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ENTERGY TEXAS, INC.

Legend Power Station Project
Jefferson County, Texas

Mitigation Plan

PROJECT NUMBER:
0246516.15.02.01

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Mitigation Plan

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1.0 INTRODUCTION

1.1 Project Description

The Legend Power Station (Legend) is an Entergy Texas, Inc. (ETI) will construct, own, and operate a 754-MW combined cycle combustion turbine (CCCT) facility on an approximately 100-acre parcel of newly acquired undeveloped land adjacent to the existing ETI Legend Substation. The overall approximate 124.4-acre Project area, including the CCCT facility, will also include a new 25-foot-wide sanitary sewer easement and a 215-foot-wide easement for the access road, 230-kilovolt (kV) overhead transmission line for interconnection to the existing Legend Substation, and water and natural gas pipelines.

The Project is located approximately 8.5 miles west of the city of Port Arthur in Jefferson County, Texas. The Project is located 0.5 mile south of Highway 73 and Cambridge Street intersection. See Project Plans in Attachment B for additional information on the project location.

1.2 Mitigation Bank Selection

To offset unavoidable impacts to waters of the United States (WOTUS) as a result of Project construction, ETI proposes to purchase compensatory mitigation credits from Seabreeze Mitigation Bank for impacts to PEM and PSS wetlands and Sabine Lake Mitigation Bank for impacts to PFO wetlands. The Project is in HUC 12040201 which is the primary service area for Sabine Lake Mitigation Bank and the secondary service area for Sea Breeze Mitigation Bank.

1.3 Waters of the United States

Multiple field investigations were conducted from October 2023 to March 2024 to determine the boundaries of potential WOTUS within the Project Area. Field surveys were conducted in accordance with the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual as well as the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plains Region (Version 2.0). A Preliminary Jurisdictional Determination (PJD) report which details the WOTUS findings of the field investigations is included in Attachment C of the Project Individual Permit application. The PJD report was used to determine wetland quality and mitigation requirements. The WOTUS mapped during field surveys can also be seen on Figures in Attachment B of the Project Individual Permit application.

2.0 PROJECT IMPACTS

2.1 Impacts to WOTUS

The following table (Table 1) includes those wetlands and other waters that were unavoidable and will be impacted by Project construction.

TABLE 1 IMPACTED WOTUS FEATURES DELINEATED WITHIN THE PROJECT FOOTPRINT.

Feature ID	Type	Temporary Impact*	Permanent Impact*
WET01	PEM	0.00	0.313
WET02	PEM	0.00	12.66
WET03	PFO	0.00	2.414
WET04	PFO	0.00	0.179
WET06	PFO	0.00	20.933
WET07	PSS	0.00	1.375
WET08	PEM	3.077	13.691
WET23	PEM	0.00	0.063
WET24	PEM	0.01	0.02
Wetland Total		**3.087**	**51.65**
OW01	Open Water	0.00	0.29
Open Water Total		**0.00**	**0.29**
DRG02	PFO	0.0	0.117
DRG03	PFO	0.0	0.203
Drainage Total		**0.0**	**0.32**
CAN06	Canal	0.00	0.046
CAN08	Canal	0.003	0.005
Canal Total		**0.01**	**0.05**

* Total Impacts in acres rounded to the nearest hundredth place. Does not include wetlands with no impacts.

2.2 Avoidance and Minimization

For siting and avoidance purposes, a larger area was surveyed than what was required for the Project footprint which is referenced as the Survey Area in the Preliminary Jurisdictional Determination Report (Attachment C). The wetland field survey area included 178.74 acres considered for the proposed Project consisting of a total of 112.24 acres of potential WOTUS (POWER 2024). The Project siting and overall design will avoid 56.8 acres of documented WOTUS. The larger survey area allowed the facility to be sited to avoid 50% of the potential WOTUS on-site.

Additionally, ETI will implement construction techniques that will avoid or minimize impacts, including the use of horizontal directional drill for select utilities, minimization of transmission interconnection and access road easement from approximately 400 feet to 215 feet wide within wetlands, temporary matting for work in wetlands, and the implementation of best management practices (BMPs) such as installing erosion/sedimentation control devices, and managing

stormwater flow. ETI also evaluated four additional sites as part of the Project Alternative Analysis (Attachment D). Due to the required transmission line interconnection to the existing Legend Substation and on-site conditions of these alternative site, it is expected that these sites would require similar, if not more, overall environmental impacts.

For unavoidable impacts to WOTUS, ETI would purchase the required compensatory mitigation credits from the Sabine Lake Mitigation Bank and the Sea Breeze Mitigation Bank as outlined in the following paragraphs.

3.0 DETERMINATION OF MITIGATION

To compensate for unavoidable permanent loss to wetlands, ETI proposes to purchase compensatory mitigation credits from Sea Breeze Mitigation Bank and Sabine Lake Mitigation Bank which are USACE approved mitigation banks that service HUC 12040201. The following sections outlines the calculations for determining the number of wetland mitigation credits required to off-set impacts.

3.1 IHGM: Sea Breeze and Sabine Lake Mitigation Bank

Riverine forested and Riverine non-forested wetland mitigation credits were determined using the USACE Southwestern Galveston District (SWG) Riverine Forested and Riverine Herbaceous/Scrub Interim Hydrogeomorphic (iHGM) model formulas. The Riverine Forested and Herbaceous/Scrub iHGMs were utilized because the wetlands are dominated by vegetation most often found in freshwater wetland communities. It is the professional opinion of POWER biologists that this model is the most applicable for the wetland communities present within the Project Area. To ensure proper mitigation compensation is achieved, iHGM formulas are utilized to quantify functional capacity indices (FCIs) of each wetland. FCIs are calculated for three different wetland functions: temporary storage and detention of surface water (physical), maintenance of plant and animal communities (biological), and removal of sequestration of elements and compounds (chemical). Wetland mitigation credits will be purchased to offset permanent impacts to PEM, PSS and PFO wetlands within the Project Area.

3.2 IHGM Variable Model

The iHGM formulas incorporate several variables to assess physical, biological, and chemical functions that measure the functional value of wetlands in the region. Each variable has been assessed and assigned sub-index values based on what was observed during field investigations, a review of historical imagery and other historical ecological analysis conducted via desktop.

One or more circular 37.2-foot-radius plot (i.e., 0.1 acre) was established for each wetland to assess field variables of the appropriate iHGM functional assessment model. Variables that are not amenable to field survey (e.g., Vconnect, Vdur, and Vfreq) were assessed using recent aerial images, topographic information, Federal Emergency Management Agency (FEMA) Floodplain maps, and the U.S. Geological Survey (USGS) 7.5-minute digital orthophoto quadrangles.

3.3 Calculated Wetland FCUs

Functional Capacity Units (FCUs) were calculated based on the FCIs of each wetland multiplied by the acreage being impacted. To determine the total (net) FCUs required to offset unavoidable wetland impacts, the pre-Project FCUs are subtracted from the post-Project FCUs. The net FCUs are used to determine the required mitigation credits that would be purchased to offset wetland impacts. PEM wetlands temporarily impacted had a net zero loss of function. Table 2 on the following page details the FCUs required for mitigation of wetland loss but does not include those wetlands mapped that had zero impacts or PEM wetlands temporarily impacted.

3.4 Required Credits

Initial runs of the iHGM indicate that the proposed permanent impacts to PEM and PSS wetlands would require the purchase of approximately 26.74 net FCUs to satisfy the mitigation need. The proposed permanent impacts to PFO wetlands would require 38.44 net FCUs to satisfy the mitigation need. The calculations for these credit requirements are included in Appendix A. The entirety of the Project is within the USACE-Galveston District and within HUC 12040201. This HUC is the primary service area for Sabine Lake Mitigation Bank, therefore a multiplier will not be applied; and the secondary service area for Sea Breeze Mitigation Bank, therefore a 1.5 FCU multiplier will be applied prior to mitigation credit purchases from this bank.

TABLE 2 WETLANDS AND OTHER WATERS REQUIRING MITIGATION

WOTUS	Impact	Cowardin Class	Acres	Net Phys	Net Bio	Net Chem	Total	Mitigation Bank
WET01	Perm	PEM	0.313	0.08	0.09	0.12	0.29	Sea Breeze
WET02	Perm	PEM	12.66	3.13	3.59	4.94	11.66	Sea Breeze
WET03	Perm	PFO	2.414	1.27	1.15	1.42	3.84	Sabine Lake
WET04	Perm	PFO	0.179	0.08	0.07	0.09	0.24	Sabine Lake
WET06	Perm	PFO	20.933	10.99	9.94	12.91	33.84	Sabine Lake
WET07	Perm	PSS	1.375	0.67	0.61	0.83	2.11	Sea Breeze
WET08	Perm	PEM	13.691	3.39	3.88	5.34	12.61	Sea Breeze
WET23	Perm	PEM	0.063	0.02	0.02	0.02	0.06	Sea Breeze
WET24	Perm	PEM	0.02	0.00	0.01	0.01	0.02	Sea Breeze
DRG02	Perm	PFO	0.117	0.06	0.06	0.07	0.19	Sabine Lake
DRG03	Perm	PFO	0.203	0.11	0.10	0.13	0.33	Sabine Lake
TOTAL			**51.97**	**19.79**	**19.51**	**25.88**	**65.19**	

[1]See Appendix A for Credit Calculations.

4.0 SUMMARY AND CONCLUSIONS

Multiple WOTUS were identified and mapped during the field assessment (See PJD report and Attachment B). The final Project footprint impacts approximately 51.97 acres of potential WOTUS that require mitigation. According to calculation using the iHGM, the fill of wetlands will result in the loss of 19.79 physical, 19.51 biological and 25.88 chemical FCUs, all of which will require mitigation.

The findings presented in this report are restricted to and are based upon POWER's professional opinion. These values are subject to alterations in project plans, verification of the wetland delineation, and verification of the iHGM. Only the USACE and the U.S. Environmental Protection Agency have final legal authority to determine the location, extent, and functional value of waters of the United States.

5.0 REFERENCES:

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APPENDIX A IHGM CALCULATIONS

WETLAND MITIGATION CALCULATIONS

SUMMATION OF IHGM CALCULATIONS/FCUS

WOTUS	Impact	Cowardin	Acres	Net Phys	Net Bio	Net Chem
WET01	Perm	PEM	0.313	0.077	0.089	0.122
WET02	Perm	PEM	12.66	3.133	3.587	4.937
WET03	Perm	PFO	2.414	1.267	1.147	1.424
WET04	Perm	PFO	0.179	0.077	0.073	0.091
WET06	Perm	PFO	20.933	10.989	9.943	12.909
WET07	Perm	PSS	1.375	0.666	0.613	0.830
WET08	Perm	PEM	13.691	3.388	3.879	5.339
WET08	Temp	PEM	3.077	0.000	0.000	0.000
WET21	Temp	PEM	0.013	0.000	0.000	0.000
WET23	Perm	PEM	0.063	0.016	0.018	0.025
WET24	Perm	PEM	0.02	0.005	0.006	0.008
WET24	Temp	PEM	0.01	0.000	0.000	0.000
DRG02	Perm	PFO	0.117	0.061	0.056	0.072
DRG03	Perm	PFO	0.203	0.107	0.096	0.125

IHGM CALCULATIONS/FCIS

Pre-Project																				
Name	Impact	Cowardin	Acres	Vdur	Vfreq	Vtopo	Vcwd	Vwood	Vtree	Vrich	Vbasal	Vdensity	Vmid	Vherb	Vdet	Vredox	Vsorbt	Vconnect	Phy FCU	Bio FCU	Chem FCU
WET01	Perm	PEM	0.313	0.75	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.4	0.1	1	0.75	0.247	0.283	0.390
WET02	Perm	PEM	12.66	0.75	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.4	0.1	1	0.75	0.247	0.283	0.390
WET03	Perm	PFO	2.414	0.75	0.5	0.1	0.5	0.75	0.3	0.4	0.6	0.6	0.5	0.1	0.4	0.1	1	0.75	0.525	0.475	0.590
WET04	Perm	PFO	0.179	0.75	0.5	0.1	0.3	0.5	0.3	0.4	0.4	0.4	0.5	0.1	0.4	0.1	1	0.75	0.429	0.408	0.510
WET05	Perm	PFO	0	0.75	0.5	0.1	0.5	0.75	0.3	0.4	0.6	0.6	0.25	0.1	0.4	0.5	1	0.75	0.525	0.454	0.617
WET06	Perm	PFO	20.933	0.75	0.5	0.1	0.5	0.75	0.3	0.4	0.6	0.6	0.5	0.1	0.4	0.5	1	0.75	0.525	0.475	0.617
WET07	Perm	PSS	1.375	0.75	0.5	0.1	0.3	0.75	0.3	0.4	0.4	0.4	0.75	0.3	0.4	0.5	1	0.75	0.485	0.446	0.603
WET08	Perm	PEM	13.691	0.75	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.4	0.1	1	0.75	0.247	0.283	0.390
WET08	Temp	PEM	3.077	0.75	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.4	0.1	1	0.75	0.247	0.283	0.390
WET21	Temp	PEM	0.013	0.75	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.4	0.1	1	0.75	0.247	0.283	0.390
WET23	Perm	PEM	0.063	0.75	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.4	0.1	1	0.75	0.247	0.283	0.390
WET24	Perm	PEM	0.02	0.75	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.4	0.1	1	0.75	0.247	0.283	0.390
WET24	Temp	PEM	0.01	0.75	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.4	0.1	1	0.75	0.247	0.283	0.390
DRG02	Perm	PFO	0.117	0.75	0.5	0.1	0.5	0.75	0.3	0.4	0.6	0.6	0.5	0.1	0.4	0.5	1	0.75	0.525	0.475	0.617
DRG03	Perm	PFO	0.203	0.75	0.5	0.1	0.5	0.75	0.3	0.4	0.6	0.6	0.5	0.1	0.4	0.5	1	0.75	0.525	0.475	0.617
Post-Project																					
Name	Impact	Cowardin	Acres	Vdur	Vfreq	Vtopo	Vcwd	Vwood	Vtree	Vrich	Vbasal	Vdensity	Vmid	Vherb	Vdet	Vredox	Vsorbt	Vconnect	Phy FCU	Bio FCU	Chem FCU
WET01	Perm	PEM	0.313	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000
WET02	Perm	PEM	12.66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000
WET03	Perm	PFO	2.414	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000
WET04	Perm	PFO	0.179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000
WET05	Perm	PFO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000
WET06	Perm	PFO	20.933	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000
WET07	Perm	PSS	1.375	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000
WET08	Perm	PEM	13.691	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000
WET08	Temp	PEM	3.077	0.75	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.4	0.1	1	0.75	0.247	0.283	0.390
WET21	Temp	PEM	0.013	0.75	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.4	0.1	1	0.75	0.247	0.283	0.390
WET23	Perm	PEM	0.063	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000
WET24	Perm	PEM	0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000
WET24	Temp	PEM	0.01	0.75	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.4	0.1	1	0.75	0.247	0.283	0.390
DRG02	Perm	PFO	0.117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000
DRG03	Perm	PFO	0.203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.00