranked in order of greatest cumulative emissions: **Peabody Energy**, **CONSOL Energy**, and **Arch Coal**. The company that UCS evaluated as CONSOL Energy in 2016 spun off its coal operations into a company named CONSOL Energy in December 2017. The remaining business, now known as CNX Resources Corporation, focuses on natural gas. As the UCS sample selection was based on cumulative historical emissions, the 2018 study includes CONSOL Energy as the entity that carries the legacy of the company's coal operations.

COMPANY AFFILIATION WITH TRADE ASSOCIATIONS AND INDUSTRY GROUPS INVOLVED IN DISINFORMATION

Seven US industry groups and trade associations were chosen for inclusion in our study. Each of these groups (1) has a well-documented role in spreading disinformation on climate science and (2) has used disinformation in opposing recent climate policy proposals in the United States. They are:

- American Coalition for Clean Coal Electricity (ACCCE)
- American Legislative Exchange Council (ALEC)
- American Petroleum Institute (API)
- National Association of Manufacturers (NAM)
- National Mining Association (NMA)
- US Chamber of Commerce (US Chamber)
- Western States Petroleum Association (WSPA)

For consistency, we have evaluated the same industry groups and trade associations included in the 2016 scorecard. Evidence and examples of how each of these groups met the two criteria above are included in Appendix B: Renouncing Disinformation on Climate Science and Policy.

Organizations such as Americans for Prosperity, Competitive Enterprise Institute, Energy and Environment Legal Institute, and Heartland Institute have also played a key role in disseminating disinformation on climate science and policy, but a lack of transparency regarding these groups' membership and funding prevented verification of corporate affiliations.

AREAS OF ASSESSMENT

The research team assessed each fossil fuel company in our study on 28 metrics to measure performance and progress in meeting emerging societal expectations for climate responsibility in four broad areas:

- **Renouncing disinformation on climate science and policy—10 metrics**, including:

- Consistently accurate public statements on climate science and the consequent need for swift and deep reductions in emissions from the burning of fossil fuels;
    - Affiliations with seven trade associations and industry groups that spread disinformation on climate science and/or block climate action;
    - Policy, governance systems, and oversight mechanisms to prevent disinformation; and
    - Support for climate-related shareholder resolutions.
- **Planning for a world free from carbon pollution—seven metrics**, including:
    - Company-wide commitments and targets to reduce greenhouse gas emissions;
    - Use of an internal price on carbon in investment decisions;
    - Commitment and mechanism to measure and reduce carbon intensity of company supply chain;
    - Disclosure of investments in low-carbon technology research and development;
    - Disclosure of greenhouse gas emissions reduction plans;
    - Disclosure of how company manages greenhouse gas emissions and associated risks; and
    - Disclosure of greenhouse gas emissions.
- **Supporting fair and effective climate policies—seven metrics**,[1] including:
    - CPA-Zicklin Index of Corporate Political Disclosure and Accountability: Disclosure;
    - CPA-Zicklin Index of Corporate Political Disclosure and Accountability: Policy;
    - CPA-Zicklin Index of Corporate Political Disclosure and Accountability: Oversight;
    - Engagement with Congress on federal climate policies or legislation;
    - Consistent support for US policy action to reduce emissions;
    - Support for Paris climate agreement and its global temperature goal;[2] and
    - Company influence through international or national business alliances or initiatives that are supportive of specific climate policies.
- **Fully disclosing climate risks—four metrics**, including:
    - Disclosure of regulatory risks;
    - Disclosure of physical risks;
    - Disclosure of market and other indirect risks and opportunities; and
    - Disclosure of corporate governance on climate-related risks by board and senior management.

STUDY PERIOD

The research focused on company policies and actions on climate change from July 1, 2016, through June 30, 2018, except where otherwise indicated.

DATA SOURCES

The climate policies and actions of companies in the sample have been assessed based on publicly available information from the study period (July 2016 through June 2018), including:

- Company annual reports, proxy statements, sustainability reports, and CDP submissions;
- Company 10-K and 20-F filings with the US Securities and Exchange Commission (SEC);
- Company websites and press releases;
- Transcripts and recordings of corporate annual meetings;

[1] In 2016, this area included two specific federal policies: the US Environmental Protection Agency (EPA) Clean Power Plan and EPA methane rule. There were no new federal climate policies under consideration during the current study period, only the repeal of the EPA Clean Power Plan and EPA methane rule. See this area's appendix under the metric Consistent support for US policy action to reduce emissions for any action by the sample companies regarding those repeal proposals.
[2] The metric regarding the Paris climate agreement moved from Area 2: Planning for a World Free from Carbon Pollution to Area 3: Supporting Fair and Effective Climate Policies, because nations have begun to craft and enact policies to implement their Paris climate agreement commitments. 2018 scores not compared with those from 2016.

- Public statements by company executives;
- The 2017 CPA-Zicklin Index of Corporate Political Disclosure and Accountability;
- Trade association federal filings;
- Major news sources; and
- Third-party websites, such as SourceWatch from the Center for Media and Democracy.

Specific data sources for each area of the assessment are identified under “Metrics and Scoring Criteria” below.

RESOURCES CONSULTED

To aid our assessment, we drew on existing resources, such as the Fossil Free Divestment and Climate Action Methodology (Barnard College 2018), the CPA-Zicklin Index of Corporate Political Disclosure and Accountability (CPA 2017), the CDP Climate Change Reporting (CDP 2017), the Principles to Guide Investment towards a Stable Climate (Millar et al. 2018), the Oxford Martin Working Principles for Investment in Fossil Fuels (Allen et al. 2015), the Science Based Targets Initiative (Science Based Targets n.d. a), and the Guide for Responsible Corporate Engagement in Climate Policy (Karbassi et al. 2013). We also consulted with a wide range of experts and peer organizations. The methodology was informed by previous studies by the Union of Concerned Scientists (UCS), including The Climate Accountability Scorecard (Mulvey et al. 2016); A Climate of Corporate Control (Grifo et al. 2012); Tricks of the Trade: How Companies Anonymously Influence Climate Policy through Their Business and Trade Associations (Goldman and Carlson 2014); Stormy Seas, Rising Risks (Carlson, Goldman, and Dahl 2015); The Climate Deception Dossiers (Mulvey et al. 2015); and Fueling a Clean Transportation Future (Martin 2016).

SCORING

The scoring of most metrics was on a five-point scale ranging from “advanced” to “egregious.” For some metrics, the scale ranges from "good" to "poor." Some of the criteria are aspirational—that is, none of the assessed companies is yet meeting a standard of climate responsibility on that indicator. Scoring bands have been developed to determine a company’s aggregate score in each area of assessment.

TABLE 1. **Scoring Bands**

Score	Definition	Points Assigned
Advanced	Company is demonstrating best practices	+2
Good	Company is meeting emerging societal expectations	+1
Fair	Company’s performance is neither positive nor negative	0
Poor	Company is falling short of emerging societal expectations	-1
Egregious	Company is acting very irresponsibly	-2

Metrics and Scoring Criteria

AREA 1: RENOUNCING DISINFORMATION ON CLIMATE SCIENCE AND POLICY

TABLE 2. **Renouncing Disinformation on Climate Science and Policy Scoring Guide**

Climate Statements: Direct	
Consistently accurate public statements on climate science and the consequent need for swift and deep reductions in emissions from the burning of fossil fuels	
Advanced (+2)	Company meets all of the criteria for "good" and also highlights the urgency and importance of achieving global net-zero CO_2 emissions to keep temperature rise well below two degrees Celsius and limit risks to society and ecosystems.
Good (+1)	Company meets all of the criteria for "fair" and also affirms the consequent need for swift and deep reductions in emissions from the burning of fossil fuels.
Fair (0)	Company consistently acknowledges the scientific evidence of climate change in all public platforms in which climate change is addresed (such as company websites and statements by company executives).
Poor (-1)	Company does not address climate science on company website on a prominent, easily accessible page (e.g., a page designated specifically to address climate change) or has downplayed the need to reduce greenhouse gas emissions on at least one platform.
Egregious (-2)	Company has misrepresented climate science on at least one platform (e.g., on company web page or in public statements). Such misrepresentation might take the form of denying the reality of the problem of climate change or disparaging the scientific evidence of climate change.

TABLE 2. **Renouncing Disinformation on Climate Science and Policy Scoring Guide (CONTINUED)**

Climate Statements: Indirect	
Affiliations with trade associations and other industry groups that spread climate science disinformation and/or block climate action, as relevant. The following trade associations and industry groups were analyzed: the American Coalition for Clean Coal Electricity (ACCCE), American Legislative Exchange Council (ALEC), American Petroleum Institute (API), National Association of Manufacturers (NAM), National Mining Association (NMA), US Chamber of Commerce (US Chamber), and Western States Petroleum Association (WSPA).	
Advanced (+2)	Company has left or never joined the association or group. In doing so, it stated explicitly that it had made the decision because the group's position on climate science is inaccurate and inconsistent with company's position.
Good (+1)	Company has left or publicly distanced itself from the association or group, or there is clear, incontrovertible evidence that the company has never been affiliated with it.
Fair (0)	Information is unavailable to determine the company's affiliation with the association or group.
Poor (-1)	Company is a recent member of the association or group and has not taken any steps to distance itself from climate disinformation spread by the group.
Egregious (-2)	Company is a recent member with a leadership role in the association or group and has not taken any steps to distance itself from climate disinformation spread by the group.
Policy, Governance, and Oversight	
Policy, governance systems, and oversight mechanisms to prevent climate disinformation	
Good (+1)	Company has made a public commitment to reject climate science disinformation and established a company-wide policy to avoid direct or indirect involvement in disinformation (i.e., through trade associations and other industry-affiliated groups), with clearly delineated responsibilities for board and senior management to ensure accountability.
Fair (0)	Company has made a public commitment to reject climate science disinformation, but it does not have clear accountability or systems for implementing a company-wide policy.
Poor (-1)	Company has no policy or commitment on record to avoid direct or indirect involvement in spreading climate science disinformation.

TABLE 2. **Renouncing Disinformation on Climate Science and Policy Scoring Guide (CONTINUED)**

Support for climate-related shareholder resolutions	
Advanced (+2)	Company has not opposed any climate-related shareholder resolutions, has recommended support for one or more climate-related shareholder resolutions put forward by established networks of socially responsible investors (e.g., Aiming for A, As You Sow, Ceres, the Interfaith Center on Corporate Responsibility), and is taking action to resolve issues brought forth in these resolutions.
Good (+1)	Company has not opposed any climate-related shareholder resolutions and has recommended support for one or more climate-related shareholder resolutions put forward by established networks of socially responsible investors (e.g., Aiming for A, As You Sow, Ceres, the Interfaith Center on Corporate Responsibility). However, it has not yet taken action to resolve issues raised in these resolutions.
Fair (0)	Company has not faced any climate-related shareholder resolutions put forward by established networks of socially responsible investors (e.g., Aiming for A, As You Sow, Ceres, the Interfaith Center on Corporate Responsibility), or it has supported one or more resolutions and recommended against one or more resolutions.
Poor (-1)	Company has recommended against one or more climate-related shareholder resolutions put forward by established networks of socially responsible investors (e.g., Aiming for A, As You Sow, Ceres, the Interfaith Center on Corporate Responsibility).
Egregious (-2)	Company has attempted to block one or more climate-related shareholder resolutions put forward by established networks of socially responsible investors (e.g., Aiming for A, As You Sow, Ceres, the Interfaith Center on Corporate Responsibility).

DATA SOURCES: COMPANY WEBSITES FROM JULY 1, 2016, THROUGH JULY 31, 2018. COMPANY REPORTS, PROXY STATEMENTS, US SECURITIES AND EXCHANGE COMMISSION FILINGS, AND SUBMISSIONS IN CLIMATE LIABILITY LITIGATION; PUBLIC STATEMENTS BY COMPANY REPRESENTATIVES; TRADE ASSOCIATION AND INDUSTRY GROUP WEBSITES; AND THIRD-PARTY SHAREHOLDER AND WATCHDOG GROUP WEBSITES FROM JULY 1, 2016, THROUGH JUNE 30, 2018; TRADE ASSOCIATION FEDERAL FILINGS FROM 2016.

TABLE 3. **Affiliations with Trade Associations and Other Industry Groups Scoring Bands**

Overall Affiliations Score	Definition	Point Range
Advanced	Company is demonstrating best practices in this area	+7 – +10
Good	Company is meeting emerging societal expectations in this area	+3 – +6
Fair	Company's performance in this area is neither positive nor negative	(-2) – +2
Poor	Company is falling short of emerging societal expectations in this area	(-6) – (-3)
Egregious	Company is acting very irresponsibly in this area	(-10) – (-7)

TABLE 4. **Renouncing Disinformation on Climate Science and Policy Scoring Bands**

Area Aggregate Score	Definition	Point Range
Advanced	Company is demonstrating best practices in the area	+10 – +15
Good	Company is meeting emerging societal expectations in this area	+4 – +9
Fair	Company's performance in this area is neither positive nor negative	(-3) – +3
Poor	Company is falling short of emerging societal expectations in this area	(-9) – (-4)
Egregious	Company is acting very irresponsibly in this area	(-15) – (-10)

Contingent scoring. A company must both have a positive score in the overall planning section and have a positive score in the "company-wide commitments and targets" subsection to be scored on the execution of those plans. No companies met this standard; therefore, the "execution" metrics and criteria will be developed in a future iteration of the scorecard.

TABLE 5. **Planning for a World Free from Carbon Pollution Scoring Guide**

Planning	
Company-wide commitments and targets to reduce greenhouse gas emissions	
Advanced (+2)	Company meets all of the criteria for "good," and: 1. The company has near-term benchmark and long-term transition metrics to measure progress toward the long-term goal, involving a credible plan to ultimately reduce the net greenhouse gas emissions of its business activities to zero. 2. If it envisages a substantial role for the offsetting of residual greenhouse gas emissions, the company provides details of that offset mechanism, including its reliability, its availability at sufficient scale for the global transition, and identification of who is going to pay for it. 3. If carbon dioxide removal plays a substantial role in the company's plans, the company provides details on how such removal will be achieved, paid for, monitored, and maintained—in effect, permanently.
Good (+1)	Company has set a strong, viable, long-term target for reducing greenhouse gas emissions resulting from company-wide operations and from the use of its products. The company has developed a concrete action plan to achieve those reductions that is consistent with the Paris climate agreement's global temperature goal and net-zero emissions. The plan is grounded in available technologies or, if it depends on future technology, specifies how the company intends to contribute to the development of new technology.
Fair (0)	Company has made a company-wide commitment to reduce absolute greenhouse gas emissions in the service of the Paris climate agreement's global temperature goal, but it has not set a net-zero target or developed a concrete action plan to achieve the target.
Poor (-1)	Company has a plan for reducing greenhouse gas emissions, but the plan is not company-wide and is not in the service of a specific temperature goal or target. Or the company has a greenhouse gas emissions reduction target that expires in the reporting year or earlier.
Egregious (-2)	Company has no commitment, targets, or plan for reducing greenhouse gas emissions.

TABLE 5. **Planning for a World Free from Carbon Pollution Scoring Guide (CONTINUED)**

Use of an internal price on carbon in investment decisions	
Advanced (+2)	Company meets all of the criteria for “good” and extends the use of the price on carbon to components of the supply chain that the company does not directly control.
Good (+1)	Company has set a price on carbon that it uses in investment decisions. The price reflects carbon emitted during all components of the supply chain over which the company has control (including refining and processing of fuels).
Fair (0)	Company has set a price on carbon that it uses in investment decisions, but the price is based solely on one segment of the supply chain, such as aggregate downstream greenhouse gas emissions (e.g., greenhouse gas emissions from end user burning of the fuel).
Poor (-1)	Company has set a price on carbon that is used in investment decisions but does not disclose what that price is. Or the company has disclosed a specific price on carbon but does not explain how that price is used in investment decisions.
Egregious (-2)	Company does not use a price on carbon in investment decisions.
Commitment and mechanism to measure and reduce carbon intensity of supply chain	
Advanced (+2)	Company has a mechanism to measure and reduce greenhouse emissions on a full life cycle basis (e.g., has made a public commitment not to invest in higher-carbon fuel sources, such as tar sands, because of the high carbon intensity in the extraction process).
Good (+1)	Company has made a public commitment to reduce carbon emissions with a quantitative, time-bound target of at least 1 percent per year (e.g., has joined the ONE Future Coalition).
Fair (0)	Company has a public commitment to measure and reduce carbon emissions in its own operations within a set period (e.g., has signed onto the World Bank's Zero Routine Flaring by 2030 initiative), but without a quantitative emissions target.
Poor (-1)	Company has publicly joined a group designed to share best practices and information for reducing global warming emissions (e.g., has signed onto the World Bank’s Global Gas Flaring Reduction Partnership), but it has not made a stronger commitment.
Egregious (-2)	Company has no public commitment to measure and reduce carbon emissions in its own operations.

TABLE 5. **Planning for a World Free from Carbon Pollution Scoring Guide (CONTINUED)**

Tracking and Disclosure	
Disclosure of investments in low-carbon technology research and development	
Good (+1)	Company meets all of the criteria for “fair” and also reports on low-carbon investments as a proportion of the total research and development budget and in the context of future budget allocations.
Fair (0)	Company reports annually on low-carbon research and development, and this information is broken down by specific investments, including those in renewable energy technologies and carbon capture and storage.
Poor (-1)	Company does not report annually on low-carbon research and development, and/or it does not provide a breakdown of specific low-carbon investments.
Disclosure of greenhouse gas emissions reduction plans	
Good (+1)	Company discloses to shareholders details of its company-wide, long-term, net-zero greenhouse gas emissions reduction plan, as well as its progress toward interim goals and benchmarks. Plan must have received a score of “good” or better in the metric *Company-wide commitments and targets to reduce greenhouse gas emissions.*
Fair (0)	Company discloses details of its company-wide greenhouse gas emissions reduction plans to shareholders. Plan must have received a score of “fair” or better on the metric *Company-wide commitments and targets to reduce greenhouse gas emissions*.
Poor (-1)	Company does not disclose details of its greenhouse gas emissions reduction plans to shareholders.

TABLE 5. **Planning for a World Free from Carbon Pollution Scoring Guide (CONTINUED)**

Disclosure of how company manages greenhouse gas emissions and associated risks	
Advanced (+2)	Company meets all four of the requirements under “good” disclosure.
Good (+1)	Company meets the requirements for “fair” disclosure and does at least two of the following: 1. Discloses greenhouse gas emissions reduction timelines. 2. Discloses estimated and actual greenhouse gas emissions reductions resulting from emissions reduction activities undertaken by the company. 3. Specifies whether the company has identified any opportunities to benefit financially from its actions to reduce greenhouse gas emissions. 4. When individual greenhouse gas emissions reduction projects are discussed, provides context about larger impacts on the company, such as whether the results are replicable on a larger scale.
Fair (0)	Company provides a detailed description of actions it is taking to reduce, offset, or limit its own greenhouse gas emissions.
Poor (-1)	Company mentions or makes generic claims about greenhouse gas emissions management, but it does not provide details or descriptions of actions it is taking to reduce, offset, or limit its own greenhouse gas emissions and associated risks.
Egregious (-2)	Company does not disclose actions it is taking to reduce, offset, or limit its own greenhouse gas emissions and associated risks.

TABLE 5. **Planning for a World Free from Carbon Pollution Scoring Guide (CONTINUED)**

Disclosure of greenhouse gas emissions	
Advanced (+2)	Company discloses adequate data from the entire fuel production supply chain to estimate life cycle greenhouse gas emissions. It describes the methodology used to calculate greenhouse gas emissions.
Good (+1)	Company meets the requirements for "fair" disclosure and also discloses indirect greenhouse gas emissions from downstream activities (e.g., final use of products, transportation, and distribution, also known as Scope 3 emissions).[3]
Fair (0)	Company provides information about direct greenhouse gas emissions from operations (also known as Scope 1 emissions)[4] and indirect greenhouse gas emissions from upstream activities (e.g., purchased goods and services, waste generated in operations, fuel- and energy-related activities, also known as Scope 2 emissions)[5] for the current year, as well as the methodology used to calculate emissions.
Poor (-1)	Company provides minimal data, insufficient to inform investors of the magnitude and trend of the company's greenhouse gas emissions (e.g., it discusses the company's greenhouse gas emissions trends but does not provide actual greenhouse gas emissions data, or it provides direct greenhouse gas emissions data but no information regarding upstream or downstream activities).
Egregious (-2)	Company does not disclose its greenhouse gas emissions.

3 Scope 3: Other indirect emissions, such as emissions from the use of sold products, the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g., transmission and distribution losses) not covered in Scope 2, outsourced activities, waste disposal, etc.

[4] Scope 1: All direct greenhouse gas emissions (emissions from sources that are owned or controlled by the reporting entity).

[5] Scope 2: Indirect greenhouse gas emissions from consumption of purchased electricity, heat, or steam.

TABLE 6. **Planning for a World Free from Carbon Pollution Scoring Bands**

Area Aggregate Score	Definition	Point Range
Advanced	Company is demonstrating best practices in this area	+8 – +12
Good	Company is meeting emerging societal expectations in this area	+3 – +7
Fair	Company's performance in this area is neither positive nor negative	(-2) – +2
Poor	Company is falling short of emerging societal expectations in this area	(-7) – (-3)
Egregious	Company is acting very irresponsibly in this area	(-12) – (-8)

TABLE 7. **Supporting Fair and Effective Climate Policies Scoring Guide**

General Political Activity and Spending			
	CPA-Zicklin Index of Corporate Political Disclosure and Accountability scores: We condensed CPA-Zicklin scores into three categories—disclosure, policy, and oversight—with a company receiving a possible score of +2 – (-2) for each category.		
	Disclosure	**Policy**	**Oversight**
Advanced (+2)	+30 – +36	+14 – +16	+15 – +18
Good (+1)	+23 – +29	+11 – +13	+11 – +14
Fair (0)	+15 – +22	+6 – +10	+8 – +10
Poor (-1)	+7 – +14	+3 – +5	+4 – +7
Egregious (-2)	0 – +6	0 – +2	0 – +3

TABLE 8. **Supporting Fair and Effective Climate Policies Scoring Guide (CONTINUED)**

Direct Influence on Climate Policy	
Engagement with Congress on federal climate policies or legislation	
Good (+1)	Company consistently speaks in support of at least some existing or proposed climate policies or legislation; it calls for climate action in public engagement with Congress.
Fair (0)	Company does not publicly engage Congress on climate policies, or it engages without supporting or opposing climate policy.
Poor (-1)	Company publicly opposes congressional policy or action on climate and does not offer a specific, viable policy alternative that would have equal or greater benefit to the climate.
Consistent support for US policy action to reduce carbon emissions	
Advanced (+2)	Company meets all of the criteria for "good" and advocates publicly and consistently for these policies, including through industry or multistakeholder groups.
Good (+1)	Company meets the criterion for "fair" and issues consistent public statements in support of one or more specific proposed federal or state climate change policies.
Fair (0)	Company identifies a general category of climate policy that it supports (e.g., carbon tax) on the company website or in public statements.
Poor (-1)	Company does not identify any climate policy that it supports on the company website on a prominent, easily accessible page (e.g., a page designated specifically to address climate change) or in public statements.
Egregious (-2)	Company opposes federal or state climate policies without identifying any policy that it supports and has used climate science disinformation as justification for its opposition.

TABLE 8. **Supporting Fair and Effective Climate Policies Scoring Guide (CONTINUED)**

Support for the Paris Climate Agreement[6]	
Advanced (+2)	Company meets all of the criteria for “good” and has publicly advocated for specific policies and/or regulations to implement the Paris climate agreement in one or more jurisdictions.
Good (+1)	Company has consistently supported the enactment of policies and/or regulations to implement the Paris climate agreement and its global temperature goal.
Fair (0)	Company has made a general statement expressing support of policies and/or regulations to advance the Paris climate agreement and its global temperature goal.
Poor (-1)	Company has made a general statement expressing support for policies and/or regulations to advance the Paris climate agreement without explicitly endorsing the agreement’s goal of keeping global temperature increase well below two degrees Celsius (C) and pursuing efforts to limit it to 1.5°C above pre-industrial levels.
Egregious (-2)	Company opposed the adoption and/or implementation of the Paris climate agreement, supported the US withdrawal from the agreement, or has been silent on the need for policies and/or regulations to advance the Paris climate agreement.
Indirect Influence on Climate Policy	
Company influence through international or national business alliances or initiatives that are supportive of specific climate policies	
Good (+1)	Company has signed on to one or more business initiatives[7] that demonstrate support for specific climate policies, including the Climate Leadership Council, the Oil and Gas Climate Initiative, the Paris Pledge for Action, and We Are Still In.
Fair (0)	Company has not signed onto any international or national business alliances or initiatives supportive of specific climate policies.
Poor (-1)	Company publicly rejects or disparages climate-supportive alliances or initiatives.

DATA SOURCES: 2017 CENTER FOR POLITICAL ACCOUNTABILITY-ZICKLIN INDEX AND SCORING GUIDELINES; COMPANY WEBSITES, MAJOR NEWS SOURCES, CONGRESSIONAL TESTIMONY, AND COMPANY COMMENTS FILED WITH REGULATIONS.GOV FROM JULY 1, 2016, THROUGH JUNE 30, 2018.

[6] Metric regarding the Paris climate agreement moved from the “Planning for a World Free from Carbon Pollution” Area to the “Supporting Fair and Effective Climate Policies” Area because nations have begun to craft and enact policies to implement their Paris climate agreement commitments. 2018 scores not compared with those from 2016.

[7] Reference to these initiatives should not be considered an endorsement by UCS of any particular business initiative on climate change.

TABLE 9. **Fully Disclosing Climate Risks Scoring Guide**

Regulatory Risks	
Disclosure of regulatory risks: The company discloses laws and regulations that will affect it and discloses the impact of complying with those existing or proposed laws and regulations.[8]	
Advanced (+2)	Company meets all of the criteria for "good" disclosure, and includes: 1. An assessment of whether these laws and regulations "will have, or are reasonably likely to have, a material impact on the company's liquidity, capital resources or results of operations," as well as the basis for the company's conclusions (US SEC 2010); 2. Any material estimated capital expenditures for environmental control facilities; and 3. An explanation of how the company will respond.
Good (+1)	Company provides a detailed analysis of existing and proposed laws and regulations relating to climate change and their possible effects on the company, including potential financial impacts (quantified, when feasible).
Fair (0)	Company identifies specific existing and proposed laws and regulations relating to climate change that may affect the company, but it does not address how it in particular will be affected by those regulations.
Poor (-1)	Company mentions the general existence of risk associated with current or proposed laws related to climate change. However, it does not identify specific laws or regulations and/or does not identify effects particular to the company (as opposed to effects that could apply to the sector as a whole).
Egregious (-2)	Company does not disclose its regulatory risks.

[8] Where the necessity and certainty of eventual regulatory action to address global climate goals is clear, the absence of a specific regulatory proposal should not relieve companies of their disclosure obligations.

TABLE 9. **Fully Disclosing Climate Risks Scoring Guide (CONTINUED)**

<table>
<tr><th colspan="2">Physical Risks</th></tr>
<tr><td colspan="2">Disclosure of physical risks: The company discloses physical risks it faces that are caused or exacerbated by climate change and how the company plans to address these risks.</td></tr>
<tr><td>Advanced (+2)</td><td>Company meets all of the criteria under “good,” and also discloses:
1. An assessment of whether these physical risks “will have, or are reasonably likely to have, a material impact on the company’s liquidity, capital resources or results of operations,” as well as the basis for the company’s conclusions (US SEC 2010); and
2. Past physical impacts, if material.</td></tr>
<tr><td>Good (+1)</td><td>Company discusses the physical climate-related risks it faces, with some specific details, including at least one of the following:
1. The operational segments and/or specific company facilities that might be impacted;
2. The magnitude and time frames of the anticipated impacts (quantified, when feasible); and
3. How the company plans to respond to physical impacts.</td></tr>
<tr><td>Fair (0)</td><td>Company acknowledges the physical risks it faces and includes some discussion of climate change as a contributor to those risks, but with few or no details about the nature of those risks, their magnitude, or how they may impact the company.</td></tr>
<tr><td>Poor (-1)</td><td>Company generally acknowledges the physical risks it faces, such as weather, but does not include a discussion of climate change as a contributor to those risks.</td></tr>
<tr><td>Egregious (-2)</td><td>Company does not disclose its physical risks.</td></tr>
</table>

TABLE 9. **Fully Disclosing Climate Risks Scoring Guide (CONTINUED)**

Market and Other Risks and Opportunities	
Disclosure of market and other indirect risks and opportunities: The company discloses indirect risks associated with climate change, such as impacts on demand or reputation, and how the company will anticipate and respond to these risks.	
Advanced (+2)	Company provides a detailed analysis of how its financial condition or operations may be affected by climate-related developments in the marketplace, including all points under “good” disclosure, as well as: 1. Impacts on suppliers and customers (e.g., changes in demand for new and existing products and services due to their greenhouse gas emissions profiles); 2. Impacts on the company’s reputation; 3. Magnitude of the anticipated risks and opportunities (quantified, when feasible); and 4. Basis for the company’s conclusions.
Good (+1)	Company provides some details or examples of how it may be affected by indirect risks and opportunities, including: 1. An assessment of whether identified risks and opportunities “will have, or are reasonably likely to have, a material impact on the company’s liquidity, capital resources or results of operations” (US SEC 2010); and 2. Key variables and other qualitative and quantitative factors (e.g., financial data, anticipated external macro-economic conditions, interest rate, or economic growth trends) that are particular to and necessary for an understanding and evaluation of the individual company.
Fair (0)	Company provides some details or examples of how it may be affected by indirect risks and opportunities from climate change, but it provides limited analysis of the risks’ potential financial impacts for the company. If the company is a defendant in climate-related lawsuit(s), it cannot receive a score of “fair” or above without explicitly discussing the lawsuit(s) and associated risks.
Poor (-1)	Company broadly mentions shifting market and other indirect risks and opportunities from climate change, but it does not specify potential impacts on the company.
Egregious (-2)	Company does not disclose its market or indirect risks.

TABLE 9. **Fully Disclosing Climate Risks Scoring Guide (CONTINUED)**

Corporate Governance	
Disclosure of corporate governance on climate-related risks by board and senior management: The company discloses how its board and executives will monitor and manage climate-related risks.[9]	
Advanced (+2)	Company meets all four of the criteria under "good" disclosure.
Good (+1)	Company discloses some details of corporate governance on greenhouse gas emissions management and climate risks and opportunities, including disclosing at least two of the following: 1. How the board is engaged on climate risks and opportunities; 2. Which executives are in charge of addressing these risks and opportunities; 3. Whether and how executive compensation is tied to meeting corporate climate objectives; and 4. How senior management and the board monitor and gauge the effectiveness of the company's climate change strategies and goals.
Fair (0)	Company mentions or makes generic statements about climate-related environmental governance.
Poor (-1)	Company mentions or makes generic statements about environmental governance, but it does not specifically describe climate-related governance.
Egregious (-2)	Company provides no disclosure of corporate governance on climate issues.

DATA SOURCES: 2018 US SECURITIES AND EXCHANGE COMMISSION (SEC) 10-K OR 20-F FILINGS; PROXY STATEMENTS AND CDP DISCLOSURES, ONLY IF DISCUSSED IN SEC 10-K/20-F.

[9] Company scores may have improved because proxy statements were considered as a source in 2018 if referenced in the US Securities and Exchange Commission (SEC) 10-K/20-F governance disclosure.

TABLE 10. **Fully Disclosing Climate Risks Scoring Bands**

Area Aggregate Score	Definition	Point Range
Advanced	Company is demonstrating best practices in this area	+6 – +8
Good	Company is meeting emerging societal expectations in this area	+3 – +5
Fair	Company's performance in this area is neither positive nor negative	(-2) – +2
Poor	Company is falling short of emerging societal expectations in this area	(-5) – (-3)
Egregious	Company is acting very irresponsibly in this area	(-8) – (-6)

[REFERENCES]

Allen, M., C. Helpburn, R. Millar, and P. Walton. 2015. *Working principles for investment in fossil fuels*. Oxford, UK: Oxford Martin Net Zero Carbon Initiative. Online at *www.oxfordmartin.ox.ac.uk/downloads/reports/Net_Zero_Working_Principles.pdf*, accessed August 17, 2016.

Barnard College. 2018. *Fossil fuel divestment and climate action methodology*. New York. Online at *https://barnard.edu/sites/default/files/divest_methodology_7-23-18_final.pdf*, accessed July 27, 2018.

Carlson, C., G. Goldman, and K. Dahl. 2015. *Stormy seas, rising risks: What investors should know about climate change impacts at oil refineries*. Cambridge, MA: Union of Concerned Scientists. Online at *www.ucsusa.org/sites/default/files/attach/2015/02/stormy-seas-rising-risks-ucs-2015.pdf*, accessed August 15, 2016.

CDP. 2017. CDP 2017 climate change scoring methodology. Online at *https://b8f65cb373b1b7b15feb-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/guidance_docs/pdfs/000/000/509/original/CDP-climate-change-scoring-methodology.pdf*, accessed September 6, 2018.

CDP. 2016. CDP 2016 climate change scoring methodology. Online at *www.cdp.net/Documents/Guidance/2016/CDP-climate-change-scoring-methodology-2016.pdf*, accessed August 17, 2016.

Center for Political Accountability (CPA). 2017. *The 2017 CPA-Zicklin index of corporate political disclosure and accountability: Sustained growth among S&P 500 companies signals commitment to political disclosure and accountability*. Washington, DC. Online at *http://files.politicalaccountability.net/index/2017%20Index.pdf*, accessed July 27, 2018.

Goldman, G., and C. Carlson. 2014. *Tricks of the trade: How companies anonymously influence climate policy through their business and trade associations*. Cambridge, MA: Union of Concerned Scientists. Online at *www.ucsusa.org/sites/default/files/legacy/assets/documents/center-for-science-and-democracy/tricks-of-the-trade.pdf*, accessed August 17, 2016.

Grifo, F., G. Goldman, B. Gutman, J. Freeman, P. Rogerson, and D. Veysey. 2012. *A climate of corporate control: How corporations have influenced the US dialogue on climate science and policy*. Cambridge, MA: Union of Concerned Scientists. Online at *www. ucsusa.org/sites/default/files/legacy/assets/documents/scientific_ integrity/a-climate-of-corporate-control-report.pdf*, accessed on August 15, 2016.

Heede, R. 2014. Tracing anthropogenic carbon dioxide and methane emissions to fossil fuel and cement producers, 1854–2010. *Climatic Change* 122:229–241.

Karbassi, L., H. Huusko, F.C. Silveira, M. VanVoore, S. Haeussling, E. Metzger, Y. Dagnet, S. Putt del Pino, J. Morgan, K. Jenkinson, and B. Watson. 2013. *Guide for responsible corporate engagement in climate policy: A caring for climate report*. New York: United Nations Global Compact and United Nations Framework Convention on Climate Change; Nairobi, Kenya: United Nations Environment Program; Washington, DC: World Resources Institute. Online at *www.unglobalcompact.org/docs/issues_doc/Environment/climate/Guide_Responsible_Corporate_Engagement_Climate_Policy.pdf*, accessed August 17, 2016.

Martin, J. 2016. *Fueling a clean transportation future: Smart fuel choices for a warming world*. Cambridge, MA: Union of Concerned Scientists. Online at *www.ucsusa.org/sites/default/files/attach/2016/02/Fueling-Clean-Transportation-Future-full-report.pdf*, accessed on August 15, 2016.

Millar, R., C. Hepburn, J. Beddington, and M. Allen. 2018. Principles to guide investment towards a stable climate. *Nature Climate Change* 8:2–4.

Mulvey, K., J. Piepenburg, G. Goldman, and P. Frumhoff. 2016. *The climate accountability scorecard: Ranking major fossil fuel companies on climate deception, disclosure, and action*. Cambridge, MA: Union of Concerned Scientists. Online at *www.ucsusa.org/sites/default/files/attach/2016/10/climate-accountability-scorecard-full-report.pdf*, accessed July 27, 2018.

Mulvey, K., S. Shulman, D. Anderson, N. Cole, J. Piepenburg, and J. Sideris. 2015. *The climate deception dossiers: Internal fossil fuel industry memos reveal decades of corporate disinformation*. Cambridge, MA: Union of Concerned Scientists. Online at *www.ucsusa.org/sites/default/files/attach/2015/07/The-Climate-Deception-Dossiers.pdf*, accessed August 17, 2016.

Science Based Targets. No date a. Science-based targets: Driving ambitious corporate climate action. Online at *http://sciencebasedtargets.org/*, accessed August 17, 2016.

US Securities and Exchange Commission (US SEC). 2010. Commission guidance regarding disclosure related to climate change. Washington, DC. Online at *www.sec.gov/rules/interp/2010/33-9106.pdf*, accessed September 12, 2016.