Distributed Energy Storage Interconnection

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## Grid Connected Storage as Market Resource

<table>
<thead>
<tr>
<th>Voltage Level of Project</th>
<th>Charging State</th>
<th>Interconnection Process</th>
<th>Rate Structure</th>
<th>Upgrade Cost Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission</td>
<td>Discharge</td>
<td>CAISO cluster study (FERC)</td>
<td>Wholesale</td>
<td>Generator funded, with partial to full reimbursement</td>
</tr>
<tr>
<td></td>
<td>Charge</td>
<td>PG&amp;E serial load study (CPUC)</td>
<td>Wholesale / Retail</td>
<td>Depends on Jurisdiction, should match rate treatment</td>
</tr>
<tr>
<td>Distribution</td>
<td>Discharge</td>
<td>PG&amp;E WDT (FERC)</td>
<td>Wholesale</td>
<td>Generator responsibility</td>
</tr>
<tr>
<td></td>
<td>Charge</td>
<td>PG&amp;E WDT (FERC) or Rule 15/16 (CPUC)</td>
<td>Wholesale / Retail</td>
<td>Depends on Jurisdiction, should match rate treatment</td>
</tr>
</tbody>
</table>
## Storage as Grid Asset

<table>
<thead>
<tr>
<th>Inter-connection Level</th>
<th>Authorization Authority</th>
<th>Criteria</th>
<th>Policy Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission</td>
<td>Capacity: CAISO (FERC) as rate based asset, via the annual Transmission Planning Process</td>
<td>Meet NERC reliability needs</td>
<td>Dual use application (Order 784) issues potentially too vague for implementation by CAISO and CPUC; narrow nature of reliability criteria likely to result in underutilization of single use assets</td>
</tr>
<tr>
<td>Distribution</td>
<td>PG&amp;E (CPUC) as rate based asset</td>
<td>Reliability needs</td>
<td>Policy not established with respect to additional interconnection study requirements (CAISO interconnection initiative)</td>
</tr>
</tbody>
</table>
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Interconnection

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The Emerging Market for Customer-Side Energy Storage

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