COMING INTO FOCUS DELIVERING ON THE VISION



JOINT VENTURE 5 2013 ANNUAL REPORT • OHIO MUNICIPAL ELECTRIC GENERATION AGENCY



Brian O'Connell, PE Vice Chair Director of Utilities City of Bowling Green

Letter to PARTICIPANTS

The Belleville Hydroelectric Facility, owned by participating members of the Ohio Municipal Electric Generation Agency Joint Venture 5 (OMEGA JV5), set a generation project record in 2013, exceeding feasibility study estimates by 51,368 megawatt hours (MWh) – or 21 percent.

The Belleville plant generated 296,234 MWh during the year, which represents an 80.52 percent capacity factor. Of the balance of lost availability, river conditions accounted for 16.45 percent. Outage de-rates claimed 2.24 percent and operational de-rates totaled 0.79 percent (3.03 percent total non-flow related).

JV5's 15 diesel units ran an average of 31 hours in 2013 compared to the 10-year average of 17 hours annually. This strategy is yielding a transmission savings of approximately \$220,000 and a Reliability Pricing Model (RPM) savings of approximately \$700,000. RPM is PJM's market-based approach to acquiring sufficient generation capacity to serve their forecasted peak load plus a reserve margin. Installed capacity is procured on a three-year-ahead basis through an annual auction held each May.

Beyond the exceptional generation output, significant upgrades and repair work were also completed in 2013. This included upgrading station batteries to valve regulated lead acid (VRLA), and completing upgrades and repair of the cross trash rake. Outages occurred for the Unit 1 and 2 generator inspections, repairs and electrical testing; and Unit 2 distribution section repairs and upgrades. Repairs were made to the areas of corona buildup found during the inspection and testing of each generator. The Unit 2 work included upgrading wicket gate cartridge components with 304 stainless, which will provide extended service life; and finding and correcting the root cause of binding of the operating ring during the distribution section repairs, which fixes an ongoing issue since the commissioning of Unit 2.

Staff also facilitated several compliance efforts, including battery charger load testing for the North American Electric Reliability Corp.; diesel UST testing and staff training for the West Virginia Department of Environmental Protection; National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines (RICE) reporting for the U.S. Environmental Protection Agency; and hydrographic surveys, and dam safety surveillance and monitoring reporting for the Federal Energy Regulatory Commission.

AMP's Belleville staff is developing a comprehensive (long-term) preventative maintenance plan and a comprehensive environmental health & safety program, as well as adopting industry standards for maintenance intervals of vital equipment.

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Brian O'Connell, PE *Vice Chair*



Project Overview

Ohio Municipal Electric Generation Agency Joint Venture 5 (OMEGA JV5) is a cooperative project composed of 42 American Municipal Power (AMP) member communities. Besides the Belleville Hydroelectric Plant, which began commercial operations

in 1999, the joint venture consists of backup generation resources and approximately 26.5 miles of 138-kilovolt transmission facilities. AMP developed and operates the project on behalf of OMEGA JV5 participants.









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