LARGE FILING SEPARATOR SHEET

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EXHIBITS

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,

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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 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.

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.

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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.

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ARTICLE 9

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.

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-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.

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 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

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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.

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 favorable to the such Third Party than those specified in the Offer Notice; provided that such purchases shall be conditioned upon: (i) such Third 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

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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.

ARTICLE 10

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 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.

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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 ___Its ___

APPALACHIAN POWER COMPANY By ___Its ___

COLUMBUS SOUTHERN 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 ___Its ___

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DUKE ENERGY OHIO, INC. By ___Its

FIRSTENERGY GENERATION CORP. By ___Its ___

INDIANA MICHIGAN POWER COMPANY By ___Its

KENTUCKY UTILITIES 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 ___Its _

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PENINSULA GENERATION COOPERATIVE

By _____
Its _____

Record Content Description, Tariff Record Title, Record Version Number, Option Code:
OVEC-IKEC Power Agreement, OVEC-IKEC Power Agreement, 0.0.0, A
Record Narative Name:
Tariff Record ID: 2
Tariff Record Collation Value: 1074191825 Tariff Record Parent Identifier: 0
Proposed Date: 2011-05-23
Priority Order: 500
Record Change Type: NEW
Record Content Type: 1
Associated Filing Identifier:

AMENDED AND RESTATED

POWER AGREEMENT

BETWEEN

OHIO VALLEY ELECTRIC CORPORATION

AND

INDIANA-KENTUCKY ELECTRIC CORPORATION

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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

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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.

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

ARTICLE 1

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.

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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.

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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

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EXHIBIT
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Company
PENGAD 800-631-6989

INDEPENDENT TECHNICAL REVIEW

KYGER CREEK
&
CLIFTY CREEK PLANTS

OHIO VALLEY ELECTRIC CORPORATION
INDIANA-KENTUCKY ELECTRIC CORPORATION

By

URS

URS Corporation

Rev. 0
June 27, 2011

URS

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EXECUTIVE SUMMARY

Ohio Valley Electric Corporation / Indiana Kentucky Electric Corporation (OVEC/IKEC hereinafter referred to as "OVEC") contracted URS Corporation (URS) to provide an independent technical review of the current condition and the operational and maintenance plans of their Kyger Creek (Kyger) and Clifty Creek (Clifty) Plants, to assess the potential for successful operation of the plants through the year 2040. URS reviewed OVEC supplied data and visited both plants in April 2011. Following are the major conclusions of the review:

Ability of Plants to Operate As Planned

Each unit has been operating primarily in a base loaded mode with recent forced outage rates of less than 5% to 11% at Kyger and 5% to 9.2% at Clifty. Forced outage rates are trending downward and it is reasonable to expect the downward trend to continue as there are major boiler tube replacements being performed. The overall system produced a low of 15.84 GW hours in 2010 of electrical output to a maximum of 17.92 GWhours in 2006. Twenty (20) year budget projections are based on 15.6 to 15.8 GWhours per year. As the flue gas desulfurization (FGD) Scrubbers are brought on line in 2011 through 2013, there will be an increase in auxiliary power usage of 4% or more, plus the scrubbers might cause more forced outages. At a minimum there will be a "shake down" period as the scrubbers are operated and the fuel is switched to primarily Eastern Coal. The OVEC system appears capable of producing to the planned production levels.

Adequacy Of Projected Capital and Operating Costs

Through 2015, projected plant performance appears reasonable and the budget projections appear capable of supporting this continued operation. The bulk of the capital expenditures will be on the boiler and scrubbers. After 2015 or 2016 the boiler capital costs should decrease with the end of the major re-tubing and partial header replacement projects. There should be no additional capital cost for the scrubbers after 2015 for the forseeable future.

These budgets assume very little capital spending on the turbogenerator units and accessory electric equipment through 2015. These low capital expense budget numbers for the turbogenerator and other electric equipment will almost certainly increase after 2015.

The total installed scrubber cost of $1,334.8mm is included in the budget, as well as an increase in maintenance costs for the scrubbers. Of this total scrubber cost, $988.5mm was already spent through 2010, and the remainder will be paid from 2011 through 2015.

With the installation and operation of the scrubbers in 2011 through 2013, the long term projections of generation output, operations and maintenance costs, and capital equipment costs appear realistic. However, as the scrubbers are major plant additions, there is some cost uncertainty to its effect on maintenance and operations.

Environmental Compliance, Present and Future

The installation of the selective catalytic reduction units (SCR's) in 2002 and 2003 has reduced NOx emissions to less than required levels.

Wet Flue Gas Desulphurization (FGD) units are planned for installation on all eleven (11) units from 2011 through 2013. Modifications are in progress or already completed to the ash ponds, stacks and ID fans.

With the Electrostatic Precipitators (ESP) installed on each unit in the 1970's and the current stack performance, particulate emissions are also less than regulatory limits. No significant changes are anticipated except as may be related to the installation of the FGD systems.

OVEC anticipates that all units having SCR and FGD systems should comply with the proposed Utility Maximum Achievable Control Technology (MACT) and Transport rules without the need for additional controls. OVEC believes that the co-benefit of the FGD and SCR systems will achieve the anticipated regulatory requirements for mercury control, since the SCR system will oxidize the mercury for more effective removal by the FGD system. Both systems are expected to be able to meet control requirements for other pollutants (e.g., particulate matter, acid gases) covered under both rules. OVEC is currently conducting preliminary engineering for retrofitting an SCR system on only one boiler (Unit 6 at Clifty Creek), which is the only boiler not equipped with this control. A decision on whether SCR would be retrofitted would be made once these rules become final.

The ammonia on demand system (AOD) is working adequately.

OVEC is complying with all federal and state regulations on water quality. OVEC was proactive and successful in negotiating a settlement with Ohio EPA regarding a non-routine ammonia release from the Kyger Creek plant in July 2009. This release resulted in a fish kill in Kyger Creek. Upgrades have been completed for installing a new landfill at Clifty Creek and new ash pond and landfill at Kyger Creek for meeting anticipated regulations related to NPDES and Coal Combustion Residues or Products.

OVEC has minimized its use and generation of hazardous wastes, and no significant cost impacts are expected due to hazardous wastes. OVEC believes that EPA likely would not regulate coal combustion products or residues as a special waste subject to regulation under Subtitle C of Resource Conservation and Recovery Act (RCRA). Therefore, OVEC does not expect any future significant increases in the generation of hazardous wastes.

OVEC has no underground fuel oil storage tanks.

URS believes that OVEC is doing an excellent job in their existing and planned environmental compliance strategy.

Good Management / Engineering Practices

OVEC actively monitors their plant production, operations, maintenance, forced outages, emissions and costs. Management uses this data to identify trends and developing problems. With the advantage of eleven (11) units of the same age and nearly identical design, when degradation at one unit is observed and corrected, evaluation is performed of the need for modifications at the other ten (10) units. Based on observations and plant production, URS believes that Kyger and Clifty plants are managed well for long term operation.

Expected Life Of Physical Assets And Major Risks To Life Expectancy

If the Clifty Creek and Kyger Creek plants operate to 2040, they will be 85 years old. This is an unusually long service life for generating facilities. Traditionally the old facilities have been retired based upon efficiency compared to new units, excessive maintenance costs, low availability, new technology, or difficulty in achieving new environmental requirements. Any of these driving forces could develop and push unit retirement prior to 2040. However, it is URS' opinion that it is a reasonable expectation that the six (6) units at Clifty Creek and five (5) units at Kyger Creek can be expected to operate through 2040. This opinion is based upon the following observations:

1. The original design was robust with an unusual amount of redundancy.
2. The operation over the first 48 years was nearly always base loaded with limited thermal cycles on the equipment.
3. Since 2003, some limited load following operation has been performed, but the thermal cycling is limited by the requirement to maintain operation of the SCR's.
4. Appropriate maintenance and inspection of equipment has nearly always been a high priority, and critical equipment has been maintained properly.
5. The plants run at or below pressure and temperature design conditions.
6. Management is continuing to work towards improvement of maintenance, operation and inspection practices.
7. There appears to be a very strong sense of "ownership" by the plant employees that they are working to assure the plants' long term operation.
8. Management appears to be focused on long term plant operation, not on a short term profit.
9. Major equipment repairs have been implemented in the last four (4) years, with major events planned through 2015. The major focus is boiler tube and header replacement.
10. Cost of electricity is competitive with neighboring utilities.
11. Major environmental upgrades have been made and will be completed by second quarter of 2013. This will complete the scrubber installation. At this time, all known regulatory requirements will be achieved.
12. At both Clifty and Kyger, sophisticated simulators has been installed to train new operators, and to refresh training of experienced operators. This training emphasis should reduce the potential for catastrophic operator error.
13. Work force is experienced at the plant. Management is aware of likely turnover due to retirement, and is working to assure younger personnel are trained and ready to move into more responsible positions.
14. There is a true focus on water chemistry, including on-site chemists and functional laboratories. This is unusual compared to other plants that have shut down their in-house chemical laboratories.

Recognized risks that exist for OVEC, as well as most other United States coal fired electric generating plants include:

- Scrubber integration may be more difficult than expected. This is not expected to be an issue, as the plant personnel appear realistic about the challenges and several possible operational and maintenance issues have been considered.

- Major unexpected equipment failures may occur that are too expensive to repair. This includes minor damage that can cause major fires, such as a lube oil system failure.
- Units are converted to cyclic or load following operational mode. This would adversely affect remaining life of high temperature equipment, and risk more operational events that could damage equipment.
- Serious operational error that causes direct and collateral damage.
- Major new environmental or other regulatory requirements, such as an enhanced "new source review".
- Major shift in fuel prices and technologies, particularly in combination with onerous new environmental regulations.

1.0 INTRODUCTION

1.1 SCOPE OF WORK

URS Corporation (URS) was retained to perform an independent technical review of the current condition and the operational and maintenance plans at the Ohio Valley Electric Corporation / Indiana – Kentucky Electric Corporation (OVEC) Kyger Creek Plant ("Kyger") Units 1 through 5, and Clifty Creek Plant Units 1 through 6. This review has been conducted to assess the financial viability of the plants through the year 2040.

A Life Expectancy Study was conducted by URS, Sirois Engineering & Consulting, Inc. and Stone & Webster, Inc. resulting in the Kyger Creek Life Expectancy Study Report, Rev. 2 issued March 26, 2004 and the Clifty Creek Life Expectancy Report, Rev. 2 issued March 26, 2004. The data for these reports was complete through November 30, 2002. URS performed a follow up study through July 31, 2005. This new study is intended to assess the actual operations, maintenance and capital improvements experience from Dec. 1, 2002 to December 31, 2011 in comparison to the 2005 report assumptions. A physical assessment has been made in 2011 of the condition of the units to confirm the quality of the previous assumptions. Lastly, expected changes in fuel, operations, regulations or other factors that would affect the long term physical and financial viability of the plant are discussed.

This report contains the following sections:
Section 1, Introduction, including Scope of Work, Methodology, Assumptions and References.

Section 2, Kyger Creek Plant Description, Review of Operations and Assessment of Plant Conditions with special attention paid to changes since 2005.

Section 3, Clifty Creek, Plant Description, Review of Operations and Assessment of Plant Conditions with special attention paid to changes since 2005.

Section 4, Environmental Compliance, reviews the system's compliance with current regulations, and the modifications that will be required to comply with scheduled changes in regulations.

Section 5, Review of System Operations Plans, reviews OVEC plans in critical operational areas as they may affect the reliability and financial performance of the plant over the next 29 years. Specific review areas include coal supply, equipment upgrades, performance goals, transmission adequacy, planned capital improvements and planned O&M

Section 6, Projected Life Expectancy provides a qualitative assessment of the condition of the plants compared with the assumptions based on the 2005 data.

Section 7, Conclusions compiles the information from all of the above sections to evaluate adequacy of OVEC's plans to successfully operate the plants over the next 30 years. These include environmental compliance, implementation of good engineering, operational and maintenance practices, expected remaining life of critical equipment, and major risks to life expectancy.

1.2 METHODOLOGY

This report summarizes major capital expenditures, operational and maintenance history, and environmental history from 2000 through February 2011, as supplied by OVEC. URS consultants visited Clifty and Kyger Plants to clarify the OVEC data and perform a high level evaluation of the plant condition. Data and observations are compared to the information available from the 2005 report to assess the plant performance versus the expected performance in the previous report. In addition, expected changes in fuel, known environmental regulation revisions, and other expected changes affecting plant performance are noted.

This report also provides a summary of our review and opinions regarding the following:

- Condition of Plant Equipment
- Remaining Life Projection (physical and operational life)
- Operations & Maintenance Life Projection Requirement
- Capital Expenditure Projections through 2015
- Environmental issues
- OVEC's Budget Projections

The Technical Review is limited to the scope of work described above and does not include review of the following:

- FERC Requirements and State Ratemaking Requirements
- Debt parameters, IRR targets, capitalization, insurance, or tax issues.
- OVEC management and personnel issues
- Legal issues relating to contracts and power sales agreements
- Power market issues, regulatory (non-environmental) issues, credit issues
- Unknown future laws related to power plant operations and environmental regulations

URS conducted this analysis and prepared the report utilizing reasonable care and skill and applied methods consistent with normal industry practice. Our opinions are based on our experience and documentation provided to us by OVEC. The documents URS has relied upon are listed in Section 1.4.

The participants in this review are:

Mike Damian, URS Project Manager
George Warriner, URS Manager, Power Projects
Gerry May, URS Manager of Mechanical Integrity
Gunseli Shareef, URS Vice President, Power Sector
John Martinez, URS Environmental Specialist

1.3 ASSUMPTIONS

In the preparation of this report and in formulating the expressed opinions, URS has made certain assumptions with respect to physical condition of components that may exist or events that may occur in the future. If events or circumstances are different than currently forecast then the budgets may be impacted. The O&M and capital expense projections,

maintenance plans, and equipment inspection reports were developed by OVEC and reviewed by URS. Assessment of legal issues, such as assignment of contractual rights, and procedural issues related to permits and permit waivers is outside of URS's scope of work as Independent Technical Reviewer.

URS personnel conducted a site visit on April 26, 2011 at Kyger Creek plant and April 27, 2011 at the Clifty Creek plant. The plants were visually inspected for general condition and to understand the history and future operational plans. The information gathered was used to verify the condition of the major equipment as represented in the maintenance reports.

The following assumptions pertain to this study and its results:

a. The report, "Independent Technical Review Kyger Creek & Clifty Creek Plants," Rev. 1, September 15, 2005 provides the baseline data and analysis for this 2011 report.

b. OVEC provided operation, maintenance, environmental and financial data; representing 2000 through 2010.

c. OVEC provided limited budget information for maintenance and capital equipment through 2015, and preliminary plans to 2020.

d. This review is based on operation through the year 2040.

e. OVEC operating and maintenance practices will continue as reported previously and are represented in OVEC's expected reliability and expected expenses over the next 30 years.

f. Major overhaul intervals will continue at ten (10) years for the HP turbine sections and 20 years for the LP turbine sections.

g. Feedwater heaters will generally be replaced or retubed when tube pluggage exceeds ten percent, except as noted.

h. Balance of plant equipment will be "replaced-in-kind" except as noted.

i. Major replacements are timed to correspond with scheduled major overhauls.

j. All costs are estimated in nominal 2011 dollars.

j. For the boiler, the planned outages for inspection and routine maintenance will continue on an annual basis or perhaps be extended up to three (3) years.

k. All eleven (11) Kyger and Clifty units are similar in design, equipment manufacturer, performance, operation and maintenance. Any known significant differences are noted throughout this report.

l. All five (5) Kyger Units are typical, except Unit 1 turbine generator, which is a GE, similar to turbine generators at Clifty Creek plant.

m. All six (6) Clifty Units are typical, except Unit 6 has a hot side precipitator and no SCR, compared to the other units having a cold side precipitator and SCR.

n. All of the units will continue to operate as base load units, and not converted to load following or cycling operation. Some load following in the evening and weekend hours is expected to be limited by the need to keep the SCR's operational.

o. Balance of plant equipment including, but not limited to, heat exchangers, condensers, pumps, valves, intake structures, outflow structures, condensers, conveyors, barge unloading facility, stacks, SCRs, instrumentation, transformers, fire protection systems, ash ponds and critical piping at both plants will continue to be inspected periodically and maintained.

1.4 REFERENCES

Clifty Creek & Kyger Creek Data and Industry Data:

1. OVEC-IKEC Generating Availability Statistics, 2010, Updated February 7, 2011
2. OVEC-IKEC 2010 Maintenance Planning Package May 19, 2010.
3. Kyger Creek Unit 2, Annual Maintenance Outage, Scheduled Outage April 09, 2010.
4. Kyger Creek Operating Plan 2011-2015. (Power Point Presentation)
5. Clifty Creek Operating Plan 2011-2015. (Power Point Presentation)
6. Clifty Creek Plant Maintenance Dept. Misc Data Sheet, Turbine Generators, 5 April 2011.
7. Use Factor-Available Power Sales to Sponsors, July 2010 to December 2010.
8. OVEC Operations December 24 to December 30, 2010.
9. Clifty Creek Unit #1 Outage Report, Maintenance Department, January 10, 2011; Planned Outage 3-27-10 to 6-1-10.
10. Gross and Net Real Power Capability Verification Form, all 11 units, Summer 2010.
11. Performance Measures Reports, MicroGads, Jaunary 2005 to February 2011.
12. Event Summary Report, Microgads, January 2005 to February 2011.
13. Generation Summary Report, Microgads, January 2005 to February 2011.
14. Independent Technical Review, Kyger Creek & Clifty Creek Plants, Ohio Valley Electric Corporation, by URS, September 15, 2005.

2.0 KYGER CREEK PLANT

2.1 PLANT DESCRIPTION

Kyger Creek Plant consists of five pulverized coal-fired steam electric generating units, each designed to produce a total of approximately 217 MWe guaranteed output. The units were commissioned in 1954 and 1955. Each unit consists of one (1) boiler and one (1) steam turbine generator. Each unit shares common facilities such as water treatment, fuel handling and ash disposal facilities, main powerhouse building, maintenance shops, service building, warehouse, and the wastewater treatment facilities.

2.1.1 Boiler System

The five (5) boilers are replicate units designed and manufactured by Babcock & Wilcox Company (B&W). See **Figure 2-1** for a typical side elevation of the Kyger Creek and Clifty Creek boilers. The boilers are natural circulation, balanced draft (converted after initial commissioning), wet bottom furnace, open-pass, single reheat type steam generators. **Table 2-1-1** provides additional boiler data. They were originally designed for operation with high sulfur Midwest bituminous coal; currently the fuel supply is a blend of mid-sulfur bituminous coal and low-sulfur western sub-bituminous coal from the Powder River Basin (PRB).

The Plant has no auxiliary boilers available for start-up purposes. Auxiliary electric power is available from the grid for starting one unit during a plant black-start condition. Once one unit has been started, the other units can then be started.

Boiler draft fans are provided on a 2 x 60 percent capacity basis for the forced draft and 1 x 100 percent for the induced draft systems, respectively. Adjustable speed drives were added to all FD and ID fans when the SCRs were installed. The FD fans have a great deal of over capacity. The ID fans are sufficient, but there is no excess capacity.

The boiler water chemistry is achieved using softened water with an RO unit per current ASME guidelines. Oxygen scavenging has been discontinued.

Since commissioning, the units were converted from pressurized operation to balanced draft. The flue gas recirculation system has been removed and electrostatic precipitators (ESP) have been installed on each unit. In 2002 and 2003, NOx reduction methods have been installed that are comprised of overfire air, and retrofit of SCR systems on each unit. Low NOx burners have not been installed.

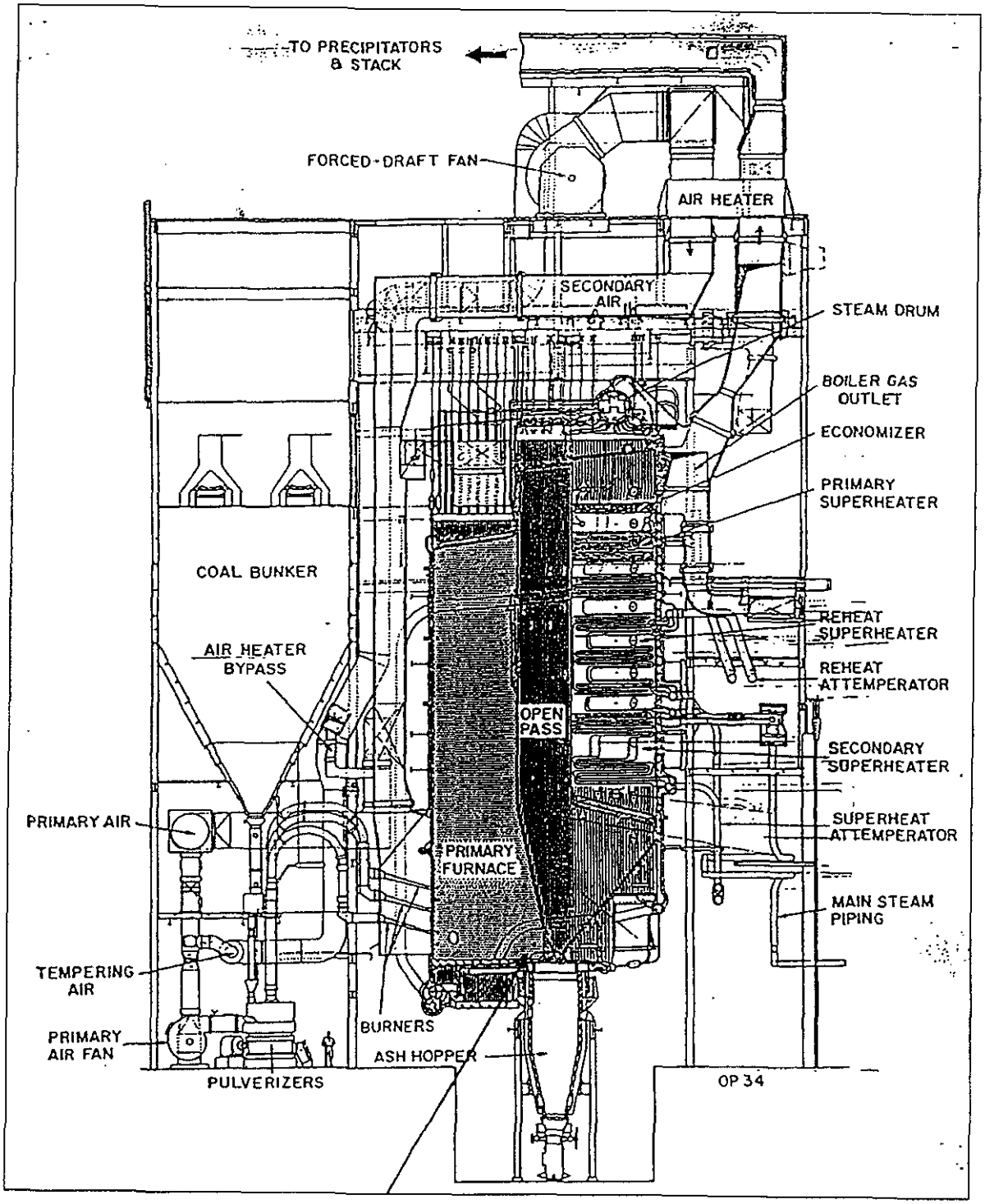

Figure 2-1 Kyger Creek & Clifty Creek Plants Boiler Side View

URS

Table 2-1-1
Kyger Creek Plant Boiler Data

Item	Unit No. 1-5
Commercial Operation Year	1954 – 1955
Manufacturer	Babcock & Wilcox Corp.
Type	Front Fired – Wet Bottom Furnace
Main Steam Temp (°F)	1,050
Reheat Steam Temp (°F)	1,050
Operating Pressure at SHO (psig)*	2,075
Design Pressure Rating (psig)	2,400
Main Steam Flow (lbs/hr)	1,336,000
Reheat Steam Flow (lbs/hr)	1,194,000
Circulation Type	Natural
Air Heater	Three Regenerative (Bisector Design)
Furnace Type	Single, wet bottom with open pass.
Pulverizer Type	7 – Babcock & Wilcox Model EL 70 Ball & Race Pulverizers
Primary Air	7 – centrifugal type motor driven hot PA fans
Additive System	Coal slag viscosity control done with magnetite injection
Burners	Directional flame burners on three rows on the front waterwall. No. 2 oil ignition.
Slag Blowers	31-Diamond Power with steam blowing medium
Furnace Draft	Balanced Draft
Forced Draft Fan	Two fans with original casings and new wheels, blades and adjustable speed drives installed in 2002 and 2003.
Induced Draft Fan	One fan with original casing and new wheel, blade and Robicon adjustable speed drive installed in 2002 and 2003...
NO_x Control	All 5 units retrofitted with SCR system in 2002 and 2003.

* Unit operated at 2,000-psig throttle pressure

2.1.2 Emission Control Systems

2.1.2.1 General

The emission control system at Kyger Creek Plant consists of electrostatic precipitators for particulate emission control with the new SCR system for NO_x control. Two (2) scrubbers are currently under construction and expected to be operational in the fourth quarter of 2011 and first quarter of 2012.

2.1.2.2 Electrostatic Precipitators

The units were originally equipped with mechanical collectors. They were retrofitted with cold side electrostatic precipitators from Flakt Inc. during 1978-1980. Salient features of the precipitators are:

• Supplier	Flakt Inc.
• Flue Gas Flow Rate	925,000 CFM
• Flue gas Inlet Temperature	350°F
• Inlet Dust Loading	0.5 – 3.5 grains/acf at 350°F
• Specific Collection Area. (SCA)	336 (sq. ft./1000 acfm)
• Effective Collecting Area	310,439 sq.ft.
• Length of Discharge Wire	236,652 ft.
• T/R Sets Rating	700 mA/55 kV/61 kVA
• Guaranteed Collection Efficiency	99%
• Guaranteed Emission	0.035 grain/acf (Maximum)

A flue gas conditioning (FGC) system was added in 1999 to augment precipitator performance. The FGC system was supplied by Wahlco Inc., and consists of sulfur burner, catalytic oxidation and sulfur trioxide injection grid and attendant controls. The overall ESP control system was upgraded in 2001.

2.1.2.3 SCRs

The SCR systems were installed on all five (5) units in 2002 and 2003 over the top of turbine roof. ID fans were modified, and turbine bay structural columns were reinforced to support the additional weight.

• Supplier	Riley
• Catalyst Manufacturer	Argillon
• Catalyst Type	Plate
• Catalyst Specific Surface Area (m^2/m^3)	353

- Plate Pitch (mm) 5.6
- Plate Thickness (mm) 0.8
- Plate Height (mm) 625
- Catalyst Volume Per Unit (m^3)
  - Initial 378.4
  - Full 504.5
- Design Temperature (^0F) 700
- Design Flow Rate (scfm) 481,507
- Removal Efficiency 90%

2.1.2.4 Stack

The original stacks were replaced with a single stack in 1980. All five (5) units discharge through this approximately 990-ft. single stack. The stack consists of a concrete shell and a steel liner with attendant standard appurtenances such as rain hood (stainless steel), CEMS, access platforms, navigational lights and personnel elevator. This stack will be replaced with a new stack downstream of the new scrubbers. The old stack will be left in place and converted to other use later.

2.1.2.5 Scrubbers

Units 1 & 2 will be serviced by one Jet Bubble Reactor (JBR) and Units 3, 4 & 5 by a second JBR. Scrubbers are Chiyoda design with Black & Veatch as AE for auxiliary equipment and design. SO2 emissions are estimated to decline from the current 124 tons per year for all five (5) units burning Powder River Basin (PRB) blended coal, to 5 tons per year using Eastern coal at 6.5 to 7 lbs sulfur per ton. This will achieve reductions as required by EPA and state regulations.

The use of Eastern coal at approximately 80% and PRB 20% will reduce transportation costs. While there is a possibility of additional savings for the cost of the coal at the mine, this is dependent upon market forces at the time of purchase.

A new dock and barge off-loading facility is complete for receipt of the limestone. Conveyors are installed from the storage area to the scrubbers.

The gypsum output of the scrubbers is not commercial grade and will be de-watered, conveyed approximately one (1) mile, and then trucked to the nearby OVEC landfill. The bottom ash that is being dewatered and sent to the landfill will use this same conveyor. As the conveyor is used, it is anticipated that there will be some issues with dust and maintenance.

The scrubbers were originally planned to be operational by January 1, 2010. However, Chiyoda and American Electric Power (AEP) discovered problems with corrosion of the scrubber tank, and the strength of the PVC pipe. The extruded PVC pipe is being replaced with fiber reinforced pipe

(FRP) for additional strength. The tank is being lined with a high alloy steel on the walls and bottom to minimize corrosion.

There is expected to be a learning curve in operation of the scrubbers and interface with the existing plant and new coal. Extensive analysis has been performed on the operation, including the possible interaction between units since multiple boilers feed one scrubber. The control room has already been upgraded with the links to the equipment and instruments.

Maintenance of the scrubbers will require adaptation as it is learned how long the scrubbers can operate without shutting down. The tanks can operate with 3 of 4 agitator blades operational. If a second blade fails, then all units connected to the scrubber must be shutdown. There is no by-pass, or cross-tie between units and scrubbers. It is estimated it will require 10 days to 2 weeks for a scrubber shutdown to clean out the tank and perform routine maintenance and inspection inside the tank. This will affect short outage plans, as work on 2 or 3 units may need to be performed simultaneously on multiple units and the scrubber.

2.1.2.6 Ash Disposal

As was planned in 2005, the fly ash pond has been de-commissioned and a new pond opened closer to the plant. The new pond has been filling in. A long term program has been implemented to remove fly ash by dredging, dewatering it, and conveying and trucking it to the Kyger Creek landfill.

Most of the bottom ash is sold for industrial use. Only a small percentage is trucked to the landfill.

2.1.3 Turbine Generators

The Kyger Creek Plant includes one (1) General Electric and four (4) Westinghouse turbine generators with the following characteristics:

Table 2-1-2
Kyger Creek Turbine Generator Details

Plant	Manufacture	Nom. Size	Type	Steam Conditions	Age
Kyger Creek 1	GE	217,260 KWe	CC2F38	2,000 psig – 1050°/1050°F	55
Kyger Creek 2 – 5	Westinghouse	217,260 KWe	CC2F40	2,000 psig – 1050°/1050°F	55

The Unit 1 turbine-generator manufactured by General Electric is a cross-compound unit with the HP-IP (high-pressure and intermediate-pressure) turbine-generator operating at 3,600 RPM and the LP (low-pressure) turbine-generator consisting of two (2) separate low-pressure turbines with 38-inch last stage blades operating at 1,800 RPM. The HP/IP and LP rotors are configured in opposed flow configuration.

This turbine was placed into service in 1955 and has a nominal rating of 217 MWe. Turbine design throttle conditions are 2,000 psig, 1,050°F main steam and 1,050°F reheat. Control valves are integral to the upper and lower half shells. The control valves are controlled by a mechanical hydraulic system (MHC). The unit control system is designed to operate in a combination of partial arc admission and full arc admission depending on whether the unit is in a startup mode, partial load or full load condition. During startup, the control valves are full open and steam is controlled by one upstream stop valve with a by-pass valve for admitting sufficient steam to carry approximately 20 percent load. The control valves then take control for partial arc admission mode. The units operate with sliding pressure down to approximately 1800 psig, in a load following mode. Main steam and reheat stop and intercept valves are separate from the turbine shells.

The unit 2-5 turbine-generators, manufactured by Westinghouse, are in a cross-compound arrangement. Separate HP (high-pressure) and IP (intermediate-pressure) turbines are arranged in a tandem compound arrangement and drive a generator at 3,600 RPM. The LP (low-pressure) turbine-generator consists of low-pressure turbine with 40-inch last stage blades. The LP turbine is an opposed flow configuration operating at 1,800 RPM. The HP, IP and LP rotors are opposed flow configuration to balance thrust.

The unit 2-5 turbine generators were placed into service in 1955 and have a nominal rating of 217 MWe. Turbine design throttle conditions are 2,000 psig, 1,050°F main steam and 1,050°F reheat. Plant personnel report the current main steam and reheat operating temperature is nominally 1050°F or less. Control valves, main steam and reheat stop and reheat intercept valves are separate from the turbine cylinders. The control valves are controlled by a mechanical hydraulic system (MHC). The unit control system is designed to operate in a combination of partial arc admission and full arc admission depending on whether the unit is in a startup mode, partial load or full load condition. During startup, the control valves are fully open and steam is controlled by one upstream stop valve with a by-pass valve for admitting sufficient steam to carry approximately 20 percent load. The control valves then take control for partial arc admission mode. The units can operate in sliding pressure mode down to approximately 500 psig in a load following mode. In fact, in reduced load operation the pressure is reduced to about 1800 psig and any additional load reduction is by valves so that adequate temperature is maintained in the SCR's for continued operation.

The turbines have not been upgraded with higher efficiency rotors or other efficiency upgrades. Such installation might require a New Source Review.

There are system spares in OVEC for the turbine rotors, both the HP/IP and LP rotors. Since units are identical, rotors have been moved between units and the spares used over the years.

2.1.4 Balance of Plant

The regenerative feedwater heating system consists of three (3) LP heaters (1, 2, 3) arranged in series feeding a direct contact deaerating heater. The HP heater configuration consists of two parallel heater trains, each including three (3) HP heaters (5 E&W, 6 E&W, 7 E&W). The condensate and feedwater pumps are horizontal, single speed motor driven type. There are 3 – 50% feedwater pumps and 2 – 100% condensate pumps.

The condensers are single pressure, with Arsenical Copper tubes, directly cooled by Ohio River water provided by horizontal scroll case, low speed circulating water pumps. Two pumps and a condenser are provided for each unit.

The main steam piping is seamless P22 and the hot reheat system piping was originally seamless P11 with welded elbows and a welded WYE fitting. Since 2005, all original seam welded hot reheat components have been replaced with forged seamless components. This greatly reduces the risk of a catastrophic steam failure.

Each unit has three (3), single phase, three (3) winding generator step up transformers. A winding is provided in each transformer for the HP generator, the LP generator and the high voltage.

2.2 REVIEW OF OPERATIONS

2.2.1 Operation Characteristics

Historically, the units are operated essentially in a base-load mode. However, in 2002 and part of 2003 the units operated in a daily load following mode. Since 2003, the units have been base loaded again. There is some load following on weekends and nights, but the temperature cycling is limited to assure that the SCR's continually operate.

The load is reduced by sliding pressure to 1800 psig. Additional reduction to approximately 85 MWe net is by throttling. Current operation with the coal blends and auxiliary equipment results in full generation at 1050^{0}F or less on the main steam and hot reheat systems, which does not exceed the 1050^{0}F design temperature.

Planned outages, forced outages, de-rating for equipment repairs, and occasional environmental issues have caused less than full generation.

With the addition of the scrubbers, the net additional parasitic load is expected to be 4 to 8 MWe per unit. Current Auxiliary Power Requirements are 16 to 17 MWe per unit. With the change to a higher blend of Eastern Coal, there is no anticipation of major changes to the plant operating characteristics. There will be some optimization work required to settle on the best fuel mix, soot blowing methods, and other boiler operations.

2.2.2 Operating Capability and Reliability

The Kyger units historically have, and presently each is, operated in approximately the same fashion and for the same duration. **Table 2-2-1** shows the total generation for each unit from 2001 through 2010. Note that the total generation was greatest in 2004 through 2006 and has been relatively consistent prior to 2004 and post 2006.

Table 2-2-2 contains annual plant production data. Given the relatively similar operational characteristics of the individual units, URS determined that it was not necessary to analyze each unit for purposes of this evaluation. Plant use is about 7% of gross generation. Load, Capacity and Capability Factors increased in 2004 and 2005 over the previous two years while the heat rate improved. However, in 2006 through 2010, the heat rate increased, while the load, capacity and capability factors decreased to levels similar to 2002 and 2003.

Except for long outages attributed to SCR installation, the Kyger units availability factor from 2000 to 2006 was not less than 85 percent, and routinely well over 90 percent. See **Table 2-2-3**. Since 2007, the availability factor is generally 83% to 87%, with some lower factors in years with major planned outages.

The units are tested annually for gross and net capability. **Table 2-2-4** shows the values in Net Generation since 2000 through 2005, except for 2002, and for 2010. There are some differences in the test methods over the years. The 2010 data is based upon summer tests that are adjusted for ambient conditions. For clarification and comparison, both the summer and winter adjusted values are provided. There is no indication of any reduction in capability in any of the units.

Plant actual production data indicates that the Kyger units can generate approximately 235 to 240 gross MWe each during the winter months and about 215 to 220 gross MWe during the summer months. Auxiliary loss is about 17 MWe per unit, and is consistent throughout the year.

Forced outages are an indicator of the unit condition. **Table 2-2-5** shows the annual equivalent forced outage rate for the Kyger Plant. The values were compiled by URS for each unit based on OVEC supplied GADS data.

The average forced outage rate for the overall plant was less than 5.5% each year through 2005. In 2006 through 2008 it increased to a maximum of 11.17%, and then has been decreasing since. Each of the forced outages has been analyzed by the plant. It shows the vast majority of these forced outages are for boiler tube leaks and other boiler related problems. For example, in 2010, 74% of all EFOR's are attributed to boiler tube failures. Another 13% were related to other boiler issues, including fouling, boiler ash hoppers, mills, PA Fans and Feeders. Of great significance is that electrical transformers, turbine-generators and aging plant auxiliary equipment are performing extremely well with very few failures and with limited down times when there is a failure.

Units 1, 2 & 3 have had the largest forced outage rates, particularly in 2008 & 2009 on Unit 1, 2007, 2008 & 2009 on Unit 2 and 2006, 2008 & 2009 on Unit 3. On these three (3) units, the forced outages in 2010 were reduced significantly.

These statistics led to the major tube replacement program that is being performed through 2014 on the Kyger boilers. With reduced likelihood of boiler tube leakage, it is expected that the EFOR's for the Kyger units will continue to trend downward over the next few years.

2.2.3 *Fuel Sourcing*

Since original commissioning, Kyger's fuel source has changed from high sulfur bituminous to a combination of bituminous and PRB sub-bituminous coals to meet operational requirements and air emission limits.

With the expected commissioning of the scrubbers in 2011 & 2012, the coal sources and blends will be re-constituted. The expected blend is about 80% Eastern coal with 6.5 to 7 #/ ton sulfur, with 20% PRB. There will be changes to the performance of the units, as the BTU content of the coal should be greater than has been burned in the last few years. Slagging, coal handling and ash handling are all expected to change, particularly since the scrubbers will change unit operation. These changes are planned for as much as possible, and personnel are realistic that evaluations and adjustments must be made after the scrubbers are operational.

At Kyger, there are no fly ash sales. The ash goes to a settling pond, is dredged out, de-watered, and then conveyed to trucks that take it about 2 miles to a landfill. The furnace bottom ash is used for various purposes off-site and is mined from the pond by a local company.

In 2005, the amount of coal in the coal yard was very low. In 2010, reasonable reserves of Eastern Coal and PRB are now in the coal yard. With the move to Eastern Coal, on-time availability and delivery of coal is expected to be routine.

2.3 OBSERVATIONS OF PLANT CONDITIONS

2.3.1 Summary of Plant Conditions

URS Consultants walked-down Kyger Unit 1 from the top to the basement floor, and observed the scrubber installation, coal yard, screens, stacks, conveyors, ash ponds and other plant equipment from the roof of Unit 1. In general the plant was found to be well maintained with most of the boiler components in a condition above average compared to other coal fired units of this vintage inspected by URS. The Kyger Creek Plant's conservative design and configuration is typical of a multi-unit pulverized coal-fired configuration. This includes a semi-indoor plant fueled through a common, covered coal gallery for the five units. The building is considered a common facility. Given its physical age, the visual condition of Kyger appeared to be very good for this vintage of power plant. There were no obvious signs of deteriorating structures, decking, support steel, piping, pipe supports, thermal insulation, cable trays, etc.

The SCR and precipitator additions, plus the on-going scrubber additions make for a relatively compact arrangement on the site. Space has been well utilized. Based

upon observations and discussions with plant personnel, the plant modifications have been well enough designed that they have not created significant maintenance problems for existing equipment due to access limitations. When the SCR's were added, existing steel had to be reinforced, and this process assured all existing steel was carefully examined.

The new scrubbers will force the retirement of the stack now in operation. Future use will be for maintenance.

Tanks have been installed to inject Trona for control of "blue plume". This has been a relatively rare occurrence and should not be needed often. After the scrubbers are operational it is likely that trona will need to be injected more often.

The fly ash pond is nearly full. A long term program has been instituted to dredge the bottom of the pond, de-water the fly-ash, and convey and truck the ash to the Kyger Creek landfill. The same conveyor and trucking system will be used for the gypsum from the scrubbers.

The dock and unloading facility for the limestone is operational. The scrubbers are still several months away from completion.

There is a staffed chemistry lab performing water chemistry evaluations on site. This is unusual at plants today, but URS considers this an example of a commitment by management to assure the plant is well maintained.

While URS did not see the training simulator at Kyger, we did observe a similar one at Clifty Creek. The facility is another commitment by management to assure that operators are well trained and will be ready to react properly when unusual events occur. This facility also is used by controls personnel to assure that planned changes to the controls logic function properly.

There are about 350 people on staff at Kyger Creek. Management is planning for possible retirement of up to 25% of the people in the next 4 years. Since the plant appears to be one of the respected employers in the area, plant jobs are considered desirable, and the turnover is manageable. If the primary turnover is retirement, with the remaining people at the plant there should be adequate managers and senior people to train the replacement personnel.

The plant personnel that URS met were knowledgeable, and focused on the long term viability of the plant. This is extremely important in that decisions should be made based upon long term plant production and availability, not upon short term least cost solutions.

Outages are well planned through a five (5) year rolling schedule. There are preliminary "place holder" outage schedules from 5 to 10 years. There is probably more uncertainty in these schedules right now than in the past because of the addition of the scrubbers. Since scrubber maintenance forces a shutdown of 2 or 3 units for days or weeks, there will have to be adjustments to attempt to perform as many of the standard maintenance and inspection items during each scrubber shutdown. Probably

scrubber shutdowns will be timed on the beginning or end of one of the unit major outages, if at all possible.

There are safety committees and other groups that meet regularly representing Kyger Creek and Clifty Creek. This provides good feedback to each plant on which improvements have worked the best. AEP, as the largest sponsor provides extensive technical support and planning. AEP also provides document control services for the plant drawings.

OVEC/IKEC maintains well-documented programs for both capital and maintenance projects done at Kyger. Records were provided that showed all major maintenance on the boilers, turbine generators and other equipment since original plant commissioning. This is impressive record keeping, and is one more example of the long term commitment of management to the maintenance of Kyger Creek.

2.3.2 Capital Improvements, Maintenance & Inspection History Since 2000

Table 2-3-1 tabulates the Capital Improvements and Maintenance expenditure levels from January 2000 through June 2010, and the budgeted expenditures through 2015. The capital expenses are dominated by the SCR installation in 2002 and 2003 and the scrubber installation since 2005.There is a $44mm Boiler Plant Equipment capital expense in 2006, which is much greater than average. This one time charge includes the coal yard upgrades.

With the major cycle of refurbishments of the boiler to be completed in 2014 at Kyger Creek, the projected boiler capital expenses are greatly reduced in 2015. Based on today's known problems, this is reasonable. Also, the basic re-tubing of major sections of the boilers is a significant expense that should lower maintenance costs and forced outages for several years.

Capital costs for the Turbogenerator and Accessory Electric Equipment are budgeted at less than historic averages through 2015. Given the current condition of the equipment this is reasonable through 2015. In later years it would be expected that this equipment capital expense would return to near its historic average.

The maintenance costs were consistent from 2000 to 2006. In 2007 on and through the budgeted period to 2015, the boiler maintenance expenses increased 50% to 100% over the 2005 values. This reflects the increase in tube failures and other boiler related work necessary to keep the plants functional. Note that the boiler plant equipment capital budget is increased dramatically from 2010 to 2014 in an attempt to bring the boilers into good working order with minimum outage time in future operating years.

The maintenance expense / budget include the full time maintenance staff, and thus there is a base cost of about 100 people that is relatively stable. The perturbations in maintenance levels are generally a function of the outage schedules and forced outages. Long outages, such as when the SCR's were installed, provide opportunity for more extensive maintenance of the boiler and turbines. There is expected to be some increased staff with the commissioning of the scrubbers, but with the boiler

improvements there is expected to be some minimal cost savings to boiler maintenance.

Overall, **Table 2-3-1** indicates a commitment by OVEC to maintain and improve the plants to meet the long term operational requirements.

The following sections summarize of the significant improvements, repairs and inspections represented by the above expenditures.

2.3.2.1 Boiler

Boilers are chemically cleaned every three (3) years. Typically the cleaning results in "uncovering" some tube leaks and additional repairs are required.

Each boiler is inspected and repaired annually during a 14 day outage. Typical inspections include visual inspection of steam drum headers, tubes and supports, magnetic particle inspection of selected locations, replication, inspection for ligament cracking, and other standard NDE. Inspections are performed on a schedule and not all inspections are performed annually. Indications are consistently repaired at the time they are found.

Major tube replacements on the primary furnace were performed on the side wall, first baffle wall and roof in the 1979 through 1982 outages. Similar replacements are being performed now through 2014. The sloping floors are also being replaced on each unit through 2014.

The reheat tubes and the reheater outlet headers are to be replaced on each unit in 2012 through 2014.

SCR units were installed in 2002 and 2003 on all five units. These units are located above the turbine roof.

All five units' lower front tubes of the primary furnace were replaced 2002 and 2003.

All five (5) units' lower bank and outlet legs of the secondary superheater were replaced 2000 to 2003.

Secondary Superheater Upper bank last replaced in 1978 through 1980, although selected SSH platens have been replaced since then.

Unit 3 lower left, lower right side walls and lower water wall headers replaced in 2010.

Unit 3 Sloping floor tubes and lower screen tubes replaced in 2010.

Unit 1, replaced 30 Sloping floor tubes in 2007.

2.3.2.2 Turbine Generator

As noted above, the H.P. turbine components are on a ten (10) year major overhaul schedule and the L.P. sections on a 20 year major overhaul schedule. Examinations are made annually during the boiler shutdowns. No unusual problems reported since 2002.

A spare HP, LP and IP rotor exists on site for the Westinghouse turbine generators. The General Elèctric spare rotors are maintained and stored at Clifty Creek since they have six GE units.

Some of the significant turbine generator maintenance accomplishments since 2005 include:

- Unit 2, HP Turbine inner cylinder replaced
- Unit 3, HP Turbine 1st Stage Curtis blades replaced

2.3.2.3 Emissions Control System

Selective Catalytic Reduction (SCR) systems were installed on all five (5) boilers at Kyger in 2003. These systems are capable of continuous operation and this mode of operation would result only in the additional variable operating costs associated with increased consumption of ammonia and catalyst. All associated SCR equipment maintenance increases proportionally to SCR operating hours.

Electrostatic Precipitators (ESP) were installed on all 5 Kyger units in the late 1970's. All five (5) units are fitted with "cold side" ESP's. These units are located downstream of the air preheater. The ESP systems were originally designed for operation with eastern bituminous coals or western sub-bituminous coals. Particulate control on all five (5) units has consistently operated well below the current emission limit.

Flue Gas Desulphurization units (FGD, also referred to as "Scrubbers" and "Jet Bubble Reactor" (JBR)) are not currently installed at Kyger. OVEC originally planned to install FGDs on all five (5) units by January 1, 2010. Construction was nearly done, when problems were found at other units with corrosion of the tank, and strength of the PVC pipe. Re-design has been performed and construction is now continuing for tie-in during late 2011 and first quarter 2012.

No mercury reduction systems are currently installed on any of the Kyger units.

During each available opportunity, forced or planned outage, the SCR is inspected for fly ash accumulation and cleaned if necessary.

CEMS and other monitoring systems are calibrated and maintained as necessary.

2.3.2.4 Stack

The existing Kyger stack will be taken out of service when the scrubbers are tied-in. There is a new stack installed downstream of the scrubbers. The old stack may be used for maintenance.

2.3.2.5 Balance of Plant

All steel, concrete foundations, turbine generator pedestal and other structural components appear to be in good condition. When the SCRs were installed, columns in the T-G building were reinforced to support the increased loads.

Intake and outflow structures are periodically inspected and no significant deterioration has been found. Since there is only one in-take and outflow structure, it is difficult to perform maintenance with five units.

Critical pipe and pipe supports are inspected bi-annually and adjusted or replaced, as needed.

Asbestos pipe insulation has been nearly completely replaced with non-asbestos insulation. Insulators are nearly continuously on site assuring the insulation is in good repair.

Electrical cable deterioration has not been a problem.

Instrumentation and controls are continually being maintained and upgraded. The major upgrade in the control rooms to the Ovation system has been accepted by plant operators and the system is working properly.

Some other equipment that has been repaired since 2005 include:

- Retubed a total of six (6) feedwater heaters in various units.
- Changed out the Ash hopper skirt and weir on Units 2 and 5
- Replaced air heater baskets on Units 1 & 4
- Retubed Units 2 and 3 Condensers
- Repaired traveling screens on units 1 & 2
- Rebuilt the air compressors on Units 1, 2, 4 & 5
- Overlayed primary furnace tubes with 309 stainless steel on all five units.
- Replaced reheat seam welded reheat line elbows and WYE fittings with seamless components.
- Underground fuel oil storage tanks have been replaced with aboveground storage tanks.

2.3.2.6 Coal Supply

Coal supply will change significantly later in 2011 from primarily PRB to primarily Eastern coal. This conversion has a high level of attention by the plant personnel to manage this properly. On-time delivery of coal to the plant should not be any problem.

2.3.2.7 Transportation

Coal is delivered to plant by barge. Docks are well maintained, as are the conveyor systems from the coal yard to the tripper.

2.3.2.8 Electricity Transmission

No recent changes have been made to the electrical transmission system from the plant to sponsoring companies. The system has been adequate, and sponsoring companies have the responsibility for the transmission system.

3.0 CLIFTY CREEK PLANT

3.1 PLANT DESCRIPTION

Clifty Creek Plant consists of six pulverized coal-fired steam electric generating units, each designed to produce a total of approximately 217 MWe guaranteed output. The units were commissioned in the mid-1950s. Each unit consists of one boiler and one steam turbine generator. Each unit shares common facilities such as water treatment, fuel handling, ash disposal facilities, main powerhouse building, maintenance shops, service building, warehouse, and the wastewater treatment facilities.

3.1.1 Boiler System

The six (6) boilers are replicate units designed and manufactured by Babcock & Wilcox Company (B&W). See **Figure 2-1** for a typical side elevation of the Clifty Creek boilers. The boilers are natural circulation, balanced draft (converted after initial commissioning), wet bottom furnace, open-pass, single reheat type steam generators. **Table 3-1-1** provides additional boiler data. They were originally designed for operation with high sulfur Midwest bituminous coal; now the fuel supply is a blend of mid-sulfur bituminous coal and low-sulfur western sub-bituminous coal from the Powder River Basin (PRB). In 2012 & 2013, with the commissioning of the scrubbers, the coal supply will be changed.

The Plant has no auxiliary boilers available for start-up purposes. Auxiliary electric power is available from the grid for starting one unit during a plant black-start condition. Once one unit has been started, the other units can then be started.

Boiler draft fans are provided on a 2 x 60 percent capacity basis for the forced draft and 1 x 100 percent for the induced draft systems, respectively. Adjustable speed drives were added to all FD and ID fans when the SCRs were installed. The FD fans have a great deal of over capacity. The ID fans are sufficient, but there is no excess capacity.

The boiler water chemistry is achieved using softened water with a double RO unit per current ASME recommendation. Oxygen scavenging has been discontinued.

Since commissioning, the units were converted from pressurized operation to balanced draft, the flue gas recirculation system has been removed and electrostatic precipitators (ESP) have been installed on each unit. In 2002 and 2003, NOx reduction methods were installed that are comprised of overfire air, burner modifications and retrofit of SCR systems on units 1 through 5. The low NOx burner modifications were found to not be totally effective, and were retrofitted back.

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Table 3-1-1
Clifty Creek Plant Boiler Data

Item	Unit No. 1-6
Commercial Operation Year	1954 – 1955
Manufacturer	Babcock & Wilcox Corp.
Type	Front Fired – Wet Bottom Furnace
Main Steam Temp (°F)	1,050
Reheat Steam Temp (°F)	1,050
Operating Pressure at SHO (psig)*	2,075
Design Pressure Rating (psig)	2,400
Main Steam Flow (lbs/hr)	1,336,000
Reheat Steam Flow (lbs/hr)	1,194,000
Circulation Type	Natural
Air Heater	Three Regenerative (Bisector Design)
Furnace Type	Single, wet bottom with open pass.
Pulverizer Type	7 – Babcock & Wilcox Model EL 70 Ball & Race Pulverizers
Primary Air	7 – centrifugal type motor driven hot PA fans
Additive System	Coal slag viscosity control done with magnetite injection
Burners	Directional flame burners on three rows on the front waterwall. No. 2 oil ignition.
Slag Blowers	31-Diamond Power with steam blowing medium
Furnace Draft	Balanced Draft
Forced Draft Fan	Two fans with original casings and new wheels, blades and adjustable speed drives installed in 2002 and 2003.
Induced Draft Fan	One fan with original casing and new wheel, blade and Robicon adjustable speed drive installed in 2002 and 2003...
NO_x Control	Units 1 through 5 retrofitted with SCR system in 2002 and 2003.

* Unit operated at 2,000-psig throttle pressure

3.1.2 Emission Control Systems

3.1.2.1 General

The emission control system at Clifty Creek Plant consists of electrostatic precipitators for particulate emission control with the SCR system for NO_x control. At this time, the plant does not have a flue gas desulphurization system for sulfur dioxide emission control, although it is under construction.

3.1.2.2 Electrostatic Precipitators

The units were originally equipped with mechanical collectors. Units 1 through 5 were retrofitted with cold side electrostatic precipitators from Lodge Cottrell in 1977 & 1978. Unit 6 was retrofitted with a hot –side precipitator from Western Precipitator in 1976. Salient features of the precipitators are:

Cold-Side Precipitators (Units 1 through 5)

- Supplier — Lodge Cottrell
- Flue Gas Flow Rate — Design 925,000 CFM
- Flue gas Inlet Temperature — 350°F
- Inlet Dust Loading — 0.27 – 3.7 grains/acf at 350°F
- Specific Collection Area. (SCA) — 532 (sq. ft./1000 acfm)
- Effective Collecting Area — 492,480 sq.ft.
- Length of Discharge Wire — 316,000 ft.
- T/R Sets Rating — 1000 mA/55 kV/61 kVA
- Guaranteed Collection Efficiency 98.41%
- Guaranteed Emission — 0.05 grain/acf (Maximum)

Hot-Side Precipitator (Unit 6)

- Supplier — Western Precipitators
- Gas Flow Rate — 1,303,000 acfm
- Flue Gas Inlet Temperature — 760°F
- Inlet Dust Loading — 0.37 to 3.4 grains/acf
- Specific Collection Area (SCA) — 371 (sq. ft./1,000 acfm)
- Effective Collection Area — 483,413 sq. ft.
- T/R Sets Rating — 1,000 mA/45 kV DC
- Guaranteed Collection Efficiency — 99.4%
- Emission — 0.0045 grain/acf

A flue gas conditioning (FGC) system was added in 1999 on units 1 through 5 to augment precipitator performance. The FGC system was supplied by Wahlco Inc., and consists of sulfur burner, catalytic oxidation and sulfur trioxide injection grid and attendant controls. The overall ESP control system was upgraded in 1997 & 1998.

3.1.2.3 SCR

The SCR systems were installed on units 1 through 5 in 2002 and 2003 over the top of turbine roof. ID fans were modified, and turbine bay structural columns were reinforced to support the additional weight.

• Supplier	Riley
• Catalyst Manufacturer	Argillon
• Catalyst Type	Plate
• Catalyst Specific Surface Area (m^2/m^3)	353
• Plate Pitch (mm)	5.6
• Plate Thickness (mm)	0.8
• Plate Height (mm)	625
• Catalyst Volume Per Unit (m^3)	
o Initial	378.4
o Full	504.5
• Design Temperature (^{0}F)	725
• Design Flow Rate (scfm)	443,617
• Removal Efficiency	90%

3.1.2.4 Stack

The original stacks were replaced with two (2) stacks in 1976. Units 1 through 3 discharge through one stack and units 4 through 6 discharge through the other. The stacks consist of a concrete shell and a steel liner with attendant standard appurtenances such as rain hood (stainless steel), CEMS, access platforms, navigational lights and personnel elevator. Both these stacks will be abandoned in place when the scrubbers are commissioned in 2012 & 2013. A new single stack has been built to replace the existing two stacks.

3.1.2.5 Scrubbers

Units 1, 2 & 3 will be serviced by one Jet Bubble Reactor (JBR) and Units 4, 5 & 6 by a second JBR. Scrubbers are Chiyoda design with Black & Veatch as AE for auxiliary equipment and design. SO2 removal is estimated that from the current approximately 70 tons per year for all 6 units burning PRB blended coal, to 4 tons per year using Eastern coal at 6.5 to 7 lbs sulfur per ton. This will achieve reductions as required by EPA and state regulations.

The use of Eastern coal at approximately 80% and PRB 20% will reduce transportation costs. While there is a possibility of additional savings for the cost of the coal at the mine, this is dependent upon market forces at the time of purchase.

A new dock and barge off-loading facility is complete for receipt of the limestone. Conveyors are installed from the storage area to the scrubbers.

The gypsum output of the scrubbers is not commercial grade and will be trucked to the nearby Clifty landfill.

The scrubbers were originally planned to be operational by January 1, 2010. However, Chiyoda and American Electric Power (AEP) discovered problems with corrosion of the scrubber tank, and the strength of the PVC pipe. The extruded PVC pipe is being replaced with FRP pipe for additional strength. The tank is being lined with a high alloy on the walls and bottom to minimize corrosion.

There is anticipated to be a learning curve in operation of the scrubbers and interface with the existing plant and new coal. Extensive analysis has been performed on the operation, including the possible interaction between units since multiple boilers feed one scrubber. The control room has already been upgraded with the links to the equipment and instruments. Some benefit may be obtained in lessons learned on the scrubber operation from Kyger Creek, since it will be operational at least 1 year prior to Clifty Creek. However, it is recognized that the coal and other operations will not be identical at the two plants.

Maintenance of the scrubbers will require adaptation as it is learned how long the scrubbers can operate without shutting down. The tanks can operate with 3 of 4 agitator blades operational. If a second blade fails, then all units connected to the scrubber must be shutdown. There is no by-pass, or cross-tie between units and scrubbers. It is estimated it will require 10 days to 2 weeks for a scrubber shutdown to clean out the tank and perform routine maintenance and inspection inside the tank. This will cause an effect on short outage plans, as work on units may need to be performed simultaneously on multiple units and the scrubber.

3.1.2.6 Ash Disposal

The bottom ash has significant slag and is used as a liner for the landfill. The fly ash is dry, and is trucked to the landfill. Some fly ash is sold to contractors for filler, if possible.

3.1.3 Turbine Generators

The Clifty Creek plant includes six (6) General Electric turbine generators with the following characteristics:

Table 3-1-2
Clifty Creek Plant Turbine Generator Details

Units	Manufacture	Nom. Size	Type	Steam Conditions	Age
Units 1 through 6	GE	217,260 KWe	CC2F38	2,000 psig - 1050°/1050°F	50

These turbine-generators manufactured by General Electric are cross-compound units with the HP-IP (high-pressure and intermediate-pressure) turbine-generator operating at 3,600 RPM and the LP (low-pressure) turbine-generator consisting of two (2) separate low-pressure turbines with 38-inch last stage blades operating at 1,800 RPM. The HP/IP and LP rotors are configured in opposed flow configuration.

The turbines were placed into service in 1955 and have a nominal rating of 217 MWe. Turbine design throttle conditions are 2,000 psig, 1,050°F main steam and 1,050°F reheat. Control valves are integral to the upper and lower half shells. The control valves are controlled by a mechanical hydraulic system (MHC). The unit control system is designed to operate in a combination of partial arc admission and full arc admission depending on whether the unit is in a startup mode, partial load or full load condition. During startup, the control valves are full open and steam is controlled by one upstream stop valve with a by-pass valve for admitting sufficient steam to carry approximately 20 percent load. The control valves then take control for partial arc admission mode. The units operate with sliding pressure down to approximately 1800 psig in a load following mode. Further reduction to 85MWe net power output is achieved by throttling. Main steam and reheat stop and intercept valves are separate from the turbine shells.

3.1.4 Balance of Plant

The regenerative feedwater heating system consists of three LP heaters (1, 2 & 3) arranged in series feeding a direct contact deaerating heater. The HP heater configuration consists of two parallel heater trains, each including three (3) HP heaters (5 E&W, 6 E&W, 7 E&W). The condensate and feedwater pumps are horizontal, single speed motor driven. There are three (3) - 50% boiler feed pumps, and two (2) – 100% condensate pumps.

The condensers are single pressure, with arsenical copper tubes, directly cooled by Ohio River water provided by horizontal scroll case, low speed circulating water pumps. Two (2) pumps and a condenser are provided for each unit.

The main steam piping is seamless P22 and the hot reheat system piping is seamless P11. None of this pipe, fittings or headers is seam welded.

Each unit has three (3), single phase, three (3) winding generator step up transformers. A winding is provided in each transformer for the HP generator, the LP generator and the high voltage.

3.2 REVIEW OF OPERATIONS

3.2.1 Operation Characteristics

Historically, the units are operated essentially in a base-load mode. However, in 2002 and part of 2003 the units operated in a daily load following mode. Since 2003, the units have been base loaded again. Planned outages, forced outages, de-rating for equipment repairs, and occasional environmental issues have caused less than full generation. There is some limited load following in the evenings and weekends

to about 85MWe, net generation. Reduction below this level is rarely done because it forces the SCR's out of service and the financial penalties are significant. This limitation in load following limits the temperature swings that the equipment experiences.

The load is reduced by sliding pressure to 1800 psig and the remainder by throttling. Current operation with the coal blends and auxiliary equipment results in full generation at 1040^{0}F to 1050^{0}F on the main steam and hot reheat systems, at or slightly less than the 1050^{0}F design temperature.

3.2.2 Operating Capability and Reliability

The Clifty units historically have, and presently each is, operated in approximately the same fashion and for the same duration. **Table 3-2-1** shows the total generation for each unit from 2001 through June 2010. It is noted that all seven pulverizers must be operating to burn 80% PRB coal. Test burns of the expected blended coal after the scrubbers are operational indicate that at most six pulverizers will be required for full load, and possibly only five.

Peak generation was in 2005 and 2006, with relatively consistent generation at the plant in the other years.

Table 3-2-2 contains annual plant production data. Given the relatively similar operational characteristics of the individual units, URS determined that it was not necessary to analyze each unit for purposes of this evaluation. Plant electrical use is about 7.5% of gross generation. Load, Capacity and Capability Factors were greatest in 2004 and 2005 and since then have been consistent with the pre-2004 levels.

At Clifty Creek, the annual plant availability factor has varied from 80.5% to 89.0% from 200 to 2010. See **Table 3-2-3.** The low availability in 2003 is attributed to installation of SCR's and some forced outages on Units 1 and 3. The overall plant availability in 2009 and 2010 is in the upper portion of the range, at 85.6% to 87% availability.

The units are tested annually for gross and net capability. **Table 3-2-4** shows the values in Net Generation since 2000, 2001, 2003, 2004, 2005 and 2010. There are some differences in the test methods over the years. The 2010 data is based upon summer tests that are adjusted for ambient conditions. For clarification and comparison both the summer and winter adjusted values are provided. There is no indication of any reduction in capability in any of the units.

Plant actual production data indicates that the Clifty units can generate approximately 225 to 235 gross MWe each during the winter months and about 217 to 227 gross MWe during the summer months. Auxiliary loss is about 17 MWe per unit, and is consistent throughout the year.

Forced outages are an indicator of the unit condition. **Table 3-2-5** shows the annual forced outage rate for the Clifty Plant.

The average forced outage rate for the overall plant peaked at 9.54% in 2007 and has been steadily decreasing ever since. The 2010 rate is 5.11%. The vast majority of forced outage (FO) events and down time at Clifty is attributed to boiler problems, primarily tube failures. Of the forced outages in 2010, 70% were attributed to boiler tube failures. Only 3% were attributed to the turbine generator. From 2006 through 2010, the top five (5) causes of forced outages were

1. Boiler tube leaks, 1,688,000 MWh
2. Slagging or fouling, 991,000 MWh
3. Air and gas systems, 486,000 MWh
4. Fuel supply from bunkers to boilers, 388,000 MWh
5. Feedwater System, 270,000 MWh

Clearly the major boiler tube retrofits should greatly reduce the boiler tube leaks.

Slagging and fouling are expected to be different once the coal blend is changed, hopefully improving the characteristics of the ash.

Of great significance is that electrical transformers and aging plant auxiliary equipment are performing extremely well with very few failures and with limited down times when there is a failure.

3.2.3 Fuel Sourcing

Since original commissioning, Clifty's fuel source has changed from high sulfur bituminous to a combination of bituminous and PRB sub-bituminous coals to meet operational requirements and air emission limits. Clifty has a dry fly ash handling system that allows the maximum PRB blend to approx. 75% without incurring pulverizer capacity limits. The sulfur dioxide emission ranges from 0.5 to 1.6 lb/mmBtu.

It is expected that the coal will change to an 80% blend of Illinois Basin coal and 20% PRB when the scubbers are installed in the first 6 months of 2013.

3.3 OBSERVATIONS OF PLANT CONDITIONS

3.3.1 Summary of Plant Conditions

URS Consultants walked-down Clifty Creek Units 3 & 4 from the top to the basement floor, and observed the scrubber installation, coal yard, screens, stacks, conveyors, ash ponds and other plant equipment from the roof of Unit 3. In general the plant was found to be well maintained with most of the boiler components in a condition above average to other coal fired units of this vintage inspected by URS. The Clifty Creek Plant's conservative design and configuration is typical of a multi-unit pulverized coal-fired configuration. This includes a semi-indoor plant fueled through a common, covered coal gallery for the five units. The building is considered a common facility. Given its physical age, the visual condition of Clifty appeared to be very good for this vintage of power plant. There were no obvious signs of deteriorating structures, decking, support steel, piping, pipe supports, thermal insulation, cable trays, etc.

The SCR and precipitator additions, plus the on-going scrubber additions make for a relatively compact arrangement on the site. Space has been well utilized. Based upon observations and discussions with plant personnel, the plant modifications have been well enough designed that they have not created significant maintenance problems for existing equipment due to access limitations. When the SCR's were added, existing steel had to be reinforced, and this process assured all existing steel was carefully examined.

The new scrubbers will force the retirement of the two stacks now in operation. Future use will be for maintenance.

Fly ash is dry. What cannot be sold is trucked to the Clifty landfill.

The dock and unloading facility for the limestone is operational. The scrubbers are about 25% installed. Construction was suspended when re-design was necessary. Construction restarted on 3 May 2011.

There is a staffed chemistry lab performing water chemistry evaluations on site. This is unusual at plants today, but URS considers this an example of a commitment by management to assure the plant is well maintained.

The Clifty Creek simulator appears to be a very will designed facility. Existing operators are scheduled for refresher training once a month. New operators can be fully trained for board work on the simulator. The facility is another commitment by management to assure that operators are well trained and will be ready to react properly when unusual events occur. This facility also is used by controls personnel to assure that planned changes to the controls logic function properly.

There are about 350 people on staff at Clifty Creek. Management is planning for possible retirement of up to 25% of the people in the next four (4) years. Since the plant appears to be one of the respected employers in the area, jobs at the plant are desirable and the turnover is manageable. If the primary turnover is retirement, with the remaining people at the plant there should be adequate managers and senior people to train the replacement personnel.

The plant personnel that URS met were knowledgeable, and focused on the long term viability of the plant. This is extremely important in that decisions should be made based upon long term plant production and availability, not upon short term least cost solutions.

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With the major cycle of refurbishments of the boiler completed in 2015 or 2016 at Clifty Creek, the boiler capital expenses are expected to be reduced in 2017. Based on today's known problems, this is reasonable. Also, the basic re-tubing of major sections of the boilers is a significant expense that should lower maintenance costs and forced outages for several years.

The Tubogenerator and Accessory Electric Equipment are budgeted at much less than historic averages through 2015. While this is reasonable through 2015, it is expected these capital costs will increase to around the historic averages after 2015.

The maintenance costs were consistent from 2000 to 2006. In 2007 on and through the budgeted period to 2015, the boiler maintenance expenses increased 50% to 90% over the 2005 values. This reflects the increase in tube failures and other boiler related work necessary to keep the plants functional.

The maintenance expense / budget include the full time maintenance staff, and thus there is a base cost of about 100 people that is relatively stable. The perturbations in maintenance levels are generally a function of the outage schedules and forced outages. Long outages, such as when the SCR's were installed, provide opportunity for more extensive maintenance of the boiler and turbines. There is expected to be some increased staff with the commissioning of the scrubbers, but with the boiler improvements there is expected to be some cost savings to boiler maintenance.

Overall, **Table 3-3-1** indicates a commitment by OVEC to maintain and improve the plants to meet the current requirements.

The following sections summarize of the significant improvements, repairs and inspections represented by the above expenditures.

3.3.2.1 Boiler

Boilers are chemically cleaned every 3 years. Typically the cleaning results in "uncovering" some tube leaks and additional repairs are required.

Each boiler is inspected and repaired annually during a 14 day outage. Typical inspections include visual inspection of steam drum headers, tubes and supports, magnetic particle inspection of selected locations, replication, inspection for ligament cracking, and other standard NDE. Inspections are performed on a schedule and not all inspections are performed annually. Indications are consistently repaired at the time they are found.

SCR units were installed in 2002 and 2003 on units 1 through 5. These units are located above the turbine roof.

Some of the major maintenance on the boilers since 2005 include:

- 30 of the Lower Primary Superheater sloping floor tubes replaced in 2007 on Unit 1.
- Secondary Superheater Outlet Header and the Outlet Legs, Upper Bank and Lower Bank replaced in 2007 on Unit 1.
- Reheat tube sections and the reheater outlet header replaced on Unit 1 in 2007.
- New Air Heater baskets on Units 2, 3 4 & 5 in 2007 through 2010.

Some of the significant boiler improvement projects through 2015 include:

- Unit 5, Replace Sloping Floor, Reheater And Superheat Tubes, 2011
- Unit 4, Replace Sidewalls, 2012
- Unit 6, Replace SSH Out Tubes, Outlet, Legs & Headers, 2013
- Unit 3, Replace First Baffle Wall , Primary Furnace Floor, Primary Furnace Front Wall & Roof, 2014
- Units 2 & 4 Replace First Baffle Wall, Primary Furnace Floor, 2015
- Unit 4 Replace SSH Out Tubes, Outlet Legs & Headers, 2015
- Replace Blowdown Tanks, All 6 Units In 2011 And 2012

3.3.2.2 Turbine - Generator

As noted above, the H.P. turbine components are on a 10 year major overhaul schedule and the L.P. sections on a 20 year major overhaul schedule. Examinations are made annually during the boiler shutdowns. No unusual problems reported since 2002.

A spare HP and LP rotor exists on site for the GE turbine generators. The General Electric spare rotors are maintained and stored at Clifty Creek since they have six GE units.

- Unit 3 HP Generator, stator rewound 2009
- Unit 6 HP Generator, stator rewound 2008
- Unit 3 LP Generator, stator rewound 2009
- Unit 6 LP Generator, stator rewound 2008

3.3.2.3 Emissions Control System

Selective Catalytic Reduction (SCR) systems were installed on 5 of the 6 boilers at Clifty in 2003. Since the current NOx regulation allow "bubbling" of the emissions from both Clifty and Kyger and since OVEC chose to design the reactors for a NOx removal efficiency of 90%, sufficient margin existed to allow one unit to remain uncontrolled. SCR's are now operated whenever the units are operational. This full time operation results in the additional variable operating costs associated with increased consumption of ammonia and catalyst. All associated SCR equipment maintenance should increase proportionally to SCR operating hours.

Electrostatic Precipitators (ESP) were installed on all 6 Clifty units in the late 1970's. Units 1-5 were fitted with "cold side" ESP's while unit 6 was fitted with a "hot side" ESP. The difference in these systems is the location of the ESP relative to the air preheater. The "hot side" is located upstream while the "cold side" ESP is located downstream. The Unit 6 ESP was the first installed at either plant, and "cold side" ESP equipment was chosen for the remaining units. The ESP systems were originally designed for operation with eastern bituminous coals or western sub-bituminous coals. Particulate control on all 11 units has consistently operated well below the regulatory limits.

Flue Gas Desulfurization units (FGD) are not currently installed at Clifty. OVEC planned to install FGDs on all 6 units by January 1, 2010. With design problems that caused a suspension of construction, commissioning is now scheduled during the first 2 quarters of 2013.

No mercury reduction systems are currently installed on any of the Clifty units, although preliminary plans are being considered for likely mercury reduction requirements.

During each available opportunity, forced or planned outage, the SCR is inspected for fly ash accumulation and cleaned if needed.

CEMS and other monitoring systems are calibrated and maintained as necessary.

3.3.2.4 Stack

The existing operating stacks were inspected during 2003 and each underwent expensive repairs. With the recent repairs both stacks should be in very good condition. These stacks will be retired in place when the FGD's are operational in 2013.

3.3.2.5 Balance of Plant

All steel, concrete foundations, turbine generator pedestal and other structural components appear to be in good condition. When the SCRs were installed, columns in the T-G building were reinforced to support the increased loads.

Intake and outflow structures are periodically inspected and no significant deterioration.

Critical pipe and pipe supports are inspected bi-annually and adjusted as needed.

Virtually all the asbestos thermal insulation has been replaced with non-asbestos insulation. Insulators are usually on site each week and assure that the insulation is in good repair.

Electrical cable deterioration has not been a problem, although the 4 kva cable to the pulverizers is being replaced.

Instrumentation and controls are continually being maintained and upgraded. The major upgrade in the control rooms to the Ovation system has been accepted by plant operators and the system is working properly.

Since the 2005 report was written, four feedwater heaters have been replaced or retubed. Heaters are typically re-tubed when 10% of the tubes are plugged.

3.3.2.6 Coal Supply

When the 2005 plant assessment was performed, coal reserves on site were very low. This issue does not appear to be a problem now with about 60 days of reserve available. As the plant is transitioned to Illinois Basin coal, coal deliveries should not be a problem.

3.3.2.7 Transportation

Coal is delivered to plant by barge. Docks are fully functional and in good repair. A separate dock is under construction for off - loading limestone for the scrubbers.

3.3.2.8 Electricity Transmission

No recent changes have been made to the electrical transmission system. The transmission is actually the responsibility of the sponsoring companies, and no long term problems have been identified. Spare transformers at the generator output are available in case of failure.

4.0 ENVIRONMENTAL COMPLIANCE

4.1 COMPLIANCE WITH CURRENT REGULATIONS

Filterable particulate matter (PM) performance tests were conducted in 2007, 2009, and 2010 at both plants. For Clifty Creek, the PM emission limit from the Title V permit is 0.236 lb/MMBtu. PM results from tests done at this plant in September 2007 and August 2009 was well below this limit and ranged from 0.0061 lb/MMBtu measured at the common stack CS001 for Units 1 to 3, and to 0.0485 lb/MMBtu measured at the common stack CS002 for Units 4 to 6. For Kyger Creek, the PM emission limit from the Title V permit is 0.1 lb/MMBtu. PM results from tests conducted in July/August 2007 and in August/September 2010 at this plant were also well below the limit, ranging from 0.0202 lb/MMBtu from Unit 4 to 0.0463 lb/MMBtu from Unit 1.

Most Title V permit deviations reported by OVEC were for short-term excess opacity events. OVEC reported to URS that for Kyger Creek, less than1.5 percent of the operating hours were associated with excess opacity events. This indicates that Kyger Creek was in compliance with the opacity standard more than 98.5 percent of the time.

At both plants, there have been numerous boiler retubing projects. The issue regarding these projects is whether each project or as an aggregate of related projects may be viewed as a modification under New Source Review (Title I of the Clean Air Act) or as routine maintenance repair and replacement (RMRR) activities. EPA views boiler life extension or regaining boiler efficiency loss as a possible modification. As discussed previously in this report, in 2010, it was reported that 74% of the forced outages were attributed to tube failures at Kyger Creek and 70% attributed to tube failures at Clifty Creek. OVEC responded that they have evaluated the tube replacements as RMRR activities which would not be considered a modification. OVEC Legal staff agreed with this assessment that neither boiler life is extended nor loss of boiler efficiency is regained by these tube replacements.

NO_x controls were installed in 2002 and 2003 as SCRs were installed on each of the 5 boilers at Kyger and 5 of the 6 boilers at Clifty. Upgrades to the existing ID fans were completed to ensure that maximum unit output would not be compromised. During this same period, both facilities have been shifting from 100% bituminous coal to a blend of eastern coals and western sub-bituminous coal (PRB). The result has been a reduction in NO_x and SO_2 emissions. With the shift to a higher percentage PRB blend, Clifty has been able to sell the majority of their fly ash, reducing landfill requirements and developing a new revenue stream. All SCRs were designed for 90% removal efficiency and continue to operate at or near design.

Since the submission of the 2005 Independent Technical Review report on both plants, OVEC has addressed the operational issue with the SCRs of the accumulation of fly ash primarily on the first layer of catalyst. The hopper and screens have been changed to prevent the accumulation of fly ash on the catalyst. OVEC stated that the operation of the SCR systems have been greatly improved after these changes were implemented. The ammonia on demand systems continue to operate reliably as well.

In the late 1970's Electrostatic Precipitators (ESP) were installed on each of the boilers at Clifty and Kyger. Also, during this retrofit, new steel reinforced concrete stacks with metal

liners were constructed and the existing stacks were partially demolished. As a part of the ESP retrofit each boiler was converted to balanced draft and new induced draft fans were installed. ESP performance and reliability have been very good. Actual particulate emissions are consistently below regulatory limits. Continued excellent performance from these systems is expected. No significant issues exist at this time.

The only significant pollution release reported by OVEC since the 2005 technical report was a fish kill due to a release of ammonia to Kyger Creek by the Kyger Creek plant. The ammonia release was not a normal wastewater stream from the ammonia on demand system. This discharge was a result of an abnormal operation condition that resulted in a buildup of excess water in the system recycle tank containing abnormally high concentrations of urea and ammonia. OVEC paid for the fish kill and took initiative to negotiate a settlement with Ohio EPA. As a result, a settlement was issued by Ohio EPA in the Findings and Orders dated November 8, 2010. OVEC responded timely on February 15, 2011 to the findings and orders. In OVEC response letter dated February 15, 2011, OVEC submitted a timely general plan for Ohio EPA's approval. OVEC has not heard from Ohio EPA as of this date. Once Ohio EPA approves OVEC general plan, OVEC is expected to provide a detailed implementation plan and schedule on measures to be taken to prevent a reoccurrence. OVEC has instituted some interim measures such as bringing in a temporary 21,000 holding tank and they are disposing of the wastewater offsite.

As an aftermath of recent RCRA inspections, OVEC has worked to correct minor RCRA issues. In particular, for Kyger Creek, OVEC has resolved the issue with Ohio EPA from their 2008 inspection that the burning of boiler cleaning material in the boiler is not combustion of RCRA hazardous wastes. This issue re-emerged in the 2010 EPA inspection. This issue is still pending with EPA, and OVEC anticipates no notice of violation from EPA based on information OVEC provided to them.

Overall, both facilities continue to operate and comply with all federal and state environmental regulations. Environmental performance and management oversight continues to be good.

4.2 MODIFICATIONS REQUIRED FOR SCHEDULED REGULATIONS

A review of environmental compliance at both Clifty and Kyger suggests that both facilities have done a good job in achieving substantial compliance with state and federal regulations for air, water and solid waste pollution management. The proposed installation of FGDs on each operating boiler will result in over compliance and the accumulation of SO_2 credits.

FGD systems are currently planned for each of the 11 boilers. The current schedule has the construction tie-ins completed on the first system at Kyger between late 2011 and the first quarter 2012, with all remaining systems operational after tie-ins and commissioning are completed. At Clifty Creek, commissioning is planned for the first two quarters of 2013. With the operation of the FGD and SCR systems, both controls should be sufficient to meet future air EPA regulations such as Utility MACT Rule (proposed on May 3, 2011) and the Transport Rule (proposed on July 6, 2010). Specifically, for mercury control that will be required under the MACT rule, OVEC estimates that the SCR oxidation of mercury will provide for enhanced removal of mercury by the FGD system. OVEC believes that the

combined control should be able to meet mercury and other pollutants emission standards in both rules once these rules become final.

The only exception is that Unit 6 at Clifty Creek is not equipped with an SCR system. OVEC's approach is that OVEC could comply with the proposed Transport Rule during the first two years when interstate trading is permitted for this boiler. However, an SCR on Unit 6 at Clifty Creek would likely be necessary after the first two years when interstate trading is no longer permitted under the Transport Rule and it would also likely be necessary to comply with the proposed Utility MACT Rule. AEP Engineering is currently conducting preliminary engineering and developing a cost estimate for retrofitting an SCR on this unit. A decision on whether and when the SCR would be retrofitted would be made once these rules are finalized by EPA.

For compliance with greenhouse gas (GHG) requirements, OVEC has systems in place for reporting GHG emissions. OVEC does not anticipate any future projects that will result in any modification, construction or reconstruction that would trigger the significant GHG increases related to EPA's GHG tailoring rule.

At Clifty Creek, a new landfill with double lining has been operating. This landfill is large enough to accept FGD dewatered wastes, boiler ash, and bottom ash. With the leachate system, OVEC believes that there would be additional modifications or upgrades needed to comply with the future CCP rule when promulgated. However, OVEC is prepared to install mercury treatment system similar to Kyger Creek system, if required.

At Kyger Creek, a new fly ash pond was added to manage fly ash and boiler slag. The fly ash and boiler slag will be periodically dewatered from this pond and the solids will be sent to an on-site landfill. The landfill is large enough to accept dewatered wastes from fly ash pond as well as future FGD wastes. Kyger Creek has a mercury treatment system and chloride purge treatment wastewater treatment plant.

OVEC believes that the proposed Coal Combustion Residuals (CCR) Rule (proposed on June 21, 2010) will be based on classifying ash as a solid waste subject to Subtitle D requirements. Therefore, OVEC believes there will be no significant changes to comply with the CCR rule with the exception of possibly installing a mercury treatment system at Clifty Creek. OVEC believes EPA has no basis to classify ash as a special waste subject to hazardous waste rules under Subtitle C. Therefore, no upgrade studies have been initiated to consider this option, given the low risk that this waste would be subject to Subtitle C.

5.0 REVIEW OF OPERATION PLANS

5.1 COAL SUPPLY

Both Kyger Creek and Clifty Creek plants will be converting from primarily PRB and some Eastern Coal to primarily Eastern Coal with 20% blending with PRB. With the barge facilities there appears to be no significant issues in assuring adequate supplies of coal. Any transportation issues of PRB coal to the sites is greatly reduced with this conversion back to Eastern Coal.

AEP provides coal supply coordination to OVEC.

5.2 EQUIPMENT UPGRADES

The following equipment upgrades are planned over the next few years. This is in addition to standard inspection and maintenance programs that are in place.

Jet Bubble Reactor scrubbers to be installed on all five units at Kyger Plant. Commissioning scheduled for last quarter of 2011, and first quarter 2012.

Jet Bubble Reactor scrubbers to be installed on all six units at Clifty Plant. Commissioning scheduled for first two quarters of 2013.

Major boiler tube replacements on virtually all units planned over the next 4-1/2 years.

Boiler tube leak detection systems have been installed at Kyger Creek. These are scheduled for Clifty Creek in 2013 and 2014.

Clifty Creek coal unloading Plant #1 to be re-built in 2015.

5.3 ENVIRONMENTAL PLANS AND UPGRADES

As discussed in Section 4.2, preliminary plans and cost estimates are on-going to retrofit an SCR system on Unit 6 at Clifty Creek for compliance with future Utility MACT rule.

OVEC submitted a plan to the Ohio EPA in accordance with Order No. 1 of the Director's Final Findings and Orders for Kyger Creek as a result of ammonia release in July 2009 resulting in a fish kill in Kyger Creek. This plan is to address future handling of all wastewater streams associated with the ammonia-on-demand system for eliminating the potential of these wastewater streams from impacting the receiving water body. Interim measures are on-going and final measures will be implemented pending Ohio EPA's approval of the plan.

OVEC worked with the State of Ohio in the 1970's, conducting tests at both plants that ultimately resulted in the exemption of Clifty and Kyger from 316a requirements. Every five (5) years during the renewal of their NPDS permit, OVEC requests a continuation of the exemption and have always been granted it. OVEC expects this process to continue.

For compliance with the proposed cooling water intake rule, 316(b) issued on April 20, 2011, Clifty and Kyger plants' circulating water flow is under a specified percentage of the

Ohio River flow rate. This allows both plants to be exempt from 316(b) requirements. OVEC continues to monitor regulatory actions that could change this exemption. Currently, OVEC believes the most extensive modification that might be required is modification of the traveling screens. Another alternative that has been proposed is to restock the river with fish. OVEC has concluded that no cooling towers or major changes to intake or outflow structures would be required to comply with the proposed 316(b) intake rule.

5.4 TRANSMISSION ADEQUACY

No significant changes are planned.

5.5 PLANNED O&M EXPENDITURES

OVEC is budgeting approximately $70 million dollars per year for Operations and Maintenance through 2015. Much of this cost is fixed by the labor and benefits associated with the approximately 700 people on payroll.

5.6 PLANNED CAPITAL IMPROVEMENTS

Per the budget documents, OVEC is planning to spend $30 to $36 million per year on capital equipment upgrades through 2014. This is a significant increase over the approximately $25 million per years spent from 2006 through 2010. Primary purpose of these expenditures is to re-tube major sections of each boiler. Capital Improvements are reduced to $19 million in 2015, and will probably be less in 2016.

The capital costs of the new scrubbers are not included in the above numbers, but are shown in Tables 2-3-1 and 3-3-1.

- Total installed cost of the scrubbers at Kyger is budgeted at $657,380,663, with about $81,000,000 of this total to be spent in 2011 and 2012. The remainder of the budgeted amount has already been spent.

- Total installed cost of the scrubbers at Clifty is budgeted at $677,405,237, with about $265,000,000 of this total to be spent in 2011 through 2015. The remaining $412,000,000 has already been spent.

6.0 PROJECTED LIFE EXPECTANCY

The focus of this study is on the physical and operational life expectancy issues; namely assessments of projected plant and equipment longevity and performance based on operating history and experience, current material condition assessments, and plant owner plans for operating and maintaining the subject facilities. This independent engineering study addresses only issues of projected plant performance and the reasonableness of costs projected by owners to maintain desired levels of plant performance. This study does not address issues of economic and financial life expectancy except to point out where existing cost projections appear to be optimistic (low) and where there appears to be a significant likelihood of the plants experiencing higher than budgeted costs that could erode revenue margins. This study focuses on assessing the technology, material condition, operations history, and plans for future operation of Kyger Creek and Clifty Creek, and making judgments about physical and operational life expectancy.

The following conclusions emerge from this review:

1. The five (5) Kyger units and six (6) Clifty units have been operated within design parameters and maintained at a high level for 55 years. The plants continue to generate reliably at or near their rated capacity. Actual steam temperatures are at or less than design, which provides extra design margin for the boiler headers, piping and turbine components.

2. Jet Bubble Reactor scrubbers will be operational at Kyger in 2011 & 2102, and in 2013 at Clifty Creek. This allows the use of Eastern Coals at about 80% with a 20% blend of PRB planned. There is expected to be a "shake-out" period at both plants to optimize the fuel blends and to best interface the operation and maintenance of the scrubbers with the existing plants. While units are similar, the exact optimization at Kyger Creek will probably not be the same at Clifty Creek.

3. The units are all being operated as base load units with limited thermal cycling in the evenings and weekends. Thermal swings are limited by the need to keep the SCR's on line. Ramp rates are generally 2 MWe per minute. Should the units be changed to load following or more severe cycling operation, it is expected that life expectancy would be adversely affected by adding significant thermal cycles to equipment, and by operating equipment at less than optimum conditions. No contingency is included in this evaluation for potential future cycling operation.

4. Maintenance in 2005 through 2010 has continued on the expected schedule described in the 2005 report. Inspection and maintenance expenditures indicate a continued commitment by OVEC to continually maintain the plants for full operation for the foreseeable future. Should maintenance and inspection levels be reduced, life expectancy and availability would be expected to be adversely affected.

5. Planned maintenance through 2015 attempts to greatly reduce the forced outages from boiler tube leaks by replacing large sections of boiler tubes. These change-outs are based on inspection results and the locations of the tube leaks. This should be successful, and both plants have aggressive goals to reduce forced outages.

6. Note that serious operations errors, maintenance errors or equipment failures that can cause explosions, fires, or other catastrophic failures are always a possibility in power plants. In these evaluations, it is assumed that good operations and maintenance practices ensure that no such serious event occurs. OVEC recognizes this issue and the implementation and use of the operation simulators at both sites is a very positive move.

7. If the units continue to be operated and maintained as they are currently, and have been for the past several years, and if current plans for equipment maintenance and upgrades are successfully conducted on an ongoing basis, then an additional 30 years or more of useful life can be reasonably expected.

7.0 CONCLUSIONS

7.1 ABILITY OF PLANT TO OPERATE AS PLANNED

Both the Kyger Creek and Clifty Creek plants are operating at or near their design capability with about 85% availability. In recent years the forced outage rate has been as high as 11% at Kyger and 9% at Clifty Creek. Both plants have improved their forced outage rates significantly in the last 3 years, with further reductions expected.

Each unit has been generally base loaded and the 11 units as a system have produced a low of 15.84 GWhours in 2010 and a high of 17.92 GWhours in 2006. Each unit is still capable of producing its rated power, and does so with a reasonable outage rate.

The installation of the scrubbers will create an additional load of 4 to 8 MWe on each unit. Maintenance of these units will be a challenge because of the multiple units tied to each scrubber. On the positive side, there should be at least one spare pulverizer on each unit at all times with the switch to Eastern Coal, and slagging and fouling may be reduced.

7.2 ADEQUACY OF PROJECTED CAPITAL AND OPERATING COSTS

Capital and maintenance costs are budgeted through 2015, only. These values appear reasonable. There is an expectation that Capital Costs will be reduced beyond 2015. Maintenance Costs will probably be the same or slightly higher with the installation of the scrubbers.

7.3 ENVIRONMENTAL COMPLIANCE, PRESENT AND FUTURE

A review of environmental compliance at both Clifty and Kyger suggests that both facilities have done a good job in substantially complying with state and federal regulations for air, water and solid waste pollution management. The current plan appears to be adequate to meet proposed changes in the regulations but some risks do exist.

In the late 1970's Electrostatic Precipitators (ESP) were installed on each of the boilers at Clifty and Kyger. ESP performance and reliability has been very good. Actual particulate emissions are consistently below regulatory limits. Continued excellent performance from these systems is expected. No significant issues should exist with the addition of the FGD systems.

With the installation of ten SCR systems in 2003, OVEC is meeting NO_x emission requirements at both facilities. Over compliance has resulted in the accumulation of NO_x credits. SCR performance has been very good and similar performance is expected in the future. Changes were completed to hopper and screens to reduce or eliminate the accumulation of fly ash primarily on the first layer of catalyst.

FGD systems are currently planned for each of the 11 boilers. The current schedule has the construction tie-ins completed on the first system at Kyger Creek between late 2011 and the first quarter 2012, with all remaining systems operational after tie-ins and commissioning are completed. At Clifty Creek, commissioning is planned for the first two quarters of 2013. FGD technology is very mature; therefore the risk of these systems not

meeting performance guarantees is very low. O&M costs should also be very predictable. The proposed installation of FGD systems on each operating boiler will result in over compliance and the accumulation of SO_2 credits.

Operation of SCR and FGD controls in combination will be important for controlling mercury emissions for compliance with future air regulations. Preliminary plans are on-going for retrofitting Unit 6 at Clifty Creek with SCR. Previous testing at Clifty Creek has indicated that mercury oxidation rates are higher with their PRB-bituminous coal blend than other PRB facilities have reported. From the 2005 Independent Technical Review report, OVEC has stated they should expect 35-40% mercury removal from the co-benefit of the SCR and FGD systems. If additional mercury control is needed, OVEC may need to consider other technologies (e.g., activated carbon injection).

Overall, both plants have maintained an excellent record with respect to wastewater discharge. OVEC has taken a proactive stance to negotiate a settlement with Ohio EPA on the July 2009 ammonia release at Kyger Creek. The improvements being made at Kyger Creek will help reduce the risks of another similar event from occurring at both plants. Good compliance is expected to continue in the future. In the 1970's, OVEC conducted extensive testing that resulted in both the Clifty and Kyger Plants being exempt from 316(a). Also, 316(b) does not apply at either facility due to the relatively low circulating water flow rates compared to the average flow rate of the Ohio River. OVEC feels confident that both the 316(a) exemption and 316(b) exclusion will continue.

OVEC is aware of EPA's rulemaking activity for amending the current NPDES effluent guidelines for the Steam Electric Power Generating Industry. They are monitoring this activity to determine if changes may be required as a result. Per EPA's schedule, EPA plans to propose a rulemaking for this industry in July 2012 and take final action by January 2014.

Management and compliance with the solid/hazardous waste regulations has been good at both plants. Each facility has worked very hard to minimize the use of materials and chemicals that result in the disposal of a hazardous waste. Programs are in place to replace hazardous waste with non-hazardous alternatives and where hazardous materials must be used to minimize the resulting waste.

At Kyger and Clifty, six underground fuel oil storage tanks were closed out at each plant and above ground tanks were installed. If leaks are detected then it is quite possible that ground water monitoring wells will have to be installed around the tanks requiring the plant to monitor ground water for contamination. Monitoring will likely continue as long as the plant is operational. Some risk exists with the closure of these tanks associated with possible ground water contamination and the resulting remediation requirements.

7.4 COMPLIANCE WITH GOOD MANAGEMENT / ENGINEERING PRACTICES

OVEC compiles a number of matrices based on production, forced outages, repairs, emissions, cost of production, energy / kWh and others. It is clear from talking to the plant personnel that this data is used in its planning and decision making to focus resources on operations, inspection and repairs.

Interactions between plant systems are considered when making major decisions, such as additional pollution control equipment, changes in coal blending and water chemistry. This management approach helps avoid modifications that will benefit one portion of the process while not necessarily improving the availability and generation of the entire system.

Consultants are used as appropriate to develop recommendations.

Eleven units have operated for 55 years with minimal major incidents. This implies that the base equipment is operable without causing major incidents, that the processes and procedures are well enough understood that major mistakes have not been made.

Each forced outage is analyzed for trends that indicate a systemic problem. When such problems are discovered, resources are available and are assigned to develop a long term solution.

The OVEC system has a great advantage over many other utilities in that the plants are virtually the same age, with the same equipment, and very similar operating history. Once a systemic problem is observed at one unit, evidence of similar issues can be examined at the other ten units. This limits the "surprises" that can occur at utilities with several different types of equipment, fuel, and operating philosophies.

Of great importance is the management emphasis on long term management of the plants for extended use and high availability. At this time, it appears that this is a very strong culture at both plants. Any change to a management philosophy of short term cost reductions may create degradation of equipment that would seriously impact the expected life of the plant.

7.5 EXPECTED LIFE OF PHYSICAL ASSETS

Projecting the life of any equipment, particularly equipment 55 years old is not an exact science. It is obvious that equipment will wear out and must be repaired or replaced. Boiler tubes, rotating equipment blades and rotors, high temperature pipe, heater tubes, pulverizers and other plant equipment are continuous maintenance items. Judgment criteria to evaluate expected life and URS's judgments are as follows:

1. **Is there evidence of degradation that indicates expended life of major equipment?** The annual planned inspection programs of boilers and high energy equipment, and the attention to detail on maintaining supports that could increase stresses means that none of the boiler headers, steam drums, and most piping systems are not in need of major repair or replacement. Rotating equipment has been operating at high levels of performance without any apparent degradation.

2. **Is there a plan based on past experience and reasonable engineering judgment to identify failing equipment before it becomes a forced outage?** OVEC continues to maintain spare turbine rotors and main transformers. There is redundancy in the boiler feed pumps, feedwater heaters and condensate pumps. Inspections are routinely performed on a high percentage of the major equipment. Plants are heavily staffed with experienced personnel in maintenance, operations and management. This provides a substantial "corporate memory" that helps identify

root causes when incidents occur. This corporate mentality could blind personnel from new ideas, but it appears that OVEC consults often with AEP and other consultants to avoid this trap.

3. **Are there reasonable contingency plans for repair of equipment?** Equipment repairs are planned up to five years in advance. The maintenance and capital expenditure budgets are consistent on an annual basis. This implies a corporate mentality to continue to maintain and inspect equipment on a continual timetable, and not to try to manipulate the budget for low spending for a year or two, resulting in much higher costs 3 or more years later.

4. **Is it reasonable to assume that the equipment will be operated within design parameters?** The experience shows that the equipment is not degrading at a high rate. Primary steam output is at less than design on pressure and temperature. Given the 1050^{0}F design temperature, operation at 10^0 to 30^0 F less than design provides significant increases in stress allowable on the high temperature headers, tubes and pipe.

5. **Are reasonable safeguards in place to avoid major operational incidents that could cause catastrophic damage?** URS did not review operations procedures. However, the recent history shows no significant operational errors that resulted in a major forced outage. The installation of operating room simulators at Kyger Creek and Clifty Creek with regularly scheduled training sessions for experienced and new operators is viewed as a very prudent use of resources to avoid significant operator error.

Based on the current condition of the plants, the plans for continued inspection and maintenance, the continued good operational record, and the plant resources to implement these plans, URS believes it is reasonable to expect that the Kyger Creek and Clifty Creek plants will be able to physically operate for the next thirty years or even longer.

7.6 MAJOR RISKS TO LIFE EXPECTANCY

The above conclusions are based on materials presented by the owners and assumptions about both existing conditions and future operations. This opinion is based upon the following observations:

1. The original design was robust with an unusual amount of redundancy.
2. The operation over the first 48 years was nearly always base loaded with limited thermal cycles on the equipment.
3. Since 2003, some limited load following operation has been performed, but the thermal cycling is limited by the requirement to maintain operation of the SCR's.
4. Appropriate maintenance and inspection of equipment has nearly always been a high priority, and critical equipment has been maintained properly.
5. The plant runs at or below pressure and temperature design conditions.
6. Management is continuing to work towards improvement of maintenance, operation and inspection practices.
7. There appears to be a very strong sense of "ownership" by the plant employees that they are working to assure the plants long term operation.

8. Management appears to be focused on long term plant operation, not on a short term profit.
9. Major equipment repairs have been implemented in the last 4 years, with major events planned through 2015. The major focus is boiler tube and header replacement.
10. Cost of electricity is competitive with neighboring utilities.
11. Major environmental upgrades have been made and will be completed by second quarter of 2013. This will complete the scrubber installation. At this time, all known regulatory requirements will be achieved.
12. At both Clifty and Kyger, sophisticated simulators has been installed to train new operators, and to refresh training of experienced operators. This training emphasis should reduce the potential for catastrophic operator error.
13. Work force is experienced at the plant. Management is aware of likely turnover due to retirement, and is working to assure younger personnel are trained and ready to move into more responsible positions.
14. There is a true focus on water chemistry, including on-site chemists and functional laboratories. This is unusual compared to other plants that have shut down their in-house chemical laboratories.

Physical life expectancy is determined by cost considerations, generally fairly sudden and unacceptably large cost increases rather than long-term gradual erosion of revenue margins. The following are viewed as the major items that could cause a significant change in costs with resultant decrease in physical life expectancy.

A. Equipment failures and/or performance significantly below current expectations that are based on material condition assessments and equipment lifetime prognosis. Key items of equipment that could be subject to unexpected major failures include boilers, steam turbines, generators, transformers, etc. Plant performance parameters that are subject to technical risks include heat rate, summer and winter megawatt ratings, forced outage rates particularly if these are high enough to adversely affect plant capacity value and capacity market revenues, and ability to provide ancillary services and secure their attendant revenues. There are really two (2) categories of risk here; catastrophic mechanical failures, which may be a serious issue for plants and equipment of this vintage, and failure to perform as designed. The latter could apply to individual units on an overall basis, or to specific subsystems, original or new.

B. Units are currently not intended to be operated other than base loaded with limited load following resulting in limited thermal cycling. Additional damage would be incurred by cyclic or load following operation. Thermal stresses and risk of operational events during changing loads and startups would be increased. During power cutbacks or shutdowns, there is risk of damage caused by condensing steam; undrainable low points, entrapped coal or ash, and equipment failures during re-start. Cycling operation that is forced by changes in power market conditions could significantly shorten operational life expectancy.

C. A serious operational error that creates considerable direct and collateral damage. Extended downtime would increase cost and reduce production. Damaged equipment may not be replaceable, or may be inordinately expensive to replace.

D. Major management change that focuses on short term profits over long term availability of the plants could create deterioration of the equipment that is not anticipated based upon the current management focus.

E. Major regulatory changes in mercury emissions limits or other pollutant emissions would cause an increase in required equipment and likely erosions of plant capability and performance.

F. A major fire or other such incident caused by relatively minor failures such as the lube oil system have been known to shut down plants for a long period of time.

G. Major new environmental or other regulatory requirements that selectively impact on Kyger Creek and Clifty Creek to a greater extent than they impact on newer coal plants in the population. An example that comes to mind is an enhanced "new source review" legislation that makes it prohibitively expensive for Kyger and Clifty to continue with major plant improvements.

Most if not all of these risks are generally applicable to all coal fired plants in the United States. Such items as regulatory changes would presumably apply not only to Kyger and Clifty, but also to all other coal fired plants.

A different type of risk could be a combination of a major shift in fuel prices (e. g. coal vs. gas), early wide deployment of new technologies such as IGCC, and onerous new environmental regulations that would cause a shift from coal as a low cost producer to other energy sources, and particularly impact on older coal plants perhaps having high heat rates. Combinations of such circumstances could produce a radical change in the Kyger and Clifty positions in the power markets and tend to shorten economic life. However, such combinations of circumstances are not currently anticipated over the next twenty to thirty year horizon.

TABLE 2-2-1 KYGER CREEK PLANT GROSS POWER GENERATION SUMMARY						
YEAR	GROSS GENERATION, MWh					
	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	STATION
2001	1,603,500	1,483,500	1,368,600	1,496,700	1,460,100	7,412,400
2002	1,397,227	1,379,928	1,484,098	1,535,731	1,646,212	7,443,196
2003	1,531,999	1,662,103	1,330,372	1,354,556	1,403,535	7,282,565
2004	1,635,645	1,640,305	1,584,909	1,610,519	1,632,218	8,103,596
2005	1,630,224	1,681,938	1,602,597	1,666,620	1,668,242	8,249,621
2006	1,638,600	1,632,626	1,545,641	1,727,212	1,386,551	7,930,630
2007	1,440,066	1,378,542	1,229,338	1,484,725	1,566,287	7,098,958
2008	1,485,897	1,449,869	1,367,792	1,500,407	1,627,661	7,431,626
2009	1,474,100	1,397,689	1,546,959	1,508,086	1,574,030	7,500,864
2010	1,489,181	1,537,328	1,267,762	1,522,930	1,497,103	7,314,304
2011 Jan/Feb	273,453	277,782	272,190	291,030	302,210	1,416,665
TOTAL	15,599,892	15,521,610	14,600,258	15,698,516	15,764,149	77,184,425
AVG 2001-2010	1,532,644	1,524,383	1,432,807	1,540,749	1,546,194	7,576,776

TABLE 2-2-2 KYGER CREEK PLANT GENERATION STATISTICS, 2002 THROUGH 2010									
GENERAL DESCRIPTION	2002	2003	2004	2005	2006	2007	2008	2009	2010
Plant Capacity (MW)	1086.3	1086.3	1086.3	1086.3	1086.3	1086.3	1086.3	1086.3	1086.3
Plant Capability (MW)	1070	1070	1070	1070	1070	1070	1070	1070	1070
Gross Generation MWhr	7,443,196	7,282,565	8,103,596	8,249,621	7,930,630	7,385,139	7,431,626	7,500,864	7,314,304
Station Use (MWhr)	591,077	548,277	578,529	592,142	590,924	574,641	586,048	591,175	575,501
Net Generation (MWhr)	6,852,119	6,734,288	7,525,067	7,657,479	7,339,706	6,810,498	6,845,578	6,909,689	6,738,803
Plant Load Factor (%)	74%	76%	81%	83%	80%	76%	76%	76%	73%
Plant Capacity Factor (%)	78%	77%	85%				76%	77%	75%
Plant Capability Factor (%)	73%	72%	80%	82%	78%	73%	73%	74%	72%
Coal Burned (Tons)	2,760,922	2,787,089	3,126,355	3,227,185	3,270,506	3,373,944	3,524,167	3,602,670	3,450,193
BTU/Pound Coal (BTU/lb)	12,451	12,057	11,858	11,762	11,283	10,271	9,871	9,847	10,123
BTU/KWHR Net Generation	10,042	9,993	9,837	9,876	10,061	10,184	10,171	10,277	10,375

TABLE 2-2-3 KYGER CREEK AVAILABILITY FACTOR (%)						
YEAR	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	PLANT
2000	92.3	91.3	95.8	90.9	92.2	**92.5**
2001	92.4	89.3	85.8	92.0	87.0	**89.3**
2002	79.2	82.2	86.5	91.3	97.4	**87.3**
2003	90.0	98.5	81.8	83.8	84.6	**87.7**
2004	92.6	89.0	90.2	89.2	93.9	**91.0**
2005	90.0	91.0	88.8	89.2	93.1	**90.4**
2006	95.5	92.9	87.3	95.2	79.5	**90.1**
2007	85.2	82.5	89.1	87.3	90.7	**87.0**
2008	84.1	83.6	77.5	88.6	92.8	**85.3**
2009	83.6	79.3	84.9	86.6	87.4	**84.4**
2010	84.4	87.6	73.0	88.4	86.5	**84.0**
2011	89.2	92.0	91.9	96.0	100.0	**93.8**
AVERAGE 2000 TO 2010	**88.1**	**87.9**	**85.5**	**89.3**	**89.6**	**88.1**

2005 TO 2011 BASED ON MONTHLY AVERAGES & DIFFERENCES IN NUMBER OF DAYS IN EACH MONTH NOT ACCOUNTED FOR.

2011 DATA FOR JANUARY AND FEBRUARY ONLY AND NOT INCLUDED IN AVERAGES

TABLE 2-2-4 KYGER CREEK NET GENERATION CAPABILITY HISTORY

UNIT	ANNUAL AVERAGE ESTABLISHED CAPABILITY		ECAR 8 HOUR TEST, WINTER			WINTER AFTER ADJUSTMENT *	SUMMER LOW SIDE NET **	INTEGRATED AUXILIARY POWER
	2000	2001	2003	2004	2005	2010	2010	2010
1	212	214	220	219	217	208	199	17.1
2	206	204	211	210	215	207	198	16.9
3	207	206	206	205	207	209	201	15.7
4	205	202	206	207	214	207	199	16.1
5	208	209	204	206	207	208	199	15.9
PLANT TOTAL	**1038**	**1035**	**1047**	**1047**	**1060**	**1039**	**996**	**81.7**

* 2010 WINTER DATA BASED UPON SUMMER CAPABILITY TEST, ADJUSTED FOR AMBIENT CONDITIONS TO WINTER, MINUS INTEGRATED AUXILIARY POWER

** 2010 SUMMER LOW SIDE NET BASED UPON SUMMBER TEST, ADJUSTED FOR AMBIENT CONDTIONS, MINUS INTEGRATED AUXILIARY POWER

TABLE 2-2-5 KYGER CREEK EQUIVALENT FORCED OUTAGE RATES (%)						
YEAR	**UNIT 1**	**UNIT 2**	**UNIT 3**	**UNIT 4**	**UNIT 5**	**PLANT**
2000	2.78	3.60	4.15	4.50	1.79	3.38
2001	5.41	2.77	4.81	10.70	3.61	5.24
2002	6.13	5.29	4.39	3.29	2.24	5.41
2003	5.38	1.07	7.09	3.89	1.82	3.81
2004	3.05	4.76	5.05	4.31	1.95	3.82
2005	5.76	4.65	5.36	5.42	2.84	4.80
2006	8.30	6.51	9.99	6.51	5.24	7.63
2007	8.01	13.20	8.25	11.84	5.57	9.52
2008	10.62	13.03	14.33	11.00	8.33	11.17
2009	11.73	10.41	10.41	5.03	3.86	8.43
2010	5.55	4.08	7.42	8.37	5.70	6.42
2011	10.96	8.89	2.45	1.14	1.35	4.96

NOTE: 2005 TO 2011 BASED ON MONTHLY AVERAGES & DIFFERENCES IN NUMBER OF DAYS IN EACH MONTH NOT ACCOUNTED FOR.
2011 DATA FOR JANUARY AND FEBRUARY ONLY.

U.S. Energy Information Administration

EXHIBIT 5 Sierra Club

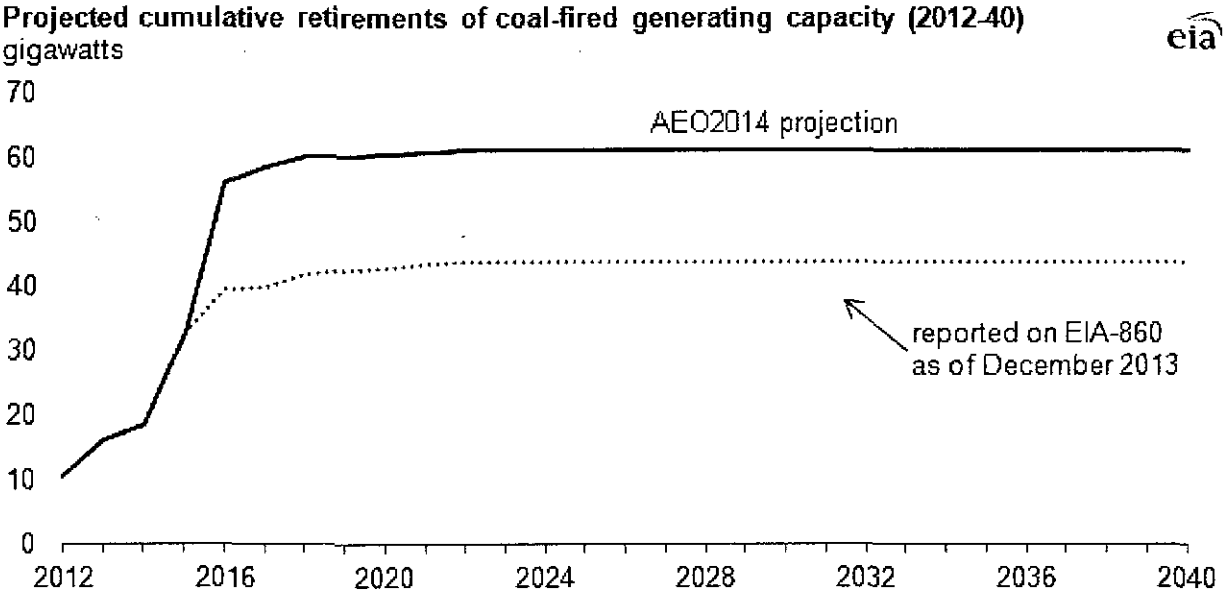
PENGAD 800-631-6989

Today in Energy

February 14, 2014

AEO2014 projects more coal-fired power plant retirements by 2016 than have been scheduled

Projected cumulative retirements of coal-fired generating capacity (2012-40)



Source: U.S. Energy Information Administration, Annual Energy Outlook 2014 Reference Case and Annual Electric Generator Report (Form EIA-860, final 2012 data)

Republished March 10, 2014, to correct an error in the table.

Coal-fired power plants in the United States have been under significant economic pressure in recent years because of low natural gas prices and slow electricity demand growth. The Annual Energy Outlook 2014 (AEO2014) Reference Case projects that a total of 60 gigawatts (GW) of capacity will retire by 2020, which includes the retirements that have already been reported to the U.S. Energy Information Administration.

Coal-fired power plants are subject to the Mercury and Air Toxics Standards (MATS), which require significant reductions in emissions of mercury, acid gases, and toxic metals. The standards are scheduled to take effect in April 2015, a deadline that is conditionally allowed to be extended by up to one year by state environmental permitting agencies. Projected retirements of coal-fired generating capacity in the AEO2014 include retirements above and beyond those reported to EIA as planned by power plant owners and operators. In these projections, 90% of the coal-fired capacity retirements occur by 2016, coinciding with the first year of enforcement for the Mercury and Air Toxics Standards.

To comply with MATS, it is assumed that all coal-fired plants have flue gas desulfurization equipment (scrubbers) or dry sorbent injection systems installed by 2016. Retirement decisions are based on the relative economics and regulatory environment of the electricity markets. A plant may retire if higher coal prices, lower wholesale electricity prices (often tied to natural gas prices), or reduced utilization make investment in equipment like scrubbers uneconomical. The Reference case projections shown in the graph above reflect EIA's baseline for comparing a number of different sensitivity cases exploring variations on these factors. The full Annual Energy Outlook 2014 including all sensitivity cases will be released in the spring.

At the end of 2012 there were 1,308 coal-fired generating units in the United States, totaling 310 GW of capacity. In 2012 alone, 10.2 GW of coal-fired capacity was retired, representing 3.2% of the 2011 total. The table below shows the progression of coal-

fired generating unit retirements between 2010 and 2012. Units that retired in 2010, 2011, or 2012 were small, with an average size of 97 megawatts (MW), and inefficient, with an average tested heat rate of about 10,695 British thermal units per kilowatthour (Btu/kWh). In contrast, units scheduled for retirement over the next 10 years are larger and more efficient: at 145 MW, the average size is 50% larger than recent retirements, with an average tested heat rate of 10,398 Btu/kWh.

Coal-fired generating unit retirements

	existing coal-fired capacity (2012)	retirements 2010	2011	2012
total net summer capacity (MW)	309,519	1,418	2,456	10,214
number of units	1,308	29	31	85
average net summer capacity (MW)	239	49	79	123
average age at retirement	N/A	58	63	51
average tested heat rate (Btu/kWh)	10,168	11,094	10,638	10,353
capacity factor	56%	36%	33%	35%

Source: U.S. Energy Information Administration, Form EIA-860, Annual Electric Generator Report
Note: Data for 2009 through 2012 represent actual retirements.

Principal contributors: Tyson Brown, Mike Leff

Available at: http://www.eia.gov/todayinenergy/detail.cfm?id=15031

v12-11-13

EXHIBIT 5 OCC

Ohio Valley Electric Corporation
Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2014-2040
in thousands of dollars

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Generation Sales													
Estimated Delivered Power Sales from OVEC Generation (MWhr)	[redacted]												
Estimated Surplus Energy Use Factor %	[redacted]												
Demand Charge													
Projected Annual Capital Improvement Costs (excluding SCR, PRB Coal Switch, FGD, Dry Fly Ash, 316B and Other Financed Projects)	[redacted]												
Projected Debt Expense and Short-Term Debt Costs (including Dry Fly Ash, 316B Clean Water Act, and Landfill Expansion Interim Debt)	[redacted]												
$445 Million - 5.80% Senior Unsecured Notes - Series 2006-A ($62 million refinanced 6.40%)	[redacted]												
$300 Million - 5.90% Senior Unsecured Notes - Series 2007-A-C ($46.9 million refinanced 6.50%)	[redacted]												
$50 Million - 5.92% Senior Unsecured Notes - Series 2008-A	[redacted]												
$300 Million - 6.71% Senior Unsecured Notes - Series 2008-B-C ($90.3 million refinanced 6.91%)	[redacted]												
$100 Million - Floating Rate LOC Backed Bonds - OAQDA Tax Exempt 2009-A-D	[redacted]												
$100 Million - 5.625% Bonds - OAQDA Tax Exempt 2009-E	[redacted]												
$100 Million - Floating Rate Bonds - IFA Tax Exempt 2010-A&B	[redacted]												
$200 Million - 5.00% Bonds - IFA Tax Exempt 2012-A	[redacted]												
$100 Million - Floating Rate - IFA Tax Exempt 2012-B&C	[redacted]												
$100 Million - Floating Rate Notes - Series 2013-A	[redacted]												
Projected [redacted]	[redacted]												
Projected Capital Improvements and Debt Costs (ICPA Component A)	[redacted]												
Projected Operation and Maintenance Costs (ICPA Component B)	[redacted]												
Projected Administration and General Costs (ICPA Component B)	[redacted]												
Projected Transmission and Dispatch Costs (ICPA Component B)	[redacted]												
Projected Taxes (ICPA Component C)	[redacted]												
Projected ROE Costs (ICPA Component D)	[redacted]												
Projected Postretirement Benefit Obligation (ICPA Component E)	[redacted]												
Projected Decommissioning and Demolition Obligation (ICPA Component F)	[redacted]												
Total Projected Demand Costs (ICPA Components A, B, C, D, E & F)	[redacted]												
Projected Demand Costs - $/MWhr	[redacted]												
Energy Charge													
Projected Coal Cost (delivered)	[redacted]												
Projected Allowance Cost (based on projected weighted average inventory)	[redacted]												
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)	[redacted]												
Total Projected Energy Costs	[redacted]												
Projected Energy Costs - $/MWhr	[redacted]												
Transmission Charge													
Projected Transmission Charges	[redacted]												
Less Transmission Charges Credit to Demand Charge (ICPA Component B)	[redacted]												
Total Transmission Costs	[redacted]												
Projected Transmission Costs - $/MWhr	[redacted]												
Summary of ICPA Billable Power Production Costs													
Total Projected Power Production Costs	[redacted]												
Dividend													
Projected Dividend	[redacted]												
Summary of ICPA Billable Power Production Costs Less Projected Dividend													
Total Projected Power Production Costs Less Projected Dividend	[redacted]												
Projected Power Production Costs Less Projected Dividend - $/MWhr	[redacted]												

Critical Assumptions:

Major Environmental Capital Projects (316b Compliance, Dry Fly Ash Conversion, Pond Modifications, and Landfill Expansion) funded by Long Term financing beginning in 2019.

Election of 5 Year Funding Holiday on contributions to Postretirement Benefit Obligation from 10/1/2013 to 12/31/2018.

Forecast assumes ICPA termination is 6/30/2040.

v12-11-13

Ohio Valley Electric Corporation
Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2014-2040
in thousands of dollars

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Generation Sales														
Estimated Delivered Power Sales from OVEC Generation (MWhr)	[redacted]													
Estimated Surplus Energy Use Factor %	[redacted]													
Demand Charge														
Projected Annual Capital Improvement Costs (excluding SCR, PRB Coal Switch, FGD, Dry Fly Ash, 316B and Other Financed Projects)	[redacted]													
Projected Debt Expense and Short-Term Debt Costs (including Dry Fly Ash, 316B Clean Water Act, and Landfill Expansion Interim Debt)	[redacted]													
$445 Million - 5.80% Senior Unsecured Notes - Series 2006-A ($62 million refinanced 6.40%)	[redacted]													
$300 Million - 5.90% Senior Unsecured Notes - Series 2007-A-C ($46.9 million refinanced 6.50%)	[redacted]													
$50 Million - 5.92% Senior Unsecured Notes - Series 2008-A	[redacted]													
$300 Million - 6.71% Senior Unsecured Notes - Series 2008-B-C ($90.3 million refinanced 6.91%)	[redacted]													
$100 Million - Floating Rate LOC Backed Bonds - OAQDA Tax Exempt 2009-A-D	[redacted]													
$100 Million - 5.625% Bonds - OAQDA Tax Exempt 2009-E	[redacted]													
$100 Million - Floating Rate Bonds - IFA Tax Exempt 2010-A&B	[redacted]													
$200 Million - 5.00% Bonds - IFA Tax Exempt 2012-A	[redacted]													
$100 Million - Floating Rate - IFA Tax Exempt 2012-B&C	[redacted]													
$100 Million - Floating Rate Notes - Series 2013-A	[redacted]													
Projected [redacted]	[redacted]													
Projected Capital Improvements and Debt Costs (ICPA Component A)	[redacted]													
Projected Operation and Maintenance Costs (ICPA Component B)	[redacted]													
Projected Administration and General Costs (ICPA Component B)	[redacted]													
Projected Transmission and Dispatch Costs (ICPA Component B)	[redacted]													
Projected Taxes (ICPA Component C)	[redacted]													
Projected ROE Costs (ICPA Component D)	[redacted]													
Projected Postretirement Benefit Obligation (ICPA Component E)	[redacted]													
Projected Decommissioning and Demolition Obligation (ICPA Component F)	[redacted]													
Total Projected Demand Costs (ICPA Components A, B, C, D, E & F)	[redacted]													
Projected Demand Costs - $/MWhr	[redacted]													
Energy Charge														
Projected Coal Cost (delivered)	[redacted]													
Projected Allowance Cost (based on projected weighted average inventory)	[redacted]													
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)	[redacted]													
Total Projected Energy Costs	[redacted]													
Projected Energy Costs - $/MWhr	[redacted]													
Transmission Charge														
Projected Transmission Charges	[redacted]													
Less Transmission Charges Credit to Demand Charge (ICPA Component B)	[redacted]													
Total Transmission Costs	[redacted]													
Projected Transmission Costs - $/MWhr	[redacted]													
Summary of ICPA Billable Power Production Costs														
Total Projected Power Production Costs	[redacted]													
Dividend														
Projected Dividend	[redacted]													
Summary of ICPA Billable Power Production Costs Less Projected Dividend														
Total Projected Power Production Costs Less Projected Dividend	[redacted]													
Projected Power Production Costs Less Projected Dividend - $/MWhr	[redacted]													

Critical Assumptions:

Major Environmental Capital Projects (316b Compliance, Dry Fly Ash Conversion, Pond Modifications, and Landfill Expansion) funded by Long Term financing beginning in 2019.

Election of 5 Year Funding Holiday on contributions to Postretirement Benefit Obligation from 10/1/2013 to 12/31/2016.

Forecast assumes ICPA termination is 6/30/2040.

EXHIBIT
6
OCC

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Attendance
Boards of Directors' Meeting
December 4, 2012

PARKING	LUNCH	OVEC	IKEC	Phone	DIRECTOR	SPONSORING COMPANY (Parent Company)
N	Y	Y	Y		Ahern, Anthony J. * ** ***	Buckeye Power Generating, LLC (Buckeye Power Inc.)
N	Y	Y	Y		Akins, Nicholas K. * **	Appalachian Power Company (AEP)
Y	Y	Y			Baker, Eric D.	Peninsula Generation Cooperative (Wolverine)
N	N		Y	Y	Chodak Paul	Indiana Michigan Power (AEP)
Y	Y	Y	Y		Doty, William S.	Southern Indiana Gas and Electric Company (Vectren Corporation)
Y	Y		Y		Games, Wayne D.	Southern Indiana Gas and Electric Company (Vectren Corporation)
Y	N	Y			Lantzy, Dennis A.	Dayton Power and Light (AES Corporation)
Y	Y	Y			Lasky, Charles D.	FirstEnergy Corp.
Y	Y		Y		Lewis, Marc E.	Indiana Michigan Power Company (AEP)
N	Y	Y			McCullough, Mark C. ***	American Electric Power (AEP)
Y	Y	Y			Nelson, Steven K.	Buckeye Power Generating, LLC (Buckeye Power Inc.)
N	Y	Y			O'Loughlin, Patrick W.	Buckeye Power Generating, LLC (Buckeye Power Inc.)
N	Y	Y			Powers, Robert P.	Ohio Power Company (AEP)
Y	Y	Y			Thompson, Paul W. ***	Kentucky Utilities Company (PPL)
N	Y	Y			Vegas, Pablo A. ***	Ohio Power Company (AEP)
Y	Y	Y			Voyles, Jr., John N. *	Louisville Gas and Electric Company (PPL)
N	N	N			Whitlock, Charles *	The Cincinnati Gas & Electric Company (Duke Energy Corporation)
					Vacant * **	The Toledo Edison Company (FirstEnergy Corp.)

* OVEC Executive Committee
** IKEC Executive Committee
*** HR Committee

1

OTHERS ATTENDING

Brodt, John	OVEC/IKEC
Brown, Mike	OVEC/IKEC
Carnes, Cliff (phone)	OVEC/IKEC
Cook, Ron	OVEC/IKEC
Hart, Bill	OVEC/IKEC
Hope, Annette (phone)	OVEC/IKEC
Jones, Dave	OVEC/IKEC
Keefer, Randy	OVEC/IKEC
Mattey, Bob	OVEC/IKEC
Pelfer, Mark	OVEC/IKEC
Chisling, Brian	Simpson, Thacher & Bartlett
McFarland, Jeff	Deloitte & Touche
Boteler, Randy	AEP
Kersanty, Jeff	AEP
Rosenthal, Marty	AEP
Tamms, Ken	AEP
Walton, Bob	AEP
West, Chuck	AEP
Zebula, Charles	AEP
Cecil, Greg	Duke Energy
Haney, James R.	FE
Stoner, Tom (phone)	FE
Szwed, Stanley F.	FE
DeCoeur, Dan	WPSC

EXHIBIT
Brodt
4
OCC

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Agenda
Boards of Directors' Meeting
December 4, 2012

			DISCUSSION	RESOLUTION	INFO
1.	Call Meeting to Order	Nick Akins			X
2.	Roll Call - Quorum (OVEC and IKEC)	John Brodt			X
3.	Approve Minutes of Prior Meeting (December 8, 2011 & July 16, 2012 OVEC and IKEC) - Resolutions (OVEC and IKEC)	John Brodt		X	
4.	Director and Executive Committee Changes *(Subject to FERC Approval)* - Resolutions (OVEC and IKEC)	Nick Akins		X	
5.	Construction Budgets for 2013, 2014, and 2015 -Resolutions (OVEC and IKEC)	Dave Jones		X	
6.	Declare Conditional Dividends for 1st, 2nd, 3rd, and 4th quarters in 2013 - *Resolutions (OVEC)*	John Brodt		X	
7.	AEP Service Corporation Service Charges for 2012 and 2013 - Resolutions (OVEC and IKEC)	John Brodt		X	
8.	*Treasurer's Report*	John Brodt		X	
9.	2012 Highlights & 2013 Plans	Mark Peifer	X		
10.	Report on Operating Activities	Dave Jones			X
11.	OVEC and IKEC Environmental Compliance Scrubber Update and Kyger Creek Dry Fly Ash Study - Resolution (OVEC)	Mike Brown Bob Walton	X	X	
12.	OVEC Coal Procurement and Transportation Strategy	Chuck West			X
13.	OVEC Power Costs 2012 YTD and Projections for 2013-2017	John Brodt			X
14.	OVEC 2013 Financing Plan	John Brodt			X
15.	Independent Auditor's Comments and Questions (Deloitte & Touche)	Jeff McFarland	X		
16.	OVEC Market Perspective	Ken Tamms	X		
17.	Impacts of Ohio Competition on OVEC's Ownership	Brian Chisling	X		
18.	OVEC Transmission - FERC Order 1000 Strategy - Future of Transmission as OVEC Asset	Brian Chisling	X		
19.	OVEC-IKEC Pension and Supplemental Pension Savings Plan Changes - Resolutions (OVEC and IKEC)	Marty Rosenthal		X	
	Adjournment				
	Executive Session - Human Resources Committee Report	Mark McCullough	X		

EXHIBIT
7
OCC

PENGAD 800-631-6989

OVEC/IKEC

OHIO VALLEY ELECTRIC CORPORATION
P. O. Box 16631
Columbus, Ohio 43215

June 17, 2013

Members of the Boards:

A. J. Ahern
E. D. Baker
P. Chodak
W. S. Doty
W. D. Games
J. R. Haney
L. L. Hillebrand
D. A. Lantzy
C. D. Lasky
M. E. Lewis
M. C. McCullough
S. K. Nelson
P. W. O'Loughlin
R. P. Powers
P. W. Thompson
J. N. Voyles, Jr.
C. Whitlock

Lady and Gentlemen:

During the December 4, 2012 meeting of the Boards of Directors of Ohio Valley Electric Corporation and Indiana-Kentucky Electric Corporation separate subcommittees were formed to discuss the following issues: (1) proposals by certain Sponsoring Companies regarding the proposed transfer of interests in the Inter-Company Power Agreement as part of their Ohio corporate separation plans; and (2) exploration of the costs and benefits of divesting OVEC's transmission facilities. OVEC's legal counsel, Brian Chisling of Simpson Thacher & Bartlett LLP, has been leading these subcommittees with participation from all of the Sponsoring Companies.

I am calling a meeting of the Boards on Tuesday, July 16, 2013, from 9:00 a.m. EST to 10:00 a.m. EST for Brian to report on the progress of the subcommittees and related issues. The meeting will be held via a conference call.

The toll-free conference number is 1-877-253-4307 and the passcode is 2002860.

Please advise John Brodt at our Piketon office (jbrodt@ovec.com, 740-289-7215) of your plans to participate in the meeting by telephone to determine if we will have quorum.

Sincerely,

Nick Akins

NK:bc

c: J. D. Brodt
B. E. Chisling
R. D. Cook
T. DePaull
D. DeZeeuw
D. E. Jones
M. A. Peifer
J. Sloat
T. Stoner
B. E. Valice
R. J. Mattey

OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Conference Call Agenda
Boards of Directors' Meeting
July 16, 2013

Call Meeting to Order	Mr. Akins
Roll Call - Quorum (OVEC and IKEC)	Mr. Brodt
Discussion of feedback from the subcommittee reviewing proposed transfer of interests in the Inter-Company Power Agreement by Sponsor Companies with Ohio corporate separation plans.	Mr. Chisling
Discussion of feedback from the subcommittee exploring the costs and benefits of divesting OVEC's transmission facilities.	Mr. Chisling
Other Business	
Adjournment	

OVEC

MARK PEIFER
DAVE JONES
RON COOK
BOB MATTEY
JOHN BRADT

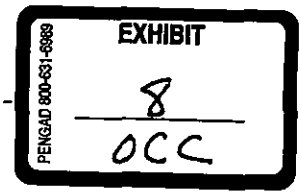
OHIO VALLEY ELECTRIC CORPORATION (OVEC)
INDIANA-KENTUCKY ELECTRIC CORPORATION (IKEC)
Conference Call Quorum
Directors by Parent Company
July 16, 2013

	OVEC	IKEC
American Electric Power		
Nicholas K. Akins	Y ☑ *	Y ☑ **
Paul Chodak		N ☐
Marc E. Lewis		N ☐
Mark C. McCullough	Y ☑	
Robert P. Powers	Y ☑	
Lana L. Hillebrand	Y ☑	
Buckeye Power		
Anthony J. Ahern	Y ☑ *	Y ☑ **
Steven K. Nelson	Y ☑	
Patrick W. O'Loughlin	Y ☑	
Duke Energy		
Charles Whitlock	Y ☑ *	
FirstEnergy		
James R. Haney	Y ☑	
Charles D. Lasky	N ☐ *	N ☐ **
PPL		
Paul W. Thompson	Y ☑	
John N. Voyles, Jr.	Y ☑ *	
Peninsula		
Eric D. Baker	Y ☑	
DAN [redacted] DeCour		
AES Corporation		
Dennis A. Lantzy	N ☐	
[redacted] HERTZEL		
[redacted] BRAD SCOTT (PHIL HARRINGTON) to Replace Dennis L.		
Vectren		
William S. Doty	Y ☑	Y ☑
Wayne Games		N ☐
	13/15	3/7

BRIAN CHISLING - SYB
JULIE SLOAT - AEP
STEVE HAYNES - AEP
ERIC DAISCOLL - AES

* OVEC Executive Committee
** IKEC Executive Committee

Duke ESP 3 -



OHIO VALLEY ELECTRIC CORPORATION

Minutes of Special Meeting of the

Board of Directors held December 4, 2012

A Special Meeting of the Board of Directors of **OHIO VALLEY ELECTRIC CORPORATION** (OVEC) was called to order by the President at 1 Riverside Plaza, Columbus, Ohio, on Tuesday, December 4, 2012, at 10:00 a.m., pursuant to notice duly given.

Nicholas K. Akins, President of the Corporation, acted as Chairman of the meeting, and John D. Brodt, Secretary and Treasurer of the Corporation, acted as Secretary of the meeting.

Mr. Brodt reported that the following Directors were present for the meeting:

Anthony J. Ahern	Mark C. McCullough
Nicholas K. Akins	Steven K. Nelson
Eric D. Baker	Patrick W. O'Loughlin
James R. Haney	Robert P. Powers
Dennis A. Lantzy (Telephone)	Paul W. Thompson
Charles D. Lasky	Pablo A. Vegas

John N. Voyles, Jr.

Mr. Brodt reported that the Minutes of Special Meeting of the Board of Directors of this Corporation, held on December 8, 2011 and July 16, 2012, had been sent to each of the Directors. He asked that, if there were no corrections, such minutes be approved in the form in which they were circulated. On a motion duly made, seconded, and unanimously adopted, it was

> **RESOLVED**, that the Minutes of the Special Meeting of the Board of Directors of this Corporation, held on, December 8, 2011 and July 16, 2012, are approved.

Mr. Akins recognized Stanley Szwed for nine years for service on the Board of Directors of this Corporation in conjunction with his resignation dated December 1, 2012. On a motion duly made, seconded, and unanimously adopted, it was

> **RESOLVED**, that subject to any necessary action by the Federal Energy Regulatory Commission under Section 305 of the Federal Power Act, Mr. James R. Haney be elected a Director of this Corporation; and further
>
> **RESOLVED**, that Mr. Charles D. Lasky be appointed a member of the OVEC Executive Committee.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Mr. Akins asked Brian Chisling of Simpson Thacher & Bartlett to report the impacts of Ohio competition on OVEC's ownership. Mr. Chisling discussed the impact of Ohio competition regulatory changes and the impact on OVEC's ownership. In addition, Mr. Chisling discussed FERC transmission regulations and the compliance issues for OVEC. Mr. Chisling offered to head two sub committees of the board to explore the impact of these regulations on OVEC.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

There being no further business to come before the Board, the meeting was adjourned.

Secretary
OHIO VALLEY ELECTRIC CORPORATION

Duke ESP 3 - EXHIBIT 10 OCC

[redacted]

From: Chisling, Brian [mailto:bchisling@stblaw.com]
Sent: Monday, April 01, 2013 1:54 PM
To: Cecil, Greg; Melillo, Nick; 'eric.driscoll@aes.com'; 'rgoocher@vectren.com'; 'cgrooms@buckeyepower.com'; 'sthaynes@aep.com'; 'jkass@wpsci.com'; 'laskyc@firstenergycorp.com'; 'john.voyles@lge-ku.com'
Cc: 'jbrodt@ovec.com'; 'djones@ovec.com'; 'rmattey@ovec.com'; 'trwallace@aep.com'; 'mapeifer@aep.com'; Beller, Amy T.; Beach, Rick; Riemann, Dina O; Fendig, John; Lisa R Groff/OR4/AEPIN; 'pmcastro@aep.com'; Tague, Nicole A.
Subject: OVEC ICPA Subcommittee Meetings -- Follow-Up Information and Call

All,

To follow up on the initial meeting of the OVEC ICPA Subcommittee on February 25, 2013, attached is a revised version of the "strawman" proposal from [redacted] and [redacted] of a form of parent guaranty proposed for use in connection with the proposed ICPA transfers to non-rated subsidiaries. Both a clean copy and a copy marked to show changes from the initial draft are attached. As before, I have participated in the revision of this proposed form. In addition, for background, I have attached certain pages from previous OVEC presentations to its credit ratings agencies listing the OVEC shareholders and Sponsors and providing information about each Sponsor's (or its proxy's) credit ratings with S&P, Moody's and Fitch.

With respect to the form of parent guaranty, I note the following changes: (1) language has been added to Section 1 to clarify that the cap amount would be reset annual; (2) the formula for the applicable cap (in Exhibit A) has been revised to clarify that it includes all current and projected debt during the annual period, and expanded to include the amount of 12 months of OVEC's projected billable costs for the current year (up from 6 month in the prior draft); and (3) an outline of the terms of the proposed consent has been added to the end of the draft, including the discussed "cross default" to the ICPA and proposed terms for acceptable replacement credit support.

We request that each of the subcommittee members review the revised form of the "strawman" guaranty and provide feedback to the subcommittee as to whether this type of arrangement would be acceptable in principle in connection with the proposed transfers. At this point, we also would welcome all specific questions, comments or concerns on the draft, including from your legal counsel. As before, we hope that the next meeting of the subcommittee could be used to determine (at a high level) if the proposed form of guaranty might receive unanimous support to permit the proposed ICPA transfers. In addition, we would like to surface material edits or concerns with the drafts. The desired result of the meeting would be a list of action items for future discussion, including (if possible) a path forward on a framework for the proposed ICPA transfers.

Subject to availability of most (if not all of the Sponsors), I suggest a follow-up meeting of the ICPA Subcommittee by phone on Wednesday April 17, 2013 at 11 am EDT. Please let me know as soon as you can if you are unable to make that day and time (and your availability that week). Dial in information for both meetings will be provided in an update email later this week. Please let me know if you want me to invite any other members of your organization (and feel free to forward to any members that will be involved, as I expect some Sponsors to include their legal teams in the review).

If you have any questions at all or if I can be of any assistance, please do not hesitate to contact me.

Respectfully,

Brian

Brian Chisling
Simpson Thacher & Bartlett LLP
425 Lexington Avenue
New York, New York 10017

Tel: (212) 455-3075
Fax: (212) 455-2502
bchisling@stblaw.com

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Duke ESP 3 -

EXHIBIT
PENGAD 800-631-6989
11
OCC

From: [redacted]
Sent: Friday, April 12, 2013 11:08 AM
To: [redacted]
Chisling, Brian; Janet Kass
Cc: Pat O'Loughlin
Subject: Re: OVEC ICPA Subcommittee Meetings - Guaranty
Attachments: [redacted] Guaranty Agreement - [redacted] Guaranty Agreement - v1.docx

All -

[redacted] has discussed the call with [redacted] and [redacted] and legal counsel for OVEC from earlier this week. Based upon the results of that call, [redacted] has modified the [redacted] guaranty proposal to:

1. Make the Sponsoring Companies beneficiaries of the guaranty, as they are parties to the ICPA and are entitled to enforce a payment default under the ICPA and should be entitled to also enforce the guaranty.

2. Modify the Guaranty to make it clear that it corresponds to the description of the guaranty as explained by OVEC's legal counsel on the call. These changes should be clarifications not substantive changes.

3. Modify the calculation of the Maximum Amount to include other OVEC costs that a Sponsoring Company is required to pay whether it takes power or not, such as unfunded decommissioning and demolition costs, unfunded post-retirement benefit obligations, unreimbursed and unfinanced facility additions and replacements, and minimum loading event costs.

Please review [redacted] proposed changes to the form of guaranty and let us know if you have any questions or comments prior to our call on Monday morning.

Also, please note that [redacted] continues to prefer the option of the assigning company remaining contingently liable or a straightforward parent guaranty from an investment grade parent with unlimited liability.

Regards,

[redacted]

>>> 4/9/2013 4:51 PM >>>
When: Monday, April 15, 2013 11:00 AM-12:00 PM (GMT-05:00) Eastern Time (US & Canada).
Where: Conference Call [redacted]

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

Meeting to discuss the form of parent guaranty proposed for use in connection with the potential ICPA transfers....that will be discussed with the entire OVEC subcommittee on 4/17/13.

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EXHIBIT
12
OCC
PENGAD 800-631-6989

From: Chisling, Brian
Sent: Tuesday, April 02, 2013 1:19 PM
To: [redacted]
Cc: [redacted]
Subject: RE: OVEC ICPA Subcommittee Meetings -- Follow-Up Information and Call

All -- I am available on 4/9, except from 11am to Noon ET (OVEC Transmission Future Subcommittee meeting at that time).

Brian Chisling
Simpson Thacher & Bartlett LLP
425 Lexington Avenue
New York, New York 10017

Tel: (212) 455-3075
Fax: (212) 455-2502
bchisling@stblaw.com

Please consider the environment before printing this email.

From: [redacted]
Sent: Tuesday, April 02, 2013 1:17 PM
To: [redacted]
Cc: [redacted]
Subject: RE: OVEC ICPA Subcommittee Meetings -- Follow-Up Information and Call

Monday is bad for me. Tuesday 4/9 works better if possible.

thanks,
Craig

>>> [redacted] > 4/1/2013 3:07 PM >>>
Janet/Craig,

[redacted] and [redacted] would like to discuss the revised proposal with [redacted] and [redacted] prior to the meeting on April 17th with all of the OVEC parties. Since [redacted] and [redacted] expressed some concern with the original proposal we thought it would be helpful to walk through any remaining concerns as a smaller group first.

Would you be available on Monday, April 8th?

Thanks,
[redacted]

Duke ESP 3 -

EXHIBIT
13
OCC

From: Chisling, Brian
Sent: Tuesday, April 16, 2013 5:51 PM
To: [redacted]
Subject: RE: [redacted] Comments on OVEC - [redacted] Guarantee Form

Thanks John. Your comments all make sense.

However, as a heads up to your team, despite efforts by [redacted] and [redacted] to iron out any differences with [redacted] and [redacted] over the basic structure of the guaranty (including calls in the last 48 hours), that group was unable to agree on further revisions that would be acceptable to each of [redacted] and [redacted]. So, unfortunately, I think the concept of a parent guaranty as a means to facilitate the [redacted] and [redacted] transfers is on hold pending further discussions (and [redacted] and [redacted] may decide to pursue other options, such as finding a way to fit their transfer into the "permitted" transfers under the ICPA or seeking PUCO relief from the requirement to transfer the ICPA interests).

I will go over this in more detail on the call, but wanted to give you a heads up. I apologize for your additional efforts on the form, but it is still possible we will all be back discussing it at some point in the future.

Please let me know if you have any questions.

Thank you,

- Brian

Brian Chisling
Simpson Thacher & Bartlett LLP
425 Lexington Avenue
New York, New York 10017

Tel: (212) 455-3075
Fax: (212) 455-2502
bchisling@stblaw.com

Please consider the environment before printing this email.

From: [redacted]
Sent: Tuesday, April 16, 2013 5:25 PM
To: Chisling, Brian
Subject: [redacted] Comments on OVEC - [redacted] Guarantee Form

Brian-
In connection with tomorrow morning's subcommittee call on the [redacted] transfer and guarantee/consent topics, attached please find a document which includes [redacted] (as Sponsors) edits or comments for consideration. We'll have representatives on the call as well. Thanks.
[redacted]

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EXHIBIT
14
OCC

From: [redacted]
Sent: Monday, August 12, 2013 1:25 PM
To: [redacted]
Cc: [redacted]
Subject: RE: OVEC/[redacted] Boards of Directors --- [redacted] ICPA Transfer Proposals
Attachments: [redacted] OVEC proposal_signed by [redacted] 08-12-2013.pdf

Steve,

[redacted] signed copy of [redacted] proposal is attached.

[redacted]

From: Chisling, Brian [mailto:bchisling@stblaw.com]
Sent: Friday, July 19, 2013 1:42 PM
To: 'nkakins@aep.com'; 'tahern@buckeyepower.com'; 'ebaker@wpsci.com'; 'pchodak@aep.com'; 'bdoty@vectren.com'; 'wdgames@vectren.com'; 'laskyc@firstenergycorp.com'; 'melewis@aep.com'; 'mcmccullough@aep.com'; 'snelson@frontier-power.com'; 'poloughlin@buckeyepower.com'; 'rppowers@aep.com'; 'jhaney@firstenergycorp.com'; 'paul.thompson@lge-ku.com'; 'john.voyles@lge-ku.com'; Whitlock, Chuck; 'lhillebrand@aep.com'
Cc: 'jbrodt@ovec.com'; 'mapelfer@aep.com'; 'djones@ovec.com'; 'tom.depaull@lge-ku.com'; 'tstoner@firstenergycorp.com'; 'bvallice@wpsci.com'; 'ddezeeuw@wpsci.com'; 'rmattey@ovec.com'; Cecil, Greg; 'ddecoeur@wpsci.com'; 'Chris Balmer'; 'Charles E Zebula'; Patricia M Castro; Lisa R Groff; Melillo, Nick; 'eric.driscoll@aes.com'; 'rgoocher@vectren.com'; 'cgrooms@buckeyepower.com'; Bradley Scott; Phil Herrington; 'Randall V Griffin'; 'sthaynes@aep.com'; 'jkass@wpsci.com'; Beller, Amy T.; Beach, Rick; Riemann, Dina O; 'Fendig, John'; 'brsignet@aep.com'; Tague, Nicole A.
Subject: OVEC/IKEC Boards of Directors --- [redacted] ICPA Transfer Proposals

Members of the OVEC/IKEC Boards:

At the request of [redacted], attached is a proposal (as discussed during the joint Board meeting on July 16th) for the consent of the Sponsoring Companies to permit [redacted] to comply with Ohio's corporate separation requirements through the transfer of its interest in the Inter-Company Power Agreement (ICPA) to a newly formed subsidiary. In connection with such transfer, [redacted] proposes to provide an AEP parent guaranty to support the obligations of the new subsidiary under the ICPA, as well as to agree to certain cross-defaults relating to such guaranty proposed to be placed in the ICPA.

[redacted] expects to provide its proposal, which we expect to include an identical form of parent guaranty and identical term sheet for the proposed consent to assignment. I will forward that proposal as soon as I receive it.

For the members of the ICPA Subcommittee, attached are blacklines showing the changes made by [redacted] to the proposed form of guaranty and term sheet for the proposed consent to assignment, from the last drafts presented to the subcommittee (by email on April 1, 2013).

In connection with these proposals [redacted] has requested that the ICPA Subcommittee (copied in this email, along with other members of the Sponsoring Companies participating in those discussions) conduct a teleconference

to discuss the proposals. ***OVEC proposes that such call be set for Monday August 5th at 11am ET.*** In order to confirm that time, please have one representative of each Sponsoring Company confirm that representatives of such Sponsoring Company would be available at that time (as well as availability for a call at another time on 8/5, or during the remainder of week from 8/7 through 8/9). If the proposed day and time do not work, I will do my best to pick an alternative that accommodates the most Sponsoring Companies based on the responses. ***Please respond by Noon ET on July 24th as to the availability of your representatives.***

Please let me know if you have any questions, and please feel free to reach out for any discussions among [redacted] and the Sponsoring Companies. As always, the Sponsoring Companies are encouraged to invite any other members of their organization to the ICPA Subcommittee call to aid in the discussion. Please forward this information (and the dial in information to provided next week) to the appropriate representatives.

Thank you,

- Brian

Brian Chisling
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Fax: (212) 455-2502
bchisling@stblaw.com

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Duke ESP 3 -

EXHIBIT
15
OCC

GUARANTY AGREEMENT

THIS GUARANTY AGREEMENT (this "Guaranty"), dated as of [date], 2013, is issued and delivered by [redacted], a Delaware corporation (the "Guarantor"), for the account of [redacted], a Delaware limited liability company (the "Obligor"), and for the benefit of **Ohio Valley Electric Corporation**, an Ohio corporation (~~the "Beneficiary"~~"OVEC") and for the benefit of each of the **Sponsoring Companies** under the Agreement (OVEC, together with the Sponsoring Companies under the Agreement, the "Beneficiaries").

Background Statement

WHEREAS, the Obligor proposed to and has become a party by assignment to that certain Amended and Restated Inter-Company Power Agreement dated as of September 10, 2010 with the ~~Beneficiary and the other parties thereto~~Beneficiaries (as amended, supplemented or otherwise modified from time to time, the "Agreement"); and

WHEREAS, ~~Beneficiary~~the Beneficiaries required that the Obligor deliver to the ~~Beneficiary~~Beneficiaries this Guaranty as a condition to and inducement to ~~Beneficiary~~the Beneficiaries to consent to the Obligor becoming a party to the Agreement with the ~~Beneficiary~~Beneficiaries.

Agreement

NOW, THEREFORE, in consideration of the foregoing and for good and valuable consideration received, the Guarantor hereby agrees as follows:

1. Guaranty; Limitation of Liability. The Guarantor hereby absolutely and unconditionally guarantees to the ~~Beneficiary~~Beneficiaries, with effect from the date of the Agreement, the timely payment of the Obligor's payment obligations under the Agreement, including, without limitation, the Obligor's damages owed to the Beneficiaries as a result of the Obligor's breach of the Agreement, as or when such amounts become due and payable, whether at their scheduled due dates, upon acceleration, as determined by a court of law, or otherwise (the "Guaranteed Obligations"), and agrees to pay any Guaranteed Obligations within three (3) business days of demand by ~~Beneficiary~~any one or more of the Beneficiaries; provided, however, that the Guarantor's aggregate liability hereunder shall not exceed the maximum amount, calculated on an annual basis by ~~the Beneficiary~~OVEC, in accordance with the formula provided in Exhibit A hereto and incorporated herein (the "Maximum Amount"). As of the date of this Guaranty, such Maximum Amount is U.S. [redacted]; _____, as calculated as shown on Exhibit A.[1] On or before January 31st of each subsequent calendar year (commencing with calendar year 2014), ~~the Beneficiary~~OVEC shall calculate the applicable amount for the then-current calendar year in accordance with Exhibit A and based on ~~the Beneficiary~~OVEC's records and provide notice thereof to the Guarantor; provided that, until the determination and

[1] Note: Maximum Amount is based on a calculation for the 2013 calendar year.

notice to the Guarantor of the new Maximum Amount, the applicable Maximum Amount for the previous year shall continue to apply.

Subject to the other terms of this Guaranty, the liability of the Guarantor under this Guaranty is limited to payment obligations required to be made by the Obligor under the Agreement.

The Guarantor agrees that the Guaranteed Obligations may at any time and from time to time exceed the Maximum Amount without impairing the guaranty hereunder or affecting the rights or remedies of the ~~Beneficiary~~Beneficiaries hereunder.

2. Effect of Amendments. The Guarantor agrees that the ~~Beneficiary~~Beneficiaries and the Obligor ~~and the other parties to the Agreement~~, individually or together (as applicable under the Agreement), may modify, amend and/or supplement the Agreement, may delay or extend the date on which any payment must be made pursuant to the Agreement or delay or extend the date on which any act must be performed by the Obligor thereunder or any demand for payment under the Agreement may be rescinded, or the liability of any person for any part of any payment or any collateral security or other guarantee or right of offset with respect to any payment may be renewed, accelerated, compromised, waived, surrendered or released by the ~~Beneficiary~~Beneficiaries or any other person, all without notice to or further assent by the Guarantor, who shall remain bound by this Guaranty, notwithstanding any such act by the ~~Beneficiary~~Beneficiaries or any other person and waives any defenses based on the foregoing.

3. Waiver of Rights. The Guarantor expressly waives notice of acceptance of this Guaranty, diligence, presentment, protest, demand for payment or notice of default or nonpayment, notice of dishonor and protest and any requirement that at any time any person exhaust any right to take any action against Obligor or their assets or any other guarantor or person, provided, however, that any failure of ~~Beneficiary~~Beneficiaries to give notice will not discharge, alter or diminish in any way Guarantor's obligations under this Guaranty. The Guarantor waives any and all notices of the creation, renewal, extension or accrual of any of the Guaranteed Obligations and notice of or proof of reliance by the ~~Beneficiary~~Beneficiaries upon this Guaranty, and the Guaranteed Obligations shall conclusively be deemed to have been contracted, incurred, renewed, extended, amended, or waived in reliance on this Guaranty. The Guarantor waives all defenses based on, and this Guaranty shall be construed as a continuing, absolute and unconditional guaranty of payment without regard to, (i) the validity or enforceability of the Agreement or any Guaranteed Obligations or any other collateral security, other guarantee or right of set off with respect thereto or lack of power or authority of, or change, restructuring or termination of the company existence or structure of, Obligor, (ii) any defense, set-off or counterclaim other than those to which the Obligor may be entitled to under the Agreement and (iii) suretyship defenses or impairment of collateral, in bankruptcy or any other circumstance, except any claims or defenses of Obligor under the Agreement in respect of payment or performance of its obligations under the Agreement.

4. Postponement of Subrogation. The Guarantor hereby postpones and subordinates in favor of the ~~Beneficiary~~Beneficiaries any and all rights which the Guarantor may have to (a) assert any claim against the Obligor based on subrogation rights with respect to

CONFIDENTIAL OVEC 00196

payments made by Guarantor hereunder and (b) any realization on any property of the Obligor, including participation in any marshalling of the Obligor's assets, until all Guaranteed Obligations have been paid in full and Obligors rights and obligations under the Agreement have been terminated. Upon payment in full of such Guaranteed Obligations and termination of the Obligor's rights and obligations under the Agreement, ~~Beneficiary~~Beneficiaries agrees that Guarantor shall be subrogated to the rights of ~~Beneficiary~~Beneficiaries against Obligor to the extent of Guarantor's payment to ~~Beneficiary~~ Beneficiaries

5. Reservation of Defenses. The Guarantor reserves to itself all rights, setoffs, counterclaims and other defenses that the Obligor may have expressly under the Agreement to payment of all or any portion of the Guaranteed Obligations, except defenses arising from the bankruptcy, insolvency, dissolution or liquidation of the Obligor and other defenses expressly waived in this Guaranty, including under Section 2 and Section 3 above.

6. Settlements Conditional. If any monies paid to the ~~Beneficiary~~Beneficiaries in reduction of the Guaranteed Obligations of the Obligor under the Agreement have to be repaid by the ~~Beneficiary~~Beneficiaries or any other person by virtue of any provision or enactment relating to bankruptcy, insolvency or liquidation for the time being in force or otherwise, the liability of the Guarantor under this Guaranty shall be computed, notwithstanding the termination or revocation of this Guaranty, which shall be reinstated and continue to be effective, as if such monies had never been paid to the ~~Beneficiary~~Beneficiaries; provided, however, if this Guaranty is replaced by a substitute guaranty pursuant to Section 17(ii), this provision shall only be applicable to such substitute guaranty and this Guaranty shall not be reinstated.

7. Primary Liability of the Guarantor. The Guarantor agrees that the ~~Beneficiary~~Beneficiaries may enforce this Guaranty without the necessity at any time of resorting to or exhausting any other rights or remedies, security or collateral or guarantees. This is a continuing Guaranty of payment and not merely of collection. This Guaranty shall not be affected by any change in the relationship between the Guarantor and the Obligor.

8. Term of Guaranty. This Guaranty shall remain in full force and effect until the earlier of (i) such time as all the Guaranteed Obligations have been discharged in full or terminated (including any potential for reinstatement pursuant to Section 6), as confirmed in writing by the ~~Beneficiary~~Beneficiaries, or (ii) in accordance with the terms for Early Termination set forth in Section 17 (the "Expiration Date"). In the event this Guaranty's Expiration Date is determined pursuant to clause (i) or (ii) above, such termination of this Guaranty shall have the affect of terminating the Guaranteed Obligations outstanding or contracted or committed for as of the time of termination, provided, however, that termination of this Guaranty for any reason other than pursuant to clause (i) or (ii) above shall not affect any Guaranteed Obligations outstanding or contracted or committed for at the time of termination, and this Guaranty shall remain in full force and effect with respect to such Guaranteed Obligations until finally and irrevocably paid in full. For the avoidance of doubt, (a) the Guarantor's payment of the Maximum Amount in full, if less than the Guaranteed Obligations, shall not constitute a discharge in full or termination of the Guaranteed Obligations and shall not result in the determination of the Expiration Date, and (b) effective as of the date of the determination of and notice to the Guarantor of the new Maximum Amount for any year, the Guarantor shall be required to pay any amounts necessary to discharge

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the Guaranteed Obligations in full, up to the amount of the newly determined Maximum Amount, even if the Guarantor has previously paid the Maximum Amount in full as determined for any prior year.

9. Governing Law. This Guaranty shall be governed by and construed in accordance with the laws of the State of New York.

10. Expenses. The Guarantor agrees to pay all reasonable out-of-pocket expenses (including the reasonable fees and expenses of the ~~Beneficiary's~~Beneficiaries' counsel) relating to the enforcement of the ~~Beneficiary's~~Beneficiaries' rights hereunder in the event the Guarantor disputes its obligations under this Guaranty. All payments under this Section 10 together with any payment of the Guaranteed Obligations shall remain subject to the aggregate amount limitations set forth in Section 1.

11. Submission to Jurisdiction; Waiver of Jury Trial. The Guarantor and the ~~Beneficiary~~Beneficiaries, through acceptance of this Guaranty, submit for any legal action relating to this Guaranty or for recognition or enforcement of any judgment in respect thereof, to the non-exclusive jurisdiction of the courts of the State of New York, the courts of the United ~~Stated~~States of America for the Southern District of New York, and appellate courts from any thereof, and consents that any such action may be brought in such courts and waives any objection it may now or hereafter have to the venue of any such action in any such court or that such action was brought in an inconvenient court. The Guarantor and the ~~Beneficiary~~Beneficiaries, through acceptance of this Guaranty, waive all rights to trial by jury in any action, proceeding or counterclaim arising or relating to this Guaranty.

12. Representations and Warranties. The Guarantor hereby represents and warrants that, as of the date of this Guaranty:

(a) it is a corporation duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation and has the corporate power and authority to conduct the business in which it is currently engaged and enter into and perform its obligations under this Guaranty;

(b) it has the corporate power and authority and the legal right to execute and deliver, and to perform its obligations under, this Guaranty, and has taken all necessary corporate action to authorize its execution, delivery and performance of this Guaranty;

(c) this Guaranty constitutes a legal, valid and binding obligation of the Guarantor enforceable in accordance with its terms, except as affected by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting the enforcement of ~~Beneficiary's~~Beneficiaries' rights generally and general equitable principles;

(d) the execution, delivery and performance of this Guaranty will not violate any provision of any requirement of law or contractual obligation of the Guarantor

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(except to the extent that any such violation would not reasonably be expected to have a material adverse effect on the Guarantor's ability to perform this Guaranty);

(e) no consent or authorization of, filing with, or other act by or in respect of, any arbitrator or governmental authority and no consent of any other person (including, without limitation, any stockholder or creditor of the Guarantor) is required in connection with the execution, delivery, performance, validity or enforceability of this Guaranty, other than any which have been obtained or made prior to the date hereof and remain in full force and effect;

(f) no litigation, investigation or proceeding of or before any arbitrator or governmental authority is pending or, to the knowledge of the Guarantor, threatened by or against the Guarantor relating to this Guaranty or that would have a material adverse effect on the Guarantor's ability to perform this Guaranty; and

(g) Guarantor has long-term senior unsecured non-credit enhanced debt having at least a BBB- rating from Standard & Poor's Rating Services, a division of The McGraw Hill Companies, Inc. ("S&P"), and at least a rating of Baa3 from Moody's Investors Service, Inc. ("Moody's").

13. Entire Agreement; Amendments. This Guaranty integrates all of the terms and conditions mentioned herein or incidental hereto and supersedes all oral negotiations and prior writings in respect to the subject matter hereof. This Guaranty may only be amended or modified by an instrument in writing signed by each of the Guarantor and the ~~Beneficiary~~Beneficiaries.

14. Headings. The headings of the various Sections of this Guaranty are for convenience of reference only and shall not modify, define or limit any of the terms or provisions hereof.

15. No Third-Party Beneficiary. This Guaranty is given by the Guarantor solely for the benefit of the ~~Beneficiary~~Beneficiaries and ~~its~~their respective successors, transferees and assigns, and is not to be relied upon by any other person or entity other than any Senior Agent (as defined below).

16. Assignment. The Guarantor may not assign its rights or obligations under this Guaranty without the prior written consent of the ~~Beneficiary~~Beneficiaries (which consent may not be unreasonably withheld or delayed) and each administrative agent for any lenders or noteholders under senior credit facilities and other senior debt of ~~the Beneficiary~~OVEC (each a "Senior Agent"). Any purported assignment in violation of this Section 16 shall be void and without effect.

17. Early Termination. This Guaranty shall terminate (i) ten (10) days after receipt by the ~~Beneficiary~~Beneficiaries of reasonably satisfactory written evidence from the Guarantor notifying the ~~Beneficiary~~Beneficiaries that the Obligor's long-term senior unsecured non-credit enhanced debt has at least a BBB- rating from S&P and at least a rating of Baa3 from Moody's; or (ii) immediately, upon the replacement of the Guaranty by substitute security in an

amount and in form and substance reasonably acceptable to the ~~Beneficiary~~Beneficiaries (and their respective lenders, if necessary) and the Senior Agent.

18. Notices. Any communication, demand or notice to be given hereunder will be duly given when delivered in writing or sent by facsimile to the Guarantor or to the ~~Beneficiary~~Beneficiaries, as applicable, at its address as indicated below:

If to the Guarantor, at:

[redacted]

With a copy to:

[redacted]

If to the ~~Beneficiary~~Beneficiaries, at:

Ohio Valley Electric Corporation
3932 U.S. Route 23
Piketon, Ohio 45661
Facsimile: (740) 289-7284
Attn: Treasurer

_____

_____

_____

With a copy to:

Ohio Valley Electric Corporation
1 Riverside Plaza

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Columbus, Oho
Facsimile: (614) 716-6494
Attn: Vice President and Chief Operating Officer

or such other address as the Guarantor or the ~~Beneficiary~~applicable Beneficiaries shall from time to time specify. Notice shall be deemed given (a) when received, as evidenced by signed receipt, if sent by hand delivery, overnight courier or registered mail or (b) when received, as evidenced by transmission confirmation report, if sent by facsimile and received on or before 4 pm local time of recipient, or (c) the next business day, as evidenced by transmission confirmation report, if sent by facsimile and received after 4 pm local time of recipient.

IN WITNESS WHEREOF, the Guarantor has executed this Guaranty as of the day and year first above written.

[redacted]

By: _____
Name:
Title:

Exhibit A - Annual Calculation of Maximum Amount (Including calculation as of the date of the Guaranty until reset in accordance with Section 1 thereof)

$ 1,596,486,240	~~Beneficiaries~~OVEC's aggregate, consolidated long-term debt as of December 31st of the previous calendar year.
$ 0	~~Beneficiary~~OVEC's reasonably expected additional long-term debt ~~for the current calendar year~~ based on ~~Beneficiaries'~~OVEC's long-term forecast of the current year.
$ 300,000,000	~~Beneficiaries~~OVEC's aggregate, consolidated short-term debt as of December 31st of the previous calendar year (including all amounts available under revolving credit or similar facilities, whether currently drawn or not).
$ 0	~~Beneficiary~~OVEC's reasonably expected additional short-term debt ~~for the current calendar year~~ based on ~~Beneficiaries'~~OVEC's long-term forecast of the current year.
$ 732,084,000	An amount equal to twelve (12) times the average monthly billable costs of ~~the Beneficiary~~OVEC for the current calendar year, as approved in ~~Beneficiary~~OVEC's current budget for such period (or if not yet approved, based on 110% of the last approved annual budget).
$_____	OVEC's aggregate unfunded Agreement Section 7.04 Decommissioning and Demolition Obligation
$_____	OVEC's aggregate unfunded Agreement Section 7.03 Postretirement Benefit Obligation
$_____	OVEC's aggregate unreimbursed and unfinanced Agreement Section 7.01 Replacement Costs
$_____	OVEC's reasonably expected additional Agreement Section 7.01 Replacement Costs not to be financed, based on OVEC's long-term forecast of the current year
$_____	OVEC's aggregate unreimbursed and unfinanced Agreement Section 7.02 Additional Facility Costs
$_____	OVEC's reasonably expected additional Agreement Section 7.02 Additional Facility Costs not to be financed, based on OVEC's long-term forecast of the current year.
$ ~~2,628,570,240~~	Subtotal
$_____ [redacted]	**Obligor's share [redacted] of the above subtotal based on its "Power Participation Ratio" (as defined in the Agreement) as of January 1st of**

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the current year.

plus

$_____ OVEC's aggregate Minimum Loading Event Costs resulting from the Obligor's failure to take its Power Participation Ratio share of the applicable Total Minimum Generating Output

plus

$_____ If the Guarantor has not paid the Guaranteed Obligations in full because the Guaranteed Obligations exceeded the Maximum Amount determined for the prior calendar year, an amount equal to the difference between the Guaranteed Obligations and the Maximum Amount as determined for the prior calendar year

Total Maximum Amount

$_____

Proposed Consent Agreements: The Guaranty would be entered into in connection with documents consenting to the assignment of the interests by the applicable Sponsoring Company under the Inter-Company Power Agreement ("ICPA") to the identified new Sponsoring Company. Consent to such assignment would be necessary from each of the other Sponsoring Companies under the ICPA (and their respective lenders, if necessary), and from the administrative agent for any lenders or noteholders under OVEC's senior credit facilities and other senior debt. For discussion purposes and based on preliminary feedback from some of the Sponsoring Companies, below is an outline of the basic terms of a proposed consent agreement.

1. Consent to Assignment. The applicable parties would consent to the proposed assignment and the form of the relevant documents to be executed as of the effective date of the assignment. A separate consent (on substantially the same form) would be used among each of the Sponsoring Companies proposing to assign its interests and the other Sponsoring Companies, as well as a separate consent from each applicable administrative agent for each such proposed assignment (on forms agreed with each such agent). The consent agreements would specify the parties to the assignment and the guarantor, as well as the agreed form of the guaranty and the assignment and assumption agreement. The consent agreements would acknowledge that upon the permitted assignment, the assigning entity would no longer be liable under the ICPA (and the assignee entity would assume all such liabilities). The consent agreements would be effective, subject to any necessary regulatory approvals,[2] immediately upon execution by all parties; provided that, if the proposed assignment is not consummated by an agreed outside date, the consent would automatically expire.

2. Effect of Default under Guaranty or Replacement Credit Support. If there exists an uncured default under or with respect to the Guaranty (or any replacement credit support, as discussed below), then such default would be considered a "Payment Default" of the applicable Sponsoring Company pursuant to Section 11.01 of the ICPA, and (unless and until cured) OVEC and each Sponsoring Company would be able to exercise all available remedies at law or in equity, including (without limitation) suspension of service to the defaulting Sponsoring Company under the ICPA. In addition, OVEC and each of the Sponsoring Companies shall be entitled to make a claim under the credit support then in effect for all damages relating to such default and any other costs, indemnities and expenses incurred or owing in connection with such default and the exercise of such remedies. In addition, if there is a default by the applicable Sponsoring Company under the ICPA or a default under or with respect to the Guaranty, the applicable Sponsoring Company or its affiliate would surrender its shares in OVEC and/or waive its rights to participate in OVEC's governance and to receive distributions as a shareholder of OVEC resulting from payments by the applicable Sponsoring Company or its Guarantor to OVEC. The applicable events of default (and cure periods, if any) with respect to the Guaranty (or replacement security) would be as follows:

---

2 Note: Subject to the scope of the proposed consent and further discussion, it is likely that the consent agreement among all of the Sponsoring Companies could be considered a technical amendment to the ICPA, and thus it would be advisable to obtain FERC approval for the applicable portions thereof. OVEC is reviewing the need for any other regulatory approvals, including from state commissions in Kentucky and Virginia (who have approved recent material amendments to the ICPA).

(a) any representation or warranty made by the entity issuing the Guaranty (or replacement credit support) was false or misleading in any material respect when made or deemed made or repeated (and such breach is not remedied within thirty (30) days after receipt of notice thereof from OVEC or the Sponsoring Companies);

(b) the failure of the entity issuing the Guaranty (or replacement credit support) to make any payment required or to perform any other material covenant or obligation under the applicable credit support agreement (and such failure is not remedied within three (3) business days after written notice thereof from OVEC or the Sponsoring Companies);

(c) the entity issuing the Guaranty (or replacement credit support) (i) files a petition or otherwise commences, authorizes or acquiesces in the commencement of a proceeding or cause of action under any bankruptcy, insolvency, reorganization or similar law, or has any such petition filed or commenced against it, (ii) makes an assignment or any general arrangement for the benefit of creditors, (iii) otherwise becomes bankrupt or insolvent (however evidenced), (iv) has a liquidator, administrator, receiver, trustee, conservator or similar official appointed with respect to it or any substantial portion of its property or assets, or (v) is generally unable to pay its debts as they become due;

(d) the Guaranty (or replacement credit support) fails to be in full force and effect ~~(other than in accordance with its terms)~~ in any material respect, including (without limitation, in an amount equal to the then-current Maximum Amount) prior to the termination or expiration of all of the applicable Sponsoring Company's obligations under the ICPA (the "Permitted Expiry");

(e) the entity issuing the Guaranty (or replacement credit support) repudiates, disaffirms, disclaims, or rejects, in whole or in part, or challenge the validity of the applicable credit support agreement, or fails to maintain a long-term senior unsecured non-credit enhanced debt having at least a BBB- rating from S&P and at least a rating of Baa3 from Moody's; or

(f) with respect to a letter of credit issued as a replacement credit support (as described below), (i) if the letter of credit has an expiration date earlier than the Permitted Expiry, a substitute letter of credit (satisfying all of the applicable requirements for a replacement credit support), which may include an amendment to the then-current letter of credit, in the required amount and with an expiration date that is at least one year after the expiration date of the then-current letter of credit is not delivered to OVEC and the Sponsoring Companies at least thirty (30) days prior to the expiration date of the then-current letter of credit and a replacement credit support (satisfying all of the applicable requirements for a replacement credit support) is not delivered to OVEC and the Sponsoring Companies prior to such 30-day period; or (~~B~~ii) if, at any time prior to the Permitted Expiry, the letter of credit issuer is no longer an "Acceptable Letter of Credit Provider" (as set forth below) or is subject to a bankruptcy or insolvency event and a replacement credit support (satisfying all of the applicable requirements for a replacement credit support) is not delivered to OVEC and the Sponsoring Companies within 10 days

after such event; provided that, OVEC and the Sponsoring Companies shall be permitted to draw on the applicable letter of credit to the extent not replaced as described above and hold the cash proceeds from any draw, and in such event such cash shall satisfy, in whole or in part, the requirement of replacement credit support until replaced as provided below.

As noted above, upon an uncured default as described above with respect to a letter of credit, the entire available amount of such letter of credit may be drawn by OVEC and the Sponsoring Companies and used as replacement credit support, without limitation or duplication of any other rights or remedies that may be available to it, with the right to draw upon such cash security deposit in accordance with the terms hereof at any time prior to the Permitted Expiry to the same extent that the letter of credit could have been drawn upon had it remained in force and effect (and assuming that the expiration date of the letter of credit was the Permitted Expiry); provided that, if subsequent to such draw down of a cash security deposit from the letter of credit, the applicable Sponsoring Company provides a replacement credit support (satisfying all of the applicable requirements for a replacement credit support), OVEC and the Sponsoring Companies shall return to the applicable Sponsoring Company (or its designee) a sum of cash equal to (i) the amount of the cash security deposit obtained as a result of such draw down, minus (ii) the aggregate amount of any and all drawings made by OVEC and the Sponsoring Companies on such cash security deposit as permitted hereunder, including for reimbursement of covered out-of-pocket expenses in connection with enforcement actions. In connection with the foregoing, OVEC and the Sponsoring Companies shall be required to keep any cash security deposit in a separate interest bearing account, and, shall not be entitled to use, possess, invest, commingle, assign, sell, or pledge such cash security deposit for any purpose other than drawing upon such cash security deposit in accordance with the terms hereof, and any interest on such cash security deposit shall be the sole property of OVEC and the Sponsoring Companies and shall be payable by OVEC and the Sponsoring Companies to the applicable Sponsoring Company (or its designee) on the date, if any, on which the cash security deposit is required to be returned in full to such Sponsoring Company (or its designee) hereunder.

3. Replacement Credit Support. At any time, the applicable Sponsoring Company is permitted to replace the Guaranty (or other replacement credit support then in effect) with other acceptable, replacement credit support as follows:

(a) a guaranty, in form and substance substantially similar to the Guaranty or otherwise satisfactory to OVEC, each of the Sponsoring Companies (and their respective lenders, if necessary), and each administrative agent for any of OVEC's lenders or noteholders under senior credit facilities and other senior debt, issued by an affiliate of the applicable Sponsoring Company with long-term senior unsecured non-credit enhanced debt having at least a BBB- rating from S&P and at least a rating of Baa3 from Moody's (or, if not then rated by both such rating agencies, having the requisite rating one of such agencies);

(b) an irrevocable, standby letter of credit (x) issued by a major U.S. commercial bank or the U.S. branch office of a foreign bank, which, in either case, (1) has counters for presentment and payment in the City of New York, (2) an asset base of at least $10 billion and (3) with long-term senior unsecured non-credit enhanced debt rating (or, if it does not have rated debt, an issuer rating) of at least A- from S&P and at least A3 from

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Moody's (an "Acceptable Letter of Credit Provider"), and (y) in a form reasonably acceptable to OVEC, each of the Sponsoring Companies (and their respective lenders, if necessary) and each administrative agent for any of OVEC's lenders or noteholders under senior credit facilities and other senior debt, including the following terms: (A) the amount of the letter of credit must be at least the amount of the then-applicable maximum liability cap under the Guaranty and subject to the same annual adjustments (or timely replacement or supplement (which may be an amendment to the stated amount of such letter of credit) with a substantially similar letter of credit in such adjusted amount); (B) such letter of credit names OVEC and each of the Sponsoring Companies as the ~~beneficiary~~beneficiaries thereunder; (C) drawings under the letter of credit are permitted upon a signed statement from an officer of the beneficiary of the letter of credit that the amount of drawing is owed to the beneficiary pursuant to the ICPA; (D) the applicable Sponsoring Company's agreement to pay all reasonable out-of-pocket expenses (including the reasonable fees and expenses of OVEC's counsel) relating to the enforcement of OVEC's and each Sponsoring Company's rights under the letter of credit; (E) the applicable Sponsoring Company shall not have any reimbursement obligations under such letter of credit; (F) the letter of credit shall provide that the beneficiary may draw the full amount of the letter of credit if the issuer is no longer an Acceptable Letter of Credit Provider, subject to any cure rights; and (G) the letter of credit requires the issuer thereof to provide at least 60 days' notice to OVEC and each Sponsoring Company of the renewal or non-renewal thereof and provides that the beneficiary may draw the full amount of the letter of credit if such letter of credit is not renewed or extended; or

(c) other replacement credit support in form and substance reasonably acceptable to OVEC, each of the Sponsoring Companies (and their respective lenders, if necessary), and with the prior written consent (in its sole discretion) of each administrative agent for any of OVEC's lenders or noteholders under senior credit facilities and other senior debt.

Upon any such replacement, the obligations of the applicable Sponsoring Company covered by such credit support (including with respect to prior periods and including all enforcement and other expenses relating to any replaced credit support) shall be assumed in full under such replacement credit support agreement and the former credit support agreement shall be terminated.

Document comparison by Workshare Compare on Wednesday, April 10, 2013 4:27:30 PM

Input	
Document 1 ID	PowerDocs://COLUMBUS/733095/1
Description	[redacted]_Guaranty_Agreement
Document 2 ID	PowerDocs://COLUMBUS/733095/3
Description	[redacted]-[redacted]_Guaranty_Agreement
Rendering set	Thompson Hine Standard

Legend	
Insertion	
~~Deletion~~	
~~Moved from~~	
Moved to	
Style change	
Format change	
~~Moved deletion~~	
Inserted cell	
Deleted cell	
Moved cell	
Split/Merged cell	
Padding cell	

Statistics	
	Count
Insertions	128
Deletions	78
Moved from	0
Moved to	0
Style change	0
Format changed	0
Total changes	206

Duke ESP 3 -

EXHIBIT
16
OCC

OHIO VALLEY ELECTRIC CORPORATION

Minutes of Special Meeting of the

Board of Directors held July 16, 2013

A Special Meeting of the Board of Directors of **OHIO VALLEY ELECTRIC CORPORATION** (OVEC) was called to order by the President on a conference call on Tuesday, July 16, 2013, at 9:00 a.m., pursuant to notice duly given.

Nicholas K. Akins, President of the Corporation, acted as Chairman of the meeting, and John D. Brodt, CFO, Secretary and Treasurer of the Corporation, acted as Secretary of the meeting.

Mr. Brodt reported that the following Directors were present on the conference call for the meeting:

Anthony J. Ahern	Steven K. Nelson
Eric D. Baker	Patrick W. O'Loughlin
William S. Doty	Robert P. Powers
James R. Haney	Paul W. Thompson
Lana L. Hillebrand	John N. Voyles
Mark C. McCullough	Charles Whitlock

Mr. Akins asked Brian Chisling, Simpson Thacher and Bartlett, LLP, to provide feedback from the subcommittee formed to review the proposed transfer of interests in the Inter-Company Power Agreement (ICPA) by the Sponsoring Companies with Ohio corporate separation plans. Mr. Chisling reported that the subcommittee had met on several occasions, in person and by phone, to discuss proposed alternatives to comply with the investment grade transfer requirement in the ICPA. Mr. Chisling advised that the subcommittee reviewed several proposals including requiring the new unregulated company secure an investment grade credit rating or issue a parent company guaranty with an annual liability limit for the unregulated company without a credit rating. Mr. Chisling stated that the subcommittee was unable to reach unanimous consent upon which credit rating format was agreeable to all parties of the ICPA.

Mr. Akins advised that the Ohio Sponsoring Companies are obligated by orders of the Public Utilities Commission of Ohio (PUCO) to separate their generation assets from their regulated entities. Mr. Akins indicated that he expected all of the Ohio Sponsoring Companies

that have not yet complied with the PUCO order to send a compliance proposal to the remaining Sponsoring Companies to accept or reject the proposal so that each impacted Ohio Sponsoring Company can comply or file with the PUCO to modify their PUCO order.

The Board discussed certain options and agreed that the Sponsoring Companies should respond to the individual proposals from any Ohio Sponsoring Company as to plans to comply with its PUCO order.

Mr. Akins asked Mr. Chisling to report on the feedback from the subcommittee exploring the costs and benefits of divesting OVEC's transmission facilities. Mr. Chisling stated that the subcommittee reviewed the pros and cons of joining (or having its generation served by) PJM Interconnection LLC (PJM), an adjoining regional transmission organization, or transferring the OVEC-IKEC transmission assets to a third party (who likely would operate within PJM). Mr. Chisling advised that these options could produce a cost savings of approximately $[redacted] per year, but that difficulties in moving power and future cost uncertainty prevented the Sponsors from agreeing on these alternatives.

After some discussion by the Board, Mr. Akins asked the subcommittee to continue to work on possible third party transactions and asked the OVEC Operating Committee to review whether or not to join PJM, with each reporting its findings to the Board.

There being no further business to come before the Board, the meeting was adjourned.

Secretary
OHIO VALLEY ELECTRIC CORPORATION

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EXHIBIT
17
OCC

From: Chisling, Brian <bchisling@stblaw.com>
Sent: Monday, July 22, 2013 12:31 PM
To: 'nkakins@aep.com'; 'tahern@buckeyepower.com'; 'ebaker@wpsci.com'; 'pchodak@aep.com'; 'bdoty@vectren.com'; 'wdgames@vectren.com'; 'laskyc@firstenergycorp.com'; 'melewis@aep.com'; 'mcmccullough@aep.com'; 'snelson@frontier-power.com'; 'poloughlin@buckeyepower.com'; 'rppowers@aep.com'; 'jhaney@firstenergycorp.com'; 'paul.thompson@lge-ku.com'; 'john.voyles@lge-ku.com'; Whitlock, Chuck; 'lhillebrand@aep.com'
Cc: 'jbrodt@ovec.com'; 'mapeifer@aep.com'; 'djones@ovec.com'; 'tom.depaull@lge-ku.com'; 'tstoner@firstenergycorp.com'; 'bvalice@wpsci.com'; 'ddezeeuw@wpsci.com'; 'rmattey@ovec.com'; Cecil, Greg; 'ddecoeur@wpsci.com'; 'Chris Balmer'; 'Charles E Zebula'; 'Patricia M Castro'; 'Lisa R Groff'; Melillo, Nick; 'eric.driscoll@aes.com'; 'rgoocher@vectren.com'; 'cgrooms@buckeyepower.com'; 'Bradley Scott'; 'Phil Herrington'; 'Randall V Griffin'; 'sthaynes@aep.com'; 'jkass@wpsci.com'; Beller, Amy T.; Beach, Rick; Riemann, Dina O; 'Fendig, John'; 'brsignet@aep.com'; Tague, Nicole A.
Subject: RE: OVEC/IKEC Boards of Directors --- [redacted] ICPA Transfer Proposals
Attachments: [redacted] Proposal 22July2013.pdf

All,

As promised, attached is the [redacted] proposal. The proposal includes an identical form of parent guaranty and identical term sheet for the proposed consent to assignment.

I will send dial in information for a meeting once I receive responses from all of the members of the ICPA Subcommittee (requested by Wednesday at Noon).

Please let me know if you have any questions.

Thank you,

- Brian

Brian Chisling
Simpson Thacher & Bartlett LLP
425 Lexington Avenue
New York, New York 10017

Tel: (212) 455-3075
Fax: (212) 455-2502
bchisling@stblaw.com

Please consider the environment before printing this email.

Duke ESP 3 -

EXHIBIT
18
OCC

PENGAD 800-631-6989

From: [redacted]
Sent: Monday, July 22, 2013 10:05 AM
To: Chisling, Brian
Cc: [redacted]
Subject: [redacted] Proposal
Attachments: [redacted] Proposal 22July2013.pdf

Brian, attached is our document that has signed.

[redacted]

He used to say, "Who ever dies with the most toys wins
But if he loses his soul, what has he gained in the end
I'll take a shack on a rock
Over a castle in the sand."

Mark Hall Lead Singer Casting Crowns, "American Dream" from the Album Casting Crowns

[redacted] PROPOSAL

FOR ASSIGNMENT TO [redacted] UNDER
THE OVEC AMENDED AND RESTATED INTER-COMPANY POWER AGREEMENT
DATED AS OF SEPTEMBER 10, 2010

This [redacted]. PROPOSAL is provided by [redacted] ([redacted]) to each Sponsoring Company under the ICPA to outline [redacted] proposal for [redacted]'s requested assignment to [redacted] of its rights, title, interests and obligations under the Amended and Restated Inter-Company Power Agreement dated as of September 10, 2010 (the "ICPA").

The following items as identified in paragraphs 1 through 7 below shall be identified as the [redacted] Proposal for the terms and conditions related to [redacted] requested assignment related to the ICPA (the "[redacted] Proposal"):

1. [redacted] has received the approval of the Public Utilities Commission of Ohio and the Federal Energy Regulatory Commission to separate its generation assets from its transmission and distribution assets.

2. In connection with regulatory approvals, [redacted] proposes to effectively transfer its rights, title, interests and obligations under the ICPA to [redacted], an unregulated wholly-owned subsidiary of [redacted] by obtaining the unanimous written consent from the Sponsoring Companies (and any other necessary party) as required under the ICPA.

3. In connection with obtaining the unanimous written consent from each Sponsoring Company, [redacted] will (i) execute a consent agreement with all the Sponsoring Companies detailing the agreed upon consent for assignment, the related obligations assumed by the assignee under the ICPA and the necessary credit support requirements (the "Consent Agreement") *(See Exhibit 1, Proposed Consent Agreements Term Sheet, attached hereto)* and (ii) provide a guaranty agreement (the "Guaranty Agreement") executed by [redacted] for the benefit of Ohio Valley Electric Corporation ("OVEC") to cover [redacted] payment obligations under the ICPA up to the Maximum Amount (as defined in the Guaranty Agreement) *(See Exhibit 2, Guaranty Agreement, attached hereto)*.

4. Guaranty Agreement Specifics. [redacted] will propose and follow the form of Guaranty Agreement as provided in Exhibit 2, which provides for the following key provisions:

a. Maximum Amount. The guaranty will have a monetary cap equal to the Maximum Amount and will remain in full force and effect until all the guaranteed obligations have been discharged in full up to the Maximum Amount.

b. Calculation of Guaranty Maximum Amount. OVEC shall recalculate the Maximum Amount based on [redacted] Power Participation Ratio on an annual basis, which amount shall be based on the following line item obligations:

(i) OVEC's aggregate consolidated long-term debt as of December 31st of the previous calendar year.

(ii) The amount required to be deposited with the trustee to either make-whole or defease the bonds as of December 31st of the previous calendar year.

(iii) OVEC's reasonably expected additional long-term debt for the current calendar year based on OVEC's long-term forecast.

(iv) OVEC's aggregate, consolidated short-term debt as of December 31st of the previous calendar year (including all amounts available under revolving credit or similar facilities, whether currently drawn of not).

(v) OVEC's reasonably expected additional short-term debt for the current calendar year based on OVEC's long-term forecast.

(vi) An amount equal to twelve (12) times the average monthly billable costs of OVEC for the current calendar year, as approved in OVEC's current budget for such period (or if not yet approved, based on 110% of the last approved annual budget).

(vii) Less any amounts paid by Guarantor to OVEC for payment of Guaranteed Obligations due OVEC under the Guaranty.

c. Guarantor To Maintain Investment Grade Rating. The Guaranty Agreement and Consent Agreement provide that the Guarantor has, and must maintain, a long-term senior unsecured non-credit enhanced debt rating of at least BBB- by S&P and Baa3 from Moody's; or if rated by only one agency, but not both, must have the requisite rating by one of such agencies.

d. Right to Substitute Guaranty Agreement. [redacted] may terminate its Guaranty Agreement if [redacted] (i) obtains a long-term senior unsecured non-credit enhanced debt rating of at least BBB- by S&P and Baa3 from Moody's; or if rated by only one agency, but not both, must have the requisite rating by one of such agencies, or (ii) provides a substitute acceptable security, including a letter of credit.

5. Consent Agreement Specifics. [redacted] will propose and follow the form of Consent Agreement as provided in Exhibit 1, which provides for the following key provisions:

a. Release of [redacted] under the ICPA. The Consent Agreement would provide that a Sponsoring Company proposing to assign its interests under the ICPA would no longer be liable under the ICPA and the assignee entity would assume all such liabilities.

b. Additional Payment Default under ICPA. The Consent Agreement would add that any default under the Guaranty Agreement or a replacement credit support would be considered a "Payment Default" (as such term is defined in the ICPA) and OVEC would be able to exercise all available remedies at law or in equity, including suspension of service to the defaulting Sponsoring Company.

c. Replacement Credit Support. The Consent Agreement would add the ability of the Sponsoring Company to replace the Guaranty Agreement (or such credit support in effect) with other acceptable credit support, including:

(i) a guaranty in a form similar to the current Guaranty Agreement or other acceptable form issued by an affiliate of the applicable Sponsoring Company with long-term senior unsecured non-credit enhanced debt rating of at least BBB- by S&P and Baa3 from Moody's; or if rated by only one agency, but not both, must have the requisite rating by one of such agencies; or

(ii) an irrevocable standby letter of credit in an acceptable form to OVEC and any of OVEC's lenders naming OVEC as beneficiary and with a value of at least the then-applicable Maximum Amount under the Guaranty Agreement.

6. [redacted] will schedule a meeting during the week of August 5th to provide the Sponsoring Companies with an opportunity to raise any questions, or present any remarks for discussion, regarding the [redacted] Proposal, including the base forms of the Guaranty Agreement and the Consent Agreement.

7. Should [redacted] receive unanimous acknowledgment from the Sponsoring Companies for [redacted]s proposed transfer as provided for under these terms and conditions of the [redacted] Proposal, then [redacted] shall work with OVEC and all the Sponsoring Companies during periodic meetings and drafting sessions in order to create one final form of Consent Agreement, as well as any necessary related documentation, for execution by all Sponsoring Companies.

Attached hereto is a Sponsoring Company Acknowledgment form, which we are requesting each Sponsoring Company to fill out in accordance with its position on the [redacted] Proposal and that each Sponsoring Company return the form to [redacted] by August 15, 2013 (the "Response Due Date"). Please note, in the event a Sponsoring Company chooses not to return a Sponsoring Company Acknowledgment form to [redacted] and identify either its agreement or disagreement with the [redacted] Proposal by the Response Due Date, [redacted] shall presume that the Sponsoring Company is in disagreement with the [redacted] Proposal.

[redacted]

Date: 22 July 2013

SPONSORING COMPANY ACKNOWLEDGMENT

TO THE [redacted] PROPOSAL FOR

ASSIGNMENT TO UNDER THE AMENDED AND RESTATED INTER-COMPANY POWER AGREEMENT DATED AS OF SEPTEMBER 10, 2010

Please evidence your agreement or disagreement with the [redacted] Proposal by August 15, 2013, by checking one of the boxes below and signing in the appropriate signatory block and return one fully executed original to [redacted]

☐ SPONSORING COMPANY **AGREES** WITH THE [redacted]. PROPOSAL

☐ SPONSORING COMPANY **DISAGREES** WITH THE [redacted] PROPOSAL

SPONSORING COMPANY

By:_____

Name: _____

Title:_____

Date:_____

Exhibit 1

Proposed Consent Agreements

Term Sheet

The Guaranty would be entered into in connection with documents consenting to the assignment of the interests by the applicable Sponsoring Company under the Inter-Company Power Agreement ("ICPA") to the identified new Sponsoring Company. Consent to such assignment would be necessary from each of the other Sponsoring Companies under the ICPA, and from the administrative agent for any lenders or noteholders under OVEC's senior credit facilities and other senior debt. For discussion purposes and based on preliminary feedback from some of the Sponsoring Companies, below is an outline of the basic terms of a proposed consent agreement.

1. Consent to Assignment. The applicable parties would consent to the proposed assignment and the form of the relevant documents to be executed as of the effective date of the assignment. A separate consent (on substantially the same form) would be used among each of the Sponsoring Companies proposing to assign its interests and the other Sponsoring Companies, as well as a separate consent from each applicable administrative agent for each such proposed assignment (on forms agreed with each such agent). The consent agreements would specify the parties to the assignment and the guarantor, as well as the agreed form of the guaranty and the assignment and assumption agreement. The consent agreements would acknowledge that upon the permitted assignment, the assigning entity would no longer be liable under the ICPA (and the assignee entity would assume all such liabilities). The consent agreements would be effective, subject to any necessary regulatory approvals,[1] immediately upon execution by all parties; provided that, if the proposed assignment is not consummated by an agreed outside date, the consent would automatically expire.

2. Effect of Default under Guaranty or Replacement Credit Support. If there exists an uncured default under or with respect to the Guaranty (or any replacement credit support, as discussed below), then such default would be considered a "Payment Default" of the applicable Sponsoring Company pursuant to Section 11.01 of the ICPA, and (unless and until cured) OVEC would be able to exercise all available remedies at law or in equity, including (without limitation) suspension of service to the defaulting Sponsoring Company under the ICPA. In addition, OVEC shall be entitled to make a claim under the credit support then in effect for all damages relating to such default and any other costs, indemnities and expenses incurred or owing in connection with such default and the exercise of such remedies. The applicable events of default (and cure periods, if any) with respect to the Guaranty (or replacement security) would be as follows:

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[1] Note: Subject to the scope of the proposed consent and further discussion, it is likely that the consent agreement among all of the Sponsoring Companies could be considered a technical amendment to the ICPA, and thus it would be advisable to obtain FERC approval for the applicable portions thereof. OVEC is reviewing the need for any other regulatory approvals, including from state commissions in Kentucky and Virginia (who have approved recent material amendments to the ICPA).

(a) any representation or warranty made by the entity issuing the Guaranty (or replacement credit support) was false or misleading in any material respect when made or deemed made or repeated (and such breach is not remedied within thirty (30) days after receipt of notice thereof from OVEC);

(b) the failure of the entity issuing the Guaranty (or replacement credit support) to make any payment required or to perform any other material covenant or obligation under the applicable credit support agreement (and such failure is not remedied within three (3) business days after written notice thereof from OVEC);

(c) the entity issuing the Guaranty (or replacement credit support) (i) files a petition or otherwise commences, authorizes or acquiesces in the commencement of a proceeding or cause of action under any bankruptcy, insolvency, reorganization or similar law, or has any such petition filed or commenced against it, (ii) makes an assignment or any general arrangement for the benefit of creditors, (iii) otherwise becomes bankrupt or insolvent (however evidenced), (iv) has a liquidator, administrator, receiver, trustee, conservator or similar official appointed with respect to it or any substantial portion of its property or assets, or (v) is generally unable to pay its debts as they become due;

(d) the Guaranty (or replacement credit support) fails to be in full force and effect (other than in accordance with its terms) in any material respect, including (without limitation, in an amount equal to the then-current Maximum Amount) prior to the termination or expiration of all of the applicable Sponsoring Company's obligations under the ICPA (the "Permitted Expiry");

(e) the entity issuing the Guaranty (or replacement credit support) repudiates, disaffirms, disclaims, or rejects, in whole or in part, or challenge the validity of the applicable credit support agreement;

(f) the long-term senior unsecured non-credit enhanced debt of the entity issuing the Guaranty (or replacement credit support) fails to maintain at least a BBB- rating from S&P and at least a rating of Baa3 from Moody's (or, if not rated by both such rating agencies, then having the requisite rating by one of such agencies) and the applicable Sponsoring Company fails within ten (10) business days thereafter to provide replacement credit support (as described below); or

(g) with respect to a letter of credit issued as a replacement credit support (as described below), (i) if the letter of credit has an expiration date earlier than the Permitted Expiry, a substitute letter of credit (satisfying all of the applicable requirements for a replacement credit support), which may include an amendment to the then-current letter of credit, in the required amount and with an expiration date that is at least one year after the expiration date of the then-current letter of credit is not delivered to OVEC at least thirty (30) days prior to the expiration date of the then-current letter of credit and a replacement credit support (satisfying all of the applicable requirements for a replacement credit support) is not delivered to OVEC prior to such 30-day period; or (B) if, at any time prior to the Permitted Expiry, the letter of credit issuer is no longer an

"Acceptable Letter of Credit Provider" (as set forth below) or is subject to a bankruptcy or insolvency event and a replacement credit support (satisfying all of the applicable requirements for a replacement credit support) is not delivered to OVEC within 10 days after such event; provided that, OVEC shall be permitted to draw on the applicable letter of credit to the extent not replaced as described above and hold the cash proceeds from any draw, and in such event such cash shall satisfy, in whole or in part, the requirement of replacement credit support until replaced as provided below.

As noted above, upon an uncured default as described above with respect to a letter of credit, the entire available amount of such letter of credit may be drawn by OVEC and used as replacement credit support, without limitation or duplication of any other rights or remedies that may be available to it, with the right to draw upon such cash security deposit in accordance with the terms hereof at any time prior to the Permitted Expiry to the same extent that the letter of credit could have been drawn upon had it remained in force and effect (and assuming that the expiration date of the letter of credit was the Permitted Expiry); provided that, if subsequent to such draw down of a cash security deposit from the letter of credit, the applicable Sponsoring Company provides a replacement credit support (satisfying all of the applicable requirements for a replacement credit support), OVEC shall return to the applicable Sponsoring Company (or its designee) a sum of cash equal to (i) the amount of the cash security deposit obtained as a result of such draw down, minus (ii) the aggregate amount of any and all drawings made by OVEC on such cash security deposit as permitted hereunder, including for reimbursement of covered out-of-pocket expenses in connection with enforcement actions. In connection with the foregoing, OVEC shall be required to keep any cash security deposit in a separate interest bearing account, and, shall not be entitled to use, possess, invest, commingle, assign, sell, or pledge such cash security deposit for any purpose other than drawing upon such cash security deposit in accordance with the terms hereof, and any interest on such cash security deposit shall be the sole property of OVEC and shall be payable by OVEC to the applicable Sponsoring Company (or its designee) on the date, if any, on which the cash security deposit is required to be returned in full to such Sponsoring Company (or its designee) hereunder.

3. Replacement Credit Support. At any time, the applicable Sponsoring Company is permitted to replace the Guaranty (or other replacement credit support then in effect) with other acceptable, replacement credit support as follows:

(a) a guaranty, in form and substance substantially similar to the Guaranty or otherwise satisfactory to OVEC and each administrative agent for any of OVEC's lenders or noteholders under senior credit facilities and other senior debt, issued by an affiliate of the applicable Sponsoring Company with long-term senior unsecured non-credit enhanced debt having at least a BBB- rating from S&P and at least a rating of Baa3 from Moody's (or, if not rated by both such rating agencies, then having the requisite rating by one of such agencies);

(b) an irrevocable, standby letter of credit (x) issued by a major U.S. commercial bank or the U.S. branch office of a foreign bank, which, in either case, (1) has counters for presentment and payment in the City of New York, (2) an asset base of at least $10 billion and (3) with long-term senior unsecured non-credit enhanced debt rating (or, if it does not have rated debt, an issuer rating) of at least A- from S&P and at

least A3 from Moody's (an "Acceptable Letter of Credit Provider"), and (y) in a form reasonably acceptable to OVEC and each administrative agent for any of OVEC's lenders or noteholders under senior credit facilities and other senior debt, including the following terms: (A) the amount of the letter of credit must be at least the amount of the then-applicable maximum liability cap under the Guaranty and subject to the same annual adjustments (or timely replacement or supplement (which may be an amendment to the stated amount of such letter of credit) with a substantially similar letter of credit in such adjusted amount); (B) such letter of credit names OVEC as the beneficiary thereunder; (C) drawings under the letter of credit are permitted upon a signed statement from an officer of the beneficiary of the letter of credit that the amount of drawing is owed to the beneficiary pursuant to the ICPA; (D) the applicable Sponsoring Company's agreement to pay all reasonable out-of-pocket expenses (including the reasonable fees and expenses of OVEC's counsel) relating to the enforcement of OVEC's rights under the letter of credit; (E) the applicable Sponsoring Company shall not have any reimbursement obligations under such letter of credit; (F) the letter of credit shall provide that the beneficiary may draw the full amount of the letter of credit if the issuer is no longer an Acceptable Letter of Credit Provider, subject to any cure rights; and (G) the letter of credit requires the issuer thereof to provide at least 60 days' notice to OVEC of the renewal or non-renewal thereof and provides that the beneficiary may draw the full amount of the letter of credit if such letter of credit is not renewed or extended; or

(c) other replacement credit support in form and substance reasonably acceptable to OVEC and with the prior written consent (in its sole discretion) of each administrative agent for any of OVEC's lenders or noteholders under senior credit facilities and other senior debt.

Upon any such replacement, the obligations of the applicable Sponsoring Company covered by such credit support (including with respect to prior periods and including all enforcement and other expenses relating to any replaced credit support) shall be assumed in full under such replacement credit support agreement and the former credit support agreement shall be terminated.

Exhibit 2

GUARANTY AGREEMENT

THIS GUARANTY AGREEMENT (this "Guaranty"), dated as of [date], 2013, is issued and delivered by [redacted] a Delaware corporation (the "Guarantor"), for the account of [redacted], a Delaware limited liability company (the "Obligor"), and for the benefit of **Ohio Valley Electric Corporation**, an Ohio corporation (the "Beneficiary").

Background Statement

WHEREAS, the Obligor proposed to and has become a party by assignment to that certain Amended and Restated Inter-Company Power Agreement dated as of September 10, 2010 with the Beneficiary and the other parties thereto (as amended, supplemented or otherwise modified from time to time, the "Agreement"); and

WHEREAS, Beneficiary required that the Obligor deliver to the Beneficiary this Guaranty as a condition to and inducement to Beneficiary to consent to the Obligor becoming a party to the Agreement with the Beneficiary.

Agreement

NOW, THEREFORE, in consideration of the foregoing and for good and valuable consideration received, the Guarantor hereby agrees as follows:

1. Guaranty; Limitation of Liability. The Guarantor hereby absolutely and unconditionally guarantees to the Beneficiary, with effect from the date of the Agreement, the timely payment of the Obligor's payment obligations under the Agreement, as or when such amounts become due and payable, whether at their scheduled due dates, upon acceleration or otherwise (the "Guaranteed Obligations"), and agrees to pay any Guaranteed Obligations within three (3) business days of demand by Beneficiary; provided, however, that the Guarantor's aggregate liability hereunder shall not exceed the maximum amount, calculated on an annual basis by the Beneficiary, in accordance with the formula provided in Exhibit A hereto and incorporated herein (the "Maximum Amount"). As of the date of this Guaranty, such Maximum Amount is U.S. $[redacted], as calculated as shown on Exhibit A.[1] On or before January 31st of each subsequent calendar year (commencing with calendar year 2014), the Beneficiary shall calculate the applicable amount for the then-current calendar year in accordance with Exhibit A and based on the Beneficiary's records and provide notice thereof to the Guarantor; provided that, until the determination and notice to the Guarantor of the new Maximum Amount, the applicable Maximum Amount for the previous year shall continue to apply.

Subject to the other terms of this Guaranty, the liability of the Guarantor under this Guaranty is limited to payment obligations required to be made by the Obligor under the Agreement.

[1] Note: Maximum Amount is based on a calculation for the 2013 calendar year.

The Guarantor agrees that the Guaranteed Obligations may at any time and from time to time exceed the Maximum Amount without impairing the guaranty hereunder or affecting the rights or remedies of the Beneficiary hereunder.

2. Effect of Amendments. The Guarantor agrees that the Beneficiary and the Obligor and the other parties to the Agreement, individually or together (as applicable under the Agreement), may modify, amend and/or supplement the Agreement, may delay or extend the date on which any payment must be made pursuant to the Agreement or delay or extend the date on which any act must be performed by the Obligor thereunder or any demand for payment under the Agreement may be rescinded, or the liability of any person for any part of any payment or any collateral security or other guarantee or right of offset with respect to any payment may be renewed, accelerated, compromised, waived, surrendered or released by the Beneficiary or any other person, all without notice to or further assent by the Guarantor, who shall remain bound by this Guaranty, notwithstanding any such act by the Beneficiary or any other person and waives any defenses based on the foregoing.

3. Waiver of Rights. The Guarantor expressly waives notice of acceptance of this Guaranty, diligence, presentment, protest, demand for payment or notice of default or nonpayment, notice of dishonor and protest and any requirement that at any time any person exhaust any right to take any action against Obligor or their assets or any other guarantor or person, provided, however, that any failure of Beneficiary to give notice will not discharge, alter or diminish in any way Guarantor's obligations under this Guaranty. The Guarantor waives any and all notices of the creation, renewal, extension or accrual of any of the Guaranteed Obligations and notice of or proof of reliance by the Beneficiary upon this Guaranty, and the Guaranteed Obligations shall conclusively be deemed to have been contracted, incurred, renewed, extended, amended, or waived in reliance on this Guaranty. The Guarantor waives all defenses based on, and this Guaranty shall be construed as a continuing, absolute and unconditional guaranty of payment without regard to, (i) the validity or enforceability of the Agreement or any Guaranteed Obligations or any other collateral security, other guarantee or right of set off with respect thereto or lack of power or authority of, or change, restructuring or termination of the company existence or structure of, Obligor, (ii) any defense, set-off or counterclaim other than those to which the Obligor may be entitled to under the Agreement and (iii) suretyship defenses or impairment of collateral, in bankruptcy or any other circumstance, except any claims or defenses of Obligor under the Agreement in respect of payment or performance of its obligations under the Agreement.

4. Postponement of Subrogation. The Guarantor hereby postpones and subordinates in favor of the Beneficiary any and all rights which the Guarantor may have to (a) assert any claim against the Obligor based on subrogation rights with respect to payments made by Guarantor hereunder and (b) any realization on any property of the Obligor, including participation in any marshalling of the Obligor's assets, until all Guaranteed Obligations have been paid in full and Obligors rights and obligations under the Agreement have been terminated. Upon payment in full of such Guaranteed Obligations and termination of the Obligor's rights and obligations under the Agreement, Beneficiary agrees that Guarantor shall be subrogated to the rights of Beneficiary against Obligor to the extent of Guarantor's payment to Beneficiary.

5. Reservation of Defenses. The Guarantor reserves to itself all rights, setoffs, counterclaims and other defenses that the Obligor may have expressly under the Agreement to payment of all or any portion of the Guaranteed Obligations, except defenses arising from the bankruptcy, insolvency, dissolution or liquidation of the Obligor and other defenses expressly waived in this Guaranty, including under Section 2 and Section 3 above.

6. Settlements Conditional. If any monies paid to the Beneficiary in reduction of the Guaranteed Obligations of the Obligor under the Agreement have to be repaid by the Beneficiary or any other person by virtue of any provision or enactment relating to bankruptcy, insolvency or liquidation for the time being in force or otherwise, the liability of the Guarantor under this Guaranty shall be computed, notwithstanding the termination or revocation of this Guaranty, which shall be reinstated and continue to be effective, as if such monies had never been paid to the Beneficiary; provided, however, if this Guaranty is replaced by a substitute guaranty pursuant to Section 17(ii), this provision shall only be applicable to such substitute guaranty and this Guaranty shall not be reinstated.

7. Primary Liability of the Guarantor. The Guarantor agrees that the Beneficiary may enforce this Guaranty without the necessity at any time of resorting to or exhausting any other rights or remedies, security or collateral or guarantees. This is a continuing Guaranty of payment and not merely of collection. This Guaranty shall not be affected by any change in the relationship between the Guarantor and the Obligor.

8. Term of Guaranty. This Guaranty shall remain in full force and effect until the earlier of (i) such time as all the Guaranteed Obligations up to the Maximum Amount have been discharged in full or terminated (including any potential for reinstatement pursuant to Section 6), as confirmed in writing by the Beneficiary, or (ii) in accordance with the terms for Early Termination set forth in Section 17 (the "Expiration Date"). In the event this Guaranty's Expiration Date is determined pursuant to clause (i) or (ii) above, such termination of this Guaranty shall have the affect of terminating the Guaranteed Obligations outstanding or contracted or committed for as of the time of termination, provided, however, that termination of this Guaranty for any reason other than pursuant to clause (i) or (ii) above shall not affect any Guaranteed Obligations outstanding or contracted or committed for at the time of termination, and this Guaranty shall remain in full force and effect with respect to such Guaranteed Obligations until finally and irrevocably paid in full up to the Maximum Amount.

9. Governing Law. This Guaranty shall be governed by and construed in accordance with the laws of the State of New York.

10. Expenses. The Guarantor agrees to pay all reasonable out-of-pocket expenses (including the reasonable fees and expenses of the Beneficiary's counsel) relating to the enforcement of the Beneficiary's rights hereunder in the event the Guarantor disputes its obligations under this Guaranty. All payments under this Section 10 together with any payment of the Guaranteed Obligations shall remain subject to the aggregate amount limitations set forth in Section 1.

11. Submission to Jurisdiction; Waiver of Jury Trial. The Guarantor and the Beneficiary, through acceptance of this Guaranty, submit for any legal action relating to this

Guaranty or for recognition or enforcement of any judgment in respect thereof, to the non-exclusive jurisdiction of the courts of the State of New York, the courts of the United States of America for the Southern District of New York, and appellate courts from any thereof, and consents that any such action may be brought in such courts and waives any objection it may now or hereafter have to the venue of any such action in any such court or such action was brought in an inconvenient court. The Guarantor and the Beneficiary, through acceptance of this Guaranty, waive all rights to trial by jury in any action, proceeding or counterclaim arising or relating to this Guaranty.

12. Representations and Warranties. The Guarantor hereby represents and warrants that, as of the date of this Guaranty:

(a) it is a corporation duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation and has the corporate power and authority to conduct the business in which it is currently engaged and enter into and perform its obligations under this Guaranty;

(b) it has the corporate power and authority and the legal right to execute and deliver, and to perform its obligations under, this Guaranty, and has taken all necessary corporate action to authorize its execution, delivery and performance of this Guaranty;

(c) this Guaranty constitutes a legal, valid and binding obligation of the Guarantor enforceable in accordance with its terms, except as affected by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting the enforcement of Beneficiary's rights generally and general equitable principles;

(d) the execution, delivery and performance of this Guaranty will not violate any provision of any requirement of law or contractual obligation of the Guarantor (except to the extent that any such violation would not reasonably be expected to have a material adverse effect on the Guarantor's ability to perform this Guaranty);

(e) no consent or authorization of, filing with, or other act by or in respect of, any arbitrator or governmental authority and no consent of any other person (including, without limitation, any stockholder or creditor of the Guarantor) is required in connection with the execution, delivery, performance, validity or enforceability of this Guaranty, other than any which have been obtained or made prior to the date hereof and remain in full force and effect;

(f) no litigation, investigation or proceeding of or before any arbitrator or governmental authority is pending or, to the knowledge of the Guarantor, threatened by or against the Guarantor relating to this Guaranty or that would have a material adverse effect on the Guarantor's ability to perform this Guaranty; and

(g) Guarantor has long-term senior unsecured non-credit enhanced debt having at least a BBB- rating from Standard & Poor's Rating Services, a division of The McGraw Hill Companies, Inc. ("S&P"), and at least a rating of Baa3 from Moody's

Investors Service, Inc. ("Moody's") (or, if not rated by both such rating agencies, then having the requisite rating by one of such agencies).

13. Entire Agreement; Amendments. This Guaranty integrates all of the terms and conditions mentioned herein or incidental hereto and supersedes all oral negotiations and prior writings in respect to the subject matter hereof. This Guaranty may only be amended or modified by an instrument in writing signed by each of the Guarantor and the Beneficiary.

14. Headings. The headings of the various Sections of this Guaranty are for convenience of reference only and shall not modify, define or limit any of the terms or provisions hereof.

15. No Third-Party Beneficiary. This Guaranty is given by the Guarantor solely for the benefit of the Beneficiary and its successors, transferees and assigns, and is not to be relied upon by any other person or entity other than any Senior Agent (as defined below).

16. Assignment. The Guarantor may not assign its rights or obligations under this Guaranty without the prior written consent of the Beneficiary (which consent may not be unreasonably withheld or delayed) and each administrative agent for any lenders or noteholders under senior credit facilities and other senior debt of the Beneficiary (each a "Senior Agent"). Any purported assignment in violation of this Section 16 shall be void and without effect.

17. Early Termination. This Guaranty shall terminate (i) ten (10) days after receipt by the Beneficiary of reasonably satisfactory written evidence from the Guarantor notifying the Beneficiary that the Obligor's long-term senior unsecured non-credit enhanced debt has at least a BBB- rating from S&P and at least a rating of Baa3 from Moody's (or, if not rated by both such rating agencies, then having the requisite rating by one of such agencies); or (ii) immediately, upon the replacement of the Guaranty by substitute security in an amount and in form and substance reasonably acceptable to the Beneficiary and the Senior Agent.

18. Notices. Any communication, demand or notice to be given hereunder will be duly given when delivered in writing or sent by facsimile to the Guarantor or to the Beneficiary, as applicable, at its address as indicated below:

If to the Guarantor, at:

[redacted]

With a copy to:

[redacted]

[redacted]

If to the Beneficiary, at:

Ohio Valley Electric Corporation
3932 U.S. Route 23
Piketon, Ohio 45661
Facsimile: (740) 289-7284
Attn: Treasurer

With a copy to:

Ohio Valley Electric Corporation
1 Riverside Plaza
Columbus, Ohio 43215
Facsimile: (614) 716-6494
Attn: Vice President and Chief Operating Officer

or such other address as the Guarantor or the Beneficiary shall from time to time specify. Notice shall be deemed given (a) when received, as evidenced by signed receipt, if sent by hand delivery, overnight courier or registered mail or (b) when received, as evidenced by transmission confirmation report, if sent by facsimile and received on or before 4:00 p.m. local time of recipient, or (c) the next business day, as evidenced by transmission confirmation report, if sent by facsimile and received after 4:00 p.m. local time of recipient.

IN WITNESS WHEREOF, the Guarantor has executed this Guaranty as of the day and year first above written.

GUARANTOR

By: _____

Name: _____

Title: _____

Exhibit A - Annual Calculation of Maximum Amount

Calculation as of the date of the Guaranty for the then-current calendar year until reset in accordance with Section 1 thereof

$ 1,596,486,240	Beneficiary's aggregate, consolidated long-term debt as of December 31st of the previous calendar year.
$ 356,817,268	The amount required to be deposited with the trustee to either make-whole or defease the bonds as of December 31st of the previous calendar year.
$ 0	Beneficiary's reasonably expected additional long-term debt for the current calendar year based on Beneficiary's long-term forecast.
$ 300,000,000	Beneficiary's aggregate, consolidated short-term debt as of December 31st of the previous calendar year (including all amounts available under revolving credit or similar facilities, whether currently drawn or not).
$ 0	Beneficiary's reasonably expected additional short-term debt for the current calendar year based on Beneficiary's long-term forecast.
$ 732,084,000	An amount equal to twelve (12) times the average monthly billable costs of the Beneficiary for the current calendar year, as approved in Beneficiary's current budget for such period (or if not yet approved, based on 110% of the last approved annual budget).
$ 2,985,387,508	Subtotal
$ [redacted]	**Obligor's share [redacted] of the above subtotal based on its "Power Participation Ratio" (as defined in the Agreement) as of January 1st of the current year.**
($ 0)	Less any amounts paid by Guarantor to Beneficiary for payment of Guaranteed Obligations due Beneficiary under the Guaranty
$ [redacted]	**Total Guaranty Maximum Amount**

From: Chisling, Brian
Sent: Wednesday, July 24, 2013 12:52 PM
To:

Subject: OVEC ICPA Subcommittee Meeting -- Date

All,

Based on responses to date, the best time for the call is the afternoon of Thursday Aug. 8th. The change accommodates and rep ( ) is on vacation that week but they will try to find a replacement to make the call. did not respond. Please let me know if you have any contact with them.

I understand that the teams are ok for a call that day, so absent any issues I will send out dial in information later this afternoon for a call on Aug 8th at 330 pm ET.

Please let me know if you have any questions.

Thank you,

- Brian

Brian Chisling
Simpson Thacher & Bartlett LLP
425 Lexington Avenue
New York, New York 10017

Tel: (212) 455-3075
Fax: (212) 455-2502
bchisling@stblaw.com

Please consider the environment before printing this email.

CONFIDENTIAL

Duke ESP 3 -

From: Chisling, Brian
Sent: Wednesday, July 24, 2013 12:52 PM
To: 'Cecil, Greg'; Melillo, Nick; brsignet@aep.com; lrgroff@aep.com; sthaynes@aep.com; Riemann, Dina O; 'pmcastro@aep.com'
Subject: OVEC ICPA Subcommittee Meeting -- Date

All,

Based on responses to date, the best time for the call is the afternoon of Thursday Aug. 8th. The change accommodates FE and LGE/KU. Buckeye's rep (Craig Grooms) is on vacation that week but they will try to find a replacement to make the call. Wolverine, DPL and Vectren did not respond. Please let me know if you have any contact with them.

I understand that the [redacted] and [redacted] teams are ok for a call that day, so absent any issues I will send out dial in information later this afternoon for a call on Aug 8th at 330 pm ET.

Please let me know if you have any questions.

Thank you,

- Brian

Brian Chisling
Simpson Thacher & Bartlett LLP
425 Lexington Avenue
New York, New York 10017

Tel: (212) 455-3075
Fax: (212) 455-2502
bchisling@stblaw.com

Please consider the environment before printing this email.

From: Chisling, Brian
Sent: Wednesday, July 24, 2013 1:45 PM
To: 'Cecil, Greg'; 'sthaynes@aep.com'; 'jkass@wpsci.com'; 'eric.driscoll@aes.com'; 'rgoocher@vectren.com'; 'cgrooms@buckeyepower.com'; 'Melillo, Nick'; 'laskyc@firstenergycorp.com'; 'john.voyles@lge-ku.com'
Cc: 'jbrodt@ovec.com'; 'mapeifer@aep.com'; 'djones@ovec.com'; 'tom.depaull@lge-ku.com'; 'tstoner@firstenergycorp.com'; 'bvalice@wpsci.com'; 'ddezeeuw@wpsci.com'; 'rmattey@ovec.com'; 'ddecoeur@wpsci.com'; 'Chris Balmer'; 'Charles E Zebula'; 'Patricia M Castro'; 'Lisa R Groff'; 'Bradley Scott'; 'Phil Herrington'; 'Randall V Griffin'; 'Beach, Rick'; Beller, Amy T.; 'Riemann, Dina O'; 'Fendig, John'; 'brsignet@aep.com'; 'nkakins@aep.com'; 'tahern@buckeyepower.com'; 'ebaker@wpsci.com'; 'pchodak@aep.com'; 'bdoty@vectren.com'; 'wdgames@vectren.com'; 'melewis@aep.com'; 'mcmccullough@aep.com'; 'snelson@frontier-power.com'; 'poloughlin@buckeyepower.com'; 'rppowers@aep.com'; 'jhaney@firstenergycorp.com'; 'paul.thompson@lge-ku.com'; 'charles.whitlock@duke-energy.com'; 'lhillebrand@aep.com'; Baucom, Benjamin J.C.
Subject: OVEC ICPA Subcommittee Call -- Thursday August 8, 2013 at 3:30 pm ET

Members of the ICPA Subcommittee:

Based on responses to my prior emails, the ICPA Subcommittee will hold a teleconference to discuss the revised proposals from [redacted] and [redacted] regarding transfers of interests in the ICPA.

The call is set for Thursday August 8, 2013 at 3:30 pm ET. The following dial in will be used for the call:

Dial in: (877) 492-4014
Passcode: 2124553075

As always, the Sponsoring Companies are encouraged to invite any other members of their organization to the ICPA Subcommittee call to aid in the discussion. Please forward this information (and the dial in information) to the appropriate representatives. *I will send an Outlook calendar invite only to the current ICPA Subcommittee members,* but feel free to forward this on to others.

Please let me know if you have any questions, and please feel free to reach out to each other for any discussions among [redacted] and the Sponsoring Companies.
Thank you,

- Brian

Brian Chisling
Simpson Thacher & Bartlett LLP
425 Lexington Avenue
New York, New York 10017

Tel: (212) 455-3075
Fax: (212) 455-2502
bchisling@stblaw.com

CONFIDENTIAL

Please consider the environment before printing this email.

From: Chisling, Brian
Sent: Friday, August 02, 2013 11:30 AM
To: [redacted]
Subject: OVEC ICPA Subcommittee Meeting

[redacted] and [redacted] teams,

I have not heard any feedback from Sponsors concerning the proposals. All Sponsors (except for Vectren) have accepted the invite to the call on Aug. 8th.

Please let me know if there is any need to discuss any issues or questions before the call. I view the call as an opportunity for Sponsors to ask questions to [redacted] and [redacted] about the proposals. I do not see any active role for OVEC on the call. I can attempt to take a straw vote at the end of the call.

- Brian

Brian Chisling
Simpson Thacher & Bartlett LLP
425 Lexington Avenue
New York, New York 10017

Tel: (212) 455-3075
Fax: (212) 455-2502
bchisling@stblaw.com

Please consider the environment before printing this email.

CONFIDENTIAL

From:	Stephan T Haynes <sthaynes@aep.com>
Sent:	Saturday, August 03, 2013 11:42 AM
To:	Chisling, Brian
Cc:	Cecil, Greg; Melillo, Nick; Riemann, Dina O; Bradford R Signet; Patricia M Castro; Lisa R Groff
Subject:	Re: OVEC ICPA Subcommittee Meeting

Brian, I don't think [redacted] needs a call in advance. I don't think we need you to do anything specific for OVEC except answer OVEC related questions and a straw poll at the end would be great. In addition i would like to encourage them to submit a written response regardless of the answer.

We don't want to negotiate on this call, but if a party gives us the one or two things needing changed to get them on board that is helpful. We would probably just say that we would look into it, if it is a possible change.

If anyone else has thoughts, let us know.

Thanks for your help in this process.

Thanks,
Steve

Home 219-2924
Office 716-2852
Cell 599-6750

On Aug 2, 2013, at 11:30 AM, "Chisling, Brian" <bchisling@stblaw.com> wrote:

This is an EXTERNAL email. STOP. THINK before you CLICK links or OPEN attachments.

[redacted] and [redacted] teams,

I have not heard any feedback from Sponsors concerning the proposals. All Sponsors (except for Vectren) have accepted the invite to the call on Aug. 8th.

Please let me know if there is any need to discuss any issues or questions before the call. I view the call as an opportunity for Sponsors to ask questions to [redacted] and [redacted] about the proposals. I do not see any active role for OVEC on the call. I can attempt to take a straw vote at the end of the call.

- Brian

Brian Chisling
Simpson Thacher & Bartlett LLP
425 Lexington Avenue
New York, New York 10017

Tel: (212) 455-3075
Fax: (212) 455-2502

bchisling@stblaw.com

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Duke ESP 3

EXHIBIT
20
OCC

From: [redacted]
Sent: Monday, August 12, 2013 10:11 AM
To: [redacted] 'jbrodt@ovec.com'; Chisling, Brian; [redacted]
Cc: 'mapeifer@aep.com'; Thompson, Paul; Fendig, John; Depaull, Tom; Early, John
Subject: RE: OVEC/IKEC Boards of Directors --- [redacted] ICPA Transfer Proposals
Attachments: [redacted] Proposal 22July2013.pdf; [redacted] Sponsor Repsonse.pdf

Greg,

Please find attached the signed acknowledgments for both [redacted] and [redacted] regarding the [redacted] Proposal as requested and discussed in the call last week with Brian Chisling.

If you wish a full signed original of the signature pages attached here, please send your mailing address and we will send them as well.

Regards,

[redacted]

The information contained in this transmission is intended only for the person or entity to which it is directly addressed or copied. It may contain material of confidential and/or private nature. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon, this information by persons or entities other than the intended recipient is not allowed. If you received this message and the information contained therein by error, please contact the sender and delete the material from your/any storage medium.

SPONSORING COMPANY ACKNOWLEDGMENT

TO THE [redacted] PROPOSAL FOR

ASSIGNMENT TO [redacted] UNDER THE AMENDED AND RESTATED INTER-COMPANY POWER AGREEMENT DATED AS OF SEPTEMBER 10, 2010

Please evidence your agreement or disagreement with the [redacted] Proposal by August 15, 2013, by checking one of the boxes below and signing in the appropriate signatory block and return one fully executed original to [redacted].

☑ SPONSORING COMPANY AGREES WITH THE [redacted]. PROPOSAL

☐ SPONSORING COMPANY DISAGREES WITH THE [redacted]. PROPOSAL

SPONSORING COMPANY
Louisville Gas & Electric Company

By: [signature]
Name: John N. Voyles Jr.
Title: Vice President
Date: 8/12/13

SPONSORING COMPANY ACKNOWLEDGMENT

TO THE [redacted] PROPOSAL FOR

ASSIGNMENT TO [redacted] UNDER THE AMENDED AND RESTATED INTER-COMPANY POWER AGREEMENT DATED AS OF SEPTEMBER 10, 2010

Please evidence your agreement or disagreement with the [redacted] Proposal by August 15, 2013, by checking one of the boxes below and signing in the appropriate signatory block and return one fully executed original to [redacted]

☑ SPONSORING COMPANY AGREES WITH THE [redacted]. PROPOSAL

☐ SPONSORING COMPANY DISAGREES WITH THE [redacted] PROPOSAL

SPONSORING COMPANY
Kentucky Utilities Company

By: John N. Voyles Jr

Name: John N. Voyles Jr.

Title: Vice President

Date: 8/12/13

SPONSORING COMPANY ACKNOWLEDGMENT

TO THE [redacted], PROPOSAL FOR

ASSIGNMENT TO [redacted] UNDER THE AMENDED AND RESTATED INTER-COMPANY POWER AGREEMENT DATED AS OF SEPTEMBER 10, 2010

Please evidence your agreement or disagreement with the [redacted] Proposal by August 15, 2013, by checking one of the boxes below and signing in the appropriate signatory block and return one fully executed original to [redacted]

☐ SPONSORING COMPANY AGREES WITH THE [redacted] PROPOSAL

☑ SPONSORING COMPANY DISAGREES WITH THE [redacted] PROPOSAL

SPONSORING COMPANY

Peninsula Generation Cooperative

By: _____

Name: Dan DeCoeur

Title: President & CEO

Date: 08-14-2013

From: Stephan T Haynes <sthaynes@aep.com>
Sent: Wednesday, August 14, 2013 3:52 PM
To: [redacted]
Cc: Chisling, Brian; Bradford R Signet; Lisa R Groff; Patricia M Castro
Subject: [redacted] ICPA Transfer Proposals
Attachments: DOC001.pdf

Attached is Ohio Power's response to the proposal.

CONFIDENTIAL

SPONSORING COMPANY ACKNOWLEDGMENT

TO THE [redacted] PROPOSAL FOR

ASSIGNMENT TO [redacted] UNDER THE AMENDED AND RESTATED INTER-COMPANY POWER AGREEMENT DATED AS OF SEPTEMBER 10, 2010

Please evidence your agreement or disagreement with the [redacted] Proposal by August 15, 2013, by checking one of the boxes below and signing in the appropriate signatory block and return one fully executed original to [redacted]

☒ SPONSORING COMPANY AGREES WITH THE [redacted] PROPOSAL

☐ SPONSORING COMPANY DISAGREES WITH THE [redacted] PROPOSAL

SPONSORING COMPANY

By: Stephan T Haynes

Name: Stephan T. Haynes

Title: Vice President

Date: 8/13/13

From: Stephan T Haynes <sthaynes@aep.com>
Sent: Wednesday, August 14, 2013 5:17 PM
To: [redacted]
Cc: Chisling, Brian; Bradford R Signet; Lisa R Groff; Patricia M Castro
Subject: Appalachian Power and Indiana Michigan Power responses to [redacted] proposal
Attachments: [redacted] Proposal IMP APCO responses.pdf

Thanks, Steve

Stephan T. Haynes
Vice President Strategic Initiatives and Chief Risk Officer
American Electric Power
1 Riverside Plaza, 28th Floor
Columbus, Ohio 43215

Office 614-716-2852
Cell 614-599-6750
Fax 614-716-3288

CONFIDENTIAL OVEC 00294

SPONSORING COMPANY ACKNOWLEDGMENT

TO THE [redacted] PROPOSAL FOR

ASSIGNMENT TO [redacted] UNDER THE AMENDED AND RESTATED INTER-COMPANY POWER AGREEMENT DATED AS OF SEPTEMBER 10, 2010

Please evidence your agreement or disagreement with the [redacted] Proposal by August 15, 2013, by checking one of the boxes below and signing in the appropriate signatory block and return one fully executed original to [redacted].

☒ SPONSORING COMPANY AGREES WITH THE [redacted] PROPOSAL

☐ SPONSORING COMPANY DISAGREES WITH THE [redacted] PROPOSAL

SPONSORING COMPANY
Indiana Michigan Power

By: Stephan T Haynes

Name: Stephan T Haynes

Title: Vice President

Date: 8/14/13

SPONSORING COMPANY ACKNOWLEDGMENT

TO THE [redacted] PROPOSAL FOR

ASSIGNMENT TO [redacted] UNDER THE AMENDED AND RESTATED INTER-COMPANY POWER AGREEMENT DATED AS OF SEPTEMBER 10, 2010

Please evidence your agreement or disagreement with the [redacted] Proposal by August 15, 2013, by checking one of the boxes below and signing in the appropriate signatory block and return one fully executed original to [redacted]

☒ SPONSORING COMPANY AGREES WITH THE [redacted] PROPOSAL

☐ SPONSORING COMPANY DISAGREES WITH THE [redacted] PROPOSAL

SPONSORING COMPANY Appalachian Power

By: Stephan T Hay

Name: Stephan T Haynes

Title: Vice President

Date: 8/14/13

Duke ESP 3 -

EXHIBIT
21
OCC

From: Chisling, Brian <bchisling@stblaw.com>
Sent: Monday, April 01, 2013 1:54 PM
To: Cecil, Greg; Melillo, Nick; 'eric.driscoll@aes.com'; 'rgoocher@vectren.com'; 'cgrooms@buckeyepower.com'; 'sthaynes@aep.com'; 'jkass@wpsci.com'; 'laskyc@firstenergycorp.com'; 'john.voyles@lge-ku.com'
Cc: 'jbrodt@ovec.com'; 'djones@ovec.com'; 'rmattey@ovec.com'; 'trwallace@aep.com'; 'mapeifer@aep.com'; Beller, Amy T.; Beach, Rick; Riemann, Dina O; Fendig, John; Lisa R Groff/OR4/AEPIN; 'pmcastro@aep.com'; Tague, Nicole A.
Subject: OVEC ICPA Subcommittee Meetings -- Follow-Up Information and Call
Attachments: [Untitled].pdf; DVComparison__13763381v1_OVEC-[redacted] Proposed Gty for [redacted] - 13763381v5_OVEC-[redacted] Proposed Gty for [redacted] docx; # 13763381v5_Active_ - OVEC-[redacted] Proposed Gty for [redacted].DOC

All,

To follow up on the initial meeting of the OVEC ICPA Subcommittee on February 25, 2013, attached is a revised version of the "strawman" proposal from [redacted] and [redacted] of a form of parent guaranty proposed for use in connection with the proposed ICPA transfers to non-rated subsidiaries. Both a clean copy and a copy marked to show changes from the initial draft are attached. As before, I have participated in the revision of this proposed form. In addition, for background, I have attached certain pages from previous OVEC presentations to its credit ratings agencies listing the OVEC shareholders and Sponsors and providing information about each Sponsor's (or its proxy's) credit ratings with S&P, Moody's and Fitch.

With respect to the form of parent guaranty, I note the following changes: (1) language has been added to Section 1 to clarify that the cap amount would be reset annual; (2) the formula for the applicable cap (in Exhibit A) has been revised to clarify that it includes all current and projected debt during the annual period, and expanded to include the amount of 12 months of OVEC's projected billable costs for the current year (up from 6 month in the prior draft); and (3) an outline of the terms of the proposed consent has been added to the end of the draft, including the discussed "cross default" to the ICPA and proposed terms for acceptable replacement credit support.

We request that each of the subcommittee members review the revised form of the "strawman" guaranty and provide feedback to the subcommittee as to whether this type of arrangement would be acceptable in principle in connection with the proposed transfers. At this point, we also would welcome all specific questions, comments or concerns on the draft, including from your legal counsel. As before, we hope that the next meeting of the subcommittee could be used to determine (at a high level) if the proposed form of guaranty might receive unanimous support to permit the proposed ICPA transfers. In addition, we would like to surface material edits or concerns with the drafts. The desired result of the meeting would be a list of action items for future discussion, including (if possible) a path forward on a framework for the proposed ICPA transfers.

Subject to availability of most (if not all of the Sponsors), I suggest a follow-up meeting of the ICPA Subcommittee by phone on Wednesday April 17, 2013 at 11 am EDT. Please let me know as soon as you can if you are unable to make that day and time (and your availability that week). Dial in information for both meetings will be provided in an update email later this week. Please let me know if you want me to invite any other members of your organization (and feel free to forward to any members that will be involved, as I expect some Sponsors to include their legal teams in the review).

If you have any questions at all or if I can be of any assistance, please do not hesitate to contact me.

Respectfully,

Brian

Brian Chisling
Simpson Thacher & Bartlett LLP
425 Lexington Avenue
New York, New York 10017

Tel: (212) 455-3075
Fax: (212) 455-2502
bchisling@stblaw.com

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HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
Produced for purposes of PUCO Case Nos. 14-841-EL-SSO,
14-842-EL-ATA only

Shareholders and Sponsoring Companies

- The Shareholders (owners) and Sponsoring Companies (customers) of OVEC have been the same since the early 1950's except for the addition of two electric cooperatives in the past 8 years.

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

Shareholder	Equity Percentage
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]	4.00
Total	100.00

Some of the Common Stock issued in the name of:
*American Gas & Electric Company
**Columbus and Southern Ohio Electric Company

These investor-owned utilities comprise the Sponsoring Companies and currently share the OVEC power participation benefits and requirements in the following percentages:

Sponsoring Company	Power Participation Ratios
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 Generation 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]	1.50
Total	100.00

Subsidiary or affiliate of:
[1]FirstEnergy Corp.
[2]Buckeye Power, Inc.
[3]The AES Corp.
[4]Duke Energy Corporation
[5]PPL Corporation
[6]American Electric Power Company, Inc.
[7]Wolverine Power Supply Cooperative, Inc.
[8]Vectren Corporation

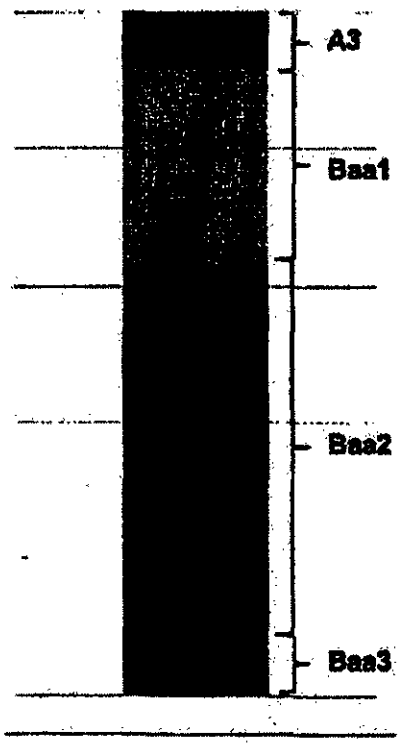
Addition of electric cooperatives increases diversity of customer base.

HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
Produced for purposes of PUCO Case Nos. 14-841-EL-SSO,
14-842-EL-ATA only

Shareholder and Sponsoring Companies Credit Ratings

- The credit quality of the Sponsoring Companies as a whole demonstrates a Baa1/Baa2 profile. A portfolio approach further minimizes the risk that a Sponsor default will adversely impact OVEC.

Sponsoring Company	% Owned	Moody's Rating[1]
Southern Indiana Gas and Electric Company[2]	1.50%	A3
[redacted]		
Kentucky Utilities Company[2]	[redacted]	Baa1
Louisville Gas and Electric Company	[redacted]	Baa1
Duke Energy Ohio, Inc.	9.00%	Baa1
Buckeye Power Generating, LLC[2]	18.00%	Baa1
[redacted]		
The Dayton Power and Light Company	4.90%	Baa2
[redacted]		



(1) Senior Unsecured Rating when available (otherwise issuer)
(2) Projected rating based on other Rating Agencies
(3) Parent Credit Rating due to FE guarantee of FE Generation Corp.

AES
AEP
Buckeye Power
Duke Energy
FirstEnergy
PPL
Vectren
Wolverine Power Supply Cooperative

PUCO Case Nos. 14-841, 14-842
RESA-POD 04-008 (a) Attach-Highly Conf.
Page 5 of 31

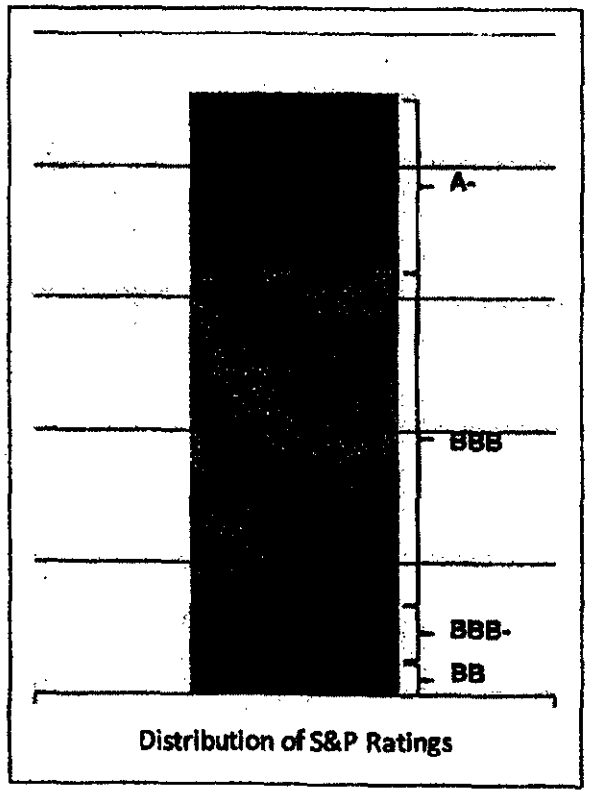
HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
Produced for purposes of PUCO Case Nos. 14-841-EL-SSO,
14-842-EL-ATA only

Shareholder and Sponsoring Companies Credit Ratings

- The credit quality of the Sponsoring Companies as a whole demonstrates a BBB+/BBB profile. A portfolio approach further minimizes the risk that a Sponsor default will adversely impact OVEC.

Sponsoring Company	% Owned	S&P[2]
Buckeye Power Generating, LLC	18.00%	A-
Southern Indiana Gas and Electric Company	1.50%	A
[redacted]		
Duke Energy Ohio, Inc	9.00%	A-
Kentucky Utilities Company	2.50%	BBB
Louisville Gas and Electric Company	5.63%	BBB
Appalachian Power Company	15.69%	BBB
Columbus Southern Power Company	4.44%	BBB
Indiana Michigan Power Company	7.85%	BBB
Ohio Power Company	15.49%	BBB
[redacted]		
The Dayton Power and Light Company	4.90%	BB

(1) Parent Credit Rating due to FE guarantee of FE Generation Corp.
(2) Senior Unsecured Rating when available (otherwise Issuer)



AES | AEP | Buckeye Power. | FirstEnergy Corp.

PPL | Vectren | Wolverine Power Supply Cooperative, Inc.

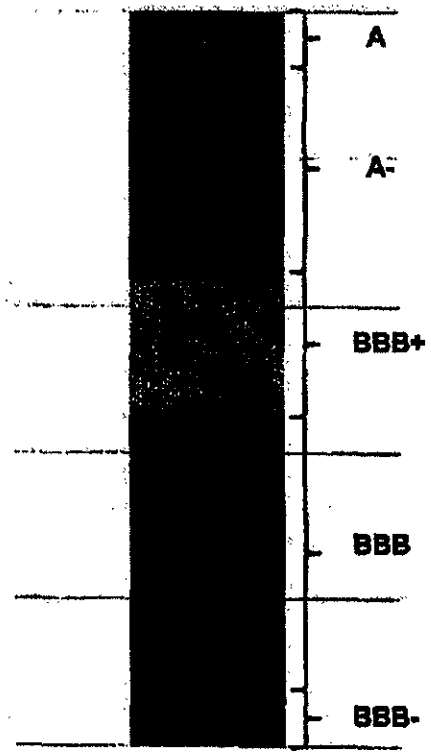
HIGHLY CONFIDENTIAL PROPRIETARY TRADE SECRET
Produced for purposes of PUCO Case Nos. 14-841-EL-SSO,
14-842-EL-ATA only

Shareholder and Sponsoring Companies Credit Ratings

- The credit quality of the Sponsoring Companies as a whole demonstrates a BBB+/BBB profile. A portfolio approach further minimizes the risk that a Sponsor default will adversely impact OVEC.

Sponsoring Company	% Owned	Fitch Rating[1]
[redacted]	[redacted]	[redacted]
Southern Indiana Gas and Electric Company[2]	1.50%	A-
[redacted]	[redacted]	[redacted]
Duke Energy Ohio, Inc.	9.00%	A-
Buckeye Power Generating, LLC[2]	18.00%	BBB+
[redacted]	[redacted]	[redacted]
The Dayton Power and Light Company	[redacted]	BBB-

(1) Senior Unsecured Rating when available (otherwise Issuer)
(2) Projected rating based on other Rating Agencies
(3) Parent Credit Rating due to FE guarantee of FE Generation Corp.



AES
AEP
Buckeye Power
Duke Energy
FirstEnergy
PPL
Vectren
Wolverine Power Supply Cooperative

GUARANTY AGREEMENT

THIS GUARANTY AGREEMENT (this "Guaranty"), dated as of [date], 2013, is issued and delivered by [redacted], a Delaware corporation (the "Guarantor"), for the account of [redacted] **LLC**, a Delaware limited liability company (the "Obligor"), and for the benefit of **Ohio Valley Electric Corporation**, an Ohio corporation (the "Beneficiary").

Background Statement

WHEREAS, the Obligor proposed to and has become a party by assignment to that certain Amended and Restated Inter-Company Power Agreement dated as of September 10, 2010 with the Beneficiary and the other parties thereto (as amended, supplemented or otherwise modified from time to time, the "Agreement"); and

WHEREAS, Beneficiary ~~has~~ required that the ~~Guarantor~~Obligor deliver to the Beneficiary this Guaranty as a condition to and inducement to Beneficiary to consent to the Obligor becoming a party to the Agreement with the Beneficiary.

Agreement

NOW, THEREFORE, in consideration of the foregoing and for good and valuable consideration received, the Guarantor hereby agrees as follows:

1. Guaranty; Limitation of Liability. The Guarantor hereby absolutely and unconditionally guarantees to the Beneficiary, with effect from the date of the Agreement, the timely payment of the Obligor's payment obligations under the Agreement ~~that are or may hereafter~~, as or when such amounts become due and payable, whether at their scheduled due dates, upon acceleration or otherwise (the "Guaranteed Obligations"), and agrees to pay any Guaranteed Obligations within three (3) business days of demand by Beneficiary; provided, however, that the Guarantor's aggregate liability hereunder shall not exceed ~~[U. S. Dollars (U.S. $203,446,015.00)],~~ ~~as~~the maximum amount, calculated on an annual basis by the Beneficiary, in accordance with the formula provided in Exhibit A ~~attached hereto. [Note: Calculation to be reset annually based on current year's approved budget.]~~ hereto and incorporated herein (the "Maximum Amount"). As of the date of this Guaranty, such Maximum Amount is U.S. $236,571,322.00, as calculated as shown on Exhibit A.[1] On or before January 31st of each subsequent calendar year (commencing with calendar year 2014), the Beneficiary shall calculate the applicable amount for the then-current calendar year in accordance with Exhibit A and based on the Beneficiary's records and provide notice thereof to the Guarantor; provided that, until the determination and notice to the Guarantor of the new Maximum Amount, the applicable Maximum Amount for the previous year shall continue to apply.

Subject to the other terms of this Guaranty, the liability of the Guarantor under this Guaranty is limited to payment obligations required to be made under the Agreement~~, and except as specifically provided therein, the Guarantor shall not be liable for or required to pay any~~

[1] Note: Maximum Amount is based on a calculation for the 2013 calendar year.

~~consequential or indirect loss (including but not limited to loss of profits), exemplary damages, punitive damages, special damages, or any other similar damages~~.

The Guarantor agrees that the Guaranteed Obligations may at any time and from time to time exceed the ~~amount of the liability of the Guarantor hereunder~~Maximum Amount without impairing the guaranty hereunder or affecting the rights or remedies of the Beneficiary hereunder.

2. Effect of Amendments. The Guarantor agrees that the Beneficiary and the Obligor and the other parties to the Agreement, individually or together (as applicable under the Agreement), may modify, amend and/or supplement the Agreement~~ and that the Beneficiary~~, may delay or extend the date on which any payment must be made pursuant to the Agreement or delay or extend the date on which any act must be performed by the Obligor thereunder or any demand for payment under the Agreement may be rescinded, or the liability of any person for any part of any payment or any collateral security or other guarantee or right of offset with respect to any payment may be renewed, accelerated, compromised, waived, surrendered or released by the Beneficiary or any other person, all without notice to or further assent by the Guarantor, who shall remain bound by this Guaranty, notwithstanding any such act by the Beneficiary or any other ~~Person~~person and waives any defenses based on the foregoing.

3. Waiver of Rights. The Guarantor expressly waives notice of acceptance of this Guaranty, diligence, presentment, protest, demand for payment or notice of default or nonpayment, notice of dishonor and protest and any requirement that at any time any person exhaust any right to take any action against Obligor or their assets or any other guarantor or person, provided, however, that any failure of Beneficiary to give notice will not discharge, alter or diminish in any way Guarantor's obligations under this Guaranty. The Guarantor waives any and all notices of the creation, renewal, extension or accrual of any of the Guaranteed Obligations and notice of or proof of reliance by the Beneficiary upon this Guaranty, and the Guaranteed Obligations shall conclusively be deemed to have been contracted, incurred, renewed, extended, amended, or waived in reliance on this Guaranty. The Guarantor waives all defenses based on, and this Guaranty shall be construed as a continuing, absolute and unconditional guaranty of payment without regard to, (i) the validity or enforceability of the Agreement or any Guaranteed Obligations or any other collateral security, other guarantee or right of set off with respect thereto or lack of power or authority of, or change, restructuring or termination of the company existence or structure of, Obligor, (ii) any defense, set-off or counterclaim other than those to which the Obligor may be entitled to under the Agreement and (iii) suretyship defenses or impairment of collateral, in bankruptcy or any other circumstance, except any claims or defenses of Obligor under the Agreement in respect of payment or performance of its obligations under the Agreement.

4. ~~4.~~ Postponement of Subrogation. The Guarantor hereby postpones and subordinates in favor of the Beneficiary any and all rights which the Guarantor may have to (a) assert any claim against the Obligor based on subrogation rights with respect to payments made by Guarantor hereunder and (b) any realization on any property of the Obligor, including participation in any marshalling of the Obligor's assets, until all Guaranteed Obligations have been paid in full and Obligors rights and obligations under the Agreement have been terminated. Upon payment in full of such Guaranteed Obligations and termination of the Obligor's rights and

obligations under the Agreement, Beneficiary agrees that Guarantor shall be subrogated to the rights of Beneficiary against Obligor to the extent of Guarantor's payment to Beneficiary.

5. ~~5.~~ Reservation of Defenses. ~~Without limiting the Guarantor's own defenses and rights hereunder, the~~The Guarantor reserves to itself all rights, setoffs, counterclaims and other defenses that the Obligor may have expressly under the Agreement to payment of all or any portion of the Guaranteed Obligations, except defenses arising from the bankruptcy, insolvency, dissolution or liquidation of the Obligor and other defenses expressly waived in this Guaranty, including under Section 2 and Section 3 above.

6. ~~6.~~ Settlements Conditional. If any monies paid to the Beneficiary in reduction of the Guaranteed Obligations of the Obligor under the Agreement have to be repaid by the Beneficiary or any other ~~Person~~person by virtue of any provision or enactment relating to bankruptcy, insolvency or liquidation for the time being in force or otherwise, the liability of the Guarantor under this Guaranty shall be computed, notwithstanding the termination or revocation of this Guaranty, which shall be reinstated and continue to be effective, as if such monies had never been paid to the Beneficiary; provided, however, if this Guaranty is replaced by a substitute guaranty pursuant to Section 17(ii), this provision shall only be applicable to such substitute guaranty and this Guaranty shall not be reinstated.

7. ~~7.~~ *Primary Liability of the Guarantor*. *The Guarantor agrees that the* Beneficiary may enforce this Guaranty without the necessity at any time of resorting to or exhausting any other rights or remedies, security or collateral or guarantees. This is a continuing Guaranty of payment and not merely of collection. This Guaranty shall not be affected by any *change in the relationship between the Guarantor and the Obligor.*

8. ~~8.~~ Term of Guaranty. This Guaranty shall remain in full force and effect until the earlier of (i) such time as all the Guaranteed Obligations have been discharged in full or terminated (including any potential for reinstatement pursuant to Section 6), as confirmed in writing by the Beneficiary, or (ii) in accordance with the terms for ~~Earlier~~Early Termination set forth in Section 17 (the "Expiration Date"); ~~provided however, the Guarantor will remain liable hereunder for Guaranteed Obligations that were outstanding prior to the Expiration Date and as set forth in Section 6.~~ In the event this Guaranty's Expiration Date is determined pursuant to clause (i) or (ii) above, such termination of this Guaranty shall have the affect of terminating the Guaranteed Obligations outstanding or contracted or committed for as of the time of termination, provided, however, that termination of this Guaranty for any reason other than pursuant to clause (i) or (ii) above shall not affect any Guaranteed Obligations outstanding or contracted or committed for at the time of termination, and this Guaranty shall remain in full force and effect with respect to such Guaranteed Obligations until finally and irrevocably paid in full.

9. ~~9.~~ Governing Law. This Guaranty shall be governed by and construed in accordance with the laws of the State of New York.

10. ~~10.~~ Expenses. The Guarantor agrees to pay all reasonable out-of-pocket expenses (including the reasonable fees and expenses of the Beneficiary's counsel) relating to the enforcement of the Beneficiary's rights hereunder in the event the Guarantor disputes its obligations under this Guaranty. All payments under this Section 10 together with any payment of

the Guaranteed Obligations shall remain subject to the aggregate amount limitations set forth in Section 1.

11. ~~11.~~ Submission to Jurisdiction; Waiver of Jury Trial. The Guarantor and the Beneficiary, through acceptance of this Guaranty, submit for any legal action relating to this Guaranty or for recognition or enforcement of any judgment in respect thereof, to the non-exclusive jurisdiction of the courts of the State of New York, the courts of the United Stated of America for the Southern District of New York, and appellate courts from any thereof, and consents that any such action may be brought in such courts and waives any objection it may now or hereafter have to the venue of any such action in any such court or such action was brought in an inconvenient court. The Guarantor and the Beneficiary, through acceptance of this Guaranty, waive all rights to trial by jury in any action, proceeding or counterclaim arising or relating to this Guaranty.

12. ~~13.~~ ~~12.~~ Representations and Warranties. The Guarantor hereby represents and warrants that, as of the date of this Guaranty:

(a) ~~(a)~~ it is a corporation duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation and has the corporate power and authority to conduct the business in which it is currently engaged and enter into and perform its obligations under this Guaranty;

(b) ~~(b)~~ it has the corporate power and authority and the legal right to execute and deliver, and to perform its obligations under, this Guaranty, and has taken all necessary corporate action to authorize its execution, delivery and performance of this Guaranty;

(c) ~~(c)~~ this Guaranty constitutes a legal, valid and binding obligation of the Guarantor enforceable in accordance with its terms, except as affected by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting the enforcement of Beneficiary's rights generally and general equitable principles;

(d) ~~(d)~~ the execution, delivery and performance of this Guaranty will not violate any provision of any requirement of law or contractual obligation of the Guarantor (except to the extent that any such violation would not reasonably be expected to have a material adverse effect on the Guarantor's ability to perform this Guaranty);

(e) ~~(e)~~ no consent or authorization of, filing with, or other act by or in respect of, any arbitrator or governmental authority and no consent of any other person (including, without limitation, any stockholder or creditor of the Guarantor) is required in connection with the execution, delivery, performance, validity or enforceability of this Guaranty, other than any which have been obtained or made prior to the date hereof and remain in full force and effect; ~~and~~

~~GUARANTY AGREEMENT~~

(f) ~~(f)~~ no litigation, investigation or proceeding of or before any arbitrator or governmental authority is pending or, to the knowledge of the Guarantor, threatened by or against the Guarantor relating to this Guaranty or that would have a material adverse effect on the Guarantor's ability to perform this Guaranty~~.~~; and

(g) Guarantor has long-term senior unsecured non-credit enhanced debt having at least a BBB- rating from Standard & Poor's Rating Services, a division of The McGraw Hill Companies, Inc. ("S&P"), and at least a rating of Baa3 from Moody's Investors Service, Inc. ("Moody's").

13. ~~13.~~ Entire Agreement; Amendments. This Guaranty integrates all of the terms and conditions mentioned herein or incidental hereto and supersedes all oral negotiations and prior writings in respect to the subject matter hereof. This Guaranty may only be amended or modified by an instrument in writing signed by each of the Guarantor and the Beneficiary.

14. ~~14.~~ Headings. The headings of the various Sections of this Guaranty are for convenience of reference only and shall not modify, define or limit any of the terms or provisions hereof.

15. ~~15.~~ No Third-Party Beneficiary. This Guaranty is given by the Guarantor solely for the benefit of the Beneficiary and its successors, transferees and assigns, and is not to be relied upon by any other person or entity other than any Senior Agent (as defined below).

16. ~~16.~~ Assignment. The Guarantor may not assign its rights or obligations under this Guaranty without the prior written consent of the Beneficiary (which consent may not be unreasonably withheld or delayed) and ~~any~~each administrative agent for any lenders or noteholders under senior credit facilities and other senior debt of the Beneficiary (each a "Senior Agent"). Any purported assignment in violation of this Section 16 shall be void and without effect.[1]

17. ~~17.~~ Early Termination. ~~The~~This Guaranty shall terminate (i) ten (10) days after receipt by the Beneficiary of ~~(i)~~reasonably satisfactory written evidence from the Guarantor notifying the Beneficiary that the Obligor's long-term senior unsecured non-credit enhanced debt has ~~an investment grade~~at least a BBB- rating ~~by each of~~from S&P and at least a rating of Baa3 from Moody's; or (ii) immediately, upon the replacement of the Guaranty ~~is replaced~~ by substitute security in an amount and in form and substance reasonably acceptable to the Beneficiary and ~~any~~the Senior Agent.

18. ~~18.~~ Notices. Any communication, demand or notice to be given hereunder will be duly given when delivered in writing or sent by facsimile to the Guarantor or to the Beneficiary, as applicable, at its address as indicated below:

If to the Guarantor, at:

---

[1] ~~Note: Sponsors and OVEC to consider any additional restrictions with respect to an assignment of the equity of the Obligor to a third party.~~

~~GUARANTY AGREEMENT~~

[redacted]

With a copy to:

[redacted]

If to the Beneficiary, at:

Ohio Valley Electric Corporation
3932 U.S. Route 23
Piketon, Ohio 45661
Facsimile: (740) 289-7284
Attn: Treasurer

With a copy to:

Ohio Valley Electric Corporation
1 Riverside Plaza
Columbus, Ohio
Facsimile: (614) 716-6494
Attn: Vice President and Chief Operating Officer

~~[ADDRESS]~~

or such other address as the Guarantor or the Beneficiary shall from time to time specify. Notice shall be deemed given (a) when received, as evidenced by signed receipt, if sent by hand delivery, overnight courier or registered mail [or (b) when received, as evidenced by transmission confirmation report, if sent by facsimile and received on or before 4 pm local time of recipient, or (c) the next business day, as evidenced by transmission confirmation report, if sent by facsimile and received after 4 pm local time of recipient].

IN WITNESS WHEREOF, the Guarantor has executed this Guaranty as of the day and year first above written.

[redacted]

By: _____
Name:
Title:

Exhibit A - Annual Calculation of Maximum Amount (Including calculation as of the date of the Guaranty until reset in accordance with Section 1 thereof)

$ 1,596,486,240	Beneficiaries' aggregate, consolidated long-term debt as of December 31st of the previous calendar year.
$ 0	Beneficiary's reasonably expected additional long-term debt for the current calendar year based on Beneficiaries' long-term forecast.
$ 300,000,000	Beneficiaries' aggregate, consolidated short-term debt as of December 31st of the previous calendar year (including all amounts available under revolving credit or similar facilities, whether currently drawn or not).
$ 0	Beneficiary's reasonably expected additional short-term debt for the current calendar year based on Beneficiaries' long-term forecast.
$ 732,084,000	An amount equal to twelve (12) times the average monthly billable costs of the Beneficiary for the current calendar year, as approved in Beneficiary's current budget for such period (or if not yet approved, based on 110% of the last approved annual budget).
$ 2,628,570,240	Subtotal
$ [redacted]	**Obligor's share ([redacted]) of the above subtotal based on its "Power Participation Ratio" (as defined in the Agreement) as of January 1st of the current year.**

Proposed Consent Agreements: The Guaranty would be entered into in connection with documents consenting to the assignment of the interests by the applicable Sponsoring Company under the Inter-Company Power Agreement ("ICPA") to the identified new Sponsoring Company. Consent to such assignment would be necessary from each of the other Sponsoring Companies under the ICPA, and from the administrative agent for any lenders or noteholders under OVEC's senior credit facilities and other senior debt. For discussion purposes and based on preliminary feedback from some of the Sponsoring Companies, below is an outline of the basic terms of a proposed consent agreement.

~~Exhibit A – Duke Energy Corporation guaranty calculation~~	
~~$ 1,596,484,358~~	~~Long-term debt as of 12/31/12~~
~~$ 300,000,000~~	~~Short-term debt~~
~~$ 364,026,920~~	~~Six months of OVEC's billable costs~~
~~$ 2,260,511,278~~	~~Subtotal~~
~~$ [redacted]~~	~~[redacted] share [redacted]) of Subtotal~~

~~Note: Calculation to be reset annually based on current year's approved budget~~

1. Consent to Assignment. The applicable parties would consent to the proposed assignment and the form of the relevant documents to be executed as of the effective date of the assignment. A separate consent (on substantially the same form) would be used among each of the Sponsoring Companies proposing to assign its interests and the other Sponsoring Companies, as well as a separate consent from each applicable administrative agent for each such proposed assignment (on forms agreed with each such agent). The consent agreements would specify the parties to the assignment and the guarantor, as well as the agreed form of the guaranty and the assignment and assumption agreement. The consent agreements would acknowledge that upon the permitted assignment, the assigning entity would no longer be liable under the ICPA (and the assignee entity would assume all such liabilities). The consent agreements would be effective, subject to any necessary regulatory approvals,[2] immediately upon execution by all parties; provided that, if the proposed assignment is not consummated by an agreed outside date, the consent would automatically expire.

[2] Note: Subject to the scope of the proposed consent and further discussion, it is likely that the consent agreement among all of the Sponsoring Companies could be considered a technical amendment to the ICPA, and thus it would be advisable to obtain FERC approval for the applicable portions thereof. OVEC is reviewing the need for any other regulatory approvals, including from state commissions in Kentucky and Virginia (who have approved recent material amendments to the ICPA).

2. Effect of Default under Guaranty or Replacement Credit Support. If there exists an uncured default under or with respect to the Guaranty (or any replacement credit support, as discussed below), then such default would be considered a "Payment Default" of the applicable Sponsoring Company pursuant to Section 11.01 of the ICPA, and (unless and until cured) OVEC would be able to exercise all available remedies at law or in equity, including (without limitation) suspension of service to the defaulting Sponsoring Company under the ICPA. In addition, OVEC shall be entitled to make a claim under the credit support then in effect for all damages relating to such default and any other costs, indemnities and expenses incurred or owing in connection with such default and the exercise of such remedies. The applicable events of default (and cure periods, if any) with respect to the Guaranty (or replacement security) would be as follows:

(a) any representation or warranty made by the entity issuing the Guaranty (or replacement credit support) was false or misleading in any material respect when made or deemed made or repeated (and such breach is not remedied within thirty (30) days after receipt of notice thereof from OVEC);

(b) the failure of the entity issuing the Guaranty (or replacement credit support) to make any payment required or to perform any other material covenant or obligation under the applicable credit support agreement (and such failure is not remedied within three (3) business days after written notice thereof from OVEC);

(c) the entity issuing the Guaranty (or replacement credit support) (i) files a petition or otherwise commences, authorizes or acquiesces in the commencement of a proceeding or cause of action under any bankruptcy, insolvency, reorganization or similar law, or has any such petition filed or commenced against it, (ii) makes an assignment or any general arrangement for the benefit of creditors, (iii) otherwise becomes bankrupt or insolvent (however evidenced), (iv) has a liquidator, administrator, receiver, trustee, conservator or similar official appointed with respect to it or any substantial portion of its property or assets, or (v) is generally unable to pay its debts as they become due;

(d) the Guaranty (or replacement credit support) fails to be in full force and effect (other than in accordance with its terms) in any material respect, including (without limitation, in an amount equal to the then-current Maximum Amount) prior to the termination or expiration of all of the applicable Sponsoring Company's obligations under the ICPA (the "Permitted Expiry");

(e) the entity issuing the Guaranty (or replacement credit support) repudiates, disaffirms, disclaims, or rejects, in whole or in part, or challenge the validity of the applicable credit support agreement; or

(f) with respect to a letter of credit issued as a replacement credit support (as described below), (i) if the letter of credit has an expiration date earlier than the Permitted Expiry, a substitute letter of credit (satisfying all of the applicable requirements for a replacement credit support), which may include an amendment to the then-current letter of credit, in the required amount and with an expiration date that is at least one year after the expiration date of the then-current letter of credit is not delivered to OVEC at least

thirty (30) days prior to the expiration date of the then-current letter of credit and a replacement credit support (satisfying all of the applicable requirements for a replacement credit support) is not delivered to OVEC prior to such 30-day period; or (B) if, at any time prior to the Permitted Expiry, the letter of credit issuer is no longer an "Acceptable Letter of Credit Provider" (as set forth below) or is subject to a bankruptcy or insolvency event and a replacement credit support (satisfying all of the applicable requirements for a replacement credit support) is not delivered to OVEC within 10 days after such event; provided that, OVEC shall be permitted to draw on the applicable letter of credit to the extent not replaced as described above and hold the cash proceeds from any draw, and in such event such cash shall satisfy, in whole or in part, the requirement of replacement credit support until replaced as provided below.

As noted above, upon an uncured default as described above with respect to a letter of credit, the entire available amount of such letter of credit may be drawn by OVEC and used as replacement credit support, without limitation or duplication of any other rights or remedies that may be available to it, with the right to draw upon such cash security deposit in accordance with the terms hereof at any time prior to the Permitted Expiry to the same extent that the letter of credit could have been drawn upon had it remained in force and effect (and assuming that the expiration date of the letter of credit was the Permitted Expiry); provided that, if subsequent to such draw down of a cash security deposit from the letter of credit, the applicable Sponsoring Company provides a replacement credit support (satisfying all of the applicable requirements for a replacement credit support), OVEC shall return to the applicable Sponsoring Company (or its designee) a sum of cash equal to (i) the amount of the cash security deposit obtained as a result of such draw down, minus (ii) the aggregate amount of any and all drawings made by OVEC on such cash security deposit as permitted hereunder, including for reimbursement of covered out-of-pocket expenses in connection with enforcement actions. In connection with the foregoing, OVEC shall be required to keep any cash security deposit in a separate interest bearing account, and, shall not be entitled to use, possess, invest, commingle, assign, sell, or pledge such cash security deposit for any purpose other than drawing upon such cash security deposit in accordance with the terms hereof, and any interest on such cash security deposit shall be the sole property of OVEC and shall be payable by OVEC to the applicable Sponsoring Company (or its designee) on the date, if any, on which the cash security deposit is required to be returned in full to such Sponsoring Company (or its designee) hereunder.

3. Replacement Credit Support. At any time, the applicable Sponsoring Company is permitted to replace the Guaranty (or other replacement credit support then in effect) with other acceptable, replacement credit support as follows:

(a) a guaranty, in form and substance substantially similar to the Guaranty or otherwise satisfactory to OVEC and each administrative agent for any of OVEC's lenders or noteholders under senior credit facilities and other senior debt, issued by an affiliate of the applicable Sponsoring Company with long-term senior unsecured non-credit enhanced debt having at least a BBB- rating from S&P and at least a rating of Baa3 from Moody's (or, if not then rated by both such rating agencies, having the requisite rating one of such agencies);

(b) an irrevocable, standby letter of credit (x) issued by a major U.S. commercial bank or the U.S. branch office of a foreign bank, which, in either case, (1) has counters for presentment and payment in the City of New York, (2) an asset base of at least $10 billion and (3) with long-term senior unsecured non-credit enhanced debt rating (or, if it does not have rated debt, an issuer rating) of at least A- from S&P and at least A3 from Moody's (an "Acceptable Letter of Credit Provider"), and (y) in a form reasonably acceptable to OVEC and each administrative agent for any of OVEC's lenders or noteholders under senior credit facilities and other senior debt, including the following terms: (A) the amount of the letter of credit must be at least the amount of the then-applicable maximum liability cap under the Guaranty and subject to the same annual adjustments (or timely replacement or supplement (which may be an amendment to the stated amount of such letter of credit) with a substantially similar letter of credit in such adjusted amount); (B) such letter of credit names OVEC as the beneficiary thereunder; (C) drawings under the letter of credit are permitted upon a signed statement from an officer of the beneficiary of the letter of credit that the amount of drawing is owed to the beneficiary pursuant to the ICPA; (D) the applicable Sponsoring Company's agreement to pay all reasonable out-of-pocket expenses (including the reasonable fees and expenses of OVEC's counsel) relating to the enforcement of OVEC's rights under the letter of credit; (E) the applicable Sponsoring Company shall not have any reimbursement obligations under such letter of credit; (F) the letter of credit shall provide that the beneficiary may draw the full amount of the letter of credit if the issuer is no longer an Acceptable Letter of Credit Provider, subject to any cure rights; and (G) the letter of credit requires the issuer thereof to provide at least 60 days' notice to OVEC of the renewal or non-renewal thereof and provides that the beneficiary may draw the full amount of the letter of credit if such letter of credit is not renewed or extended; or

(c) other replacement credit support in form and substance reasonably acceptable to OVEC and with the prior written consent (in its sole discretion) of each administrative agent for any of OVEC's lenders or noteholders under senior credit facilities and other senior debt.

Upon any such replacement, the obligations of the applicable Sponsoring Company covered by such credit support (including with respect to prior periods and including all enforcement and other expenses relating to any replaced credit support) shall be assumed in full under such replacement credit support agreement and the former credit support agreement shall be terminated.

Document comparison by Workshare Compare on Monday, April 01, 2013 1:19:25 PM

Input:	
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Description	#13763381v1<Active> - OVEC-[redacted] Proposed Qty for [redacted]
Document 2 ID	interwovenSite://STBDMS/Active/13763381/5
Description	#13763381v5<Active> - OVEC-[redacted] Proposed Qty for [redacted]
Rendering set	Standard

Legend:	
Insertion	
~~Deletion~~	
~~Moved from~~	
Moved to	
Style change	
Format change	
~~Moved deletion~~	
Inserted cell	
Deleted cell	
Moved cell	
Split/Merged cell	
Padding cell	

Statistics:	
	Count
Insertions	117
Deletions	72
Moved from	0
Moved to	0
Style change	0
Format changed	0
Total changes	189

GUARANTY AGREEMENT

THIS GUARANTY AGREEMENT (this "Guaranty"), dated as of [date], 2013, is issued and delivered by [redacted] a Delaware corporation (the "Guarantor"), for the account of [redacted] a Delaware limited liability company (the "Obligor"), and for the benefit of **Ohio Valley Electric Corporation**, an Ohio corporation (the "Beneficiary").

Background Statement

WHEREAS, the Obligor proposed to and has become a party by assignment to that certain Amended and Restated Inter-Company Power Agreement dated as of September 10, 2010 with the Beneficiary and the other parties thereto (as amended, supplemented or otherwise modified from time to time, the "Agreement"); and

WHEREAS, Beneficiary required that the Obligor deliver to the Beneficiary this Guaranty as a condition to and inducement to Beneficiary to consent to the Obligor becoming a party to the Agreement with the Beneficiary.

Agreement

NOW, THEREFORE, in consideration of the foregoing and for good and valuable consideration received, the Guarantor hereby agrees as follows:

1. Guaranty; Limitation of Liability. The Guarantor hereby absolutely and unconditionally guarantees to the Beneficiary, with effect from the date of the Agreement, the timely payment of the Obligor's payment obligations under the Agreement, as or when such amounts become due and payable, whether at their scheduled due dates, upon acceleration or otherwise (the "Guaranteed Obligations"), and agrees to pay any Guaranteed Obligations within three (3) business days of demand by Beneficiary; provided, however, that the Guarantor's aggregate liability hereunder shall not exceed the maximum amount, calculated on an annual basis by the Beneficiary, in accordance with the formula provided in Exhibit A hereto and incorporated herein (the "Maximum Amount"). As of the date of this Guaranty, such Maximum Amount is U.S. [redacted] as calculated as shown on Exhibit A.[1] On or before January 31st of each subsequent calendar year (commencing with calendar year 2014), the Beneficiary shall calculate the applicable amount for the then-current calendar year in accordance with Exhibit A and based on the Beneficiary's records and provide notice thereof to the Guarantor; provided that, until the determination and notice to the Guarantor of the new Maximum Amount, the applicable Maximum Amount for the previous year shall continue to apply.

Subject to the other terms of this Guaranty, the liability of the Guarantor under this Guaranty is limited to payment obligations required to be made under the Agreement.

[1] Note: Maximum Amount is based on a calculation for the 2013 calendar year.

The Guarantor agrees that the Guaranteed Obligations may at any time and from time to time exceed the Maximum Amount without impairing the guaranty hereunder or affecting the rights or remedies of the Beneficiary hereunder.

2. Effect of Amendments. The Guarantor agrees that the Beneficiary and the Obligor and the other parties to the Agreement, individually or together (as applicable under the Agreement), may modify, amend and/or supplement the Agreement, may delay or extend the date on which any payment must be made pursuant to the Agreement or delay or extend the date on which any act must be performed by the Obligor thereunder or any demand for payment under the Agreement may be rescinded, or the liability of any person for any part of any payment or any collateral security or other guarantee or right of offset with respect to any payment may be renewed, accelerated, compromised, waived, surrendered or released by the Beneficiary or any other person, all without notice to or further assent by the Guarantor, who shall remain bound by this Guaranty, notwithstanding any such act by the Beneficiary or any other person and waives any defenses based on the foregoing.

3. Waiver of Rights. The Guarantor expressly waives notice of acceptance of this Guaranty, diligence, presentment, protest, demand for payment or notice of default or nonpayment, notice of dishonor and protest and any requirement that at any time any person exhaust any right to take any action against Obligor or their assets or any other guarantor or person, provided, however, that any failure of Beneficiary to give notice will not discharge, alter or diminish in any way Guarantor's obligations under this Guaranty. The Guarantor waives any and all notices of the creation, renewal, extension or accrual of any of the Guaranteed Obligations and notice of or proof of reliance by the Beneficiary upon this Guaranty, and the Guaranteed Obligations shall conclusively be deemed to have been contracted, incurred, renewed, extended, amended, or waived in reliance on this Guaranty. The Guarantor waives all defenses based on, and this Guaranty shall be construed as a continuing, absolute and unconditional guaranty of payment without regard to, (i) the validity or enforceability of the Agreement or any Guaranteed Obligations or any other collateral security, other guarantee or right of set off with respect thereto or lack of power or authority of, or change, restructuring or termination of the company existence or structure of, Obligor, (ii) any defense, set-off or counterclaim other than those to which the Obligor may be entitled to under the Agreement and (iii) suretyship defenses or impairment of collateral, in bankruptcy or any other circumstance, except any claims or defenses of Obligor under the Agreement in respect of payment or performance of its obligations under the Agreement.

4. Postponement of Subrogation. The Guarantor hereby postpones and subordinates in favor of the Beneficiary any and all rights which the Guarantor may have to (a) assert any claim against the Obligor based on subrogation rights with respect to payments made by Guarantor hereunder and (b) any realization on any property of the Obligor, including participation in any marshalling of the Obligor's assets, until all Guaranteed Obligations have been paid in full and Obligors rights and obligations under the Agreement have been terminated. Upon payment in full of such Guaranteed Obligations and termination of the Obligor's rights and obligations under the Agreement, Beneficiary agrees that Guarantor shall be subrogated to the rights of Beneficiary against Obligor to the extent of Guarantor's payment to Beneficiary.

5. Reservation of Defenses. The Guarantor reserves to itself all rights, setoffs, counterclaims and other defenses that the Obligor may have expressly under the Agreement to payment of all or any portion of the Guaranteed Obligations, except defenses arising from the bankruptcy, insolvency, dissolution or liquidation of the Obligor and other defenses expressly waived in this Guaranty, including under Section 2 and Section 3 above.

6. Settlements Conditional. If any monies paid to the Beneficiary in reduction of the Guaranteed Obligations of the Obligor under the Agreement have to be repaid by the Beneficiary or any other person by virtue of any provision or enactment relating to bankruptcy, insolvency or liquidation for the time being in force or otherwise, the liability of the Guarantor under this Guaranty shall be computed, notwithstanding the termination or revocation of this Guaranty, which shall be reinstated and continue to be effective, as if such monies had never been paid to the Beneficiary; provided, however, if this Guaranty is replaced by a substitute guaranty pursuant to Section 17(ii), this provision shall only be applicable to such substitute guaranty and this Guaranty shall not be reinstated.

7. Primary Liability of the Guarantor. The Guarantor agrees that the Beneficiary may enforce this Guaranty without the necessity at any time of resorting to or exhausting any other rights or remedies, security or collateral or guarantees. This is a continuing Guaranty of payment and not merely of collection. This Guaranty shall not be affected by any change in the relationship between the Guarantor and the Obligor.

8. Term of Guaranty. This Guaranty shall remain in full force and effect until the earlier of (i) such time as all the Guaranteed Obligations have been discharged in full or terminated (including any potential for reinstatement pursuant to Section 6), as confirmed in writing by the Beneficiary, or (ii) in accordance with the terms for Early Termination set forth in Section 17 (the "Expiration Date"). In the event this Guaranty's Expiration Date is determined pursuant to clause (i) or (ii) above, such termination of this Guaranty shall have the affect of terminating the Guaranteed Obligations outstanding or contracted or committed for as of the time of termination, provided, however, that termination of this Guaranty for any reason other than pursuant to clause (i) or (ii) above shall not affect any Guaranteed Obligations outstanding or contracted or committed for at the time of termination, and this Guaranty shall remain in full force and effect with respect to such Guaranteed Obligations until finally and irrevocably paid in full.

9. Governing Law. This Guaranty shall be governed by and construed in accordance with the laws of the State of New York.

10. Expenses. The Guarantor agrees to pay all reasonable out-of-pocket expenses (including the reasonable fees and expenses of the Beneficiary's counsel) relating to the enforcement of the Beneficiary's rights hereunder in the event the Guarantor disputes its obligations under this Guaranty. All payments under this Section 10 together with any payment of the Guaranteed Obligations shall remain subject to the aggregate amount limitations set forth in Section 1.

11. Submission to Jurisdiction; Waiver of Jury Trial. The Guarantor and the Beneficiary, through acceptance of this Guaranty, submit for any legal action relating to this

Guaranty or for recognition or enforcement of any judgment in respect thereof, to the non-exclusive jurisdiction of the courts of the State of New York, the courts of the United Stated of America for the Southern District of New York, and appellate courts from any thereof, and consents that any such action may be brought in such courts and waives any objection it may now or hereafter have to the venue of any such action in any such court or such action was brought in an inconvenient court. The Guarantor and the Beneficiary, through acceptance of this Guaranty, waive all rights to trial by jury in any action, proceeding or counterclaim arising or relating to this Guaranty.

12. Representations and Warranties. The Guarantor hereby represents and warrants that, as of the date of this Guaranty:

(a) it is a corporation duly organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation and has the corporate power and authority to conduct the business in which it is currently engaged and enter into and perform its obligations under this Guaranty;

(b) it has the corporate power and authority and the legal right to execute and deliver, and to perform its obligations under, this Guaranty, and has taken all necessary corporate action to authorize its execution, delivery and performance of this Guaranty;

(c) this Guaranty constitutes a legal, valid and binding obligation of the Guarantor enforceable in accordance with its terms, except as affected by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting the enforcement of Beneficiary's rights generally and general equitable principles;

(d) the execution, delivery and performance of this Guaranty will not violate any provision of any requirement of law or contractual obligation of the Guarantor (except to the extent that any such violation would not reasonably be expected to have a material adverse effect on the Guarantor's ability to perform this Guaranty);

(e) no consent or authorization of, filing with, or other act by or in respect of, any arbitrator or governmental authority and no consent of any other person (including, without limitation, any stockholder or creditor of the Guarantor) is required in connection with the execution, delivery, performance, validity or enforceability of this Guaranty, other than any which have been obtained or made prior to the date hereof and remain in full force and effect;

(f) no litigation, investigation or proceeding of or before any arbitrator or governmental authority is pending or, to the knowledge of the Guarantor, threatened by or against the Guarantor relating to this Guaranty or that would have a material adverse effect on the Guarantor's ability to perform this Guaranty; and

(g) Guarantor has long-term senior unsecured non-credit enhanced debt having at least a BBB- rating from Standard & Poor's Rating Services, a division of

The McGraw Hill Companies, Inc. ("S&P"), and at least a rating of Baa3 from Moody's Investors Service, Inc. ("Moody's").

13. Entire Agreement; Amendments. This Guaranty integrates all of the terms and conditions mentioned herein or incidental hereto and supersedes all oral negotiations and prior writings in respect to the subject matter hereof. This Guaranty may only be amended or modified by an instrument in writing signed by each of the Guarantor and the Beneficiary.

14. Headings. The headings of the various Sections of this Guaranty are for convenience of reference only and shall not modify, define or limit any of the terms or provisions hereof.

15. No Third-Party Beneficiary. This Guaranty is given by the Guarantor solely for the benefit of the Beneficiary and its successors, transferees and assigns, and is not to be relied upon by any other person or entity other than any Senior Agent (as defined below).

16. Assignment. The Guarantor may not assign its rights or obligations under this Guaranty without the prior written consent of the Beneficiary (which consent may not be unreasonably withheld or delayed) and each administrative agent for any lenders or noteholders under senior credit facilities and other senior debt of the Beneficiary (each a "Senior Agent"). Any purported assignment in violation of this Section 16 shall be void and without effect.

17. Early Termination. This Guaranty shall terminate (i) ten (10) days after receipt by the Beneficiary of reasonably satisfactory written evidence from the Guarantor notifying the Beneficiary that the Obligor's long-term senior unsecured non-credit enhanced debt has at least a BBB- rating from S&P and at least a rating of Baa3 from Moody's; or (ii) immediately, upon the replacement of the Guaranty by substitute security in an amount and in form and substance reasonably acceptable to the Beneficiary and the Senior Agent.

18. Notices. Any communication, demand or notice to be given hereunder will be duly given when delivered in writing or sent by facsimile to the Guarantor or to the Beneficiary, as applicable, at its address as indicated below:

If to the Guarantor, at:

[redacted]

With a copy to:

[redacted]

[redacted]

If to the Beneficiary, at:

Ohio Valley Electric Corporation
3932 U.S. Route 23
Piketon, Ohio 45661
Facsimile: (740) 289-7284
Attn: Treasurer

With a copy to:

Ohio Valley Electric Corporation
1 Riverside Plaza
Columbus, Oho
Facsimile: (614) 716-6494
Attn: Vice President and Chief Operating Officer

or such other address as the Guarantor or the Beneficiary shall from time to time specify. Notice shall be deemed given (a) when received, as evidenced by signed receipt, if sent by hand delivery, overnight courier or registered mail or (b) when received, as evidenced by transmission confirmation report, if sent by facsimile and received on or before 4 pm local time of recipient, or (c) the next business day, as evidenced by transmission confirmation report, if sent by facsimile and received after 4 pm local time of recipient.

IN WITNESS WHEREOF, the Guarantor has executed this Guaranty as of the day and year first above written.

[redacted]

By: _____
Name:
Title:

Exhibit A - Annual Calculation of Maximum Amount (Including calculation as of the date of the Guaranty until reset in accordance with Section 1 thereof)

$ 1,596,486,240	Beneficiaries' aggregate, consolidated long-term debt as of December 31st of the previous calendar year.
$ 0	Beneficiary's reasonably expected additional long-term debt for the current calendar year based on Beneficiaries' long-term forecast.
$ 300,000,000	Beneficiaries' aggregate, consolidated short-term debt as of December 31st of the previous calendar year (including all amounts available under revolving credit or similar facilities, whether currently drawn or not).
$ 0	Beneficiary's reasonably expected additional short-term debt for the current calendar year based on Beneficiaries' long-term forecast.
$ 732,084,000	An amount equal to twelve (12) times the average monthly billable costs of the Beneficiary for the current calendar year, as approved in Beneficiary's current budget for such period (or if not yet approved, based on 110% of the last approved annual budget).
$ 2,628,570,240	Subtotal
$ [redacted]	**Obligor's share [redacted] of the above subtotal based on its "Power Participation Ratio" (as defined in the Agreement) as of January 1st of the current year.**

Proposed Consent Agreements: The Guaranty would be entered into in connection with documents consenting to the assignment of the interests by the applicable Sponsoring Company under the Inter-Company Power Agreement ("ICPA") to the identified new Sponsoring Company. Consent to such assignment would be necessary from each of the other Sponsoring Companies under the ICPA, and from the administrative agent for any lenders or noteholders under OVEC's senior credit facilities and other senior debt. For discussion purposes and based on preliminary feedback from some of the Sponsoring Companies, below is an outline of the basic terms of a proposed consent agreement.

1. Consent to Assignment. The applicable parties would consent to the proposed assignment and the form of the relevant documents to be executed as of the effective date of the assignment. A separate consent (on substantially the same form) would be used among each of the Sponsoring Companies proposing to assign its interests and the other Sponsoring Companies, as well as a separate consent from each applicable administrative agent for each such proposed assignment (on forms agreed with each such agent). The consent agreements would specify the parties to the assignment and the guarantor, as well as the agreed form of the guaranty and the assignment and assumption agreement. The consent agreements would acknowledge that upon the permitted assignment, the assigning entity would no longer be liable under the ICPA (and the assignee entity would assume all such liabilities). The consent agreements would be effective, subject to any necessary regulatory approvals,[2] immediately upon execution by all parties; provided that, if the proposed assignment is not consummated by an agreed outside date, the consent would automatically expire.

2. Effect of Default under Guaranty or Replacement Credit Support. If there exists an uncured default under or with respect to the Guaranty (or any replacement credit support, as discussed below), then such default would be considered a "Payment Default" of the applicable Sponsoring Company pursuant to Section 11.01 of the ICPA, and (unless and until cured) OVEC would be able to exercise all available remedies at law or in equity, including (without limitation) suspension of service to the defaulting Sponsoring Company under the ICPA. In addition, OVEC shall be entitled to make a claim under the credit support then in effect for all damages relating to such default and any other costs, indemnities and expenses incurred or owing in connection with such default and the exercise of such remedies. The applicable events of default (and cure periods, if any) with respect to the Guaranty (or replacement security) would be as follows:

(a) any representation or warranty made by the entity issuing the Guaranty (or replacement credit support) was false or misleading in any material respect when made or deemed made or repeated (and such breach is not remedied within thirty (30) days after receipt of notice thereof from OVEC);

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2 Note: Subject to the scope of the proposed consent and further discussion, it is likely that the consent agreement among all of the Sponsoring Companies could be considered a technical amendment to the ICPA, and thus it would be advisable to obtain FERC approval for the applicable portions thereof. OVEC is reviewing the need for any other regulatory approvals, including from state commissions in Kentucky and Virginia (who have approved recent material amendments to the ICPA).

(b) the failure of the entity issuing the Guaranty (or replacement credit support) to make any payment required or to perform any other material covenant or obligation under the applicable credit support agreement (and such failure is not remedied within three (3) business days after written notice thereof from OVEC);

(c) the entity issuing the Guaranty (or replacement credit support) (i) files a petition or otherwise commences, authorizes or acquiesces in the commencement of a proceeding or cause of action under any bankruptcy, insolvency, reorganization or similar law, or has any such petition filed or commenced against it, (ii) makes an assignment or any general arrangement for the benefit of creditors, (iii) otherwise becomes bankrupt or insolvent (however evidenced), (iv) has a liquidator, administrator, receiver, trustee, conservator or similar official appointed with respect to it or any substantial portion of its property or assets, or (v) is generally unable to pay its debts as they become due;

(d) the Guaranty (or replacement credit support) fails to be in full force and effect (other than in accordance with its terms) in any material respect, including (without limitation, in an amount equal to the then-current Maximum Amount) prior to the termination or expiration of all of the applicable Sponsoring Company's obligations under the ICPA (the "Permitted Expiry");

(e) the entity issuing the Guaranty (or replacement credit support) repudiates, disaffirms, disclaims, or rejects, in whole or in part, or challenge the validity of the applicable credit support agreement; or

(f) with respect to a letter of credit issued as a replacement credit support (as described below), (i) if the letter of credit has an expiration date earlier than the Permitted Expiry, a substitute letter of credit (satisfying all of the applicable requirements for a replacement credit support), which may include an amendment to the then-current letter of credit, in the required amount and with an expiration date that is at least one year after the expiration date of the then-current letter of credit is not delivered to OVEC at least thirty (30) days prior to the expiration date of the then-current letter of credit and a replacement credit support (satisfying all of the applicable requirements for a replacement credit support) is not delivered to OVEC prior to such 30-day period; or (B) if, at any time prior to the Permitted Expiry, the letter of credit issuer is no longer an "Acceptable Letter of Credit Provider" (as set forth below) or is subject to a bankruptcy or insolvency event and a replacement credit support (satisfying all of the applicable requirements for a replacement credit support) is not delivered to OVEC within 10 days after such event; provided that, OVEC shall be permitted to draw on the applicable letter of credit to the extent not replaced as described above and hold the cash proceeds from any draw, and in such event such cash shall satisfy, in whole or in part, the requirement of replacement credit support until replaced as provided below.

As noted above, upon an uncured default as described above with respect to a letter of credit, the entire available amount of such letter of credit may be drawn by OVEC and used as replacement credit support, without limitation or duplication of any other rights or remedies that may be available to it, with the right to draw upon such cash security deposit in accordance with the

terms hereof at any time prior to the Permitted Expiry to the same extent that the letter of credit could have been drawn upon had it remained in force and effect (and assuming that the expiration date of the letter of credit was the Permitted Expiry); provided that, if subsequent to such draw down of a cash security deposit from the letter of credit, the applicable Sponsoring Company provides a replacement credit support (satisfying all of the applicable requirements for a replacement credit support), OVEC shall return to the applicable Sponsoring Company (or its designee) a sum of cash equal to (i) the amount of the cash security deposit obtained as a result of such draw down, minus (ii) the aggregate amount of any and all drawings made by OVEC on such cash security deposit as permitted hereunder, including for reimbursement of covered out-of-pocket expenses in connection with enforcement actions. In connection with the foregoing, OVEC shall be required to keep any cash security deposit in a separate interest bearing account, and, shall not be entitled to use, possess, invest, commingle, assign, sell, or pledge such cash security deposit for any purpose other than drawing upon such cash security deposit in accordance with the terms hereof, and any interest on such cash security deposit shall be the sole property of OVEC and shall be payable by OVEC to the applicable Sponsoring Company (or its designee) on the date, if any, on which the cash security deposit is required to be returned in full to such Sponsoring Company (or its designee) hereunder.

3. Replacement Credit Support. At any time, the applicable Sponsoring Company is permitted to replace the Guaranty (or other replacement credit support then in effect) with other acceptable, replacement credit support as follows:

(a) a guaranty, in form and substance substantially similar to the Guaranty or otherwise satisfactory to OVEC and each administrative agent for any of OVEC's lenders or noteholders under senior credit facilities and other senior debt, issued by an affiliate of the applicable Sponsoring Company with long-term senior unsecured non-credit enhanced debt having at least a BBB- rating from S&P and at least a rating of Baa3 from Moody's (or, if not then rated by both such rating agencies, having the requisite rating one of such agencies);

(b) an irrevocable, standby letter of credit (x) issued by a major U.S. commercial bank or the U.S. branch office of a foreign bank, which, in either case, (1) has counters for presentment and payment in the City of New York, (2) an asset base of at least $10 billion and (3) with long-term senior unsecured non-credit enhanced debt rating (or, if it does not have rated debt, an issuer rating) of at least A- from S&P and at least A3 from Moody's (an "Acceptable Letter of Credit Provider"), and (y) in a form reasonably acceptable to OVEC and each administrative agent for any of OVEC's lenders or noteholders under senior credit facilities and other senior debt, including the following terms: (A) the amount of the letter of credit must be at least the amount of the then-applicable maximum liability cap under the Guaranty and subject to the same annual adjustments (or timely replacement or supplement (which may be an amendment to the stated amount of such letter of credit) with a substantially similar letter of credit in such adjusted amount); (B) such letter of credit names OVEC as the beneficiary thereunder; (C) drawings under the letter of credit are permitted upon a signed statement from an officer of the beneficiary of the letter of credit that the amount of drawing is owed to the beneficiary pursuant to the ICPA; (D) the applicable Sponsoring Company's agreement to pay all reasonable out-of-pocket expenses (including the reasonable fees and expenses

of OVEC's counsel) relating to the enforcement of OVEC's rights under the letter of credit; (E) the applicable Sponsoring Company shall not have any reimbursement obligations under such letter of credit; (F) the letter of credit shall provide that the beneficiary may draw the full amount of the letter of credit if the issuer is no longer an Acceptable Letter of Credit Provider, subject to any cure rights; and (G) the letter of credit requires the issuer thereof to provide at least 60 days' notice to OVEC of the renewal or non-renewal thereof and provides that the beneficiary may draw the full amount of the letter of credit if such letter of credit is not renewed or extended; or

(c) other replacement credit support in form and substance reasonably acceptable to OVEC and with the prior written consent (in its sole discretion) of each administrative agent for any of OVEC's lenders or noteholders under senior credit facilities and other senior debt.

Upon any such replacement, the obligations of the applicable Sponsoring Company covered by such credit support (including with respect to prior periods and including all enforcement and other expenses relating to any replaced credit support) shall be assumed in full under such replacement credit support agreement and the former credit support agreement shall be terminated.

Revision 11/29/13

Duke ESP 3 -

EXHIBIT
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OCC
PENGAD 800-631-6989

Ohio Valley Electric Corporation
Inter-Company Power Agreement (ICPA) Billable Cost Summary
Calendar Years 2013-2040
In thousands of dollars

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Generation Sales													
Estimated Delivered Power Sales from OVEC Generation (MWhr)	[redacted]												
Estimated Surplus Energy Use Factor %	[redacted]												
Demand Charge													
Projected Annual Capital Improvement Costs (excluding SCR, FGD Coal Switch, FGD and Other Financed Projects)	[redacted]												
Projected Hyper FGD Landfill Capital Costs for Phase 2 - 5 and Inter Landfill	[redacted]												
Projected Cliffy FGD Landfill Capital Costs for Phase 2 -4 and Lateral Expansion	[redacted]												
Projected Debt Expense Amortization and Short-Term Debt Costs (excluding FGD Construction Interim Debt)	[redacted]												
$445 Million - 5.80% Senior Unsecured Notes - Series 2008-A ($82 million refinanced 6.40%)	[redacted]												
$300 Million - 5.60% Senior Unsecured Notes - Series 2007-A-C ($48.8 million refinanced 6.00%)	[redacted]												
600 Million - 6.50% Senior Unsecured Notes - Series 2008-A	[redacted]												
$300 Million - 6.71% Senior Unsecured Notes - Series 2008-B-C ($60.3 million refinanced 6.01%)	[redacted]												
$100 Million - Floating Rate Notes - Series 2008-A	[redacted]												
$100 Million - Floating Rate LOC Backed Bonds - OADDA Tax Exempt 2008-A-D	[redacted]												
$100 Million - 5.625% Bonds - OADDA Tax Exempt 2009-E	[redacted]												
$100 Million - Floating Rate Bonds - IFA Tax Exempt 2010-AAB	[redacted]												
$200 Million - 5.00% Bonds - IFA Tax Exempt 2012-A	[redacted]												
$100 Million - Floating Rate - IFA Tax Exempt 2012-B&C	[redacted]												
Projected Capital Improvements and Debt Costs (ICPA Component A)	[redacted]												
Projected Operation and Maintenance Costs (ICPA Component B)	[redacted]												
Projected Administration and General Costs (ICPA Component B)	[redacted]												
Projected Transmission and Dispatch Costs (ICPA Component B)	[redacted]												
Projected Taxes (ICPA Component C)	[redacted]												
Projected ROE Costs (ICPA Component D)	[redacted]												
Projected Postretirement Benefit Obligation (ICPA Component E)	[redacted]												
Projected Decommissioning and Demolition Obligation (ICPA Component F)	[redacted]												
Total Projected Demand Costs (ICPA Components A, B, C, D, E & F)	[redacted]												
Projected Demand Costs - $/MWhr	[redacted]												
Energy Charge													
Projected Coal Cost (delivered)	[redacted]												
Projected Allowance Cost (based on projected weighted average inventory)	[redacted]												
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)	[redacted]												
Total Projected Energy Costs	[redacted]												
Projected Energy Costs - $/MWhr	[redacted]												
Transmission Charge													
Projected Transmission Charges	[redacted]												
Less Transmission Charges Credit to Demand Charge (ICPA Component B)	[redacted]												
Total Transmission Costs	[redacted]												
Projected Transmission Costs - $/MWhr	[redacted]												
Summary of ICPA Billable Power Production Costs													
Total Projected Power Production Costs	[redacted]												
Dividend													
Projected Dividend	[redacted]												
Summary of ICPA Billable Power Production Costs Less Projected Dividend													
Total Projected Power Production Costs Less Projected Dividend	[redacted]												
Projected Power Production Costs Less Projected Dividend - $/MWhr	[redacted]												
Projected Power Production Costs Less Projected Dividend - $/MWhr at Delivered Surplus Energy Use Factor of 70%	[redacted]												
Projected Power Production Costs Less Projected Dividend - $/MWhr at Delivered Surplus Energy Use Factor of 85%	[redacted]												

Critical Assumptions:
Cliffy JSR-13 operational March 2013, and Cliffy JSR-48 operational May 2013.
Future projects related to proposed legislation of Effluent Limitation Guidelines and Coal Combustion Residuals were not been included in this cost projection
Forecast assumes ICPA termination in 8/30/2040.

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	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Generation Sales															
Estimated Delivered Power Sales from OVEC Generation (MWhr)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Estimated Surplus Energy Use Factor %	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Demand Charge															
Projected Annual Capital Improvement Costs (excluding SCR, PRB Coal Switch, FGD and Other Financed Projects)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Kyger FGD Landfill Capital Costs for Phase 2 - 5 and New Landfill	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Clifty FGD Landfill Capital Costs for Phase 2 - 4 and Lateral Expansion	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Debt Expense Amortization and Short-Term Debt Costs (excluding FGD Construction Interim Debt)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
$445 Million - 5.80% Senior Unsecured Notes - Series 2008-A (382 million refinanced 6.40%)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
$300 Million - 5.50% Senior Unsecured Notes - Series 2007-A-C (348.8 million refinanced 6.50%)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
650 Million - 6.82% Senior Unsecured Notes - Series 2008-A	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
$300 Million - 6.71% Senior Unsecured Notes - Series 2008-B-C (289.3 million refinanced 6.91%)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
$100 Million - Floating Rate Notes - Series 2008-A	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
$100 Million - Floating Rate LOC Backed Bonds - OAQDA Tax Exempt 2008-A-D	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
$100 Million - 5.625% Bonds - OAQDA Tax Exempt 2008-E	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
$100 Million - Floating Rate Bonds - IFA Tax Exempt 2010-AAB	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
$200 Million - 5.00% Bonds - IFA Tax Exempt 2012-A	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected [redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Capital Improvements and Debt Costs (ICPA Component A)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Operation and Maintenance Costs (ICPA Component B)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Administration and General Costs (ICPA Component B)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Transmission and Dispatch Costs (ICPA Component B)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Taxes (ICPA Component C)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected ROE Costs (ICPA Component D)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Postretirement Benefit Obligation (ICPA Component E)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Decommissioning and Demolition Obligation (ICPA Component F)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Projected Demand Costs (ICPA Components A, B, C, D, E & F)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Demand Costs - $/MWhr	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Energy Charge															
Projected Coal Cost (delivered)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Allowance Cost (based on projected weighted average inventory)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Other Fuel-Related Costs (reagents, fuel oil & coal handling less byproduct sales)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Projected Energy Costs	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Energy Costs - $/MWhr	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Transmission Charge															
Projected Transmission Charges	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Less Transmission Charges Credit to Demand Charge (ICPA Component B)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Transmission Costs	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Transmission Costs - $/MWhr	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Summary of ICPA Billable Power Production Costs															
Total Projected Power Production Costs	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Dividend															
Projected Dividend	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Summary of ICPA Billable Power Production Costs Less Projected Dividend															
Total Projected Power Production Costs Less Projected Dividend	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Projected Power Production Costs Less Projected Dividend - $/MWhr	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Assumptions and Notes:
Projected Power Production Costs Less Projected Dividend - $/MWhr at Estimated Surplus Energy Use Factor of 50%