Entergy Corporation Shareholder Proposal: Report on Distribution Generation

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RESOLVED: With board oversight, shareholders request that Entergy prepare a report (at reasonable cost and omitting proprietary information) describing how the Company could adapt its enterprise-wide business model to significantly increase deployment of distributed-scale non-carbon-emitting electricity resources as a means of reducing greenhouse gas emissions consistent with limiting global warming to no more than 2 degrees Celsius over pre-industrial levels.

2017 Vote on Same Proposal: 35%

Rationale for a "YES" vote

Implementing the Proposal would allow investors to better assess what the Company plans to do, if anything, to respond to the proliferation of distributed non-carbon-emitting electricity resources, including but not limited to rooftop solar, community solar, energy efficiency, demand response, and electric car charging stations, that are increasingly disrupting the U.S. power sector. **A strong adaptation strategy would indicate a reduction in regulatory risk and improved competitive position.**

Background on this proposal:

In 2016 and 2017 Shareholders proposed a similar report, receiving over one third the vote each year. In the past years, the Company has not provided the information requested in this proposal.

1. The declining cost of solar power and energy storage technologies presents a formidable competitive threat to Entergy in the absence of integrating such technologies into the company's business plan. Wall Street banks and analysts predict the utility business will be significantly transformed by 2030, and companies on the forefront of change will be best positioned to compete.

2. Utilities that do not move swiftly to adapt their business model to changing technology trends may become vulnerable to the "death spiral" of customer loss to increasing ownership of distributed energy generation.

3. Entergy lags peers on investment in non-carbon-emitting distribution and technology and has not invested in distributed energy resources beyond a negligible portion of the company's generation capacity.

The Proponents recommend best practice disclosure as follows:
A report adequate for investors to assess the Company's strategy, as referenced in the Proposal, would discuss how the company plans or does not plan to increase deployment of distributed non-carbon-emitting electricity resources.

1. **The declining cost of solar power and energy storage technologies presents a formidable competitive threat to Entergy in the absence of integrating such technologies into the company's business plan. Wall Street banks and analysts predict the utility business will be significantly transformed by 2030, and companies on the forefront of change will be best positioned to compete.**

Research from Barclay's, Goldman Sachs, UBS, and NREL all describe a striking transformation in the U.S. electricity sector, in which utilities that currently sell energy generated at large, centralized, coal powered plants must transform into utilities that dispatch many sources of distributed power, i.e., power that is generated near the site where it is consumed.

- In 2014, Barclays downgraded bonds for the entire U.S. electric utility sector due to the rapidly declining costs of solar power and energy storage technologies.[1]

- UBS projects solar systems and batteries will cause a huge disruption in the energy industry, noting, "Large-scale power stations could be on a path to extinction. … Not all of them will have disappeared by 2025, but we would be bold enough to say that most of those plants retiring in the future will not be replaced."[2]

- Goldman Sachs' analysts report "Decreased reliability from an aging distribution infrastructure, a broadening desire to reduce the carbon footprint, and perhaps most importantly, the reduction of solar panel and battery costs could also work together to make grid independence a reality for many customers one day."[3]

- The U.S. National Renewable Energy Laboratory (NREL) estimates that rooftop solar could meet 40% of U.S. power demand.[4]

- A 2017 Accenture survey showed that a majority of utility executives believe distributed generation will cause revenue reduction by 2030.[5]

Corporate consultant Ernst and Young (EY) states that companies in the utility sector must move from "defense to offense"; that those best poised to face "the challenge of transformation in the utilities

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[1] Aneiro "*Barclays Downgrades Electric Utility Bonds, Sees Viable Solar Competition*", Barron's May 2014: http://blogs.barrons.com/incomeinvesting/2014/05/23/barclays-downgrades-electric-utility-bonds-sees-viable-solar-competition/

2 Parkinson: "*UBS Analysts: 'Large-Scale Power Stations Could Be on a Path to Extinction*", Greentech Media, August 2014: https://www.greentechmedia.com/articles/read/ubs-time-to-join-the-solar-ev-storage-revolution

[3] Lacey "*Wall Street Firms Step Up Warnings About Distributed Energy's Threat to Utilities*", Greentech Media May 2014: http://www.greentechmedia.com/articles/read/wall-street-firms-keep-warning-of-distributed-energy-threat

[4] NREL Raises Rooftop Photovoltaic Technical Potential Estimate, March 2016: http://www.nrel.gov/news/press/2016/24662

[5] https://newsroom.accenture.com/news/distributed-generation-an-ongoing-threat-to-utility-revenues-and-hosting-capacity-accenture-research-shows.htm

sector" will be more likely to prosper; but notes a malaise in the utility sector that has resulted in slow adaptation:[6]

For decades, the electric power sector — whether regulated or deregulated, wholesale or retail — operated on a simple premise: we have the power, and when our customers need it, we will provide it. Within this context, even with limited or no load growth, the electric power sector had been counting on long-term earnings growth, and therefore, shareholder value creation via the so-called virtuous cycle: capital investment (or rate base growth) leading to satisfied customers, in turn leading to accommodating regulators. However, U.S. power markets are now in the midst of a transformation driven by the adoption of distributed energy.

Ernst and Young emphasizes that utilities must adapt rather than futilely attempt to stall change: **"The threat distributed energy resources (DER) poses to incumbents is significant, and attempting to deny the situation with status quo forecasts or blocking the inevitable outcome by penalizing customers who adopt DER is futile. It's time for the [power] sector to move over to the offensive by developing DER- friendly strategies and business models that focus on creating customer as well as shareholder value**."[7]

Ernst and Young further recommends integrating distributed energy into utilities' business models: "Utilities should adopt a business model that can adapt to changing conditions – one that captures and provides value in connection with distributed energy….Utilities have no choice but to adapt or become extinct like so many businesses in other industries that failed to transform; those dinosaurs became the stuff whereof business school case studies are made."[8]

This analysis is just a sample of the extensive consensus that power market fundamentals are being rewritten by climate change driven technology and market changes. It also underscores the importance of Entergy taking proactive steps to modify its business model to integrate non-carbon-emitting distributed technologies.

2. Utilities that do not move swiftly to adapt business plans to changing technology trends may be vulnerable to the "death spiral" of customer loss to customer's increasing ownership of distributed energy generation.

As the cost of solar infrastructure continues to plummet, and as coal pollution control costs inevitably escalate, the point at which renewable resources reach "grid parity", or become equal to or less expensive than retail utility power is coming quickly. Far from tentative, even fossil fuel giant BP recently reported that solar will reach grid parity by the mid-2020s, "10 years earlier than previously expected."[9] The changes that will occur as renewable energy becomes competitive with, or cheaper than, utility power are immediate and must be recognized and treated as such by Entergy.

Renewable grid parity is key, as it empowers utilities' customers to defect from the utility's services. In its 2013 report "Disruptive Challenges", the power sector's primary industry association Edison Electric Institute describes a cycle in which utility customers gain the ability to withdraw from utility service

6: From defense to offense Distributed energy and the challenge of transformation in the utilities sector, Ernsy&Young, 2014: http://www.ey.com/Publication/vwLUAssets/EY_-_From_defense_to_offense/$FILE/EY-From-defense-to-offense.pdf
7 http://www.ey.com/Publication/vwLUAssets/EY_-_From_defense_to_offense/$FILE/EY-From-defense-to-offense.pdf
8 http://www.ey.com/Publication/vwLUAssets/EY_-_From_defense_to_offense/$FILE/EY-From-defense-to-offense.pdf
9 BP: Energy Outlook 2018: https://www.bp.com/content/dam/bp/en/corporate/pdf/energy-economics/energy-outlook/bp-energy-outlook-2018.pdf

partially or entirely by adopting technology like customer owned solar, plus storage. This allows customers to be self-sufficient at lower cost and, importantly for businesses, to control and minimize overhead power costs rather than be subject to ongoing utility rate increases. At scale, customer defection to distributed generation could shrink utilities' customer base, creating a cycle in which remaining customers are subject to higher costs, thereby incentivizing more defection.[10] This cycle is further intensified as utilities add fixed costs to remaining customers' bills, which then lowers the breakeven cost required to defect from the utility.

Due in part to strong policy support for renewable energy, European utilities have sustained breathtaking losses resulting from the 'death spiral'.[11] However, U.S. utilities are beginning to show symptoms of the death spiral as well. In response to stagnant load growth, and to discourage customers' solar adoption, U.S. utilities nationally are increasing their customers' fixed costs, regardless of their volume of electricity use.[12] Similarly, many large commercial customers are aggressively adopting renewable power, often building it themselves where collaborating with the utility was not possible. In 2018, the *RE 100* pledge, in which commercial brands commit to procuring 100% renewable power, has 125 signatories including some of the world's biggest brands.[13]

As regulations necessary to respond to climate change increase and impact fossil-fuel powered generation, the move to grid parity will intensify and utilities will become even more vulnerable to the death spiral. Navigant Research indicates that this can be avoided and that "Utilities that proactively engage with their customers to accommodate distributed generation - and even participate in the market themselves - limit their risk and stand to benefit the most."[14]

It is additionally worth noting that the Company's business is focused in regions where the role of distributed energy is a widely debated issue, and shows significant potential to expand renewable energy generation due to regional conditions favorable to solar energy. Yet the Company has provided little information to investors as to whether it could adapt its business model to tap this added GHG reduction potential by encouraging increased deployment of distributed low-carbon electricity generation.

3. Entergy lags peers on investment in non-carbon-emitting distribution and technology and has not invested in distributed energy resources beyond a negligible portion of the company's generation capacity.

Though Entergy is one of the largest utilities in the U.S., it has not adopted renewable energy at the rate of its peers, and is among the lowest ranked utilities on renewable energy deployment.[15] Entergy was ranked 28th of 32 on renewable energy sales; 30th of 32 on incremental annual energy efficiency; and last

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[10] Kind, *Disruptive Challenges:Financial Implications and Strategic Responses to a Changing Retail Electric Business*, Edison Electric Institute 2013: http://www.eei.org/ourissues/finance/Documents/disruptivechallenges.pdf
[11] Gray, Leaton, Fulton. *Coal: Caught in the EU Utility Death Spiral*, Carbontracker, June 2015: http://www.carbontracker.org/wp-content/uploads/2015/06/CTI-EU-Utilities-Report-v6-080615.pdf
[12] Ackerman, De Martini "Future of Retail Rate Design" Edison Electric Institute http://www.eei.org/issuesandpolicy/stateregulation/Documents/Future%20of%20Retail%20Rate%20Design%20v4%20021713%20eta%20-%20pjd2.pdf
[13] RE100: http://there100.org/
[14] Navigant Research. "Navigant Research Expects Global Customer Engagement Spending by Utilities to Exceed $5 Billion in 2026", 2017: https://www.businesswire.com/news/home/20171109005078/en/Navigant-Research-Expects-Global-Customer-Engagement-SpendingIncontrasttoEntergy%E2%80%99senterprise-wideapproachoflimitedfocusondistributedenergy
[15] Ceres. "*Benchmarking Utility Clean Energy Deployment*", 2014: http://www.ceres.org/resources/reports/benchmarking-utility-clean-energy-deployment-2014 p.6

for annual energy efficiency savings.[16] The Company's "clean generation" website has no mention of renewables like solar or wind.[17] The Company's forward looking projections are bleak. Entergy's 2016 integrated resource plan mention sporadic solar pilot projects and requests for proposals that do not add up to significant amounts of renewable energy capacity. There is no meaningful, comprehensive strategy to prepare for a changing energy market and climate change impacts.[18]

Entergy's utility peers' aggressive clean energy investments provide a stunning contrast with Entergy's meager investment in both renewable energy and distributed energy resources. Entergy reports having financed approximately 83.5 Megawatts (MW) of solar and proposals for an additional 320 MW.[19] In comparison, Sempra Energy plans to invest in over 2,000 MW of renewable power by 2018.[20] Southern Company has added more than 3,800 MW of renewable energy[21] since 2012 in Southeastern and Midwestern states (like states where Entergy operates) that lack policy support for such procurement. [22] Even Southern Company's subsidiary, Alabama Power, plans to add 500 megawatts of renewables by 2021.[23]

Many utilities are responding to the challenges in the power market by becoming *purveyors of distributed generation* themselves.[24] As Southern Company's CEO Tom Fanning put it, "If distributed generation is eroding your growth, own distributed generation!"[25] Other utilities work with third-party solar system providers. For example, Great Plains Energy, a smaller utility than Entergy, located in Missouri, teamed with a solar company on a small project and anticipates greater solar investments in the future, telling the press that, "We believe in solar. We believe in its environmental benefits, and we believe over the long term it's a cost-effective source of power."[26] Other utilities like Exelon, Southern Company, and Duke Energy have invested over $100 million in distributed energy.[27]

Following shareholder action from As You Sow, Arjuna Capital, and other investors, utilities such as Avista and Duke Energy have recently committed to publish additional information on how they are integrating distributed non-carbon emitting energy resources into their business planning.

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[16] Ceres. "*Benchmarking Utility Clean Energy Deployment*", 2014: http://www.ceres.org/resources/reports/benchmarking-utility-clean-energy-deployment-2014 p. 17; p.19; p.21.
[17] Entergy, Clean Generation, 2018: http://entergy.com/environment/CleanGen.aspx
[18] Entergy 2016 Integrated Report http://integratedreport.entergy.com/2016_Entergy_IR.pdf p. 23
[19] Entergy 2016 Integrated Report http://integratedreport.entergy.com/2016_Entergy_IR.pdf p.23
[20] "*Growing Responsibly*" Sempra 2014: http://responsibility.sempra.com/wp-content/uploads/2015/08/Sempra-Energy-2014-CR-Report-FINAL.pdf
[21] It is worth noting that, with 50,000 MW of capacity, Southern Company's 3,800 MW of renewable energy, while more volume than Entergy, represents a small fraction of Southern Company's total energy mix, and in fact suggests a need for even greater renewable energy adoption at Southern Company.
[22] "*Southern Company subsidiary and Turner Renewable Energy acquire Calipatria Solar Facility in California*", Southern Company 2016: http://www.southerncompany.com/news/2016-02-15-spc-Calipatria.cshtml. It should also be noted that at 50,000 MW of capacity, Southern's level of renewable adoption is also poor, by proportion to its total portfolio.
[23] Pillion, "*PSC approves Alabama Power's renewable energy project request, with modifications*", Al.com, 2015: http://www.al.com/news/index.ssf/2015/09/psc_approves_alabama_powers_re.html
[24] Pyper, "*Utilities See Distributed Generation as a Challenge- and Owning it as a Solution*", Utilitydive, February 2016: http://www.greentechmedia.com/articles/read/utilities-see-distributed-generation-as-a-challenge-and-owning-it-as-the-so
[25] Bade: "*EEI 2015: 5 major utility CEOs on the transformation of the energy system*", UtilityDive June 2015: http://www.utilitydive.com/news/eei-2015-5-major-utility-ceos-on-the-transformation-of-the-energy-system/400530/
[26] Alonzo. "*Building KC: KCP&L sees sunny forecast for solar's potential*", Kansas City Business Journal, November 2015: http://www.bizjournals.com/kansascity/print-edition/2015/11/20/building-kc-kcp-l-sees-sunny-forecast-for-solar-s.html
[27] GTM Research, 2017 http://www.ourenergypolicy.org/wp-content/uploads/2017/03/GTMR-Utility-Investments-in-Distributed-Energy-report.pdf p. 7

Entergy competes for investor capital with the companies noted above, and with utilities that have even greater renewable energy adoption such as XCEL and PG&E.[28] Where many leading utilities have acknowledged the evolution of the U.S. power industry and are taking proactive steps to move toward non-carbon emitting, distributed resources, Entergy is a holdout. Entergy's lack of investment in distributed energy resources represent a weak value proposition that should alarm investors.

Response to the 2018 Board of Director's Statement of Opposition

While Entergy claims to be a "thought leader" on proactive climate change adaptation, its disclosures lack clarity on common sense planning for energy market changes underway. Entergy further purports that the Proponents are not acknowledging various complex considerations involved in business decisions; however in fact, the disclosures requested would help investors to better understand such considerations and assure that the Company is taking appropriate steps to prepare for the significant market impacts arising from disruptive technologies like distributed energy resources. While distributed energy is indeed briefly mentioned in the Company's Integrated Report, this report lacks detailed information to adequately explain Entergy's comprehensive, forward-looking plans and objectives. Such an analysis as requested in this proposal would enable investors to assess the risks and opportunities facing our Company.

Conclusion

Entergy, which claims to recognize the importance of a "diverse, modern, and efficient" generation has not invested in distributed non-carbon emitting energy resources beyond a negligible portion of the company's portfolio. Investors will be best served with a more comprehensive understanding of the company's strategic direction through the requested report.

[28] Ceres. "*Benchmarking Utility Clean Energy Deployment*", 2014: http://www.ceres.org/resources/reports/benchmarking-utility-clean-energy-deployment-2014