

## **FUTURE GRID**

*Project Name*

## **NATIONAL GRID USA SERVICE CO., INC.**

*Prime Recipient*

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*Project Co-Manager*

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**SUMMARY:** The Future Grid project will deploy innovative digital technology solutions to maximize the value of distributed energy resources (DER) through advanced network management, resource orchestration and control. The project will leverage and build upon foundational grid modernization investments in AMI, ADMS, DERMS and FLISR currently underway in our electric service territories across New York and Massachusetts through the following three components:

1

### **Enhanced FLISR-DER Integrations**

Enhancing National Grid's outage management system by integrating DER into FLISR schemes through system integrations with ADMS, DERMS, and AMI

2

### **Network-Adaptive DER Connections**

Enhancing the operational flexibility of DER for critical load balancing functions by integrating National Grid's flexible interconnection schemes with ADMS and DERMS

3

### **Substation-Edge Computing**

Deployment of cloud-edge computing software to enhance interoperability between smart grid technologies to provide real-time monitoring and control of the distribution system

## **OBJECTIVES**

- Improving visibility of the distribution system to grid operators, to help quickly rebalance the system with autonomous controls, through data analytics, software, and sensors
- Enhancing interoperability and data architecture of systems that support two-way flow of both electric power and localized analytics
- Aggregation and integration of DER and grid-edge devices to provide system benefits

## **SMART GRID FUNCTIONALITY**

- Adaptive controls
- Real-time, granular data
- Flexible DER operations
- Multi-way communications
- Autonomous controls
- Grid-edge sensing capabilities



## **GRID-BENEFITTING OUTCOMES**

- Improved system resiliency and reliability
- Increased DER integration
- Improved operational flexibility
- Improved economics for DER developers and customers