# JOINT VENTURE 5-ANNUAL REPORT 2014



# LETTER TO PARTICIPANTS

For the second consecutive year, the 42-megawatt (MW) Belleville Hydroelectric Facility set a project generation record. The Ohio River plant produced 304,007 megawatt-hours (MWh) in 2014 for the 42 participating members of Ohio Municipal Electric Generation Agency Joint Venture 5 (OMEGA JV5). This exceeded the previous record, set in 2013, by 7,773 MWh and represents a capacity factor of 82.6 percent.

Belleville's 2014 generation was also 59,162 MWh more than the 1992 feasibility study projections and 50,477 MWh over its historical annual average. It also exceeded 90 percent capacity six out of 12 months. That was the most that 90 percent threshold has been crossed in any of the plant's 15 years of operation.

With its 2013 and 2014 performances combined, Belleville generated a total of 600,241 MWh and had a capacity factor of 81.5 percent. These past two years contributed significantly to the plant achieving a net generation of 4 million MWh in February 2015, a milestone reached six months ahead of original forecasts.

#### - FLOW, MAINTENANCE AID IN SUCCESS -

Helping Belleville set its numerous operating records last year were great flow conditions. Flow-related derates – the periods when the plant generates at lower capacity because Ohio River levels are too high or too low – accounted for 16.38 percent of lost output. That was significantly below the facility's annual flow-related derate average of 27.55 percent.

Of the 16.38 percent of output lost, high river levels were responsible for slightly more than half. Ice had a minimal impact on flow, despite prolonged subzero temperatures in early 2014 creating the most significant icing conditions Belleville has experienced.

Non-flow-related derates – the periods of lower capacity resulting from equipment failures, testing or repair work – were also lower in 2014. At just under 1 percent, they were one-third the historical project average. Improvements in preventive maintenance practices, planning and scheduling helped achieve this low rate.

#### - NEW EPA RULES AFFECT USE OF DIESEL UNITS -

Due to the U.S. Environmental Protection Agency's (USEPA) new RICE NESHAP (National Emissions Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines) rules that went into effect in May 2014, JV5's 15 diesel units were no longer able to peak shave during the transmission peak hours in 2014.\* The units are still permitted to participate in PJM's demand response program, which will provide approximately \$1 million in revenue during PJM's June 2015-May 2016 planning year.

Before the start of the RICE/NESHAP rules, the units were able to operate for 14 hours during the Polar Vortex in January 2014 and in March, when market prices exceeded \$500 per megawatt-hour. Diesel generation during these hours saved JV5 members more than \$100,000.

#### -UPGRADES, MAINTENANCE COMPLETED-

Beyond the exceptional generation output, a number of maintenance-related projects and system upgrades were completed in 2014. They included vegeta-

tion clearing by AMP Forestry on the right of way of JV5's 138-kilovolt transmission line, an emergency lighting upgrade, and on Unit 1, installation of a new fire pump and replacement of a failed unwatering pump. Maintenance during the fall outage included main power transformer electrical testing, generator electrical testing and inspections, control system loop checks and diver inspection of the downstream retaining wall weep-holes.

In addition, staff facilitated a number of compliance efforts. These included the biennial alignment/settlement monument survey, which is a key component in Belleville's Dam Safety Surveillance & Monitoring Program, and the five-year Part 12D independent consultant safety inspection and potential failure mode assessment review. Focused on project structural integrity, the review was conducted by Federal Energy Regulatory Commission inspectors and MWH engineers, who made minor recommendations that AMP addressed.

Belleville staff also hosted and assisted in training staff operators for the Cannelton and Meldahl hydroelectric projects that were in the commissioning stage in preparation for 2015 operation. Staff provided training in plant equipment/systems, as well as in operations and maintenance.

## - PROJECT FINANCING PROVIDING COST SAVINGS -

Belleville's value is further increasing as JV5 retires its debt, some of which is being paid ahead of schedule for a significant cost savings to participants.

In February, all the OMEGA JV5 Series 2004 beneficial interest refunding certificates (BIRCs) were redeemed using AMP's revolving line of credit, a lower cost of borrowing at the time, and secured by a promissory note OMEGA JV5 issued to AMP. This debt restructuring followed the OMEGA JV5 participants' vote at their 2013 annual meeting to call the outstanding BIRCs when they became eligible in February 2014.

The resulting balance was \$65,891,509 by Feb. 28, 2014. JV5 participants expected to continue to pay debt service at approximately the amortization schedule originally used for the Series 2004 BIRCs, increasing the amount paid down for principal due to the lower cost of borrowing. The resulting note receivable had been reduced at Dec. 31, 2014, to \$57,679,473. AMP will continue to collect debt service from JV5 participants until the note is paid in full.

2014 was a year in which OMEGA JV5 and the Belleville Hydroelectric Facility truly demonstrated the value of this investment in renewable and sustainable power by the 42 participating member communities.



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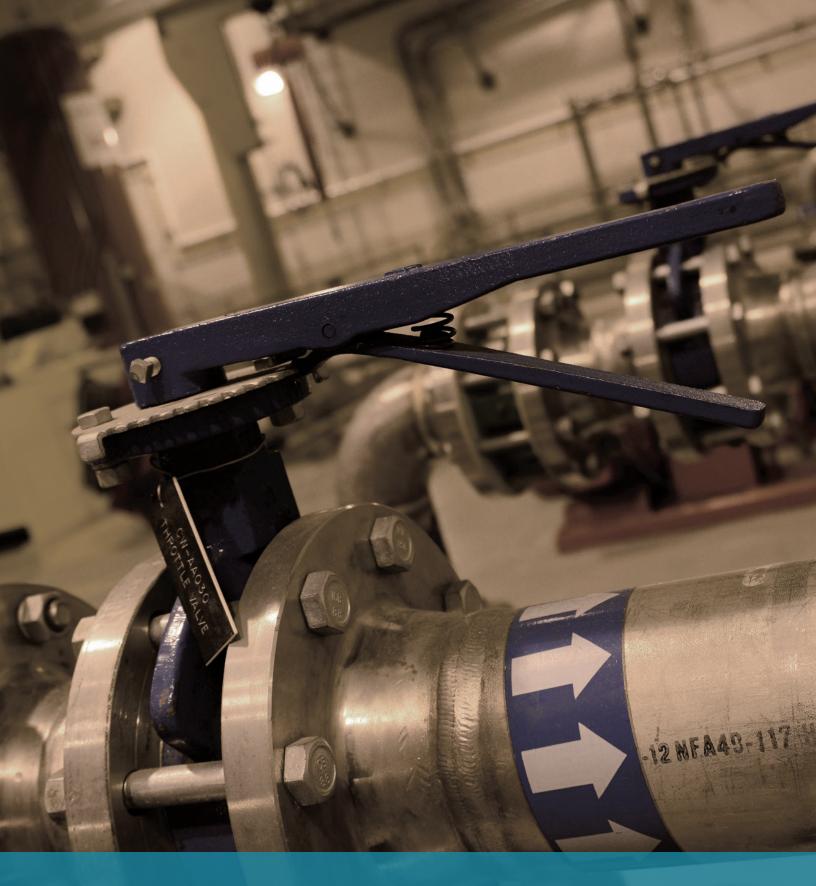
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<sup>\*</sup>A May 1, 2015, ruling by the D.C. Circuit Court of Appeals regarding the 2013 USEPA RICE NESHAP emissions rule has AMP and the American Public Power Association evaluating impacts on interim operation long-term viability of emergency generators enrolled in demand response programs. The court said USEPA acted "arbitrarily and capriciously" when it modified NESHAP and the New Source Performance Standards under the Clean Air Act to allow commercial backup generators to operate without emissions controls for up to 100 hours per year as part of an emergency demand response program. The hours limit was raised to 100 hours from 15 hours in a 2013 rulemaking.

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