Greenhouse Gas Inventory Management Plan and Reporting Document (IMPRD)

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Entergy's GHG Commitment Snapshot

Base Year – 2000

Original Commitment Years –	2001 to 2005
Original Commitment –	Stabilize at 2000 levels direct CO_2 emissions from power plants
Original Commitment Funding –	$25 million ($5 million per year)
Second Commitment Years –	2006 to 2010
Second Commitment –	20% below 2000 levels direct CO_2 emissions & cont. purchased power
Second Commitment Funding –	$3.25 million ($650K per year)
Third Commitment Years –	2011 to 2020
Third Commitment –	20% below 2000 levels direct CO_2 emissions & cont. purchased power
Third Commitment Funding –	$10 million ($1 million per year)
Net-Zero Commitment Year--	2020 to 2050
Net-Zero Commitment	Entergy is committed to achieving net-zero greenhouse gas emissions
Interim Commitment Years	2021 to 2030
Interim Commitment	50% reduction of 2000 levels in utility CO2 emission rate, both owned & purchased generation
Interim Commitment Years	2022 to 2030
Interim Commitment	Carbon -free capacity of 50% by 2030, including nuclear & renewables; both owned & purchased generation; additional capacity from renewable battery storage

Entergy Corporation Greenhouse Gas Inventory Management Plan and Reporting Document

Introduction and Background

In May 2001, Entergy publicly committed to stabilize CO_2 emissions from its power plants at year 2000 levels through 2005, and dedicated $25 million in supplemental corporate funding to achieve this target over the five-year period. This commitment was focused on CO_2 emissions from fuel combustion at the company's power plants and required that Entergy:

- Stabilize CO_2 emissions from its U.S. power plants at year 2000 levels through 2005.
- Establish the $25 Million Environmental Initiatives Fund (EIF) in support of achieving the 2001-2005 stabilization targets.
- Document activities and annually report progress.
- Employ an independent third party organization to verify measurement of Entergy's CO_2 emissions from U.S. power plants.

Entergy joined EPA's Climate Leaders Program in 2004 (the program was discontinued in 2010) and began the process of renewing its GHG commitment by developing a detailed inventory of all GHGs resulting from its operations. The inventory development and results were documented in this Inventory Management Plan and Reporting Document (IMPRD). Entergy's second commitment included:

- Stabilize CO_2 emissions from all Entergy power generation plants plus controllable purchased power at 20% below 2000 levels through 2010.
- Commit funding of $3.25 million in support of achieving the 2005-2010 target.
- Document activities and annually report progress.

In 2011, Entergy once again renewed its commitment to stabilize GHGs with a third commitment:

- Stabilize CO_2 emissions from all Entergy power generation plants plus controllable purchased power at 20% below 2000 levels through 2020.
- Commit funding of $10 million in support of achieving the 2011-2020 target.
- Document activities and annually report progress.

Beginning in 2012, Entergy decided to conduct the third-party verification audit to the International Standards Organization (ISO) standard for GHG development and verification (ISO 14064-3:2006).

In March of 2019, Entergy established a goal to reduce its utility CO_2 emission rate (lbs per MWh of net energy generation) by 50 percent of 2000 levels by 2030. See the company's Climate Scenario Analysis and Evaluation of Risks and Opportunities (2019) for more information. In September 2020, Entergy enhanced this goal with a commitment to achieve net-zero emissions by 2050 (all businesses, all scopes, all gases). More information regarding this commitment can be found in an addendum to the climate report focused on Entergy's 2050 Net-Zero Commitment.

In November of 2022, Entergy provided an update on its progress to net-zero carbon emissions through its 2022 Climate Report. In this report, Entergy established a new interim goal to achieve 50% of power generation capacity from clean, carbon-free energy sources by 2030; this includes nuclear and renewable capacity, both owned and purchased, as well as additional capacity provided by accompanying renewable battery storage. Entergy also enhanced their interim goal to reduce carbon emissions 50% from 2000 base year emissions by 2030 to include purchased power, both controlled and market-based purchases. Further details on Entergy's illustrative pathway to reach net zero can be found in the report.

This IMPRD has been created and subsequently revised according to the requirements in the World Resources Institute and the World Business Council for Sustainable Development Greenhouse Gas Protocol, 2004 revised edition, and formatted according to the US EPA Climate Leaders 2004 draft checklist of IMPRD components.

This IMPRD is used to create and document an inventory that was previously reported to the Climate Leaders program and other external parties. However, EPA announced in 2010 that the Climate Leaders program was being discontinued. This IMPRD will continue to be updated and used to document Entergy's GHG Inventory methodology

and results on an annual basis. Entergy has made an estimate of emissions, including small sources, for reporting externally. Entergy registers its emissions and offset purchases to the American Carbon Registry (www.americancarbonregistry.org) and posts the GHG Inventory, along with this document, on the company's website (www.entergy.com).

The current GHG Inventory (by calendar year) is attached to this document as Attachment 1 and is referenced throughout.

Reporting Entity Information

Entergy, a Fortune 500 company headquartered in New Orleans, powers life for 3 million customers across Arkansas, Louisiana, Mississippi and Texas. Entergy is creating a cleaner, more resilient energy future for everyone with our diverse power generation portfolio, including increasingly carbon-free energy sources. With roots in the Gulf South region for more than a century, Entergy is a recognized leader in corporate citizenship, delivering more than $100 million in economic benefits to local communities through philanthropy and advocacy efforts annually over the last several years. Our approximately 12,000 employees are dedicated to powering life today and for future generations.
Additional company information can be located at www.entergy.com.

Company address:	639 Loyola Avenue New Orleans, Louisiana 70113
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Boundary Conditions

Consolidated Approach for Emissions Reporting – Entergy has elected to include all company-owned assets and those under a capital lease, consistent with "equity share" reporting under WRI reporting protocols. Where partial ownership share of an asset exists, only Entergy's owned portion of the asset/emissions is included in the inventory. Additionally, Entergy has opted to include some emissions associated with the electricity purchased to support grid operations and meet customer demand. The GHG emissions resulting from the full life cycle of the various fuel sources are not included in the inventory.

Other emission sources that have emissions estimated to be less than 1% of the total inventory are considered *de minimus* unless they are anticipated to change dramatically and grow above this threshold. Emissions of each GHG from facilities/assets that are *de minimus* are estimated and included in the inventory for each gas and/or source. The same data are used for future years unless one of the categories of emissions changes significantly. These estimates will be recalculated approximately every five years (or as updated data becomes available), after major equipment changes, asset acquisition and/or asset divestiture in order to reconfirm *de minimus* status.

Some emission sources require reporting under EPA's Mandatory GHG Reporting Rule. These emissions are included for the previous calendar year due to the timing of the reporting cycle. The methodology for calculation of these categories is the same as is required under this EPA reporting program.

Facilities List –The majority of Entergy's emissions are from fossil-fueled electricity generation facilities. However, other sources include small sources at other company facilities. A full list of facilities included in the inventory is contained in Attachment 1. This list identifies Entergy's fossil-fueled electricity generation assets and ownership share. All other GHG emissions-producing assets are assumed to be 100% owned by Entergy.

List of GHGs Included – Entergy includes the following GHG gasses associated with various sources in its inventory and management program:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous Oxide (N_2O)
- Sulfur Hexafluoride (SF_6)
- Hydrofluorocarbons (HFC)

Perfluorocarbons and Nitrogen Trifluoride are not included in Entergy's inventory given the nature of its business and that this class of chemicals is not used in any of Entergy's operations in any sizeable amount. However, due to the inclusion of indirect emissions from supply chain purposes, Entergy is reflecting additional GHGs as identified by the EPA (LCIA Factors of Other GHGs).

Entergy Corporation Emission Sources

Process for Identifying Emissions Sources – A spreadsheet was created by Platts/E source as contractors to EPA's Climate Leaders program, and was utilized as an overall roadmap to help identify GHG emission sources at Entergy locations. Within each category, a determination was made as to the applicability to Entergy's operations. The findings of this analysis are presented in the section below. Additionally, publicly-available data, previous equipment inventories, internal company data, and existing air permit information were utilized to identify GHG sources at company locations. This includes an extensive analysis and estimates of emissions from small combustion sources co-located at electrical power generating facilities or at stand-alone facilities. The specific information gathered (updated annually) and its sources are shown in Attachment 1 and summarized in the sections below. Additionally, this information was further refined and updated based on data submitted to the EPA for the mandatory GHG reporting rule beginning in 2011. Entergy is confident that this methodology has captured emission estimate information for the majority of small source equipment at its locations.

Direct Sources

Entergy's direct emissions are included in the following categories:

- ⇨ Stationary combustion: Entergy's direct sources of GHGs include emissions from the direct combustion of fossil-fuels in electrical generation boilers and small sources at company facilities. In 2022, generators from power delivery sites & service centers and power through customer projects were added to the small stationary combustion category.
- ⇨ Mobile Combustion: Fossil fuels combusted in company fleet vehicles, including corporate aircraft.
- ⇨ Fugitive Emissions: Methane (CH_4) from natural gas distribution systems, SF_6 from power transmission and distribution equipment, and HFCs from building HVAC systems and mobile air conditioning sources (vehicles).

Company activity data sources including contacts and information for the various emissions from and/or usage of these assets are included in Attachment 2.

Indirect Sources

Entergy's indirect sources of emissions include those from some purchased electricity and electrical line transmission/conversion losses. Data sources for the various emissions from and/or usage of these assets are included in Attachment 1. All electricity consumed in the operation of the utility generating plants and consumed in Entergy's various administrative and commercial buildings and operations are accounted for in Entergy's direct emissions for stationary combustion. However, electricity consumed by the wholesale generation plants and associated facilities is accounted for separately in the inventory. Additionally, line losses for self-generated and purchased electricity are accounted for by the additional generation necessary to make-up for these losses. There are no other indirect sources included in Entergy's inventory or program.

Optional Sources

Entergy is reporting some emissions associated with power purchased to meet customer demand and support grid operations. This emission source is not required under EPA and

WRI reporting protocols. Entergy has elected to report some of these emissions because it has decreased its self-generation while increasing the amount of power it purchases. Beginning in 2014, employee commuting and customer combustion of the company's product (natural gas) were added to the inventory. In 2021, Delivered Gas and Business Travel were added to the inventory. In 2022, purchased goods & services and capital goods were added for the first time, and the employee commuting survey was updated to better reflect a hybrid work environment. Lastly, a leased asset was added in 2022.

GHG Emissions Quantification

Quantification Method and Emission Factors

The quantification methodologies used in the Entergy inventory are commonly accepted methods for measuring GHG emissions. For inventory years 2000-2004, Entergy used methodologies outlined in the EPA Climate Leaders Protocol, or methodologies proposed by Platts/E-source (a technical consultant working for EPA as a part of the Climate Leaders Program) staff and approved by EPA Climate Leaders staff – these methodologies were carried forward in future inventory years, unless supplanted by an updated method. In a number of cases, Entergy has used conservative estimation methodologies for expected *de minimus* emission sources (<1% of corporate total). In all cases, these estimation methodologies were reviewed and approved by EPA Climate Leaders staff and subsequently verified by a third-party. When emissions are based on these conservative estimates, they are identified as such below.

Emission factors used for the initial inventory were derived from various sources including *USEPA Climate Leaders GHG Protocol* (derived from GHG Protocol and AP-42), US DOE, and EPA's eGRID system; these factors are updated as needed. The quantification methodologies, emission factors and their sources can be found in the GHG inventory calculation spreadsheets, accessible through Entergy's external website (http://www.entergy.com/environment/performance.aspx). Entergy remained engaged with the EPA Climate Leaders Program updates and staff until the program was eliminated by the agency. Entergy will monitor WRI protocol and other leading sources for updates

in order to stay aware of any changes to quantification methodologies, emission factors, or protocol changes.

These approaches for emission quantifications were chosen because they represent the most accurate and, in most cases, the only data source for such an exercise. Other methods were not chosen due to the fact that other methods simply do not exist.

Direct Emissions

Entergy's direct emissions are either measured directly via a continuous emissions monitoring (CEM) system, calculated using emission factors and fuel throughput or other relevant data, or estimated using equipment capacity factors and maximum fuel throughput data. Direct GHG emissions are quantified separately for each GHG, and then aggregated across Entergy by GHG constituent. The quantification method and data source for each major category of direct GHG sources is detailed below.

Fossil-Fuel Combustion Boilers and Gas Turbines – Entergy's electrical generation equipment is heavily regulated by state and federal agencies and is required to report emissions on a periodic basis. A continuous emission monitoring (CEM) system is used at most plants to directly monitor emissions. CO_2 is directly monitored in these systems and other GHGs, such as CH_4 and N_2O, are calculated based on the data collected by these systems. However, in some cases, CO_2 is calculated based on fuel throughput and heat rate data. However the CO_2 number is derived, it is reported to the EPA as required under various agency regulatory programs. In 2022, this category represented 58.53% of the corporate total.

Source: This GHG emissions data is reported to the SEP Group by Entergy's Power Generation Environmental Support Group quarterly.

Small Stationary Combustion Sources at Company Facilities – This category includes equipment such as emergency generators, house service boilers, natural gas-fired comfort heaters, and other small combustion/emission sources not monitored by CEM systems at company facilities. Inventories for 2000 to 2010 used an available equipment inventory and information contained in facility air

permits and compiled by facility personnel, small source emissions were calculated for each plant for which this data was available. This data was compiled in 1994 in the Power Generation Operations Equipment Inventory. Similarly, an inventory of small sources also was conducted at the Nuclear facilities in 2005 – these numbers are carried forward from year-to-year.

Beginning in 2011, Entergy reported small sources at the Power Generation plants to the EPA under the mandatory GHG reporting rule Subpart C. These numbers were used beginning with the 2011 inventory in order to align regulatory reporting with this voluntary inventory. Changes to the overall number were not material.

In 2022, Entergy added generator data from two sources: Power Delivery sites & service centers, and Power Through customer projects. For Power Delivery, emissions are calculated for 519 backup electrical generators throughout the Entergy system. Average heat input (MMBTU/yr), generator runtime (100 hours/year), and emission factors (kg/MMBTU) were used to calculate the emissions multiplied by their respective Global Warming Potential (GWP) derived from EPA Final Rule for 40 CFR Part 98, Subpart A - Table A-1. For Power Through, max CO2 rates were applied via generator spec sheets for respective generator size and model and multiplied by run hours.

In 2022, this category represented 0.20% of the corporate total and is representative of both calendar year 2020 and calendar year 2021 reporting.

Transportation Fleet Vehicles – Entergy's Transportation Group maintains a detailed inventory of vehicles owned and/or leased throughout the company. This group also tracks information regarding the fleet's fuel usage and miles traveled. Additionally, Entergy's Aviation Group (part of Human Resources and Administration) maintains fuel usage information for our fleet of corporate aircraft. This information is updated with 2021 data and used to calculate GHG emissions for this equipment category.

In 2022, this category represented 0.07% of the corporate total. Entergy included GHG emissions resulting from employee business travel in 2022, located separately

in Scope 3. Fleet emissions were quantified using units of all mobile fossil fuels and default emission factors.

Source: The source of this information is the Manager, Transportation and the Aviation Group.

Fugitive Emissions: Methane – This category of emissions includes losses of methane from Entergy's natural gas distribution system and Entergy's natural gas storage facility. Losses of methane from the distribution system were estimated using the Gas Research Institute's protocol. This protocol uses input data such as miles of pipe and number of services (steel, coated, and plastic), number of meters (commercial and residential) and gas vented to estimate methane emissions from these types of distribution systems. The emissions from the storage facility were estimated, using Tier 1 factors for natural gas storage for both vented and fugitive natural gas. In 2022, this category represented 0.07% of the corporate total.

Source: These input data were obtained from the Manager, Gas Distribution Operations and Power Generation, Sabine Plant.

Fugitive Emissions: HFCs – This category of emissions includes losses of HFCs from HVAC equipment at buildings which Entergy owns or for which it holds a capital lease and from Entergy vehicular air conditioning. For the indoor air cooling equipment, square footage of company building space was collected and an emission factor developed by Platts/E-Source was applied to this number in order to estimate HFC losses from this equipment. This emission factor is based on national averages of tonnage of equipment per square foot of space and average leakage rates of common air conditioning equipment. An investigation revealed that no HFC-based air or water pre-cooling is performed at any Entergy electric power generation facilities. Additionally, vehicle HFC emissions were also estimated in a similar manner. Conservative estimates were completed for all sources of HFC emissions; this category of emissions was determined to be *de minimus*. In 2022, these categories represented 0.01% of the corporate total. PLEASE NOTE: Entergy's district cooling/thermal operations were sold to a third-

party in December of 2013. Due to the *de minimus* nature of emissions associated with these assets, no adjustments were made to the 2013 inventory; however, these assets were removed from the inventory beginning in 2014. The calculations behind all factors used in estimating HFC emissions can be found in the inventory spreadsheet (Attachment 1).

Source: The source of this information was the Manager, Real Estate Operations and the Manager, Transportation.

Fugitive Emissions: SF_6 – This category of emissions includes operational and unintentional releases of SF_6 used in electricity transmission equipment. Emissions of this gas were previously estimated using a protocol similar to the protocol utilized for EPA's SF_6 Emission Reduction Partnership Program. However, beginning in 2014, the methodology was updated to be consistent with the EPA Mandatory GHG Reporting Rule. This category is reported under Subpart DD of this rule; the number included in this inventory represents the number reported under this compliance program. This category increased between 2021 and 2022 inventories due to a calculation methodology changed associated with the GHG Mandatory Reporting Rule. The emissions estimate provided is from calendar year 2021 and this category represented 0.15% of the corporate total.

Source: The source of this information is the Manager, Environmental Management in Entergy's Distribution Operations Organization. SF_6 emission estimates are reported to SEP at least once per year.

For *de minimus* fugitive emission categories described above, a consistent quantity of emissions is included in the inventory and will be carried forward annually; However, SF6 emissions will be updated annually.

Indirect Emissions

Transmission/Distribution System Line Losses and Company Energy Consumption – Line losses associated with power purchased to support the utility operations are considered required indirect emissions under EPA and Scope 2 Indirect under WRI reporting requirements. Emissions from T&D losses and company energy consumption are estimated using data assembled for the preceding year's annual Statistical Report and Investor Guide (page 36)**.** Line losses and company usage as a percentage of sales provides us with a loss factor to which our emission factors are applied. This emission estimate is calculated and presented; however, it is not subtracted from the number described below since it is assumed that the bulk of purchased power and company usage is generated from within Entergy's service area. T&D line losses and company usage are already accounted for in the extra generation required to make up for these losses and usage.

Optional Emissions

Purchased Power – This category of emissions includes some of the emissions from power purchased by Entergy to supplement its own supply in order to meet customer demand and/or support utility operations. In some cases, the source of this power is known and an actual buying decision is made by Entergy (controllable or unit-contingent purchases). The remaining sources of purchased power are either not known (non-controllable or grid purchases) or cannot be controlled for some other reason (i.e., Qualifying Facility Puts [QF Puts] under PURPA). Under the EPA and WRI protocols, including emissions from power purchased by utilities is optional. From 2000 to 2013, Entergy opted to include all purchased power in its GHG inventory and subsequent tracking – this practice was resumed in 2021. In 2022, this category represented 12.96% of the corporate total.

Purchased power information (in terms of millions of megawatt-hours) was collected. Supplier and unit-specific emission rate information from eGRID, where available, was used to develop a supplier-specific custom CO_2 emissions factor (regional emission factors were used for other GHGs). If supplier-specific GHG

emission factors were not available, the regional grid factor from eGRID was used as a default.

Source: All data regarding power purchases (TRADES database and S were obtained and are available from Entergy's System Planning Group. Primary contact for the data was the Sr. Staff Engineer in the Energy Analysis and Reporting Group.

Product Combustion – This optional category of emissions includes combustion of the natural gas distributed to customers in Baton Rouge and New Orleans, the only areas of the service territory where Entergy distributes natural gas to retail customers. Entergy began including these emissions in the 2014 inventory to be consistent with the EPA Mandatory GHG Reporting Rule. This category is reported under Subpart NN of this rule; the number included in this inventory represents the number reported under this compliance program. The emission estimate provided is from calendar year 2013. In 2022, this category represented 1.41% of the corporate total.

Source: All data regarding this category is sourced from the Manager, Gas Operations.

Employee Commuting – This optional category of emissions was originally estimated using employee survey data collected in 2014 and using EPA methodologies for Scope 3 emission estimations and emission factors. In early 2023, Entergy conducted a new employee commuting survey to update commuting data based on the new way of hybrid working. The full calculation methodology is shown on the appropriate spreadsheet of Attachment 1. In 2022, this category represented 0.04% of the corporate total. Accordingly, this is a *de minimus* category that will be carried forward annually.

Source: Survey data was provided by voluntary employee survey

Business Travel – This optional category of emissions was estimated using total distance flown, number of days/nights of car rentals, hotel nights, and employee

personal car mileage as recorded over 2021 by our Travel to Reimburse Program. The airline GHG footprint estimate was provided by the AMEX travel group, emissions from car rentals and employee personal cars was calculated using EPA's Greenhouse Gas Emissions from a Typical Passenger Vehicle , and hotel night emissions calculated using EPA Indirect Emissions from Events and Conferences Guidelines 2018. The full calculation methodology is shown on the appropriate spreadsheet of Attachment 1. In 2022, this category represented 0.01% of the corporate total. Accordingly, this is a *de minimus* category that will be carried forward annually.

Source: Footprint data was provided by Accounts Payable.

Delivered Gas – This optional category of emissions was estimated using total gas deliveries in mmBtu to our electric utility and local distribution companies (ENO and ELL). The emissions were calculated using the 2020 NETL Industry Partnerships and their Role in Reducing Natural Gas Supply Chain Greenhouse Gas Emissions – Phase 2 Report emissions rate of 14.1g CO2e per MJ of natural gas delivered, converted to g CO2e per mmBtu. The full calculation methodology is shown on the appropriate spreadsheet of Attachment 1. In 2022, this category represented 11.20% of the corporate total.

Source: Delivered gas data was provided by System Planning & Operations

Purchased and Capital Goods – This optional category was estimated using 2022 supply chain spend data, categorized into EPA Commodity classifications, and multiplied by EPA Supply Chain Emission Factors for US Industries and Commodities. Because the EPA emissions factors related to 2018 purchaser prices, an inflation adjustment of 0.885 was applied to translate 2022 purchases into 2018 prices leveraging GDP, CPI and PPI. Spend was divided between 'purchased goods and services" and "capital goods" to align to Greenhouse Gas Protocol framework through internal estimations, and we hope to evolve this classification methodology in future reporting years as we better understand and

develop this category. The full calculation methodology is shown on the appropriate spreadsheet of Attachment 1. In 2022, this category represents 12.20% of the corporate total.

Source: Purchase data provided by Supply Chain, and Inflation conversion factor came from Corporate Commercial Analytics

Leased assets – This optional category was added in 2022 to reflect an Entergy facility leased to a third party for their sole use. The facility is the Louisiana 1 power station located in Baton Rouge, Louisiana. Data was accessed via the EPA Clean Air markets Division to reflect 2022 associated emissions. The full calculation methodology is shown on the appropriate spreadsheet of Attachment 1. In 2022, this category represents 3.13% of the corporate total.

Source: EPA Clean Air markets division

Data Management

Activity Data

In all cases, the best available activity data was used to calculate or estimate emissions from a specific source. All collected data for each source is maintained by the data source identified in the previous section.

The primary source of data related to Entergy's largest category of emissions (representing 87.6% of total corporate emissions in 2020) is CEM system data. CEM system data from monitored plants is managed by Entergy's Power Generation Environmental Support Group. CEM system data is closely managed and maintains a high level of quality control as required by EPA regulations (40 CFR Part 75). The Director, Power Generation Environmental Support is responsible for maintaining these data; the primary contact for these data is the Supervisor, Emission Monitoring and Markets. CEMS data is sourced from the data acquisition and handling system (DAHS), which is the software package used to manage and query CEMS data. A report is generated for the annual CO_2 emissions and provided to the Senior Manager, Environmental Management Systems & Audits (see further description below of how the inventory is generated).

Controllable Power purchase information is managed by the Manager, System Planning using an internally developed software package called TRADES. This system is used by the power buyers to track, validate and eventually invoice long-term power purchase contracts necessary to support grid operations. Additionally, the ISB system is used to track the final settlement of power purchases. Where there were discrepancies in the data, the ISB system was used as the correct value. Other data categories are managed as described in the section above.

Entergy transitioned system dispatch and the bulk of power purchasing operations to MISO on December 19, 2013. This transition greatly impacts the manner in which power is purchased and dispatched for Entergy. Beyond the long-term power purchase contracts described above, all power necessary to support grid operations is purchased directly from MISO. The source plant/unit of this power is not known and may in fact include power generated by Entergy.

Data Management

All data required for the inventory is either reported to or collected by the Director, Sustainability in the SEP Group in the December/January/February timeframe. This information is maintained in electronic files and calculation spreadsheets. The specific steps of the process are described further below:

- DATA RECEIPT – the data described above are transmitted to ESP in the form of spreadsheet files via email attachment. This transmittal method is secure and reliable. Once received, the spreadsheet files are saved to a shared Directory under the 'GHG Inventory' folder.

- DATA REVIEW AND MANIPULATION – spreadsheets are accessed and reviewed for the relevant information. In some cases, the data are sorted, totaled and formatted to facilitate entry into the inventory spreadsheet. The data also is reviewed during this step to evaluate the overall magnitude to identify any obvious errors or omissions.

- DATA ENTRY – data is entered into the draft working version of the GHG inventory. During this step, an additional review for data reasonableness and completeness is performed. Any obvious errors or omissions are addressed directly with the data manager by phone or email, as needed. All of the data sources are either entered directly into the inventory or are used for further calculation of the necessary data points required to develop the overall inventory. All supporting calculations and spreadsheets are housed on the shared directory noted above.

- QA/QC AND TECHNICAL REVIEW – where data entry is required, a double check and a reverse double check is always performed. A double check review is simply another review of the numbers entered into the working draft version of the inventory, while a reverse double check is an evaluation of the data entered against the working draft version of the inventory to ensure all data points are

included. Once this review is completed, the draft version is circulated to several technical reviewers within the company; feedback is used to modify the inventory as needed.

Annual inventories and IMPRD updates are published and posted on SEP's SharePoint site, Entergy's intranet site for all information maintained by SEP. Additionally, Entergy posts the total inventory number, along with the verification statement and other information to its registry account with the American Carbon Registry (www.americancarbonregistry.org) and on Entergy's external website (http://www.entergy.com/environment/performance.aspx). Entergy will continue to use and update the inventory template in future years in order to remain as consistent as possible.

Key Performance Indicator Selection and Data Collection

Entergy's current goal is to achieve net-zero emissions by 2050 from all business, all gases and all scopes. In the interim, Entergy's goal is to reduce our CO2 emissions rate to 50% below 2000 year levels by 2030. The goal does not use emissions intensity; however, on an as needed basis, Entergy does calculate and evaluate GHG emission intensities. The primary intensity measure used is tons of emissions per megawatt hour.

Data Collection Process Quality Assurance

The owners of data identified in the previous section are responsible for maintaining data quality assurance. Every effort should be made to ensure that the data reported are accurate and complete. SEP will evaluate the data, once collected, to ensure that it is reasonable and consistent with past years. SEP will also conduct and document QA checks during the production of the inventory.

As part of the process each data manager uses for collecting GHG data, they must define and document any areas of possible error and the QA/QC actions they use to maintain accuracy. CEMS data quality is maintained in accordance with the compliance requirements contained in EPA regulations (40 CFR Part 75). Any departures from these

data quality measures (i.e. non-compliance events) should be communicated to ESP. Possible errors in emissions factors and calculations are also documented with the emissions factors and calculations records. Any inconsistencies and large unexpected changes from the previous year's data should be sufficiently explained when the data is transmitted. The Director, Sustainability will compare the current year's data for each source category to the previous year's data in order to identify any large, unexpected variations. The data also is reviewed and all calculations validated to ensure that the calculations are correct.

Data Collection System Security and Integrated Tools

Data is typically transferred through Entergy's e-mail system. Security of this system is the responsibility of the IT group. Security of the data once it is collected and consolidated is the responsibility of SEP. Every effort will be made to ensure the security of the inventory information, primarily by saving this information to the shared directory in the 'GHG Inventory' folder. The shared directory is only accessible by employees in the SEP group. Entergy's external website (www.entergy.com) and the Entergy's registry account with the American Carbon Registry (www.americancarbonregistry.org) will serve as the final publication repository for the GHG inventory using read-only, redacted versions.

Frequency

Data will be reported to/collected by SEP on an annual basis (at a minimum). This information will be used to produce an updated GHG inventory each year. No later than the end of the 1st quarter of each year, SEP will produce an updated inventory for the previous calendar year. A verification audit will be conducted by an independent third-party. Beginning in 2012, this verification audit will be conducted in accordance with the international standard – ISO 14064.3. This updated inventory will be used to track progress against the reduction goal discussed above.

Base Year

Adjustment for Structural Changes – The base year (2000) will be adjusted for material mergers, acquisitions, and divestitures that occur during the reporting time frame for the goal. Actual yearly emissions the acquisition of each material emission-producing entity/asset that existed during the base year will be added to the base year and each year that follows. Emissions from divestitures of material emission-producing assets that existed during the base year will be removed from the base year and every year that follows. Mergers and capital leases on material emission-producing assets will be planned in the same manner as the acquisitions to the degree that it is practical. There are no planned adjustments for outsourcing. Mergers, acquisition, divestitures, and capital leases will be identified by SEP and integrated into the GHG inventory for the calendar year when the deal closes. Additionally, data managers should keep SEP informed of any such changes. Finally, SEP will monitor such changes through the investment approval process, which it participates in on as a subject matter expert for environmental issues.

Since 2000, Entergy has purchased and divested several assets. The table below shows these transactions and describes any adjustments to the base year that were required, along with a justification of such changes.

Transaction/Asset	**Year of Close**	**Year of COD**	**Comments**
Hardin County Peaking Facility	2021	2010	Did not exist in base year – no adjustment needed
Montgomery County Power Station	NA	2021	Did not exist in base year – no adjustment needed
Hinds 2	NA	2020	Did not exist in base year – no adjustment needed
Washington Parish Energy Center	NA	2020	Did not exist in base year – no adjustment needed
New Orleans Power Station (new self-build RICE engines)	NA	2020	Did not exist in base year – no adjustment needed
Lake Charles Power Station (new self-build CCGT)	NA	2020	Did not exist in base year – no adjustment needed
Choctaw Plant (acquisition)	2019	2003	Did not exist in base year – no adjustment needed
St. Charles (new self-build CCGT)	NA	2019	Did not exist in base year – no adjustment needed
Union Plant (acquisition)	2016	2003	Did not exist in base year – no adjustment needed

Top of Iowa Windfarm (divestiture)	2016	2003	No emissions from these assets – did not exist in base year – no adjustment needed
White Deer Windfarm (divestiture)	2016	2003	No emissions from this asset – did not exist in base year – no adjustment needed
Ninemile 6 – NOLA (new self-build CCGT)	NA	2014	Did not exist in base year – no adjustment needed
Thermal Plant – Houston (divestiture)	2013	Pre-2000	Estimated plant emissions fall well below materiality threshold (1%) – no adjustment needed
Thermal Plant – NOLA (divestiture)	2013	Pre-2000	Estimated plant emissions fall well below materiality threshold (1%) – no adjustment needed
Hinds County Plant (acquisition)	2012	2001	Did not exist in base year – no adjustment needed
Hot Spring Plant (acquisition)	2012	2002	Did not exist in base year – no adjustment needed
Rhode Island Plant (acquisition)	2011	2002	Did not exist in base year – no adjustment needed
Rhode Island Plant (divestiture)	2015	2002	Did not exist in base year – no adjustment needed
Harrison County Plant (divestiture)	2011	2003	Did not exist in base year – no adjustment needed
Acadia Plant (acquisition)	2011	2002	Did not exist in base year – no adjustment needed
Ouachita Plant (acquisition)	2008	2002	Did not exist in base year – no adjustment needed
Calcasieu Plant – Unit 1 (acquisition)	2008	2000	Estimated plant emissions fall well below materiality threshold (1%) – no adjustment needed
Calcasieu Plant – Unit 2 (acquisition)	2008	2001	Did not exist in base year – no adjustment needed
Perryville Plant (acquisition)	2005	2001/2	Did not exist in base year – no adjustment needed
Attala Plant (acquisition)	2003	2001	Did not exist in base year – no adjustment needed
Spindletop Gas Storage (acquisition)	2004	Pre-2000	Estimated plant emissions fall well below materiality threshold (1%) – no adjustment needed
Thermal Plant – Houston (acquisition)	2003	Pre-2000	Estimated plant emissions fall well below materiality threshold (1%) – no adjustment needed
Thermal Plant – NOLA (acquisition)	2000	Pre-2000	Estimated plant emissions fall well below materiality threshold (1%) – no adjustment needed

Adjustment for Methodology Changes - Changes will be made to calculations and emissions factors only if justified by regulatory changes, scientific/engineering judgment, or updates to the various protocols employed. As an example, several emission factors were updated in 2014 due to adjustments made by EPA. The Vice President, Sustainability & Environmental Policy will make the final decision as to whether or not make such adjustments. In cases where changes are made, the changes will be made to all years in the

inventory, including the base year, so that all emissions are reported using the same basis for all years.

An **IMPRD Revision Log** is included in this document as Attachment 3 and should be used to document any structural or methodological changes to corporate greenhouse gas inventories or this IMPRD.

Management Tools

Roles and Responsibilities

The Vice President, Sustainability & Environmental Policy is responsible for overall GHG program management and external reporting. This individual is also responsible for compiling the data required to update the GHG inventory on an annual basis before the end of Q1 and for evaluating the reasonableness of the GHG data.

He/she also reviews changes to the programs that Entergy participates in and updates the IMPRD as needed. These responsibilities are defined in more detail in specific sections of this IMPRD. SEP then produces and distributes needed reports summarizing the emissions inventory and progress toward the goal.

SEP also provides guidance and feedback to relevant company Managers and Directors on what sources to include in the inventory, what data to use and collect, and what emissions factors are most appropriate.

Various Managers and Directors around the company are responsible for maintaining the data necessary to complete the inventory and subsequent updates. Entergy's Environmental Leadership Team (ELT) reviews and approves the summary of each year's data.

Communication

The IMPRD will be communicated upon initial finalization and subsequently on a periodic basis, when major revisions occur or as needed. Opportunities for

communication with Data Managers include when training is delivered, when data requests are made, during the third-party review of the inventory, and when the IMPRD is revised.

Training

Entergy currently has no training materials available regarding GHG management or inventory. Training will be delivered on an ad hoc basis to employees involved in the process. The Senior Manager, Environmental Management Systems & Audits (or designee) will conduct this training as needed.

Document Retention and Control Policy

Entergy's GHG management program and all relevant records and documentation should be managed in accordance with Entergy's Records Management & Retention Policy. Entergy's external website will serve as the final publication repository for the GHG inventory. The external website is accessible via the internet. Additionally, the annual inventory, verification statement and IMPRD will be submitted to the American Carbon Registry for posting on Entergy's registry account. This is accessible to anyone via the ACR website (www.americancarbonregistry.com).

Data verification and documentation is essential for the authenticity of this program. To maintain a high standard, all records verifying the GHG inventories and registry contents will be maintained by SEP for a minimum of three years. Documentation of GHG reduction project expenditures and project close-out reports shall also be maintained for a minimum of three years.

Auditing and Verification

Internal Auditing

Internal auditing of the GHG program will be conducted by SEP staff or designee. Some of the data used to develop emission estimates are also audited through Entergy's Safety and Environment Audit Program (i.e., CEMS data/processes, reporting under the Mandatory Reporting Rule, etc.) administered by SEP. Findings related to the GHG Inventory will be provided to the VP, SEP who will determine the responsible individual for each finding's corrective action. The audit will include a review of the IMPRD and the latest version of the inventory. A consistency check is also performed against the prior year's data, especially in the area of direct emissions. Changes to the IMPRD driven by audit results will also be entered into the IMPRD Revision Log (Attachment 3).

External Validation and/or Verification

Entergy is committed to an external third-party audit of the GHG baseline/inventory data, calculations, and records. This third-party verification of the program will be conducted at least every other year, including 2006 and the goal year. Since 2006, Entergy has sought annual, third-party verification of the GHG Inventory. The verification statement and report are made available via the ACR website and Entergy's external website.

In 2012, Entergy decided to elevate this third-party verification audit to the ISO standard for GHG Inventory preparation and verification (ISO 14064.3). This is an expanded verification effort that requires a higher level of scrutiny and additional data review/evaluation. The verification report will include a statement regarding the type of verification, associated level of assurance and an assessment of the verification relative risks. That verification risk assessment identifies and describes the largest sources of relative uncertainty for the GHG Inventory. See Attachment 2 for the full verification report.

Management Review

The GHG emissions summary data will be reviewed and approved annually by the ELT. Goal setting, progress toward meeting goals, and any additional action or options necessary

to meet the goals will be covered in this management review. The VP, SEP will verify that the information has been reviewed and found to be substantially compliant with this IMPRD. Additionally, this information will be presented to the Audit Committee of the Board of Directors during the annual reporting cycle.

Corrective Action

Any findings identified through QA/QC and internal and external reviews related to the greenhouse gas inventory or IMPRD are assigned to the appropriate Manager or Director for action by the VP, SEP. The VP, SEP will maintain a list of identified gaps related to the program, the person that is responsible for closing the gap, and the required timing for gap closure. Changes to the IMPRD driven by this process will also be entered into the IMPRD Revision Log (Attachment 3).

Any findings identified through QA/QC and internal and external audits related to the GHG emission inventory, calculations, or reporting are assigned to the VP, SEP or his designee.

Voluntary Commitment and Reduction Efforts

Voluntary Commitments

In May 2001, Entergy publicly committed to stabilize CO_2 emissions from its power plants at year 2000 levels through 2005, and dedicated $25 million in supplemental corporate funding to achieve this target over the five-year period. This commitment was focused on CO_2 emissions from fuel combustion at the company's power plants and required that Entergy:

- Stabilize CO_2 emissions from its U.S. power plants at year 2000 levels through 2005.
- Establish the $25 Million Environmental Initiatives Fund (EIF) in support of achieving the 2001-2005 stabilization targets.
- Document activities and annually report progress.
- Employ an independent third-party organization to verify measurement of Entergy's CO_2 emissions from U.S. power plants.

Entergy completed this first commitment 23 percent below year 2000 levels.

Entergy's second commitment, made in 2005, included:

- Stabilize CO_2 emissions from all Entergy operations at 20% below 2000 levels through 2010.
- Commit funding of $3.25 million in support of achieving the 2005-2010 target.
- Document activities and annually report progress.

Entergy completed this second commitment more than three percent below the target. On a cumulative basis, Entergy bettered the two commitments by over 14 percent.

In 2011, Entergy once again renewed its commitment to stabilize GHGs with a third commitment:

- Stabilize CO_2 emissions from all Entergy operations at 20% below 2000 levels through 2020.
- Commit funding of $10 million in support of achieving the 2011-2020 target.
- Document activities and annually report progress.

In March 2019, Entergy established a goal to reduce its utility CO2 emission rate (lbs per MWh of net energy generation) by 50 percent of 2000 levels by 2030. See the company's Climate Scenario Analysis and Evaluation of Risks and Opportunities (2019) for more information. In September 2020, Entergy enhanced this goal with a commitment to achieve net-zero emissions by 2050 (all businesses, all scopes, all gases). More information regarding this commitment can be found in an addendum to the climate report focused on Entergy's 2050 Net-Zero Commitment.

In November 2022, Entergy established a new interim goal to achieve 50% of power generation capacity from clean, carbon-free energy sources by 2030; this includes nuclear and renewable capacity, both owned and purchased, as well as additional capacity provided by accompanying renewable battery storage. Entergy also enhanced their interim goal to reduce carbon emissions 50% from 2000 base year emissions by 2030 to include purchased

power, both controlled and market-based purchases. Further details on Entergy's illustrative pathway to reach net zero can be found in their **2022 Climate report.**

Additional information on these goals and commitments can be viewed on Entergy's website.

Voluntary Reductions

Since 2001, Entergy has invested in various types of internal and external emission reduction projects. These projects range from internal plant efficiency improvements, to reforestation projects, to carbon offset purchases. These projects are described annually in the Environmental Section of Entergy's Integrated Report.

In addition to the projects described above, Entergy owns several facilities that generate electricity without emission of GHGs. Entergy's nuclear fleet (9,000 MW), hydro plants (74 MW), and solar PV facilities (2.5 MW) generate virtually emission-free electricity and constitute a major portion of Entergy's overall generation mix (more than 30% at the end of 2020.)

Attachment 1

2021 GHG Inventory – FINAL and VERIFIED

Attachment 2

2021 GHG Inventory Verification Statement and Report

Attachment 3

IMPRD Revision Log

Entergy GHG IMP and Reporting Document Revision Log

Revision No	Revision Date	Reason for Revision	Additional Comments
1	July 2005	Original DRAFT	
2	8/16/05	Revised Draft	Editorial/technical comments from Fossil Operations, Nuclear Operations, and T&D included
3	9/30/05	FINAL DRAFT	Editorial/technical comments from Platts/E source
4	12/21/05	FINAL VERSION	Changes made to reflect approved GHG reduction goal – 2nd commitment
5	10/10/06	Revised based on comments from Climate Leaders and E-source	Clarified various data sources and communication requirements in document
6	04/28/09	Revised based on findings during verification of 2006 and 2007 GHG Inventories	Various editorial changes; added Thermal facilities and Spindletop to facilities list
7	08/25/09	Revised based on findings during verification of 2008 GHG Inventory	Revised fugitive emissions methodology for SF_6; other minor editorial changes
8	04/01/10	Revised based on findings during verification of 2009 GHG Inventory	Various editorial changes; noted need to subtract EAM from total purchases (ISB); updated facility list; enhanced QA/QC discussion
9	3/10/11	Revised based on findings during verification of 2010 GHG Inventory	Various editorial changes; updated status of EPA Climate Leaders Program; clarified review requirements, QAQC measures and training
10	03/09/12	Revised to comply with ISO 14064-3:2006 and based on findings during verification audit of 2011 GHG Inventory	Major revision – expanded document to include aspects necessary to comply with ISO standard. Expanded discussions of data management, quantification methods, targets, actions, base year adjustments and uncertainty.
11	03/08/13	Revised based on findings during verification audit of 2012 GHG Inventory	Various editorial changes; updated plant acquisitions during 2012
12	03/07/14	Revised based on findings during verification audit of 2013 GHG Inventory	Various editorial changes; updated to reflect plant divestitures during 2013, inclusion of off-site power for plants out of utility territory, discussion of transition to MISO, updated internal website address
13	03/09/14	Revised to reflect changes caused by transition to MISO and based on findings during verification audit of 2014 GHG Inventory	Various editorial changes; updated to reflect new plant started up in 2014, described impacts of MISO transition, updated website addresses

14	**03/11/15**	**Revised based on findings during verification audit of 2012 GHG Inventory**	**Various editorial changes; updated plant sales**
15	**03/02/17**	**Revised based on findings during verification audit of 2016 GHG Inventory**	**Various editorial changes; updated to reflect plant acquisition and divestitures closed during 2016.**
16	**03/09/18**	**Revised based on findings during verification audit of 2017 GHG Inventory**	**Various editorial changes; added Attala**
17	**03/07/2019**	**Revised based on findings during verification audit of 2018 GHG Inventory**	**Various editorial changes; clarified inclusion of Attachment 2**
18	**03/18/2020**	**Revised based on findings during verification audit of 2019 GHG Inventory**	**Various editorial changes; added St. Charles and Choctaw; added new 2030 CO2 commitment**
19	**03/15/2021**	**Revised based on findings during verification audit of 2020 GHG Inventory**	**Various editorial changes; added Lake Charles and NOPS**
20	**03/18/22**	**Revised based on findings during verification audit for 2021 GHG Inventory**	**Various editorial changes; added voluntary sources of Business Travel and Delivered Gas**
21	**03/XX/23**	**Revised based on findings during verification audit for 2022 GHG Inventory**	**Various editorial changes; enhanced sources for Small Stationary Combustion sources with generator data; added voluntary sources of Leased Assets; Purchased Goods and Services; Capital Goods; enhanced methodology for Employee Commuting**