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# BEFORE STAN 22 PH 1: 35

In the Matter of the Applications of Ohio Power Company

Approval of the Minimum Requirements for

Distribution System Interconnection

Case No. 00-1247-EL-ATA

# OHIO POWER COMPANY'S FILING OF CONFORMING SERVICE SCHEDULES

The Commission's November 20, 2001 Finding and Order in this docket adopted a Stipulation and Recommendation which had been submitted concerning uniform interconnection service requirements.<sup>1</sup> The Commission's Finding and Order directed that "[e]ach EDU should file in its ATA docket its amended individual company interconnection tariffs, fee schedules, and supporting cost documentation on or before January 19, 2002." (Finding and Order, ¶7). The schedules are to be substantially equivalent to the proforma Interconnection Tariff approved by the Commission.

Pursuant to that directive Ohio Power Company submits the following:

Attachment No. 1: Minimum Requirements for Distribution System

Interconnection, 1<sup>ST</sup> Revised Sheet No. 6-1 and Original

Sheet Nos. 6-2 through 6-5.

Attachment No. 2: Minimum Requirements for Distribution System

Interconnection, 1<sup>ST</sup> Revised Sheet No. 6-1D and Original

Sheet Nos. 6-2D through 6-5D, for the Company's Open

Access Distribution Tariff.

Attachment No. 3: Schedule NEMS (Net Energy Metering Service, 1<sup>ST</sup> Revised Sheet No. 28-2).

This is to certify that the images appearing one an accurate and complete approduction of a case file document delivered in the regular course of laginess Technician Lot Late Processed 1/20/02

Attachment No. 4: Schedule OAD-NEMS (Open Access Distribution – Net

Energy Metering Service, 1<sup>ST</sup> Revised Sheet No. 28-2D).

Attachment No. 5: Supporting Cost Documentation (2 pages).

The changes to Schedules NEMS and OAD-NEMS are consistent with the footnotes to each of those current schedules which provide that certain paragraphs will be removed from the respective schedules upon Commission approval of an interconnection tariff. No changes are proposed to Original Sheet Nos. 28-1 or 28-1D of the respective schedules, and Original Sheet Nos. 28-3 and 28-3D of the respective schedules are being cancelled since the surviving text fits on two pages.

Ohio Power Company urges the Commission to accept all four of the proposed service schedule filings and to direct that upon submission of these schedules by the Company to the Commission that this docket be closed.

Respectfully submitted,

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<sup>&</sup>lt;sup>1</sup> This docket was one of nine dockets consolidated and resolved by the Commission's Finding and Order.

# **CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing Ohio Power Company's Filing of Conforming Service Schedules was served by U.S. Mail upon the following parties this 22<sup>nd</sup> day of January, 2002.

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# Attachment No. 1 Page 1 of 5

OHIO POWER COMPANY

1<sup>st</sup> Revised Sheet No. 6-1 Cancels Original Sheet No. 6-1

#### P.U.C.O. NO. 17

# MINIMUM REQUIREMENTS FOR DISTRIBUTION SYSTEM INTERCONNECTION

(This page shall remain in effect until no later than December 31, 2005)

#### Applicability

This schedule is applicable to any customer with cogeneration, small power production facilities, and/or other on-site facilities producing electrical energy who wishes to operate such facilities in parallel with the Company's distribution system at voltages up to 35 kV. This schedule is not applicable to the interconnection and parallel operation of facilities which the Federal Energy Regulatory Commission has determined to be subject to its jurisdiction. A customer who has a facility that does not qualify for simplified interconnection pursuant to the Technical Requirements for Interconnection and Parallel Operation of Distributed Generation (Technical Requirements), incorporated herein by reference, may negotiate a separate interconnection agreement with the Company and the terms and conditions of this schedule shall apply to such customers to the extent that the negotiated interconnection agreement does not conflict with this schedule.

#### Purpose

The purpose of this schedule is to implement Ohio Revised Code Section 4928.11, which calls for uniform interconnection standards that are not unduly burdensome or expensive and also ensure safety and reliability, to the extent governing authority is not preempted by federal law. This schedule states the terms and conditions that govern the interconnection and parallel operation of a customer's facility with the Company's distribution system.

# Customer Request For Interconnection

Any customer seeking to physically connect facilities to the Company's distribution system, which facilities may be used in parallel operation with the Company's distribution system, shall file an interconnection application and sign an interconnection agreement with the Company. For facilities for which the referenced Technical Requirements are applicable, the customer and Company shall execute a simplified interconnection agreement. For all other facilities, the customer and the Company shall execute an interconnection agreement which may be different from the simplified agreement, but which shall conform with the provisions of this schedule, to the extent applicable. Copies of all applicable forms and the Company's Technical Requirements are available upon request.

To the extent possible, interconnection to the Company's distribution system shall take place within the following time frames:

1. Where no construction is required by the Company and the facility qualifies for simplified interconnection pursuant to the screening process contained in the Technical Requirements, interconnection shall be permitted within four weeks of the Company's receipt of a completed interconnection application in compliance with the terms and conditions of this schedule. Prior to actual interconnection, the customer must execute the interconnection agreement.

(Continued on Sheet No. 6-2)

Filed Pursuant to Order No. 00-1247-EL-ATA dated November 20, 2001

Issued:

Effective:

Original Sheet No. 6-2

#### P.U.C.O. NO. 17

## MINIMUM REQUIREMENTS FOR DISTRIBUTION SYSTEM INTERCONNECTION

(This page shall remain in effect until no later than December 31, 2005)

# Customer Request For Interconnection (Cont'd)

- 2. Where construction or system upgrades of the Company's distribution system are required, the Company shall provide the customer, in a timely fashion, an estimate of the schedule and the customer's cost for the construction or upgrades. If the customer desires to proceed with the construction or upgrades, the customer and the Company shall enter into a contract. The contract shall contain a construction schedule listing target commencement and completion dates, and an estimate of the customer's costs for construction or upgrades. Assuming the customer is ready, the interconnection shall take place no later than two weeks following the completion of such construction or upgrades. The Company shall employ best reasonable efforts to complete such system construction or upgrades in the shortest time reasonably practical.
  - 3. All interconnection applications shall be processed by the Company in a nondiscriminatory manner. The Company shall promptly provide the customer a written notice of the Company's receipt of the application. The Company will endeavor to place such notice in the U.S. Mail within three business days after the application has been received by the Company's personnel designated on the application form. The Company shall provide the customer with a copy of the screening process and a target date for processing the application. If the application is viewed as incomplete, the Company must provide a written notice within 10 days of receipt of the application by the Company's personnel designated on the application form that the application is not complete together with a description of the information needed to complete the application and a statement that processing of the application cannot begin until the information is received. The Company's target date shall permit interconnection in a timely manner pursuant to the requirements of O.A.C. § 4901:1-22-04(C). Interconnection applications will be processed in the order that they are received. It is recognized that certain interconnection applications may require minor modifications while they are being reviewed by the Company. Such minor modifications to a pending application shall not require that it be considered incomplete and treated as a new or separate application. Minor modifications would not include at least the following: changes in facility size or location; any change requiring a new impact study; or any other substantive change.
- 4. If the Company determines that it cannot connect the customer's facility within the time frames required by O.A.C. § 4901:1-22-04(C), the Company will notify the customer in writing of that fact as soon as possible. The notification will identify the reason or reasons the interconnection could not be completed within the time frames stated in O.A.C. § 4901:1-22-04(C), and provide an estimated date for completion. This section shall not limit the rights of a customer for relief under Ohio Revised Code Chapter 4905.

(Continued on Sheet No. 6-3)

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OHIO POWER COMPANY

Original Sheet No. 6-3

#### P.U.C.O. NO. 17

## MINIMUM REQUIREMENTS FOR DISTRIBUTION SYSTEM INTERCONNECTION

(This page shall remain in effect until no later than December 31, 2005)

#### Technical Requirements

The Company shall maintain a copy of the Technical Requirements at its business office such that the Technical Requirements are readily available to the public. The Company shall provide the Commission Staff with a copy of the Technical Requirements. Standards adopted by IEEE shall supersede the applicable provisions of the Company's Technical Requirements effective the date that IEEE adopts such standards. However, any interconnection made or initiated prior to the adoption of any national standard promulgated by IEEE shall not be subject to that standard. Regarding any IEEE minimum standard, or any guideline that the IEEE may promulgate, the Company may amend the Technical Requirements to the minimum extent required to address unique local conditions, and shall provide such amendments to the Staff and make such amendments available to customers. All Technical Requirements, including superseding standards adopted by IEEE, are incorporated herein by reference.

#### Metering

Any metering installation, testing, or recalibration required by the installation of the customer's generation facilities shall be provided consistent with the Electric Service and Safety Standards pursuant to Ohio Revised Code Chapter 4928, and specifically O.A.C. § 4901:1-10-05 (Metering) and, as applicable, § 4901:1-10-28 (C) (Net Metering).

## Liability Insurance

Prior to interconnection with the Company, the customer must provide the Company with proof of insurance or other suitable financial instrument sufficient to meet its construction, operating and liability responsibilities pursuant to this schedule. At no time shall the Company require that the applicant negotiate any policy or renew any policy covering any liability through a particular insurance company, agent, solicitor, or broker. The Company's receipt of evidence of liability insurance does not imply an endorsement of the terms and conditions of the coverage.

# System Impact and Facilities Studies

For those facilities that do not qualify for simplified interconnection pursuant to the screening process included in the Technical Requirements, the Company may require a supplemental review, service study, coordination study, facilities study or Company system impact study prior to interconnection. In instances where such studies are required, the scope of such studies shall be based on the characteristics of the particular generation facility to be interconnected and the Company's system at the specific proposed location. By agreement between the Company and the customer, studies related to interconnection of the generation facility may be conducted by a qualified third party. The cost of an impact facilities study performed by the Company shall be included in the costs set forth in the Interconnection Fees section of this schedule. The Company shall provide the customer with a target date for completion of any required system impact or facilities study. Any such study conducted by the Company shall be shared with the customer.

(Continued on Sheet No. 6-4)

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#### P.U.C.O. NO. 17

#### MINIMUM REQUIREMENTS FOR DISTRIBUTION SYSTEM INTERCONNECTION

(This page shall remain in effect until no later than December 31, 2005)

# Interconnection Fees

The Company shall not charge any fees for interconnection other than those authorized by this schedule.

The Company shall charge each customer that applies for interconnection service a nonrefundable application fee of \$100.00 for single phase installations up to 25 kW and \$500.00 for single phase installations over 25 kW and for three phase installations, payable at the time the application is submitted.

Where a system impact study is required to determine the feasibility and cost of safely connecting the customer's generation facilities to the Company's distribution system, the customer shall deposit with the Company an amount as follows:

Installation Type	Deposit (\$)
Single phase installation up to 25 kW*	500
Single phase installation – 26 kW to 100 kW and three phase installation up to 100 kW*	1,000
Single phase and three phase installation – 101 kW to 500 kW*	3,000
Single phase and three phase installation greater than 500 kW*	5,000

<sup>\*</sup>Based on total rated generating capacity.

Such deposit shall be paid in advance and apply to each installation at the Company's distribution voltages up to 35 kV.

The Company shall apply the deposit to the Company's actual costs, including applicable taxes, to perform the system impact study associated with the interconnection. If such costs are greater than the amount of the deposit, the customer shall pay such additional costs to the Company. If such costs are less than the amount of the deposit the Company shall refund the balance of the deposit to the customer.

# Additional Fees

The customer is responsible for all equipment and installation costs of the customer's facility.

The Company may require an inspection of the inverter settings of a static inverter-connected generator with capacity in excess of 10 KW prior to interconnection. The customer shall pay a charge of \$115.00 for each inspection.

(Continued on Sheet No. 6-5)

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#### P.U.C.O. NO. 17

# MINIMUM REQUIREMENTS FOR DISTRIBUTION SYSTEM INTERCONNECTION

(This page shall remain in effect until no later than December 31, 2005)

# Additional Fees (Cont'd)

The Company may require an inspection of the protective equipment settings of a non-static inverter-connected generator prior to interconnection. The customer shall pay a charge of \$115.00 for each inspection.

The customer shall pay any additional charges, as determined by the Company, for equipment, labor, metering, testing or inspections requested by the customer.

#### Construction or Upgrade Fees

If the interconnection requires construction or an upgrade of the Company's system which, save for the generation facility would not be required, the Company will assess the customer the actual cost including applicable taxes of such construction or upgrade. Payment terms for such construction or upgrade will be agreed to and specified in the construction contract. The Company and the customer may negotiate for alternatives in order to reduce any costs or taxes applicable thereto.

## Resolution of Disputes

The Company or the customer who is a non-mercantile, non-residential customer may seek resolution of any disputes which may arise out of this schedule, including the interconnection and the referenced Technical Requirements in accordance with the Commission's Rules for Alternative Dispute Resolution.

# Special Terms and Conditions of Service

This schedule is subject to the Company's Terms and Conditions of Service and all provisions of the standard service schedule under which the customer takes service. If applicable, the customer shall also take the appropriate service under the provisions of Schedule COGEN/SPP, Schedule SBS and/or Schedule NEMS.

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# Attachment No. 2 Page 1 of 5

OHIO POWER COMPANY

1<sup>st</sup> Revised Sheet No. 6-1D Cancels Original Sheet No. 6-1D

#### P.U.C.O. NO. 17

#### MINIMUM REQUIREMENTS FOR DISTRIBUTION SYSTEM INTERCONNECTION

#### Applicability

This schedule is applicable to any customer with cogeneration, small power production facilities, and/or other on-site facilities producing electrical energy who wishes to operate such facilities in parallel with the Company's distribution system at voltages up to 35 kV. This schedule is not applicable to the interconnection and parallel operation of facilities which the Federal Energy Regulatory Commission has determined to be subject to its jurisdiction. A customer who has a facility that does not qualify for simplified interconnection pursuant to the Technical Requirements for Interconnection and Parallel Operation of Distributed Generation (Technical Requirements), incorporated herein by reference, may negotiate a separate interconnection agreement with the Company and the terms and conditions of this schedule shall apply to such customers to the extent that the negotiated interconnection agreement does not conflict with this schedule.

#### Purpose

The purpose of this schedule is to implement Ohio Revised Code Section 4928.11, which calls for uniform interconnection standards that are not unduly burdensome or expensive and also ensure safety and reliability, to the extent governing authority is not preempted by federal law. This schedule states the terms and conditions that govern the interconnection and parallel operation of a customer's facility with the Company's distribution system.

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1. Where no construction is required by the Company and the facility qualifies for simplified interconnection pursuant to the screening process contained in the Technical Requirements, interconnection shall be permitted within four weeks of the Company's receipt of a completed interconnection application in compliance with the terms and conditions of this schedule. Prior to actual interconnection, the customer must execute the interconnection agreement.

(Continued on Sheet No. 6-2D)

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#### P.U.C.O. NO. 17

#### MINIMUM REQUIREMENTS FOR DISTRIBUTION SYSTEM INTERCONNECTION

# Customer Request For Interconnection (Cont'd)

- 2. Where construction or system upgrades of the Company's distribution system are required, the Company shall provide the customer, in a timely fashion, an estimate of the schedule and the customer's cost for the construction or upgrades. If the customer desires to proceed with the construction or upgrades, the customer and the Company shall enter into a contract. The contract shall contain a construction schedule listing target commencement and completion dates, and an estimate of the customer's costs for construction or upgrades. Assuming the customer is ready, the interconnection shall take place no later than two weeks following the completion of such construction or upgrades. The Company shall employ best reasonable efforts to complete such system construction or upgrades in the shortest time reasonably practical.
  - 3. All interconnection applications shall be processed by the Company in a nondiscriminatory manner. The Company shall promptly provide the customer a written notice of the Company's receipt of the application. The Company will endeavor to place such notice in the U.S. Mail within three business days after the application has been received by the Company's personnel designated on the application form. The Company shall provide the customer with a copy of the screening process and a target date for processing the application. If the application is viewed as incomplete, the Company must provide a written notice within 10 days of receipt of the application by the Company's personnel designated on the application form that the application is not complete together with a description of the information needed to complete the application and a statement that processing of the application cannot begin until the information is received. The Company's target date shall permit interconnection in a timely manner pursuant to the requirements of O.A.C. § 4901:1-22-04(C). Interconnection applications will be processed in the order that they are received. It is recognized that certain interconnection applications may require minor modifications while they are being reviewed by the Company. Such minor modifications to a pending application shall not require that it be considered incomplete and treated as a new or separate application. Minor modifications would not include at least the following: changes in facility size or location; any change requiring a new impact study; or any other substantive change.
- 4. If the Company determines that it cannot connect the customer's facility within the time frames required by O.A.C. § 4901:1-22-04(C), the Company will notify the customer in writing of that fact as soon as possible. The notification will identify the reason or reasons the interconnection could not be completed within the time frames stated in O.A.C. § 4901:1-22-04(C), and provide an estimated date for completion. This section shall not limit the rights of a customer for relief under Ohio Revised Code Chapter 4905.

(Continued on Sheet No. 6-3D)

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Original Sheet No. 6-3D

#### P.U.C.O. NO. 17

#### MINIMUM REQUIREMENTS FOR DISTRIBUTION SYSTEM INTERCONNECTION

# **Technical Requirements**

The Company shall maintain a copy of the Technical Requirements at its business office such that the Technical Requirements are readily available to the public. The Company shall provide the Commission Staff with a copy of the Technical Requirements. Standards adopted by IEEE shall supersede the applicable provisions of the Company's Technical Requirements effective the date that IEEE adopts such standards. However, any interconnection made or initiated prior to the adoption of any national standard promulgated by IEEE shall not be subject to that standard. Regarding any IEEE minimum standard, or any guideline that the IEEE may promulgate, the Company may amend the Technical Requirements to the minimum extent required to address unique local conditions, and shall provide such amendments to the Staff and make such amendments available to customers. All Technical Requirements, including superseding standards adopted by IEEE, are incorporated herein by reference.

#### Metering

Any metering installation, testing, or recalibration required by the installation of the customer's generation facilities shall be provided consistent with the Electric Service and Safety Standards pursuant to Ohio Revised Code Chapter 4928, and specifically O.A.C. § 4901:1-10-05 (Metering) and, as applicable, § 4901:1-10-28 (C) (Net Metering).

#### Liability Insurance

Prior to interconnection with the Company, the customer must provide the Company with proof of insurance or other suitable financial instrument sufficient to meet its construction, operating and liability responsibilities pursuant to this schedule. At no time shall the Company require that the applicant negotiate any policy or renew any policy covering any liability through a particular insurance company, agent, solicitor, or broker. The Company's receipt of evidence of liability insurance does not imply an endorsement of the terms and conditions of the coverage.

# System Impact and Facilities Studies

For those facilities that do not qualify for simplified interconnection pursuant to the screening process included in the Technical Requirements, the Company may require a supplemental review, service study, coordination study, facilities study or Company system impact study prior to interconnection. In instances where such studies are required, the scope of such studies shall be based on the characteristics of the particular generation facility to be interconnected and the Company's system at the specific proposed location. By agreement between the Company and the customer, studies related to interconnection of the generation facility may be conducted by a qualified third party. The cost of an impact facilities study performed by the Company shall be included in the costs set forth in the Interconnection Fees section of this schedule. The Company shall provide the customer with a target date for completion of any required system impact or facilities study. Any such study conducted by the Company shall be shared with the customer.

(Continued on Sheet No. 6-4D)

Filed Pursuant to Order No. 00-1247-EL-ATA dated November 20, 2001

Issued: Effective:

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OHIO POWER COMPANY

Original Sheet No. 6-4D

#### P.U.C.O. NO. 17

#### MINIMUM REQUIREMENTS FOR DISTRIBUTION SYSTEM INTERCONNECTION

# Interconnection Fees

The Company shall not charge any fees for interconnection other than those authorized by this schedule.

The Company shall charge each customer that applies for interconnection service a nonrefundable application fee of \$100.00 for single phase installations up to 25 kW and \$500.00 for single phase installations over 25 kW and for three phase installations, payable at the time the application is submitted.

Where a system impact study is required to determine the feasibility and cost of safely connecting the customer's generation facilities to the Company's distribution system, the customer shall deposit with the Company an amount as follows:

Installation Type	Deposit (\$)
Single phase installation up to 25 kW*	500
Single phase installation – 26 kW to 100 kW and three phase installation up to 100 kW*	1,000
Single phase and three phase installation – 101 kW to 500 kW*	3,000
Single phase and three phase installation greater than 500 kW*	5,000

<sup>\*</sup>Based on total rated generating capacity.

Such deposit shall be paid in advance and apply to each installation at the Company's distribution voltages up to 35 kV.

The Company shall apply the deposit to the Company's actual costs, including applicable taxes, to perform the system impact study associated with the interconnection. If such costs are greater than the amount of the deposit, the customer shall pay such additional costs to the Company. If such costs are less than the amount of the deposit the Company shall refund the balance of the deposit to the customer.

# Additional Fees

The customer is responsible for all equipment and installation costs of the customer's facility.

The Company may require an inspection of the inverter settings of a static inverter-connected generator with capacity in excess of 10 KW prior to interconnection. The customer shall pay a charge of \$115.00 for each inspection.

(Continued on Sheet No. 6-5D)

Filed Pursuant to Order No. 00-1247-EL-ATA dated November 20, 2001

Issued:

# Attachment No. 2 Page 5 of 5

OHIO POWER COMPANY

Original Sheet No. 6-5D

#### P.U.C.O. NO. 17

## MINIMUM REQUIREMENTS FOR DISTRIBUTION SYSTEM INTERCONNECTION

# Additional Fees (Cont'd)

The Company may require an inspection of the protective equipment settings of a non-static inverter-connected generator prior to interconnection. The customer shall pay a charge of \$115.00 for each inspection.

The customer shall pay any additional charges, as determined by the Company, for equipment, labor, metering, testing or inspections requested by the customer.

#### Construction or Upgrade Fees

If the interconnection requires construction or an upgrade of the Company's system which, save for the generation facility would not be required, the Company will assess the customer the actual cost including applicable taxes of such construction or upgrade. Payment terms for such construction or upgrade will be agreed to and specified in the construction contract. The Company and the customer may negotiate for alternatives in order to reduce any costs or taxes applicable thereto.

## Resolution of Disputes

The Company or the customer who is a non-mercantile, non-residential customer may seek resolution of any disputes which may arise out of this schedule, including the interconnection and the referenced Technical Requirements in accordance with the Commission's Rules for Alternative Dispute Resolution.

# Special Terms and Conditions of Service

This schedule is subject to the Company's Terms and Conditions of Open Access Distribution Service and all provisions of the OAD service schedule under which the customer takes service. If applicable, the customer shall also take the appropriate service under the provisions of Schedule OAD-SBS and/or Schedule OAD-NEMS.

Filed Pursuant to Order No. 00-1247-EL-ATA dated November 20, 2001

Issued:

Effective:

# Attachment No. 3 Page 1 of 1

OHIO POWER COMPANY

1<sup>st</sup> Revised Sheet No. 28-2 Cancels Original Sheet No. 28-2

P.U.C.O. NO, 17

SCHEDULE NEMS (Net Energy Metering Service)

#### Metering

Net energy metering shall be accomplished using a single meter capable of registering the flow of electricity in each direction. If the existing electrical meter installed at the customer's facility is not capable of measuring the flow of electricity in two directions, the customer shall be responsible for all expenses for the purchase and installation of an appropriate meter with such capability.

The Company may, at its own expense and with written consent of the customer, install one or more additional meters to monitor the flow of electricity.

#### Monthly Charges

Monthly charges for energy, and demand where applicable, to serve the customer's net or total load shall be determined according to the Company's standard service schedule under which the customer would otherwise be served, absent the customer-owned generation source. If a non-residential customer's qualifying customer-generator facility has a total rated generating capacity of more than 10 kW, service shall be provided under the Company's standard demand-metered schedule (Schedule GS-2 or GS-3 depending on the customer's load characteristics).

Energy charges under the standard service schedule shall be based on the customer's net energy for the billing period. If the customer's net billing under the standard service schedule is negative during the billing period, the negative net billing shall be allowed to accumulate as a credit to offset billing in the next billing period. After three consecutive months of accumulated credit, the customer may request a refund.

## Special Terms and Conditions

This schedule is subject to the Company's Terms and Conditions of Service and all provisions of the standard service schedule under which the customer takes service. This schedule is also subject to the applicable provisions of the Company's Minimum Requirements for Distribution System Interconnection.

Filed Pursuant to Order No. 00-1247-EL-ATA dated November 20, 2001

Issued:

Effective:

# Attachment No. 4 Page 1 of 1

OHIO POWER COMPANY

1<sup>st</sup> Revised Sheet No. 28-2D Cancels Original Sheet No. 28-2D

P.U.C.O. NO. 17

SCHEDULE OAD - NEMS (Open Access Distribution - Net Energy Metering Service)

#### Metering

Net energy metering shall be accomplished using a single meter capable of registering the flow of electricity in each direction. If the existing electrical meter installed at the customer's facility is not capable of measuring the flow of electricity in two directions, the customer shall be responsible for all expenses for the purchase and installation of an appropriate meter with such capability.

The Company may, at its own expense and with written consent of the customer, install one or more additional meters to monitor the flow of electricity.

# Monthly Charges

Monthly charges for energy, and demand where applicable, to serve the customer's net or total load shall be determined according to the Company's OAD service schedule under which the customer would otherwise be served, absent the customer-owned generation source. If a non-residential customer's qualifying customer-generator facility has a total rated generating capacity of more than 10 kW, service shall be provided under the Company's OAD demand-metered schedule (Schedule OAD-GS-2 or OAD-GS-3 depending on the customer's load characteristics).

Energy charges under the OAD service schedule shall be based on the customer's net energy for the billing period. If the customer's net billing under the OAD service schedule is negative during the billing period, the negative net billing shall be allowed to accumulate as a credit to offset billing in the next billing period. After three consecutive months of accumulated credit, the customer may request a refund.

#### Special Terms and Conditions

This schedule is subject to the Company's Terms and Conditions of Open Access Distribution Service and all provisions of the OAD service schedule under which the customer takes service. This schedule is also subject to the applicable provisions of the Company's Minimum Requirements for Distribution System Interconnection.

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# **Supporting Cost Documentation**

# Application Fees

The Companies have proposed interconnection service application fees of \$100.00 for single phase installations up to 25 kW and \$500.00 for single phase installations over 25 kW and for three phase installations. The application fees are applied to the costs of the following processes and procedures:

Initiate Order and Track Request
Perform Screening Process Review
Update Maps and Database
Process Application Fee
O.25 hours
Process Interconnection Agreement
Inspect and Approve Installation

1 hour
0.25 hours
0.25 hours
0.25-1.25 hours

Total Time 6.5-12.5 hours

Average Time 9.5 hours

At an average rate of \$50 per man-hour, the total cost would be \$325 to \$625 and the average cost \$475. The Companies believe the proposed application fees to be quite reasonable.

# Inspection Charges

The Companies have proposed a charge of \$115 for inspection of the inverter settings of a static inverter-connected generator with a capacity in excess of 10 kW and a charge of \$115 for inspection of the protective equipment settings of a non-static inverter-connected generator. The inspection charges were derived as follows: The estimated conservative hourly rate, including overheads, for a Power Quality (PQ) engineer is \$70 including vehicle time. The estimated average trip time to a Distributed Generation (DG) site including 0.5 hours of inspection time is 1.5 hours. A labor charge of 1.5 hours times \$70 equals \$105, plus a PQ instrument charge of \$10 equals the total estimated inspection charge of \$115. The \$115 charge applies to both types of inspections.

# System Impact Study Fee Deposits

The Companies have proposed system impact study fee deposits as follows:

# A. Residential / single phase installation up to 25 kW

This type of interconnection is usually simple and local in nature and would generally not have a major impact on Company facilities. However, it would require engineering involvement and discussions with customer / consultant / contractor to ensure safe isolation of the customer's generation facilities in the event of an AEP facilities outage or during maintenance of customer facilities. This could also involve review of the type of technology employed to ensure that no adverse harmonics, voltage flicker or out of limits voltage conditions would affect local customers' facilities. It is estimated that the study costs will be around \$500.

# B. Single phase installation 26 kW to 100 kW and three phase installation up to 100 kW

This type of interconnection addresses commercial and small industrial customers. In addition to items covered in A. above, this could involve utility transformer, service size evaluations, system protection and harmonics interaction issues. It is estimated that the study costs will be around \$1,000.

C. Single phase and three phase installation 101 kW to 500 kW In addition to the items covered in A. and B. above, this category may involve review beyond the transformation and into the primary side including equipment and conductor loading, circuit voltage regulation, protection device coordination, reverse energy flow, etc. Additionally, modeling of the circuit may be needed at the higher end of the generation capacity. It is estimated that the study costs will be around \$3,000, depending on the size of the generation and the complexity of the system impact study involved.

D. Single phase and three phase installation more than 500 kW In addition to the items covered in A., B., and C. above and depending on the size of the generation, the distribution circuit involved and the amount of customer load, a detailed study involving both the distribution and station facilities may be needed. The feasibility and impact of connecting at the secondary or at the primary voltage levels may need to be analyzed. It is estimated that the study costs will be around \$5,000, depending on the size of the generation and the complexity of the system impact study involved.