



SUSTAINABILITY PERFORMANCE

At A Glance Second Quarter 2020

April 1, 2020 — June 30, 2020

AMERICAN MUNICIPAL POWER, INC.

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Included below is American Municipal Power, Inc.'s (AMP) 2020 second quarter (Q2) "At a Glance" sustainability report. The quarterly update is intended to measure and compare the progress of sustainability metrics while also highlighting accomplishments. If you have questions or would like additional information, please contact Erin Miller, assistant vice president of energy policy and sustainability, at 614.540.1111 or emiller@amppartners.org.

FINAL SOLAR PHASE II SITE OPERATIONAL

On June 1, the final site in the Solar Phase II Project, located in Wadsworth, began commercial operation. In 2016, AMP entered into a joint development



The final Solar Phase II site in Wadsworth

agreement with DG AMP Solar, a wholly owned subsidiary of NextEra Energy Resources, for the development, construction and operation of up to 60 megawatts (MW) or more of new solar electric generation facilities located in AMP member communities. Under the agreement, AMP prepaid for a portion of the projected energy output upon commercial operation of each site. The innovative structure provides additional economics to the overall power purchase agreement price. The first and largest of the Solar Phase II Project sites was a 20 MW facility located in Bowling Green, which went operational in January 2017. Since that time, a total of 16 sites have been constructed totaling more than 58 MW.

The [Solar Phase II Project](#) consists of 22 AMP member participants that receive renewable energy from each of the 16 sites.

AMP GIVES BACK

AMP staff donated \$2,573 to the Mid-Ohio Foodbank's COVID-19 Relief Fund. The Mid-Ohio Foodbank typically provides enough food for 150,000+ meals each day. The AMP donation will provide up to \$23,000 worth of groceries or 8,200 meals for hungry families. In addition, staff at the Willow Island and Belleville hydroelectric plants donated a collection of non-perishable items for the Lubec Community Food Pantry in West Virginia.

AMP HOLDS WEBINAR ON COMMUNITY PEAK SHAVING PROGRAMS

On June 4, AMP held a webinar on Peak Shaving Program changes.



The webinar covered ways to improve communication with customers regarding reducing electricity costs during peak load periods this summer, the basics of peak shaving, AMP's peak alert notification process and AMP's Community Energy Savings Days toolkit. To receive a link to a recording of the webinar, contact Sam Wolfe at swolfe@amppartners.org.

EARTH DAY

Fifty years ago, on April 22, 1970, the first Earth Day was celebrated. Due to COVID-19, many events were cancelled or postponed this year, including AMP's annual e-waste and secure shred collection drive.



AMP staff members celebrate Earth Day

AMP provided ideas and suggestions for staff to celebrate Earth Day at home. In response, staff did things like enjoying time outdoors, capturing and reusing rainwater, and using reusable towels instead of paper.

JOLENE THOMPSON ASSUMES AMP PRESIDENT/CEO POSITION

The AMP Board of Trustees named Jolene Thompson as AMP's new President and CEO, and she assumed the role on April 1, following the March 31 retirement of longtime President and CEO Marc Gerken, who led the organization for nearly two decades.



Thompson joined AMP in 1990 and has held several leadership roles. She most recently served as executive vice president of member services and external affairs. In this role, she provided oversight to AMP's government relations, communications, technical services, environmental affairs, sustainability, risk, insurance, strategic planning and member programs. She advocated with state and federal policy makers on behalf of AMP and its members and led the launch of a \$26-million Efficiency Smart end-use energy efficiency program.

Nationally, she serves as chair of the American Public Power Association (APPA) Board of Directors and she has held several roles as an active member of the Transmission Access Policy Study (TAPS) Group Board of Directors.

Gerken remains with AMP as a consultant to assist with the transition.



OEP MAKES DIGITAL MATERIALS FOR ENERGY EDUCATION AVAILABLE TO ALL AMP MEMBER COMMUNITIES



In response to COVID-19 and associated school closures, the Ohio Energy Project (OEP) expanded availability of digital resources to teachers and students. OEP

transitioned many training and classroom activities to online resources to accommodate teacher sessions converting to remote programs. These resources were made available to teachers in all AMP member communities.

AMP is a supporter and board member of the OEP. At the request of the AMP Board of Trustees, OEP is making training videos and materials available to all AMP member community schools. As Ohio's leading energy education experts, OEP has been serving teachers, students, families and partners since 1984. They provide classrooms with educational resources on the sources and forms of energy, energy efficiency and conservation, and economic and environmental impact of energy use.

AMP, DEMEC MEMBER COMMUNITIES AWARDED RP3 DESIGNATIONS

The American Public Power Association (APPA) recognized 15 AMP members and four DEMEC members with Reliable Public Power Provider (RP3) designation for the year 2020.

- Cuyahoga Falls, Hamilton, Hillsdale, Minster, Paducah and Westerville were awarded RP3 Diamond status.
- Columbus, Dover (DEMEC), Jackson Center, Montpelier, Napoleon, Princeton, Tipp City, Versailles and Wapakoneta were awarded RP3 Platinum status.
- Milford (DEMEC), Newark (DEMEC), Painesville and Seaford (DEMEC) were awarded RP3 Gold status.

Congratulations to these communities. They bring the total number of AMP members with RP3 designation to 30, and DEMEC members to five.

The RP3 program recognizes utilities that demonstrate high proficiency in reliability, safety, workforce development and system improvement. Criteria within each of the four RP3 areas are based upon recognized industry-leading practices.

For more information, contact Jennifer Flockerzie at jflockerzie@amppartners.org or 614.540.0853.

DEED GRANT APPLICATION APPROVED FOR FUNDING

The Demonstration of Energy & Efficiency Developments (DEED) Board of Directors approved AMP's DEED grant application and related proposed project: Public Power Grid-Interactive Heat Pump Water Heater Guidebook and Calculator, for full funding (\$85,460).



Over the next year, AMP will work with its members, and project partner VEIC, to study the potential for grid-interactive heat pump water heaters (HPWH) in AMP member communities and develop a guidebook and interactive HPWH calculator to support adoption of grid-interactive HPWH by public power utilities.

The American Public Power Association DEED program funds research, pilot projects and education to improve the operations and services of public power utilities. Learn more about DEED [here](#).

AMP HONORED WITH TWO APPA AWARDS


AMP has received the American Public Power Association (APPA) Energy Innovator Award in recognition of the [Public Power Electric Vehicle \(EV\) Planning Toolkit and Guidebook](#) (login required), and the 2020 Award of Continued Excellence in recognition of AMP's commitment to innovations designed to improve public power utilities' operations and services.

The Energy Innovator Award recognizes utility programs that have demonstrated advances in the development or application of creative, energy-efficient techniques or technologies that provide better service to electric customers or projects and increase the efficiency of utility operations or resource efficiency. Judging criteria also includes transferability and takes into account project scope in relation to utility size.

The Award of Continued Excellence recognizes organizations that show a continued commitment to the APPA's DEED program and its ideals, including support of research, development and demonstration, improving efficiency, renewable resources and support of public power.

To see the full Energy Innovator Award news release, click [here](#). To see the full Award of Continued Excellence news release, click [here](#).

EFFICIENCY SMART

In response to COVID-19,  Efficiency Smart launched two new services for subscribing communities:

1. Small Business Advice service to provide free remote, one-on-one consultations. During these consultations, Efficiency Smart's energy engineers help solve specific energy challenges.
2. Home Energy Challenge to help households save energy and money. It encourages residents to investigate items in their homes that use electricity, identify ways to reduce consumption and become more energy efficient. After completing the challenge, residents receive energy-saving products.

The fourth Efficiency Smart contract reported a savings of 3,605 MWh (net) at the end of the second quarter. There are currently 25 communities participating in the program.

For more information, visit www.energysmart.org.

FOCUS FORWARD

EV Subgroup hosts webinar on May 14

The Focus Forward Advisory Council and Electric Vehicle (EV) Subgroup hosted the EV Fleet webinar, which focused on fleet electrification. The webinar featured Patricia Taylor, senior manager of regulatory policy and business programs for the American Public Power Association and Andrew Burnham, principal environmental scientist for Argonne National Laboratory. Taylor reviewed the motivations and considerations for fleets to electrify; the potential roles for public power; and highlighted trends and examples from across the country. Burnham gave an overview of vehicle, battery and EV charging station research being conducted by Argonne and shared their AFLEET tool, developed to assist fleet managers and other decision makers examine the costs and benefits associated with fleet electrification.

The webinar recording can be viewed [here](#) (login required).

AMP Board of Trustees adopts policy position for carbon reductions

On May 21, the AMP Board of Trustees adopted a policy position for carbon reductions. The [Resolution](#) states that the Board supports policies to reduce carbon emissions if done in such a way as to maintain a reliable electric grid, ensure affordable electric rates for retail customers, and provide consistency, fairness and equitable treatment of public power. The Resolution further describes components that should be included in any future carbon reduction policies or legislative efforts at the state and federal level.

ECOSMART CHOICE

Ten member communities purchased 28,609 megawatt hours (MWh) of renewable energy in the second quarter through AMP's free EcoSmart Choice program.



The EcoSmart Choice 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 and retirement of renewable energy certificates.

LEGISLATIVE AND REGULATORY UPDATES

On April 15, the U.S. District Court for the District of Montana vacated the U.S. Army Corps of Engineers (ACOE) Nationwide Permit (NWP) 12 for Utility Line Activities. NWP 12 was commonly used in energy projects to authorize utility line activities that have minimal adverse environmental effects on waters of the United States (WOTUS). The Court's ruling made permit applications for constructing electric lines, fiber optic cable, substations and other utility projects more complex and costly to prepare, and takes substantially longer for ACOE to review and approve.



On May 11, the Court issued a revised ruling that limited the judgement to new oil and gas pipelines. This means that NWP 12 is once again available for use by electric utilities that are involved in projects that may affect WOTUS but have minimal adverse impacts. Since changes to the NWP program could have negative impacts on future maintenance or construction projects, AMP will continue to follow this issue as it progresses through the courts of appeal.

On June 29, AMP provided comments on the U.S. Environmental Protection Agency's proposed rule "Review of the National Ambient Air Quality Standards for Particulate Matter". Comments can be found [here](#).

AMP RENEWABLE ENERGY PRODUCTION, ENERGY EFFICIENCY: EMISSIONS AVOIDANCE

	Q2 2020 MWh	CO2 emissions avoided (Tons)*	SO2 emissions avoided (Tons)*	NOx emissions avoided (Tons)*	Total emissions avoided (Tons)
Belleville Hydro (JV5)	68,980	29,351	18.97	15.52	29,385
Greenup Hydro **	37,402	15,915	10.29	8.42	15,933
Meldahl Hydro	106,122	45,155	29.18	23.88	45,208
Cannelton Hydro	85,561	36,406	23.53	19.25	36,449
Willow Island Hydro	62,130	26,436	17.09	13.98	26,467
Smithland Hydro	45,562	19,387	12.53	10.25	19,409
AMP Wind Farm (JV6)	2,378	1,012	0.65	0.54	1,013
Napoleon Solar	1,434	610	0.39	0.32	611
Landfill Gas ***	91,142	595,934	25.06	20.51	595,979
Blue Creek Wind	32,894	13,996	9.05	7.40	14,013
EcoSmart Choice	28,609	12,173	7.87	6.44	12,187
Efficiency Smart	1,449	617	0.40	0.33	617
Solar Phase II	34,012	14,472	9.35	7.65	14,489
Carbon Offset**** Reforestation Projects	467 acres	122			122
					811,884

* <https://www.pjm.com/-/media/library/reports-notice/special-reports/2019/2019-emissions-report.ashx?la=en>

** AMP's share of the Greenup Hydro facility is 48.6 percent.

*** Includes direct emissions reduced from methane (CO_{2e}) and avoided emissions from CO₂. <https://www.epa.gov/lmop/landfill-gas-energy-benefits-calculator>

**** USEPA estimates 1.043 tons of CO₂ is sequestered annually by one acre of average U.S. forest.

GREEN BOND FINANCED PROJECTS – Q2 2020 REPORT

	Meldahl	Combined Hydro (Cannelton, Willow Island, Smithland)	Solar Phase II
Net Renewable Capacity (MW)	108.8	208	36.8
Net Renewable Generation (MWh)	106,122	193,253	22,719
Capacity Factor (%)	45%	43%	N/R
Emissions Avoidance			
CO ₂ (GHG) emissions avoided (Tons)	45,155	82,229	9,667
SO ₂ emissions avoided (Tons)	29.18	53.14	6.25
NO _x emissions avoided (Tons)	24.41	44.45	N/R

2019 PJM Market Power Emissions Rate ^[1]	
CO ₂ (GHG) emissions Factor (lbs/MWh)	851
SO ₂ emissions Factor (lbs/MWh)	0.55
NO _x emissions Factor (lbs/MWh)	0.46

2019 PJM Market Power Fuel Breakdown ^[2]	
Nuclear	33.60%
Natural Gas	36.20%
Coal	23.80%
Wind and Solar	3.20%
Hydroelectric	2.00%
Other	1.20%
Total	100.00%

^[1] [PJM 2015-2019 CO₂, SO₂ and NO_x Emissions Rates Report April 9, 2020](#)

^[2] [PJM State of the Market Report, 2019 Table 3-50](#)

N/R - not required for reporting

POWER GENERATION

in net MWh

April 1, 2020 — June 30, 2020

AMP Wind Farm (JV6): 2,378

AMP Fremont Energy Center (AFEC):* 1,009,149

Belleville Hydro (JV5): 68,980

Greenup Hydro:* 37,402

Meldahl Hydro: 106,122

Cannelton Hydro: 85,561

Willow Island Hydro: 62,130

Smithland Hydro: 45,562

Prairie State Energy Campus (PSEC):** 708,366

Distributed Generation: 3,312

Landfill Gas: 91,142

Blue Creek Wind:** 32,894

Napoleon Solar: 1,434

Solar Phase II: 34,012

* Total plant

** AMP's share

HEALTH AND SAFETY

April 1, 2020 — June 30, 2020

Employee Work Related Fatalities:

0

Recordable Incidents or Accidents:

0

Lost Work Day Incidents:

0

COMMUNITY

April 1, 2020 — June 30, 2020

AMP Employee Charitable Giving: \$6,439.50

ENVIRONMENT
emissions in short tons (AFEC, AMP share of Prairie State*, gas and diesel turbines)
April 1, 2020 — June 30, 2020

CO2: 1,258,717.5	SO2: 611.7	NOx: 293.8
PM: 31.9	CO: 33.9	Hg (in lbs): 4.2
	VOC: 8.4	

**Prairie State data not yet certified*

**HAZARDOUS, UNIVERSAL,
OTHER WASTE**

April 1, 2020 — June 30, 2020

7,800 lbs.

**TRASH PULLED FROM
THE OHIO RIVER**

April 1, 2020 — June 30, 2020

71,710 lbs.

**ENERGY EFFICIENCY AND ECOSMART CHOICE
REC SALES**

April 1, 2020 — June 30, 2020

Efficiency Smart Cumulative Savings 2014 — 2020: 120,592 MWh 2020 Q2: 1,449 MWh	EcoSmart Choice REC Sales: 28,609 MWh
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RECYCLING AND REUSE

April 1, 2020 — June 30, 2020

Recycled glass, plastic, metals, paper and cardboard
6,074 lbs.