



Smithland hydroelectric facility



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2015 AMP/OMEA Conference

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Cover: Napoleon Solar Facility



AMP is excited to release its 2015 Report on Sustainability, Laying a Foundation. While AMP has been strategically addressing issues of sustainability for over a decade, the organization has begun to observe large-scale economic and environmental shifts that are changing the future of the utility industry.



AMP's long-standing commitment to sustainability and our established principles have allowed us to make significant inroads to meet the demands of our members. In this 2015 report, we will highlight the actions taken that have built the foundation for AMP and its members to successfully and sustainably execute projects and provide strong value into the future.

In **Laying a Foundation**, we will illustrate how 2015 has been crucial across a number of industry segments in the context of those principles. Major milestones have positioned AMP to provide members with new ways to meet customer and community sustainability needs. These include substantial completion of much of our hydroelectric developments, planning associated with our next phase of solar development, the rollout of an Automated Meter Infrastructure (AMI) pilot program and development of Efficiency Smart 3.0.

**Laying a Foundation** has been designed as a companion to the other AMP and Efficiency Smart-prepared annual reports. We feel strongly

Marc Gerken, PE, AMP President/CEO (left) and Steve Dupee, AMP Board of Trustees Chair and Director, Oberlin Municipal Light & Power System

Marc S. Derken

Marc S. Gerken, PE AMP President/CEO

Aleve Tupee

Steve Dupee AMP Board of Trustees Chair Director of Oberlin Municipal Light & Power System

## PRINCIPLE #1

PROVIDING A BALANCED AND SUSTAINABLE POWER SUPPLY PORTFOLIO

AMP is committed to providing our members with a variety of options for meeting their power supply needs. This includes maintaining a balanced portfolio of generation projects, power purchase agreements, and a project development pipeline that includes cost-effective fuel and generation technology options. This also means using energy efficiency and load control as meaningful tools in power supply planning to reduce the need for new generation resources.

## **PRINCIPLE #1 IN ACTION**

### Hydroelectric

AMP continues to display a position of leadership in the industry through operations and development of run-of-the-river hydroelectric projects along the Ohio River. AMP's belief in hydro as a reliable, low-impact and renewable energy source is a key component to maintaining a balanced and diverse portfolio.

The Belleville hydroelectric facility was once again an asset to project participants in 2015. The plant generated over 258,000 megawatt hours (MWh) for the year. Belleville has been instrumental in AMP's pursuit of new hydro development. For OMEGA JV5, Fitch Ratings affirmed its A rating in October 2015, with a stable outlook; Moody's Investors Service affirmed its A1 rating in December 2015, with a stable outlook; and Standard & Poor's affirmed its A- rating in April 2015, with a stable outlook. Moody's pointed out the rating was stable largely due to average weighted credit quality of the participants, satisfactory bond covenants and expected consistent performance of the facility. The Belleville plant has proven to be a great energy and capacity resource for project participants.

In addition to Belleville's consistent performance, AMP's new hydro facilities made substantial progress in 2015. Willow Island reached full commercial operations in early 2016, and both the Meldahl and Cannelton plants were running units in the 30-day commercial test phase by the end of 2015; subsequently, all units in those projects have been declared in commercial operation in 2016. There are 79 AMP communities from Ohio, Michigan, Virginia, Kentucky and West Virginia participating in the Phase I hydro efforts (Cannelton, Smithland and Willow Island) and 48 members participating in Phase II (Meldahl/ Greenup). Once completed, AMP will have constructed one of the largest run-of-the-river hydro generation projects in the country.

### Solar

and operator.

### Landfill Gas

In 2015, AMP initiated feasibility and due diligence studies for behind-the-meter solar projects across the AMP footprint and plans to subscribe 80 megawatts (MW) or more for construction in a number of member communities. The Phase II solar project is structured so that all participating members receive the shared capacity and transmission benefits of the project sites. As behind-the-meter generation, project participants will benefit from solar as a transmission and demand resource. Federal developments and support of renewable energy resources through the extension of the federal Investment Tax Credit has allowed AMP to reduce project costs. AMP executed a power purchase agreement in early 2016 with DG AMP Solar, LLC, a wholly owned subsidiary of NextEra Energy Resources, as the project developer owner

In 2015, AMP negotiated a term sheet with the developer of a new 4 MW landfill gas generating facility in Brown County, Ohio. The facility is expected to be commercial in March 2017. AMP is in the process of subscribing the project output to its members. This joins six landfill gas generation projects in the AMP portfolio, which provide 63 MW of landfill gas power to 49 members.





# PRINCIPLE #2 REDUCING OUR OVERALL EMISSIONS PROFILE

AMP is committed to reducing its overall emissions profile. Reductions of airborne emissions can be achieved through the use of efficient coal and natural gas and other lower- or zero-emission generation technologies (including hydroelectric and other renewables), supply-side or end-use efficiency improvements, and conservation activities. Improvements in energy and operational efficiency and use of efficient coal and natural gas technologies at the generation level will also reduce water usage and need for landfill space. Mindful that emissions of greenhouse gases (GHGs) will be limited at some point in the future, AMP will prudently invest in projects to offset carbon dioxide and other GHG emissions from our fossil generation resources. AMP also encourages efforts to account for and reduce GHG emissions by individual AMP member communities, which promotes balancing their system needs with other stewardship and customer values.



## **PRINCIPLE #2 IN ACTION**

### **Efficient Generation**

AMP took a number of actions in 2015 to reduce emissions across the generation portfolio. Continued operational improvements at Prairie State, the 1,600 MW supercritical mine-mouth coal plant located in Illinois, makes it one of the most efficient, well-controlled coal-fired power plants in the country. Prairie State also uses a best-in-class coal combustion residuals programs to recycle gypsum, fly-ash and bottom ash.

In 2015, AMP made upgrades to peaking resources as diesel oxidation catalysts (DOCs) were installed to improve engine performance and meet the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reciprocating Internal Combustion Engines (RICE) requirements. Financial payback for the installations was estimated at 18 months. By permit, the units can run up to 300 hours per 12-month rolling period. The DOCs limit carbon monoxide (CO) emissions to 23 parts per million by volume, dry basis (ppmvd at 15 percent oxygen); thereby reducing the potential for ground-level ozone formation and smog formation. Reductions of particulate matter (PM) and volatile organic compounds (VOCs) are co-benefits of the DOC installations, and provide additional environmental health benefits.

# Clean Power Plan: USEPA GHG Rule for Existing Fossil Generation – 111(d)

On Aug. 3, 2015, the U.S. Environmental Protection Agency's (USEPA) final Clean Power Plan (CPP) was released. The rule promulgated through the Clean Air Act Section 111(d) targets carbon dioxide (CO2) emissions from fossil-burning electricity generating units responsible for roughly 31 percent of the nation's CO2 emissions. The rule establishes a broad regulatory program that would culminate in a 32 percent reduction from electricity generation in nationwide carbon emissions by year 2030. This rule has been controversial and faced opposition from many states and utilities. In February 2016, the U.S. Supreme Court placed a stay on the agency action. The stay will remain in effect during the consideration of the rule and final judgment by the Supreme Court.

AMP continues to closely monitor this ruling and court proceeding, and is working with state and federal stakeholders to stay informed of developments as they occur. AMP has taken a proactive approach to voicing concerns and issues via public comment and in working with aligned organizations such as the American Public Power Association (APPA) and others. As a result of AMP's ongoing efforts, new hydroelectric development projects received favorable treatment in the final rule.

The CPP presents both compliance obligations (which impact PSGC and AFEC) and opportunities through renewable energy and energy efficiency for AMP and its members. As such, AMP/OMEA has continued to be actively engaged with state and federal agency officials citing AMP interests that the CPP must:

- 1. Maintain a balanced approach between environmental protection and reliable power supplies.
- 2. Provide for state control, allowing flexible solutions that recognize unique state-level challenges and portfolios.
- 3. Adequately harmonize emissions measurement and verification.
- 4. Maximize the value of renewable resources, including hydroelectric generation.
- 5. Allow for the creation of multi-state trading schemes.

### Carbon Mitigation

AMP maintains a carbon mitigation program as a proactive hedging strategy, continuing its role as an active participant of voluntary carbon markets in case those markets play roles in future regulatory structures. In 2015, AMP continued to develop its carbon reforestation partnership program with the Ohio Department of Natural Resources in three of Ohio's state forests. In the fall of 2015, AMP began the site preparation process on 250 acres of reclaimed mine land with its sub-contracted partner Williams Forestry. Williams performed site ripping and invasive species removal at 160 acres located at Fernwood State Forest, 100 acres at Harrison State Forest, and 40 acres in West Blue Rock State Park. The site ripping loosens the soil on the reclaimed mine land and creates a better soil composition for seedling planting. AMP planted over 180,000 native seedlings of oak, sycamore, hickory and maple in spring 2016.



# **PRINCIPLE #3** USING LESS

AMP recognizes that electricity not generated – because it is not needed – yields the greatest environmental benefit and is essential to a truly sustainable business approach. Reducing electricity demand through innovative conservation efforts and efficiency improvements offered to AMP member communities will help conserve natural resources as well as reduce emissions. AMP will also promote the "reduce, reuse, recycle" principles of sustainability to its membership and employees and throughout its operations.



# **PRINCIPLE #3 IN ACTION**

### **Efficiency Smart**

In continued partnership with the Vermont Energy Investment Corporation (VEIC), AMP continued to build upon the success of its energy efficiency program, Efficiency Smart, which delivered 15,000 MWh of savings to participating members in 2015. Efficiency Smart was designed to encourage residential, business and industrial customers to adopt cost-effective energy efficiency services that provide reliable and verifiable cost savings.

By the end of 2015, the Efficiency Smart contract achieved 36,373 MWh in savings for 28 participating member communities – approximately 78 percent of the three-year target for member communities participating under an agreement spanning 2014-2016. In 2015, Efficiency Smart started working with community action agencies to provide free energy efficiency kits to hard-to-reach populations in its service areas. By partnering with these community agencies, Efficiency Smart was able to increase its reach and help ensure a larger base of residential electric customers had an opportunity to take advantage of its services. Community action agencies have the infrastructure, credibility within the local community and implementation strategies in place to access these hard-to-reach populations.

Efficiency Smart has been in operation for five years and the program has reached a cumulative savings of more than 150,000 MWh for participating communities. Pilot phase testing of a revised Efficiency Smart structure is underway (to begin in 2017) and will provide additional performance-based and on-demand products to meet diverse member needs and offer communities more flexibility with end-use-customers.

### **Green Power Pricing**

Eight member communities purchased more than 41,000 MWh of green power in 2015 through AMP's EcoSmart Choice program. The program is designed to allow AMP members to offer a green pricing option for individuals and companies who are interested in sourcing 100 percent renewable energy through the purchase and retirement of Renewable Energy Certificates (RECs).



Efficiency Smart display at Weatherization Day, an event hosted by SELF, in Hamilton, Ohio.



# PRINCIPLE #4 MAKING SMART

INVESTMENTS

AMP is faced with finding new power supply options to meet member needs. Volatile energy markets and aging generation resources have spurred AMP to make smart investments in efficient coal, natural gas, hydroelectric, landfill gas and solar generation assets to mitigate overexposure to the wholesale market. AMP will continue to pursue incorporating other cost-effective renewable resources as an important part of our generation portfolio and will endeavor to use any available favorable local, state or federal regulatory treatment when siting and financing these projects.

Peak Shaving

system reliability.

Napoleon Solar Facility



# **PRINCIPLE #4 IN ACTION**

Through the work of AMP's power supply group, energy control center and generation operations, AMP's strategic coordination of peak shaving was successful during the five coincident peaks (5 CPs) and transmission one coincident peaks (1 CP) in 2015. This resulted in more than \$49 million value of transmission and capacity savings from AMP and members' behindthe-meter generation for the upcoming planning and calendar years.

In addition, the power purchase agreement with DG AMP Solar, LLC, a wholly owned subsidiary of NextEra Energy Resources, will provide peak shaving value to participating members as the solar resources will be sited as behind the meter, providing local peaking generation for added member

# **PRINCIPLE #5 IN ACTION**

### **AMI Hosted Solutions project**

### Member Training

As of Dec. 1, 2015, AMP offers eReliability Tracker services to all members through APPA. The AMP Board of Trustees feels strongly that measuring distribution reliability is important for municipal electric utilities and this service will help members record, track and analyze outage data. Active participation in eReliability Tracker is also a benefit to AMP members as they can earn points toward APPA's Reliable Public Power Provider (RP3) designation - strong reliability metrics used to promote public power.

# PRINCIPLE #5

**ASSISTING MEMBER** COMMUNITIES



Voltage Regulator class

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 ensuring a good quality of life and encouraging economic development and growth. AMP provides ongoing employee training, safety instruction, project engineering, and other technical services to ensure that member communities have access to the most up-todate services in these areas. Environmental enhancements (planting trees, creating green space, etc.) are also valuable assets to local communities, and AMP will provide technical support and work with interested member communities to identify energy efficiency, carbon management, and sustainable investment and development opportunities consistent with local needs.

As part of a pilot program, a group of AMP's members are collaborating on an Automated Metering Infrastructure (AMI) project, hosted by AMP, that will enable the participants to benefit from cost savings due to the bulk purchase of field components; both smart meters and wireless networks.

The AMP IT Department will acquire and deploy the remaining technology required to support the smart meter infrastructure and billing system integrations, as well as provide data analytics, web portals for both operational and customer access, and the advanced cyber security required for this technology. The deployment of the AMI project is expected to benefit members interested in upgrading their metering systems in the future as AMP will have an ability to share best practices and discuss lessons learned as a result of the AMI program. In addition, the project aims to reduce the cost for members looking to upgrade metering and communication infrastructure, improve outage management and enhanced customer engagement. This initiative will also provide an important first step toward continued grid modernization and integration efforts.

The health and safety of member and AMP employees is a key social responsibility principle. In 2015, AMP's training programs were used by 159 employees from 61 communities in five states. Led by an Advisory Task Force, AMP also offered 14 technical and lineworker classes in 2015. Approximately 1,000 AMP member community employees from 38 member utilities were trained monthly through AMP's OSHA programming in 2015.

### eReliability Tracker



AMP Circuit Rider program assistance in Arcadia



### **Annual Awards**

In recognition of their accomplishments in 2015, members were presented with the following awards at the AMP/OMEA Annual Conference.

In the generation category, awards were presented to:

- Bryan Municipal Utilities
- Dover Light & Power
- City of Hamilton Department of Electric
- Oberlin Municipal Light & Power System
- Orrville Utilities Power Plant Operations and Power Plant Maintenance departments
- Shelby Division of Electric & Telecommunications

### In the transmission/distribution category, the winners were:

- Bryan Municipal Utilities
- City of Columbus Division of Power
- Ephrata Borough Electric Division
- Jackson Center Municipal Electric
- Kutztown Electric Department
- Village of Lodi Utilities
- Village of Minster Electric Department
- Montpelier Municipal Utilities
- Oak Harbor Public Power
- Oberlin Municipal Light & Power System
- Plymouth Municipal Electric
- St. Clairsville Light & Power
- Shelby Division of Electric & Telecommunications
- Wapakoneta Electric Department

### Mutual Aid Commendations were given to:

- Piqua Power System for providing assistance to Dayton Power & Light
- Bryan Municipal Utilities for providing assistance to North Western Electric Cooperative

### **Finance Awards**

- Highest Credit Score Population 5,000 and over tie between Lebanon and Piqua, both with a score of 97 percent
- Highest Credit Score Population under 5,000 Clinton with a score of 97 percent
- Most Improved Credit Score Hudson with a 20 percent improvement

### **Innovation Award**

• Dover Light & Power for the Steam Seal System Upgrade project

- Village of Minster: Golf Course Substation Improvement project • Montpelier Municipal Utilities: Airport Substation Expansion • Wadsworth Electric & Communications: Community Wall at Akron Road Substation
- City of Wapakoneta: East Auglaize Street Reconstruction project Subdivision Electric Improvement project
- Honorable Mention Bryan Municipal Utilities: Norlick Place
- Equipment

### System Improvement Awards

- Honorable Mention Dover Light & Power: Skip Hoist Coal Delivery
- Honorable Mention Cuyahoga Falls Electric System: Feeder 323 Voltage Regulators Upgrade project
- Honorable Mention City of Hamilton Department of Electric: Third Street Utility Improvements

### Environmental Stewardship Awards

- City of Columbus Division of Power: T-8 Lamp and Fixture Upgrades - Warehouse Lighting project
- Cuyahoga Falls Electric System: Energy Efficiency Program • City of Hamilton Electric Department: 2015 Arbor Day Tree Planting • Orrville Utilities: Ella Street/Mineral Spring Street Lighting project
- Safety commendations in transmission/distribution were given to: Cuyahoga Falls Electric System • City of Hamilton Department of Electric Hudson Public Power • City of Newton Falls Electric Department

## AMP Hard Hat Safety Award

- Member utilities with 2015 Hard Hat Award winners were: • Bryan Municipal Utilities • City of Columbus Division of Power Cuyahoga Falls Electric System • Dover Light & Power • City of Hamilton Department of Electric Hudson Public Power Jackson Center Municipal Electric Minster Electric Department Montpelier Municipal Utility Orrville Utilities Princeton Electric Plant Board • St. Clairsville Light & Power City of Wadsworth Electric & Communications
- City of Westerville Electric Division



Kyle Weygandt (left), AMP's director of member safety, presents a 2015 Safety Award to Steve Dupee, director of Oberlin Municipal Light & Power System and chair of the AMP Board of Trustees, at the 2015 AMP/OMEA Conference,



# PRINCIPLE #6 REACHING OUT TO STAKEHOLDERS

AMP will reach out to other stakeholder entities – including (but not limited to) government, business, academia, media and other utility organizations – to ensure that they understand AMP's mission and vision and AMP's approach to sustainability. This outreach is intended to help AMP identify potential future collaborative opportunities beyond those traditionally associated with providing electric power supply. AMP encourages member communities to identify potential partnership opportunities as well.



Roger Martella (left), a partner in the Environmental Practice Group at Sidley Austin, and Ohio Environmental Protection Agency Director Craig Butler discuss 111(d) at the 2015 AMP/OMEA Conference.



## PRINCIPLE #6 IN ACTION

AMP continues to actively reach out to stakeholders across sectors of government business and utility associations. In 2015, AMP met with numerous individuals, state and federal agencies, including state resource agencies, USEPA, the Department of Energy (DOE) and Federal Energy Regulatory Commision (FERC). In addition to government agency work, AMP actively maintains memberships and is integrally involved with the APPA, the National Hydropower Association (NHA), Transmission Access Policy Study (TAPS), and the Smart Electric Power Association (SEPA). Members of AMP executive staff continue to serve on APPA, NHA, TAPS and other trade association governing bodies.

In 2015, in response to investor-owned utilities' attention on transmission and their pursuit of a guaranteed return on equity, AMP continued to focus on efforts to manage and reduce those costs for members. Through engagement with FERC, and in hiring a vice president of transmission in December 2015, AMP has enhanced its efforts in this area. This will continue to be an area of focus as part of AMP's strategic planning outcomes and in an effort to reduce transmission dependency risks. AMP's continued engagement with PJM and MISO has allowed the organization to stay ahead of regulatory changes and be a strong advocate for policy positions in support of AMP member communities.

AMP's long-standing relationship with The Energy Authority (TEA) gives AMP access to TEA's dedicated resources and advanced technology systems, which allows AMP to respond competitively in the changing market. Through partnership with TEA, AMP benefits from state-of-the-art technology and dedicated resources for a fraction of the cost.

# **PRINCIPLE #7**

LEADING BY EXAMPLE

AMP encourages its officers and employees to lead by example through increased efforts to reuse and recycle home and office products and conserve energy, both at home and in the workplace. To the extent practicable, AMP will strive to use its headquarters building to demonstrate the use of green materials and energy efficient products, thus leading by example. 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.

AMP headquarters is removed and replaced with a more efficient unit

# **PRINCIPLE #7 IN ACTION**

**Corporate Safety** 

\*Incident rate is the number of recordable injuries per 100 full-time employees and is calculated as: the number of recordable injuries x 200,000 average hours worked by 100 fulltime employees in a year / man hours worked for the year

AMP experienced one recordable accident in 2015, which was also a lost work day case. AMP had an average of 181 employees in 2015 with a total of 343,085 man hours worked and an incident rate of 0.58 for the year.\* In addition, AMP provided new hire safety training for 43 new employees and implemented an ongoing online safety training program for corporate employees.

### AMP HQ Capital Upgrades

In 2015, the AMP Green Team coordinated the release of the AMP Headquarters Equipment Evaluation and Energy Audit report. This initiative closely examined the many original building systems reaching the end of their useful lives. The report identified a total of eight low-cost improvements, including controls adjustments, and upgrades to exterior/interior lighting and controls. The report also identified potential capital improvement projects focused on the chilled water plant, controls upgrades and an interior lighting LED retrofit. The report is allowing AMP to plan for future capital spending needs and take a strategic approach to asset improvement.

AMP's current energy performance at 1111 Schrock Road is better than the national average, but there is room for improvement. AMP uses 73 kBtu per square foot annually, compared to the national annual average of 81 kBtu per square foot. The energy conservation measures identified provide an opportunity to save more than \$30,000 annually and reduce energy use by approximately 15 kBtu per square foot annually. At the end of 2015, the Green Team was developing a formal series of recommendations for AMP Executive Management Team and Board.



Safety training at Willow Island hydroelectric facility



## Blood drive at AMP headquarters



### Focus Forward Advisory Council

A group of AMP staff and Board members attended APPA's first Public Power Forward Summit in October 2015. In recognition of a rapidly evolving utility landscape, APPA convened a series of expert speakers to discuss topics including new business models in public power, financing and rate implications, the impact of technology on operations, and consumer engagement and communications. The conference was insightful and reinforced the importance of many of AMP's existing sustainability initiatives focused on power supply diversity and smart investments in technology.

The lessons learned during the conference provided affirmation of the many drivers AMP has observed within its footprint and membership. Those implications highlighted the next steps for the organization and generated a series of follow-up tasks to best ensure AMP member communities are well positioned to engage with these emerging issues.

AMP continues to evaluate market trends and long-term drivers for its member communities. To best assist members, AMP developed the Focus Forward Advisory Council (FFAC) to help member communities with rate design, model ordinance and interconnection issues. The FFAC will meet throughout 2016 and present recommendations at the AMP/OMEA annual conference.



Focus Forward Advisory Council kickoff meeting

## AMP STAFF GIVING

Staff members at AMP headquarters made a positive impact in the Columbus area community for the 2015 holiday season by donating to the Mid-Ohio Foodbank and Community Shelter Board. Employees collected nearly 350 pounds of donations, which exceeded 2014 donation weight by more than 100 pounds. AMP employees also donated a total of \$14,213 to local charities through payroll deduction in 2015 and generously donated blood to the American Red Cross during the organization's annual blood drive.

Americal Americal Science

# 2014 AMP MEMBER ENERGY **RESOURCE MIX**

(16,000,000 MWh)



### **AMP Organization**

Number of membe Load (in million M System peak (in MV Electric revenue (in Service fees (in \$) Programs and other Operating expenses Net margin (in \$) Number of employ

### **Power Generation**

Prairie State Energy AFEC Belleville Hydro Distributed Genera AMP Wind Farm Napoleon Solar

### Efficiency and Oth Traditional Genera

Efficiency Smart - cu savings since 2011 % of 2011-2013 tar % of 2014-2016 tax EcoSmart Choice (

## Health & Safety

Employee work-rela Reportable incident Lost work-day incid

# 2017 AMP MEMBER ENERGY **RESOURCE MIX** (16,800,000 MWh)

Notes to 2014 & 2017 charts:

• The Wind & Solar percentage includes member-owned solar.

• The Hydro percentage includes member-owned hydro.

Kentucky Municipal Power Association.

• The Member Coal figure includes the participation of AMP

members Paducah and Princeton in PSEC through the

# AMP'S ANNUAL SUSTAINABILITY PERFORMANCE 2013-2015

	2013	2014	2015		2013	2014	2015
n and Financial Metrics				Environment			
er communities	129	130	131	Permit violations	1	0	0
1Wh)	16.4	14	16	Fines or penalties	0	0	0
W)	3,503	3,386	3,400	NPDES permit exceedences	0	0	0
1 \$)	\$953,077,162	\$1,012,684,268	\$1,103,886,270	CO2 emissions (in short tons)	3,231,142	3,276,805	3,967,732
	\$9,648,054	\$10,913,504	\$11,515,575	Annual CO2 emisison rate (in lbs / MWh)	1,379	1,403	1,269
r revenue (in \$)	\$19,769,641	\$16,305,240	\$12,589,167	SO2 emissions (in short tons)	1,159	1,390	1,824
s (in \$)	\$879,798,629	\$937,845,012	\$1,002,832,762	Annual SO2 emisison rate (in lbs / MWh)	0.495	0.595	0.584
	\$5,278,799	\$2,577,656	\$5,823,840	NOx emissions (in short tons)	699	775	894
rees (as of 12/31)	147	178	180	Annual NOx emission rate (in lbs / MWh)	0.298	0.332	0.286
				PM emissions (in short tons)	64	63	79
n (in net MWh)				Annual PM emission rate (in lbs / MWh)	0.027	0.027	0.025
Campus (AMP share)	2.076.643	2.641.857	2,592,694	CO emissions (in short tons)	560	540	352
I III (	2,708,704	2,351,669	3,649,554	Annual CO emisison rate (in lbs / MWh)	0.239	0.231	0.113
	284,731	303,340	258,668	VOC emissions (in short tons)	32	42	14
ation	8,183	6,561	9,498	Annual VOC emission rate (in lbs /MWh)	0.014	0.018	0.004
	14.582	14,262	13,086	Cooling water usage AFEC			
	5,270	5,147	5,111	(net, in million gallons)	358	453	467
	-,	-, .	- ,	Cooling water usage AMP share of PSEC			
her Offsets to				(in million gallons)	-	-	1,308
ation				AMP HQ recycled paper and cardboard			
rumulative generation				(estimate, in pounds)	-	21,000	19,200
(in MWh)	121,339	143,133	179,018	AMP HQ recycled glass, metal and plastic			
argets	149.8%	-	-	(estimate, in pounds)	-	1,040	2,255
argets	-	58.0%	77.4%	Forestry carbon projects - cumulative acres			
green energy sales in MWh)	5,661	10,000	41,800	of trees planted	210	210	210
				Community			
ated fatalities	0	0	0	Number of scholarships awarded	8	8	8
ts or accidents	0	0	1	Value of scholarships awarded	\$16,000	\$16,000	\$16,000
dents	0	0	1	AMP employee charitable giving			
			1	(payroll deduction in \$)	\$8,880	\$10,856	\$14,213







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Belleville hydroelectric facility