



# SUSTAINABILITY PERFORMANCE

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## At A Glance Second Quarter 2016

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AMERICAN MUNICIPAL POWER, INC.

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Included below is AMP's 2016 Q2 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 David Deal, director of energy policy and sustainability, at 614.540.0840 or ddeal@amppartners.org.

## FOCUS FORWARD TOOLKIT

Throughout the summer of 2016, AMP and selected consultants worked on the development of a rate design guide and refinement of AMP's existing interconnection checklist. AMP staff collaborated with consultant partners over a 12-week period to develop the AMP Focus Forward Member Toolkit and the results were presented during the AMP/OMEA Conference, Sept. 26-29.

## SOLAR POLICY & PROJECT DEVELOPMENTS

AMP DG Solar, a wholly owned subsidiary of NextEra Energy Resources, has officially broken ground on the first Tier 1 sites. Construction preparations began in Bowling Green, with panels, fencing and additional facility materials being delivered to the site. Construction continues to move forward on facilities in Marshallville and Prospect, with intended start dates in fall 2016.

Tier 1 of Solar Phase II, which encompass six solar facilities, is expected to be in full operation by first quarter 2017. Tier 2 will add additional solar facilities and is projected to be completed by the end of 2017.

## AMI CONTINUED PROGRAM ROLLOUT

As momentum grows for smart cities being a vehicle for sustainability, AMP's members find themselves evaluating myriad technologies, often with overlapping capabilities. Members are faced with a choice between deploying these technologies on their own or subscribing to a vendor-provided service and outsourcing valuable business knowledge.

AMP's advanced metering infrastructure (AMI) program provides a better alternative to members by allowing a lower cost acquisition of electric, water and gas meters, and communications equipment through purchasing aggregation, sharing of key resources necessary to deploy 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.

For additional information about AMP's AMI program, please contact Jared Price, assistant vice president and chief

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## ENVIRONMENT emissions in short tons

*April 1, 2016 – June 30, 2016*

**CO2 emissions:** 993,382

**SO2 emissions:** 549

**NOx emissions:** 204.8

**PM emissions:** 23.35

**CO emissions:** 33.68

**VOC emissions:** 2.26

## ENERGY EFFICIENCY & ECOSMART CHOICE REC SALES

*April 1, 2016 – June 30, 2016*

**Efficiency Smart Percent of 2014-2016**  
**Target:** 119%

**Efficiency Smart - Cumulative Savings**  
**Through 7/1/16:** 55,278 MWh

**EcoSmart Choice REC Sales:** 12,400 MWh

## AMP HEADQUARTERS RECYCLING

*April 1, 2016 – June 30, 2016*

**AMP HQ Recycled Glass, Plastic & Metals**  
**(in lbs):** 145

**AMP HQ Recycled paper and cardboard**  
**(in lbs):** 2,700

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## EFFICIENCY SMART

At the end of the second quarter 2016, actual savings achieved under the second Efficiency Smart contract stood at 55,278 MWh, which was 119 percent of the three-year target.

A new version of the program, Efficiency Smart 3.0, is being readied for subscription starting in the fall. Efficiency Smart 3.0 will feature a multiple product options at a variety of price points, including four performance-based options with included savings guarantees and an a la carte menu of energy efficiency options that would supplement or supplant the performance-based options.

## ECOSMART CHOICE

Eight member communities purchased more than 12,400 MWh of green power in the second 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).

## BLOOD DRIVE

Staff and friends at AMP headquarters helped save lives through the second annual AMP blood drive to benefit the American Red Cross on May 3. The drive produced 26 productive units.

AMP defines "corporate sustainability" as a business approach that creates long-term member value by maximizing opportunities and minimizing risks related to a host of economic, environmental, and community or societal considerations. The blood drive is one way AMP meets these expectations for the community.

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## AMP HYDRO UPDATE

As of early 2016, the Cannelton, Willow Island and Meldahl plants were all in commercial operation. A monthly energy production summary of the hydro facilities is highlighted below.

Construction progress continues at the Smithland plant, including work at the powerhouse including completion of all three bulb noses, termination of the 161 kV cable, and start-up activities for the powerhouse systems. The approach and tailrace channel have been riprapped and site work on the recreation areas, sidewalks and warehouse continues.

Month	Combined Hydro kWh			Total Combined kWh	Belleville kWh	Meldahl kWh	Greenup kWh*
	Smithland	Cannelton	Willow Island				
Jan	-	1,411,851	11,177,986	12,589,837	30,997,451	7,218,973	-
Feb	-	5,864,965	15,026,562	20,891,528	19,507,170	10,543,316	-
March	-	14,093,484	23,687,471	37,780,955	26,965,965	18,099,057	-
April	-	27,933,415	24,343,940	52,277,355	19,621,764	32,387,198	-
May	-	9,269,444	25,147,087	34,416,531	30,177,629	26,128,405	19,761,616
June	-	25,473,086	19,924,110	45,397,196	25,315,395	16,324,413	28,888,506

\*Greenup kWh: AMP became a 48 percent share owner of the Greenup project with the City of Hamilton in May 2016 following commercial operation of the Meldahl project.

## AMP RENEWABLE ENERGY PRODUCTION: EMISSIONS AVOIDANCE

	Q2 MWh	Quarterly GHG emissions avoided (Tons)	Quarterly emissions avoided SO2 (Tons)	Quarterly emissions avoided NOx (Tons)
Belleville Hydro (JV5)	75,114	38,082.80	60.47	14.85
Greenup Hydro	66,066	33,495.46	53.18	13.06
Meldahl Hydro	74,840	37,943.88	60.25	14.80
Cannelton Hydro	62,675	31,776.23	50.45	12.39
Willow Island Hydro	69,415	35,193.41	55.88	13.73
AMP Wind Farm (JV6)	2,412	1,222.88	1.94	0.48
Napoleon Solar	1,507	764.05	1.21	0.30
Landfill Gas	71,518	36,259.63	57.57	14.14
Blue Creek Wind	30,044	15,232.31	24.19	5.94

## POWER GENERATION

in net MWh

April 1, 2016 – June 30, 2016

**AMP Wind Farm (JV6): 2,412**

**AMP Fremont Energy Center (AFEC): 779,988**

**Belleville Hydro (JV5): 75,114**

**Greenup Hydro: 66,066**

**Meldahl Hydro: 74,840**

**Cannelton Hydro: 62,675**

**Willow Island Hydro: 69,415**

**Prairie State Generating Co. (PSGC) (delivered to participants): 635,712**

**Distributed Generation: 2,332**

**Landfill Gas: 71,518**

**Blue Creek Wind: 30,044**

**Napoleon Solar: 1,507**

## HEALTH & SAFETY

April 1, 2016 – June 30, 2016

**Employee Work Related Fatalities:**  
0

**Reportable Incidents or Accidents:**  
0

**Lost Work Day Incidents:**  
0

## COMMUNITY

April 1, 2016 – June 30, 2016

**AMP Employee Charitable Giving: \$3,000**

