This report provides an update on Entergy’s continued portfolio transformation and outlines our commitment to achieve net-zero carbon emissions by 2050 while balancing affordability and reliability for our customers. This report serves as an addendum to our 2019 report, Climate Scenario Analysis and Evaluation of Risks and Opportunities. Establishing a net-zero by 2050 climate commitment continues Entergy’s two decades of leadership and action on climate change described in detail in the 2019 climate report. We believe that an effective climate strategy should include a near-term goal and a long-term commitment, along with near-term actions supportive of these commitments.

In this addendum, we describe our commitment to achieving enterprise-wide net-zero carbon emissions by 2050, tangible near-term actions the company is taking toward meeting this commitment and our holistic vision of a net-zero future for the communities we serve. We also provide our view on technology developments and breakthroughs that may pave our path to net-zero emissions as described in an illustrative scenario of Entergy’s evolving energy resource mix. Lastly, this addendum provides an overview of our three-phased approach to decarbonization over the five-decade span of 2000 to 2050 in the context of climate scenarios that limit warming to 1.5° to 2° Celsius.

Entergy’s Commitment to Net-Zero Emissions by 2050

Entergy is committed to achieving net-zero emissions by 2050 while balancing affordability and reliability for our customers. We believe that the optimal net-zero strategy requires reduction of our own emissions as much as possible, followed by capturing or offsetting remaining emissions through various innovative strategies. Our decarbonization journey to net-zero ensures that our customers can reduce their environmental footprints by relying on our low-carbon generation fleet. Entergy views climate issues not only as a challenge to be addressed by the company and the communities and region that we serve, but also as an opportunity to invest in new technologies and customer solutions.

We take a holistic view of emission reductions. Given our unique role in the economy and our relationships with the customers and communities we serve, Entergy’s commitment to net-zero is a critical part of ushering in a decarbonized economy, particularly in our region. As such, our near-term actions and long-term sustainability plans address the emissions profile of our generation portfolio while also considering partnerships with our customers and suppliers.
Committed to Net-Zero Emissions by 2050

Entergy will continue to transform its generation portfolio to cleaner, low- and zero-carbon resources. This transformation will result in a lower emission rate as conceived by our 2030 climate analysis and goal. It also will result in reducing absolute emissions as additional low- and zero-carbon generation technologies are integrated into our system over the next three decades. In the illustrative scenario presented in this addendum, this transformation reduces Entergy’s carbon emission rate by 90% from our base year, 2000.

Regarding Entergy’s gas business, local distribution company operations represented only 0.2% of our direct emissions (fugitive losses – scope 1) and 2.4% of our indirect emissions (customer combustion – scope 3) in 2019. These categories are part of our net-zero commitment, and we will work to

Technology Developments and Future Options:
- New/advanced nuclear
- Carbon capture, utilization and sequestration
- Green/pink/blue hydrogen usage
- Renewable natural gas/alternative fuels
- Advanced renewables
- Energy storage (long duration)
- Advanced generation technology
- Incremental natural sequestration

Engage Suppliers:
- Natural Gas Supply Collaborative – carbon impact of gas suppliers
- Electric Utility Industry Sustainable Supply Chain Alliance – carbon impact of non-fuel suppliers
- Renewable and H₂ collaborations
- Renewable natural gas
- Direct engagement with suppliers

Engage Customers & Other Sectors of the Economy:
- Energy efficiency
- Peak load reduction
- Demand-side management
- Customer solutions
- Distributed energy sources
- Beneficial electrification
- Gulf Coast Carbon Collaborative

Current Portfolio Transformation Technology:
- Retire coal-powered capacity
- Modernize gas assets
- Utility-scale renewables
- Energy storage (short-to-medium duration)
- Invest in and extend life of nuclear units
- Gas supply pipe upgrade and replacement
- Renewable energy credits and carbon offsets

Conventional Pollutant Reduction Goals
Entergy also anticipates significant reductions in conventional pollutants such as oxides of nitrogen (NOₓ), sulfur dioxide (SO₂) and mercury (Hg). We project that NOₓ and SO₂ both will be 90% below 2000 levels by 2030 and Hg emission will be near zero. As we move through our regular planning cycles, these projected reductions will be updated.
minimize these emissions through efforts to decarbonize the gas fuel supply, replace older supply piping and partner with customers on energy efficiency and beneficial electrification. Additionally, we will continue to engage our gas suppliers to reduce upstream emissions. All of these actions will minimize the full lifecycle emissions associated with these operations.

As we work to reduce emissions through technology solutions, Entergy also will continue its efforts to enhance natural, carbon-absorbing systems. As described in our 2019 climate report, the Paris Climate Agreement identifies the need to seek balance between sources of carbon and natural systems that absorb carbon. Over the last two decades, Entergy has gained valuable experience and supported innovations in the areas of reforestation/afforestation, wetland restoration and agricultural carbon offsets through our Environmental Initiatives Fund. We anticipate continuing and accelerating these actions that enhance natural systems to offset remaining carbon emissions and to improve the quality of life for customers and communities throughout our service area. Additionally, Entergy will account for the environmental attributes associated with renewable generation and natural gas owned and retired on behalf of the utility operating companies.

**Customer Partnerships and Products** – Entergy has identified an opportunity to engage with customers through various innovative offerings and partnerships that help reduce emissions for both our company and our customers. Entergy is working to expand energy efficiency and demand-side management offerings that reduce customer demand—while balancing the need to electrify carbon-intensive energy needs in other sectors. Entergy’s eTech program offers incentives to customers who are interested in electrification and is more fully described in the climate report.

In 2019, we shared thought leadership for the development of an economy-wide collaborative to reduce carbon. Entergy sponsored the December launch of the Gulf Coast Carbon Collaborative, which now provides an ongoing platform for regional collaboration on carbon reduction efforts across all sectors of the economy. Additionally, the company is evaluating opportunities for distributed generation solutions to supplement centralized generation resources and improve community resiliency. Our company is uniquely positioned to engage with our customers, many of whom also are setting aggressive climate goals and establishing business models around the opportunities for investing in many of the technologies discussed in this report.

**Decarbonize Support Infrastructure and Supply Chain** – We are engaging both fuel and non-fuel suppliers on decarbonizing the fuel supply and the various materials/goods we procure. We have joined the Natural Gas Supply Collaborative to engage fuel suppliers on upstream emissions associated with exploration, production and transportation. As a founding member of the Electric Utility Industry Sustainable Supply Chain Alliance, we engage broadly with suppliers of materials and goods to our sector. Additionally, some of our largest suppliers and customers are implementing low-carbon business models. We are engaged in partnerships focused on developing utility-scale renewable generation and the technology and infrastructure necessary to decarbonize our fuel supply through co-firing of green and/or blue hydrogen. We also anticipate opportunities to collaborate on renewable natural gas and other mutually beneficial technology advancements such as carbon capture.
Entergy’s 2019 Climate Report

In March 2019, Entergy published a report titled Climate Scenario Analysis and Evaluation of Risks and Opportunities. The purpose of this report is threefold: (1) to continue Entergy’s long history of engagement on climate change and management of the risks to our business; (2) to use scenario planning to analyze potential impacts on – and opportunities for – Entergy and the regional economies in which we operate; and (3) to inform and engage stakeholders on Entergy’s current and ongoing processes for managing climate risk and evaluating future opportunities. The structure of the analysis and report was informed by the Recommendations of the Task Force on Climate-related Financial Disclosures. The analysis also informed the establishment of our fourth voluntary carbon goal – to reduce our utility generation asset emission rate to 50% of what it was in 2000 by 2030. Information on our earlier Environment 2020 commitment and performance can be found on entergy.com.

The climate report discussion on strategy, governance, risks, opportunities, metrics and targets remains reflective of our current position on climate issues. On the strategy front, we are continuing to evaluate options and refine our path toward meeting our 2030 goal. Our resource planners continue to evaluate technology options and operational decisions necessary to ensure that we meet this goal. Additionally, a multilevel working group is focused on ensuring all options are explored in order to find the pathway that provides reliable, affordable and sustainable energy to our customers. Since the climate report was published, we have announced several related projects and efforts that can be found in our Newsroom. Here are some highlights:

- August 2019 – Entergy New Orleans Adding 90 Megawatts of Renewable Energy to Its Portfolio
- December 2019 – Cross-Industry Gulf Coast Coalition to Tackle Carbon Emissions
- March 2020 – Lake Charles Power Station Achieves Commercial Operation
- April 2020 – Mississippi Public Service Commission Gives Green Light to 1,000-Acre Solar Farm
- April 2020 – Entergy Named 2020 Tree Line USA Utility by Arbor Day Foundation
- April 2020 – Arkansas Public Service Commission Approves Searcy Solar Project
- July 2020 – New Analysis Shows Momentum Building To Decarbonize The Power Sector
- August 2020 – Entergy Arkansas Plans Fourth Solar-generation Resource, Walnut Bend, Near Brinkley
- September 2020 – Entergy New Orleans Completes Louisiana’s Largest Commercial Rooftop Solar Project
- September 2020 – Mitsubishi Power and Entergy to Collaborate and Help Decarbonize Utilities in Four States
- September 2020 – Entergy Commits to Achieving Net-Zero Carbon Emissions by 2050

The final section of our climate report is focused on Entergy’s future. This addendum expands on Entergy’s view of our ongoing portfolio transformation, developing technology options, our commitment to net-zero emissions by 2050 and our holistic vision of a net-zero emission economy for our region.
Entergy’s Ongoing Portfolio Transformation

Continuing the company’s portfolio transformation strategy, Entergy expects to meet its 2030 target using technology that exists today. Initiated in 2002, this strategy focuses on modernizing our gas generation fleet, investing in our existing nuclear fleet, integrating renewable resources and retiring older, less-efficient fossil units, including all of the company’s coal-powered capacity. Low- to zero-carbon technology developments are necessary to continue reducing both our carbon emission rate per megawatt hour and our absolute carbon emissions to levels consistent with our 2050 net-zero commitment. To achieve this commitment, technology developments and continued innovation are assumed to play a major role in enabling the decarbonization of our generation fleet while balancing customer costs and reliability. Some perspectives on advanced technologies, their role in the future, and our efforts to monitor and develop them are presented below:

Customer-centric Solutions – At Entergy, our focus is not on any particular product or service, but instead on the customer. Our customers’ goals and objectives drive our planning and operational processes. Reducing demand for energy is an effective way to approach avoiding emissions. Entergy offers customers various energy efficiency-related products, services and programs. Our customers also desire behind-the-meter energy solutions, such as distributed generation and energy storage, which we are committed to helping them identify and implement. Additionally, electrifying energy needs currently served by fossil fuels is a decarbonization strategy employed by many of our customers. We expect all these areas – energy efficiency, distributed generation/storage and electrification – to continue to develop over the next three decades. Entergy’s goal is for these strategies to benefit our customers while also supporting our decarbonization strategy and enhancing economic performance.

Coal Generation Retirement – Entergy intends to cease burning coal by the end of 2030. Coal currently makes up only 6% of our generation, less than 5% of 2019 revenue and less than 2% of 2019 rate base. We do not anticipate constructing any future generation assets or securing power purchase agreements from any resources that use coal. Our employee commitment and community focus will continue to be important to Entergy as we transition from coal-powered capacity.

Natural Gas, Low-Carbon Fuels and Carbon Capture – We continue to modernize our gas generation fleet through our portfolio transformation strategy. Our analysis shows that natural gas units remain a necessary and economic resource to enable retirements of less-efficient gas units and to maintain system reliability as we transition to a low- to no-carbon economy. These modern, efficient gas units not only produce approximately 40% less carbon dioxide than older, less-efficient gas units, but we expect future gas generation to offer the option of co-firing advanced, lower- and zero-carbon fuels. Hydrogen, renewable natural gas and carbon capture technology provide carbon reduction options for gas-powered infrastructure being built beyond 2020, while also helping our customers meet their need for reliable and affordable power. This flexible, low-carbon generation is critical to meeting the objectives of reliability, affordability and sustainability, and allows for integration of additional renewable capacity.

Entergy and Mitsubishi Power to Collaborate and Help Decarbonize Utilities in Four States

Entergy has engaged with Mitsubishi Power because of the company’s demonstrated ability to provide innovative total solutions, leveraging multiple technologies to reach decarbonization goals. Mitsubishi Power is a first mover in hydrogen-enabled gas turbine and long- and short-term storage solutions.

Together, Entergy and Mitsubishi Power will focus on:

• Developing hydrogen-capable gas turbine combined cycle facilities.
• Advancing green hydrogen production, storage and transportation facilities.
• Creating nuclear-supplied electrolysis facilities with energy storage.
• Developing utility-scale battery storage systems.
• Enabling economic growth through partnerships with the Entergy utility customers.

Entergy and Mitsubishi Power to Collaborate and Help Decarbonize Utilities in Four States

Entergy has engaged with Mitsubishi Power because of the company’s demonstrated ability to provide innovative total solutions, leveraging multiple technologies to reach decarbonization goals. Mitsubishi Power is a first mover in hydrogen-enabled gas turbine and long- and short-term storage solutions.

Together, Entergy and Mitsubishi Power will focus on:

• Developing hydrogen-capable gas turbine combined cycle facilities.
• Advancing green hydrogen production, storage and transportation facilities.
• Creating nuclear-supplied electrolysis facilities with energy storage.
• Developing utility-scale battery storage systems.
• Enabling economic growth through partnerships with the Entergy utility customers.
**Existing and Advanced Nuclear**—We are continuing to invest in our existing zero-carbon nuclear fleet to extend and preserve those assets. Entergy has not made any definitive decisions or announcements regarding the potential for subsequent license renewals; however, we are considering this as a part of our future, long-term energy mix as shown in the illustrative scenario in this addendum. Additionally, we are monitoring advanced technologies, such as advanced nuclear fuels, as well as small modular fission and fusion reactors to determine what role they may play in our future resource mix.

**Renewables and Storage**—We currently are investing in multiple solar generation facilities and expect to continue to expand our renewable energy capacity over the coming decades. As needed, battery storage will complement these clean generation assets. We expect investment in renewables plus storage to continue beyond 2030, eventually becoming a larger part of our resource mix. Entergy is also monitoring wind technology developments both on- and offshore; other renewable options and storage technologies that eventually may represent capacity; and resource investment opportunities.

**Other Technologies**—Entergy monitors developments not only in the technologies described in this report, but also in new technologies that may represent resource options over the next three decades. Advanced generation technologies and different low- to zero-carbon approaches to generating power likely will emerge and become commercially viable by 2050.

**Uncertainties and Risk**—The technologies and strategies discussed in this report are in various stages of development and deployment. Some of these are considered “state of the market,” while others are “state of the art” and some are nascent. Those that are less developed or deployed present more investment risk today. Some of the technologies have a higher likelihood of reaching maturity than others. Due to our commitment to achieving net-zero carbon emissions by 2050, Entergy is monitoring these technologies as they develop and working to advance these technologies through joint endeavors with other industry partners, research organizations and industry groups. The points of view described above will continue to be refined as these developments occur, and when appropriate, these technologies will be proposed for inclusion in the company’s resource plan.

**Transition Equity**—Entergy is committed to achieving our environmental sustainability goals and commitments while balancing the reliability of our system and affordability for our customers. Additionally, we believe that sustaining economic development and growth during our transition is essential to continuing to improve the quality of life for customers and communities in our region. Accordingly, as this transition occurs, Entergy considers human rights, social equity and environmental justice issues important to employees, the communities we serve and society as a whole. Entergy is committed to addressing employees impacted by the transition. Our robust corporate social responsibility efforts have focused on poverty elimination and workforce development for the last two decades. We seek not only to avoid disproportionate impacts of the investments necessary for this transition, but also to ensure the economic, health and environmental benefits of the transition are shared across the communities we serve.

**Entergy’s Capital Plan**—Our five-year, $21 billion capital plan is consistent with and supportive of a transition to a low-carbon power generation fleet and our long-term commitment to achieving net-zero carbon emissions, while...
also improving reliability, strengthening system resiliency and facilitating integration of low-carbon resources. The plan also accommodates our ability to create a platform for innovative products and services and provide customer solutions optimized by coupling digital technology with analytics. For the generation fleet, we are investing $9 billion over the next five years to continue transitioning our fleet to modern, efficient gas units, support our existing nuclear assets and integrate a significant amount of renewable energy generation. Utility-scale renewable generation and hydrogen infrastructure partnerships provide near-term experience with technologies necessary for meeting a net-zero commitment and represent potential future capital investment opportunities.

**Entergy’s 2050 Climate Scenario Analysis**

The impact of our two decades of action on our portfolio transformation strategy is evident in the evolution of our resource mix since 2000 (our base year). The illustrative projection for 2030 remains generally consistent with the mix presented in our 2019 climate report. Below we present the results of an analysis that includes a comprehensive technology review and development of an analysis tool to evaluate integration of the various technology options described previously in this report. A significant amount of uncertainty exists with respect to the assumptions on which this scenario is based. Additionally, some of the modeling assumptions described below do not necessarily match retirement dates assumed in regulatory proceedings. The charts presented here represent an illustrative capacity and generation mix projection based on Entergy’s current technology points of view.

**Assumptions for the Illustrative Scenario**

- **Existing coal** – This scenario assumes that all coal-powered capacity is retired by the end of 2030 – Entergy already has announced our intent to cease burning coal by the end of 2030;
- **Pre-2000 gas units** – It is assumed that all pre-2000 gas is retired no later than the 2040s – this would complete the turnover of the company’s legacy fossil generation fleet, leaving only post-2000 modern, efficient gas;
- **2000 to 2019 gas units** – It is assumed that most of these units are retired by 2050; however, for some of these units, life extension beyond the current planning assumption of 30 years may be required to support the ongoing deployment of other low- to zero-carbon technologies, but it is assumed that this vintage of gas generation is fully retired by 2050;
- **Gas supply decarbonization** – Strategies such as co-firing of either renewable natural gas or hydrogen are deployed beginning in the mid- to late-2020s on modern, efficient gas units;
- **Carbon capture, utilization and sequestration** – This technology is assumed to be installed on post-2020 modern, efficient gas units beginning in the late-2030s;
- **Existing nuclear** – It is assumed that all nuclear units receive subsequent license renewal, extending the life of the fleet beyond 2050;
- **Advanced nuclear** – Entergy assumes that this technology becomes available in the 2040s, resulting in the deployment of 1 gigawatt of capacity by 2050; and,
- **Renewables and storage** – Deployment of renewable energy sources (some with storage) continues for the next three decades, ultimately resulting in over 10 gigawatts of capacity.

---

1. Subject to integrated resource planning processes, economic evaluations and regulatory approvals. 2. Potential 2030 and Potential 2050 portfolios assume technology advancements and/or declining costs of carbon-free technologies in order to balance environmental stewardship with affordability and reliability; offsets utilized for remaining emissions.
While not specifying a supply plan, this scenario illustrates how Entergy’s 2050 net-zero commitment could be achieved while meeting all energy and capacity requirements. This view is not a recommended supply plan and has not undergone an economic analysis; rather, it is an example of how Entergy could reach net-zero emissions if the technologies develop and a resulting generation portfolio is found to be cost-effective and reliable. Specific supply plans will be developed in coordination with our regulators and other stakeholders and will require regulatory approval consistent with our legal obligation to provide affordable and reliable energy.

This illustrative scenario will be adjusted over time as technology develops and evolves, limited by our ability to incorporate new technologies into our resource mix due to the long lead times inherent in the regulatory and resource planning processes. Entergy will continue to monitor technology developments that impact the potential use, cost, efficiency and emissions of these projections.

**Entergy’s Three-Phase Approach to Decarbonization**

The chart below provides some additional context for the illustrative scenario presented in the previous section of this report. Entergy’s decarbonization pathway began over the last two decades and now extends over the next three decades, meaning that our phased approach spans five decades.

**2001-2020**

**One of the lowest CO₂ emission rates in the electric power sector**

Since 2001, after voluntarily committing to stabilize and reduce our emissions, Entergy has reduced its carbon emissions by almost 25%.

Entergy maintains one of the lowest CO₂ emission rates in the industry with a combination of nuclear, renewable and natural gas-fired generation.

**2020-2030**

**A plan to reduce our carbon intensity 50% by 2030**

Over the coming decade, Entergy is committed to reducing its carbon emissions intensity by 50% below 2000 levels by 2030, while enabling carbon reductions throughout the economy (e.g., industry and transportation).

This generally is in line with scenarios aimed at limiting global temperature increases to well below 2°C.*

**2030-2050**

**Committed to net-zero carbon emissions by 2050**

Entergy is fully committed to achieving net-zero CO₂ emissions by 2050.

According to the Intergovernmental Panel on Climate Change (IPCC), to limit global warming to 1.5°C above pre-industrial levels and avoid the most catastrophic impacts of climate change, the world must reach net-zero CO₂ emissions by mid-century.

Technology advancements will be critical to making this step change in performance.

---

*Entergy’s 2030 goal is to reduce its carbon intensity to approximately 532 pounds of CO₂ per megawatt hour (lb/MWh) of electricity production. The International Energy Agency’s 2°C Scenario (2DS) projects a carbon intensity of 514 lb/MWh for the U.S. power sector in 2030, and the Beyond 2°C Scenario (B2DS) projects a carbon intensity of 510 lb/MWh in 2030.
Conclusion

Entergy’s leadership in sustainability and environmental stewardship has been a hallmark of who we are for two decades. Entergy has one of the lowest carbon dioxide emission rates in the electric power sector and was the first U.S. utility to announce a voluntary carbon commitment. This leadership on climate action continues today with our near-term 2030 goal and long-term commitment to achieving net-zero carbon emissions by 2050. Entergy recognizes that technological advancements are critical to achieving these emission reductions and is establishing partnerships and collaborating across our full value chain on the necessary technology developments. Our capital plan is in line with a low-carbon transition, and our leadership is held accountable for results through Entergy’s executive compensation program. Entergy is committed to continuing — and strengthening — its environmental stewardship; actively engaging in partnerships to develop long-term, sustainable climate solutions; realizing the opportunities that lie ahead of us in meeting our climate commitment; and driving toward results that benefit our customers, our communities, our society and our world.

Forward-Looking Statements Disclaimer

In this report, and from time to time, Entergy Corporation makes certain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements include, among other things, statements regarding Entergy’s operational outlooks and capital plan; statements regarding its environmental plans, goals, beliefs and expectations, including statements regarding its greenhouse gas reduction goals and strategies and statements regarding the planned addition of renewable generation, potential technological advances, legacy asset retirements, nuclear license extensions, offsets and other potential means of achieving its environmental goals; statements regarding opportunities to partner with customers and others to advance technology development or reduce societal emissions; and other statements of Entergy’s plans, beliefs, or expectations included in this presentation.

Readers are cautioned not to place undue reliance on these forward-looking statements, which apply only as of the date of this presentation. Except to the extent required by the federal securities laws, Entergy undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise. Forward-looking statements are subject to a number of risks, uncertainties, and other factors that could cause actual results to differ materially from those expressed or implied in such forward-looking statements, including (a) those factors discussed elsewhere in this presentation and in Entergy’s most recent Annual Report on Form 10-K, any subsequent Quarterly Reports on Form 10-Q, and Entergy’s other reports and filings made under the Securities Exchange Act of 1934; (b) uncertainties associated with (1) rate proceedings, formula rate plans, and other cost recovery mechanisms, including the risk that costs may not be recoverable to the extent anticipated by the utilities and (2) implementation of the ratemaking effects of changes in law; (c) uncertainties associated with efforts to remediate the effects of major storms and recover related restoration costs; (d) risks associated with operating nuclear facilities, including plant relicensing, operating, and regulatory costs and risks; (e) changes in decommissioning trust fund values or earnings or in the timing or cost of decommissioning Entergy’s nuclear plant sites; (f) legislative and regulatory actions and risks and uncertainties associated with claims or litigation by or against Entergy and its subsidiaries; (g) risks and uncertainties associated with execution on our business strategies, including strategic transactions that Entergy or its subsidiaries may undertake and the risk that any such transaction may not be completed as and when expected and the risk that the anticipated benefits of the transaction may not be realized; (h) effects of changes in federal, state, or local laws and regulations and other governmental actions or policies, including changes in monetary, fiscal, tax, environmental, or energy policies; (i) the effects of changes in commodity markets, capital markets, or economic conditions; (j) impacts from a terrorist attack, cybersecurity threats, data security breaches, or other attempts to disrupt Entergy’s business or operations, and/or other catastrophic events; (k) the direct and indirect impacts of the COVID-19 pandemic on Entergy and its customers; and (l) the effects of technological change, including the costs, pace of development and commercialization of new and emerging technologies.