Sustainability Performance
At A Glance
Third Quarter 2016
Included below is AMP’s 2016 Q3 “At a Glance” sustainability report. The quarterly update is intended to measure and compare the progress of sustainability metrics while also highlighting accomplishments in the quarter. If you have any questions or would like additional information, please contact Adam Ward, assistant vice president of environmental affairs and policy, at award@amppartners.org or 614.540.0946.

2016 AMP/OMEA ANNUAL CONFERENCE

More than 400 representatives from member communities, AMP staff and municipal electric partners attended the 2016 AMP/OMEA Conference held in Columbus Sept. 26-29. Featured speakers included Sue Kelly, president/CEO of the American Public Power Association (APPA), and Mike Zenker, senior director of NextEra Energy Resources. Conference sessions provided attendees with the opportunity to learn about current and future AMP projects, as well as industry trends and technologies, energy markets and state and federal legislation.

In addition, a panel was held focused on the emerging trends associated with cost declines observed in the solar and energy storage industry. Julia Hamm, president/CEO of the Smart Electric Power Alliance (SEPA) spoke about the continued price declines across the solar sector including utility, commercial and residential installed cost per watt pricing.

Hamm also described the different services battery storage can provide to the grid among specific market participants. Emerging battery technology use cases have been illustrated to provide over 13 different services across the grid, including transmission (spinning reserves and frequency regulation), distribution (upgrade deferral, voltage support and capacity factor) and end-use customers (demand charge reductions and backup power). Panelists emphasized battery use case scenarios must be examined on a case-by-case basis, and that the projected value of energy storage projects must be carefully weighed against first costs and value streams. Panelists also noted that continued cost declines, similar to those observed in the solar and wind industry, are being seen in the battery storage industry.

Other highlights from the annual conference included AMP’s continued movement from hydro project development to operations, continued investigation of products and services that could prove beneficial to members, and working with members to ensure they are maintaining systems, developing rate designs and interconnection standards to prepare for the grid of the future. AMP continues to move toward more diverse power supply, substantially increasing member access to renewable energy resources in 2016-2017.

Note:
• Member coal includes Puducuh and Princeton’s Prairie State energy purchased through KMPA
• Wind & Solar includes member contracted solar
• Hydro includes member-owned hydro
• 2017 resource mix includes 60 MW of new solar
FOCUS FORWARD MEMBER TOOLKIT
AMP presented the Focus Forward Member Toolkit results during a general session at the 2016 AMP/OMEA Conference. The report and related resources are available on the AMP Member Extranet. The Focus Forward Member Toolkit represents AMP’s initial effort to educate and inform members about Distributed Energy Resources (DER). The report is broken into two main components, a Rate Design Guide and Interconnection Checklist, and also includes four case studies of AMP members who have taken action on DER matters and the lessons they learned in the process.

“With the publication of the Focus Forward Member Toolkit, American Municipal Power has taken a leadership role in the transformation of the U.S. energy sector being driven by the growth of distributed energy resources on the grid,” said Julia Hamm. “AMP is ensuring members have the options and practical tools to create their own roadmaps to foster stakeholder engagement and energy system change, based on local markets and interests.”

AMP offers special appreciation to the consultant partners who assisted with the development of the toolkit and the members who volunteered to participate as case study profiles, including Ephrata, Hudson, Minster and Wadsworth.

SOLAR POLICY & PROJECT DEVELOPMENTS
AMP DG Solar, a wholly owned subsidiary of NextEra Energy Resources, has continued construction progress on the first Tier I sites. Construction at Bowling Green included build out of the 69 kV transmission line with panels, as well as the concurrent installation of fencing and additional facility materials. Construction is near completion at the Bowling Green, Prospect and Marshallville sites. Front Royal, Coldwater and Smyrna will likely be completed in 2017. Additional due diligence and planning for Tier 2 sites continues.

EFFICIENCY SMART
At the end of the third quarter 2016, actual savings achieved under the second Efficiency Smart contract stood at 56,638 MWh, 200 percent of the three-year target goal. A new version of the program, Efficiency Smart 3.0, is being readied for subscription starting through the fall of 2016. Efficiency Smart 3.0 will feature multiple product options at a variety of price points, including four performance-based options with included savings guarantees and an à la carte menu of energy efficiency options that would supplement or supplant the performance-based options, as is highlighted in the program comparison chart below:

<table>
<thead>
<tr>
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<th>Guaranteed Performance Services</th>
<th>Community “A La Carte” Services</th>
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<tbody>
<tr>
<td></td>
<td>Enhanced (4.5% annual municipal electric load reduction)</td>
<td>Business Energy Rebates</td>
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<td>High (1.5% annual municipal electric load reduction)</td>
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<td></td>
<td>Basic (0.5% annual municipal electric load reduction)</td>
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<td>Moran owned programs</td>
<td>Custom Commercial and Industrial (0.5% annual C&amp;I load reduction)</td>
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<td>Custom Only Financial Incentives</td>
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<tr>
<td></td>
<td>Prescriptive Only Financial Incentives</td>
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<td></td>
<td>Prescriptive Forms Available Via Website</td>
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<td>Account Management Services</td>
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<td>Technical Services</td>
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<td>Community Outreach Services</td>
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<td>Community Service Organization Partnerships</td>
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<td></td>
<td>Community-Specific Delivery Strategy</td>
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<td></td>
<td>Coordinate Marketing and Promotional Activities with Local Utility</td>
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<td></td>
<td>Savings Guarantee</td>
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<td></td>
<td>Savings Verification</td>
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<td></td>
<td>Savings Review</td>
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<td></td>
<td>Potential to Bid into PJM Forward Capacity Market</td>
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</table>

*special pricing*
AMI CONTINUED PROGRAM ROLLOUT

AMP’s advanced metering infrastructure (AMI) program provides an alternative to traditional metering for members. The AMI program allows a lower cost acquisition of electric, water and gas meters, and communications equipment through purchasing aggregation, sharing of key resources necessary to deploy meters and systems operation, and providing the IT infrastructure using a shared services operating model. The aggregated scale of the program has enabled AMP to contract with top-tier providers in the marketplace, giving members access to technology and capabilities previously out of reach in order to build and deploy the foundations necessary for a smart city.

AMP and members are collaborating on a pilot program to deploy smart meter infrastructure. This consists of advanced meters, field communication networks, customer web portals and back office system integrations; all with an emphasis on cyber security. AMP has partnered with industry-leading technology partners to deliver a comprehensive solution. Consider the following:

- Local utilities need to get fully educated on AMI.
- Third parties such as Google are trying to get between you and your customers.
- The AMP program can make AMI feasible for both large and small utilities.
- AMP provides fully managed AMI-headend and meter data management system.
- Advanced cybersecurity, intrusion prevention, data encryption and monitoring of all systems.
- No meter vendor lock-in.
- Economies of scale from collaborative procurement.
- Dedicated staff to manage the system and issue resolution.
- A joint action agency history focused on collaboration to build economies of scale.

For additional information about AMP’s AMI program, please contact Jared Price, assistant vice president of IT and chief technology officer, at 614.540.1069 or jprice@amppartners.org; or Branndon Kelley, chief information officer, at 614.540.0879 or bkelley@amppartners.org.

ECOSMART CHOICE Q3 2016 PERFORMANCE TOTALS ARE TALLIED

Eight member communities purchased more than 13,000 MWh of green power in the third quarter through AMP’s Ecosmart Choice program. The program is designed to offer a green pricing option for individuals and companies who are interested in purchasing up to 100 percent renewable energy through the purchase of renewable energy certificates (RECs). In addition, the EcoSmart Choice program welcomes the City of Hudson as the ninth participating community in the green pricing program.

ENVIRONMENT

emissions in short tons

July 1, 2016 – Sept. 30, 2016

CO2 emissions: 1,125,713
SO2 emissions: 580
NOx emissions: 282
PM emissions: 34.96
CO emissions: 12.3
VOC emissions: 2

ENERGY EFFICIENCY & ECOSMART CHOICE

REC SALES

July 1, 2016 – Sept. 30, 2016

Efficiency Smart Percent of 2014-2016
Target: 200%
Efficiency Smart - Cumulative Savings
Through 10/1/16: 56,638 MWh
EcoSmart Choice REC Sales: 13,000 MWh

AMP HEADQUARTERS RECYCLING

July 1, 2016 – Sept. 30, 2016

AMP HQ Recycled Glass, Plastic & Metals
(in lbs): 75
AMP HQ Recycled paper and cardboard
(in lbs): 2,200
### AMP RENEWABLE ENERGY PRODUCTION: EMISSIONS AVOIDANCE

<table>
<thead>
<tr>
<th></th>
<th>Q3 MWh</th>
<th>Quarterly GHG emissions avoided (Tons)</th>
<th>Quarterly emissions avoided SO2 (Tons)</th>
<th>Quarterly emissions avoided NOx (Tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belleville Hydro (JV5)</td>
<td>46,445</td>
<td>23,547</td>
<td>37.3</td>
<td>18.1</td>
</tr>
<tr>
<td>Greenup Hydro</td>
<td>81,988</td>
<td>41,567</td>
<td>65.5</td>
<td>31.97</td>
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<tr>
<td>Meldahl Hydro</td>
<td>109,205</td>
<td>55,366</td>
<td>87.3</td>
<td>42.5</td>
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<tr>
<td>Cannelton Hydro</td>
<td>125,513</td>
<td>63,635</td>
<td>100.4</td>
<td>48.9</td>
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<tr>
<td>Willow Island Hydro</td>
<td>35,665</td>
<td>18,082</td>
<td>28.5</td>
<td>13.9</td>
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<tr>
<td>AMP Wind Farm (JV6)</td>
<td>1,218</td>
<td>617</td>
<td>0.97</td>
<td>0.47</td>
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<tr>
<td>Napoleon Solar</td>
<td>1,441</td>
<td>730</td>
<td>1.15</td>
<td>0.56</td>
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<tr>
<td>Landfill Gas</td>
<td>71,666</td>
<td>36,334</td>
<td>57.3</td>
<td>27.9</td>
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<tr>
<td>Blue Creek Wind</td>
<td>16,156</td>
<td>8,191</td>
<td>12.9</td>
<td>6.3</td>
</tr>
</tbody>
</table>

### POWER GENERATION

in net MWh

*July 1, 2016 – Sept. 30, 2016*

- AMP Wind Farm (JV6): 1,218
- AMP Fremont Energy Center (AFEC): 1,046,041
- Belleville Hydro (JV5): 46,455
- Greenup Hydro: 81,988
- Meldahl Hydro: 109,205
- Cannelton Hydro: 125,513
- Willow Island Hydro: 35,655
- Prairie State Generating Co. (PSGC) (delivered to participants): 741,881
- Distributed Generation: 18,909
- Landfill Gas: 71,666
- Blue Creek Wind: 16,156
- Napoleon Solar: 1,441

### HEALTH & SAFETY

*July 1, 2016 – Sept. 30, 2016*

- Employee Work Related Fatalities: 0
- Reportable Incidents or Accidents: 1
- Lost Work Day Incidents: 0

### COMMUNITY

*July 1, 2016 – Sept. 30, 2016*

- AMP Employee Charitable Giving: $1,700