

BULK POWER ENERGY STORAGE PROCUREMENT OF SCHEDULING AND DISPATCH RIGHTS – REQUEST FOR PROPOSAL

National Grid

September 30, 2019

APPENDIX J – IT ARCHITECTURE QUESTIONNAIRE

Comments/Questions for Establishing Energy Storage Goal and Deployment Policy (“Storage Order”).³ where National Grid is directed to procure at least 10 MW of Storage

1. Please describe the connectivity you will provide from the Storage Management System to National Grid’s Control Room (EMS/ADMS) Services
 - a. Please describe the connectivity options to National Grid’s Control Systems
 - b. Please describe the protocols used to connect the systems
 - c. Please describe how this link(s) will be secured

2. Please describe the connectivity you will provide from the Storage Management System to National Grid’s IT System to provide system performance and analytic information.
 - a. Please describe your connectivity options available to National Grid (eg VPN, MPLS). Are resilient options available? What is the connectivity SLA?
 - b. Please describe the required bandwidth
 - c. Please describe how this link(s) will be secured
 - d. Please describe the information you will make available to National Grid.
 - e. Please describe where this information will be delivered from? Will it be directly from the field location or a cloud data center.
 - f. If the data is cloud hosted, where is your cloud offering hosted? (eg AWS, Azure, other data center)

3. Please describe the NYISO Point of Interconnection (“POI”) and how you propose to send/receive electronic signals from National Grid and meet NYISO communications and metering requirements to enable participation in NYISO markets.
4. Please describe (including security) how the provided Marketer services will interconnect with the Storage Management System, National Grid EMS/ADMS and the NYISO.
5. Please describe the proposed design (including security) and activities associated with implementing the communication requirements between the Storage Energy Management System, NYISO for measurement and verification (“M&V”) and National Grid EMS/DMS.

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6. Please describe how the Storage Management System provides the following:

- Real-time monitoring data (i.e., alarms, status, SoC, real and reactive power flow, etc.)
- Full storage control and dispatch capability up to ratings specified in this RFP
- Direct integration with EMS/ADMS and provision of communications
- Communications and revenue grade metering to NYISO for M&V
- Communications between the Storage Management System and the Trading & Dispatch software.
- Storage maintenance schedule and notifications
- Dual control and priority authorization capability (between National Grid and the Marketer)