

Date: December 17, 2015

To: THE TRUSTEES

From: THE PRESIDENT and CHIEF EXECUTIVE OFFICER

SUBJECT: Operations Network II – Capital Expenditure Authorization Request

SUMMARY

The Trustees are requested to authorize capital expenditures in the amount of \$10,714,200 for the implementation of a new Operations Network as per the Authority's Expenditure Authorization Procedures ("EAPs"). These expenditures have been included in the 2016 Capital budget.

BACKGROUND

In accordance with the Authority's EAPs, the award of non-personal services or equipment purchase contracts in excess of \$3 million, as well as personal services contracts in excess of \$1 million if low bidder, or \$500,000 if sole-source or non-low bidder, requires the Trustees' approval.

The Authority has a heterogeneous environment of various types of telecommunication equipment that make up the 'Operations network' infrastructure. This environment has grown and evolved over the past twenty years without an integrated design philosophy. A number of issues have been identified that need to be addressed:

- Cyber Security Risks – The installation of a new Operations Network will provide additional protection for the Authority in the event of a breach of its system.
- Management Difficulties – the age and variety of telecommunication circuits from numerous carriers present many problems in 'Outage Events.' For example, location of the problem; who should be called; staffing skills required to support the issue; how long the issue existed; and how long it will take to clear the 'Outage.'
- Lack of Circuit Redundancy – many of the current circuits are 'single path' without 'route diversity' and backup.
- End of Life Technology – many of the circuits the Authority depends on are being phased out by the carriers.

The original Operations Network project was utilized to implement the work associated with the BG network. Operations Network II will use that implementation model for implementation of the remaining facilities including CEC, HLT, NIA, POL, STL, as well as 21 utility locations.

DISCUSSION

The current infrastructure that has evolved over the past twenty years supports operations at the Authority's facilities. The types of uses include inter-facility communication of 'Real-Time Systems,' telemetry data acquisition for Supervisory Control and Data Acquisition ('SCADA') and Energy Management System ('EMS'), communication for Remote Terminal Units ('RTUs'), Access Control, Security, Video Surveillance, Radio communication, Protection Relay's communication and communication with the New York Independent System Operator ('NYISO') and other utilities.

The project requires the building of a new Operations Network, separate from the business Local Area Network ('LAN'), based on new technology – Multi-Protocol Label Switching ('MPLS') – provided by a single carrier. This new environment will have security and monitoring built in from the ground up in order to meet and exceed current North American Electric Reliability Corporation ('NERC') Critical Infrastructure Protection ('CIP') compliance and audit requirements.

The establishment of this new MPLS infrastructure will provide the following:

- Aggregate all circuits under one contract with a single carrier
- Segregation of the Operations Network from the Corporate Business Network
- Provide a new environment to monitor all Operations Circuits for Cyber Security
- Provide Centralized Management of the Status and Health of all circuits
- Reduce Costs of Operation

This project is a multi-year effort that will begin in 2016 and should be completed in 2018. It will involve engineering design, new hardware and software, installation and testing.

The major components of the funding are as follows:

• Engineering Design, Hardware, Software, Vendor Labor	\$ 5,632,000
• Internal Labor	\$ 4,572,000
• HQ Overhead	<u>\$ 510,200</u>
Total	<u>\$ 10,714,200</u>

FISCAL INFORMATION

Payments associated with this project will be made from the Capital Fund.

RECOMMENDATION

The Chief Information Officer – Information Technology recommends that the Trustees approve the Capital Expenditure Authorization Request in the amount of \$10,714,200 for the Operations Network II.

For the reasons stated, I recommend the approval of the above-requested action by adoption of the resolution below.

Gil C. Quiniones
President and Chief Executive Officer

RESOLUTION

RESOLVED, That in accordance with the Authority's Expenditure Authorization Procedures, Capital Expenditures are hereby approved as recommended in the foregoing memorandum of the President and Chief Executive Officer, in the amount and for the purpose listed below:

<u>Capital</u>	<u>Expenditure Authorization</u>
Operations Network II	<u>\$ 10,714,200</u>

AND BE IT FURTHER RESOLVED, That the Chairman, the President and Chief Executive Officer, the Chief Operating Officer and all other officers of the Authority are, and each of them hereby is, authorized on behalf of the Authority to do any and all things and take any and all actions and execute and deliver any and all agreements, certificates and other documents to effectuate the foregoing resolution, subject to the approval of the form thereof by the Executive Vice President and General Counsel.