ENTERGY LOUISIANA, LLC
LOUISIANA PUBLIC SERVICE COMMISSION
UNDOCKETED WINTER STORM EVENT

Response of: Entergy Louisiana, LLC
to the First Set of Data Requests
of Requesting Party: Louisiana Public Service Commission

Question No.: LPSC 1-2 Part No.: Addendum:

Question:

What were all identified causes of storm related outages for generation during the Winter Storms for your system? Please also indicate what was the main contributing factor.

Response:

The following table identifies all root causes of generation outages experienced by the Company during the Winter Storms, as well as a summary of contributing factors associated with these causes.

Generation Outage/Derate Cause	**Contributing Factor(s)**
Lack of Fuel	Please see the Company's responses to LPSC 1-17 and 1-18 for more discussion of fuel supply related issues affecting generation.
Lack of Water	Demineralized water needed to support unit operations unavailable due to icy road conditions preventing delivery.
Frozen Equipment	Contributing factors to these outage causes at certain generating units included, but were not limited to, the following: • Forced draft fans were iced, preventing movement. • Inlet Bleed Heating (IBH) valve froze, despite heat lamps being in place to prevent freezing. • Frozen fuel gas positioners resulted in inadequate gas pressure being delivered to duct burners on a heat recovery steam generator unit. • Combustion pressure monitoring alerts caused by cold temperatures required ramping a unit down to allow for tuning constant adjustments to facilitate the unit operating at full output.
Frozen Transmitters	Contributing factors to these outage causes at certain generating units included, but were not limited to, the following: • Erratic drum level transmitter readings experienced due to

	cold weather. • Cold weather caused drum level instrumentation to cease functioning. • Icing on forced draft fans. • Freezing on boiler pump feed flow sensing lines. • Icing on seal regulator sensing lines. • Loss of condensation flow transmitter lines due to freezing.