



Action Report

Environment (Climate Change)

DTE Energy

April 11, 2017

Ticker	Exchange	Meeting Date	Record Date	Annual Meeting Location
DTE	NYSE	5-4-17	3-7-17	Boston, Massachusetts

Agenda

Item	Proposal
1	MGT: Elect directors
2	MGT: Ratify accountants
3	MGT: Advisory vote on executive compensation
4	MGT: Advisory vote on frequency of executive compensation vote
5	SH: Report on climate change strategy

Si2 Briefing

[Environment \(Climate Change\)](#)

Report Author

[Sara E. Murphy](#)

Links

[2017 Proxy Statement](#), [2016 Form 10-K](#)

Resolved Clause

Resolved: Shareholders request that DTE Energy, with board oversight, publish an assessment (at reasonable cost and omitting proprietary information) of the long term impacts on the company's portfolio, of public policies and technological advances that are consistent with limiting global warming to no more than two degrees Celsius over pre-industrial levels.

Lead Proponent

New York State Common Retirement Fund

Vote History

The proposal is a new formulation for DTE. In the previous two years, the same proponent filed a resolution seeking a report on the company's approach to distributed generation. That resolution earned 26.4 percent support in 2016 and 27.5 percent in 2015, when investors also gave majority approval to a resolution seeking the right to name board candidates on the company proxy statement, a resolution prompted by the company's high carbon profile.

Summary

DTE Energy's subsidiary, DTE Electric, is the largest electric utility in Michigan and one of the largest in the nation. The proponent, the New York State Common Retirement Fund, believes that traditional electric utility business models are at risk from global climate change and the various responses to it. The proponent says the rapid expansion of alternative energy technology is creating new risks, and wants to know how the company is preparing for these, particularly as concerns efforts to constrain global warming to 2 degrees Celsius. It would like to see an analysis that projects to 2040 to help the company better plan "for future regulatory, technological and market changes." DTE Energy says that its strategy already takes account of foreseeable future risk, but disagrees that it can project out to 2040. Management says DTE already has adequate plans in place to increase its share of renewable energy sources, and continues to work internally and with government to improve public policy.

I. Challenges to Electric Utility Business Models

Electric utilities are facing unprecedented external and internal challenges to traditional business models. Technological change and associated new market entrants, climate change regulation and shifting consumer demands are putting pressure on traditional electrical generation, transmission and distribution. Fossil fuels—particularly coal—are becoming increasingly expensive to exploit. Energy efficiency and other demand-side resources are now cheaper than conventional generation in many cases. Renewables—particularly solar and wind—outcompete fossil fuels in many instances, and generally are approaching grid parity.¹ Many utilities are also experimenting with electricity storage, thanks to very rapid advances in the technology. Electricity generation, transmission and delivery is growing increasingly decentralized, electricity is no longer necessarily consumed immediately and formerly high barriers to market entry are eroding.

Distributed generation² of electricity has proliferated in many states. Residential rooftop solar is expanding rapidly as costs for solar panels decrease and companies such as **Solar City** and **First Solar** expand. Many environmental activists and utility sector analysts see distributed generation as a critical element of the electric grid of the future. Key advantages they point to are *reduced emissions* from prevented generation, *cost advantages* to owners, *efficiency gains* in the form of decreased transmission loss, *resilience* that comes from independence from an interconnected grid that is otherwise subject to cascading outages and *modularity* that enables renewable energy source integration. A November 2014 [report](#) from Moody's credit rating agency indicated that "a proactive regulatory response to distributed generation is credit positive as it gives utilities improved rate designs and helps in the long-term planning for their infrastructure."

Others question the value of distributed generation proliferation in the current framework. Some scholars at the Massachusetts Institute of Technology (MIT) who have been skeptical about distributed solar assets' usefulness recently published a [report](#) suggesting large-scale, utility-controlled solar assets may make better long-term economic sense. MIT's report warns regulators that they must:

minimize distortions from charges that are designed to collect taxes, recover the costs of public policies [including subsidies for renewable energy [and] cross-subsidies between different categories of customers, etc.), and recover residual network costs (i.e., those network costs that are not recovered via cost-reflective charges).

This admonition is based on the difficulty utilities face under traditional regulatory structures, where their costs for grid maintenance are recovered from customers' charges, which are largely volumetric. In general, customers generating their own solar power, for instance, are entitled to electrical grid access to draw power during times of insufficient generation and to sell power back to the grid in times of excess, yet such customers will pay less for grid availability because of lower usage. On net, this can result in the utility receiving less in fees than it costs to keep that customer connected to the grid. In some cases, customer rates (i.e. cost per unit of electricity) would increase substantially if the same fixed costs for grid services were applied to lower volumes of usage. Importantly, these challenges are not necessarily an inherent problem with distributed generation, but rather largely with the cost recovery mechanisms that regulators have put in place for utilities. A number of experts, regulatory officials and utilities have described rate solutions to such problems. These rate structures could be changed.

¹ Grid parity occurs when new energy sources can generate power at a cost less than or equal to the price of purchasing power from the existing electricity grid.

² Distributed generation refers to power generation at the point of consumption. It usually involves renewable energy sources, particularly solar, and is thus intimately connected to the topic of renewable energy uptake.

The uptake of renewable energy has suddenly increased significantly. Although photovoltaic cells and wind turbines were invented nearly 150 years ago, they still only generate roughly 7 percent of the world's electricity. However, while essentially peripheral to our energy system a dozen years ago, these sources of energy are now growing more quickly than any other, and their costs continue to fall relative to fossil fuels. **BP** expects renewables to account for half of global energy supply growth in the next 20 years, and the U.S. Energy Information Agency (EIA)'s [2017 Annual Energy Outlook](#) projects that renewable energy will surpass coal and nuclear globally by 2040. In 2016, wind energy capacity **grew** by 19 percent in the United States, while its price plummeted. It has surpassed hydropower as the country's most plentiful renewable energy source. Momentum for that construction came not just from utilities aiming to meet renewable energy mandates, but because power companies saw economic reasons to invest in wind. According to a March 2017 [analysis](#) by Moody's Investor Services, some 56 gigawatts of U.S. coal-fired generation in the Midwest is at risk as wind energy comes online with lower costs. The average cost of wind power in the Great Plains states has fallen to around \$20 per megawatt hour (MWh), while coal-fired generation runs at about \$30 per MWh.

A February 2017 [article](#) in *The Economist* notes, however, that we face a tough journey from here to there. Specifically, the transition will require:

huge amounts of investment over the next few decades, to replace old smog-belching power plants and to upgrade the pylons and wires that bring electricity to consumers. Normally investors like putting their money into electricity because it offers reliable returns. Yet green energy has a dirty secret. The more it is deployed, the more it lowers the price of power from any source. That makes it hard to manage the transition to a carbon-free future, during which many generating technologies, clean and dirty, need to remain profitable if the lights are to stay on. Unless the market is fixed, subsidies to the industry will only grow.

Policymakers are already seeing this inconvenient truth as a reason to put the brakes on renewable energy. In parts of Europe and China, investment in renewables is slowing as subsidies are cut back. However, the solution is not less wind and solar. It is to rethink how the world prices clean energy in order to make better use of it.

Meanwhile, renewable energy demand among U.S. companies that are large utility customers is significant and growing quickly, according to a report from Advanced Energy Economy (AEE), a clean energy trade group. The [report](#) found that 71 of *Fortune* 100 companies have set renewable energy or sustainability targets, up from 60 just two years ago. Among *Fortune* 500 companies, commitments have held steady at 43 percent, or 215 firms, the report found. Twenty-two *Fortune* 500 companies have committed to sourcing 100 percent of their electricity needs from renewables, including **Wal-Mart Stores, Apple, General Motors** and **Amazon.com**. **Google** announced in December 2016 that 100 percent of its data centers around the world would be powered exclusively by renewable energy sources by 2017. However, companies with operations in states whose regulatory structures are not supportive of advanced energy must commit significant effort and creativity to meet these commitments.

Non-utility companies are entering the energy efficiency services market, particularly in deregulated markets. Google recently purchased Nest, which provides products and services to reduce residential electricity use. **Comcast** now provides an EcoSaver service to help customers save money on energy bills. **General Electric** has created a new company, Current, to focus on providing products and services in energy efficiency, renewable generation and storage to large buyers such as hospitals, universities, retail stores and cities. If this trend continues, utilities could be outpaced in providing a service in which they should be more expert than anyone.

According to PricewaterhouseCooper’s *2015 Global Power & Utilities (P&U) Survey*, 94 percent of electric power industry representatives predict that the power utility business model will be either completely transformed or significantly changed by 2030:

In defining future business models, utilities need to understand and challenge their company’s purpose and positioning in tomorrow’s markets. In the past, operating an integrated utility from generation through customer supply was well understood. Now, unbundling opportunities are extending deeper into the value chain and enabling greater participation by specialists. As a result, electric companies will need to rethink not just their roles and business models, but also their service and product offerings and approaches to customer engagement.

In May 2014, Barclays downgraded bonds for the entire U.S. electric utility sector due to risks posed by the rapidly declining costs of solar power and energy storage technologies. Deutsche Bank predicts total solar photovoltaic (PV) power costs would reach grid parity in 36 U.S. states as soon as this year, and Frost & Sullivan projects that both residential and utility-scale solar photovoltaic power will reach global grid parity by 2020. In many regions, wind and solar—especially at utility scale—are already reaching grid parity and often pricing out more traditional generation resources.

In 2016, Si2 published a report in collaboration with IRRIC Institute that examined in depth the climate orientation of the boards of the 25 largest investor-owned utilities, allowing investors to make informed judgements. *The Top 25 U.S. Electric Utilities: Climate Change, Corporate Governance and Politics* evaluated boards using a standardized set of metrics designed by Si2 with input from investors, governance experts and utility economists. The project provided data for use by investors concerned about climate and regulatory impacts on their portfolio companies. DTE Energy was among the companies evaluated in that study.

This Action Report addresses carbon asset stranding, the 2-degree scenario and renewable energy and its relationship to climate change, which are discussed in greater detail in *Si2’s 2017 Briefing Paper on Climate Change*.

II. DTE Energy and Climate Change

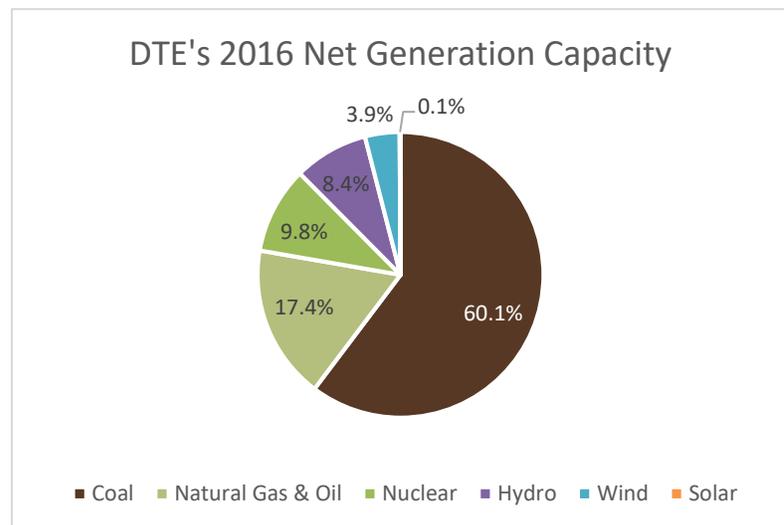
DTE Energy, is based in Michigan but operates in many other states, as well, through five segments:

- The **Electric** segment generates, purchases, distributes and sells electricity to approximately 2.2 million residential, commercial and industrial customers in southeastern Michigan—it is the largest electric utility in that state. It generates electricity through fossil-fuel plants, hydroelectric pumped storage plants, nuclear plants and wind and other renewable assets. This segment owns and operates approximately 690 distribution substations and 438,000 line transformers. DTE Electric has long- and short-term purchase contracts for approximately 37.9 million tons of low-sulfur western coal, and approximately 3 million tons of Appalachian coal to be delivered from 2016 to 2021. DTE Electric accounted for 71.7 percent of 2016 revenues.
- The **Gas** segment purchases, stores, transports, distributes and sells natural gas to approximately 1.3 million residential, commercial and industrial customers in Michigan, and sells storage and transportation capacity. This segment has approximately 19,000 miles of distribution mains, 1,149,000 service pipelines and 1,297,000 active meters, and owns approximately 2,000 miles of transmission pipelines.

Financials			
(\$ millions)	2016	2015	% Change
Operating Revenues	\$10,630	\$10,337	2.8%
Net Income	\$868	\$727	19.4%
Source: DTE Energy			

- The **Gas Storage and Pipelines** segment controls natural gas storage fields, and intrastate lateral and intrastate gathering pipeline systems, and has ownership interests in interstate pipelines serving the Midwest, Ontario and Northeast markets.
- The **Power and Industrial Projects** segment provides metallurgical coke, pulverized coal and petroleum coke to the steel, pulp and paper and other industries; and power generation, steam production, chilled water production, wastewater treatment and compressed air supply to industrial customers. This segment also owns and operates four renewable generating plants with a capacity of 191 Megawatts, and 11 reduced emissions fuel facilities, as well as developing landfill gas recovery systems.
- The **Energy Trading** segment focuses on physical and financial power, as well as gas marketing and trading, structured transactions and optimization of contracted natural gas pipeline transportation and storage positions.

Generation mix: DTE Electric has an 11,084 megawatt (MW) system capacity that uses coal, nuclear fuel, natural gas, hydroelectric pumped storage and renewable sources to generate its electrical output. Its 2016 generation capacity is shown in the graphic at right. This shows a reduction of fossil fuel dependence in recent years; in 2013, the company relied on coal for more than three-quarters of its generation mix. Since that year, the company has not significantly grown its wind and solar generation, instead increasing its use of natural gas and hydroelectricity. Over the next 15 years, DTE Electric expects to retire additional coal-fired generation and to increase the proportion of its generation mix attributable to natural gas-fired generation and renewables. Currently, DTE Electric's generating capability is heavily dependent upon the availability of coal, but the company reports a change in strategy in its [Corporate Citizenship Report](#):



In response to environmental regulation and the aging of our coal fleet, we anticipate that our generation mix in the long term will shift from a generation portfolio heavily weighted toward coal to a more balanced mix of coal, natural gas, renewables and nuclear. With the anticipated retirements of coal-fired power plants across Michigan (as well as the entire Midwest region and the U.S. as a whole), we are actively working to replace that capacity with other assets and maintain adequate reserves.

DTE Electric retired one of its coal-fired units with 110 megawatts (MW) in generation capacity in April 2016. This added to a reduction in fossil fuel dependence in recent years; in 2013, the company relied on coal for more than three-quarters of its generation mix. Since that year, the company has not significantly grown its wind and solar generation, instead increasing its use of natural gas and hydroelectricity.

DTE Energy notes that some communities in its operating area oppose new wind turbines, noting that at least one township in Huron County has imposed a moratorium on new turbines. Regarding solar, the company says: "Given today's solar technology, it doesn't make sense for our state to invest in solar at a significant scale; however, we remain committed to implementing technology breakthroughs in solar when, and if, they happen."

In 2008, Michigan established a renewable portfolio standard for Michigan electric providers. Michigan required them to source 10 percent of electricity sold to retail customers from renewable sources by 2015. DTE Electric says it met this goal.

The Midcontinent Independent System Operator (MISO) regional energy market, which includes the state of Michigan, faced capacity constraints in certain areas beginning in 2016 primarily because increasingly stringent environmental requirements forced the retirement of coal-fired generation. DTE Energy notes in its 2016 Form 10-K that the increased dependency on its generation “to provide reliable service and price stability for customers” will require “a large investment due to DTE Electric’s aging coal fleet along with increased environmental regulations.” The company has joined others in Michigan in [promoting demand response](#)³ and time-of-use rates⁴ to help keep peak demand in check. On-peak pricing for DTE Energy is more than ten times the usual rate.

DTE Energy provides a [graphic](#) on its website to illustrate its approach to energy transformation. The graphic, while too large for clear reproduction here, shows the following elements:

- We participate in research on new technologies to make carbon capture and geologic carbon storage practical for both new and existing fossil-fuel power plants.
- Nuclear power generation provides a significant amount of essentially carbon-free, base-load electricity, which is crucial for helping the state of Michigan and the entire United States meet the challenges of reducing greenhouse gas emissions (GHGs).
- In 2015 we purchased two natural gas-fired simple cycle plants that, combined, can provide more than 1,000 MW of power during peak demand periods.
- We are national leaders in developing landfill gas capture systems and in converting small coal-fired power plants to run on biomass fuels.
- We’re building the largest utility-owned solar project east of the Mississippi.
- DTE is the largest investor in renewable energy in the state.

As shown above, the company is banking on carbon capture and storage, the challenges of which are detailed in [Si2’s 2017 Briefing Paper on Climate Change](#). DTE Energy also places strong emphasis on high capital cost nuclear projects. While the company shows some renewable initiatives in the graphic, the information provided earlier in this section suggests that these currently are not a significant part of its business.

DTE Energy has, however, made statements indicating that it may make a shift in the coming decade. In a June 2016 [press release](#), the company announced that it would retire eight coal-fired generators at three power plants by 2023. DTE Energy said that these plants accounted for approximately 25 percent of its 2015 generation:

The retirements are part of an overarching fundamental transformation in the way DTE will produce energy for Michigan. Earlier this year, DTE retired three coal generating units due to age and projected future costs. With today’s announcement, the company will retire 11 of its 17 coal-fired units by 2023.

“The way DTE generates electricity will change as much in the next 10 years as any other period in our history. We will replace 11 aging coal-fired generating units at three facilities built in the 1950s and 1960s with a

³ Demand response provides an opportunity for consumers to play a significant role in the operation of the electric grid by reducing or shifting their electricity usage during peak periods in response to time-based rates or other forms of financial incentives.

⁴ Time-of-use rates allow electric customers to lower their bill by shifting their energy use to partial-peak or off-peak hours.

mix of newer, more modern and cleaner sources of energy generation such as wind, natural gas and solar,” said DTE Energy Chairman and CEO Gerry Anderson. “DTE Energy will work with the state of Michigan on a plan that ensures electric reliability for our 2.2 million customers, places a premium on affordability, and is seamless for our employees and the communities that are home to these plants.”

Reduced emissions fuel: DTE Energy’s Power and Industrial Projects segment, in addition to operating renewable energy plants, focuses on “reduced emissions fuel,” which essentially amounts to the dubiously named “clean coal.” In the company’s words, its “facilities blend a proprietary additive with coal used in coal-fired power plants, resulting in reduced emissions of nitrogen oxide and mercury.” DTE says the economic benefit of this program arises from production tax credits.

Distributed generation: Between the company’s SEC filings and Corporate Citizenship Report, the only reference DTE Energy makes to distributed generation is in the section of its 2016 Form 10-K that deals with competition:

Competition in the regulated electric distribution business is primarily from the on-site generation of industrial customers and from distributed generation applications by industrial and commercial customers. DTE Electric does not expect significant competition for distribution to any group of customers in the near term.

On the client-facing section of its website, DTE Energy has [a page describing options](#) for customer generation that includes distributed generation. The page is intended to help customers sign up for distributed generation and other options. Si2 was unable to find any information about the extent of customer uptake of this option.

In a [2011 conference presentation](#), a DTE Energy representative described the company’s application of distributed resources. The presentation highlights several distributed generation projects, which appear to be partnerships with customers. It is unclear how significant these projects were to the company’s overall business, and to what extent they persist today.

Under the [SolarCurrents](#) utility-owned pilot program, DTE Electric obtains easement rights to locate large (up to 1,100 kW) photovoltaic (PV) arrays in southeastern Michigan. DTE Electric currently has 22 sites in operation totaling 9.9 MW of solar generating capacity. DTE Energy achieved its goal of bringing approximately 15 MW of solar capacity online and investing approximately \$70 million in this program by the end of 2015. It engineers, builds, owns and maintains the PV systems and receives all energy, capacity and environmental and/or renewable attributes generated by the PV systems. The property owner receives an annual income generated as an easement payment. Because the company reached its targets, it is no longer accepting customer applications to participate in the program.

Capital investments: DTE Energy’s utility businesses require significant capital investments to maintain and improve the electric generation and electric and natural gas distribution infrastructure and to comply with environmental regulations and renewable energy requirements. DTE Electric’s capital investments over the 2017 to 2021 period are estimated at \$8.4 billion, comprising \$3.2 billion for maintenance and other projects, \$3.2 billion for distribution infrastructure and \$2.0 billion for new generation. DTE Electric has retired three coal-fired generation units and has announced plans to retire an additional eight coal-fired generating units through 2023. The retired facilities will be replaced with natural gas-fired generation and renewables. DTE Electric plans to build natural gas turbine plants to provide approximately 1,000 megawatts of energy between 2021 and 2023. In September 2016, DTE Electric received an order from the Michigan Public Service Commission (MPSC) in its amended Renewable Energy Plan approving two 150 megawatt wind projects expected to be constructed and placed into service between 2018 and 2020, and 25 megawatts of company-owned solar projects that will be constructed and

placed into service between 2019 and 2020. DTE Electric is also currently constructing 50 megawatts of solar generation expected to be placed into service mid-2017.

Climate change risk: DTE Energy does not acknowledge climate change risk in any fashion in its 2016 Form 10-K, except for several brief, vague nods to the possibility of future regulation, and a mention of the “environmental benefits” of reducing greenhouse gas emissions.

The company has announced an absolute target of reducing carbon dioxide emissions from electric generation by 20 percent below a 2010 baseline by 2020, and by 40 percent by 2030. DTE says it already has achieved a 17 percent reduction. DTE Energy acknowledges that its target is not science-based, and that it does not anticipate setting a science-based target in the next two years. Its targets were established as a means by which to meet the requirements of the Clean Power Plan, which is now unlikely to pass. It has no intensity targets, making it difficult to gauge the company’s performance relative to its peers. DTE Energy discloses its 2016 intensity as denominated by revenue and full-time equivalent (FTE) employees, showing a decrease in both, but these are not especially meaningful measures. A useful intensity measure is denominated by units of energy generated and/or purchased.

DTE Energy’s [2016 response](#) to CDP’s climate change survey includes various statements about the company’s absolute emissions reduction. The company also acknowledges various non-regulatory risks from climate change—including change in temperature extremes and increased storm severity—but characterizes the time horizon, likelihood and impact magnitude as unknown, and says these considerations are already integrated into existing budgets. DTE Energy says it uses an internal carbon price, but does not elaborate.

Stranded carbon asset risk: In a January 2016 report, *“Stranded Assets and Thermal Coal: An analysis of environment-related risk exposure,”* the University of Oxford’s Smith School of Enterprise and the Environment found that “the environment-related risks facing the thermal coal value chain are substantial and span physical environmental impacts, the transition risks of policy and technology responding to environmental pressures, and new legal liabilities that may arise from either of the former.” The report specifically evaluated the top 100 global utilities by coal-fired generation capacity for their risks related to asset stranding. The strongest takeaway from the researchers’ exhaustive analysis was that current disclosure mechanisms are not sufficient for consistent evaluation of stranded carbon asset risk. It said:

[I]t is noteworthy that very little of our analysis has actually depended on existing corporate reporting or data disclosed through voluntary disclosure frameworks. This is both a cause for hope and concern. It demonstrates that significant strides can be made to understand company exposure to environment-related risks even in the absence of consistent, comprehensive, and timely corporate reporting on these issues. But it also highlights how existing frameworks on environment-related corporate disclosure might be asking the wrong questions – they generally attempt to support and enable top down analysis, but might not do enough to support a bottom up, asset-specific approach. Reporting needs to link back to a fundamental understanding of risk and opportunity and to specific assets within company portfolios, especially for companies with portfolios of large physical assets (e.g. power stations, mines, oil and gas fields, processing plants, and factories). In the absence of that, what is reported may not be actionable from an investor perspective.

The researchers also note that the cost of accessing and processing the data they used for their study is prohibitive for most investors. The report ranked utilities’ risk along a variety of scenarios associated with asset stranding:

- **Carbon Dioxide Intensity:** The more carbon-intensive a coal-fired power station, the more likely it is to be negatively affected by climate policy, whether through carbon pricing, emissions performance standards or similar measures.

- **Plant Age:** Older power stations create risk for utilities in two ways: they are more vulnerable to regulations that might force their closure, and they increase the likely cost of site remediation requirements.
- **Local Air Pollution:** Coal-fired power stations in locations with high population density and serious local air pollution are more at risk from regulation and emission abatement technology requirements, or even operation cessation.
- **Water Stress:** Power stations located in areas with higher physical baseline water stress, or in areas characterized by water conflict or regulatory uncertainty, are at higher risk of forced operational reduction or cessation, or of profit impairment by water pricing.
- **Coal Quality:** Coal-fired power stations that use lignite—which emits the most carbon dioxide of any coal type—are more at risk than those that use other forms of coal.
- **CCS Retrofitability:** Coal-fired power stations that are not suitable for carbon capture and storage (CCS) technology retrofit might be at greater risk of premature closure.
- **Future Heat Stress:** Climate change will exacerbate heat stress on power stations, as higher ambient local temperatures decrease power station efficiency and exacerbate water stress.

The following table shows the 12 major U.S. investor-owned utilities covered in the Oxford study, along with their risk ranking from 1 to 100, where 1 constitutes the lowest risk.

Stranded Carbon Asset Risk Ranking								
Company	CO ₂ Intensity Risk Rank	Plant Age Risk Rank	Local Air Pollution Risk Rank	Water Stress Risk Rank	Coal Quality Risk Rank	CCS Retrofitability Risk Rank	Future Heat Stress Risk Rank	Average Risk Rank
AEP	65	87	20	1	62	100	83	59.7
NRG Energy	70	92	22	1	69	100	58	58.9
Ameren	74	96	26	1	1	100	100	56.9
DTE Energy	71	97	27	1	1	100	100	56.7
AES	64	71	31	62	1	100	32	51.6
Entergy	52	72	11	1	1	100	100	48.1
Xcel Energy	40	59	5	73	1	100	54	47.4
Dominion Resources	57	94	24	1	1	100	33	44.3
Duke Energy	49	83	29	1	59	33	50	43.4
FirstEnergy	66	86	19	1	1	32	80	40.7
Southern	51	79	13	1	60	31	47	40.3
PPL	32	56	4	1	1	20	65	25.6

Board oversight: In its CDP response, DTE Energy says that its Public Policy and Responsibility Committee of the board of directors is “responsible for reviewing and advising the Board on emerging social, economic, political, reputational and environmental issues that could significantly affect the Company’s business and performance in relation to the community, shareholders, customers and employees,” and that this committee is responsible for climate change issues. DTE Energy does not have a board committee that is dedicated only to climate change issues. In contrast, the company does have a board commit-

tee, the Nuclear Review Committee, that is charged with reviewing “the policies, procedures and practices related to health and safety, potential risks, resources and compliance” at its nuclear facilities and reviewing “non-financial audit findings” related to its nuclear facilities or personnel, among other things.

Climate change management incentives: DTE Energy says in its response to the CDP climate change survey for 2016 that it provides incentives for the management of climate change issues. However, according to the details the company itself provides, this characterization is something of a stretch. All DTE Energy offers are three awards—one monetary, two non-monetary—and none is specific to climate change; rather, the awards include environmental initiatives among the many categories of employee innovation that are eligible for consideration.

Public policy positions: Companies that respond to CDP, as DTE Energy does, are asked questions regarding the extent to which they support various public policies related to climate change, as well as their financial support for and alignment with major trade associations. According to DTE’s most recent response, the company generally supports market-based solutions, and is concerned with having enough time for transitions of existing power plants to new requirements, cost impact on customers and preserving flexibility in keeping with regional differences. The company prefers state-level clean energy policies, and has supported clean energy generation efforts in Michigan. It is noteworthy to take the company’s self-declared policy positions in the context of the company’s history of misrepresenting climate science. A 2012 Union of Concerned Scientists (UCS) [report](#) found DTE Energy to be one of several companies that had “misrepresented some element of established climate science in their public communications.” The UCS characterized DTE Energy as playing both sides of the field, describing the company as “notable in that while it supports several trade groups that undermine climate science and policy proposals, DTE is recognized as an industry leader on climate action.”

Additionally, [DTE Energy](#) is among several companies that [fund law firms](#) known to be working against the Clean Power Plan (CPP), according to research compiled by Republic Report, a project of Ralph Nader-founded Essential Information, even though the company declares its support for the CPP in its Corporate Citizenship Report. This is consistent with the long history of some corporations playing both sides of the fence on contentious public policy issues.

Michigan’s Electricity Market and Renewables Goals

Under Michigan’s Electric Customer Choice Program, the supply of power is open to competitive suppliers. Electric transmission and distribution remain under a regulated utility structure. Customers with retail access to alternative electric suppliers represented approximately 10 percent of DTE Energy’s retail sales in 2015 and consisted primarily of industrial and commercial customers. Michigan Public Service Commission (MPSC) rate orders and 2008 energy legislation enacted by the State of Michigan had placed a 10 percent cap on the total retail access related migration, mitigating some of the unfavorable effects of electric retail access on DTE Electric’s financial performance and full service customer rates.

The year 2016 saw a [pitched battle](#) to overhaul Michigan’s electricity markets, with DTE Energy advocating charges or restrictions on alternative energy suppliers. Negotiations over this point were so intense that Michigan lawmakers held overnight sessions in December, trying to arrive at a resolution. One particular sticking point was a proposed capacity charge that alternative energy suppliers would have been required to pay to Michigan’s regulated utilities, including DTE Energy. The company argued that charges or restrictions on alternative suppliers were justified because DTE Energy is obligated to build the generation infrastructure to serve its customers. Opponents of the provision feared it would kill the retail choice market.

In mid-December, regulators arrived at a bipartisan compromise that kept the retail choice program alive and raised Michigan's RPS from 10 percent to 15 percent. Clean energy advocates celebrated the decision, which did not include provisions that they feared would have undermined Michigan's nascent solar market. The legislation also directs state regulators to establish a tariff process for distributed generation resources, which advocates expect will expand Michigan's currently tiny solar generation capacity while preventing utility domination of the market. As with so much in electricity market regulation, though, the impact of this tariff will be determined by its design, which remains to be determined.

Republican Governor Rick Snyder ushered the legislation into passage. Snyder [brokered](#) a compromise between DTE Energy (along with the state's other investor-owned utility, **Consumers Energy**) and alternative energy suppliers, setting clear parameters for regulators to determine if a capacity charge is warranted and, if so, how high it could rise, or if it would be better for an alternative energy supplier to secure capacity demands through a three-year auction process. Ultimately, this new legislation is a victory for compromise and collaboration, and DTE Energy and alternative energy providers alike declared their general satisfaction with its outcome.

Industry and Investor Initiatives

Climate risk analysis and disclosure: On December 14, 2016, a 20-nation task force released [guidelines](#) for voluntary climate risk disclosure by companies and investors in financial filings. The Task Force on Climate-Related Financial Disclosures (TCFD), set up by Bank of England Governor Mark Carney in his role as head of the G20's Financial Stability Board, recommends that all companies "describe the potential impact of different scenarios, including a 2°C scenario, on the organization's businesses, strategy, and financial planning," and provides more specific guidance for companies in the oil and gas, coal and electric utilities sectors due to the unique vulnerabilities of these industries. The TCFD offered 11 specific recommendations for all industries, divided into four topics: governance, strategy, risk management and metrics and targets. They include:

- All companies should benchmark strategic and financial planning using a 2-degrees Celsius economic scenario as their baseline for analyzing climate risks and opportunities. (As discussed earlier in this report, even two degrees Celsius of average global temperature increase could be too much to prevent catastrophic impacts.)
- All companies should disclose information related to water, energy usage and efficiency, land use and revenues from products and services designed for a low carbon economy.

DTE Energy's peers **NRG Energy**, **Xcel** and **Enel** (in Italy) have set greenhouse gas emission targets aligned with achieving a 2-degree scenario. **BHP Billiton**, a global mining, metals and petroleum company, has adopted a [planning process](#) that "uses scenario analysis to encompass a wide spectrum of potential outcomes for key global uncertainties." In a 2015 [report](#), BHP Billiton outlined four possible scenarios ranging from an orderly transition to a 2-degree world to a shock event that leads to a much more rapid transition to a 2-degree Celsius world by 2030.

Shareholder Support for This Resolution

On March 27, 2017, the California Public Employees Retirement System (CalPERS) announced that it would vote in favor of this proposal and encouraged other shareholders to follow suit. CalPERS is the largest state public pension fund in the United States with \$311 billion in total assets under management, and owns approximately 443,000 shares in DTE Energy. CalPERS explained its reasoning in an [SEC filing](#):

After completing a review of the CalPERS global equity portfolio, we identified 100 companies as significant carbon emitters responsible for over 50% of the portfolio's total carbon emissions. CalPERS defines these companies as systemically important carbon emitters (SICEs) – with DTE Energy Co. being one of them. Further, we believe proposal #5 is of particular significance in light of the global consensus regarding climate change and emission reduction targets reflected in the Paris Agreement. The importance of the proposal's request is also underscored by the efforts of Financial Stability Board (FSB), an international body mandated by G-20 leaders to develop efficient climate-related financial risk disclosures.

Consistent with the CalPERS Investment Beliefs, we believe effective management of environmental factors, including those related to climate change risk increase the likelihood that companies will perform well over the long-term.

II. Proponent Position

The proponent, the New York State Common Retirement Fund (NYSCRF), believes that traditional electric utility business models are at risk from the growth of customer-sited distributed generation and global climate change. The rapidly decreasing cost of solar photovoltaic (PV) and battery storage technology is prompting customers to switch to solar power providers for a portion of their energy needs, or leave the grid entirely (using batteries and or other backup systems), as the proponent points out in a [memo](#) supporting the resolution. As a result, utilities may need to raise prices for remaining customers to recoup their long-term investments and cover grid maintenance, prompting additional customers to switch to solar.

The proponent notes that the Moody's credit rating agency now analyzes carbon transition risk, and highlights the high carbon risk exposure of the power sector. NYSCRF also points out that, according to the International Energy Agency (IEA), transportation [accounts](#) for more than one-fifth of global carbon dioxide emissions and is likely to rise, [requiring rapid adoption](#) of new technologies to keep temperatures within the 2-degree Celsius limit set by the Paris Agreement. The IEA and the International Council on Clean Transportation [forecast](#) that transport electrification will play a critical role in achieving required greenhouse gas reductions by 2050. The proponent raises this issue as an example of a disruptive force in the energy space.

NYSCRF says that DTE Energy does not provide sufficient information on its long-term strategy to decarbonize, and that it is concerned the company is "not properly accounting for the risk of its current high reliance on carbon-intensive generation." NYSCRF believes that a 2-degree analysis will provide investors with "a more complete picture of current and future risks and opportunities than business as usual planning," and that an analysis that projects to 2040 will help the company plan better for "future regulatory, technological and market changes."

The proponent suggests that the requested report could include a discussion of how the company would adjust its capital expenditure plans to a 2-degree scenario, along with "plans to integrate technological, regulatory and business model innovations such as electric vehicle infrastructure, distributed energy sources (storage and generation), demand response, smart grid technologies, and customer energy efficiency as well as corresponding revenue models and rate designs."

III. Management Position

DTE Energy's board of directors opposes the resolution, saying that the company's strategy is designed to meet Michigan's energy needs while protecting the environment. Management says it takes its environmental stewardship responsibility seriously, and analyzes risks "related to environmental policy and technological changes that are reasonably foreseeable." The board says the company is in the process of transforming its generation fleet to a cleaner, lower-emitting mix.

Management says a projection to 2040 is “far beyond the Company’s ability to influence. Because of the global nature of the climate issue such an assessment would be of questionable value. It would necessarily be based on speculation about developments over the next 24 years and would not provide useful information to investors.” The board says it engaged with the proponent on this point, but that this “did not lead to a retraction of the proposal.”

Management points to its various public disclosures, including its Corporate Citizenship Report, and the information contained therein related to its generation mix and emissions reduction goals, as described earlier in this report. The board adds that it and the Public Policy and Responsibility Committee oversee the company’s policies and practices in these areas. Through publicly available Integrated Resource Plans, and reports on its renewable energy plans and investments on its website, DTE Energy says that it keeps its customers, shareholders and stakeholders informed of the company’s approach and commitment to emissions reduction, which includes distributed low-carbon electricity generation resources.

The board says it “takes initiative in helping to craft public policy and legislation related to environmental sustainability,” a topic also covered earlier in this report. Management concludes that DTE Energy is a “proactive leader in reducing carbon emissions” and provides extensive disclosure to bolster this view. The board thinks the proposal at hand “would lead to a duplicative and speculative assessment that would waste valuable Company resources without a corresponding benefit.”

IV. Analysis

Key Point at Issue

- Is DTE Energy sufficiently reporting on how it is positioning the company in response to climate change constraints?

For additional analysis, please refer to Si2’s 2017 [Briefing Paper - Environment \(Climate Change\)](#). The following analysis is specific to DTE Energy.

DTE Energy is a diversified energy company in Michigan. Its subsidiary, DTE Electric, is the largest electric utility in the state with more than 11,000 MW of generating capacity and one of the largest electric utilities in the nation. The utility is heavily dependent on coal, although its dependence has lessened in recent years. The utility is working to retire some of its coal-fired generation and to increase its use of natural gas-fired generation and renewables. Independent analyses have found the company to be at high risk of stranded assets.

The proponent, the New York State Common Retirement Fund (NYSCRF), raises concerns about growing evidence that anthropogenic climate change is already having serious impacts on the environment and society, that these impacts are highly likely to increase in severity and that global regulatory bodies will take increasingly stringent steps to constrain the greenhouse gas emissions that are responsible for the majority of atmospheric warming. NYSCRF specifically raises the 2-degree scenario, which reflects what had been a general scientific consensus that average global temperatures must not increase more than 2 degrees Celsius in order to avert catastrophic impacts. Recent research, however, strongly suggests that even 2 degrees of warming would be devastating, and the most recent discourse is turning toward a 1.5-degree scenario. Within this context, one proponent wants to know more about how DTE Energy is planning for a transition to this new, low-carbon future.

The Paris climate treaty reached in December 2015 initially prompted optimism from many about new prospects for a real shift in global government action to address climate change. The outcome of the 2016 presidential election and the new Trump administration’s stated intention to abandon many of the U.S. existing climate initiatives may delay some movement at the federal level. Nonetheless, many large

institutional investors are convinced that companies and governments must take urgent action to address climate risks; they are paying ever closer attention to how their portfolio companies are strategically situated to handle climate-related risks and opportunities, despite the continuing U.S. political dysfunction that puts meaningful national energy legislation out of reach in the short term. Many analysts believe that regulation is inevitable, given the scope and impact of the problem, and that if such regulation is delayed, it will constitute a greater shock when it is ultimately passed. They argue that companies would create a strategic advantage by adjusting their business models now. Indeed, many leading global asset managers are now advocating for greater climate change risk management and disclosure, and do not believe that a temporary shift in U.S. policy will derail decarbonization efforts. Furthermore, states may step up climate change mitigation efforts in the face of federal inaction.

DTE already is facing a changing business environment. Michigan has established an Electric Customer Choice Program, under which the supply of power is open to competitive suppliers. Electric transmission and distribution remain under a regulated utility structure, however. The company also notes looming capacity constraints from environmental regulation, and the consequent “large investment” it will have to make in order to adapt. Compared to its industry peers, DTE Energy is at higher-than-average risk along a variety of climate change indicators. Some utility peers and other energy companies are providing the type of information suggested by the proponent, or outlooks with the suggested timeframe; **NRG Energy, Xcel and Enel**, for instance, have set greenhouse gas emission targets aligned with achieving a 2-degree scenario, while **ConocoPhillips, Statoil and BHP Billiton** have conducted 2-degree scenario analyses through 2040.

DTE’s response to the resolution does not provide the company’s view on any potential threats to its business model, but it does point out that renewables are a growing part of DTE Electric’s generating mix and that through publicly available reports, it keeps its shareholders and stakeholders informed of the company’s approach and commitment to renewable energy, including low-carbon distributed generation.

While DTE has focused its renewable efforts primarily on wind power, the proponent is focused on solar and battery storage—resources that lend themselves more readily to uptake by DTE Energy’s existing customer base. DTE does have several solar development projects underway, but does not think it “makes sense... to invest in solar at a significant scale” under the current state of solar technology.

Voting Considerations

Voting in favor: Investors who share the proponent’s view that the company should provide more information on potential impacts driven by a 2-degree scenario will vote in favor of the resolution. They are likely to believe that this report would help investors better assess risks and potentially help the company prepare for likely climate-induced risks. These shareholders are also likely to believe that even though the United States has retreated from climate change initiatives under a new administration, the growing risk and impact of climate change renders eventual regulation inevitable, and companies would serve their shareholders’ interests by preparing and adapting now.

Voting against: Shareholders who believe the company’s current disclosure is adequate, and those who think that it would be difficult for the company to report on the timeframe requested will probably vote against the resolution. These investors may be persuaded that the United States’ recent retreat from climate-related regulation decreases the likelihood of regulatory pressure on carbon-intensive companies. Shareholders voting against this proposal may further be persuaded by the company’s assertions that it is planning to transition its energy sources to a cleaner, lower-emitting mix in the coming years.

Resources

- DTE Energy's 2017 Proxy Statement
<https://www.sec.gov/Archives/edgar/data/936340/000093634017000104/def14a.htm>
- DTE Energy's 2016 Form 10-K
<https://www.sec.gov/Archives/edgar/data/28385/000093634017000064/dteen-ergy2016123110k.htm>
- DTE Energy's 2015/2016 Corporate Citizenship Report
<https://www.newlook.dteenergy.com/wps/wcm/connect/dte-web/dte-pages/ccr/home/home>
- DTE Energy's 2016 response to CDP's climate change survey
<https://www.cdp.net/sites/2016/21/5021/Climate%20Change%202016/Pages/Disclosure-View.aspx>
- *The Top 25 U.S. Electric Utilities: Climate Change, Corporate Governance and Politics*
<http://irrcinstitute.org/reports/the-top-25-u-s-electric-utilities-climate-change-corporate-governance-and-politics/>