

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of Duke Energy Ohio, Inc.'s)	
Application for Approval of)	09-757-EL-ESS
Proposed Reliability Standards)	

**AMENDED APPLICATION OF DUKE ENERGY OHIO, INC.
FOR APPROVAL OF PROPOSED RELIABILITY STANDARDS**

1. On August 28, 2009, Duke Energy Ohio, Inc. (Duke Energy Ohio or Company) filed, in this matter an Application for Approval of Proposed Reliability Standards pursuant to the Order of the Public Utilities Commission of Ohio (Commission) in its rulemaking in Case No. 06-653-EL-ORD. In its Application, Duke Energy Ohio provided proposed standards and supporting information designed to comply with the requirements set forth in Ohio Administrative Code Section 4901:1-10-10, et seq.
2. Now comes Duke Energy Ohio and submits this Amended Application for Approval of Proposed Reliability Standards which includes additional supporting information and clarifications which includes greater detail.
3. In its initial filing, Duke Energy Ohio provided a proposed methodology for establishing Customer Average Interruption Duration Index (CAIDI). Staff guidelines suggested that a method to determine the new CAIDI standards should begin with historic system performance. Duke Energy Ohio proposes a methodology which includes historic performance and then applies adjustments to that performance to account for technological advancements and improvements in system design.

4. Consistent with Staff guidelines, the proposed method to determine the new CAIDI standard is to begin with recent historic performance. The past five years reported CAIDI, including the twelve months ending with September 30, 2009 is included in the below table. Please note corrections to CAIDI numbers for the year 2007 as compared with initial filing in this matter.

Year	Annual CAIDI with Transmission-Related and MED outages excluded
2004	84.01
2005	82.20
2006	87.81
2007	97.07
2008	98.31
2009, 12 months ending Sep 30	105.70
CAIDI Mean	92.52

5. Duke Energy Ohio is in the process of installing devices to sectionalize and automate the distribution system. It is expected that this effort will reduce whole circuit outages (lockouts) by at least fifty percent. If we assume a conservative fifty percent reduction in lockouts, CAIDI will increase when large circuit outages are replaced by smaller, localized outages. If circuit lockouts had been cut in half over the past five years, reported CAIDI would have changed as follows:

Year	Annual CAIDI with Transmission-Related and MED outages excluded. Lockouts reduced by 50%
2004	91.73
2005	92.81
2006	95.84
2007	111.42
2008	107.37
2009, 12 months ending Sep 30	116.14
Adjusted CAIDI Mean	102.6

The standard deviation of the adjusted CAIDI value above is 9.48 minutes. To allow for expected variations in weather, we propose to add two standard deviations, or 18.96 minutes to the adjusted mean of 100.7.

Smart Grid improvements including Self Healing Circuits will further reduce the size of outage cases to less than what can be achieved by sectionalization alone. The estimated impact of these further improvements is an additional 10 CAIDI minutes. An explanation of the reasoning for the increase in CAIDI can be found in the examples included in the original filing of August 28. The examples are titled 1a, 1b, 2a, 2b, 3a and 3b.

In addition, a real-world example occurred on September 4, 2009 when the first self-healing circuit installation experienced a fault. Prior to adding the automated switches, the entire circuit would have locked out. The automated equipment limited the affected area and reduced the customers who were out. The result was that System Average Interruption Frequency Index (SAIFI) for the event was reduced from 1.00 to 0.36 while CAIDI increased from 70.3 to 77.9 minutes.

Duke Energy Power Delivery is in the process of replacing our existing Trouble Call and Outage Management System (TCOMS). The new system will eventually have the ability to interface with the smart meters being installed with the AMI porting of Smart Grid. When the new Distribution Outage Management System (DOMS) is fully implemented, the present connectivity model method of determining customers affected will be supplemented by actual outage data reporting from the smart meters. Duke Energy Ohio estimates this improved data will add four CAIDI minutes by reducing the number of customers counted to the actual number affected.

Additional efforts are under way to improve circuit sectionalization and reduce the number of customers affected by cases of trouble. Those efforts include continuing the CSP transformer retrofit program and expanding it to include circuit laterals. The large outage follow-up and the construction quality audit programs continue as well. These programs help to confine the size of outages to the area actually affected by the trouble. These additional efforts are expected to add 3 minutes to CAIDI by reducing the average number of customers involved in outage cases.

The resulting CAIDI standard is the sum of the adjusted CAIDI mean, plus the adjustments needed to account for weather variations and for the ongoing improvements that will reduce the number of customers experiencing an outage.

2004-2009 Reduced-Lockout CAIDI Mean	102.6
Two Standard Deviations Weather Adjustment	20.8
Self-Healing Circuit Adjustment	10.0
Smart Meter Customer Interruption Adjustment	4.0
Improved Customer Outage Count Adjustment	3.0
Proposed CAIDI Standard	140.4

6. Duke Energy Ohio's service area geography remains the same as in past years. The same district offices that have been in existence for many years continue in operation. The district offices and their respective general service areas are as follows:

District Office	Major Area Served
City	Southern and Western Hamilton County
Hartwell	Northern Hamilton County
Fairfield	Southern and Western Butler County
Todhunter	Northeast Butler and Northwest Warren Counties
Brecon	Southeast Warren and Northeast Hamilton Counties
Little Miami	Eastern Hamilton, Northern Clermont and Clinton Counties
Hamlet	Southeast Hamilton, Southern Clermont and Brown Counties

7. Customer perception survey results

Duke Energy conducts telephone surveys of customers in the five states served during the first two weeks of each month. The surveys include questions regarding the frequency and duration of outages and the customers' satisfaction with the service received. The survey data reaffirms that DEO's proposed reliability targets are consistent with improving customer satisfaction. A longer CAIDI metric initially seems counterintuitive until the metric is fully understood with the strategies to reduce SAIFI.

Based on the survey results, customer satisfaction appears to be driven more by a good SAIFI number than by CAIDI. For example, Duke's customers in the Carolinas have a high satisfaction level even though their CAIDI is over 40 minutes longer.

	Overall PQ and Reliability Satisfaction	CAIDI	SAIFI
Carolinas	87.8%	143.3	0.97
Ohio	74.9%	101.5	1.31

	Average SAIFI, 2007, 2008, 2009 YTD	Average of Residential and Small Business SAIFI Satisfaction
Carolinas	0.97	86%
Ohio	1.31	73%

	Average CAIDI 2007, 2008, 2009 YTD	Average of Residential and Small Business Outage Response Satisfaction
Carolinas	143	78%
Ohio	102	69%

8. **Supporting Workpapers**

In addition to the above information and documentation, Duke Energy Ohio is providing with this filing, additional Exhibits C, D, E, F and G. Exhibits C, D and E are demonstrations of CAIDI adjustments due to circuit lockout reductions. Exhibits F and G are the results of a customer survey.

For status of implementation of SmartGrid modernization, Duke Energy Ohio refers the Staff and other interested parties to information provided in Case No. 09-543-GE-UNC.

Respectfully submitted,

/s/ Elizabeth H. Watts

Amy B. Spiller
Associate General Counsel
Elizabeth H. Watts
Assistant General Counsel

DUKE ENERGY OHIO
155 East Broad Street
21st Floor
Columbus, Ohio 43215
(614) 222-1331
139 Fourth Street, 25Atrium II
Cincinnati, Ohio 45202
(513) 419-1871

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

10/9/2009 2:58:56 PM

in

Case No(s). 09-0757-EL-ESS

Summary: Amended Application Amended Application of Duke Energy Ohio, Inc. for Approval of Proposed Reliability Standards electronically filed by Ms. Elizabeth H Watts on behalf of Duke Energy Ohio, Inc.