1. GSDS Availability

The GSDS must be available for the dispatch or scheduling of Grid Services Capability by Company 24 hours a day, 365 days a year. GSDS availability will be calculated as uptime. GSDS availability calculation shall begin at the System Integration Date. Availability applies to any components or elements that make up the GSDS that either individually or collectively prevent or hinder Company’s ability to schedule or dispatch Supplier’s Grid Service Capability.

1.1 Maintenance Downtime

Maintenance downtime (“Maintenance Downtime”) for the GSDS shall not exceed four (4) hours per month. Supplier shall give Company at least seven (7) Business Days advance notice by email to the email accounts specified by Company. Maintenance Downtime will be planned to occur during the hours of 11 PM-4 AM HST, as practicable. Maintenance Downtime shall be used for update releases of the GSDS, including, for example, bug fixes, patches, error corrections and minor enhancements of and to the GSDS (collectively, “minor updates”) or new versions of the GSDS that include significant hardware changes or enhancements in features, performance or functionality (collectively, “major updates”). Maintenance Downtime will not be deducted from minutes GSDS is available to dispatch or schedule Grid Service Capability. Maintenance Downtime shall be indicated as appropriate in Supplier’s Operational Forecast and updated to the Company in accordance with Exhibit F (Operational Forecast).

1.2 Emergency Downtime

Emergency downtime (“Emergency Downtime”) for the GSDS shall not exceed two (2) hours per month. Supplier shall give Company at least 24 hours’ advance notice by telephone. If practicable, Emergency Downtime should be scheduled during 11 PM-4 AM HST. Emergency Downtime will not be deducted from minutes GSDS is available to dispatch or schedule Grid Service Capability. Emergency Downtime shall be indicated as appropriate in Supplier’s Operational Forecast and updated to the Company in accordance with Exhibit F (Operational Forecast).

1.3 Unscheduled Downtime

Unscheduled downtime (“Unscheduled Downtime”) accounts for any time when the GSDS is not available to Dispatch or schedule Grid Service Capability, for which notification of Emergency Downtime or Maintenance Downtime has not been provided. For any Unscheduled Downtime for the GSDS, Supplier shall notify Company as soon as practicable. If possible, Unscheduled Downtime shall be indicated as appropriate in Supplier’s Operational Forecast and updated to the Company in accordance with Exhibit F (Operational Forecast).
2. Uptime Metric

Supplier GSDS shall maintain 85% uptime or higher per month. 85% uptime equates to 6,480 minutes or 4.5 days of Unscheduled Downtime per month. The GSDS will be available on average 85% of the time, measured on a Calendar Monthly basis, less scheduled maintenance. “Uptime” is defined as follows:

\[
\text{Uptime Percent} = \frac{\text{Minutes GSDS is available to dispatch or schedule Grid Service Capability}}{\text{Total number of minutes in the applicable month (typically 43,200)}}
\]

Minutes GSDS is available to dispatch or schedule Grid Service Capability will be measured by tracking online and offline status of Supplier’s GSDS as represented by their Virtual End Node in Company’s DERMS.

3. Company DERMS Availability

If the DERMS is unavailable due to scheduled maintenance or Unscheduled Downtime, such that the GSDS cannot perform or support mission critical functions, the total number of minutes of DERMS downtime will be deducted from the total number of minutes in the applicable month.

3.1 Maintenance Downtime

Company will provide Supplier at least five (5) Business Days advance notice by email to the email accounts or other method as specified by Supplier of DERMS Maintenance Downtime.

4. Tracking and Reporting

Supplier shall submit monthly reports to validate GSDS availability and include, but not be limited to uptime and Maintenance Downtime statistics. In addition, Supplier shall track and report on a monthly basis the following items:

1. All problem resolution requests submitted by Company and their resolution.
2. Modifications to GSDS, such as minor updates or other modifications that did not require downtime, but resulted in changes to the GSDS, including but not limited to software, firmware, hardware and communication protocols.
3. Errors or inconsistencies in measurements and corrective action taken to resolve such errors to Supplier installed metering equipment as specified in Exhibit E (Advanced Metering).
5. Problem Reporting, Response, and Resolution

When software vulnerabilities are revealed and addressed by a patch, Supplier will obtain the patch from the applicable vendor and apply it as it is tested and determined to be safe for installation.

Problem Reporting. Company shall report any technical or connectivity problems with the GSDS as follows:

1. Company shall submit resolution requests via online support portal, if available, otherwise via email or phone call. Supplier shall provide 24-hour phone number for requesting resolution of Priority 1 or 2 problems and to respond to Participant calls received by Company’s customer service representatives and relayed to Supplier as described below.

2. Priority of problem reports shall be determined in accordance with the following guidelines:
   - Priority 1: A priority 1 (“P1”) level should be used to request resolution of a problem causing the GSDS to not be available.
   - Priority 2: A priority 2 (“P2”) level should be used to request resolution of any problem causing any mission critical function of the GSDS to perform unacceptably or to fail. Mission critical functions of the GSDS include provisioning of Operational Forecast as described in Exhibit F (Operational Forecast), provisioning of Participant Enablement Status, including subsequent enrollment transactions, and Participant Incentives as described in Exhibit G (Data, Integration, and Testing), and Grid Service Communications and Control as described in Section 8 of each of the Grid Service Description and Requirements Exhibits (Exhibit A-1 (Fast Frequency Response Grid Service), Exhibit A-2 (Regulating Reserve Grid Service), Exhibit A-3 (Capacity Grid Service) and Exhibit A-4 (Replacement Reserve Grid Service)).
   - Priority 3: A priority 3 (“P3”) level should be used to request resolution of any problem related to the GSDS that does not qualify as a P1 or P2 level request.

3. Participant calls received by Company’s call center, where life safety concerns are identified will be submitted as a P1 level request. All other calls received by Company’s call center will be submitted as a P3 level call.

Problem Response. Supplier shall respond to Company problem resolution requests and use commercially reasonable efforts to resolve problem and return GSDS to normal operation in the time frames described in the table set forth below:

<table>
<thead>
<tr>
<th>Priority Level</th>
<th>Response Time</th>
<th>Target Resolution Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>Thirty (30) Minutes</td>
<td>One (1) Hour</td>
</tr>
<tr>
<td>P2</td>
<td>Two (2) Hours</td>
<td>Eight (8) Hours</td>
</tr>
<tr>
<td>P3</td>
<td>Twelve (12) Hours</td>
<td>Five (5) Days</td>
</tr>
</tbody>
</table>
Company acknowledges that the Target Resolution Time metrics are only targets and cannot be guaranteed. If Target Resolution Time cannot be achieved for a problem resolution request, the request will be remediated as described in Section 6 below.

The following definitions shall be used:

Priority Level: Level assigned to a given problem resolution request based on the guidelines set forth in this section.

Response Time: The time period for Supplier to acknowledge the submission by the problem resolution request by Company. Such period will commence on submission of the problem resolution request to the online support portal, via email or phone call and conclude upon first response by Supplier.

Target Resolution Time: The target time period for Supplier to resolve the problem or provide a work-around or other temporary fix. Such period will commence on submission of the problem resolution request to the online support portal, via email or phone call and conclude when such request is identified as resolved and shall not include any time that a request is identified as awaiting Company input.

For P1 and P2 level requests, hours and days shall be determined on a 24 x 7 x 365 basis and may be submitted 24 x 7 x 365. For all other requests, hours and days shall be determined on a 24 x 5 basis, excluding federal and state holidays. In the event that Supplier addresses any request to resolve a problem by providing a work-around or other temporary fix, Supplier will use commercially reasonable efforts to determine a permanent resolution to the problem described in the problem resolution request.

For all P1 and P2 level requests, Supplier shall provide a post mortem report describing Problem Report, resolution, and steps taken to ensure the problem will not re-occur, within fourteen (14) days of problem resolution.

If Supplier does not respond to P1 and P2 level requests within in the Response Time specified in Table 1 above, each ten (10) minutes past the Response Time (Response Time + 10 minutes) will be subtracted from the minutes GSDS is available to dispatch or schedule Grid Service Capability that is used in the Uptime calculation. Company allows for a ten (10) minute grace period beyond the Response Time specified in Table 1 before deducting minutes from GSDS monthly availability.

6. Remediation

Upon Company’s request, Supplier and Company shall meet to review the availability of the GSDS. In the event of a consistent failure of Supplier to meet the timelines stated in Section 6, or should other operational issues be identified by Company or Supplier, or as a result of submission of a Problem Report, Supplier will develop a remedial plan to rectify such failure and a suggested timetable for its implementation (“Recovery Plan”). The
Parties shall negotiate in good faith to agree to a Recovery Plan. Supplier shall implement the Recovery Plan in accordance with its terms and shall be responsible for all costs and expenses incurred in the implementation of the Recovery Plan. Supplier’s failure to implement the approved Recovery Plan is an Event of Default under Section 6.1(a) (Default by Supplier) of the Grid Services Purchase Agreement.

7. GSDS Re-Test

Company reserves the right to retest the GSDS, upon the completion of major updates or to ensure resolution of a P1 or P2 level problem report. Retest of the GSDS may also be included in the Recovery Plan. Retest will be performed in accordance with Exhibit G (Data, Integration, and Testing Requirements).

8. GSDS Annual Test

Company reserves the right to request an annual test of the GSDS. Retest will be performed in accordance with Exhibit G (Data, Integration, and Testing Requirements).

9. Failure to Meet Availability Requirements

If Supplier fails to comply with Uptime Metric specified in Section 2, the following reductions in management fees will be applied:

1. Third incidence of non-compliance will result in a 5% reduction in management fee payment for all Grid Services
2. Fourth incidence of non-compliance will result in a 10% reduction in management fee payment for all Grid Services
3. Each successive incidence of non-compliance will result in an additional 5% reduction in management fee payment for all Grid Services
4. 22nd incidence of non-compliance will result in a 100% reduction in management fee payment for all Grid Services

The first and second incidences of non-compliance will not result in any reductions in management fees.

10. Unique Authorization

Access to and use of the GSDS is restricted to Supplier’s authorized users only. Supplier shall be responsible to ensure all Supplier users maintain the security of any password, username, or other form of authentication involved in obtaining access to the Software. Usernames and passwords must be uniquely assigned to a specific individual and may not be shared by multiple individual at any one time or transferred.
11. Participant Company Account Numbers

Supplier may not use a Participant’s Company Account number for tracking or display purposes. The GSDS may not reflect a Participant’s Company Account number, but must use a unique identifier associated with the Participant account.

12. Datacenter and Security Requirements

Supplier agrees that the GSDS will use a SAS 70 Type II certified (or equivalent) datacenter in a manner consistent with the following requirements:

1. Supplier shall implement and maintain procedures to segregate Company’s Participant data from Supplier’s data and data belonging to Supplier's other customers.

2. Supplier shall establish and maintain appropriate environmental, safety and facility procedures, data security procedures and other safeguards against the destruction, corruption, loss or alteration of the GSDS and any Company or Participant data, and to prevent unauthorized access, alteration or interference by third parties of the same.

3. In order to prevent unauthorized use access to Company or Participant data or Company or Participant’s Confidential information or Grid Services Capability or underlying infrastructure, Supplier shall implement measures to delete or otherwise disable user accounts for those employees, agents, representatives or affiliates of Supplier that have been terminated or voluntarily discontinue their relationship with Supplier. Such measures shall ensure that such user accounts are deleted or disabled within twenty four (24) hours of termination or voluntary discharge.