



2020  
SUSTAINABILITY  
REPORT



# SUSTAINING **Change**

AMERICAN MUNICIPAL POWER, INC.



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# LETTER to Members

*While 2020 challenged the electric industry and its consumers in new ways, AMP and our public power members remained undaunted. We rose to the challenges wrought by the COVID-19 pandemic in a manner that was true to public power's core values and in a way that supported AMP's stated sustainability goals and principles.*

As we worked to achieve a more balanced and sustainable power supply portfolio, our internal Carbon Leadership Team continued to help prepare the organization and our members for the potential of a carbon-constrained future. This cross-departmental team provided educational information to members on the carbon and renewable positions of their power supply and adopted a policy position for carbon reductions. By year's end, AMP's greenhouse gas (GHG) emissions reduction total is 28 percent since baseline year of 2015.

Throughout the year, in an effort to provide members with direct assistance the Focus Forward Advisory Council (FFAC) held five webinars on topics including electric vehicle (EV) public charging, fleets and time-based rate design; designed services for customers; and provided best practices for communicating with customers. In addition, the FFAC released Consumer's Guide to Rooftop Solar for members to provide their customers with helpful information about rooftop solar and third-party financing.



AMP's programs, such as Efficiency Smart™, that help residents, businesses and communities use less energy, proved especially valuable during 2020, when many small businesses were suffering due to the economic downturn. In direct response to COVID-19, Efficiency Smart offered new services, such as Small Business Advice for help with specific energy challenges, a bonus incentive for small businesses that purchased LED products from designated local suppliers and a free home energy assessment tool to residential customers. In 2020, the 25 AMP member communities participating in the program conserved 9,206 megawatt hours of power.

The AMP Board of Trustees approved new AMP Mission, Vision and Values statements — placing a priority on providing our members with forward-looking services and solutions, managing resources wisely and sustainably and embracing innovation and new technology. At the same time, AMP also prioritized new strategies to promote an inclusive culture through an increased emphasis on AMP's Diversity and Inclusion Statement.

2020 proved to be a year of perseverance for AMP and its members. Throughout this report, you will see examples of how we have used our principles as a guide to create long-term sustainability for AMP and our members.



**Jolene Thompson**  
President/CEO, AMP



**Jeff Brediger**  
Chair of the AMP Board of Trustees  
Director of Utilities, Orrville

*Jolene Thompson*

*Jeff Brediger*

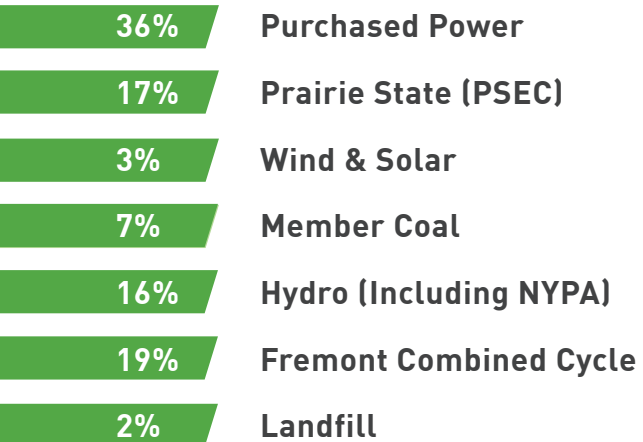
# PRINCIPLE

# 1

## Providing a balanced and sustainable power supply portfolio

AMP is committed to providing our members with a variety of power supply options to best satisfy their respective preferences, values and needs. This includes maintaining a balanced portfolio of generation projects, power purchase agreements and a potential project development pipeline that includes cost-effective power supply options. In addition, AMP will integrate that energy efficiency, demand response and distributed energy resource (DER) options are available for members to integrate into members' portfolios. AMP maintains a balanced portfolio of generation projects and power purchase agreements, including coal, natural gas, diesel, hydropower, landfill gas, solar and wind. The AMP member energy resource mix was approximately 21 percent renewable resources in 2020. Visit the "Generation" section of the AMP website for additional information. <https://www.amppartners.org/> A few of the many noteworthy items regarding AMP's power supply portfolio in 2020 are highlighted below.

### 2020 AMP Member Energy Resource Mix



## Hydropower

American Municipal Power, Inc. (AMP) has one of the largest deployments of run-of-the-river hydroelectric generation in the region. The six facilities that AMP operates or owns, in whole or in part, on the Ohio River generated 1,882,698 megawatt hours (MWh) of renewable energy in 2020. Additionally, a number of AMP member communities operate their own locally-sited hydroelectric facilities.

Several generation records were set at AMP's hydroelectric plants in 2020, including:

- In June, the net energy output from the Meldahl Hydroelectric Plant exceeded 64,000 MWh. Meldahl delivered an average of 90 megawatts (MW) per hour to participants, which is an 86-percent capacity factor for the 105-MW facility.
- In July and August, the net energy output from the Smithland Hydroelectric Plant exceeded 102,000 MWh, which set a new two-month production record for the plant since its start-up in summer 2017. Smithland delivered an average of 68.6 MW per hour to participants, which is a 90-percent capacity factor for the 76.2-MW facility.

AMP projects benefitted from favorable market conditions. The issuance of \$105.3 million Combined Hydroelectric Projects Revenue Bonds Refunding Series 2020A to refund \$129.4 million in previously issued bonds achieved an \$18.6 million savings. This savings results in a 14.4 percent net present value for project participants.

## Solar

Development of new solar continued as part of the AMP Solar Phase II Project, a partnership between AMP and DG AMP Solar, LLC, a subsidiary of NextEra Energy Resources. The Solar Phase II Project added 8.875 MW of capacity with the addition of two commercially operational facilities in Wadsworth.

The Solar Phase II Project consists of 22 AMP member participants that receive renewable energy from the project, which includes 16 sites, totaling more than 58 MW.

The first and largest of the Solar Phase II Project sites is a 20-MW facility located in Bowling Green that began commercial operation in January 2017. The Bowling Green facility performed at a 41-percent capacity factor in 2020, producing the site's all-time high of 5,933 MWh of solar generation. This is equivalent to the monthly electricity usage of a town with a population of approximately 8,000.

## Demand Response

Summer 2020 was one of the warmest on record, which resulted in a large number of peak alerts. Additionally, it was the first summer that PJM Interconnection, LLC, required all behind-the-meter generation units that peak shave to operate during PJM generation emergency events (with consequences for nonperformance).

Throughout the summer, AMP issued peak alerts weekly, with day-ahead and day-of instructions using a color-coded system to help members make more customized choices on how aggressively to peak shave. When peak events were forecasted, AMP encouraged member communities to share AMP-developed content, such as the Summer Efficiency Tips video and Community Energy Savings Day digital communication materials. In addition, AMP's combustion turbines ran approximately 98 hours and AMP's diesel units ran approximately 90 hours. The collective efforts of AMP and member communities resulted in approximately \$83 million in transmission and capacity savings.

In addition, AMP continued its partnership with CPower Energy Management and worked with 20 members to enroll larger commercial/industrial customers in PJM's Capacity Market Demand Response Program, for a total of 239 MW and program revenue of approximately \$2.5 million to AMP, its members and their customers.



## PRINCIPLE

# 2

### Reducing our overall emissions profile

AMP is committed to minimizing pollution, reducing waste and conserving natural resources by designing, constructing, operating and maintaining its facilities in an environmentally sound and responsible manner in compliance with all environmental obligations. AMP also prudently invests in projects to offset GHG emissions from its fossil generation resources. AMP continues to provide efficient and reliable power while also striving to reduce and mitigate airborne emissions. Some highlights of AMP's efforts to reduce AMP's overall emissions profile include:

### Carbon Leadership, Mitigation and Resilience

Since the baseline year of 2015, AMP has reduced its greenhouse gas (GHG) emissions by 28 percent and GHG intensity from its power supply by 21 percent.





Through the internal, cross-departmental Carbon Leadership Team, AMP:

- Provided educational information to members on the carbon and renewable positions of their power supply, issuing 18 member sustainability reports;
- Kept abreast of carbon and climate-related news;
- Attended webinars and stakeholder meetings;
- Adopted a policy position for carbon reductions ([available here](#)); and
- Updated its GHG emission inventory\*\*

*\*AMP power supply includes AMP's share of ownership in power generating assets and the power purchased on behalf of its members.*

*\*\*AMP uses The Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard, equity share approach, covering Scope 1 (direct from power generating assets and fleet vehicles), Scope 2 (indirect from energy used to power its facilities) and limited Scope 3 (power purchases — market or direct power-purchase agreements — made on behalf of its members).*

## EcoSmart® Choice

The EcoSmart Choice program offers a green-pricing option for individuals and companies interested in purchasing up to 100 percent renewable energy through the purchase of renewable energy certificates (RECs).

The 10 communities participating in the EcoSmart Choice program purchased 117,714 MWh of green power (backed by RECs) through the program in 2020, representing a 15.8 percent increase over 2019. These RECs offset 46,556 tons of carbon dioxide (CO<sub>2</sub>) emissions, 25.31 tons of sulfur dioxide (SO<sub>2</sub>) emissions and 21.19 tons of nitrogen oxide (NO<sub>x</sub>) emissions.\*

Participants were awarded Sustainability Grants totaling \$173,182 for their participation in EcoSmart Choice for program year 2019. Sustainability Grants are intended to incentivize participation in EcoSmart Choice, and are awarded from unused program funds at the direction of the AMP Board of Trustees.

*\*Avoided emissions is derived from the amount of energy conserved multiplied by the [PJM market power emissions rate](#).*



# PRINCIPLE 3

## Using less

AMP recognizes the importance of energy efficiency as a strategy for improving system cost effectiveness, customer retention and business development. Reducing electricity demand and usage through innovative conservation efforts and efficiency improvements offered to AMP member communities results in conservation of natural resources and emissions reductions. AMP promotes the “reduce, reuse, recycle” principles of sustainability to its members and employees and throughout its operations. AMP provides and facilitates programs and services to its members in an effort to use less.

### Efficiency Smart

AMP's Efficiency Smart program helps residents, businesses and communities use less energy and save money by providing cost-effective energy efficiency services that provide reliable and verifiable cost savings.

# EFFICIENCY\$MART



In 2020, 25 communities participated in the program, conserving 9,206 MWh. The cumulative net savings of the program (Jan. 1, 2011 – Dec. 31, 2020) are 247,241 MWh, which offset 97,784 tons of CO<sub>2</sub>, 53.16 tons of SO<sub>2</sub> and 44.5 tons of NO<sub>x</sub> emissions. In total, across all subscribing members, Efficiency Smart achieved more than \$190 million in utility cost savings between 2011 and 2020.

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

- Small Business Advice service to provide free remote, one-on-one consultations with energy engineers to help solve specific energy challenges.
- Bonus incentives for small businesses that purchased LED products from designated local contractors and suppliers.
- Free online Home Energy Assessment Tool for residential electric customers of participating communities.
- Home Energy Challenge encouraging 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 received energy-saving products.

Visit [www.energysmart.org](http://www.energysmart.org) for more information. Data listed for 2020 is preliminary and subject to third-party verification.

*\*Avoided emissions is derived from the amount of energy conserved multiplied by the [PJM market power emissions rate](#).*

## Energy Education

AMP is a supporter and board member of the OEP, which provides classrooms in member communities across AMP's footprint with educational resources on the sources and forms of energy, energy efficiency and conservation, and the economic and environmental impact of energy use.

The COVID-19 pandemic forced many school closures across the country, so the Ohio Energy Project (OEP) transitioned many training and classroom activities to online resources to accommodate teacher sessions converting to remote programs. At the request of the AMP Board of Trustees, these resources were made available to teachers in all AMP member communities.

In an effort to help public power customers save energy and money throughout the year, Efficiency Smart and AMP regularly shared efficiency-related content on social media and in Update, AMP's weekly e-newsletter, including a number of energy efficiency tips graphics. In total, these graphics reached more than 3,100 individuals and garnered almost 100 engagements.

## PRINCIPLE

# 4

## Assisting member communities

AMP member municipal electric systems are critical components in the success of the communities they serve. Investment of capital — both financial and human — in AMP member communities is essential to ensure a good quality of life and foster economic development and growth. AMP provides ongoing employee training, safety instruction, project engineering and other technical programs to ensure that member communities have access to the most up-to-date information and services in these areas. AMP also collaborates with interested member communities to identify and provide economic development services, energy efficiency opportunities and sustainable development opportunities consistent with local preferences, values and needs. Looking to the future, AMP's member-led Focus Forward Advisory Council strives to inform and prepare members for the evolving electric utility industry. AMP provides many member training programs and compliance services. More detailed information on how AMP assists members can be found in the separate 2020 AMP Annual Report.

### Member Relations

In 2019, AMP commissioned GreatBlue to conduct comprehensive research among AMP members to gain a deeper understanding of satisfaction with AMP's existing resources, services and communication methods. Twenty-two surveys were captured by phone and 60 were collected digitally.

A sample of some key findings:

- Overall, 96.3 percent reported AMP's overall performance in servicing members was "excellent" or "good," which was higher than the rating in 2015 (90.9 percent).
- While almost all members — 98.8 percent — rated "diversification of power supply resources" as "very" or "somewhat" important, fewer respondents rated "renewable energy in power supply resources" as "important," compared to 2015 (81.7 percent versus 87.9 percent in 2015).



- Additionally, 95.1 percent rated AMP “excellent” or “good” at how well it offers options to members to diversify power supply resources.
- When asked about the top three concerns facing their municipal utility, 51.2 percent reported “power supply costs” as a concern, 42.7 percent reported “rate competitiveness,” and 34.1 percent identified “transmission issues” as a concern.
- While 15.9 percent reported currently having “electric vehicle charging stations in their community,” more than 53 percent reported considering charging stations in their community in the future.

In response, more one-on-one meetings (mainly virtual) were held with members throughout 2020 to increase awareness of programs and services available to AMP members as well as to provide assistance with managing power supply costs and ways to integrate rate competitiveness programs into their communities. For example, economic development had a combination of 34 in-person and virtual meetings; Key Accounts had more than 150 consultation calls.

## eReliability Tracker

Through the APPA, AMP began offering eReliability Tracker service to all AMP members in 2015. There are 60 members participating in the program, receiving customized annual reports that analyze the utility’s outage information for the previous year and compares the data to other subscribers’ data in the same region and class size. Through active participation in the service, subscribers can earn a certificate of excellence and points toward APPA Reliable Public Power Provider (RP3) designation.

## Smart Energy Provider Program

The cities of Wadsworth and Coldwater received the Smart Energy Provider (SEP) designation by the APPA. There are only 94 communities nationwide that hold the designation.

The SEP designation recognizes public power utilities for demonstrating leading practices in four key disciplines: smart energy program structure, energy efficiency and distributed energy programs, environmental and sustainability initiatives, and the customer experience. The designation for Wadsworth and Coldwater is valid for two years, from Dec. 1, 2020 to Nov. 30, 2022.

This was the second year the designation has been awarded. Two other AMP member communities, Westerville and Bowling Green, also hold this designation.



## ICF Smart21 Communities

The cities of Hudson and Westerville were named Intelligent Community Forum's (ICF) Smart21 Communities. Additionally, Hudson and Westerville finished number six and five, respectively, among the Top 30 Intelligent Communities for Sustainability.

## Focus Forward

The member-led Focus Forward Initiative informs members of industry trends and emerging technologies and helps them prepare for further integration of distributed energy resources (DER) onto their systems.

During 2020, five webinars were held covering electric vehicle (EV) public charging, fleets and time-based rate design; designing services for customers; and learning best practices for communicating with customers. Webinars averaged 30 attendees, up from 20 in 2019, and were made available for viewing on the Member Extranet page. AMP staff assisted 15 members with developing a DER program/policy; 20 members with EV-related inquiries; three members with the Smart Energy Provider program; and had more than 200 individual member meetings/interactions.

The following resources were released:

- Public power EV public charging station case studies from the Borough of Lansdale, Danville Utilities and the City of Shelby.
- AMP, with assistance from the FFAC, created a *Consumer's Guide to Rooftop Solar* for members to share with their residential customers.

- An online EV customer education platform is being considered by the Focus Forward Advisory Council (FFAC). A subgroup was formed to participate in deeper-dive demonstrations of the platform and plans to make their recommendation to the AMP Board of Trustees in 2021.

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). AMP and project partner, VEIC, are using the funds to study the potential for grid interactive heat pump water heaters (HPWH) in AMP member communities and develop a guidebook and HPWH calculator to support adoption of grid interactive HPWH by public power utilities.



## Cybersecurity and Advanced Metering Infrastructure

Five members completed the Cyber Security Pilot Program; several more are interested in signing on in 2021. In addition, AMP is supporting Hometown Connections with resources to perform cybersecurity assessments for public power utilities nationally.

The Advanced Metering Infrastructure (AMI) Program continues to grow, adding new member communities and providing an expert AMI solution that is purpose built for the unique needs of municipal utility systems. To date, there are nine communities enrolled in the program, for a total of 30,340 meters.

AMP employees participated in an annual cybersecurity training/awareness seminar. AMP also shared information with the public, members and employees about utility scams and provided tips about what to do if someone calls or comes to your door claiming to be from the local utility asking for payment or personal information; what to do when threatened by ransomware at work; using the internet safely; how to avoid phishing; practicing caution when using online banking and more.

## Workforce: promoting careers in public power

In an effort to promote careers in public power, AMP launched a social media campaign, “Twenty careers in public power for 2020.” The campaign featured 20 different careers in public power throughout the year and won the APPA Excellence in Public Power Communications Award, Web and Social Category.

## Health and Safety

AMP assisted its member communities with resources to help them face challenges associated with the COVID-19 pandemic by:

- creating a members-only webpage to catalog sample policies and information from industry, state and federal governments;
- developing a listserv for members to interact with each other, seek ideas and share concerns;
- conducting roundtable conference calls with health experts; and
- supporting efforts by LPPC and APPA to represent the interest of public power in congressional economic relief efforts.

As part of AMP’s Technical Services offerings, four lineworker training courses were held with 56 participants representing 29 member communities from four states. The trainings were produced as videos and made available on the AMP Member Extranet and YouTube at AMPtv. There were 29 safety trainings held virtually in lieu of in-person visits due to travel restrictions.

# PRINCIPLE

# 4

## Environmental Services to Members

AMP provided members with environmental compliance support and guidance tailored to meet their unique needs. In 2020, AMP submitted 292 environmental compliance reports, and assisted with, or performed, 51 site inspections of AMP-owned or -operated facilities, and provided consultative support to a number of member communities for their on-site generation. In 2020, no significant violations were cited by environmental regulatory agencies. Additionally, AMP tracked regulatory developments at the state and national level, submitted comments on proposed rules and provided regular updates on these activities.





## PRINCIPLE

# 5

## Reaching out to stakeholders

AMP engages with stakeholder entities – including (but not limited to) government, business, academia, media and utility organizations – in an effort to ensure that they understand the purpose, role and value of public power, along with AMP’s mission and vision. AMP leverages this outreach to promote AMP and member interests. AMP encourages member communities to identify potential partnership opportunities as well. AMP continues to foster existing relationships with stakeholders and develop new ones. Several examples of how this was accomplished in 2020 are highlighted below.

### 2020 AMP Annual Conference

The 2020 AMP Annual conference was held Sept. 22–23 as a virtual event. The Conference successfully provided attendees with the educational sessions and industry-related insights that AMP members are accustomed to.

The conference included sessions covering a number of topics and trends in the power industry — including updates on the Federal Energy Regulatory Commission (FERC), PJM Interconnection (PJM), Midcontinent Independent System Operator, Inc. (MISO), the energy and gas markets, strategies for working with bond rating agencies, innovative thinking, economic development efforts and the annual federal legislative update. In addition to the many sessions and events, AMP held its general membership meeting during the two-day annual conference.



## Legislative and Regulatory

AMP tracked key regulations and provided updates to members regarding activities by FERC, PJM, MISO and U.S. Environmental Protection Agency (U.S. EPA), and monitored all legislation and policy developments relating to COVID-19 and climate/environmental issues, among others.

During the 2020 APPA Legislative Rally, more than 55 participants from 23 AMP member communities met with congressional lawmakers or their staff. These AMP members shared concerns over the continued sequestration of BABs and New CREBs, as well as increasing transmission costs and the recently adopted FERC order on PJM's Minimum Offer Price Rule (MOPR).

## Supporting Research and Development

AMP has been a member of the APPA Demonstration of Energy & Efficiency Developments (DEED) program since 2003. In 2017, AMP began paying the DEED dues on behalf of its 135 members. In an effort to encourage its members to participate in the program, AMP provides assistance to utilities in the grant application process.

In addition to DEED, AMP is an active member of the Smart Electric Power Alliance (SEPA) and serves on several of its working groups. AMP Board of Trustees member Chris Monacelli, electric utility manager for the City of Westerville, serves on SEPA's Utility Advisory Council.

AMP is also an owner of The Energy Authority (TEA), and Jolene Thompson, President/CEO of AMP, serves on the TEA Board. AMP participates in TEA's Innovation Team, an event that brings employees from a variety of TEA clients together as teams to create inventive solutions to issues challenging the public power industry.



## PRINCIPLE

# 6

### Leading by example

AMP encourages its officers and employees to lead by example through increased efforts to recycle and conserve energy, both at home and in the workplace. To the extent practicable, AMP uses its headquarters to demonstrate the use of green building principles, distributed energy resources and energy efficient technologies, thus leading by example. AMP assists members as they pursue innovations in the rapidly changing electric utility industry, increase environmental stewardship and meet customer needs. Through AMP's internal Innovation Team and industry group memberships, AMP strives to be informed and engaged as power sector technological advances and trends progress. AMP reports its sustainability and environmental stewardship actions on both a quarterly and an annual basis and, where possible, measures its success in achieving the goals laid out by these Sustainability Principles. Striving to be public power's trusted leader in providing members and their customers the highest-quality, forward-looking services and solutions, carries with it the responsibility to help set the standard for sustainability.

### Corporate Safety

AMP generation facilities placed third for the American Public Power Association's (APPA) Safety Award of Excellence for 2019 (awarded in 2020) and continued its strong corporate safety efforts with no lost-time accidents and one recordable incident for 2020.

AMP presented annual spill prevention, control and countermeasure (SPCC) plans, and conducted virtual regulatory training for plant staff at each hydroelectric plant.



## Employee Health and Safety

To ensure employee health and safety during the pandemic, AMP:

- implemented a mobile device health monitoring app;
- enabled remote work from home for most personnel;
- provided training on how to deal with COVID-19 and stress with employee assistance program partner, Matrix; and
- installed:
  - MERV-13 filters at facilities;
  - signage regarding hand-washing, occupancy limits, social distancing and mask requirements;
  - sanitizing stations in lobbies and elevators;
  - foot openers on all bathroom doors; and
  - motion-activated, 'touchless' faucets and soap dispensers in all bathrooms.

## North American Electric Reliability Corporation Compliance

The ReliabilityFirst Critical Infrastructure Protection (CIP) Self-Certification was completed with no findings and the 2018 audit was closed with no significant findings. AMP also offered three member-educational conference calls, co-hosted with Utility Services for seven members.

## Diversity, Equity and Inclusion

In 2020, to reach a wider, more diverse pool of candidates (i.e., LGBTQ+, persons of color and veterans), AMP deployed new strategies and partnerships to expand its recruiting efforts. AMP also adopted the following diversity and inclusion statement:

"AMP values and appreciates the strengths afforded by the different attributes, characteristics and experiences of each employee. AMP is dedicated to creating an inclusive workplace made up of employees who strengthen AMP with their diverse talents and perspectives gained through their age, race, culture, color, disability, ethnicity, religion, sexual orientation, gender identity, education, service to our country and unique personality.

AMP will continue to make a good faith effort to recruit and retain a diverse group of employees and will maintain its commitment to being an equal opportunity employer. In so doing, AMP and its employees can maximize their contributions to their community and those of AMP's members.

We are proud of AMP's inclusive culture that supports every employee's success and encourages an environment where they can feel challenged, appreciated, respected and engaged."

## Mentorship

The AMP Mentor Program, launched in August, was the result of suggestions received through the AMP employee engagement survey. The initial focus of the program was to pair recent hires with mentor volunteers to help build a successful foundation at AMP and help newer employees build trusted relationships to help guide them professionally.

The program was launched with 11 pairings and the feedback received from all involved was very positive. Based on the program's success, AMP will continue to match new hires with a staff mentor going forward. To qualify as a mentor, staff must have more than two years of experience with AMP, have the support of their department head and agree to meet the established guidelines and criteria.

## Scholarships

AMP provided 10 students with \$3,000 scholarships each (five Lyle B. Wright and five Richard H. Gorsuch). As of 2020, the program has given out \$378,000 in scholarships since its inception.

## Risk Management

In 2020, the organization's mission, vision and values statements were updated, and the Board of Trustees reaffirmed its strategic priorities:

- Engaged and Equipped Members (which includes member engagement and communication, member system benchmarking, member distribution systems, economic development and member IT)
- Engaged and High Performing Workforce
- Industry and Policy Relevance
- Operational, Financial and Administrative Excellence
- Transmission
- Power Supply
- Value and Cost Management

The Enterprise Risk Management (ERM) Program was also updated to incorporate changes published by the Committee of Sponsoring Organizations. The changes are designed to closely link the organization's mission, strategic plan, goal setting and ERM program.

## AMP DNA Award

Anthony (Tony) Belcher was recognized as the AMP 2020 DNA Award recipient. Belcher is the operations and maintenance supervisor of the Belleville Hydroelectric Plant and has been with the organization since 1998.

The annual award recognizes an employee who advances AMP's mission, vision and values.



## AMP Engagement Team

The Engagement Team's (E-Team) mission is to engage AMP employees through programs, activities and resources that support civic responsibility, health and wellness, and uphold AMP's sustainability principles.

### *Charitable Efforts*

- Held annual, company-wide holiday donation drives benefiting:
  - Audubon Area Community Services, Inc., Henderson and Owensboro, Ky.
  - Community Shelter Board, Columbus, Ohio
  - Family Service Society, Paducah, Ky.
  - Old Man Rivers Mission, Parkersburg, W.Va.
  - Toys for Tots
  - Mid-Ohio Food Collective, Grove City, Ohio
- Raised \$17,331 for 15 charities through payroll deduction

## Sustainability Efforts

AMP celebrated the 50th anniversary of Earth Day by providing 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.

*2020 AMP DNA Award recipient Anthony (Tony) Belcher, AMP operations and maintenance supervisor of the Belleville Hydroelectric Plant.*



***Virtual Activities***

Although COVID-19 kept staff from gathering in traditional ways, the E-Team organized photo submission events to keep staff engaged and held virtual lunch-and-learns on a variety of topics.

***Health and Wellness***

- AMP sponsored participation in the Turbine Runner 5K virtual race;
- distributed the Walgreens flu shot vouchers to all employees; and
- held a heart healthy challenge.

***AMP Sustainability Initiatives***

AMP completed a number of sustainability initiatives within its facilities to conserve natural resources and in many cases save money.

***Conserving and Protecting Water***

- In 2020, water use was reduced by 54 percent compared to 2019. Starting in March 2020 through the present, due to COVID-19, the majority of AMP’s headquarter employees worked from home.
- All existing restroom faucets were replaced with motion-activated “touchless” faucets at 0.5 gallons/minute (GPM). The old aerators on each faucet were 2.0 GPM.

***Conserving Energy***

- Due to low activity in the building from COVID-19, energy use in the building was reduced by 14 percent compared to 2019. Interior lighting remained off and the southern blinds were opened to let the sun heat the building.
- The primary two cable elevators were modernized — new electronics, controllers, variable frequency drives and LED upgrades were installed to increase efficiency.
- Electric use was offset at 1111 and 1201 Schrock Rd. facilities with renewable energy certificates.

***Green Transportation***

- AMP’s workplace Level 2 EV charging station served 198 charging sessions in 2020, dispensing 2,133 kWh and preventing 896 kg of GHG emissions.

***Waste Reduction***

AMP recycled 25,175 pounds of material from both the main building (1111 Schrock Rd.) and the adjacent building (1201 Schrock Rd.).



### Awards and Recognitions to AMP

AMP was honored with the APPA Energy Innovator Award in recognition of the *Public Power Electric Vehicle (EV) Planning Toolkit and Guidebook* and the APPA 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.

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.





# MEMBER Awards

## *Innovation Awards*

The AMP Innovation Award, which recognizes municipal utilities that have completed an innovative or unique project to better serve their customer-owners, was given to:

- Village of Yellow Springs Electric Distribution for the Leveraging Technology to Better Serve Citizens Project
- Dover Light and Power for the B004 Coal Combustion Upper Overfire Air System Nozzle Modification Project
- City of Hamilton Department of Infrastructure for the Utility Customer Experience Improvement Project
- Honorable Mention: Cleveland Public Power for the CPP GIS Project

## *Electric System Sustainability Awards*

The following members received the AMP Electric System Sustainability Award, which recognizes utilities that have made significant efforts in sustainability:

- Shelby Division of Electricity & Communication for the Shelby Solar Array Project
- Westerville Electric Division for the Commercial Solar Rebate Program
- Honorable Mention: City of Hamilton Department of Infrastructure for the Monarch Conservation and Pollinator Health Research Project
- Honorable Mention: Napoleon Power and Light for the LED Street Light Conversion Project
- Honorable Mention: Village of Yellow Springs Electric Distribution for the Streetscape Project



## System Improvement Awards

The AMP System Improvement Award, which recognizes utilities that have made a significant improvement in electric service and reliability to their customer-owners, was awarded to:

- Brewster Electric Utility for the South Substation Addition Project
- Jackson Center Municipal Electric System for the Jerry Drive Substation and 69-Kilovolt Pole Line Project
- City of Columbiana Electric Department for the Fiber Optic Backbone Project
- Jackson Municipal Electric Department for the Jamestown Substation Project
- City of Columbus Division of Power for the 69-Kilovolt Line Extension Project
- Cuyahoga Falls Electric System for the Sub-Transmission System 600 Ampere Switch Replacement Project
- City of Hamilton Department of Infrastructure for the Hamilton Enterprise Park Upgrades Project
- Honorable Mention: Berlin, Maryland, Electric Utility Department for the Power Plant #2 Engine Replacement Project
- Honorable Mention: Montpelier Electric Department for the Steuben Substation Relay Upgrades and Industrial Park Utility Easement Roads Project
- Honorable Mention: St. Clairsville Light and Power Department for the 30 Recloser Project
- Honorable Mention: Village of Yellow Springs Electric Distribution for the Overhead Primary Undergrounding Project Corry Street and Glenview Street Project
- Honorable Mention: Bowling Green Electric Division for the Dunbridge Substation Transformer Replacement Project
- Honorable Mention: City of Wadsworth Electric and Communications for the Akron Road Substation East Power Transformer Replacement Project
- Honorable Mention: Westerville Electric Division for the Hempstead Road Street Lighting Project

## Public Power Promotion Awards

The AMP Public Power Promotion Award recognizes utilities for their promotional efforts in marketing, consumer awareness and branding. The following members received the award in 2020:

- DEMEC for the Public Power Awareness Campaign
- City of Hamilton Department of Infrastructure for the EmPower Hamilton Round-Up Donation Feature
- Westerville Electric Division for the Holiday Light Recycling Program
- Honorable Mention: Napoleon Power and Light for the Napoleon High School Banner Project
- Honorable Mention: City of Wadsworth Electric and Communications for the Public Power Week Promotion Campaign
- Honorable Mention: Village of Yellow Springs Electric Distribution for the Making Residential Solar Equitable Program

## Safety Awards

Safety awards are presented to communities with no time lost due to reportable accidents or injuries.

In the **generation** category, an award was presented to:

- Bryan Municipal Utilities

In the **transmission and distribution** category, awards were presented to:

- Berlin, Maryland, Electric Utility Department
- Brewster Electric Utility
- Bryan Municipal Utilities
- Carey Municipal Light and Power
- City of Hamilton Department of Infrastructure
- Jackson Center Municipal Electric System
- Minster Electric Department
- Montpelier Electric Department
- Napoleon Power and Light
- New Martinsville Municipal Electric
- Oak Harbor Public Power
- Orrville Utilities
- Shelby Division of Electricity and Communication
- St. Clairsville Light and Power Department
- Village of Yellow Springs Electric Distribution

*Scott McKenzie, AMP director of member training and safety, maintained social distancing while conducting pole top and bucket rescue training in Piqua on June 17, 2020.*

**Electric Distribution Safety** commendations are given to communities with less than one percent of time loss due to reportable accidents or injuries.

Safety commendations for **generation** were presented to:

- Dover Light and Power
- City of Hamilton Department of Infrastructure
- Orrville Utilities

Safety commendations for **transmission and distribution** were presented to:

- Cleveland Public Power
- Cuyahoga Falls Electric System
- City of Wadsworth Electric and Communications
- Westerville Electric Division



## Hard Hat Safety Awards

The Hard Hat Safety program was established to recognize an employee in each member community who demonstrates safety at all times.

The following utilities have an AMP Hard Hat Safety Award winner:

- Berlin, Maryland, Electric Utility Department
- Bowling Green Electric Division
- Brewster Electric Utility
- Bryan Municipal Utilities (Transmission)
- Bryan Municipal Utilities (Generation)
- Carey Municipal Light and Power
- Cleveland Public Power
- Cuyahoga Falls Electric System
- Dover Light and Power (Generation)
- Borough of Ephrata Electric Division
- City of Hamilton, Hydroelectric Operations
- City of Hamilton, Department of Infrastructure
- Jackson Center Municipal Electric System
- Montpelier Electric Department
- Quakertown Electric Department
- Shelby Division of Electricity and Communication
- St. Clairsville Light and Power Department
- City of Wadsworth Electric and Communications
- Westerville Electric Division
- Village of Yellow Springs Electric Distribution

## Mutual Aid

Electric Distribution Mutual Aid Commendations were presented to:

- Village of Bradner Board of Public Affairs
- Clyde Light and Power
- Bowling Green Electric Division

*The 15 AMP members and four DEMEC members below received the Reliable Public Power Provider (RP3) designation from APPA for the year 2020. They bring the total number of AMP members with RP3 designation to 30, and DEMEC members to four.*



### GOLD

*Milford (DEMEC)  
Newark (DEMEC)  
Seaford (DEMEC)  
Painesville Municipal Electric*

### PLATINUM

*City of Columbus, Division of Power  
Jackson Center Municipal Electric System  
Montpelier Electric Department  
Napoleon Power & Light  
Princeton Electric Plant Board  
Tipp City Municipal Utilities  
Village of Versailles Utilities  
Wapakoneta Electric Department*

### DIAMOND

*Cuyahoga Falls Electric Department  
Hamilton Department of Infrastructure  
Hillsdale Board of Public Utilities  
Minster Electric Department  
Paducah Power System  
Westerville Electric Division*

# AMP'S SUSTAINABILITY Performance 2015-2020

## AMP Organization and Financial Metrics

	2015	2016	2017	2018	2019	2020
Number of member communities	131	135	135	135	135	135
Load (in million MWh)	16.5	16.7	15.8	17.2	17.2	14.1
System peak (in MW) (non-coincidental)	3,378	3,416	3,400	3,478	3,489	3,432
Electric revenue (in \$)	\$1,103,886,270	\$1,218,475,675	\$1,203,615,402	\$1,243,722,977	\$1,138,687,466	\$1,061,220,653
Service fees (in \$)	\$11,515,575	\$11,501,983	\$10,981,725	\$11,679,120	\$11,439,922	\$10,743,188
Programs and other revenue (in \$)	\$12,589,167	\$12,513,647	\$14,362,362	\$13,393,319	\$19,907,027	\$19,431,590
Operating expenses (in \$)	\$1,002,832,762	\$1,028,599,138	\$982,458,119	\$1,045,579,528	\$957,096,466	\$878,308,324
Net margin (in \$)	\$5,823,840	\$10,247,552	\$3,530,525	\$2,787,334	\$5,270,932	\$2,500,746
Value of assets (in \$billion)	\$6.49	\$6.76	\$7.03	\$6.20	\$6.47	\$6.12
Number of employees (AMP and MESA as of 12/31)	180	156	165	156	175	178
Total Women and Minorities on Board of Trustees	2	2	2	1	1	1

## Power Generation (in net MWh)

Prairie State Energy Campus (AMP share)	2,585,795	2,470,185	2,516,213	2,682,636	2,793,970	2,630,647
AFEC	3,429,684	2,683,313	3,058,684	3,973,452	3,439,836	3,411,576
Belleville Hydro	262,065	273,205	274,360	231,582	271,433	218,361
Distributed Generation (gas, diesel units: JV and AMP)	9,396	19,548	13,988	18,765	12,811	19,769
AMP Wind Farm	13,086	10,892	12,076	11,227	11,232	9,259
Napoleon Solar	5,111	4,888	4,905	3,736	4,119	4,458
Greenup Hydro	0	235,313	259,398	211,362	257,437	232,966
Meldahl Hydro	0	366,655	490,875	425,049	482,357	477,607
Cannelton Hydro	0	343,202	449,129	354,851	392,271	414,438
Willow Island Hydro	0	218,242	230,523	207,698	243,583	207,457
Landfill Gas (PPA)	373,821	368,352	387,127	393,078	379,815	380,810
Blue Creek Wind (PPA)	140,083	139,975	144,072	129,151	134,641	134,024

# AMP'S SUSTAINABILITY Performance 2015-2020 *(continued)*

	2015	2016	2017	2018	2019	2020
<b>Power Generation (in net MWh) <i>(continued)</i></b>						
Smithland Hydro	0	0	164,489	219,454	180,750	331,868
Solar Phase II (PPA)	0	0	43,311	57,848	73,710	98,918
NYPA/SEPA Hydro (PPA, not Cleveland)	364,465	364,929	389,496	362,434	394,046	349,502
Market Power Purchases made on behalf of members	6,081,708	6,186,661	4,540,812	4,754,011	4,307,446	3,260,582
<b>Total</b>	<b>13,270,324</b>	<b>13,685,360</b>	<b>12,979,458</b>	<b>14,036,334</b>	<b>13,379,537</b>	<b>12,182,242</b>
<i>Note: Total plant accounted for unless noted as PPA or AMP share</i>						
<b>Efficiency and Other Offsets to Traditional Generation</b>						
Efficiency Smart – cumulative generation savings since 2011 (in MWh)	159,416	189,950	204,865	218,636	238,035	247,241
EcoSmart Choice (green energy sales in MWh)	41,871	48,021	43,420	49,187	101,647	117,714
<b>Health and Safety</b>						
Employee work-related fatalities	0	0	0	0	0	0
Reportable incidents or accidents	1	2	1	0	1	1
Lost work-day incidents	1	1	0	0	0	0
Days Away, Restricted and Transfer (DART) Rate	0.6%	-	-	0%	0%	0%
<b>Environment</b>						
Permit violations	0	0	0	0	0	0
Fines or penalties	0	0	0	0	0	0
NPDES permit exceedances	0	0	0	0	0	0
CO <sub>2</sub> e emissions (in metric tons) for owned generation + purchased power	7,851,467	6,942,421	6,283,507	6,809,561	6,537,042	5,668,614
CO <sub>2</sub> e emission rate (in lbs/net MWh) for owned generation + purchased power	1,327	1,145	1,097	1,098	1,108	1,051

# AMP'S SUSTAINABILITY Performance 2015-2020 *(continued)*

	2015	2016	2017	2018	2019	2020
<b>Environment <i>(continued)</i></b>						
For AFEC, PSGC (AMP share), OMEGA JV and AMP peakers:						
CO2 emissions (in short tons)	3,967,732	3,798,210	4,068,820	4,732,824	4,706,281	4,528,411
Annual CO2 emission rate (in lbs/MWh)	1,127	1,067	1,000	1,058	1,074	1,494
SO2 emissions (in short tons)	1,824	2,010	2,178	2,394	2,497	2,276
Annual SO2 emission rate (in lbs/MWh)	0.518	0.565	0.535	0.535	0.570	0.751
NOx emissions (in short tons)	894	1,033	1,035	1,171	1,154	1,132
Annual NOx emissions rate (in lbs/MWh)	0.254	0.290	0.254	0.262	0.263	0.374
PM emissions (in short tons)	79	122	100	139	126	110
Annual PM emission rate (in lbs/MWh)	0.022	0.034	0.025	0.031	0.029	0.036
CO emissions (in short tons)	352	146	106	164	121	143
Annual CO emission rate (in lbs/MWh)	0.100	0.041	0.026	0.04	0.03	0.05
VOC emissions (in short tons)	14	29	44	40	20	32
Annual VOC emission rate (in lbs/MWh)	0.004	0.008	0.011	0.009	0.005	0.011
Cooling water usage, AFEC (net, in million gallons)	467	540	602	878	827	1,084
Cooling water usage, AMP share of PSEC (in million gallons)	1,308	1,105	1,107	1,177	1,159	1,139
Recycling (est., in lbs.)	19,200	10,410	58,525	70,926	132,824	30,775
Forestry carbon projects – cumulative acres of trees planted	210	467	467	467	467	467
<b>Community</b>						
Number of scholarships awarded	8	8	8	8	8	10
Value of scholarships awarded	\$16,000	\$16,000	\$20,000	\$20,000	\$20,000	\$30,000
AMP employee charitable giving (payroll deduction in \$)	\$14,213	\$18,396	\$21,863	\$25,129	\$21,178	\$17,331

1 minor sampling exceedance that has been addressed

## AMP'S EMISSIONS AVOIDANCE 2020 Report

AMP Renewable Energy Production, Energy Efficiency: emissions avoidance	2020 MWh	CO2 emissions avoided (Tons) *	SO2 emissions avoided (Tons) *	NOx emissions avoided (Tons) *	Total emissions avoided (Tons)
Belleville Hydro (JV5)	218,361	86,362	46.95	39.30	86,448
Greenup Hydro	232,966	92,138	50.09	41.93	92,230
Meldahl Hydro	477,607	188,894	102.69	85.97	189,082
Cannelton Hydro	414,438	163,910	89.10	74.60	164,074
Willow Island Hydro	207,457	82,049	44.60	37.34	82,131
Smithland Hydro	331,868	131,254	71.35	59.74	131,385
AMP Wind Farm (JV6)	9,259	3662	1.99	1.67	3,666
Napoleon Solar	4,458	1763	0.96	0.80	1765
Landfill Gas ***	380,810	2,478,509	81.87	68.55	2,478,659
Blue Creek Wind	134,024	53,006	28.82	24.12	53,059
EcoSmart Choice	117,714	46,556	25.31	21.19	46,602
Efficiency Smart (cumulative)	207,457	82,049	25.31	44.50	97,881
Solar Phase II	247,241	39,122	21.27	17.81	39,161
Carbon Offset Forestation Projects	98,918	487			487
					<b>3,466,632</b>

\*<https://www.pjm.com/-/media/library/reports-notice/special-reports/2020/2020-emissions-report.ashx>

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

\*\*\* Includes direct emissions reduced from methane (CO2e) and avoided emissions from CO2.

<https://www.epa.gov/lmop/landfill-gas-energy-benefits-calculator>



# AMP'S GREEN BOND FINANCED Hydro/Solar Projects 2020 Report

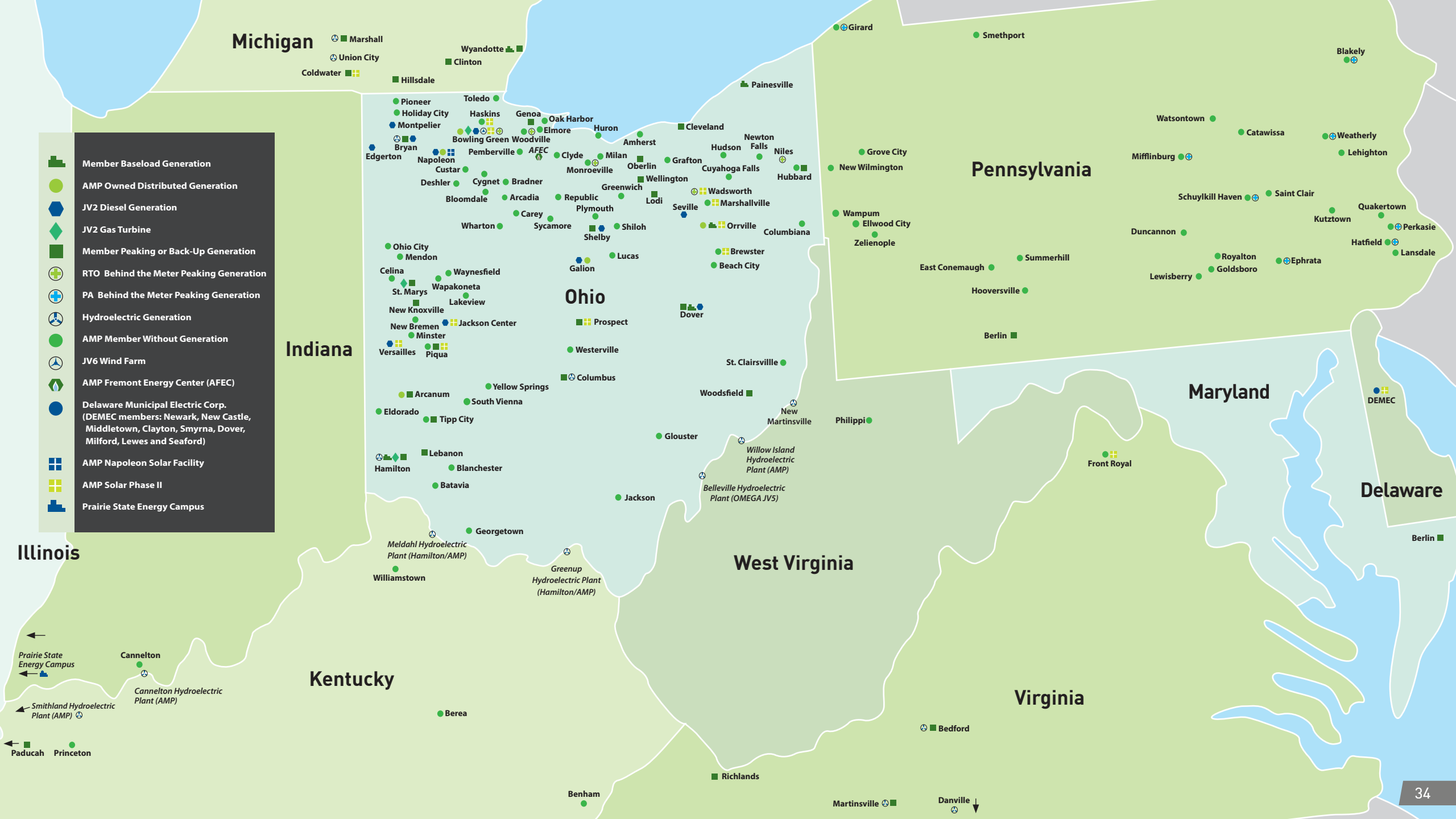
	Meldahl	Combined Hydro (Cannelton, Willow Island, Smithland)	Solar Phase II
Net renewable capacity (MW)	108.8	208	58.3
Net renewable generation (MWh)	477,607	953,763	98,918
Capacity factor (%)	50%	52%	N/R
Emissions avoidance <sup>[1][2]</sup>			
Annual CO2 (GHG) emissions avoided (Tons)	188,894	377,213	39,122
SO2 emissions avoided (Tons)	102.69	205.06	21.27
NOx emissions avoided (Tons)	85.97	171.68	N/R
















*PJM Market Power Emissions Rate [1]	2020
CO2 emissions factor (lbs/MWh)	791
SO2 emissions factor (lbs/MWh)	0.43
NOx emissions factor (lbs/MWh)	0.36

2019 PJM Market Power Fuel Breakdown [2]	2020
Nuclear	34.20%
Natural Gas	39.60%
Coal	19.30%
Wind	3.30%
Solar	0.50%
Hydroelectric	2.00%
Other	1.10%
Total	100.00%

<sup>[1]</sup> PJM 2016-2020 CO2, SO2 and Nox Emissions Rates Report, April 9, 2021

<sup>[2]</sup> PJM State of the Market Report, 2020 Table 3-58



-  Member Baseload Generation
-  AMP Owned Distributed Generation
-  JV2 Diesel Generation
-  JV2 Gas Turbine
-  Member Peaking or Back-Up Generation
-  RTO Behind the Meter Peaking Generation
-  PA Behind the Meter Peaking Generation
-  Hydroelectric Generation
-  AMP Member Without Generation
-  JV6 Wind Farm
-  AMP Fremont Energy Center (AFEC)
-  Delaware Municipal Electric Corp. (DEMEC members: Newark, New Castle, Middletown, Clayton, Smyrna, Dover, Milford, Lewes and Seaford)
-  AMP Napoleon Solar Facility
-  AMP Solar Phase II
-  Prairie State Energy Campus

Michigan

Pennsylvania

Ohio

Indiana

Maryland

Delaware

West Virginia

Virginia

Kentucky

Illinois



American Municipal Power, Inc.  
1111 Schrock Road, Suite 100  
Columbus, Ohio 43229  
614.540.1111  
[www.amppartners.org](http://www.amppartners.org)



For more information contact:  
Holly Karg  
Assistant Vice President of  
Communications and Public Relations  
[hkarg@amppartners.org](mailto:hkarg@amppartners.org)