

Exhibits to
Direct Testimony of
Jeremy I. Fisher, PhD

Case Nos. 2018-00294 and 2018-00295

January 16, 2019

JIF-01

Jeremy Fisher, PhD.
Senior Strategy and Technical Advisor

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EDUCATION

BROWN UNIVERSITY

Providence, Rhode Island

Doctor of Philosophy in Geological Sciences (2006)
Master of Science in Geological Sciences (2003)

UNIVERSITY OF MARYLAND

College Park, Maryland

Bachelor of Science in Geology (2001)
Bachelor of Science in Geography (2001)

PROFESSIONAL EXPERIENCE

SIERRA CLUB

Oakland, California

Senior Strategy and Technical Advisor

Provides detailed expertise on energy system issues and strategic engagement with utilities, regulatory commission, and partners. Research and development on cutting edge energy system economic issues, supports legal and campaign staff at Sierra Club; provides oversight to consulting practices on energy issues.

SYNAPSE ENERGY ECONOMICS

Cambridge, Massachusetts

Principal Associate (2013-2017); Scientist (2007-2013)

Consulted on economic analysis of climate change and energy, carbon, and emissions policies. Developed successful clean energy regulatory strategy. Provides detailed technical and strategic analysis on behalf of public interest groups in US. Provides training to regulators on best practices in energy system planning. Develops quantitative evaluations of regional climate change impact, long- and short-term electric industry planning, carbon reduction strategies, and emissions compliance programs. Lead investigator on avoided emissions tool (AVERT) for US EPA; collaborator on health benefits assessments.

TULANE UNIVERSITY

New Orleans, Louisiana

Postdoctoral Researcher (2006-2007)

Modeled carbon balance in forest ecosystems through satellite data and dynamic models. Developed new techniques to assess large-scale forest morbidity and mortality. Tracking impacts of Hurricane Katrina (US Gulf Coast) and large-scale disturbances in Amazon basin. (Brazil).

BROWN UNIVERSITY

Providence, Rhode Island

Research Assistant (2001-2006)

Tracked impact of climate change on New England forests from satellites. Worked with West African communities to determine impact of climate change and practice on landscape. Modeled coastal power plant effluent from satellite data.

FELLOWSHIPS & AWARDS

- *Visiting Fellow*, Watson Institute for International Studies, Brown University, 2007
- *Fellow*, National Science Foundation East Asia Summer Institute (EASI), 2003
- *Fellow*, Henry Luce Foundation at the Watson Institute for International Studies, Brown University, 2003

REPORTS

Varadarajan, U., D. Posner, **J. Fisher**. 2018. *Harnessing Financial Tools to Transform the Electric Sector*. Sierra Club.

February 6, 2018. *Sierra Club Comments on Puerto Rico Federal Oversight Board's Critical Infrastructure Project, Peaking Projects*.

February 6, 2018. *Sierra Club Comments on Puerto Rico Federal Oversight Board's Critical Infrastructure Project, Arecibo Incinerator*.

June 12, 2018. *Sierra Club Comments on Puerto Rico Federal Oversight Board's Critical Infrastructure Project, Peaking Projects*.

Fisher, J. 2017. *Sierra Club Preliminary and Reply Comments on PacifiCorp's 2017 Integrated Resource Plan*. Synapse Energy Economics for Sierra Club.

Fisher J. Allison, A. 2017. *Sierra Club Comments on Tucson Electric Power's 2017 Integrated Resource Plan*. Synapse Energy Economics for Sierra Club.

Allison, A., **J. Fisher**. 2017. *Sierra Club Comments on Arizona Public Service Company's 2017 Integrated Resource Plan*. Synapse Energy Economics for Sierra Club.

Fisher, J. 2017. *Chasing the Elusive Benefits of Navajo Generating Station: A Review of Peabody & Navigant's Navajo Economic Assessment*. Prepared for Sierra Club, May 2, 2017

Fisher, J. and A. I. Horowitz. 2016. *Expert Report: State of PREPA's System, Load Forecast, Capital Budget, Fuel Budget, Purchased Power Budget, Operations Expense Budget*. Prepared for the Puerto Rico Energy Commission regarding Matter No. CEPR-AP-2015-0001, November 23, 2016.

Fisher, J., P. Luckow, A. Horowitz, T. Comings, A. Allison, E.A. Stanton, S. Jackson, K. Takahashi. 2016. *Michigan Compliance Assessment for the Clean Power Plan: MPSC/MDEQ EPA 111(d) Impact Analysis*. Prepared for Michigan Public Service Commission, Michigan Department of Environmental Quality, and Michigan Agency for Energy.

Comings, T., S. Jackson, **J. Fisher**. 2016. *The Economic Case for Retiring North Valmy Generating Station*. Synapse Energy Economics for Sierra Club.

Fisher, J., A. Horowitz, J. Migden-Ostrander, T. Woolf. 2016. *Puerto Rico Electric Power Authority's 2015 Integrated Resource Plan*. Prepared for Puerto Rico Energy Commission.

Luckow, P., E.A. Stanton, S. Fields, W. Ong, B. Biewald, S. Jackson, **J. Fisher**. 2016. *Spring 2016 National Carbon Dioxide Price Forecast*. Synapse Energy Economics.

Fisher, J., N. Santen, P. Luckow, F. De Sisternes, T. Levin, A. Botterud. 2016. *A Guide to Clean Power Plan Modeling Tools: Analytical Approaches for State Plan CO₂ Performance Projections*. Prepared by Synapse Energy Economics and Argonne National Library.

- Jackson, S., **J. Fisher**, B. Fagan, W. Ong. 2016. *Beyond the Clean Power Plan: How the Eastern Interconnection Can Significantly Reduce CO₂ Emissions and Maintain Reliability*. Prepared by Synapse Energy Economics for the Union of Concerned Scientists.
- Fisher, J.**, R. DeYoung, N. R. Santen. 2015. *Assessing the Emission Benefits of Renewable Energy and Energy Efficiency Using EPA's Avoided Emissions and generation Tool (AVERT)*. Prepared for 2015 International Emission Inventory Conference.
- Fisher, J.**, P. Luckow, N. R. Santen. 2015. *Review of the Use of the System Optimizer Model in PacifiCorp's 2015 IRP*. Synapse Energy Economics for Sierra Club, Western Clean Energy Campaign, Powder River Basin Resource Council, Utah Clean Energy, and Idaho Conservation League.
- Fisher, J.**, T. Comings, F. Ackerman, S. Jackson. 2015. *Clearing Up the Smog: Debunking Industry Claims that We Can't Afford Healthy Air*. Synapse Energy Economics for Earthjustice.
- Biewald, B., J. Daniel, **J. Fisher**, P. Luckow, A. Napoleon, N. R. Santen, K. Takahashi. 2015. *Air Emissions Displacement by Energy Efficiency and Renewable Energy*. Synapse Energy Economics.
- Takahashi, K., **J. Fisher**, T. Vitolo, N. R. Santen. 2015. *Review of TVA's Draft 2015 Integrated Resource Plan*. Synapse Energy Economics for Sierra Club.
- Luckow, P., E. A. Stanton, S. Fields, B. Biewald, S. Jackson, **J. Fisher**, R. Wilson. 2015. *2015 Carbon Dioxide Price Forecast*. Synapse Energy Economics.
- Vitolo, T., **J. Fisher**, J. Daniel. 2015. *Dallman Units 31/32: Retrofit or Retire?* Synapse Energy Economics for the Sierra Club.
- Vitolo, T., **J. Fisher**, K. Takahashi. 2014. *TVA's Use of Dispatchability Metrics in Its Scorecard*. Synapse Energy Economics for Sierra Club.
- Luckow, P., E. A. Stanton, B. Biewald, S. Fields, S. Jackson, **J. Fisher**, F. Ackerman. 2014. *CO₂ Price Report, Spring 2014: Includes 2013 CO₂ Price Forecast*. Synapse Energy Economics.
- Daniel, J., T. Comings, **J. Fisher**. 2014. *Comments on Preliminary Assumptions for Cleco's 2014/2015 Integrated Resource Plan*. Synapse Energy Economics for Sierra Club.
- Fisher, J.**, T. Comings, and D. Schlissel. 2014. *Comments on Duke Energy Indiana's 2013 Integrated Resource Plan*. Synapse Energy Economics and Schlissel Consulting for Mullet & Associates, Citizens Action Coalition of Indiana, Earthjustice, and Sierra Club.
- Fisher, J.**, P. Knight, E. A. Stanton, and B. Biewald. 2014. *Avoided Emissions and Generation Tool (AVERT): User Manual*. Version 1.0. Synapse Energy Economics for the U.S. Environmental Protection Agency.
- Luckow, P., E. A. Stanton, B. Biewald, **J. Fisher**, F. Ackerman, E. Hausman. 2013. *2013 Carbon Dioxide Price Forecast*. Synapse Energy Economics.
- Knight, P., E. A. Stanton, **J. Fisher**, B. Biewald. 2013. *Forecasting Coal Unit Competitiveness: Coal Retirement Assessment Using Synapse's Coal Asset Valuation Tool (CAVT)*. Synapse Energy Economics for Energy Foundation.
- Takahashi, K., P. Knight, **J. Fisher**, D. White. 2013. *Economic and Environmental Analysis of Residential Heating and Cooling Systems: A Study of Heat Pump Performance in U.S. Cities*. Proceeding of the 7th International Conference on Energy Efficiency in Domestic Appliances and Lighting (EEDAL'13), September 12, 2013.
- Fagan, R., **J. Fisher**, B. Biewald. 2013. *An Expanded Analysis of the Costs and Benefits of Base Case and Carbon Reduction Scenarios in the EIPC Process*. Synapse Energy Economics for the Sustainable FERC Project.

- Fisher, J.** *Sierra Club's Preliminary Comments on PacifiCorp 2013 Integrated Resource Plan*. Oregon Docket LC 57. Synapse Energy Economics for Sierra Club.
- Fisher, J., T. Vitolo.** 2012. *Assessing the Use of the 2011 TVA Integrated Resource Plan in the Retrofit Decision for Gallatin Fossil Plant*. Synapse Energy Economics for Sierra Club.
- Fisher, J., K. Takahashi.** 2012. *TVA Coal in Crisis: Using Energy Efficiency to Replace TVA's Highly Non-Economic Coal Units*. Synapse Energy Economics for Sierra Club.
- Fisher J., S. Jackson, B. Biewald.** 2012. *The Carbon Footprint of Electricity from Biomass: A Review of the Current State of Science and Policy*. Synapse Energy Economics.
- Fisher, J., C. James, N. Hughes, D. White, R. Wilson, and B. Biewald.** 2011. *Emissions Reductions from Renewable Energy and Energy Efficiency in California Air Quality Management Districts*. Synapse Energy Economics for California Energy Commission.
- Fisher, J., F. Ackerman.** 2011. *The Water-Energy Nexus in the Western States: Projections to 2100*. Synapse Energy Economics for Stockholm Environment Institute.
- Averyt, K., **J. Fisher**, A. Huber-Lee, A. Lewis, J. Macknick, N. Madden, J. Rogers, S. Tellinghuisen. 2011. *Freshwater use by US power plants: Electricity's thirst for a precious resource*. Union of Concerned Scientists for the Energy and Water in a Warming World Initiative.
- White, D. E., D. Hurley, **J. Fisher**. 2011. *Economic Analysis of Schiller Station Coal Units*. Synapse Energy Economics for Conservation Law Foundation.
- Fisher, J., R. Wilson, N. Hughes, M. Wittenstein, B. Biewald.** 2011. *Benefits of Beyond BAU: Human, Social, and Environmental Damages Avoided Through the Retirement of the US Coal Fleet*. Synapse Energy Economics for Civil Society Institute.
- Fisher, J., B. Biewald.** 2011. *Environmental Controls and the WECC Coal Fleet: Estimating the forward-going economic merit of coal-fired power plants in the West with new environmental controls*. Synapse Energy Economics for Energy Foundation and Western Grid Group.
- Hausman, E., V. Sabodash, N. Hughes, **J. Fisher**. 2011. *Economic Impact Analysis of New Mexico's Greenhouse Gas Emissions Rule*. Synapse Energy Economics for New Energy Economy.
- Fisher, J.** 2011. *A Green Future for Los Angeles Department of Water and Power: Phasing out Coal in LA by 2020*. Synapse Energy Economics for Sierra Club.
- Fisher, J., J. Levy, Y. Nishioka, P. Kirshen, R. Wilson, M. Chang, J. Kallay, C. James.** 2010. *Co-Benefits of Energy Efficiency and Renewable Energy in Utah: Air Quality, Health and Water Benefits*. Synapse Energy Economics, Harvard School of Public Health, Tufts University for State of Utah Energy Office.
- Biewald, B., D. White, **J. Fisher**, M. Chang, L. Johnston. 2009. *Incorporating Carbon Dioxide Emissions Reductions in Benefit Calculations for Energy Efficiency: Comments on the Department of Energy's Methodology for Analysis of the Proposed Lighting Standard*. Synapse Energy Economics for the New York Office of Attorney General.
- Hausman, E., **J. Fisher**, L.A. Mancinelli, B. Biewald. 2009. *Productive and Unproductive Costs of CO₂ Cap-and-Trade: Impacts on Electricity Consumers and Producers*. Synapse Energy Economics for the National Association of Regulatory Utility Commissioners, The National Association of State Utility Consumer Advocates (NASUCA), The National Rural Electric Cooperative Association (NRECA), The American Public Power Association (APPA).
- Biewald, B., **J. Fisher**, C. James, L. Johnston, D. Schlissel, R. Wilson. 2009. *Energy Future: A Green Energy Alternative for Michigan*. Synapse Energy Economics for Sierra Club.

- James, C., **J. Fisher**, K. Takahashi. 2009. "Energy Supply and Demand Sectors." *Alaska Climate Change Strategy's Mitigation Advisory Group Final Report: Greenhouse Gas Inventory and Forecast and Policy Recommendations Addressing Greenhouse Gas Reduction in Alaska*. Submitted to the Alaska Climate Change Sub-Cabinet. Synapse Energy Economics for the Center for Climate Strategies.
- James, C., **J. Fisher**, K. Takahashi, B. Warfield. 2009. *No Need to Wait: Using Energy Efficiency and Offsets to Meet Early Electric Sector Greenhouse Gas Targets*. Synapse Energy Economics for Environmental Defense Fund.
- James, C., **J. Fisher**. 2008. *Reducing Emissions in Connecticut on High Electric Demand Days (HEDD)*. Synapse Energy Economics for the Connecticut Department of Environmental Protection and the US Environmental Protection Agency.
- Napoleon, A., **J. Fisher**, W. Steinhurst, M. Wilson, F. Ackerman, M. Resnikoff. 2008. *The Real Costs of Cleaning up Nuclear Waste: A Full Cost Accounting of Cleanup Options for the West Valley Nuclear Waste Site*. Synapse Energy Economics et al.
- James, C., F. Fisher. 2008. *Reducing Emissions in Connecticut on High Electric Demand Days (HEDD)*. Synapse Energy Economics for the CT Department of Environmental Protection and the U.S. Environmental Protection Agency.
- Hausman, E., **J. Fisher**, B. Biewald. 2008. *Analysis of Indirect Emissions Benefits of Wind, Landfill Gas, and Municipal Solid Waste Generation*. Synapse Energy Economics for US. Environmental Protection Agency.
- Schlissel, D., **J. Fisher**. 2008. *A preliminary analysis of the relationship between CO₂ emission allowance prices and the price of natural gas*. Synapse Energy Economics for Energy Foundation.

PEER-REVIEWED ARTICLES

- Buonocore, J. J., P. Luckow, **J. Fisher**, W. Kempton, J. I. Levy. 2016. "Health and climate benefits of offshore wind facilities in the Mid-Atlantic United States." *Environmental Research Letters*, 11 (2016) 074019. doi: 10.1088/1748-9326/11/7/074019
- Buonocore, J. J., P. Luckow, G. Norris, J. D. Spengler, B. Biewald, **J. Fisher**, J. I. Levy. 2015. "Health and climate benefits of different energy-efficiency and renewable energy choices." *Nature Climate Change*, August 2015: doi:10.1038/nclimate2771.
- Ackerman, F., **J.I. Fisher**. 2013. "Is there a water-energy nexus in electricity generation? Long-term scenarios for the western United States." *Energy Policy*, August: 235–241.
- Averyt, K., J. Macknick, J. Rogers, N. Madden, **J. Fisher**, J.R. Meldrum, and R. Newmark. 2012. "Water use for electricity in the United States: An analysis of reported and calculated water use information for 2008." *Environmental Research Letters*. In press (accepted Nov. 2012).
- Morisette, J. T., A. D. Richardson, A. K. Knapp, **J.I. Fisher**, E. Graham, J. Abatzoglou, B.E. Wilson, D. D. Breshears, G. M. Henebry, J. M. Hanes, and L. Liang. 2009. "Tracking the rhythm of the seasons in the face of global change: Challenges and opportunities for phenological research in the 21st Century." *Frontiers in Ecology* 7 (5): 253–260.
- Biewald, B., L. Johnston, **J. Fisher**. 2009. "Co-benefits: Experience and lessons from the US electric sector." *Pollution Atmosphérique*, April 2009: 113-120.
- Fisher, J.I.**, G.C. Hurtt, J.Q. Chambers, Q. Thomas. 2008. "Clustered disturbances lead to bias in large-scale estimates based on forest sample plots." *Ecology Letters* 11 (6): 554–563.

- Chambers, J.Q., **J.I. Fisher**, H. Zeng, E.L. Chapman, D.B. Baker, and G.C. Hurtt. 2007. "Hurricane Katrina's Carbon Footprint on US Gulf Coast Forests." *Science* 318 (5853): 1107. DOI: 10.1126/science.1148913.
- Fisher, J.I.**, A.D. Richardson, and J.F. Mustard. 2007. "Phenology model from surface meteorology does not capture satellite-based greenup estimations." *Global Change Biology* 13:707–721.
- Fisher, J.I.**, J.F. Mustard. 2007. "Cross-scalar satellite phenology from ground, Landsat, and MODIS data." *Remote Sensing of Environment* 109:261–273.
- Fisher, J.I.**, J.F. Mustard, and M. Vadeboncoeur. 2006. "Green leaf phenology at Landsat resolution: Scaling from the field to the satellite." *Remote Sensing of Environment* 100 (2): 265–279.
- Fisher, J.I.**, J.F. Mustard. 2004. "High spatial resolution sea surface climatology from Landsat thermal infrared data." *Remote Sensing of Environment* 90:293–307.
- Fisher, J.I.**, J. F. Mustard, and P. Sanou. 2004. "Policy imprints in Sudanian forests: Trajectories of vegetation change under land management practices in West Africa." *Submitted, International Remote Sensing*.
- Fisher, J.I.**, S.J. Goetz. 2001. "Considerations in the use of high spatial resolution imagery: an applications research assessment." Proceedings at the American Society for Photogrammetry and Remote Sensing (ASPRS) Conference in St. Louis, MO.

SELECTED ABSTRACTS

- Fisher, J.I.**, "Phenological indicators of forest composition in northern deciduous forests." *American Geophysical Union*. San Francisco, CA. December 2007.
- Fisher, J.I.**, A.D. Richardson, and J.F. Mustard. "Phenology model from weather station meteorology does not predict satellite-based onset." *American Geophysical Union*. San Francisco, CA. December 2006.
- Chambers, J., **J.I. Fisher**, G Hurtt, T. Baker, P. Camargo, R. Campanella, *et al.*, "Charting the Impacts of Disturbance on Biomass Accumulation in Old-Growth Amazon Forests." *American Geophysical Union*. San Francisco, CA. December 2006.
- Fisher, J.I.**, A.D. Richardson, and J.F. Mustard. "Phenology model from surface meteorology does not capture satellite-based greenup estimations." *American Geophysical Union. Eos Trans.* 87(52). San Francisco, CA. December 2006.
- Fisher, J.I.**, J.F. Mustard, and M. Vadeboncoeur. "Green leaf phenology at Landsat resolution: scaling from the plot to satellite." *American Geophysical Union. Eos Trans.* 86(52). San Francisco, CA. December 2005.
- Fisher, J.I.**, J.F. Mustard. "Riparian forest loss and landscape-scale change in Sudanian West Africa." *Ecological Association of America*. Portland, Oregon. August 2004.
- Fisher, J.I.**, J.F. Mustard. "High spatial resolution sea surface climatology from Landsat thermal infrared data." *American Society for Photogrammetry and Remote Sensing (ASPRS) New England Region Technical Meeting*. Kingston, Rhode Island. November, 2004.
- Fisher, J.I.**, J.F. Mustard, and P. Sanou. "Trajectories of vegetation change under controlled land-use in Sudanian West Africa." *American Geophysical Union. Eos Trans.* 85(47). San Francisco, CA. December 2004.
- Fisher, J.I.**, J.F. Mustard. "Constructing a climatology of Narragansett Bay surface temperature with satellite thermal imagery." *The Rhode Island Natural History Survey Conference*. Cranston, RI. March, 2003.

- Fisher, J.I.**, J.F. Mustard. "Constructing a high resolution sea surface climatology of Southern New England using satellite thermal imagery." *New England Estuarine Research Society*. Fairhaven, MA. May, 2003.
- Fisher, J.I.**, J.F. Mustard. "High spatial resolution sea surface climatology from Landsat thermal infrared data." *Ecological Society of America Conference*. Savannah, GA. August, 2003.
- Fisher, J.I.**, S.J. Goetz. "Considerations in the use of high spatial resolution imagery: an applications research assessment." *American Society for Photogrammetry and Remote Sensing (ASPRS) Conference Proceedings*, St. Louis, MO. March, 2001.

SEMINARS AND PRESENTATIONS

- Fisher, J.** 2015. "Planning for Clean Power Plan: Top Five Points for States." Presentation at the National Governor's Association Policy Academy on Clean Power Plan in Salt Lake City, UT, October 14, 2015.
- Fisher, J.** 2015. "Environmental Regulations in Integrated Resource Planning." Presentation at EUCI Conference in Atlanta, GA, May 14, 2015.
- Fisher, J.I.**, R. DeYoung. 2015. "EPA's AVERT: Avoiding Emissions from the Electric Sector through Efficiency and Renewable Energy." Presentation at the 18th Annual Energy, Utility & Environment Conference & Expo (EUEC2015) in San Diego, CA, February 17, 2015.
- Fisher, J.** 2014. "Planning in Vertically Integrated Utilities." Presentation to the U.S. Environmental Protection Agency in Washington, DC, May 22, 2014.
- Fisher, J.** 2013. "IRP Best Practices Stakeholder Perspectives." Presentation at Indiana Utility Regulatory Commission Emerging Issues in IRP conference. October 17, 2013.
- Fisher, J.**, P. Knight. 2013. "Avoided Emissions and Generation Tools (AVERT): An Introduction." Presentation for EPA and various state departments of environmental quality/protection.
- Takahashi, K., **J. Fisher**. 2013. "Greening TVA: Leveraging Energy Efficiency to Replace TVA's Highly Uneconomic Coal Units." Presentation at the ACEEE National Conference on Energy Efficiency as a Resource, September 23, 2013.
- Fisher, J.** 2011. "Emissions Reductions from Renewable Energy and Energy Efficiency in California Air Districts." Presentation for EPA State Climate and Energy Program, June 14, 2011.
- Fisher, J.**, B. Biewald. 2011. "WECC Coal Plant Retirement Based On Forward-Going Economic Merit." Presentation for Western Grid Group, January 10, 2011.
- Fisher, J.** 2010. "Protecting Electricity and Water Consumers in a Water-Constrained World." Presentation to the National Association of State Utility Consumer Advocates, November 16, 2010.
- James, C., **J. Fisher**, D. White, and N. Hughes. 2010. "Quantifying Criteria Emissions Reductions in CA from Efficiency and Renewables." CEC / PIER Air Quality Webinar Series, October 12, 2010.
- Fisher, J.** 2008. "Climate Change, Water, and Risk in Electricity Planning." Presentation at National Association of Regulatory Utility Commissioners (NARUC) Conference in Portland, OR, July 22, 2008.
- Fisher, J.**, E. Hausman, and C. James. 2008. "Emissions Behavior in the Northeast from the EPA Acid Rain Monitoring Dataset." Presentation at Northeast States for Coordinated Air Use Management (NESCAUM) conference in Boston, MA, January 30, 2008.

Fisher, J.I., J.F. Mustard, and M. Vadeboncoeur. 2006. "Climate and phenological variability from satellite data. Ecology and Evolutionary Biology," Presentation at Tulane University, March 24, 2006.

Fisher, J.I., J.F. Mustard, and M. Vadeboncoeur. 2005. "Anthropogenic and climatic influences on green leaf phenology: new observations from Landsat data." Seminar presentation at the Ecosystems Center at the Marine Biological Laboratory in Woods Hole, MA, September 27, 2005.

Fisher, J.I., J.F. Mustard, "High resolution phenological modeling in Southern New England." Seminar at the Woods Hole Research Center in Woods Hole, MA, March 16, 2005.

EXPERT TESTIMONY & DECLARATIONS

Before the Superior Court of Washington for Thurston County (No. 18-2-03640-34). Declaration in support of Sierra Club opposing PacifiCorp motion for relief to keep certain materials related to the economics of PacifiCorp's coal fleet confidential. On behalf of Sierra Club. September 7, 2018.

In the United States District Court for the District of Columbia (Civil Action 17-2700-EGS). Declaration in support of Sierra Club's action to compel the Secretary of Energy to complete energy efficiency standards for manufactured housing. On behalf of Sierra Club. June 29, 2018.

Public Utilities Commission of Ohio (Docket 17-32-EL-AIR): Direct testimony in Duke Energy Ohio's request for a rider to include the costs of Ohio Valley Electric Corporation contract costs into rates. On behalf of Sierra Club. June 25, 2018.

California Public Utilities Commission (Investigation 17-04-019): Direct testimony regarding PacifiCorp's compliance with California's Emissions Performance Standard. On behalf of Sierra Club. February 7, 2018.

Mississippi Public Service Commission (Docket No. 2017-AD-112): Direct testimony regarding settlement with Mississippi Power Company on value of Kemper County Combined Cycle plant. On behalf of Sierra Club. October 23, 2017.

Utah Public Service Commission (Docket 14-035-114): Direct and surrebuttal testimonies in the investigation into the costs and benefits of PacifiCorp's proposed Net Metering program, with respect to long-term resource value and environmental benefits. On behalf of Heal Utah. June 8, 2017.

Indiana Utility Regulatory Commission (Cause No. 44872): Direct and rebuttal testimonies regarding Northern Indiana Public Service Company's application for a Certificate of Public Convenience and Necessity for environmental compliance projects at Schahfer units 14 & 15 and Michigan City unit 12. On behalf of Sierra Club. April 3, 2017.

Indiana Utility Regulatory Commission (Cause No. 44871): Direct and rebuttal testimonies regarding Indiana Michigan Company's application for a Certificate of Public Convenience and Necessity to install Selective Catalytic Reduction at Rockport Power Plant Unit 2. On behalf of Citizens Action Coalition of Indiana, Sierra Club, and Valley Watch. February 3, 2017.

Public Utilities Commission of Nevada (Docket Nos. 16-07001, 16-07007, and 16-08027): Direct testimony regarding the economic viability of the North Valmy coal plant. On behalf of Sierra Club. September 30, 2016.

California Public Utilities Commission (Docket 15-09-007): Direct testimony regarding PacifiCorp's application for authority to sell Utah mining assets on a post-hoc basis. On behalf of Sierra Club. July 11, 2016.

- Washington Utilities and Transportation Commission (Docket UE-152253):** Response, cross-answer, and supplementary cross-answer testimony regarding the general rate case on behalf of Pacific Power & Light Company. On behalf of Sierra Club. June 1, 2016.
- Georgia Public Service Commission (Docket 40161):** Direct testimony regarding Georgia Power Company's 2016 Integrated Resource Plan. On behalf of Sierra Club. May 18, 2016.
- Oregon Public Utility Commission (Docket UM-1712):** Direct testimony regarding PacifiCorp's application for approval of Deer Creek Mine transaction. On behalf of Sierra Club. March 5, 2015.
- Oklahoma Corporation Commission (Case No. PUD 201400):** Direct and rebuttal testimony comparing the modeling performed by Oklahoma Gas & Electric in support of its request for authorization and cost recovery of a Clean Air Act compliance plan and Mustang modernization against best practices in resource planning. On behalf of Sierra Club. December 16, 2014 and January 26, 2015.
- New Mexico Public Regulation Commission (Case 12-00390-UT):** Direct and surrebuttal testimony evaluating the economic modeling performed by Public Service Company of New Mexico in support of its application for certificate of public convenience and necessity for the acquisition of San Juan Generating Station and Palo Verde units. On behalf of New Energy Economy. August 29, 2014; December 29, 2014.
- Wyoming Public Service Commission (Docket No. 20000-446-ER-14):** Direct testimony in the matter of the application of Rocky Mountain Power for authority to increase its retail electric utility service rates in Wyoming approximately \$36.1 million per year or 5.3 percent. On behalf of Sierra Club. July 25, 2014.
- Indiana Utility Regulatory Commissions (Cause No. 44446):** Direct testimony evaluating the economic modeling performed on behalf of Vectren South in support of its application for certificate of public convenience and necessity for various retrofits at Brown 1 & 2, Culley 3 and Culley plant, and Warrick 4. On behalf of Sierra Club, Citizens Action Coalition, and Valley Watch. May 28, 2014.
- Utah Public Service Commission (Docket No. 13-035-184):** Direct testimony In the matter of the application of Rocky Mountain Power for authority to increase its retail electric utility service rates in Utah and for approval of its proposed electric service schedules and electric service regulations. On behalf of Sierra Club. May 1, 2014.
- Louisiana Public Service Commission (Docket No. U-32507):** Direct and cross answering testimony regarding the application of Cleco Power LLC for: (i) authorization to install emissions control equipment at certain of its generating facilities in order to comply with the federal national emissions standards for hazardous air pollutants from coal and oil-fired electric steam units rule; and (ii) authorization to recover the costs associated with the emissions control equipment in jurisdictional rates. On behalf of Sierra Club. November 8, 2013 and December 9, 2013.
- Nevada Public Utilities Commission (Docket No. 13-07021):** Direct testimony regarding a joint application of Nevada Power Company d/b/a NV Energy, Sierra Pacific Power Company d/b/a NV Energy (referenced together as "NV Energy, Inc.") and MidAmerican Energy Holdings Company ("MidAmerican") for approval of a merger of NV Energy, Inc. with MidAmerican. On behalf of Sierra Club. October 24, 2013.
- Indiana Utility Regulatory Commission (Cause No. 44339):** Direct testimony in the matter of Indianapolis Power & Light Company's application for a Certificate of Public Convenience and Necessity for the construction of a combined cycle gas turbine generation facility. On behalf of Citizens Action Coalition of Indiana. August 22, 2013.

- Indiana Utility Regulatory Commission (Cause No. 44242):** Direct and surrebuttal testimony regarding Indianapolis Power & Light Company's petition for approval of clean energy projects and qualified pollution control property. On behalf of Sierra Club. January 28, 2013; April 3, 2013.
- Wyoming Public Service Commission (Docket 2000-418-EA-12):** Direct testimony regarding the application of PacifiCorp for approval of a certificate of public convenience and necessity to construct selective catalytic reduction systems on the Jim Bridger Units 3 and 4. On behalf of Sierra Club. February 1, 2013.
- Public Service Commission of Wisconsin (Docket No. 6690-CE-197):** Direct, rebuttal, and surrebuttal testimony regarding Wisconsin Public Service Corporation's application for authority to construct a multi-pollutant control technology system for Unit 3 of Weston Generating Station. On behalf of Clean Wisconsin. Direct testimony submitted November 15, 2012, rebuttal testimony submitted December 14, 2012, surrebuttal testimony submitted January 7, 2013.
- Utah Public Service Commission (Docket 12-035-92):** Direct, surrebuttal, and cross-answering testimony regarding Rocky Mountain Power's request for approval to construct Selective Catalytic Reduction systems at Jim Bridger units 3 and 4. On behalf of Sierra Club. November 30, 2012.
- Oregon Public Utility Commission (Docket UE 246):** Direct testimony in the matter of PacifiCorp's filing of revised tariff schedules for electric service in Oregon. On behalf of Sierra Club. June 20, 2012.
- Kentucky Public Service Commission (Docket 2011-00401):** Direct testimony regarding the application of Kentucky Power Company for approval of its 2011 environmental compliance plan, for approval of its amended environmental cost recovery surcharge tariff, and for the granting of a certificate of public convenience and necessity for the construction and acquisition of related facilities. On behalf of Sierra Club. March 12, 2012.
- Kentucky Public Service Commission (Dockets 2011-00161/2011-00162):** Direct testimony regarding the application of Kentucky Utilities/Louisville Gas and Electric Company for certificates of public convenience and necessity and approval of its 2011 compliance plan for recovery by environmental surcharge. On behalf of Sierra Club and Natural Resources Defense Council (NRDC). September 16, 2011.
- Kansas Corporation Commission (Docket 11-KCPE-581-PRE):** Direct testimony in the matter of the petition of Kansas City Power & Light (KCP&L) for determination of the ratemaking principles and treatment that will apply to the recovery in rates of the cost to be incurred by KCP&L for certain electric generating facilities under K.S.A. 66-1239. On behalf of Sierra Club. June 3, 2011.
- Utah Public Service Commission (Docket 10-035-124):** Direct testimony in the matter of the application of Rocky Mountain Power for authority to increase its retail electric utility service rates in Utah and approval of its proposal electric service schedules and electric service regulations. On behalf of Sierra Club. May 26, 2011.
- Wyoming Public Service Commission (Docket 20000-384-ER-10):** Direct testimony in the matter of the application of Rocky Mountain Power for authority to increase its retail electric utility rates in Wyoming approximately \$97.9 million per year or an average overall increase of 17.3 percent. On behalf of Powder River Basin Resource Council. April 11, 2011.

JIF-02

ANNUAL REPORT — 2017

OHIO VALLEY ELECTRIC CORPORATION

and subsidiary

INDIANA-KENTUCKY ELECTRIC CORPORATION

Ohio Valley Electric Corporation

GENERAL OFFICES, 3932 U.S. Route 23, Piketon, Ohio 45661

Ohio Valley Electric Corporation (OVEC) and its wholly owned subsidiary, Indiana-Kentucky Electric Corporation (IKEC), collectively, the Companies, were organized on October 1, 1952. The Companies were formed by investor-owned utilities furnishing electric service in the Ohio River Valley area and their parent holding companies for the purpose of providing the large electric power requirements projected for the uranium enrichment facilities then under construction by the Atomic Energy Commission (AEC) near Portsmouth, Ohio.

OVEC, AEC and OVEC's owners or their utility-company affiliates (called Sponsoring Companies) entered into power agreements to ensure the availability of the AEC's substantial power requirements. On October 15, 1952, OVEC and AEC executed a 25-year agreement, which was later extended through December 31, 2005 under a Department of Energy (DOE) Power Agreement. On September 29, 2000, the DOE gave OVEC notice of cancellation of the DOE Power Agreement. On April 30, 2003, the DOE Power Agreement terminated in accordance with the notice of cancellation.

OVEC and the Sponsoring Companies signed an Inter-Company Power Agreement (ICPA) on July 10, 1953, to support the DOE Power Agreement and provide for excess energy sales to the Sponsoring Companies of power not utilized by the DOE or its predecessors. Since the termination of the DOE Power Agreement on April 30, 2003, OVEC's entire generating capacity has been available to the Sponsoring Companies under the terms of the ICPA. The Sponsoring Companies and OVEC entered into an Amended and Restated ICPA, effective as of August 11, 2011, which extends its term to June 30, 2040.

OVEC's Kyger Creek Plant at Cheshire, Ohio, and IKEC's Clifty Creek Plant at Madison, Indiana, have nameplate generating capacities of 1,086,300 and 1,303,560 kilowatts, respectively. These two generating stations, both of which began operation in 1955, are connected by a network of 705 circuit miles of 345,000-volt transmission lines. These lines also interconnect with the major power transmission networks of several of the utilities serving the area.

The current Shareholders and their respective percentages of equity in OVEC are:

Allegheny Energy, Inc. ¹	3.50
American Electric Power Company, Inc.*	39.17
Buckeye Power Generating, LLC ²	18.00
The Dayton Power and Light Company ³	4.90
Duke Energy Ohio, Inc. ⁴	9.00
Kentucky Utilities Company ⁵	2.50
Louisville Gas and Electric Company ⁵	5.63
Ohio Edison Company ¹	0.85
Ohio Power Company** ⁶	4.30
Peninsula Generation Cooperative ⁷	6.65
Southern Indiana Gas and Electric Company ⁸	1.50
The Toledo Edison Company ¹	<u>4.00</u>
	<u>100.00</u>

These investor-owned utilities and affiliates of generation and transmission rural electric cooperatives comprise the Sponsoring Companies and currently share the OVEC power participation benefits and requirements in the following percentages:

Allegheny Energy Supply Company LLC ¹	3.01
Appalachian Power Company ⁶	15.69
Buckeye Power Generating, LLC ²	18.00
The Dayton Power and Light Company ³	4.90
Duke Energy Ohio, Inc. ⁴	9.00
FirstEnergy Solutions Corp. ¹	4.85
Indiana Michigan Power Company ⁶	7.85
Kentucky Utilities Company ⁵	2.50
Louisville Gas and Electric Company ⁵	5.63
Monongahela Power Company ¹	0.49
Ohio Power Company ⁶	19.93
Peninsula Generation Cooperative ⁷	6.65
Southern Indiana Gas and Electric Company ⁸	<u>1.50</u>
	<u>100.00</u>

Some of the Common Stock issued in the name of:

- *American Gas & Electric Company
- **Columbus and Southern Ohio Electric Company

Subsidiary or affiliate of:

- ¹FirstEnergy Corp.
- ²Buckeye Power, Inc.
- ³The AES Corporation
- ⁴Duke Energy Corporation
- ⁵PPL Corporation
- ⁶American Electric Power Company, Inc.
- ⁷Wolverine Power Supply Cooperative, Inc.
- ⁸Vectren Corporation

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

A Message from the President

Ohio Valley Electric Corporation (OVEC) and its subsidiary, Indiana-Kentucky Electric Corporation (IKEC), achieved improved generation and operating performance in 2017. Our employees accomplished these results because of their focus on safety, improving operating metrics, and cost optimization through use of continuous improvement and LEAN tools. However, we must continue to focus on improvement or “better” to succeed in a very competitive energy market. The OVEC-IKEC strategic business plan remains the road map for the future, and its successful implementation will be the driver to achieving our goals of being a safe, reliable and environmentally compliant provider of choice.

SAFETY

Making safety a priority in all facets of our business is a Company core value. Ensuring that each employee returns home safely at the end of the day is paramount. In 2017, Clifty Creek and System Division employees completed the calendar year without a recordable injury. This is an inaugural milestone reached by the employees of Clifty Creek. Electrical Operations, which includes station mechanic employees, achieved a milestone of three years without a recordable injury early in 2018. Company recordable and DART incident rates improved in 2017 from the previous year, with year-end rates being 1.10 and 0.94, respectively. The goal is unchanged; zero harm is the target.

In 2017, the Supervisor Field Observation safety training program was implemented and has moved into its evaluation phase for 2018, with the focus being on the quality and effectiveness of all evaluations completed. Contractor oversight and safety standardization, an additional focus area for 2017, was supported through the review and revision of contractor safety and health requirements. These focus areas will continue to promote our goal of a zero harm culture.

RELIABILITY

In 2017, the combined equivalent availability of the five generating units at Kyger Creek and the six units at Clifty Creek was 75.6 percent compared with 72.9 percent in 2016. The combined equivalent forced outage rate (EFOR) at both plants was 6.5 percent in 2017 compared with 8.4 percent in 2016.

Through June 2018, the combined EFOR of the eleven generating units was 5.9 percent.

ENERGY SALES

OVEC’s use factor — the ratio of power scheduled by the Sponsoring Companies to power available — for the combined on- and off-peak periods averaged 83.9 percent in 2017 compared with 72.7 percent in 2016. The on-peak use factor averaged 91.9 percent in 2017 compared with 82.8 percent in 2016. The off-peak use factor averaged 73.7 percent in 2017 and 59.7 percent in 2016.

In 2017, OVEC delivered 11.7 million megawatt hours (MWh) to the Sponsoring Companies under the terms of the Inter-Company Power Agreement compared with 9.7 million MWh delivered in 2016.

POWER COSTS

In 2017, OVEC’s average power cost to the Sponsoring Companies was \$54.270 per MWh compared with \$58.657 per MWh in 2016. The total Sponsoring Company power costs were \$636 million in 2017 compared with \$572 million in 2016.

2018 ENERGY SALES OUTLOOK

Through June 2018, the demand for energy was slightly lower than expected due to moderate winter temperatures and sustained lower natural gas prices. OVEC projects the energy market to be more normalized during the remainder of 2018. OVEC's updated projection for 2018 is a combined utilization factor of 84 percent, which will result in energy sales estimated at 11.7 million MWh at a cost of approximately \$55 per MWh.

COST CONTROL INITIATIVES

The OVEC and IKEC employees continue to strive to control costs and improve operating performance through its continuous improvement process (CIP). Since 2013, CIP has obtained over \$20.6 million in sustainable savings through approximately 2,500 process improvements. Employee-driven process improvements and a continued effort in hands-on skill development with CIP or LEAN tools throughout the Company are driving the sustainability of the continuous improvement efforts.

In 2017, OVEC-IKEC continued utilizing the LEAN tool of Open Book Leadership (OBL) as a cost-control initiative to further improve our culture and overall business success. OBL is a management philosophy that focuses on empowering employees by providing them the information, education and communication necessary to understand how the Company performs and how they can impact that performance. The OBL process creates transparency of Company performance and engages employees in their ability to impact and improve key performance areas.

ENVIRONMENTAL COMPLIANCE

OVEC-IKEC continues to maintain a strong commitment to meeting all applicable federal, state and local environmental rules and regulations. During 2017, we operated in substantial compliance with the Mercury Air Toxics Standards (MATS), the Cross-State Air Pollution Rule (CSAPR) and other applicable state and federal air, water and solid waste regulations. In addition, OVEC successfully met the challenge of the new ozone season NO_x constraints that went into effect on May 1, 2017. The Company anticipates being well positioned to

continue to operate all SCR controlled units during the entire 2018 ozone season, as well as future ozone seasons, within the constraints of the new CSAPR Update Rule. Consistent with changes made in 2017, Clifty Creek Unit 6, which does not have an SCR, will continue to be offered as "economic" for dispatch in the PJM Market during the ozone season and operated the same as the remaining ten units outside of the ozone season.

OVEC-IKEC has worked diligently to modify the gypsum dewatering systems at each plant to improve the marketability of the gypsum generated from our scrubber operations. This effort recently resulted in OVEC signing a long-term gypsum supply contract on May 1, 2018, between the Kyger Creek Station and a wallboard manufacturer. Efforts are underway to secure a similar long-term agreement with a different wallboard manufacturer for the purchase of gypsum from IKEC's Clifty Creek Station.

During the first year of the Trump Administration, there have been myriad regulatory actions involving several key environmental regulations impacting the electric utility sector. The regulatory actions include, but are not limited to, reconsideration of portions of the Steam Electric Effluent Limitations Guidelines (ELG) and associated compliance deadlines, pending regulatory actions to the Coal Combustion Residuals (CCR) rule and the proposed repeal and replacement of the Clean Power Plan. OVEC-IKEC continues to monitor and evaluate the impacts of these regulatory actions and will evaluate their potential impact on future operations.

In the interim, OVEC-IKEC continues to work toward meeting various compliance obligations associated with the CCR rule and the Clean Water Act Section 316(b) regulations. In addition, OVEC-IKEC continues to evaluate technology options for compliance with the Steam Electric ELG rules, particularly dry fly ash conversion options at the Kyger Creek Station.

INTEGRATION OF THE OVEC-IKEC TRANSMISSION SYSTEM INTO PJM

At the request of the Board, OVEC was directed to begin the process of filing for the approval of the Federal Energy Regulatory

Commission (FERC) to fully integrate into PJM and to report back to the Board after such approval with any updates to the Cost-Benefit Analysis prepared by OVEC management to permit the Board to take a final vote on such integration. OVEC and PJM executed an Integration Agreement on May 23, 2017 to begin the process. On December 13, 2017, OVEC and PJM made a joint filing with the FERC for OVEC to fully integrate into PJM, which was approved by FERC order dated as of February 13, 2018. After additional updates to the Board and continued validation of the Cost-Benefit Analysis, on June 28, 2018, the Board approved OVEC's integrating into PJM, with an expected integration date as of December 1, 2018.

BOARD OF DIRECTORS AND OFFICERS CHANGES

In October 2017, John A. Verderame, managing director – power trading and dispatch of Duke Energy, was elected a director of OVEC and was appointed to the OVEC Executive Committee following the death of Lee E. Barrett. Mr. Barrett had served on the OVEC board and as a member of the Executive Committee of OVEC since January 2017.

On January 1, 2018, John D. Brodt retired as Chief Financial Officer, Secretary and Treasurer of OVEC and IKEC. Justin J. Cooper was elected to replace Mr. Brodt as Chief Financial Officer, Secretary and Treasurer of both Companies, effective January 1, 2018. Mr. Brodt had served as Secretary and Treasurer since 1988 and as Chief Financial Officer, Secretary and Treasurer since 2012.

At the OVEC and IKEC Boards of Directors' meeting held on April 27, 2018, Mark C. McCullough, executive vice president–generation of American Electric Power Company, Inc., was elected a director of IKEC and appointed to the Executive Committee of IKEC. Mr. McCullough also was elected to serve as president of both Companies. He succeeds Nicholas K. Akins, who resigned from his positions as a director, member of the Executive Committee and president of OVEC and IKEC. Mr. Akins had served on the OVEC board since 2009 and on the IKEC board since 2011. He also had served as president and a member of the Executive Committee of both

Companies since 2011. On that same date, Mr. McCullough resigned as a member and chairman of the Human Resources Committee of OVEC. Also on April 27, 2018, Christian T. Beam, president and chief operating officer of Appalachian Power, was elected a director of OVEC and was appointed as a member of the Human Resources Committee of OVEC. Also on April 27, 2018, Julie Sloat, president and chief operating officer of AEP Ohio, was appointed to the Executive Committee of OVEC; and Lana L. Hillebrand, senior vice president and chief administrative officer, was appointed chairwoman of the Human Resources Committee of OVEC.



Mark C. McCullough
President

July 16, 2018

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

CONSOLIDATED BALANCE SHEETS AS OF DECEMBER 31, 2017 AND 2016

	2017	2016
ASSETS		
ELECTRIC PLANT:		
At original cost	\$2,782,873,612	\$2,739,103,561
Less—accumulated provisions for depreciation	<u>1,445,352,656</u>	<u>1,352,933,437</u>
	1,337,520,956	1,386,170,124
Construction in progress	<u>6,493,278</u>	<u>14,638,632</u>
Total electric plant	<u>1,344,014,234</u>	<u>1,400,808,756</u>
CURRENT ASSETS:		
Cash and cash equivalents	58,978,090	47,810,728
Accounts receivable	40,734,337	37,443,514
Fuel in storage	33,817,111	76,387,854
Emission allowances	355,852	872,920
Materials and supplies	38,445,277	34,857,142
Income taxes receivable	-	3,118,299
Property taxes applicable to future years	2,912,500	2,822,500
Prepaid expenses and other	<u>2,051,978</u>	<u>1,998,372</u>
Total current assets	<u>177,295,145</u>	<u>205,311,329</u>
REGULATORY ASSETS:		
Unrecognized postemployment benefits	3,865,985	4,273,382
Unrecognized pension benefits	37,249,847	37,128,152
Decommissioning and demolition	<u>678,154</u>	<u>-</u>
Total regulatory assets	<u>41,793,986</u>	<u>41,401,534</u>
DEFERRED CHARGES AND OTHER:		
Unamortized debt expense	327,610	498,536
Long-term investments	154,273,960	119,002,376
Income taxes receivable	9,294,909	-
Deferred tax assets	-	2,700,000
Other	<u>1,534</u>	<u>78,637</u>
Total deferred charges and other	<u>163,898,013</u>	<u>122,279,549</u>
TOTAL	<u>\$1,727,001,378</u>	<u>\$1,769,801,168</u>

(Continued)

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

CONSOLIDATED BALANCE SHEETS AS OF DECEMBER 31, 2017 AND 2016

	2017	2016
CAPITALIZATION AND LIABILITIES		
CAPITALIZATION:		
Common stock, \$100 par value—authorized, 300,000 shares; outstanding, 100,000 shares in 2017 and 2016	\$ 10,000,000	\$ 10,000,000
Long-term debt	1,261,297,697	1,170,781,545
Line of credit borrowings	85,000,000	85,000,000
Retained earnings	<u>10,342,251</u>	<u>8,805,462</u>
Total capitalization	<u>1,366,639,948</u>	<u>1,274,587,007</u>
CURRENT LIABILITIES:		
Current portion of long-term debt	76,483,805	248,483,907
Accounts payable	31,331,422	33,642,452
Accrued other taxes	10,799,150	9,858,927
Regulatory liabilities	1,909,470	11,610,328
Accrued interest and other	<u>25,684,840</u>	<u>25,389,872</u>
Total current liabilities	<u>146,208,687</u>	<u>328,985,486</u>
COMMITMENTS AND CONTINGENCIES (Notes 3, 11, 12)		
REGULATORY LIABILITIES:		
Postretirement benefits	56,495,826	32,986,336
Income taxes refundable to customers	11,571,428	5,433,716
Advance billing of debt reserve	30,000,000	-
Decommissioning and demolition	<u>-</u>	<u>13,507,852</u>
Total regulatory liabilities	<u>98,067,254</u>	<u>51,927,904</u>
OTHER LIABILITIES:		
Pension liability	37,249,847	37,128,152
Asset retirement obligations	57,170,620	33,044,921
Postretirement benefits obligation	17,196,685	39,218,090
Postemployment benefits obligation	3,865,985	4,273,382
Other noncurrent liabilities	<u>602,352</u>	<u>636,226</u>
Total other liabilities	<u>116,085,489</u>	<u>114,300,771</u>
TOTAL	<u>\$ 1,727,001,378</u>	<u>\$ 1,769,801,168</u>

See notes to consolidated financial statements.

(Concluded)

**OHIO VALLEY ELECTRIC CORPORATION
AND SUBSIDIARY COMPANY**

**CONSOLIDATED STATEMENTS OF INCOME AND RETAINED EARNINGS
FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016**

	2017	2016
OPERATING REVENUES—Sales of electric energy to:		
Department of Energy	\$ 8,187,803	\$ 8,519,114
Sponsoring Companies	<u>615,870,005</u>	<u>577,376,640</u>
Total operating revenues	<u>624,057,808</u>	<u>585,895,754</u>
OPERATING EXPENSES:		
Fuel and emission allowances consumed in operation	288,503,093	261,832,736
Purchased power	6,922,507	7,617,661
Other operation	85,206,695	78,388,622
Maintenance	82,862,095	81,651,038
Depreciation	84,699,703	73,882,917
Taxes—other than income taxes	11,975,463	11,983,295
Income taxes	<u>-</u>	<u>345,420</u>
Total operating expenses	<u>560,169,556</u>	<u>515,701,689</u>
OPERATING INCOME	63,888,252	70,194,065
OTHER INCOME	<u>12,619,686</u>	<u>4,149,935</u>
INCOME BEFORE INTEREST CHARGES	<u>76,507,938</u>	<u>74,344,000</u>
INTEREST CHARGES:		
Amortization of debt expense	3,479,683	4,618,191
Interest expense	<u>71,491,466</u>	<u>68,787,341</u>
Total interest charges	<u>74,971,149</u>	<u>73,405,532</u>
NET INCOME	1,536,789	938,468
RETAINED EARNINGS—Beginning of year	<u>8,805,462</u>	<u>7,866,994</u>
RETAINED EARNINGS—End of year	<u>\$ 10,342,251</u>	<u>\$ 8,805,462</u>

See notes to consolidated financial statements.

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016

	2017	2016
OPERATING ACTIVITIES:		
Net income	\$ 1,536,789	\$ 938,468
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Depreciation	84,699,703	73,882,917
Amortization of debt expense	3,479,683	4,618,191
Deferred taxes/refundable taxes	-	3,539,704
Loss (gain) on marketable securities	(6,998,135)	655,288
Changes in assets and liabilities:		
Accounts receivable	(3,290,823)	(13,251,364)
Fuel in storage	42,570,743	4,974,911
Materials and supplies	(3,588,135)	(1,797,001)
Property taxes applicable to future years	(90,000)	27,500
Emissions allowances	517,068	(872,920)
Income tax receivable	(3,476,610)	(3,118,299)
Prepaid expenses and other	(53,606)	114,385
Other regulatory assets	(4,215,734)	(10,985,113)
Other noncurrent assets	77,103	(7,979)
Accounts payable	(2,476,932)	(955,698)
Accrued taxes	940,223	294,171
Accrued interest and other	294,968	3,434,977
Other liabilities	(20,444,880)	19,995,842
Other regulatory liabilities	52,091,672	(15,418,375)
Net cash provided by operating activities	<u>141,573,097</u>	<u>66,069,605</u>
INVESTING ACTIVITIES:		
Electric plant additions	(17,028,105)	(27,580,471)
Proceeds from sale of long-term investments	55,607,351	47,626,573
Purchases of long-term investments	<u>(83,880,802)</u>	<u>(47,524,131)</u>
Net cash used in investing activities	<u>(45,301,556)</u>	<u>(27,478,029)</u>
FINANCING ACTIVITIES:		
Debt issuance and maintenance costs	(11,308,531)	(3,905,669)
Repayment of Senior 2006 Notes	(19,636,354)	(18,539,255)
Repayment of Senior 2007 Notes	(13,920,909)	(13,130,063)
Repayment of Senior 2008 Notes	(14,926,913)	(13,990,154)
Redemption of 2009 Bonds	(25,000,000)	-
Proceeds from line of credit	50,000,000	69,000,000
Payments on line of credit	(50,000,000)	(29,000,000)
Principal payments under capital leases	<u>(311,472)</u>	<u>(508,280)</u>
Net cash provided by financing activities	<u>(85,104,179)</u>	<u>(10,073,421)</u>
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	11,167,362	28,518,155
CASH AND CASH EQUIVALENTS—Beginning of year	47,810,728	19,292,573
CASH AND CASH EQUIVALENTS—End of year	\$ <u>58,978,090</u>	\$ <u>47,810,728</u>
SUPPLEMENTAL DISCLOSURES:		
Interest paid	<u>\$ 72,541,166</u>	<u>\$ 69,458,491</u>
Income taxes paid (received)—net	<u>\$ (2,912,531)</u>	<u>\$ (76,578)</u>
Noncash electric plant additions included in accounts payable at December 31	<u>\$ 746,202</u>	<u>\$ 268,828</u>

See notes to consolidated financial statements.

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016

1. ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES

Consolidated Financial Statements—The consolidated financial statements include the accounts of Ohio Valley Electric Corporation (OVEC) and its wholly owned subsidiary, Indiana-Kentucky Electric Corporation (IKEC), collectively, the Companies. All intercompany transactions have been eliminated in consolidation.

Organization—The Companies own two generating stations located in Ohio and Indiana with a combined electric production capability of approximately 2,256 megawatts. OVEC is owned by several investor-owned utilities or utility holding companies and two affiliates of generation and transmission rural electric cooperatives. These entities or their affiliates comprise the Sponsoring Companies. The Sponsoring Companies purchase power from OVEC according to the terms of the Inter-Company Power Agreement (ICPA), which has a current termination date of June 30, 2040. Approximately 27% of the Companies' employees are covered by a collective bargaining agreement that expires on August 31, 2018.

Prior to 2004, OVEC's primary commercial customer was the U.S. Department of Energy (DOE). The contract to provide OVEC-generated power to the DOE was terminated in 2003 and all obligations were settled at that time. Currently, OVEC has an agreement to arrange for the purchase of power (Arranged Power), under the direction of the DOE, for resale directly to the DOE. The agreement with the DOE expires on July 31, 2018. All purchase costs are billable by OVEC to the DOE.

Rate Regulation—The proceeds from the sale of power to the Sponsoring Companies are designed to be sufficient for OVEC to meet its operating expenses and fixed costs, as well as earn a return on equity before federal income taxes. In addition, the proceeds from power sales are designed to cover debt amortization and interest expense associated with financings. The Companies have continued and expect to continue to operate pursuant to the cost plus rate of return recovery provisions at least to June 30, 2040, the date of termination of the ICPA. However, in 2014 the Companies reduced their billings under the ICPA to effectively forego recovery of the equity return through the ICPA billings.

On March 31, 2018, one of the Sponsoring Companies filed for Chapter 11 bankruptcy protection. OVEC made a preemptive filing on March 26, 2018, with the Federal Energy Regulatory Commission (FERC) to request FERC take exclusive jurisdiction over the possible rejection of the ICPA in regards to the potential bankruptcy of this Sponsoring Company. On April 1, 2018, the Sponsoring Company filed a motion to reject the ICPA; however, no decision by the courts has been taken on this rejection motion to date. This Sponsoring Company's ownership and power participating benefits and requirements are approximately 5%. However, the Companies currently have access to the credit markets to fund ongoing liquidity needs, and the Sponsoring Companies remain obligated to fund debt service payments when due.

The accounting guidance for Regulated Operations provides that rate-regulated utilities account for and report assets and liabilities consistent with the economic effect of the way in which rates are established, if the rates established are designed to recover the costs of providing the regulated service and it is probable that such rates can be charged and collected. The Companies follow the accounting and reporting requirements in accordance with the guidance for Regulated Operations. Certain expenses and credits subject to utility regulation or rate determination normally reflected in income are deferred in the

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016

accompanying consolidated balance sheets and are recognized in income as the related amounts are included in service rates and recovered from or refunded to customers.

The Companies' regulatory assets, liabilities, and amounts authorized for recovery through Sponsor billings at December 31, 2017 and 2016, were as follows:

	2017	2016
Regulatory assets:		
Other assets:		
Unrecognized postemployment benefits	\$ 3,865,985	\$ 4,273,382
Unrecognized pension benefits	37,249,847	37,128,152
Asset retirement costs	<u>4,501,436</u>	<u>-</u>
Total	<u>45,617,268</u>	<u>41,401,534</u>
Total regulatory assets	<u>\$ 45,617,268</u>	<u>\$ 41,401,534</u>
Regulatory liabilities:		
Current liabilities:		
Deferred revenue—advances for construction	145,226	9,722,972
Deferred credit—advance collection of interest	<u>1,764,244</u>	<u>1,887,356</u>
Total	<u>1,909,470</u>	<u>11,610,328</u>
Other liabilities:		
Post retirement benefits	56,495,826	32,986,336
Income taxes refundable to customers	11,571,428	5,433,716
Advance billing of debt reserve	30,000,000	-
Decommissioning and demolition	<u>3,823,282</u>	<u>13,507,852</u>
Total	<u>101,890,536</u>	<u>51,927,904</u>
Total regulatory liabilities	<u>\$ 103,800,006</u>	<u>\$ 63,538,232</u>

Regulatory Assets—Regulatory assets consist primarily of pension benefit costs, postemployment benefit costs, and accrued decommissioning and demolition costs to be billed to the Sponsoring Companies in future years. The Companies' current billing policy for pension and postemployment benefit costs is to bill its actual plan funding.

Regulatory Liabilities—The regulatory liabilities classified as current in the accompanying consolidated balance sheet as of December 31, 2017, consist primarily of interest expense collected from customers in advance of expense recognition and customer billings for construction in progress. These amounts will be credited to customer bills during 2018. Other regulatory liabilities consist primarily of postretirement

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016

benefit costs and decommissioning and demolition costs that have been billed to customers in excess of cumulative expense recognition, income taxes refundable to customers that will be credited to bills over a long-term basis, and advanced billings collected from the Sponsoring Companies for debt services.

In 2003, the DOE terminated the DOE Power Agreement with OVEC, entitling the Sponsoring Companies to 100% of OVEC's generating capacity under the terms of the ICPA. Under the terms of the DOE Power Agreement, OVEC was entitled to receive a "termination payment" from the DOE to recover unbilled costs upon termination of the agreement. The termination payment included unbilled postretirement benefit costs. In 2003, OVEC recorded a settlement payment of \$97 million for the DOE obligation related to postretirement benefit costs. The regulatory liability for postretirement benefits recorded at December 31, 2017 and 2016, represents amounts collected in historical billings in excess of the accounting principles generally accepted in the United States of America (GAAP) net periodic benefit costs, including the DOE termination payment and incremental unfunded plan obligations recognized in the balance sheets but not yet recognizable in GAAP net periodic benefit costs. The Companies' ratemaking policy will recover postretirement benefits in an amount equal to estimated benefit accrual cost, plus amortization of unfunded liabilities, if any. As a result, related regulatory liabilities are being credited to customer bills on a long-term basis.

In January 2017, the Companies started advance billing the Sponsoring Companies for debt service as allowed under the ICPA. At December 31, 2017, \$30 million had been advance billed to the Sponsoring Companies. As the Companies have not yet incurred these debt costs, a regulatory liability was recorded which will be credited to customer bills on a long-term basis.

Cash and Cash Equivalents—Cash and cash equivalents primarily consist of cash and money market funds and their carrying value approximates fair value. For purposes of these statements, the Companies consider temporary cash investments to be cash equivalents since they are readily convertible into cash and have original maturities of less than three months.

Electric Plant—Property additions and replacements are charged to utility plant accounts. Depreciation expense is recorded at the time property additions and replacements are billed to customers or at the date the property is placed in service if the in-service date occurs subsequent to the customer billing. Customer billings for construction in progress are recorded as deferred revenue—advances for construction. These amounts are closed to revenue at the time the related property is placed in service. Depreciation expense and accumulated depreciation are recorded when financed property additions and replacements are recovered over a period of years through customer debt retirement billing. All depreciable property will be fully billed and depreciated prior to the expiration of the ICPA. Repairs of property are charged to maintenance expense.

Fuel in Storage, Emission Allowances, and Materials and Supplies—The Companies maintain coal, reagent, and oil inventories, as well as emission allowances, for use in the generation of electricity for regulatory compliance purposes due to the generation of electricity. These inventories are valued at average cost, less reserves for obsolescence. Materials and supplies consist primarily of replacement parts necessary to maintain the generating facilities and are valued at average cost.

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Long-Term Investments—Long-term investments consist of marketable securities that are held for the purpose of funding postretirement benefits, decommissioning and demolition costs, and debt service. These securities have been classified as trading securities in accordance with the provisions of the accounting guidance for Investments—Debt and Equity Securities. Trading securities reflected in Long-Term Investments are carried at fair value with the unrealized gain or loss, reported in Other Income (Expense). The cost of securities sold is based on the specific identification cost method. The fair value of most investment securities is determined by reference to currently available market prices. Where quoted market prices are not available, the Companies use the market price of similar types of securities that are traded in the market to estimate fair value. See Fair Value Measurements in Note 10. Due to tax limitations, the amounts held in the postretirement benefits portfolio have not yet been transferred to the Voluntary Employee Beneficiary Association (VEBA) trusts (see Note 8). Long-term investments primarily consist of municipal bonds, money market mutual fund investments, and mutual funds. Net unrealized gains (losses) recognized during 2017 and 2016 on securities still held at the balance sheet date were \$6,995,056 and \$(509,314), respectively.

Fair Value Measurements of Assets and Liabilities—The accounting guidance for Fair Value Measurements and Disclosures establishes a fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). Where observable inputs are available, pricing may be completed using comparable securities, dealer values, and general market conditions to determine fair value. Valuation models utilize various inputs that include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in inactive markets, and other observable inputs for the asset or liability.

Unamortized Debt Expense—Unamortized debt expense relates to costs incurred in connection with obtaining revolving credit agreements. These costs are being amortized over the term of the related revolving credit agreement and are recorded as an asset in the consolidated balance sheets. Costs incurred to issue debt are recorded as a reduction to long-term debt as presented in Note 6.

Asset Retirement Obligations and Asset Retirement Costs—The Companies recognize the fair value of legal obligations associated with the retirement or removal of long-lived assets at the time the obligations are incurred and can be reasonably estimated. The initial recognition of this liability is accompanied by a corresponding increase in depreciable electric plant. Subsequent to the initial recognition, the liability is adjusted for any revisions to the expected value of the retirement obligation (with corresponding adjustments to electric plant) and for accretion of the liability due to the passage of time.

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These asset retirement obligations are primarily related to obligations associated with future asbestos abatement at certain generating stations and certain plant closure costs, including the impacts of the coal combustion residuals rule.

Balance—January 1, 2016	\$ 31,249,839
Accretion	1,832,759
Liabilities settled	<u>(37,677)</u>
Balance—December 31, 2016	33,044,921
Accretion	1,941,140
Liabilities settled	(45,038)
Revisions to cash flows	<u>22,229,597</u>
Balance—December 31, 2017	<u>\$ 57,170,620</u>

During 2017, the Companies completed an updated study to estimate the asset retirement costs described above. The revised estimated costs are recorded in the accompanying balance sheets. Adjustments resulting from the revised estimated costs are included as revisions to cash flows in the above table. The increase in the asset retirement obligation is primarily the result of proposed regulations related to the disposal of coal combustion residuals, as further discussed in Note 9.

The Companies do not recognize liabilities for asset retirement obligations for which the fair value cannot be reasonably estimated. The Companies have asset retirement obligations associated with transmission assets at certain generating stations. However, the retirement date for these assets cannot be determined; therefore, the fair value of the associated liability currently cannot be estimated and no amounts are recognized in the consolidated financial statements herein.

Income Taxes—The Companies use the liability method of accounting for income taxes. Under the liability method, the Companies provide deferred income taxes for all temporary differences between the book and tax basis of assets and liabilities which will result in a future tax consequence. The Companies account for uncertain tax positions in accordance with the accounting guidance for Income Taxes.

Use of Estimates—The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

New Accounting Pronouncements—In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers*. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. This standard also includes expanded disclosure

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requirements that result in an entity providing users of financial statements with comprehensive information about the nature, amount, timing, and uncertainty of revenue and cash flows arising from the entity's contracts with customers. In August 2015, ASU No. 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date*, was issued deferring the effective date of ASU 2014-09 to annual reporting periods beginning after December 15, 2018. The Companies plan to adopt the standard and all subsequent amendments in the fiscal year ending December 31, 2018. The Companies have not yet completed their evaluation of the impact of adopting the standard. The Companies' evaluation process will include, but is not limited to, identifying contracts within the scope of Topic 606 as well as evaluating the implications of specific contractual terms. The Companies expect the adoption of ASC 606 will not have a material impact on either the timing or amount of revenues recognized in their consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, *Leases*, which represents a wholesale change to lease accounting. The standard introduces a lessee model that brings most leases into the balance sheet as well as aligns certain underlying principles of the new lessor model with those in Accounting Standards Codification (ASC) 606, *Revenue From Contracts With Customers*. In January 2018, the FASB issued ASU No. 2018-01, *Leases (Topic 842): Land Easements Practical Expedient for Transition to Topic 842*, which offers a practical expedient for accounting for land easements under ASU 2016-02. This practical expedient allows an entity the option of not evaluating existing land easements under ASC 842. New or modified land easements will still require evaluation under ASC 842 on a prospective basis beginning on the date of adoption. The Companies plan to adopt the new standard and all subsequent amendments in the fiscal year ending December 31, 2019. The Companies are in the process of evaluating the impact of adoption of this ASU on the Companies' consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The pronouncement changes the impairment model for most financial assets, replacing the current "incurred loss" model. ASU No. 2016-13 will require the use of an "expected loss" model for instruments measured at amortized cost and will also require entities to record allowances for available-for-sale debt securities rather than reduce the carrying amount. The Companies plan to adopt the standard for the fiscal year ended December 31, 2020. The Companies are in the process of evaluating the impact of adoption, if any, of this ASU on the Companies' consolidated financial statements.

Subsequent Events—In preparing the accompanying financial statements and disclosures, the Companies reviewed subsequent events through April 12, 2018, which is the date the consolidated financial statements were issued.

2. RELATED-PARTY TRANSACTIONS

Transactions with the Sponsoring Companies during 2017 and 2016 included the sale of all generated power to them, the purchase of Arranged Power from them, and other utility systems in order to meet the DOE's power requirements, contract barging services, railcar services, and minor transactions for services and materials. The Companies have Power Agreements with Louisville Gas and Electric Company, Duke Energy Ohio, Inc., The Dayton Power and Light Company, Kentucky Utilities Company, Ohio Edison Company, and American Electric Power Service Corporation as agent for the American Electric Power

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System Companies; and Transmission Service Agreements with Louisville Gas and Electric Company, Duke Energy Ohio, Inc., The Dayton Power and Light Company, The Toledo Edison Company, Ohio Edison Company, Kentucky Utilities Company, and American Electric Power Service Corporation as agent for the American Electric Power System Companies.

At December 31, 2017 and 2016, balances due from the Sponsoring Companies are as follows:

	2017	2016
Accounts receivable	<u>\$ 39,005,995</u>	<u>\$ 36,035,316</u>

During 2017 and 2016, American Electric Power accounted for approximately 44% of operating revenues from Sponsoring Companies and Buckeye Power accounted for 18%. No other Sponsoring Company accounted for more than 10%.

American Electric Power Company, Inc. and subsidiary company owned 43.47% of the common stock of OVEC as of December 31, 2017. The following is a summary of the principal services received from the American Electric Power Service Corporation as authorized by the Companies' Boards of Directors:

	2017	2016
General services	\$ 3,787,293	\$ 3,978,358
Specific projects	<u>1,113,250</u>	<u>1,562,412</u>
Total	<u>\$ 4,900,543</u>	<u>\$ 5,540,770</u>

General services consist of regular recurring operation and maintenance services. Specific projects primarily represent nonrecurring plant construction projects and engineering studies, which are approved by the Companies' Boards of Directors. The services are provided in accordance with the service agreement dated December 15, 1956, between the Companies and the American Electric Power Service Corporation.

3. COAL SUPPLY

The Companies have coal supply agreements with certain nonaffiliated companies that expire at various dates from the year 2018 through 2021. Pricing for coal under these contracts is subject to contract provisions and adjustments. The Companies currently have approximately 87% of their 2018 coal requirements under contract. These contracts are based on rates in effect at the time of contract execution.

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4. ELECTRIC PLANT

Electric plant at December 31, 2017 and 2016, consists of the following:

	2017	2016
Steam production plant	\$2,688,812,712	\$2,645,647,687
Transmission plant	81,190,947	80,459,171
General plant	12,843,389	12,970,139
Intangible	<u>26,564</u>	<u>26,564</u>
	2,782,873,612	2,739,103,561
Less accumulated depreciation	<u>1,445,352,656</u>	<u>1,352,933,437</u>
	1,337,520,956	1,386,170,124
Construction in progress	<u>6,493,278</u>	<u>14,638,632</u>
Total electric plant	<u>\$1,344,014,234</u>	<u>\$1,400,808,756</u>

All property additions and replacements are fully depreciated on the date the property is placed in service, unless the addition or replacement relates to a financed project. As the Companies' policy is to bill in accordance with the debt service schedule under the debt agreements, all financed projects are being depreciated in amounts equal to the principal payments on outstanding debt.

5. BORROWING ARRANGEMENTS AND NOTES

OVEC has an unsecured bank revolving line of credit agreement with a borrowing limit of \$200 million as of December 31, 2017 and 2016. The \$200 million line of credit has an expiration date of November 14, 2019. At December 31, 2017 and 2016, OVEC had borrowed \$85 million under this line of credit. Interest expense related to line of credit borrowings was \$2,680,713 in 2017 and \$1,692,301 in 2016. During 2017 and 2016, OVEC incurred annual commitment fees of \$304,448 and \$335,376, respectively, based on the borrowing limits of the line of credit.

6. LONG-TERM DEBT

The following amounts were outstanding at December 31, 2017 and 2016:

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	Interest Rate	2017	2016
Senior 2006 Notes:			
2006A due February 15, 2026	5.80 %	\$ 209,037,387	\$ 227,600,578
2006B due June 15, 2040	6.40 %	56,503,080	57,576,242
Senior 2007 Notes:			
2007A-A due February 15, 2026	5.90 %	93,609,630	102,311,927
2007A-B due February 15, 2026	5.90 %	23,574,667	25,766,254
2007A-C due February 15, 2026	5.90 %	23,762,382	25,971,422
2007B-A due June 15, 2040	6.50 %	28,209,392	28,752,657
2007B-B due June 15, 2040	6.50 %	7,104,257	7,241,073
2007B-C due June 15, 2040	6.50 %	7,160,825	7,298,730
Senior 2008 Notes:			
2008A due February 15, 2026	5.92 %	29,219,169	31,932,971
2008B due February 15, 2026	6.71 %	59,238,453	64,641,227
2008C due February 15, 2026	6.71 %	61,136,357	66,463,125
2008D due June 15, 2040	6.91 %	41,017,439	41,752,834
2008E due June 15, 2040	6.91 %	41,730,140	42,478,312
Series 2009 Bonds:			
2009A due February 1, 2026			25,000,000
2009B due February 1, 2026	2.85 %	25,000,000	25,000,000
2009C due February 1, 2026	2.85 %	25,000,000	25,000,000
2009D due February 1, 2026	0.85 %	25,000,000	25,000,000
2009E due October 1, 2019	5.63 %	100,000,000	100,000,000
Series 2010 Bonds:			
2010A due February 1, 2040	5.57 %	50,000,000	50,000,000
2010B due February 1, 2040	2.85 %	50,000,000	50,000,000
Series 2012 Bonds:			
2012A due June 1, 2032	5.00 %	76,800,000	76,800,000
2012A due June 1, 2039	5.00 %	123,200,000	123,200,000
2012B due June 1, 2040	5.57 %	50,000,000	50,000,000
2012C due June 1, 2040	5.57 %	50,000,000	50,000,000
Series 2013 Notes:			
2013A due February 15, 2018	-	-	100,000,000
Series 2017 Notes:			
2017A due August 4, 2022	5.57 %	<u>100,000,000</u>	<u>-</u>
Total debt		1,356,303,178	1,429,787,352
Total premiums and discounts (net)		(483,065)	(505,664)
Less unamortized debt expense		<u>(18,038,611)</u>	<u>(10,016,236)</u>
Total debt net of premiums, discounts, and unamortized debt expense		1,337,781,502	1,419,265,452
Current portion of long-term debt		<u>76,483,805</u>	<u>248,483,907</u>
Total long-term debt		<u>\$ 1,261,297,697</u>	<u>\$ 1,170,781,545</u>

All of the OVEC amortizing unsecured senior notes have maturities scheduled for February 15, 2026, or June 15, 2040, as noted in the previous table.

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During 2009, OVEC issued a series of four \$25 million variable-rate non-amortizing tax-exempt pollution control bonds (2009A, B, C, and D Bonds) and \$100 million fixed-rate non-amortizing tax-exempt pollution control bonds (2009E Bonds). The variable rates listed above reflect the interest rate in effect at December 31, 2017.

The 2009 Series D Bonds are secured by irrevocable transferable direct-pay letters of credit, expiring on November 14, 2019, issued for the benefit of the owners of the bonds. The interest rate on the bonds is adjusted weekly, and bondholders may require repurchase of the bonds at the time of such interest rate adjustments. OVEC has entered into an agreement to provide for the remarketing of the bonds if such repurchase is required. The 2009D Series Bonds are current, as they are redeemable at the election of the holders at any time. The 2009 Series B and C Bonds were remarketed in August 2016 for a five-year interest period that extends to August 25, 2021. The 2009A Bonds were secured by an irrevocable transferable direct-pay letter of credit at December 31, 2016, but were repurchased by OVEC on February 6, 2017 and are held by OVEC.

In December 2010, OVEC established a borrowing facility under which OVEC borrowed, in 2011, \$100 million remarketable variable-rate bonds due on February 1, 2040. In June 2011, the \$100 million variable-rate bonds were issued as two \$50 million non-amortizing pollution control revenue bonds (Series 2010A and 2010B) with initial interest periods of three years and five years, respectively. The Series 2010A Bond was remarketed in June 2014 for a three-year period and in August 2017 for another three-year period that extends to August 4, 2020. The Series 2010B Bond was remarketed in August 2016 for another five-year interest period that extends to August 25, 2021.

During 2012, OVEC issued \$200 million fixed-rate tax-exempt midwestern disaster relief revenue bonds (2012A Bonds) and two series of \$50 million variable-rate tax-exempt midwestern disaster relief revenue bonds (2012B and 2012C Bonds). The 2012A, 2012B, and 2012C Bonds will begin amortizing on June 1, 2027, to their respective maturity dates. The variable rates listed above reflect the interest rate in effect at December 31, 2017.

In 2017, the 2012B and 2012C Bonds, which were secured by irrevocable transferable direct-pay letters of credit, expiring June 28, 2017, and June 28, 2018, were remarketed with four-year and five-year interest periods expiring August 4, 2021 and August 4, 2022, respectively.

During 2017, OVEC issued \$100 million 2017A variable-rate non-amortizing unsecured senior notes (2017A Notes) to refinance and retire a 2013 series of notes (2013A). The 2013A Notes had an original maturity date of February 15, 2018. The 2017A Notes have annual repayment of \$33,333,333 on August 4, 2020, August 4, 2021, and at the maturity date of August 4, 2022.

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The annual maturities of long-term debt as of December 31, 2017, are as follows:

2018	\$ 76,483,805
2019	154,670,115
2020	141,387,803
2021	244,982,570
2022	148,800,891
2023–2040	<u>589,977,994</u>
Total	<u>\$ 1,356,303,178</u>

Note that the 2017 current maturities of long-term debt include \$25 million of remarketable variable-rate bonds. The Companies expect cash maturities of as little as \$51,483,805 to the extent the remarketing agents are successful in their ongoing efforts to remarket the bonds through the contractual maturity dates in February 2026 and to the extent that OVEC elects not to repurchase the bonds.

7. INCOME TAXES

OVEC and IKEC file a consolidated federal income tax return. The effective tax rate varied from the statutory federal income tax rate due to differences between the book and tax treatment of various transactions as follows:

	2017	2016
Income tax expense at 35% statutory rate	\$ 537,876	\$ 449,361
Temporary differences flowed through to customer bills	(546,716)	(115,669)
Permanent differences and other	<u>8,840</u>	<u>11,728</u>
Income tax provision	<u>\$ -</u>	<u>\$ 345,420</u>

Components of the income tax provision were as follows:

	2017	2016
Current income tax expense—federal	\$ -	\$ 345,420
Current income tax (benefit)/expense—state	-	-
Deferred income tax expense/(benefit)—federal	<u>-</u>	<u>-</u>
Total income tax provision	<u>\$ -</u>	<u>\$ 345,420</u>

OVEC and IKEC record deferred tax assets and liabilities based on differences between book and tax basis of assets and liabilities measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. Deferred tax assets and liabilities are adjusted for changes in tax rates.

On December 22, 2017, the United States Government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (“TCJA”). The TCJA makes broad and complex changes to the Internal Revenue Code (“IRC”), many of which are effective on January 1, 2018, including, but not limited

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to, (1) reducing the federal corporate income tax rate from 35 percent to 21 percent, (2) eliminating the use of bonus depreciation for regulated utilities, while permitting full expensing of qualified property for non-regulated entities, (3) eliminating the domestic production activities deduction previously allowable under Section 199 of the IRC, (4) creating a new limitation on the deductibility of interest expense for non-regulated businesses, (5) eliminating the corporate alternative minimum tax (“AMT”) and changing how existing AMT credits can be realized, and (6) restricting the deductibility of entertainment and lobbying-related expenses.

As a result of the reduction in the federal tax rate, the Companies recorded a revaluation adjustment to decrease deferred tax assets by \$15.3 million, with a corresponding decrease of \$15.3 million in the valuation allowance.

At December 31, 2017, the Companies have alternative minimum tax credit carryforwards which do not expire. Pursuant to the TCJA, the Companies now have a noncontingent right to recover their alternative minimum tax carryforwards through 2021. Accordingly, the Companies recorded \$9.3 million as income taxes receivable in the accompanying balance sheets as of December 31, 2017.

To the extent that the Companies have not reflected credits in customer billings for deferred tax assets, they have recorded a regulatory liability representing income taxes refundable to customers under the applicable agreements among the parties. The regulatory liability was \$11,571,428 and \$5,433,716 at December 31, 2017 and 2016, respectively.

Deferred income tax assets (liabilities) at December 31, 2017 and 2016, consisted of the following:

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	2017	2016
Deferred tax assets:		
Deferred revenue—advances for construction	\$ 30,515	\$ 3,404,026
AMT credit carryforwards	-	8,837,712
Federal net operating loss carryforwards	56,314,469	104,723,266
Postretirement benefit obligation	3,613,382	13,683,150
Pension liability	7,113,085	11,721,810
Postemployment benefit obligation	812,324	1,535,562
Asset retirement obligations	12,012,740	11,569,073
Advanced collection of interest and debt service	6,674,331	660,766
Miscellaneous accruals	1,284,013	2,158,746
Regulatory liability—other	-	-
Regulatory liability—asset retirement costs	-	4,729,118
Regulatory liability—postretirement benefits	11,870,952	9,670,762
Regulatory liability—income taxes refundable to customers	-	-
	<u>7,302,379</u>	<u>15,096,997</u>
Total deferred tax assets	<u>107,028,190</u>	<u>187,790,988</u>
Deferred tax liabilities:		
Prepaid expenses	(360,396)	(602,424)
Electric plant	(77,669,885)	(128,994,396)
Unrealized gain/loss on marketable securities	(3,649,108)	(3,694,091)
Regulatory asset—pension benefits	(7,826,970)	(12,998,618)
Regulatory asset—asset retirement costs	(142,494)	
Regulatory asset—unrecognized postemployment benefits	(812,324)	(1,535,562)
Total deferred tax liabilities	(90,461,177)	(147,825,091)
Valuation allowance	<u>(16,567,013)</u>	<u>(37,265,897)</u>
Deferred income tax assets	<u>\$ -</u>	<u>\$ 2,700,000</u>

As discussed in Note 1, OVEC indefinitely changed its billing practices in 2014 to effectively suspend billings for its authorized equity return. As a result, the Companies' long-term expectation is that taxable income will be breakeven for the foreseeable future. Accordingly, the Companies have recorded a valuation allowance for their deferred tax assets as of December 31, 2017 and 2016.

The accounting guidance for Income Taxes addresses the determination of whether the tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under this guidance, the Companies may recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. The Companies have not identified any uncertain tax positions as of December 31, 2017 and 2016, and accordingly, no liabilities for uncertain tax positions have been recognized.

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The Companies file income tax returns with the Internal Revenue Service and the states of Ohio, Indiana, and the Commonwealth of Kentucky. The Companies are no longer subject to federal tax examinations for tax years 2013 and earlier. The Companies are no longer subject to State of Indiana tax examinations for tax years 2013 and earlier. The Companies are no longer subject to Ohio and the Commonwealth of Kentucky examinations for tax years 2012 and earlier. The Companies have \$268,164,138 of Federal Net Operating Loss carryovers that begin to expire in 2032.

8. PENSION PLAN AND OTHER POSTRETIREMENT AND POSTEMPLOYMENT BENEFITS

The Companies have a noncontributory qualified defined benefit pension plan (the Pension Plan) covering substantially all of their employees hired prior to January 1, 2015. The benefits are based on years of service and each employee's highest consecutive 36-month compensation period. Employees are vested in the Pension Plan after five years of service with the Companies.

Funding for the Pension Plan is based on actuarially determined contributions, the maximum of which is generally the amount deductible for income tax purposes and the minimum being that required by the Employee Retirement Income Security Act of 1974, as amended.

In addition to the Pension Plan, the Companies provide certain health care and life insurance benefits (Other Postretirement Benefits) for retired employees. Substantially, all of the Companies' employees hired prior to January 1, 2015, become eligible for these benefits if they reach retirement age while working for the Companies. These and similar benefits for active employees are provided through employer funding and insurance policies. In December 2004, the Companies established VEBA trusts. In January 2011, the Companies established an Internal Revenue Code Section 401(h) account under the Pension Plan.

The full cost of the pension benefits and other postretirement benefits has been allocated to OVEC and IKEC in the accompanying consolidated financial statements. The allocated amounts represent approximately a 57% and 43% split between OVEC and IKEC, respectively, as of December 31, 2017, and approximately a 56% and 44% split between OVEC and IKEC, respectively, as of December 31, 2016.

The Pension Plan's assets as of December 31, 2017, consist of investments in equity and debt securities. All of the trust funds' investments for the pension and postemployment benefit plans are diversified and managed in compliance with all laws and regulations. Management regularly reviews the actual asset allocation and periodically rebalances the investments to targeted allocation when appropriate. The investments are reported at fair value under the Fair Value Measurements and Disclosures accounting guidance.

All benefit plan assets are invested in accordance with each plan's investment policy. The investment policy outlines the investment objectives, strategies, and target asset allocations by plan. Benefit plan assets are reviewed on a formal basis each quarter by the OVEC-IKEC Qualified Plan Trust Committee.

The investment philosophies for the benefit plans support the allocation of assets to minimize risks and optimize net returns.

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Investment strategies include:

- Maintaining a long-term investment horizon.
- Diversifying assets to help control volatility of returns at acceptable levels.
- Managing fees, transaction costs, and tax liabilities to maximize investment earnings.
- Using active management of investments where appropriate risk/return opportunities exist.
- Keeping portfolio structure style neutral to limit volatility compared to applicable benchmarks.

The target asset allocation for each portfolio is as follows:

Pension Plan Assets	Target
Domestic equity	15.0 %
International and global equity	15.0
Fixed income	70.0
VEBA Plan Assets	Target
Domestic equity	20 %
International and global equity	20
Fixed income	57
Cash	3

Each benefit plan contains various investment limitations. These limitations are described in the investment policy statement and detailed in customized investment guidelines. These investment guidelines require appropriate portfolio diversification and define security concentration limits. Each investment manager's portfolio is compared to an appropriate diversified benchmark index.

Equity investment limitations:

- No security in excess of 5% of all equities.
- Cash equivalents must be less than 10% of each investment manager's equity portfolio.
- Individual securities must be less than 15% of each manager's equity portfolio.
- No investment in excess of 5% of an outstanding class of any company.
- No securities may be bought or sold on margin or other use of leverage.

Fixed-Income Limitations—As of December 31, 2017, the Pension Plan fixed-income allocation consists of managed accounts composed of U.S. Government, corporate, and municipal obligations. The VEBA benefit plans' fixed-income allocation is composed of a variety of fixed-income securities and mutual funds. Investment limitations for these fixed-income funds are defined by manager prospectus.

Cash Limitations—Cash and cash equivalents are held in each trust to provide liquidity and meet short-term cash needs. Cash equivalent funds are used to provide diversification and preserve principal. The underlying holdings in the cash funds are investment grade money market instruments, including money market mutual funds, certificates of deposit, treasury bills, and other types of investment-grade short-term debt securities. The cash funds are valued each business day and provide daily liquidity.

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Projected Pension Plan and Other Postretirement Benefits obligations and funded status as of December 31, 2017 and 2016, are as follows:

	Pension Plan		Other Postretirement Benefits	
	2017	2016	2017	2016
Change in projected benefit obligation:				
Projected benefit obligation—beginning of year	\$ 232,998,159	\$ 210,230,403	\$ 174,338,482	\$ 159,175,000
Service cost	6,511,513	6,100,517	5,100,383	4,668,640
Interest cost	9,796,123	10,010,361	7,434,498	7,490,213
Plan participants' contributions	-	-	1,357,889	1,242,428
Benefits paid	(11,928,458)	(8,968,048)	(6,175,593)	(5,477,750)
Net actuarial loss (gain)	18,676,940	15,674,831	(4,131,790)	7,239,951
Plan amendments (1)	-	-	(9,436,660)	-
Expenses paid from assets	(34,854)	(49,905)	-	-
Projected benefit obligation—end of year	<u>256,019,423</u>	<u>232,998,159</u>	<u>168,487,209</u>	<u>174,338,482</u>
Change in fair value of plan assets:				
Fair value of plan assets—beginning of year	195,870,007	182,340,523	135,120,392	126,939,255
Actual return on plan assets	28,862,881	16,380,770	16,259,397	7,972,778
Expenses paid from assets	(34,854)	(49,905)	-	-
Employer contributions	6,000,000	6,166,667	4,728,439	4,443,681
Plan participants' contributions	-	-	1,357,889	1,242,428
Benefits paid	(11,928,458)	(8,968,048)	(6,175,593)	(5,477,750)
Fair value of plan assets—end of year	<u>218,769,576</u>	<u>195,870,007</u>	<u>151,290,524</u>	<u>135,120,392</u>
Underfunded status—end of year	<u>\$ (37,249,847)</u>	<u>\$ (37,128,152)</u>	<u>\$ (17,196,685)</u>	<u>\$ (39,218,090)</u>

(1) The \$9.4 million plan amendment is the result of the removal of a cost of living adjustment for non-grandfathered employees. These employees are expected to receive benefits through a Medicare Exchange with OVEC's maximum annual subsidy to be limited to \$4,000.

See Note 1 for information regarding regulatory assets related to the Pension Plan and Other Postretirement Benefits plan.

The accumulated benefit obligation for the Pension Plan was \$230,114,000 and \$208,284,000 at December 31, 2017 and 2016, respectively.

Components of Net Periodic Benefit Cost—The Companies record the expected cost of Other Postretirement Benefits over the service period during which such benefits are earned.

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Pension expense is recognized as amounts are contributed to the Pension Plan and billed to customers. The accumulated difference between recorded pension expense and the yearly net periodic pension expense, as calculated under generally accepted accounting principles, is billable as a cost of operations under the ICPA when contributed to the pension fund. This accumulated difference has been recorded as a regulatory asset in the accompanying consolidated balance sheets.

	Pension Plan		Other Postretirement Benefits	
	2017	2016	2017	2016
Service cost	\$ 6,511,513	\$ 6,100,517	\$ 5,100,383	\$ 4,668,640
Interest cost	9,796,123	10,010,361	7,434,498	7,490,213
Expected return on plan assets	(11,658,739)	(10,904,733)	(7,275,382)	(6,719,397)
Amortization of prior service cost	(416,565)	(416,565)	(1,763,901)	(1,763,901)
Recognized actuarial loss (gain)	1,049,964	643,503	-	(75,802)
Total benefit cost	\$ 5,282,296	\$ 5,433,083	\$ 3,495,598	\$ 3,599,753
Pension and other postretirement benefits expense recognized in the consolidated statements of income and retained earnings and billed to Sponsoring Companies under the ICPA	\$ 6,000,000	\$ 6,166,667	\$ -	\$ -

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The following table presents the classification of Pension Plan assets within the fair value hierarchy at December 31, 2017 and 2016:

	Fair Value Measurements at Reporting Date Using			Total
	Quoted Prices in Active Market for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	
2017				
Common stock	\$ 9,089,309	\$ -	\$ -	\$ 9,089,309
Equity mutual funds	43,799,989	-	-	43,799,989
Fixed-income securities	-	149,310,352	-	149,310,352
Cash equivalents	<u>2,983,062</u>	<u>-</u>	<u>-</u>	<u>2,983,062</u>
Subtotal Benefit Plan Assets	<u>\$ 55,872,360</u>	<u>\$ 149,310,352</u>	<u>\$ -</u>	205,182,712
Investments measured at net asset value (NAV)				<u>13,586,864</u>
Total Benefit Plan Assets				<u>\$ 218,769,576</u>
2016	(Level 1)	(Level 2)	(Level 3)	Total
Common stock	\$ 9,056,579	\$ -	\$ -	\$ 9,056,579
Equity mutual funds	40,257,125	-	-	40,257,125
Fixed income securities	-	127,711,240	-	127,711,240
Cash equivalents	<u>6,727,436</u>	<u>-</u>	<u>-</u>	<u>6,727,436</u>
Subtotal Benefit Plan Assets	<u>\$ 56,041,140</u>	<u>\$ 127,711,240</u>	<u>\$ -</u>	183,752,380
Investments measured at net asset value (NAV)				<u>12,117,627</u>
Total Benefit Plan Assets				<u>\$ 195,870,007</u>

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The following table presents the classification of VEBA and 401(h) account assets within the fair value hierarchy at December 31, 2017 and 2016:

	Fair Value Measurements at Reporting Date Using			2017 Total
	Quoted Prices in Active Market for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	
2017				
Equity mutual funds	\$ 55,419,961	\$ -	\$ -	\$ 55,419,961
Fixed-income mutual funds	69,687,330	-	-	69,687,330
Fixed-income securities	-	19,304,908	-	19,304,908
Cash equivalents	<u>736,826</u>	<u>-</u>	<u>-</u>	<u>736,826</u>
Benefit Plan Assets	<u>\$ 125,844,117</u>	<u>\$ 19,304,908</u>	<u>\$ -</u>	145,149,025
Uncleared cash disbursements from benefits paid				(1,839,265)
Investments measured at net asset value (NAV)				<u>7,980,764</u>
Total Benefit Plan Assets				<u>\$ 151,290,524</u>
2016				
Equity mutual funds	\$ 68,645,763	\$ -	\$ -	\$ 68,645,763
Fixed-income mutual funds	41,750,065	-	-	41,750,065
Fixed-income securities	-	18,611,238	-	18,611,238
Cash equivalents	<u>728,483</u>	<u>-</u>	<u>-</u>	<u>728,483</u>
Benefit Plan Assets	<u>\$ 111,124,311</u>	<u>\$ 18,611,238</u>	<u>\$ -</u>	129,735,549
Uncleared cash disbursements from benefits paid				(1,601,641)
Investments measured at net asset value (NAV)				<u>6,986,484</u>
Total Benefit Plan Assets				<u>\$ 135,120,392</u>

Investments that were measured at net asset value (NAV) per share (or its equivalent) as a practical expedient have not been classified in the fair value hierarchy. These investments represent holdings in a single private investment fund that are redeemable at the election of the holder upon no more than 30 days' notice. The values reported above are based on information provided by the fund manager.

Pension Plan and Other Postretirement Benefit Assumptions—Actuarial assumptions used to determine benefit obligations at December 31, 2017 and 2016, were as follows:

	Pension Plan		Other Postretirement Benefits			
	2017	2016	2017		2016	
			Medical	Life	Medical	Life
Discount rate	3.75 %	4.31 %	3.76 %	3.76 %	4.31 %	4.31 %
Rate of compensation increase	3.00	3.00	N/A	3.00	N/A	3.00

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Actuarial assumptions used to determine net periodic benefit cost for the years ended December 31, 2017 and 2016, were as follows:

	Pension Plan		Other Postretirement Benefits			
	2017	2016	2017		2016	
			Medical	Life	Medical	Life
Discount rate	4.31 %	4.82 %	4.31 %	4.31 %	4.80 %	4.80 %
Expected long-term return on plan assets	6.00	6.00	5.29	6.00	5.29	6.00
Rate of compensation increase	3.00	3.00	N/A	3.00	N/A	3.00

In selecting the expected long-term rate of return on assets, the Companies considered the average rate of earnings expected on the funds invested to provide for plan benefits. This included considering the Pension Plan and VEBA trusts' asset allocation and the expected returns likely to be earned over the life of the Pension Plan and the VEBAs.

Assumed health care cost trend rates at December 31, 2017 and 2016, were as follows:

	2017	2016
Health care trend rate assumed for next year—participants under 65	7.30 %	7.00 %
Health care trend rate assumed for next year—participants over 65	7.00	7.00
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)—participants under 65	5.00	5.00
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)—participants over 65	5.00	5.00
Year that the rate reaches the ultimate trend rate	2022	2022

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. A one-percentage-point change in assumed health care cost trend rates would have the following effects:

	One-Percentage-Point Increase	One-Percentage-Point Decrease
Effect on total service and interest cost	\$ 2,438,218	\$ (1,883,985)
Effect on postretirement benefit obligation	25,619,686	(20,533,984)

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Pension Plan and Other Postretirement Benefit Assets—The asset allocation for the Pension Plan and VEBA trusts at December 31, 2017 and 2016, by asset category was as follows:

Asset category:	Pension Plan		VEBA Trusts	
	2017	2016	2017	2016
Equity securities	30 %	31 %	41 %	40 %
Debt securities	70	69	59	60

Pension Plan and Other Postretirement Benefit Contributions—The Companies expect to contribute \$6,000,000 to their Pension Plan and \$5,000,000 to their Other Postretirement Benefits plan in 2018.

Estimated Future Benefit Payments—The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid:

Years Ending December 31	Pension Plan	Other Postretirement Benefits
2018	\$ 8,716,563	\$ 6,578,426
2019	9,496,969	7,068,992
2020	10,253,026	7,543,046
2021	11,102,802	7,938,311
2022	11,750,758	8,497,990
Five years thereafter	69,890,983	50,073,420

Postemployment Benefits—The Companies follow the accounting guidance in FASB ASC 712, *Compensation—Non-Retirement Postemployment Benefits*, and accrue the estimated cost of benefits provided to former or inactive employees after employment but before retirement. Such benefits include, but are not limited to, salary continuations, supplemental unemployment, severance, disability (including workers’ compensation), job training, counseling, and continuation of benefits, such as health care and life insurance coverage. The cost of such benefits and related obligations has been allocated to OVEC and IKEC in the accompanying consolidated financial statements. The allocated amounts represent approximately a 66% and 34% split between OVEC and IKEC, respectively, as of December 31, 2017, and approximately a 59% and 41% split between OVEC and IKEC, respectively, as of December 31, 2016. The liability is offset with a corresponding regulatory asset and represents unrecognized postemployment benefits billable in the future to customers. The accrued cost of such benefits was \$3,865,985 and \$4,273,362 at December 31, 2017 and 2016, respectively.

Defined Contribution Plan—The Companies have a trustee-defined contribution supplemental pension and savings plan that includes 401(k) features and is available to employees who have met eligibility requirements. The Companies’ contributions to the savings plan equal 100% of the first 1% and 50% of the next 5% of employee-participants’ pay contributed. In addition, the Companies provide contributions to eligible employees, hired on or after January 1, 2015, of 3% to 5% of pay based on age and service. Benefits to participating employees are based solely upon amounts contributed to the participants’

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accounts and investment earnings. By its nature, the plan is fully funded at all times. The employer contributions for 2017 and 2016 were \$1,997,840 and \$1,985,582, respectively.

9. ENVIRONMENTAL MATTERS

Air Regulations

On March 10, 2005, the United States Environmental Protection Agency (the U.S. EPA) issued the Clean Air Interstate Rule (CAIR) that required significant reductions of SO₂ and NO_x emissions from coal-burning power plants. On March 15, 2005, the U.S. EPA also issued the Clean Air Mercury Rule (CAMR) that required significant mercury emission reductions for coal-burning power plants. The CAIR and CAMR emission reductions were respectively required in two phases: 2009 and 2015 for NO_x; 2010 and 2015 for SO₂; and 2010 and 2018 for mercury. Ohio and Indiana subsequently finalized their respective versions of CAIR and CAMR. In response, the Companies determined that it would be necessary to install flue gas desulfurization (FGD) systems at both plants to comply with these rules. Following completion of the necessary engineering and permitting, construction was started on the FGD systems, and the two Kyger Creek FGD systems were placed into service in 2011 and 2012, while the two Clifty Creek FGD systems were placed into service in 2013.

After the promulgation of CAIR and CAMR, a series of legal challenges to those rules resulted in their replacement with additional rules. CAMR was replaced with a rule referred to as the Mercury and Air Toxics Standards (MATS) rule. The rule became final on April 16, 2012, and the Companies had to demonstrate compliance with MATS emission limits on April 16, 2015. The MATS rule has also undergone legal challenges since it went into effect, and there are a few remaining legal issues pending. The controls the Companies have installed have proven to be adequate to meet the stringent emissions requirements outlined in the MATS rule.

After CAIR was promulgated, legal challenges resulted in that rule being remanded back to the U.S. EPA. The U.S. EPA subsequently promulgated a replacement rule to CAIR called the Cross-State Air Pollution Rule (CSAPR). CSAPR was issued on July 6, 2011, and it was scheduled to go into effect on January 1, 2012. However, a legal challenge of that rule resulted in a stay. The stay was lifted by the D.C. Circuit Court in 2014 and CSAPR, which requires significant NO_x and SO₂ emissions reductions, became effective on January 1, 2015. Further legal challenges of CSAPR resulted in the U.S. Supreme Court remanding portions of the CSAPR rule back to the D.C. Circuit Court for additional review and subsequent action by the U.S. EPA. This resulted in U.S. EPA issuing the CSAPR Update rule which became final on September 7, 2016, and went into effect beginning with the May 1, 2017 to September 30, 2017 ozone season. The CSAPR Update did not replace CSAPR, it only required additional reductions in NO_x emissions from utilities in certain states during the ozone season. The Companies prepared for and implemented a successful compliance strategy for the CSAPR Update rule requirements in the 2017 ozone season. The Companies expect that this compliance strategy will be successful for the 2018 ozone season as well.

As a result of the installation and effective operation of the FGD systems and the SCR systems at each plant, management did not need to purchase additional SO₂ allowances in 2017 to cover actual emissions. The Companies also did not need to consume additional NO_x ozone season allowances purchased strategically in advance of the 2017 ozone season as a safeguard to cover NO_x emissions in 2017 and

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beyond. Depending on a variety of operational and economic factors, management may elect to consume banked allowances and/or strategically purchase additional CSAPR annual and ozone season NO_x allowances in 2018 and beyond for compliance with the CSAPR Update rule.

With all FGD systems fully operational, the Companies continue to expect to have adequate SO₂ allowances available without having to rely on market purchases to comply with the CSAPR rules in their current form. Given the success of our NO_x ozone season compliance strategy in 2017, the purchase of additional NO_x allowances is less likely in the short term as well; however, we did implement changes in unit dispatch criteria for Clifty Creek Unit 6 during the 2017 ozone season and are continuing to evaluate the need for additional NO_x controls for this unit to provide additional flexibility in operating this unit under the CSAPR Update regulations as well as any future NO_x regulations.

CCR Rule

In 2010, the U.S. EPA published a proposed rule to regulate the disposal and beneficial reuse of coal combustion residuals (CCRs), including fly ash and boiler slag generated at coal-fired electric generating units as well as FGD gypsum generated at some coal-fired plants. The proposed rule contained two alternative proposals. One proposal would impose federal hazardous waste disposal and management standards on these materials and another would allow states to retain primary authority to regulate the beneficial reuse and disposal of these materials under state solid waste management standards, including minimum federal standards for disposal and management. Both proposals would impose stringent requirements for the construction of new coal ash landfills and existing unlined surface impoundments.

Various environmental organizations and industry groups filed a petition seeking to establish deadlines for a final rule. To comply with a court-ordered deadline, the U.S. EPA issued a prepublication copy of its final rule in December 2014. The rule was published in the Federal Register in April 2015 and became effective in October 2015.

In the final rule, the U.S. EPA elected to regulate CCR as a nonhazardous solid waste and issued new minimum federal solid waste management standards. The rule applies to new and existing active CCR landfills and CCR surface impoundments at operating electric utility or independent power production facilities. The rule imposes new and additional construction and operating obligations, including location restrictions, liner criteria, structural integrity requirements for impoundments, operating criteria, and additional groundwater monitoring requirements. The rule is self-implementing and currently does not require state action. As a result of this self-implementing feature, the rule contains extensive recordkeeping, notice, and Internet posting requirements.

The Companies have been systematically implementing applicable provisions of the CCR rule. The Companies have completed all compliance obligations associated with the rule to date and are continuing to evaluate what, if any, impacts groundwater quality will have on its CCR units. Preliminary background results indicate that there is a potential for groundwater quality issues with the boiler slag ponds at each plant and both landfills. This information is still being collected and evaluated, so no final determination has been made to date. Alternative source demonstrations (ASD) are already being completed in parallel to the additional groundwater evaluations. The Companies are confident in being able to demonstrate that an

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ASD is the cause of the preliminary groundwater quality issues being observed in the Kyger Creek landfill and boiler slag ponds.

In February 2014, the U.S. EPA completed a risk evaluation of the beneficial uses of coal fly ash in concrete and FGD gypsum in wallboard and concluded that the U.S. EPA supports these beneficial uses. Currently, approximately eight percent of the coal ash and other residual products from our generating facilities are reused in the production of cement and wallboard, as soil amendments, as abrasives or road treatment materials, and for other beneficial uses.

NAAQS Compliance for SO₂

On June 22, 2010, the U.S. EPA revised the Clean Air Act by developing and publishing a new one-hour SO₂ NAAQS of 75 parts per billion, which replaced the previously existing 24-hour and annual standards, and became effective on August 23, 2010. States with areas failing to meet the new standard are required to develop SIPs to expeditiously attain and maintain the standard.

On August 15, 2013, the U.S. EPA published its initial non-attainment area designations for the new one-hour SO₂, which did not include the areas around Kyger Creek or Clifty Creek. However, the amended rule does establish that at a minimum sources that emit 2,000 tons SO₂ or more per year be characterized by their respective states using either modeling of actual source emissions or through appropriately sited ambient air quality monitors.

In addition, U.S. EPA entered into a settle agreement with Sierra Club/NRDC in the U.S. District Court for the Northern District of California requiring U.S. EPA to take certain actions, including completing area designation by July 2, 2016, for areas with either monitored violations based on 2013-15 air quality monitoring or sources not announced for retirement that emitted more than 16,000 tons SO₂ or more than 2,600 tons with a 0.45 SO₂/mmBtu emission rate in 2012.

Both Kyger Creek and Clifty Creek either directly or indirectly triggered one of the criteria and have been evaluated by our respective state regulatory agencies through modeling. The modeling results showed Clifty Creek could meet the new one-hour SO₂ limit using their current scrubber systems without any additional investment or modifications. Kyger Creek's modeling data was rejected by U.S. EPA as inconclusive. As a result, Kyger Creek installed a SO₂ monitoring network around the plant and is being required to monitor ambient air quality for at least a three-year window which began on January 1, 2017. U.S. EPA will then use the results of the monitoring network data to make a determination of our compliance status with the SO₂ NAAQS by no later than December 31, 2020. Based on the first year of data from that network, OVEC expects to show compliance with the new one-hour standard, and we expect to avoid additional scrubber investments or modifications.

Steam Electric ELGs

On September 30, 2015, the U.S. EPA signed a new final rule governing Effluent Limitations Guidelines (ELGs) for the wastewater discharges from steam electric power generating plants. The rule, which was formally published in the Federal Register on November 3, 2015, was going to impact future wastewater discharges from both the Kyger Creek and Clifty Creek Stations.

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The rule was intended to require the Companies to modify the way we handle a number of wastewater processes at both power plants. Specifically, the new ELG standards were going to affect the following wastewater processes in three ways listed below; however, in April of 2017, EPA issued an administrative stay on the ELG rule, and then in June of 2017, the EPA issued a separate rulemaking staying the compliance deadlines for portions of the ELG rule applicable to bottom ash sluice water and to FGD wastewater discharges. EPA intends to reevaluate what constitutes “best available technology” for these two wastewater discharges and issue an updated rule by no later than the fall of 2020. The original impacts and updated impacts to each wastewater discharge are highlighted below:

1. Kyger Creek will need to convert to dry fly ash handling by no later than December 31, 2023. The EPA stay on portions of the ELG rule do not impact the need to convert Kyger Creek Station to dry fly ash handling or the associated timeline. The Clifty Creek Station already has a dry fly ash handling system in place, so this provision of the rule will not impact Clifty Creek’s operations.
2. The new ELG rules originally prohibited the discharge of bottom ash sluice water from boiler slag/bottom ash wastewater treatment systems. For Clifty Creek and Kyger Creek, this would have most likely resulted in conversion of each plant’s boiler slag ponds to either a closed-loop sluicing system or a dry handling system for boiler slag. The Companies conducted a Phase I engineering study in 2016 to determine options and costs associated with retrofitting the plants’ boiler slag treatment systems. The study results are now on hold while we await further regulatory action from EPA that will determine if these options are still appropriate or if other technology-based options will be available to demonstrate compliance. Until the new rulemaking is published associated with the ELG stay that would either change the scope or timeline for compliance, we are still expected to complete engineering, design, construction, installation, and successful operation of all controls needed to demonstrate compliance with ELGs on these discharges by no later than December 31, 2023.
3. The new ELG rules originally established new internal limitations for the FGD system wastewater discharges. Specifically, there was to be new internal limits for arsenic, mercury, selenium, and nitrate/nitrite nitrogen from the FGD chlorides purge stream wastewater treatment plant at each plant. For both Clifty Creek and Kyger Creek Stations, we were expecting to be able to meet the mercury and arsenic limitations with the current wastewater treatment technology; however, we were expecting to add some form of biological (or equivalent nonbiological) treatment system on the back end of each station’s existing FGD wastewater treatment plant to meet the new nitrate/nitrite nitrogen and selenium limitations. Installation of new controls for selenium and nitrate-nitrite nitrogen are now on hold while the Companies await further regulatory action from EPA that will determine if the biological controls are still appropriate or if other technology based options will be available to demonstrate compliance. Until the new rulemaking is published associated with the ELG stay that would either change the scope or timeline for compliance, we are still expected to complete engineering, design, construction, installation, and successful operation of all controls needed to demonstrate compliance with ELGs on these discharges by no later than December 31, 2023.

Any new ELG limits will be implemented through each station’s wastewater discharge permit which is typically renewed on a five-year basis. The final compliance dates are expected to be facility-specific and negotiated with our state permit agencies based on the time needed to plan, secure funding, design,

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procure, and install necessary control technologies once the new rulemaking has been completed. The Companies will continue to monitor EPA regulatory actions on this rule and will respond as necessary.

316(b) Compliance

The 316(b) rule was published as a final rule in the Federal Register on August 15, 2014, and impacts facilities that use cooling water intake structures designed to withdraw at least two million gallons per day from waters of the U.S. and who also have an NPDES permit. The rule requires such facilities to choose one of seven options specified by the rule to reduce impingement to fish and other aquatic organisms. Additionally, facilities that withdraw 125 million gallons or more per day must conduct entrainment studies to assist state permitting authorities in determining what site-specific controls are required to reduce the number of aquatic organisms entrained by each respective cooling water system.

The Companies have completed the required two-year fish entrainment studies. Additional analysis is being performed in compliance with the rule, and comprehensive reports are being developed for submittal to each plant's respective state agency for review.

Currently, the Companies expect to provide the results of the comprehensive 316(b) studies and our control technology recommendations to our state regulatory agencies in 2018. The timeline for when the Companies will be required to retrofit the cooling water systems at Clifty Creek and Kyger Creek, as well as the type of retrofit required, will then be negotiated with each state regulatory agency.

10. FAIR VALUE MEASUREMENTS

The accounting guidance for Financial Instruments requires disclosure of the fair value of certain financial instruments. The estimates of fair value under this guidance require the application of broad assumptions and estimates. Accordingly, any actual exchange of such financial instruments could occur at values significantly different from the amounts disclosed.

OVEC utilizes its trustee's external pricing service in its estimate of the fair value of the underlying investments held in the benefit plan trusts and investment portfolios. The Companies' management reviews and validates the prices utilized by the trustee to determine fair value. Equities and fixed-income securities are classified as Level 1 holdings if they are actively traded on exchanges. In addition, mutual funds are classified as Level 1 holdings because they are actively traded at quoted market prices. Certain fixed-income securities do not trade on an exchange and do not have an official closing price. Pricing vendors calculate bond valuations using financial models and matrices. Fixed-income securities are typically classified as Level 2 holdings because their valuation inputs are based on observable market data. Observable inputs used for valuing fixed-income securities are benchmark yields, reported trades, broker/dealer quotes, issuer spreads, bids, offers, and economic events. Other securities with model-derived valuation inputs that are observable are also classified as Level 2 investments. Investments with unobservable valuation inputs are classified as Level 3 investments.

As of December 31, 2017 and 2016, the Companies held certain assets that are required to be measured at fair value on a recurring basis. These consist of investments recorded within long-term investments. The investments consist of money market mutual funds, equity mutual funds, and fixed-income municipal securities. Changes in the observed trading prices and liquidity of money market funds are monitored as additional support for determining fair value, and unrealized gains and losses are recorded in earnings.

**OHIO VALLEY ELECTRIC CORPORATION
AND SUBSIDIARY COMPANY**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016**

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Companies believe their valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

As cash and cash equivalents, current receivables, current payables, and line of credit borrowings are all short-term in nature, their carrying amounts approximate fair value.

Long-Term Investments—Assets measured at fair value on a recurring basis at December 31, 2017 and 2016, were as follows:

	Fair Value Measurements at Reporting Date Using		
	Quoted Prices in Active Market for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
2017			
Equity mutual funds	\$ 49,400,226	\$ -	\$ -
Fixed-income mutual funds	10,246,444	-	-
Fixed-income municipal securities	-	90,140,833	-
Cash equivalents	<u>4,486,457</u>	<u>-</u>	<u>-</u>
Total fair value	<u>\$ 64,133,127</u>	<u>\$ 90,140,833</u>	<u>\$ -</u>
2016			
Equity mutual funds	\$ 28,106,968	\$ -	\$ -
Fixed-income municipal securities	-	87,163,674	-
Cash equivalents	<u>3,731,735</u>	<u>-</u>	<u>-</u>
Total fair value	<u>\$ 31,838,703</u>	<u>\$ 87,163,674</u>	<u>\$ -</u>

Long-Term Debt—The fair values of the senior notes and fixed-rate bonds were estimated using discounted cash flow analyses based on current incremental borrowing rates for similar types of borrowing arrangements. These fair values are not reflected in the balance sheets.

**OHIO VALLEY ELECTRIC CORPORATION
AND SUBSIDIARY COMPANY**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2017 AND 2016**

The fair values and recorded values of the senior notes and fixed- and variable-rate bonds as of December 31, 2017 and 2016, are as follows:

	2017		2016	
	Fair Value	Recorded Value	Fair Value	Recorded Value
Total	<u>\$ 1,509,468,557</u>	<u>\$ 1,381,303,178</u>	<u>\$ 1,548,416,122</u>	<u>\$ 1,429,281,688</u>

11. LEASES

OVEC has various operating leases for the use of other property and equipment.

The amount in property under capital leases is \$1,744,030 and \$1,866,796 with accumulated depreciation of \$908,732 and \$949,520 as of December 31, 2017 and 2016, respectively.

Future minimum lease payments for capital and operating leases at December 31, 2017, are as follows:

Years Ending December 31	Operating	Capital
2018	\$ 34,218	\$ 292,230
2019	15,095	117,888
2020	7,512	131,671
2021	-	86,433
2022	-	63,898
Thereafter	<u>-</u>	<u>215,891</u>
Total future minimum lease payments	<u>\$ 56,825</u>	908,011
Less estimated interest element		<u>273,015</u>
Estimated present value of future minimum lease payments		<u>\$ 634,996</u>

The annual operating lease cost incurred was \$36,610 and \$41,198 for 2017 and 2016, respectively.

12. COMMITMENTS AND CONTINGENCIES

The Companies are party to or may be affected by various matters under litigation. Management believes that the ultimate outcome of these matters will not have a significant adverse effect on either the Companies' future results of operation or financial position.

* * * * *

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

INDEPENDENT AUDITORS' REPORT

To the Board of Directors of
Ohio Valley Electric Corporation:

We have audited the accompanying consolidated financial statements of Ohio Valley Electric Corporation and its subsidiary company, Indiana-Kentucky Electric Corporation (the "Companies"), which comprise the consolidated balance sheets as of December 31, 2017 and 2016, and the related consolidated statements of income and retained earnings and cash flows for the years then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Companies' preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Companies' internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Companies as of December 31, 2017 and 2016, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

/s/Deloitte & Touche LLP

Cincinnati, Ohio
April 23, 2018

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

OVEC PERFORMANCE—A 5-YEAR COMPARISON

	2017	2016	2015	2014	2013
Net Generation (MWh)	11,940,259	9,946,877	8,899,619	11,410,006	10,471,693
Energy Delivered (MWh) to:					
DOE ⁽¹⁾	156,768	173,873	221,610	211,337	195,470
Sponsors	11,724,662	9,745,956	8,681,829	11,193,643	10,304,107
Maximum Scheduled (MW) by:					
DOE ⁽¹⁾	34	35	40	42	33
Sponsors	2,186	2,167	2,047	2,162	2,160
Power Costs to:					
DOE ⁽¹⁾	\$8,188,000	\$8,519,000	\$10,249,000	\$11,758,000	\$9,282,000
Sponsors	\$636,287,000	\$571,687,000	\$559,123,000	\$631,120,000	\$671,648,000
Average Price (MWh):					
DOE ⁽¹⁾	\$52.229	\$48.996	\$46.248	\$55.636	\$47.483
Sponsors	\$54.270	\$58.657	\$64.402	\$56.382	\$65.183
Operating Revenues	\$624,058,000	\$585,896,000	\$565,329,000	\$656,174,000	\$675,649,000
Operating Expenses	\$560,170,000	\$515,702,000	\$492,803,000	\$587,900,000	\$594,742,000
Cost of Fuel Consumed	\$288,503,000	\$261,833,000	\$246,582,000	\$315,461,000	\$311,900,000
Taxes (federal, state, and local)	\$11,975,000	\$12,329,000	\$11,646,000	\$12,426,000	\$12,312,000
Payroll	\$58,847,000	\$60,051,000	\$63,909,000	\$62,275,000	\$63,175,000
Fuel Burned (tons)	5,338,318	4,603,575	4,134,871	5,183,311	4,958,872
Heat Rate (Btu per kWh, net generation)	10,622	10,904	10,681	10,483	10,715
Unit Cost of Fuel Burned (per mmBtu)	\$2.27	\$2.41	\$2.59	\$2.64	\$2.78
Equivalent Availability (percent)	75.6	72.9	64.7	69.8	73.9
Power Use Factor (percent)	83.90	72.67	73.07	86.48	75.05
Employees (year-end)	666	708	738	775	781

⁽¹⁾ OVEC purchases power from third party generators and provides certain services for the Department of Energy (DOE) at its Portsmouth facility under the terms and conditions of an Arranged Power Agreement (APA) dated May 1, 2003. On April 28, 2015, DOE and OVEC signed an agreement to terminate the APA effective July 31, 2015. The DOE and OVEC had extended the date for termination of the agreement to July 31, 2018. On April 10, 2018, OVEC, DOE and Ohio Power Company (AEP Ohio) filed a stipulation with the Public Utility Commission of Ohio (PUCO) providing for the termination of electric service by OVEC to the DOE's Portsmouth facility and the replacement of this service with service from AEP Ohio. The stipulation was approved by the PUCO on June 28, 2018. As a result, the DOE and OVEC extended the date for termination of the APA to the effective date of this replacement of service by AEP Ohio, which is expected in approximately four years.

OHIO VALLEY ELECTRIC CORPORATION AND SUBSIDIARY COMPANY

DIRECTORS

Ohio Valley Electric Corporation

- ¹ **THOMAS ALBAN**, Columbus, Ohio
*Vice President, Power Generation
Buckeye Power, Inc.*
- ERIC D. BAKER**, Cadillac, Michigan
*President and Chief Executive Officer
Wolverine Power Supply Cooperative, Inc.*
- ¹ **CHRISTIAN T. BEAM**, Charleston, West Virginia
*President and Chief Operating Officer
Appalachian Power*
- ² **LONNIE E. BELLAR**, Louisville, Kentucky
*Chief Operating Officer
LG&E and KU Energy LLC*
- WAYNE D. GAMES**, Evansville, Indiana
*Vice President – Power Supply
Vectren Corporation*
- JAMES R. HANEY**, Akron, Ohio
*Vice President, Compliance & Regulated Services
and Chief FERC Compliance Officer
FirstEnergy Service Company*
- ¹ **LANA L. HILLEBRAND**, Columbus, Ohio
*Senior Vice President and Chief Administrative Officer
American Electric Power Company, Inc.*
- ² **MARK C. McCULLOUGH**, Columbus, Ohio
*Executive Vice President - Generation
American Electric Power Company, Inc.*
- MARK E. MILLER**, Indianapolis, Indiana
*Chief Operating Officer
Indianapolis Power & Light Company*
- STEVEN K. NELSON**, Coshocton, Ohio
*Chairman, Buckeye Power Board of Trustees
The Frontier Power Company*
- ² **PATRICK W. O'LOUGHLIN**, Columbus, Ohio
*President and Chief Executive Officer
Buckeye Power, Inc.*
- ² **DAVID W. PINTER**, Akron, Ohio
*Executive Director, Business Development
FirstEnergy Corp.*
- ² **JULIE SLOAT**, Gahanna, Ohio
*President and Chief Operating Officer, AEP Ohio
American Electric Power Company, Inc.*
- ¹ **PAUL W. THOMPSON**, Louisville, Kentucky
*Chief Operating Officer
LG&E and KU Energy LLC*
- ² **JOHN A. VERDERAME**, Charlotte, North Carolina
*Director, Power Trading & Dispatch
Duke Energy Corporation*

Indiana-Kentucky Electric Corporation

- WAYNE D. GAMES**, Evansville, Indiana
*Vice President – Power Supply
Vectren Corporation*
- MARC E. LEWIS**, Fort Wayne, Indiana
*Vice President, External Relations
Indiana Michigan Power*
- DAVID A. LUCAS**, Fort Wayne, Indiana
*Vice President – Finance
Indiana Michigan Power*
- ² **MARK C. McCULLOUGH**, Columbus, Ohio
*Executive Vice President - Generation
American Electric Power Company, Inc.*
- ² **PATRICK W. O'LOUGHLIN**, Columbus, Ohio
*President and Chief Executive Officer
Buckeye Power, Inc.*
- ² **DAVID W. PINTER**, Akron, Ohio
*Executive Director, Business Development
FirstEnergy Corp.*
- TOBY L. THOMAS**, Fort Wayne, Indiana
*President and Chief Operating Officer
Indiana Michigan Power*

OFFICERS—OVEC AND IKEC

MARK C. McCULLOUGH
President

ROBERT A. OSBORNE
*Vice President and
Chief Operating Officer*

JUSTIN J. COOPER
*Chief Financial Officer,
Secretary and Treasurer*

RONALD D. COOK
*Assistant Secretary, Assistant
Treasurer and Supply Chain Director*

LONNI L. DIECK
*Assistant Secretary and
Assistant Treasurer*

¹Member of Human Resources Committee.

²Member of Executive Committee.

JIF-03

KENTUCKY UTILITIES COMPANY

**Response to Sierra Club's Initial Data Requests
Dated November 19, 2018**

Case No. 2018-00294

Question No. 1

Responding Witness: David S. Sinclair

Q-1. Produce an authentic copy of the current OVEC ICPA.

A-1. See attached.

AMENDED AND RESTATED
INTER-COMPANY POWER AGREEMENT
DATED AS OF SEPTEMBER 10, 2010

AMONG

OHIO VALLEY ELECTRIC CORPORATION,
ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.
APPALACHIAN POWER COMPANY,
BUCKEYE POWER GENERATING, LLC,
COLUMBUS SOUTHERN POWER COMPANY,
THE DAYTON POWER AND LIGHT COMPANY,
DUKE ENERGY OHIO, INC.,
FIRSTENERGY GENERATION CORP.,
INDIANA MICHIGAN POWER COMPANY,
KENTUCKY UTILITIES COMPANY,
LOUISVILLE GAS AND ELECTRIC COMPANY,
MONONGAHELA POWER COMPANY,
OHIO POWER COMPANY,
PENINSULA GENERATION COOPERATIVE, and
SOUTHERN INDIANA GAS AND ELECTRIC COMPANY

INTER-COMPANY POWER AGREEMENT

THIS AGREEMENT, dated as of September 10, 2010 (the "Agreement"), by and among OHIO VALLEY ELECTRIC CORPORATION (herein called OVEC), ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C. (herein called Allegheny), APPALACHIAN POWER COMPANY (herein called Appalachian), BUCKEYE POWER GENERATING, LLC (herein called Buckeye), COLUMBUS SOUTHERN POWER COMPANY (herein called Columbus), THE DAYTON POWER AND LIGHT COMPANY (herein called Dayton), DUKE ENERGY OHIO, INC. (formerly known as The Cincinnati Gas & Electric Company and herein called Duke Ohio), FIRSTENERGY GENERATION CORP. (herein called FirstEnergy), INDIANA MICHIGAN POWER COMPANY (herein called Indiana), KENTUCKY UTILITIES COMPANY (herein called Kentucky), LOUISVILLE GAS AND ELECTRIC COMPANY (herein called Louisville), MONONGAHELA POWER COMPANY (herein called Monongahela), OHIO POWER COMPANY (herein called Ohio Power), PENINSULA GENERATION COOPERATIVE (herein called Peninsula), and SOUTHERN INDIANA GAS AND ELECTRIC COMPANY (herein called Southern Indiana, and all of the foregoing, other than OVEC, being herein sometimes collectively referred to as the Sponsoring Companies and individually as a Sponsoring Company) hereby amends and restates in its entirety, the Inter-Company Power Agreement dated as of March 13, 2006, as amended by Modification No. 1, dated as of March 13, 2006 (herein called the Current Agreement), by and among OVEC and the Sponsoring Companies.

WITNESSETH THAT:

WHEREAS, the Current Agreement amended and restated the original Inter-Company Power Agreement, dated as of July 10, 1953, as amended by Modification No. 1, dated as of June 3, 1966; Modification No. 2, dated as of January 7, 1967; Modification No. 3, dated as of November 15, 1967; Modification No. 4, dated as of November 5, 1975; Modification No. 5, dated as of September 1, 1979; Modification No. 6, dated as of August 1, 1981; Modification No. 7, dated as of January 15, 1992; Modification No. 8, dated as of January 19, 1994; Modification No. 9, dated as of August 17, 1995; Modification No. 10, dated as of January 1, 1998; Modification No. 11, dated as of April 1, 1999; Modification No. 12, dated as of November 1, 1999; Modification No. 13, dated as of May 24, 2000; Modification No. 14, dated as of April 1, 2001; and Modification No. 15, dated as of April 30, 2004 (together, herein called the Original Agreement); and

WHEREAS, OVEC designed, purchased, and constructed, and continues to operate and maintain two steam-electric generating stations, one station (herein called Ohio Station) consisting of five turbo-generators and all other necessary equipment, at a location on the Ohio River near Cheshire, Ohio, and the other station (herein called Indiana Station) consisting of six turbogenerators and all other necessary equipment, at a location on the Ohio River near Madison,

WHEREAS, OVEC also designed, purchased, and constructed, and continues to operate and maintain necessary transmission and general plant facilities (herein called the Project Transmission Facilities) and OVEC established or cause to be established interconnections between the Project Generating Stations and the systems of certain of the Sponsoring Companies; and

WHEREAS, OVEC entered into an agreement, attached hereto as Exhibit A, with Indiana-Kentucky Electric Corporation (herein called IKEC), a corporation organized under the laws of the State of Indiana as a wholly owned subsidiary corporation of OVEC, which has been amended and restated as of the date of this Agreement and embodies the terms and conditions for the ownership and operation by IKEC of the Indiana Station and such portion of the Project Transmission Facilities which are to be owned and operated by it; and

WHEREAS, transmission facilities were constructed by certain of the Sponsoring Companies to interconnect the systems of such Sponsoring Companies, directly or indirectly, with the Project Generating Stations and/or the Project Transmission Facilities, and the Sponsoring Companies have agreed to pay for Available Power, as hereinafter defined, as may be available at the Project Generating Stations; and

WHEREAS, the parties hereto desire to amend and restate in their entirety, the Current Agreement to define the terms and conditions governing the rights of the Sponsoring Companies to receive Available Power from the Project Generating Stations and the obligations of the Sponsoring Companies to pay therefor.

NOW, THEREFORE, the parties hereto agree with each other as follows:

ARTICLE 1

DEFINITIONS

1.01. For the purposes of this Agreement, the following terms, wherever used herein, shall have the following meanings:

1.011 "Affiliate" means, with respect to a specified person, any other person that directly or indirectly through one or more intermediaries controls, is controlled by, or is under common control with, such specified person; provided that "control" for these purposes means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting securities, by contract or otherwise.

1.013 "Available Energy" of the Project Generating Stations means the energy associated with Available Power.

1.014 "Available Power" of the Project Generating Stations at any particular time means the total net kilowatts at the 345-kV busses of the Project Generating Stations which Corporation in its sole discretion will determine that the Project Generating Stations will be capable of safely delivering under conditions then prevailing, including all conditions affecting capability.

1.015 "Corporation" means OVEC, IKEC, and all other subsidiary corporations of OVEC.

1.016 "Decommissioning and Demolition Obligation" has the meaning set forth in Section 5.03(f) hereof.

1.017 "Effective Date" means September 10, 2010, or to the extent necessary, such later date on which Corporation notifies the Sponsoring Companies that all conditions to effectiveness, including all required waiting periods and all required regulatory acceptances or approvals, of this Agreement have been satisfied in form and substance satisfactory to the Corporation.

1.018 "Election Period" has the meaning set forth in Section 9.183(a) hereof.

1.019 "Minimum Generating Unit Output" means 80 MW (net) for each of the Corporation's generation units; provided that such "Minimum Generating Unit Output" shall be confirmed from time to time by operating tests on the Corporation's generation units and shall be adjusted by the Operating Committee as appropriate following such tests.

1.0110 "Minimum Loading Event" means a period of time during which one or more of the Corporation's generation units are operating at below the Minimum Generating Output as a result of the Sponsoring Companies' failure to schedule and take delivery of sufficient Available Energy.

1.0111 "Minimum Loading Event Costs" means the sum of the following costs caused by one or more Minimum Loading Events: (i) the actual costs of any of the Corporation's generating units burning fuel oil; and (ii) the estimated actual additional costs to the Corporation resulting from Minimum Loading Events, including without limitation the incremental costs of additional emissions allowances, reflected in the schedule of charges prepared by the Operating Committee and in effect as of the commencement of any Minimum Loading Event, which schedule may be adjusted from time to time as necessary by the Operating Committee.

1.0112 "Month" means a calendar month.

1.0113 "Nominal Power Available" means an individual Sponsoring Company's Power Participation Ratio share of the Corporation's current estimate of the maximum amount of Available Power available for delivery at any given time.

1.0114 "Offer Notice" means the notice required to be given to the other Sponsoring Companies by a Transferring Sponsor offering to sell all or a portion of such Transferring Sponsor's rights, title and interests in, and obligations under this Agreement. At a minimum, the Offer Notice shall be in writing and shall contain (i) the rights, title and interests in, and obligations under this Agreement that the Transferring Sponsor proposes to Transfer; and (ii) the cash purchase price and any other material terms and conditions of such proposed transfer. An Offer Notice may not contain terms or conditions requiring the purchase of any non-OVEC interests.

1.0115 "Permitted Assignee" means a person that is (a) a Sponsoring Company or its Affiliate whose long-term unsecured non-credit enhanced indebtedness, as of the date of such assignment, has a Standard & Poor's credit rating of at least BBB- and a Moody's Investors Service, Inc. credit rating of at least Baa3 (provided that, if the proposed assignee's long-term unsecured non-credit enhanced indebtedness is not currently rated by one of Standard & Poor's or Moody, such assignee's long-term unsecured non-credit enhanced indebtedness, as of the date of such assignment, must have either a Standard & Poor's credit rating of at least BBB- or a Moody's Investors Service, Inc. credit rating of at least Baa3); or (b) a Sponsoring Company or its Affiliate that does not meet the criteria in subsection (a) above, if the Sponsoring Company or its Affiliate that is assigning its rights, title and interests in, and obligations under, this Agreement agrees in writing (in form and substance satisfactory to Corporation) to remain obligated to satisfy all of the obligations related to the assigned rights, title and interests to the extent such obligations are not satisfied by the assignee of such rights, title and interests; provided that, in no event shall a person be deemed a "Permitted Assignee" if counsel for the Corporation reasonably determines that the assignment of the rights, title or interests in, or obligations under, this Agreement to such person could cause a termination, default, loss or payment obligation under any security issued, or agreement entered into, by the Corporation prior to such transfer.

1.0116 "Postretirement Benefit Obligation" has the meaning set forth in Section 5.03(e) hereof.

1.0117 "Power Participation Ratio" as applied to each of the Sponsoring Companies refers to the percentage set forth opposite its respective name in the tabulation below:

Company	Power Participation Ratio—Percent
---------	--------------------------------------

Allegheny	3.01
Appalachian.....	15.69
Buckeye.....	18.00
Columbus	4.44
Dayton.....	4.90
Duke Ohio.....	9.00
FirstEnergy.....	4.85
Indiana.....	7.85
Kentucky	2.50
Louisville	5.63
Monongahela.....	0.49
Ohio Power	15.49
Peninsula	6.65
Southern Indiana	<u>1.50</u>
Total.....	100.0

1.0118 “Tariff” means the open access transmission tariff of the Corporation, as amended from time to time, or any successor tariff, as accepted by the Federal Energy Regulatory Commission or any successor agency.

1.0119 “Third Party” means any person other than a Sponsoring Company or its Affiliate.

1.0120 “Total Minimum Generating Output” means the product of the Minimum Generating Unit Output times the number of the Corporation’s generation units available for service at that time.

1.0121 “Transferring Sponsor” has the meaning set forth in Section 9.183(a) hereof.

1.0122 “Uniform System of Accounts” means the Uniform System of Accounts prescribed by the Federal Energy Regulatory Commission as in effect on January 1, 2004.

ARTICLE 2

TRANSMISSION AGREEMENT AND FACILITIES

2.01. *Transmission Agreement.* The Corporation shall enter into a transmission service agreement under the Tariff, and the Corporation shall reserve and schedule transmission service, ancillary services and other transmission-related services in accordance with the Tariff to provide for the delivery of Available Power and Available Energy to the applicable delivery point under this Agreement.

2.02. *Limited Burdening of Corporation's Transmission Facilities.*

Transmission facilities owned by the Corporation, including the Project Transmission Facilities, shall not be burdened by power and energy flows of any Sponsoring Company to an extent which would impair or prevent the transmission of Available Power.

ARTICLE 3

[RESERVED]

~~ARTICLE 4~~

AVAILABLE POWER SUPPLY

4.01. *Operation of Project Generating Stations.* Corporation shall operate and maintain the Project Generating Stations in a manner consistent with safe, prudent, and efficient operating practice so that the Available Power available from said stations shall be at the highest practicable level attainable consistent with OVEC's obligations under Reliability First Reliability Standard BAL-002-RFC throughout the term of this Agreement.

4.02. *Available Power Entitlement.* The Sponsoring Companies collectively shall be entitled to take from Corporation and Corporation shall be obligated to supply to the Sponsoring Companies any and all Available Power and Available Energy pursuant to the provisions of this Agreement. Each Sponsoring Company's Available Power Entitlement hereunder shall be its Power Participation Ratio, as defined in subsection 1.0117, of Available Power.

4.03. *Available Energy.* Corporation shall make Available Energy available to each Sponsoring Company in proportion to said Sponsoring Company's Power Participation Ratio. No Sponsoring Company, however, shall be obligated to avail itself of any Available Energy. Available Energy shall be scheduled and taken by the Sponsoring Companies in accordance with the following procedures:

4.031 Each Sponsoring Company shall schedule the delivery of all or any portion (in whole MW increments) of its entitlement to Available Energy in accordance with scheduling procedures established by the Operating Committee from time to time.

4.032 In the event that any Sponsoring Company does not schedule the delivery of all of its Power Participation Ratio share of Available Energy, then each such other Sponsoring Company may schedule the delivery of all or any portion (in whole MW increments) of any such unscheduled share of Available Energy (through successive allotments if necessary) in proportion to their Power Participation Ratios.

4.033 Notwithstanding any Available Energy schedules made in accordance with this Section 4.03 and the applicable scheduling procedures, (i) the Corporation shall adjust all schedules to the extent that the Corporation's actual generation output is less than or more than the expected Nominal Power Available to all Sponsoring Companies, or to the extent that the Corporation is unable to obtain sufficient transmission service under the Tariff for the delivery of all scheduled Available Energy; and (ii) immediately following a Minimum Loading Event, any Sponsoring Company causing (in whole or part) such Minimum Loading Event shall have its Available Energy schedules increased after the schedules of the Sponsoring Companies not causing such Minimum Load Event, in accordance with the estimated ramp rates associated with the shutdown and start-up of the Corporation's generation units as reflected in the schedules prepared by the Operating Committee and in effect as of the commencement of any Minimum Loading Event, which schedules may be adjusted from time to time as necessary by the Operating Committee.

4.034 Each Sponsoring Company availing itself of Available Energy shall be entitled to an amount of energy (herein called billing kilowatt-hours of Available Energy) equal to its portion, determined as provided in this Section 4.03, of the total Available Energy after deducting therefrom such Sponsoring Company's proportionate share, as defined in this Section 4.03, of all losses as determined in accordance with the Tariff incurred in transmitting the total of such Available Energy from the 345-kV busses of the Project Generating Stations to the applicable delivery points, as scheduled pursuant to Section 9.01, of all Sponsoring Companies availing themselves of Available Energy. The proportionate share of all such losses that shall be so deducted from such Sponsoring Company's portion of Available Energy shall be equal to all such losses multiplied by the ratio of such portion of Available Energy to the total of such Available Energy. Each Sponsoring Company shall have the right, pursuant to this Section 4.03, to avail itself of Available Energy for the purpose of meeting the loads of its own system and/or of supplying energy to other systems in accordance with agreements, other than this Agreement, to which such Sponsoring Company is a party.

4.035 To the extent that, as a result of the failure by one or more Sponsoring Companies to take its respective Power Participation Ratio share of the applicable Total Minimum Generating Output during any hour, a Minimum Loading Event shall occur, then such one or more Sponsoring Companies shall be assessed charges for any Minimum Loading Event Costs in accordance with Section 5.05.

ARTICLE 5

CHARGES FOR AVAILABLE POWER AND MINIMUM LOADING EVENT COSTS

5.01. *Total Monthly Charge.* The amount to be paid to Corporation each month ~~by the Sponsoring Companies~~ for Available Power and Available Energy supplied under this

Agreement shall consist of the sum of an energy charge, a demand charge, and a transmission charge, all determined as set forth in this Article 5.

5.02. *Energy Charge.* The energy charge to be paid each month by the Sponsoring Companies for Available Energy shall be determined by Corporation as follows:

5.021 Determine the aggregate of all expenses for fuel incurred in the operation of the Project Generating Stations, in accordance with Account 501 (Fuel), Account 506.5 (Variable Reagent Costs Associated With Pollution Control Facilities) and 509 (Allowances) of the Uniform System of Accounts.

5.022 Determine for such month the difference between the total cost of fuel as described in subsection 5.021 above and the total cost of fuel included in any Minimum Loading Event Costs payable to the Corporation for such month pursuant to Section 8.03. For the purposes hereof the difference so determined shall be the fuel cost allocable for such month to the total kilowatt-hours of energy generated at the Project Generating Stations for the supply of Available Energy. For Available Energy availed of by the Sponsoring Companies, each Sponsoring Company shall pay Corporation for each such month an amount obtained by multiplying the ratio of the billing kilowatt-hours of such Available Energy availed of by such Sponsoring Company during such month to the aggregate of the billing kilowatt-hours of all Available Energy availed of by all Sponsoring Companies during such month times the total cost of fuel as described in this subsection 5.022 for such month.

5.03. *Demand Charge.* During the period commencing with the Effective Date and for the remainder of the term of this Agreement, demand charges payable by the Sponsoring Companies to Corporation shall be determined by the Corporation as provided below in this Section 5.03. Each Sponsoring Company's share of the aggregate demand charges shall be the percentage of such charges represented by its Power Participation Ratio.

The aggregate demand charge payable each month by the Sponsoring Companies to Corporation shall be equal to the total costs incurred for such month by Corporation resulting from its ownership, operation, and maintenance of the Project Generating Stations and Project Transmission Facilities determined as follows:

As soon as practicable after the close of each calendar month the following components of costs of Corporation (eliminating any duplication of costs which might otherwise be reflected among the corporate entities comprising Corporation) applicable for such month to the ownership, operation and maintenance of the Project Generating Stations and the Project Transmission Facilities, including additional facilities and/or spare parts (such as fuel processing plants, flue gas or waste product processing facilities, and facilities reasonably required to enable the Corporation to limit the emission of pollutants or the discharge of wastes in compliance with governmental requirements) and

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replacements necessary or desirable to keep the Project Generating Stations and the Project Transmission Facilities in a dependable and efficient operating condition, and any provision for any taxes that may be applicable to such charges, to be determined and recorded in the following manner:

(a) Component (A) shall consist of fixed charges made up of (i) the amounts of interest properly chargeable to Accounts 427, 430 and 431, less the amount thereof credited to Account 432, of the Uniform System of Accounts, including the interest component of any purchase price, interest, rental or other payment under an installment sale, loan, lease or similar agreement relating to the purchase, lease or acquisition by Corporation of additional facilities and replacements (whether or not such interest or other amounts have come due or are actually payable during such Month), (ii) the amounts of amortization of debt discount or premium and expenses properly chargeable to Accounts 428 and 429, and (iii) an amount equal to the sum of (I) the applicable amount of the debt amortization component for such month required to retire the total amount of indebtedness of Corporation issued and outstanding, (II) the amortization requirement for such month in respect of indebtedness of Corporation incurred in respect of additional facilities and replacements, and (III) to the extent not provided for pursuant to clause (II) of this clause (iii), an appropriate allowance for depreciation of additional facilities and replacements.

(b) Component (B) shall consist of the total operating expenses for labor, maintenance, materials, supplies, services, insurance, administrative and general expense, etc., properly chargeable to the Operation and Maintenance Expense Accounts of the Uniform System of Accounts (exclusive of Accounts 501, 509, 555, 911, 912, 913, 916, and 917 of the Uniform System of Accounts), minus the total of all non-fuel costs included in any Minimum Loading Event Costs payable to the Corporation for such month pursuant to Section 8.03, minus the total of all transmission charges payable to the Corporation for such month pursuant to Section 5.04, and plus any additional amounts which, after provision for all income taxes on such amounts (which shall be included in Component (C) below), shall equal any amounts paid or payable by Corporation as fines or penalties with respect to occasions where it is asserted that Corporation failed to comply with a law or regulation relating to the emission of pollutants or the discharge of wastes.

(c) Component (C) shall consist of the total expenses for taxes, including all taxes on income but excluding any federal income taxes arising from payments to Corporation under Component (D) below, and all operating or other costs or expenses, net of income, not included or

specifically excluded in Components (A) or (B) above, including tax adjustments, regulatory adjustments, net losses for the disposition of property and other net costs or expenses associated with the operation of a utility.

(d) Component (D) shall consist of an amount equal to the product of \$2.089 multiplied by the total number of shares of capital stock of the par value of \$100 per share of Ohio Valley Electric Corporation which shall have been issued and which are outstanding on the last day of such month.

(e) Component (E) shall consist of an amount to be sufficient to pay the costs and other expenses relating to the establishment, maintenance and administration of life insurance, medical insurance and other postretirement benefits other than pensions attributable to the employment and employee service of active employees, retirees, or other employees, including without limitation any premiums due or expected to become due, as well as administrative fees and costs, such amounts being sufficient to provide payment with respect to all periods for which Corporation has committed or is otherwise obligated to make such payments, including amounts attributable to current employee service and any unamortized prior service cost, gain or loss attributable to prior service years ("Postretirement Benefit Obligation"); provided that, the amount payable for Postretirement Benefit Obligations during any month shall be determined by the Corporation based on, among other factors, the Statement of Financial Accounting Standards No. 106 (Employers' Accounting For Postretirement Benefits Other Than Pensions) and any applicable accounting standards, policies or practices as adopted from time to time relating to accruals with respect to all or any portion of such Postretirement Benefit Obligation.

(f) Component (F) shall consist of an amount that may be incurred in connection with the decommissioning, shutdown, demolition and closing of the Project Generating Stations when production of electric power and energy is discontinued at such Project Generating Stations, which amount shall include, without limitation the following costs (net of any salvage credits): the costs of demolishing the plants' building structures, disposal of non-salvageable materials, removal and disposal of insulating materials, removal and disposal of storage tanks and associated piping, disposal or removal of materials and supplies (including fuel oil and coal), grading, covering and reclaiming storage and disposal areas, disposing of ash in ash ponds to the extent required by regulatory authorities, undertaking corrective or remedial action required by regulatory authorities, and any other costs incurred in putting the facilities

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in a condition necessary to protect health or the environment or which are required by regulatory authorities, or which are incurred to fund continuing obligations to monitor or to correct environmental problems which result, or are later discovered to result, from the facilities' operation, closure or post-closure activities ("Decommissioning and Demolition Obligation") provided that, the amount payable for Decommissioning and Demolition Obligations during any month shall be calculated by Corporation based on, among other factors, the then-estimated useful life of the Project Generating Stations and any applicable accounting standards, policies or practices as adopted from time to time relating to accruals with respect to all or any portion of such Decommissioning and Demolition Obligation, and provided further that, the Corporation shall recalculate the amount payable under this Component (F) for future months from time to time, but in no event later than five (5) years after the most recent calculation.

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5.04. *Transmission Charge.* The transmission charges to be paid each month by the Sponsoring Companies shall be equal to the total costs incurred for such month by Corporation for the purchase of transmission service, ancillary services and other transmission-related services under the Tariff as reserved and scheduled by the Corporation to provide for the delivery of Available Power and Available Energy to the applicable delivery point under this Agreement. Each Sponsoring Company's share of the aggregate transmission charges shall be the percentage of such charges represented by its Power Participation Ratio.

5.05. *Minimum Loading Event Costs.* To the extent that, as a result of the failure by one or more Sponsoring Companies to take its respective Power Participation Ratio share of the applicable Total Minimum Generating Output during any hour, a Minimum Loading Event shall occur, then the sum of all Minimum Loading Event Costs relating to such Minimum Loading Event shall be charged to such Sponsoring Company or group of Sponsoring Companies that failed take its respective Power Participation Ratio share of the applicable Total Minimum Generating Output during such period, with such Minimum Loading Event Costs allocated among such Sponsoring Companies on a pro-rata basis in accordance with such Sponsoring Company's MWh share of the MWh reduction in the delivery of Available Energy causing any Minimum Loading Event. The applicable charges for Minimum Loading Event Costs as determined by the corporation in accordance with Section 5.05 shall be paid each month by the applicable Sponsoring Companies.

ARTICLE 6

Metering of Energy Supplied

6.01. *Measuring Instruments.* The parties hereto shall own and maintain such metering equipment as may be necessary to provide complete information regarding the delivery of power and energy to or for the account of any of the parties hereto; and the ownership and

expense of such metering shall be in accordance with agreements among them. Each party will at its own expense make such periodic tests and inspections of its meters as may be necessary to maintain them at the highest practical commercial standard of accuracy and will advise all other interested parties hereto promptly of the results of any such test showing an inaccuracy of more than 1%. Each party will make additional tests of its meters at the request of any other interested party. Other interested parties shall be given notice of, and may have representatives present at, any test and inspection made by another party.

ARTICLE 7

COSTS OF REPLACEMENTS AND ADDITIONAL FACILITIES; PAYMENTS FOR EMPLOYEE BENEFITS; DECOMMISSIONING, SHUTDOWN, DEMOLITION AND CLOSING CHARGES

7.01. *Replacement Costs.* The Sponsoring Companies shall reimburse Corporation for the difference between (a) the total cost of replacements chargeable to property and plant made by Corporation during any month prior thereto (and not previously reimbursed) and (b) the amounts received by Corporation as proceeds of fire or other applicable insurance protection, or amounts recovered from third parties responsible for damages requiring replacement, plus provision for all taxes on income on such difference; provided that, to the extent that the Corporation arranges for the financing of any replacements, the payments due under this Section 7.01 shall equal the amount of all principal, interest, taxes and other costs and expenses related to such financing during any month. Each Sponsoring Company's share of such payment shall be the percentage of such costs represented by its Power Participation Ratio. The term cost of replacements, as used herein, shall include all components of cost, plus removal expense, less salvage.

7.02. *Additional Facility Costs.* The Sponsoring Companies shall reimburse Corporation for the total cost of additional facilities and/or spare parts purchased and/or installed by Corporation during any month prior thereto (and not previously reimbursed), plus provision for all taxes on income on such costs; provided that, to the extent that the Corporation arranges for the financing of any additional facilities and/or spare parts, the payments due under this Section 7.02 shall equal the amount of all principal, interest, taxes and other costs and expenses, related to such financing during any month. Each Sponsoring Company's share of such payment shall be the percentage of such costs represented by its Power Participation Ratio.

7.03. *Payments for Employee Benefits.* Not later than the effective date of termination of this Agreement, each Sponsoring Company will pay to Corporation its Power Participation Ratio share of additional amounts, after provision for any taxes that may be applicable thereto, sufficient to cover any shortfall if the amount of the Postretirement Benefit Obligation collected by the Corporation prior to the effective date of termination of the Agreement is insufficient to permit Corporation to fulfill its commitments or obligations with respect to both postemployment benefit obligations under the Statement of Financial Accounting Standards No. 112 and postretirement benefits other than pensions, as determined by Corporation

with the aid of an actuary or actuaries selected by the Corporation based on the terms of the Corporation's then-applicable plans.

7.04. *Decommissioning, Shutdown, Demolition and Closing.* The Sponsoring Companies recognize that a part of the cost of supplying power to it under this Agreement is the amount that may be incurred in connection with the decommissioning, shutdown, demolition and closing of the Project Generating Stations when production of electric power and energy is discontinued at such Project Generating Stations. Not later than the effective date of termination of this Agreement, each Sponsoring Company will pay to Corporation its Power Participation Ratio share of additional amounts, after provision for any taxes that may be applicable thereto, sufficient to cover any shortfall if the amount of the Decommissioning and Demolition Obligation collected by the Corporation prior to the effective date of termination of the Agreement is insufficient to permit Corporation to complete the decommissioning, shutdown, demolition and closing of the Project Generating Stations, based on the Corporation's recalculation of the Decommissioning and Demolition Obligation in accordance with Section 5.03(f) of this Agreement no earlier than twelve (12) months before the effective date of termination of this Agreement.

ARTICLE 8

BILLING AND PAYMENT

8.01. *Available Power, and Replacement and Additional Facility Costs.* As soon as practicable after the end of each month Corporation shall render to each Sponsoring Company a statement of all Available Power and Available Energy supplied to or for the account of such Sponsoring Company during such month, specifying the amount due to the Corporation therefor, including any amounts for reimbursement for the cost of replacements and additional facilities and/or spare parts incurred during such month, pursuant to *Articles 5 and 7* above. Such Sponsoring Company shall make payment therefor promptly upon the receipt of such statement, but in no event later than fifteen (15) days after the date of receipt of such statement. In case any factor entering into the computation of the amount due for Available Power and Available Energy cannot be determined at the time, it shall be estimated subject to adjustment when the actual determination can be made.

8.02. *Provisional Payments for Available Power.* The Sponsoring Companies shall, from time to time, at the request of the Corporation, make provisional semi-monthly payments for Available Power in amounts approximately equal to the estimated amounts payable for Available Power delivered by Corporation to the Sponsoring Companies during each semi-monthly period. As soon as practicable after the end of each semi-monthly period with respect to which Corporation has requested the Sponsoring Companies to make provisional semi-monthly payments for Available Power, Corporation shall render to each Sponsoring Company a separate statement indicating the amount payable by such Sponsoring Company for such semi-monthly period. Such Sponsoring Company shall make payment therefor promptly upon receipt of such statement, but in no event later than fifteen (15) days after the date of receipt of such

statement and the amounts so paid by such Sponsoring Company shall be credited to the account of such Sponsoring Company with respect to future payments to be made pursuant to Articles 5 and 7 above by such Sponsoring Company to Corporation for Available Power.

8.03. *Minimum Loading Event Costs.* As soon as practicable after the end of each month, Corporation shall render to each Sponsoring Company a statement indicating any applicable charges for Minimum Loading Event Costs pursuant to Section 5.05 during such month, specifying the amount due to the Corporation therefor pursuant to Article 5 above. Such Sponsoring Company shall make payment therefor promptly upon the receipt of such statement, but in no event later than fifteen (15) days after the date of receipt of such statement. In case the computation of the amount due for Minimum Loading Event Costs cannot be determined at the time, it shall be estimated subject to adjustment when the actual determination can be made, and all payments shall be subject to subsequent adjustment.

8.04. *Unconditional Obligation to Pay Demand and Other Charges.* The obligation of each Sponsoring Company to pay its specified portion of the Demand Charge under Section 5.03, the Transmission Charge under Section 5.04, and all charges under Article 7 for any Month shall not be reduced irrespective of:

(a) whether or not any Available Power or Available Energy are supplied by the Corporation during such calendar month and whether or not any Available Power or Available Energy are accepted by any Sponsoring Company during such calendar month;

(b) the existence of any claim, set-off, defense, reduction, abatement or other right (other than irrevocable payment, performance, satisfaction or discharge in full) that such Sponsoring Company may have, or which may at any time be available to or be asserted by such Sponsoring Company, against the Corporation, any other Sponsoring Company, any creditor of the Corporation or any other Person (including, without limitation, arising as a result of any breach or alleged breach by either the Corporation, any other Sponsoring Company, any creditor of the Corporation or any other Person under this Agreement or any other agreement (whether or not related to the transactions contemplated by this Agreement or any other agreement) to which such party is a party); or

(c) the validity or enforceability against any other Sponsoring Company of this Agreement or any right or obligation hereunder (or any release or discharge thereof) at any time.

GENERAL PROVISIONS

9.01. *Characteristics of Supply and Points of Delivery.* All power and energy delivered hereunder shall be 3-phase, 60-cycle, alternating current, at a nominal unregulated voltage designated for the point of delivery as described in this *Article 9*. Available Power and Available Energy to be delivered between Corporation and the Sponsoring Companies pursuant to this Agreement shall be delivered under the terms and conditions of the Tariff at the points, as scheduled by the Sponsoring Company in accordance with procedures established by the Operating Committee and in accordance with Section 9.02, where the transmission facilities of Corporation interconnect with the transmission facilities of any Sponsoring Company (or its successor or predecessor); provided that, to the extent that a joint and common market is established for the sale of power and energy by Sponsoring Companies within one or more of the regional transmission organizations or independent system operators approved by the Federal Energy Regulatory Commission in which the Sponsoring Companies are members or otherwise participate, then Corporation and the Sponsoring Companies shall take such action as reasonably necessary to permit the Sponsoring Companies to bid their entitlement to power and energy from Corporation into such market(s) in accordance with the procedures established for such market(s).

9.02. *Modification of Delivery Schedules Based on Available Transmission Capability.* To the extent that transmission capability available for the delivery of Available Power and Available Energy at any delivery point is less than the total amount of Available Power and Available Energy scheduled for delivery by the Sponsoring Companies at such delivery point in accordance with Section 9.01, then the following procedures shall apply and the Corporation and the applicable Sponsoring Companies shall modify their delivery schedules accordingly until the total amount of Available Power and Available Energy scheduled for delivery at such delivery point is equal to or less than the transmission capability available for the delivery of Available Power and Available Energy: (a) the transmission capability available for the delivery of Available Power and Available Energy at the following delivery points shall be allocated first on a pro rata basis (in whole MW increments) to the following Sponsoring Companies up to their Power Participation Ratio share of the total amount of Available Energy available to all Sponsoring Companies (and as applicable, further allocated among Sponsoring Companies entitled to allocation under this Section 9.02(a) in accordance with their Power Participation Ratios): (i) to Allegheny, Appalachian, Buckeye, Columbus, FirstEnergy, Indiana, Monongahela, Ohio Power and Peninsula (or their successors) for deliveries at the points of interconnection between the Corporation and Appalachian, Columbus, Indiana or Ohio Power, or their successors; (ii) to Duke Ohio (or its successor) for deliveries at the points of interconnection between the Corporation and Duke Ohio or its successor; (iii) to Dayton (or its successor) for deliveries at the points of interconnection between the Corporation and Dayton or its successor; and (iv) to Kentucky, Louisville and Southern Indiana (or their successors) for deliveries at the points of interconnection between the Corporation and Louisville or Kentucky, or their successors; and (b) any remaining transmission capability available for the delivery of

Available Power and Available Energy shall be allocated on a pro rata basis (in whole MW increments) to the Sponsoring Companies in accordance with their Power Participation Ratios. Page 17 of 60
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9.03. *Operation and Maintenance of Systems Involved.* Corporation and the Sponsoring Companies shall operate their systems in parallel, directly or indirectly, except during emergencies that temporarily preclude parallel operation. The parties hereto agree to coordinate their operations to assure maximum continuity of service from the Project Generating Stations, and with relation thereto shall cooperate with one another in the establishment of schedules for maintenance and operation of equipment and shall cooperate in the coordination of relay protection, frequency control, and communication and telemetering systems. The parties shall build, maintain and operate their respective systems in such a manner as to minimize so far as practicable rapid fluctuations in energy flow among the systems. The parties shall cooperate with one another in the operation of reactive capacity so as to assure mutually satisfactory power factor conditions among themselves.

The parties hereto shall exercise due diligence and foresight in carrying out all matters related to the providing and operating of their respective power resources so as to minimize to the extent practicable deviations between actual and scheduled deliveries of power and energy among their systems. The parties hereto shall provide and/or install on their respective systems such communication, telemetering, frequency and/or tie-line control facilities essential to so minimizing such deviations; and shall fully cooperate with one another and with third parties (such third parties whose systems are either directly or indirectly interconnected with the systems of the Sponsoring Companies and who of necessity together with the parties hereto must unify their efforts cooperatively to achieve effective and efficient interconnected systems operation) in developing and executing operating procedures that will enable the parties hereto to avoid to the extent practicable deviations from scheduled deliveries.

In order to foster coordination of the operation and maintenance of Corporation's transmission facilities with those facilities of Sponsoring Companies that are owned or functionally controlled by a regional transmission organization or independent system operator, Corporation shall use commercially reasonable efforts to enter into a coordination agreement with any regional transmission organization or independent system operator approved by the Federal Energy Regulatory Commission that operates transmission facilities that interconnect with Corporation's transmission facilities, and to enter into a mutually agreeable services agreement with a regional transmission organization or independent system operator to provide the Corporation with reliability and security coordination services and other related services.

9.04. *Power Deliveries as Affected by Physical Characteristics of Systems.* It is recognized that the physical and electrical characteristics of the transmission facilities of the interconnected network of which the transmission systems of the Sponsoring Companies, Corporation, and other systems of third parties not parties hereto are a part, may at times preclude the direct delivery at the points of interconnection between the transmission systems of one or more of the Sponsoring Companies and Corporation, of some portion of the energy supplied under this Agreement, and that in each such case, because of said characteristics, some

of the energy will be delivered at points which interconnect the system of one or more of the Sponsoring Companies with systems of companies not parties to this Agreement. The parties hereto shall cooperate in the development of mutually satisfactory arrangements among themselves and with such companies not parties hereto whereby the supply of power and energy contemplated hereunder can be fulfilled,

9.05. *Operating Committee.* There shall be an "Operating Committee" consisting of one member appointed by the Corporation and one member appointed by each of the Sponsoring Companies electing so to do; provided that, if any two or more Sponsoring Companies are Affiliates, then such Affiliates shall together be entitled to appoint only one member to the Operating Committee. The "Operating Committee" shall establish (and modify as necessary) scheduling, operating, testing and maintenance procedures of the Corporation in support of this Agreement, including establishing: (i) procedures for scheduling delivery of Available Energy under Section 4.03, (ii) procedures for power and energy accounting, (iii) procedures for the reservation and scheduling of firm and non-firm transmission service under the Tariff for the delivery of Available Power and Available Energy, (iv) the Minimum Generating Unit Output, and (v) the form of notifications relating to power and energy and the price thereof. In addition, the Operating Committee shall consider and make recommendations to Corporation's Board of Directors with respect to such other problems as may arise affecting the transactions under this Agreement. ~~The decisions of the Operating Committee, including the adoption or modification of any procedure by the Operating Committee pursuant to this Section 9.04, must receive the affirmative vote of at least two-thirds of the members of the Operating Committee, regardless of the number of members of the Operating Committee present at any meeting.~~

9.06. *Acknowledgment of Certain Rights.* For the avoidance of doubt, all of the parties to this Agreement acknowledge and agree that (i) as of the effective date of the Current Agreement, certain rights and obligations of the Sponsoring Companies or their predecessors under the Original Agreement were changed, modified or otherwise removed, (ii) to the extent that the rights of any Sponsoring Company or their predecessors were thereby changed, modified or otherwise removed as of the effective date of the Current Agreement, such Sponsoring Company may be entitled to rights under applicable law, regulation, rules or orders under the Federal Power Act or otherwise adopted by the Federal Energy Regulatory Commission ("FERC"), (iii) as a result of the elimination as of the effective date of the Current Agreement of the firm transmission service previously provided during the term of the Original Agreement to Sponsoring Companies or their predecessors whose transmission systems were only indirectly connected to the Corporation's facilities through intervening transmission systems by certain Sponsoring Companies or their predecessors whose transmission systems were directly connected to the Corporation's facilities, such Sponsoring Companies or their predecessors whose transmission systems were only indirectly connected to the Corporation's facilities through intervening transmission systems shall have been entitled to such "roll over" firm transmission service for delivery of their entitlement to their Power Participation Ratio share of Surplus Power and Surplus Energy under this Agreement, to the border of such Sponsoring Company system and intervening Sponsoring Company system, as would be accorded a long-

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term firm point-to-point transmission service reservation under the then otherwise applicable FERC Open Access Transmission Tariff ("OATT"), (iv) the obligation of any Sponsoring Company to maintain or expand transmission capacity to accommodate another Sponsoring Company's "roll over" rights to transmission service for delivery of their entitlement to their Power Participation Ratio share of Surplus Power and Surplus Energy under this Agreement shall be consistent with the obligations it would have for long-term firm point-to-point transmission service provided pursuant to the then otherwise applicable OATT, and (v) the parties shall cooperate with any Sponsoring Company that seeks to obtain and/or exercise any such rights available under applicable law, regulation, rules or orders under the Federal Power Act or otherwise adopted by the FERC.

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9.07. *Term of Agreement.* This Agreement shall become effective upon the Effective Date and shall terminate upon the earlier of: (1) June 30, 2040 or (2) the sale or other disposition of all of the facilities of the Project Generating Stations or the permanent cessation of operation of such facilities; provided that, the provisions of *Articles 5, 7 and 8, this Section 9.07 and Sections 9.08, 9.09, 9.10, 9.11, 9.12, 9.14, 9.15, 9.16, 9.17 and 9.18* shall survive the termination of this Agreement, and no termination of this Agreement, for whatever reason, shall release any Sponsoring Company of any obligations or liabilities incurred prior to such termination.

9.08. *Access to Records.* Corporation shall, at all reasonable times, upon the request of any Sponsoring Company, grant to its representatives reasonable access to the books, records and accounts of the Corporation, and furnish such Sponsoring Company such information as it may reasonably request, to enable it to determine the accuracy and reasonableness of payments made for energy supplied under this Agreement.

9.09. *Modification of Agreement.* Absent the agreement of all parties to this Agreement, the standard for changes to provisions of this Agreement related to rates proposed by a party, a non-party or the Federal Energy Regulatory Commission (or a successor agency) acting sua sponte shall be the "public interest" standard of review set forth in *United Gas Pipeline Co. v. Mobile Gas Serv. Corp.*, 350 U.S. 332 (1956) and *Federal Power Comm'n v. Sierra Pacific Power Co.*, 350 U.S. 348 (1956).

9.10. *Arbitration.* Any controversy, dispute or claim arising out of this Agreement or the refusal by any party hereto to perform the whole or any part thereof, shall be determined by arbitration, in the City of Columbus, Franklin County, Ohio, in accordance with the Commercial Arbitration Rules of the American Arbitration Association or any successor organization, except as otherwise set forth in this Section 9.10.

The party demanding arbitration shall serve notice in writing upon all other parties hereto, setting forth in detail the controversy, dispute or claim with respect to which arbitration is demanded, and the parties shall thereupon endeavor to agree upon an arbitration board, which shall consist of three members ("Arbitration Board"). If all the parties hereto fail so to agree within a period of thirty (30) days from the original notice, the party demanding

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arbitration may, by written notice to all other parties hereto, direct that any members of the Arbitration Board that have not been agreed to by the parties shall be selected by the American Arbitration Association, or any successor organization. No person shall be eligible for appointment to the Arbitration Board who is an officer, employee, shareholder of or otherwise interested in any of the parties hereto or in the matter sought to be arbitrated.

The Arbitration Board shall afford adequate opportunity to all parties hereto to present information with respect to the controversy, dispute or claim submitted to arbitration and may request further information from any party hereto; provided, however, that the parties hereto may, by mutual agreement, specify the rules which are to govern any proceeding before the Arbitration Board and limit the matters to be considered by the Arbitration Board, in which event the Arbitration Board shall be governed by the terms and conditions of such agreement.

The determination or award of the Arbitration Board shall be made upon a determination of a majority of the members thereof. The findings and award of the Arbitration Board shall be final and conclusive with respect to the controversy, dispute or claim submitted for arbitration and shall be binding upon the parties hereto, except as otherwise provided by law. The award of the Arbitration Board shall specify the manner and extent of the division of the costs of the arbitration proceeding among the parties hereto.

9.11. *Liability.* The rights and obligations of all the parties hereto shall be several and not joint or joint and several.

9.12. *Force Majeure.* No party hereto shall be held responsible or liable for any loss or damage on account of non-delivery of energy hereunder at any time caused by an event of Force Majeure. "Force Majeure" shall mean the occurrence or non-occurrence of any act or event that could not reasonably have been expected and avoided by exercise of due diligence and foresight and such act or event is beyond the reasonable control of such party, including to the extent caused by act of God, fire, flood, explosion, strike, civil or military authority, insurrection or riot, act of the elements, or failure of equipment. For the avoidance of doubt, "Force Majeure" shall in no event be based on any Sponsoring Company's financial or economic conditions, including without limitation (i) the loss of the Sponsoring Company's markets; or (ii) the Sponsoring Company's inability economically to use or resell the Available Power or Available Energy purchased hereunder.

9.13. *Governing Law.* This Agreement shall be governed by, and construed in accordance with, the laws of the State of Ohio.

9.14. *Regulatory Approvals.* This Agreement is made subject to the jurisdiction of any governmental authority or authorities having jurisdiction in the premises and the performance thereof shall be subject to the following:

- (a) The receipt of all regulatory approvals, in form and substance satisfactory to Corporation, necessary to permit Corporation to perform all the duties and obligations to be performed by Corporation hereunder.

(b) The receipt of all regulatory approvals, in form and substance satisfactory to the Sponsoring Companies, necessary to permit the Sponsoring Companies to carry out all transactions contemplated herein. Page 21 of 60 Sinclair

9.15. *Notices.* All notices, requests or other communications under this Agreement shall be in writing and shall be sufficient in all respects: (i) if delivered in person or by courier, upon receipt by the intended recipient or an employee that routinely accepts packages or letters from couriers or other persons for delivery to personnel at the address identified above (as confirmed by, if delivered by courier, the records of such courier), (ii) if sent by facsimile transmission, when the sender receives confirmation from the sending facsimile machine that such facsimile transmission was transmitted to the facsimile number of the addressee, or (iii) if mailed, upon the date of delivery as shown by the return receipt therefor.

9.16. *Waiver.* Performance by any party to this Agreement of any responsibility or obligation to be performed by such party or compliance by such party with any condition contained in this Agreement may by a written instrument signed by all other parties to this Agreement be waived in any one or more instances, but the failure of any party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights, but the same shall continue and remain in full force and effect.

9.17. *Titles of Articles and Sections.* The titles of the Articles and Sections in this Agreement have been inserted as a matter of convenience of reference and are not a part of this Agreement.

9.18. *Successors and Assigns.* This Agreement may be executed in any number of counterparts, all of which shall constitute but one and the same document.

9.181 This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns, but a party to this Agreement may not assign this Agreement or any of its rights, title or interests in or obligations (including without limitation the assumption of debt obligations) under this Agreement, except to a successor to all or substantially all the properties and assets of such party or as provided in Section 9.182 or 9.183, without the written consent of all the other parties hereto.

9.182 Notwithstanding the provisions of Section 9.181, any Sponsoring Company shall be permitted to, upon thirty (30) days notice to the Corporation and each other Sponsoring Company, without any further action by the Corporation or the other Sponsoring Companies, assign all or part of its rights, title and interests in, and obligations under this Agreement to a Permitted Assignee, provided that, the assignee and assignor of the rights, title and interests in, and obligations under, this Agreement have executed an assignment agreement in form and substance acceptable to the Corporation

in its reasonable discretion (including, without limitation; the agreement by the Sponsoring Company assigning such rights, title and interests in, and obligations under, this Agreement to reimburse the Corporation and the other Sponsoring Companies for any fees or expenses required under any security issued, or agreement entered into, by the Corporation as a result of such assignment, including without limitation any consent fee or additional financing costs to the Corporation under the Corporation's then-existing securities or agreements resulting from such assignment).

9.183 Notwithstanding the provisions of Section 9.181, any Sponsoring Company shall be permitted to, subject to compliance with all of the requirements of this Section 9.183, assign all or part of its rights, title and interests in, and obligations under this Agreement to a Third Party without any further action by the Corporation or the other Sponsoring Companies.

(a) A Sponsoring Company (the "Transferring Sponsor") that desires to assign all or part of its rights, title and interests in, and obligations under this Agreement to a Third Party shall deliver an Offer Notice to the Corporation and each other Sponsoring Company. The Offer Notice shall be deemed to be an irrevocable offer of the subject rights, title and interests in, and obligations under this Agreement to each of the other Sponsoring Companies that is not an Affiliate of the Transferring Sponsor, which offer must be held open for no less than thirty (30) days from the date of the Offer Notice (the "Election Period").

(b) The Sponsoring Companies (other than the Transferring Sponsor and its Affiliates) shall first have the right, but not the obligation, to purchase all of the rights, title and interests in, and obligations under this Agreement described in the Offer Notice at the price and on the terms specified therein by delivering written notice of such election to the Transferring Sponsor and the Corporation within the Election Period; provided that, irrespective of the terms and conditions of the Offer Notice, a Sponsoring Company may condition its election to purchase the interest described in the Offer Notice on the receipt of approval or consent from such Sponsoring Company's Board of Directors; provided further that, written notice of such conditional election must be delivered to the Transferring Sponsor and the Corporation within the Election Period and such conditional election shall be deemed withdrawn (as if it had never been provided) unless the Sponsoring Company that delivered such conditional election subsequently delivers written notice to the Transferring Sponsor and the Corporation on or before the tenth (10th) day after the expiration of the Election Period that all necessary approval or consent of such Sponsoring Company's Board of Directors have been obtained. To the extent that more than one Sponsoring Company exercises its right to purchase all of the rights, title and interests in, and

obligations under this Agreement described in the Offer Notice in accordance with the previous sentence, such rights, title and interests in, and obligations under this Agreement shall be allotted (successively if necessary) among the Sponsoring Companies exercising such right in proportion to their respective Power Participation Ratios.

(c) Each Sponsoring Company exercising its right to purchase any rights, title and interests in, and obligations under this Agreement pursuant to this Section 9.183 may choose to have an Affiliate purchase such rights, title and interests in, and obligations under this Agreement; provided that, notwithstanding anything in this Section 9.183 to the contrary, any assignment to a Sponsoring Company or its Affiliate hereunder must comply with the requirements of Section 9.182.

(d) If one or more Sponsoring Companies have elected to purchase all of the rights, title and interests in, and obligations under this Agreement of the Transferring Sponsor pursuant to the Offer Notice, the assignment of such rights, title and interests in, and obligations under this Agreement shall be consummated as soon as practical after the delivery of the election notices, but in any event no later than fifteen (15) days after the filing and receipt, as applicable, of all necessary governmental filings, consents or other approvals and the expiration of all applicable waiting periods. At the closing of the purchase of such rights, title and interests in, and obligations under this Agreement from the Transferring Sponsor, the Transferring Sponsor shall provide representations and warranties customary for transactions of this type, including those as to its title to such securities and that there are no liens or other encumbrances on such securities (other than pursuant to this Agreement) and shall sign such documents as may reasonably be requested by the Corporation and the other Sponsoring Companies. The Sponsoring Companies or their Affiliates shall only be required to pay cash for the rights, title and interests in, and obligations under this Agreement being assigned by the Transferring Sponsor.

(e) To the extent that the Sponsoring Companies have not elected to purchase all of the rights, title and interests in, and obligations under this Agreement described in the Offer Notice, the Transferring Sponsor may, within one-hundred and eighty (180) days after the later of the expiration of the Election Period or the deemed withdrawal of a conditional election by a Sponsoring Company under Section 9.183(b) hereof (if applicable), enter into a definitive agreement to, assign such rights, title and interests in, and obligations under this Agreement to a Third Party at a price no less than 92.5% of the purchase price specified in the Offer Notice and on other material terms and conditions no more

Attachment to Response to SC-1 Question No. 1

favorable to the such Third Party than those specified in the Offer Notice **Page 24 of 60**
provided that such purchases shall be conditioned upon: (i) such Third **Sinclair**
Party having long-term unsecured non-credit enhanced indebtedness, as of
the date of such assignment, with a Standard & Poor's credit rating of at
least BBB- and a Moody's Investors Service, Inc. credit rating of at least
Baa3 (provided that, if such Third Party's long-term unsecured non-credit
enhanced indebtedness is not currently rated by one of Standard & Poor's
or Moody, such Third Party's long-term unsecured non-credit enhanced
indebtedness, as of the date of such assignment, must have either a
Standard & Poor's credit rating of at least BBB- or a Moody's Investors
Service, Inc. credit rating of at least Baa3); (ii) the filing or receipt, as
applicable, of any necessary governmental filings, consents or other
approvals; (iii) the determination by counsel for the Corporation that the
assignment of the rights, title or interests in, or obligations under, this
Agreement to such Third Party would not cause a termination, default,
loss or payment obligation under any security issued, or agreement entered
into, by the Corporation prior to such transfer; and (iv) such Third Party
executing a counterpart of this Agreement, and both such Third Party and
the Sponsoring Company which is assigning its rights, title and interests
in, and obligations under, this Agreement executing such other documents
as may be reasonably requested by the Corporation (including, without
limitation, an assignment agreement in form and substance acceptable to
the Corporation in its reasonable discretion and containing the agreement
by such Sponsoring Company to reimburse the Corporation and the other
Sponsoring Companies for any fees or expenses required under any
security issued, or agreement entered into, by the Corporation as a result
of such assignment, including without limitation any consent fee or
additional financing costs to the Corporation under the Corporation's then-
existing securities or agreements resulting from such assignment). In the
event that the Sponsoring Company and a Third Party have not entered
into a definitive agreement to assign the interests specified in the Offer
Notice to such Third Party within the later of one-hundred and eighty
(180) days after the expiration of the Election Period or the deemed
withdrawal of a conditional election by a Sponsoring Company under
Section 9.183(b) hereof (if applicable) for any reason or if either the price
to be paid by such Third Party would be less than 92.5% of the purchase
price specified in the Offer Notice or the other material terms of such
assignment would be more favorable to such Third Party than the terms
specified in the Offer Notice, then the restrictions provided for herein shall
again be effective, and no assignment of any rights, title and interests in,
and obligations under this Agreement may be made thereafter without
again offering the same to Sponsoring Companies in accordance with this
Section 9.183.

REPRESENTATIONS AND WARRANTIES

10.01. *Representations and Warranties.* Each Sponsoring Company hereby represents and warrants for itself, on and as of the date of this Agreement, as follows:

(a) it is duly organized, validly existing and in good standing under the laws of its state of organization, with full corporate power, authority and legal right to execute and deliver this Agreement and to perform its obligations hereunder;

(b) it has duly authorized, executed and delivered this Agreement, and upon the execution and delivery by all of the parties hereto, this Agreement will be in full force and effect, and will constitute a legal, valid and binding obligation of such Sponsoring Company, enforceable in accordance with the terms hereof, except as enforceability may be limited by applicable bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or other similar laws affecting the enforcement of creditors' rights generally;

(c) Except as set forth in Schedule 10.01(c) hereto, no consents or approvals of, or filings or registrations with, any governmental authority or public regulatory authority or agency, federal state or local, or any other entity or person are required in connection with the execution, delivery and performance by it of this Agreement, except for those which have been duly obtained or made and are in full force and effect, have not been revoked, and are not the subject of a pending appeal; and

(d) the execution, delivery and performance by it of this Agreement will not conflict with or result in any breach of any of the terms, conditions or provisions of, or constitute a default under its charter or by-laws or any indenture or other material agreement or instrument to which it is a party or by which it may be bound or result in the imposition of any liens, claims or encumbrances on any of its property.

ARTICLE 11

EVENTS OF DEFAULT AND REMEDIES

11.01. *Payment Default.* If any Sponsoring Company fails to make full payment to Corporation under this Agreement when due and such failure is not remedied within ten (10) days after receipt of notice of such failure from the Corporation, then such failure shall constitute a "Payment Default" on the part of such Sponsoring Company. Upon a Payment Default, the

Attachment to Response to SC-1 Question No. 1

Corporation may suspend service to the Sponsoring Company that has caused such Payment Default for all or part of the period of continuing default (and such Sponsoring Company shall be deemed to have notified the Corporation and the other Sponsoring Companies that any Available Energy shall be available for scheduling by such other Sponsoring Companies in accordance with Section 4.032). The Corporation's right to suspend service shall not be exclusive, but shall be in addition to all remedies available to the Corporation at law or in equity. No suspension of service or termination of this Agreement shall relieve any Sponsoring Company of its obligations under this Agreement, which are absolute and unconditional. —

Page 26 of 60
Sinclair

11.02. *Performance Default.* If the Corporation or any Sponsoring Company fails to comply in any material respect with any of the material terms, conditions and covenants of this Agreement (and such failure does not constitute a Payment Default under Section 11.01), the Corporation (in the case of a default by any Sponsoring Company) and any Sponsoring Company (in the case of a default by the Corporation) shall give the defaulting party written notice of the default ("Performance Default"). To the extent that a Performance Default is not cured within thirty (30) days after receipt of notice thereof (or within such longer period of time, not to exceed sixty (60) additional days, as necessary for the defaulting party with the exercise of reasonable diligence to cure such default), then the Corporation (in the case of a default by any Sponsoring Company) and any Sponsoring Company (in the case of a default by the Corporation) shall have all of the rights and remedies provided at law and in equity, other than termination of this Agreement or any release of the obligation of the Sponsoring Companies to make payments pursuant to this Agreement, which obligation shall remain absolute and unconditional.

11.03. *Waiver.* No waiver by the Corporation or any Sponsoring Company of any one or more defaults in the performance of any provision of this Agreement shall be construed as a waiver of any other default or defaults, whether of a like kind or different nature.

11.04. *Limitation of Liability and Damages.* TO THE FULLEST EXTENT PERMITTED BY LAW, NEITHER THE CORPORATION, NOR ANY SPONSORING COMPANY SHALL BE LIABLE UNDER THIS AGREEMENT FOR ANY CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY OR INDIRECT DAMAGES, LOST REVENUES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR CONTRACT, OR OTHERWISE.

[Signature pages follow]

IN WITNESS WHEREOF, the parties hereto have caused this Amended and Restated Inter-Company Power Agreement to be duly executed and delivered by their proper and duly authorized officers as of September 10, 2010.

OHIO VALLEY ELECTRIC CORPORATION

By *Michael J. ...*
Its _____

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By _____
Its _____

APPALACHIAN POWER COMPANY

By _____
Its _____

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

By _____
Its _____

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

DUKE ENERGY OHIO, INC.

By _____
Its _____

FIRSTENERGY GENERATION CORP.

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

By _____
Its _____

KENTUCKY UTILITIES COMPANY

By _____
Its _____

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OHIO VALLEY ELECTRIC CORPORATION

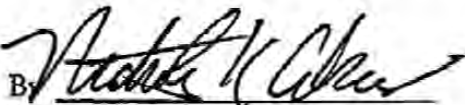
ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By _____
Its _____

By _____
Its _____

APPALACHIAN POWER COMPANY

BUCKEYE POWER GENERATING, LLC

By 
Its _____

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

By _____
Its _____

DUKE ENERGY OHIO, INC.

FIRSTENERGY GENERATION CORP.

By _____
Its _____

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

KENTUCKY UTILITIES COMPANY

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Its _____

By _____
Its _____

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APPALACHIAN POWER COMPANY


BUCKEYE POWER GENERATING, LLC

By _____
Its _____

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

THE DAYTON POWER AND LIGHT COMPANY

By 
Its _____

By _____
Its _____

DUKE ENERGY OHIO, INC.

FIRSTENERGY GENERATION CORP.

By _____
Its _____

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

KENTUCKY UTILITIES COMPANY

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Its _____

By _____
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Its _____

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Its _____

APPALACHIAN POWER COMPANY

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY


THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

By _____
Its _____

DUKE ENERGY OHIO, INC.

FIRSTENERGY GENERATION CORP.

By 
Its VACC PRESIDENT

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

KENTUCKY UTILITIES COMPANY

By _____
Its _____

By _____
Its _____

Amended and Restated Inter-Company Power Agreement
S-1

IN WITNESS WHEREOF, the parties hereto have caused this Amended and Restated Inter-Company Power Agreement to be duly executed and delivered by their proper and duly authorized officers as of September 10, 2010.

OHIO VALLEY ELECTRIC CORPORATION

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By _____
Its _____

By _____
Its _____

APPALACHIAN POWER COMPANY

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

By _____
Its _____

DUKE ENERGY OHIO, INC.

FIRSTENERGY GENERATION CORP.

By _____
Its _____

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

KENTUCKY UTILITIES COMPANY

By *Mark G. Lewis*
Its *Vice President*

By _____
Its _____

Amended and Restated Inter-Company Power Agreement

S-1

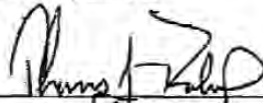
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IN WITNESS WHEREOF, the parties hereto have caused this Amended and Restated Inter-Company Power Agreement to be duly executed and delivered by their proper and duly authorized officers as of September 10, 2010.

OHIO VALLEY ELECTRIC CORPORATION

By _____
Its _____

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By 
Its VICE PRESIDENT

APPALACHIAN POWER COMPANY

By _____
Its _____

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

By _____
Its _____

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

DUKE ENERGY OHIO, INC.

By _____
Its _____

FIRSTENERGY GENERATION CORP.

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

By _____
Its _____

KENTUCKY UTILITIES COMPANY

By _____
Its _____

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OHIO VALLEY ELECTRIC CORPORATION

By _____
Its _____

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By _____
Its _____

APPALACHIAN POWER COMPANY

By _____
Its _____

BUCKEYE POWER GENERATING, LLC

By *Anthony J. Aherm*
Its President & CEO

COLUMBUS SOUTHERN POWER COMPANY

By _____
Its _____

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

DUKE ENERGY OHIO, INC.

By _____
Its _____

FIRSTENERGY GENERATION CORP.

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

By _____
Its _____

KENTUCKY UTILITIES COMPANY

By _____
Its _____

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OHIO VALLEY ELECTRIC CORPORATION

By _____
Its _____

APPALACHIAN POWER COMPANY

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

By _____
Its _____

DUKE ENERGY OHIO, INC.

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

By _____
Its _____

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By _____
Its _____

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

THE DAYTON POWER AND LIGHT COMPANY

By *Gary Stephenson*
Its EXECUTIVE VICE PRESIDENT
Gary Stephenson

FIRSTENERGY GENERATION CORP.

By _____
Its _____

KENTUCKY UTILITIES COMPANY

By _____
Its _____

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OHIO VALLEY ELECTRIC CORPORATION

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By _____
Its _____

By _____
Its _____

APPALACHIAN POWER COMPANY.

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

By _____
Its _____

DUKE ENERGY OHIO, INC.

FIRSTENERGY GENERATION CORP.

By _____
Its _____

By *Harry R. Lerdich*
Its *President*

INDIANA MICHIGAN POWER COMPANY

KENTUCKY UTILITIES COMPANY

By _____
Its _____

By _____
Its _____

Amended and Restated Inter-Company Power Agreement

S-1

030809-0015-02023-Addvs.12026116.4

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OHIO VALLEY ELECTRIC CORPORATION

ALLEGHENY ENERGY SUPPLY COMPANY, L.L.C.

By _____
Its _____

By _____
Its _____

APPALACHIAN POWER COMPANY

BUCKEYE POWER GENERATING, LLC

By _____
Its _____

By _____
Its _____

COLUMBUS SOUTHERN POWER COMPANY

THE DAYTON POWER AND LIGHT COMPANY

By _____
Its _____

By _____
Its _____

DUKE ENERGY OHIO, INC.

FIRSTENERGY GENERATION CORP.

By _____
Its _____

By _____
Its _____

INDIANA MICHIGAN POWER COMPANY

KENTUCKY UTILITIES COMPANY

By _____
Its _____

By *[Signature]*
Its *Sr. Vice President*

LOUISVILLE GAS AND ELECTRIC COMPANY

MONONGAHELA POWER COMPANY

By *John N. Boyle Jr*
Its *VP Trans & Generation Services*

By _____
Its _____

OHIO POWER COMPANY

SOUTHERN INDIANA GAS AND ELECTRIC COMPANY

By _____
Its _____

By _____
Its _____

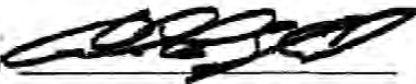
**LOUISVILLE GAS AND ELECTRIC
COMPANY**

By _____
Its _____

**MONONGAHELA POWER
COMPANY**

By _____
Its _____

OHIO POWER COMPANY

By 
Its _____

**SOUTHERN INDIANA GAS AND
ELECTRIC COMPANY**

By _____
Its _____

**LOUISVILLE GAS AND ELECTRIC
COMPANY**

By _____
Its _____

**MONONGAHELA POWER
COMPANY**

By 
Its GENERAL MANAGER, ELECTRIC SUPPLY

OHIO POWER COMPANY

By _____
Its _____

**SOUTHERN INDIANA GAS AND
ELECTRIC COMPANY**

By _____
Its _____

**LOUISVILLE GAS AND ELECTRIC
COMPANY**

By _____
Its _____

**MONONGAHELA POWER
COMPANY**

By _____
Its _____

OHIO POWER COMPANY

By _____
Its _____

**SOUTHERN INDIANA GAS AND
ELECTRIC COMPANY**

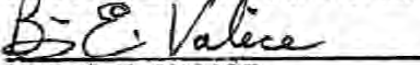
By Ronald E. Christman
Its President

PENINSULA GENERATION COOPERATIVE



By Daniel H. DeCoeur
Its President

APPROVED AS TO FORM:



BRIAN E. VALICE
ATTORNEY FOR PENINSULA
GENERATION COOPERATIVE

SCHEDULE 10.01(c)

Allegheny Energy Supply Company, L.L.C.

and

Monongahela Power Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

SCHEDULE 10.01(c)

Appalachian Power Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

Approval of the Virginia State Corporation Commission

Filing with the Public Service Commission of West Virginia

SCHEDULE 10.01(c)

Buckeye Power Generating, LLC

None

Columbus Southern Power Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

The Dayton Power and Light Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

Duke Energy Ohio, Inc.

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

FirstEnergy Generation Corp.

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

Indiana Michigan Power Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

Filing with the Indiana Utility Regulatory Commission

Kentucky Utilities Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

Consent or approval of, or filings or registrations with, the Kentucky Public Service Commission
may be required

SCHEDULE 10.01(c)

Louisville Gas and Electric Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

Consent or approval of, or filings or registrations with, the Kentucky Public Service Commission
may be required

Ohio Power Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

SCHEDULE 10.01(c)

Peninsula Generation Cooperative

None

Southern Indiana Gas and Electric Company

Filing with, or consent or approval of, the Federal Energy Regulatory Commission

AMENDED AND RESTATED
POWER AGREEMENT

BETWEEN

OHIO VALLEY ELECTRIC CORPORATION

AND

INDIANA-KENTUCKY ELECTRIC CORPORATION

Dated as of September 10, 2010

THIS AGREEMENT, dated as of September 10, 2010 by and between OHIO VALLEY ELECTRIC CORPORATION (herein called OVEC) and INDIANA-KENTUCKY ELECTRIC CORPORATION (herein called IKEC), hereby amends and restates in its entirety, the Power Agreement (herein called the Current Agreement), dated March 13, 2006, between OVEC and IKEC.

WITNESSETH THAT:

WHEREAS, IKEC, a wholly owned subsidiary of OVEC, designed, purchased, and constructed, and continues to own, operate and maintain a steam-electric generating station (herein called Indiana Station) consisting of six turbogenerators and all other necessary equipment, at a location on the Ohio River near Madison, Indiana; and

WHEREAS, OVEC designed, purchased, and constructed, and continues to own, operate and maintain a steam-electric generating stations (herein called Ohio Station) consisting of five turbo-generators and all other necessary equipment, at a location on the Ohio River near Cheshire, Ohio (the Ohio Station and the Indiana Station being herein called the Project Generating Stations); and

WHEREAS, OVEC also designed, purchased, and constructed, and continues to operate and maintain necessary transmission and general plant facilities (herein called the Project Transmission Facilities) and OVEC established or cause to be established interconnections between the Project Generating Stations and/or the Project Transmission Facilities, and the systems of certain of the Sponsoring Companies; and

WHEREAS, IKEC owns and operates the portion of the Project Transmission Facilities located in the State of Indiana; and

WHEREAS, IKEC entered into the Current Agreement with OVEC which embodies the terms and conditions for the ownership and operation by IKEC of the Indiana Station and such portion of the Project Transmission Facilities which are to be owned and operated by it; and

WHEREAS, the owners of OVEC or their affiliates that are parties to an Inter-Company Power Agreement, have amended and restated such Inter-Company Power Agreement as of the date hereof, which defines the terms and conditions governing the rights of the "Sponsoring Companies" (as defined thereunder) to receive "Available Power" (as defined thereunder) from the Project Generating Stations and the obligations of the Sponsoring Companies to pay therefor; and

WHEREAS, concurrent with the amendment and restatement of the Inter-Company Power Agreement, IKEC and OVEC hereto desire to amend and restate in their entirety, the Current Agreement in order for IKEC to continue to sell to OVEC any and all power available at the Indiana Station, and energy associated therewith, and to transmit power and energy as provided herein.

ARTICLE I

POWER AND ENERGY TRANSACTIONS

1.01. IKEC shall transmit any and all power generated at the Indiana Station by any of the generating units thereof in commercial operation and deliver such power, together with the energy associated therewith, but less the transmission losses in the facilities of IKEC applicable thereto from the 330 kV busses of the Indiana Station, at the points of delivery hereinafter designated in *Section 1.03* hereof, and sell such power and energy at said points of delivery to OVEC. OVEC shall purchase from IKEC all such power so delivered by IKEC to OVEC at said points of delivery, together with the energy associated therewith, and shall from time to time pay IKEC therefor, amounts which, when added to revenues received by IKEC from other sources, will be sufficient to enable IKEC to pay all of its operating and other expenses, including all income and other taxes and any interest and regular amortization requirements applicable to any indebtedness for borrowed funds incurred by IKEC. For the purposes of this *Section 1.01* the term "operating and other expenses" shall also include, without limitation, all amounts payable to suppliers of fuel requirements (including the handling and shipment thereof) in connection with the cancellation of commitments and the extension of delivery schedules, as well as all expenses accrued to pay for postemployment and postretirement benefits and the costs of the decommissioning, shutdown, demolition and closing of the Project Generating Stations.

1.02 IKEC shall transmit and deliver to OVEC at the points of delivery hereinafter designated in *Section 1.03* hereof, all power and the energy associated therewith supplied to IKEC by Sponsoring Companies at the points of delivery hereinafter designated in *Section 1.03* hereof, less the transmission losses in the facilities of IKEC applicable thereto. IKEC shall transmit and deliver to Sponsoring Companies designated by OVEC at the points of delivery hereinafter designated in *Section 1.03* hereof, all power, and the energy associated therewith, supplied to IKEC by OVEC at the points of delivery hereinafter designated in *Section 1.03* hereof, less the transmission losses in the facilities of IKEC applicable thereto.

1.03 All power and energy sold, purchased, transmitted or delivered hereunder shall be 3-phase, 60-cycle, alternating current, at nominal unregulated voltage, designated for the points of delivery hereinbelow described. Power and energy transmitted, delivered and sold by IKEC to OVEC pursuant to the provisions of *Section 1.01* hereof shall be delivered at the points where the transmission facilities of OVEC and the transmission facilities of IKEC interconnect and title to such power and energy shall pass from IKEC to OVEC at said points. Power and energy supplied to IKEC by a Sponsoring Company for transmission to OVEC pursuant to the provisions of *Section 1.02* hereof, shall be delivered by said Sponsoring Company to IKEC at the points where the transmission facilities of said Sponsoring Company and the transmission facilities of IKEC interconnect and shall be delivered by IKEC to OVEC and title thereto shall pass from said Sponsoring Company to OVEC at the points where the transmission facilities of OVEC and the transmission facilities of IKEC interconnect. Power and energy supplied to IKEC

by OVEC for transmission to a Sponsoring Company pursuant to the provisions of Section 1.02 hereof shall be delivered by OVEC to IKEC at the points where the transmission facilities of OVEC and the transmission facilities of IKEC interconnect and title to such power and energy shall pass from OVEC to said Sponsoring Company at said points. Such power and energy shall be delivered by IKEC to said Sponsoring Company at the points where the transmission facilities of IKEC and the transmission facilities of said Sponsoring Company interconnect.

1.04 The parties hereto shall exercise due diligence and foresight in carrying out all matters related to the providing and operating of their respective power resources so as to minimize to the extent practicable deviations between actual and scheduled deliveries of power and energy among their systems. The parties hereto shall provide and/or install on their respective systems such communication, telemetering, frequency and/or tie-line control facilities essential to so minimizing such deviations; and shall fully cooperate with one another and with third parties (such third parties whose systems are either directly or indirectly interconnected with the systems of the Sponsoring Companies and who of necessity together with the Sponsoring Companies and the parties hereto must unify their efforts cooperatively to achieve effective and efficient interconnected system operation) in developing and executing operating procedures that will enable the parties hereto to avoid to the extent practicable deviations from scheduled deliveries.

1.05 OVEC shall reimburse IKEC for the difference between (a) the total cost of replacements chargeable to property and plant made by IKEC, and the total cost of additional facilities and/or spare parts purchased or installed by Corporation, during any month or prior thereto (and not previously reimbursed) and (b) the amounts paid for by IKEC out of proceeds of fire or other applicable insurance protection, or out of amounts recovered from third parties responsible for damages requiring replacement. OVEC shall pay to IKEC such amount in lieu of the amounts to be paid as above provided, which, after provision for all taxes on income, shall equal the costs of the replacements reimbursable by OVEC to IKEC as above provided. The term cost of replacements, as used herein, shall include all components of costs, plus removal expense, less salvage. The amounts reimbursed by OVEC to IKEC for such replacements shall be accounted for on the books of IKEC in a special balance sheet account provided for such purposes.

ARTICLE 2

MISCELLANEOUS

2.01 This Agreement shall become effective on September 10, 2010, or to the extent necessary, such later date on which all conditions to effectiveness, including all required waiting periods and all required regulatory acceptances or approvals, of this Agreement have been satisfied in form and substance satisfactory to OVEC, and shall terminate upon the earlier of: (1) June 30, 2040 or (2) the sale or other disposition of all of the facilities of the Project Generating Stations or the permanent cessation of operation of such facilities.

2.02 No party hereto shall be held responsible or liable for any loss or damage on account of non-delivery of energy hereunder at any time caused by act of God, fire, flood, explosion, strike, civil or military authority, insurrection or riot, act of the elements, failure of equipment, or for any other cause beyond its control.

2.03 This Agreement is made subject to the jurisdiction of any governmental authority or authorities having jurisdiction in the premises and the performance thereof shall be subject to the receipt of all regulatory approvals, in form and substance satisfactory to the parties hereto, necessary to permit the parties hereto to perform all the duties and obligations to be performed by such parties hereunder.

2.04 This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns, but this Agreement shall not be assigned by either party hereto without the written consent of the other, except (a) to a successor to all or substantially all the properties and assets of such party, or (b) to a trustee under an indenture securing any indebtedness of such party.

2.05 All notices and requests under this Agreement shall be in writing and shall be sufficient in all respects if delivered in person or sent by registered mail addressed to the party to be served at such party's general office or at such other address as such party may from time to time in writing designate.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be duly executed as of the day and year first above written.

OHIO VALLEY ELECTRIC CORPORATION

By _____
Its

INDIANA-KENTUCKY ELECTRIC CORPORATION

By _____
Its