



Legal Department

American Electric Power  
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Columbus, OH 43215-2373  
AEP.com

July 16, 2013

Barcy F. McNeal  
Docketing Division Chief  
Public Utilities Commission of Ohio  
180 East Broad Street  
Columbus Ohio 43215-3793

*Re: In the Matter of the Application of Ohio Power Company  
to Amend Its Supplier Coordination Tariff and Related  
Contracts, Case No. 13-729-EL-ATA*

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Dear Ms. McNeal:

Ohio Power Company (AEP Ohio) submitted its Application initiating this case to update its Supplier Coordination Tariff on March 22, 2013. As part of Exhibit B-2 to the Application (redlined proposed tariff changes), the Company referenced load calculations that would be posted to its Customer Choice website. (See Section 7 of Ex. B-2 starting on Sheet No. 103-32D.) Through an inadvertent administrative oversight, the referenced calculations were not posted until yesterday. CRES providers are being directly notified of the postings via the Company's CRES notification system and I wanted to docket the materials and copy the parties of record, in case interested parties would like to address these matters as part of the reply comments due on July 22, 2013.

Accordingly, the load calculation postings are enclosed with this letter, as they appear on the Company's Customer Choice website. Thank you for your attention to this matter.

Respectfully Submitted,

/s/ Steven T. Nourse

cc: Parties of Record

# Customer Choice

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**AEP-Ohio CRES Transmission Calculation Process Description -**

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## AEP-Ohio CRES Transmission Obligation Calculation Process Description

Individual Service Delivery Identifier (SDI) transmission tags (also referred to as NITS tags) are calculated annually for each SDI in the AEP-Ohio territory based upon the PJM published date and time of the PJM AEP Zonal maximum demand from the previous November 1 to October 31 year. For SDIs which are interval metered, the actual hourly usage at that hour provides the at-the-meter NITS tag component. If a customer has an interruptible component to their load and was interrupted on the NITS hour, the best estimate of the amount of load interrupted is added back to the interval data to provide the best estimate of the normal uninterrupted NITS value. For SDIs which are not interval metered only total usage and maximum demand over the billing cycle may be known, so the at-the-meter usage at the NITS hour must be estimated. This estimation is accomplished by performing a load profiling process. In the load profiling process, each SDI is assigned a load\_profile\_id defining the load characteristic group to which it belongs. Each load\_profile\_id has an associated hourly load profile, computed from actual interval metered usage of randomly selected sample customers within each profile\_id group. The NITS tag calculation algorithm then utilizes the individual SDI monthly billing cycle usage spanning the NITS date/time to scale the hourly profile usage over that time to the appropriate level for the SDI, thus providing a reasonable representation of the hourly usage of each SDI. Once that is accomplished for all hours throughout the billing cycle periods spanning the NITS date/time, the resulting hourly usage estimates at the NITS time determines the at-the-meter NITS component. There are normally a limited number of new SDIs that were not active during the NITS peak hour and which therefore had no interval usage or monthly billing usage for that period. Those SDIs are assigned a default tag, based upon the profile group average value. All at-the-meter values are then loss adjusted to the generation level based upon loss factors listed in the Company Tariffs. A check is performed to ensure that the sum of all loss adjusted SDI tags compares closely to the interruption adjusted AEP-Ohio system load at the NITS peak hour providing evidence that the tags in total reasonably represent the system total load. The individual SDI tags are then stored for use in the daily CRES NITS obligation calculations. Tags remain unchanged until the next calendar year calculation is performed, even though some SDIs may experience significant load growth or load reduction in the period between the period upon which the tag is based and the days to which it is applied.

CRES daily NITS obligations are then calculated from the summation of the tags for each of the SDIs for which the CRES has responsibility on the day, with a possible calibration factor applied to ensure that the total AEP-Ohio load is fully allocated among the AEP-Ohio SDIs.

## AEP-Ohio CRES Capacity Obligation Calculation Process

Individual Service Delivery Identifier (SDI) capacity tags (also referred to as PLC tags) are calculated annually for each SDI in the AEP-Ohio territory based upon the five PJM Peak date/times (PLC hours) published by PJM. For SDIs which are interval metered, the actual hourly usage at those five hours is averaged to determine the at-the-meter PLC component. If a customer has an interruptible component to their load and was interrupted on one or more of the PLC hours, the best estimate of the amount of load interrupted is added back to the interval data to provide the best estimate of normal uninterrupted PLC values. For SDIs which are not interval metered only total usage and maximum demand over the billing cycle may be known, so the at-the-meter usage at the five PLC hours must be estimated. This estimation is accomplished by performing a load profiling process. In the load profiling process, each SDI is assigned a load\_profile\_id defining the load characteristic group to which it belongs. Each load\_profile\_id has an associated hourly load profile, normally computed from actual interval metered usage of randomly selected sample customers within each profile\_id group. The PLC tag calculation algorithm then utilizes the individual SDI monthly billing cycle usage spanning each PLC date/time to scale the hourly profile usage over that time to the appropriate level for the SDI, thus providing a reasonable representation of the hourly usage of each SDI. Once that is accomplished for all hours throughout the billing cycle periods spanning the five PLC date/times, the resulting hourly usage estimates at the five PLC hours are averaged to determine the at-the-meter PLC component. There are normally a limited number of new SDIs that were not active during the five PJM PLC hours and which therefore had no interval usage or monthly billing usage for that period. Those SDIs are assigned a default PLC tag, based upon the profile group average value. All at-the-meter values are then loss adjusted to the generation level based upon loss factors as filed in the Company tariffs which are normally determined from the most recent AEP-Ohio system loss study. A check is performed to ensure that the sum of all loss adjusted SDI tags compares closely to AEP-Ohio system load at the 5 CP hours providing evidence that the capacity tags in total reasonably represent the system total load. The individual SDI capacity tags are then stored for use in the daily CRES capacity obligation calculations. Tags remain unchanged until the next PJM year calculation is performed, even though some SDIs may experience significant load growth or load reduction in the period between the five hours on which the tag is based and the load days to which it is applied.

CRES daily capacity obligations are computed from the summation of the capacity tags for each of the SDIs for which the CRES has responsibility for that day, with appropriate adjustment factors applied, including a PJM provided forecast/weather adjustment factor, and a calibration factor which ensures all AEP-Ohio capacity is allocated among the AEP-Ohio customers.

# AEP-Ohio CRES Hourly Energy Calculation Process

## Introduction

Ohio rules place the responsibility for calculation of Competitive Retail Electric Service (CRES) Provider load obligations for settlement on the local distribution company. Also, as AEP-Ohio is in the PJM control area, compliance with PJM procedures is necessary. The PJM energy market is an hourly market with associated bids and hourly spot market prices. Each Competitive Retailer is a Load Serving Entity (LSE) in the market for which the hourly energy obligation must be calculated, as it is not separately metered on the PJM power grid. This calculation is performed in the AEP Clearinghouse through the Load Estimation and Reallocation System (LERS) which develops an hourly load estimate for each Service Delivery Identifier (SDI) and aggregates the hourly SDI usage to each CRES for the SDIs served by the CRES during each load day.

AEP-Ohio's role in settlement is to provide PJM with the hourly energy supply obligation for the sum of all SDIs served for each CRES. On a daily basis, AEP submits to PJM an initial settlement of each LSE's hourly energy supply obligation from the previous day (known as the "day-after settlement" or "Settlement A") in the AEP zone. These initial values are largely comprised of estimates based upon historical SDI usage, historical load profiles, historical weather, and forecasted weather on the load day.

After all meter reading schedules are completed for the month, AEP re-estimates each LSE's hourly energy usage for each day in the month using actual period meter readings, actual period interval data, and actual period load profiles from load research samples. AEP Transmission then submits hourly energy differences between the initial and revised loads for each LSE to PJM through the InSchedule (formerly eSchedule) system. This true-up is known as the "60-day settlement" or "Settlement B". Data submitted to PJM is available to electricity suppliers through PJM's systems.

## CRES Hourly Energy Obligation Calculation Details:

Most retail SDIs do not have meters capable of registering energy usage on an hourly basis. To enable these SDIs to participate in electric customer choice, a process known as "load profiling" is used to estimate the SDI hourly energy. At the time each bill is processed the usage for each SDI is transferred from AEP's Customer Information System to the Load Estimation and Reallocation System (LERS). The LERS System then disaggregates this total usage through the load profiling process. For SDIs which do have meters which register usage on an hourly basis, the actual interval usage is transferred to LERS and load profiling is not necessary. The LERS process runs for every SDI in AEP-Ohio whether or not the SDI is a shopping customer.

For the initial day-after settlement process, the load estimate process is performed during the load day itself, or on the last business day prior to weekends and holidays. Forecasted hourly temperatures for the days to be estimated are compared to the hourly temperatures from similar day-type days in a specified historical time period (the latest 15 months) and the load profiles from the most similar historical day are used as a proxy for the load day and applied to the current load day. For each SDI in AEP-Ohio, a usage scale factor is developed which relates the load level of that SDI to the load profile load level. The estimate of that SDI's load on each hour of a load day is then computed by multiplying the load profile hourly load by the SDI usage scale factor. For SDIs which do have an interval meter, the estimate of the hourly load is derived straight from the SDI's hourly load on the selected historical proxy load day. Resulting hourly load estimates are then loss adjusted to represent generation level rather than meter level loads, and are aggregated by CRES and by remaining AEP-Ohio default load.

Approximately forty five days after the end of a calendar month, the 60-day settlement calculation process begins. The electricity supplier hourly load obligations are re-calculated using the same processing steps used to derive the original CRES values, but now all data subsequently collected is utilized. As a result of the data collection and subsequent reprocessing:

- The hourly profiles for non-interval metered SDIs are now based on dynamic load profiles for the actual days of the settlement period, instead of on weather proxy day static load profiles.
- The actual load data for interval metered SDIs is now available to replace the estimated data used in the day-after settlement.
- The meter reading cycle is completed for the month to be settled, so the hourly load profiles of all SDIs can be scaled to match known metered usage spanning each day of the month.
- AEP-Ohio's zonal hourly load is now known from actual metered values. The CRES and default hourly load obligations are reconciled to AEP-Ohio's zonal hourly load, by proportionally adding back any differences between the SDI-by-SDI analysis results and the AEP-Ohio zonal load determined from generation and system interchange metering.

**This foregoing document was electronically filed with the Public Utilities**

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Summary: Notice -Correspondence electronically filed by Mr. Steven T Nourse on behalf of Ohio Power Company