



NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

July 31, 2009

Ms. Kimberly Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

**Re: NERC Notice of Penalty regarding MidAmerican Energy Company, FERC Docket
No. NP09-_-000**

Dear Ms. Bose:

The North American Electric Reliability Corporation (NERC) hereby provides this Notice of Penalty¹ regarding MidAmerican Energy Company (MEC), NERC Registry ID NCR00824,² in accordance with the Federal Energy Regulatory Commission's (Commission or FERC) rules, regulations and orders, as well as NERC Rules of Procedure including Appendix 4C (NERC Compliance Monitoring and Enforcement Program (CMEP)).³

On May 1, 2008, MEC self-reported non-compliance with Reliability Standard PRC-005-1 Requirement (R) 2.1, to Midwest Reliability Organization (MRO), for failure to document evidence of its Protection System device maintenance and testing program within each device's defined intervals. This Notice of Penalty is being filed with the Commission because, based on information from MRO, MEC does not dispute the violation of PRC-005-1 R2.1 and the proposed zero dollar (\$0) financial penalty to be assessed to MEC. Accordingly, the violation identified as NERC Violation Tracking Identification Number MRO200800051 is a Confirmed Violation, as that term is defined in the NERC Rules of Procedure and the CMEP.

¹ *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards* (Order No. 672), III FERC Stats. & Regs. ¶ 31,204 (2006); *Notice of New Docket Prefix "NP" for Notices of Penalty Filed by the North American Electric Reliability Corporation*, Docket No. RM05-30-000 (February 7, 2008). See also 18 C.F.R. Part 39 (2008). *Mandatory Reliability Standards for the Bulk-Power System*, FERC Stats. & Regs. ¶ 31,242 (2007) (Order No. 693), *reh'g denied*, 120 FERC ¶ 61,053 (2007) (Order No. 693-A).

² Midwest Reliability Organization confirmed that MidAmerican Energy Company was included on the NERC Compliance Registry on May 30, 2007 as a Balancing Authority, Distribution Provider, Generator Operator, Generator Owner, Load Serving Entity, Purchasing-Selling Entity, Resource Planner, Transmission Operator, Transmission Owner, Transmission Planner and Transmission Service Provider, and was subject to the requirements of NERC Reliability Standard PRC-005-1. On June 4, 2008, a Notice of Penalty was filed with the Commission in Docket No. NP08-2-000 regarding a Settlement Agreement by and between MRO and MEC to resolve an alleged violation of FAC-003-1 R2. The Commission did not engage in further review of that Notice of Penalty. *Guidance on Filing Reliability Notices of Penalty*, 124 FERC ¶ 61,015 (2008).

³ See 18 C.F.R. § 39.7(c)(2).

Statement of Findings Underlying the Violation

This Notice of Penalty incorporates the findings and justifications set forth in the Notice of Confirmed Violation and Proposed Penalty or Sanction (NOCV) issued on December 12, 2008, by MRO. The details of the findings and basis for the penalty are set forth herein. This Notice of Penalty filing contains the basis for approval of this Notice of Penalty by the NERC Board of Trustees Compliance Committee (BOTCC). In accordance with Section 39.7 of the Commission's regulations, 18 C.F.R. § 39.7 (2007), NERC provides the following summary table identifying each Reliability Standard at issue in this Notice of Penalty.

| Region | Registered Entity | NOC ID | NERC Violation ID | Reliability Std. | Req. (R) | VRF | Total Penalty (\$) |
|--------|----------------------------|---------|-------------------|------------------|----------|-------------------|--------------------|
| MRO | MidAmerican Energy Company | NOC-133 | MRO200800051 | PRC-005-1 | 2.1 | High ⁴ | 0 |

The purpose of Reliability Standard PRC-005-1 is to ensure all transmission and generation Protection Systems affecting the reliability of the bulk power system are maintained and tested.

In summary, PRC-005-1 R2.1 requires an entity such as MEC to provide documentation of its Protection System maintenance and testing program and the implementation of that program to its Regional Entity on request (within 30 calendar days). The documentation of the program implementation shall include evidence that Protection System devices were maintained and tested within defined intervals. PRC-005-1 R2.1 has a "High" Violation Risk Factor (VRF).

In April 2008, MEC conducted an internal investigation following a relay replacement project and found discrepancies related to the testing of eight generator protection relays at Neal Unit 3 (a single 515 MW unit from the Neal complex) and battery testing at two black start combustion turbines connected to the 69 kV system (Pleasant Hills Units 1 and 2). On May 1, 2008, MEC self-reported non-compliance with PRC-005-1 R2.1 for its failure to maintain and test Protection System devices within their defined intervals.

Neal Unit 3 Relay Testing

The MEC electro-mechanical relay testing interval is five years per the MEC testing schedule. The last verifiable test records for the eight electro-mechanical relays at Neal Unit 3 were dated October 2002. Generator relay testing was performed at the Neal Unit 3 plant in November 2004, but the internal investigation uncovered that the tests were only on the generator digital relays and did not include the eight electro-mechanical relays. According to MRO, MEC self-

⁴ Reliability Standard PRC-005-1 Requirement R2 has a "Lower" VRF and the sub-requirements have "High" VRFs. During a final review of the standards subsequent to the March 23, 2007 filing of the Version 1 VRFs, NERC identified that some standards requirements were missing VRFs; one of these include PRC-005-1 R2.1. On May 4, 2007, NERC assigned PRC-005 R2.1 a "High" VRF. In the Commission's June 26, 2007 Order on Violation Risk Factors, the Commission approved the PRC-005-1 R2.1 "High" VRF as filed. Therefore, the "High" VRF was in effect from June 26, 2007.

certified compliance in October 2007 based on the relay testing summary spreadsheet available at that time.

The 'generator relays' were reported as tested in 2004 after one engineer reported them tested by a contractor. The second engineer misunderstood this to mean the 'generator digital protection relays' as well as the 'generator/transformer electro-mechanical relays' as listed on the generator test list. It was discovered during the internal investigation that only the 'generator digital protection relays' were tested. The eight electro-mechanical relays were replaced and tested as part of normal maintenance outage during the April 12, 2008 – May 13, 2008 outage period at Neal Unit 3 plant. Because of the April 15, 2008 discovery of testing discrepancies, the eight electro-mechanical relays were tested one day later. This test entailed reviewing all settings for proper performance. Specifically, MEC tested the affected relays after they had been removed from service and determined that the actual protection of the system was never degraded. MEC concluded that staff miscommunication was the primary cause for this incident. To prevent a recurrence of human error that led to this violation, MEC instituted specific relay test records for all applicable power plants in May 2008.

MEC owns and maintains 1,822 relay devices subject to compliance with Reliability Standard PRC-005-1, R2.1. The eight electro-mechanical relays that exceeded the defined maintenance and testing interval represent 0.44% of the total MEC relays. Due to the misunderstanding between the engineers in documenting the testing, the eight electro-mechanical relays exceeded the defined interval for maintenance and testing from November 1, 2007 until they were tested on April 16, 2008.

Pleasant Hills Battery Testing

MEC maintains and operates 213 battery banks subject to compliance with Reliability Standard PRC-005-1, R2.1. MEC's 2007 testing plan included instructions on battery testing including (i) annual testing and (ii) bi-monthly testing provisions on applicable units, such as Pleasant Hills Units 1 and 2. MEC was able to demonstrate that annual and bi-monthly battery testing was compliant when MEC submitted its 2007 self-certification in October 2007. Although the normal procedure called for both Units 1 and 2 to be tested on the same day, MEC was unable to provide evidence that bi-monthly testing occurred in the October and December 2007 timeframe on Pleasant Hills Unit 1. While MEC was able to provide evidence of bi-monthly testing for Unit 2, it was unable to provide evidence that annual battery testing occurred in the last quarter of 2007 on both Units 1 and 2.

At MEC's internal review of past test records in April 2008, it was verified that testing prior to October 2007 was consistently performed for all units in the MEC battery banks by technicians responsible for all on-site units. The same records show bi-monthly testing was consistent for all periods except for October and December 2007 but, correct and true maintenance and testing within the defined interval resumed as expected in February 2008. MEC concluded that the primary cause for these incidents appeared to be human error; the technician was not following the normal procedures for recording maintenance activities.

Upon identifying the battery testing recording discrepancies that happened between October and December 2007, MEC tested the affected batteries and determined that the actual protection of the system was never degraded. MEC then modified its maintenance work order systems to generate a report that is run prior to the end of the bi-monthly reporting period that indicates the battery testing status of all plants. This process is intended to help ensure that all battery testing is completed as scheduled.

MRO determined that the violation of PRC-005-1 R2.1 with respect to relay testing began November 1, 2007 and continued until relay testing was complete on April 16, 2008. The battery testing records violation of PRC-005-1 R2.1 also began on November 1, 2007. The battery testing records were properly documented and maintained according to schedule as of February 1, 2008, but the violation itself was not completely mitigated until relay testing was complete on April 16, 2008. In addition to resolving the specific past interval testing violations, MEC's approved Mitigation Plan included system enhancements to prevent future recurrence. This included modifying its internal system programming to enhance its reporting thus reducing the risk of subsequent violations. The system enhancement was completed on September 12, 2008.

MRO exercised discretion to assess no penalty for this violation because: (1) the violation was related to only eight electro-mechanical protection relays for a single 515 MW unit representing 0.44% of the MEC relay population and battery testing at two black start combustion turbines connected to the 69 kV system out of the MEC battery bank population of 213; (2) the violation, which was identified during an internal audit following the replacement of the electro-mechanical protection relays, was self-reported; (3) the violation was identified during an internal audit conducted by MEC as a result of its increasing compliance and document management efforts; (4) within one week of identifying the discrepancy, the related equipment was tested to verify that it would have functioned properly if called upon; (5) when MEC recognized the irregularity in the documentation, the affected relays and batteries were tested and an operability evaluation was performed to ensure the actual protection of the system was never degraded; and (6) MEC expended over 1,200 personnel hours in efforts to gather, verify and upload data to a common storage site for maintaining generation and substation relay maintenance and test records, which will help MEC to maintain adequate records, avoid documentation errors and demonstrate compliance with the applicable Commission-approved Reliability Standards.

Furthermore, the violation was deemed by MRO not to be a violation that put bulk power system reliability at serious or substantial risk. MRO found that MEC fosters a good compliance culture throughout its operations because the violation was identified during an internal review and MEC self-reported its non-compliance with PRC-005-1, R2.1.⁵ There was no repetitive violation and no negative relevant compliance history. Moreover, MEC cooperated with MRO and worked diligently to identify and mitigate the violation. Finally, according to MRO, there was no evidence of any attempt by MEC to conceal the violation, no evidence that the violation

⁵ As noted above, the Notice of Penalty for MEC's violation of FAC-003-1 R2 was filed with the Commission on June 4, 2008 in Docket No. NP08-2-000. *See also Guidance on Filing Reliability Notices of Penalty*, 124 FERC ¶ 61,015.

was intentional, and no aggravating extenuating circumstances that would have led MRO Staff to recommend any penalty beyond zero dollars (\$0).

Status of Mitigation Plan⁶

On September 12, 2008, MEC submitted a Mitigation Plan to address the referenced violation. MEC's mitigation plan was accepted by MRO on October 13, 2008 and by NERC on October 20, 2008. The Mitigation Plan for the violation listed is designated as MIT-08-1076 and was submitted as non-public information to FERC on October 20, 2008 in accordance with FERC orders. MEC's Mitigation Plan specified the following tasks and actions for mitigation were taken:

- **Operational Testing** - When MEC recognized the possible documentation discrepancies, the affected relays and batteries were tested promptly to ensure that the actual protection of the system was never degraded. Operability tests were positive and determined that the relays and batteries would have functioned as designed even though the normal testing and maintenance cycle was not followed within the defined intervals.
- **The Use of Relay Test Records Rather than Summary Spreadsheets** - MEC now has specific relay test records for all applicable power plants. It will continue to require specific relay test records as evidence of proof of compliance rather than rely on the use of summary spreadsheets. The relay test sheets have been uploaded into the MEC SharePoint compliance software.
- **MEC Relay Maintenance and Testing Plan Clarifications** - MEC reviewed its relay and maintenance testing plans and added sections that clearly defined the scope of facilities and relays to be tested.
- **MEC Battery Maintenance Enhancements** - MEC reviewed its SynerGen work order management system for consistency. It then modified its maintenance work order systems where appropriate to enhance its reporting to reduce the chance of missing bi-monthly and annual battery tests. The fluid generation department developed a query to check the status of battery testing at all plants including the Pleasant Hills units. These are run prior to the end of the bi-monthly reporting period to avoid missing bi-monthly and annual battery testing intervals.

On November 11, 2008, MRO requested supporting evidence from MEC that its Mitigation Plan had been completed. On November 25, 2008, MEC provided an update to its Mitigation Plan including evidence of the operability tests conducted on the eight electro-mechanical relays, specific relay testing spreadsheets (rather than the summary spreadsheet maintained prior to the discovery of the relay testing deficiency), the generation and substation relay testing records, its General Protection System Maintenance and Testing summary, and its battery testing records. On December 3, 2008, MEC certified that its Mitigation Plan was complete as of September 12, 2008. Relays had been tested by April 16, 2008 and were replaced as part of a normal maintenance outage during the April 12, 2008 – May 13, 2008 outage period. Battery testing was returned to compliance in February 2008 when the bi-monthly testing and maintenance resumed as scheduled. The final step of the Mitigation Plan, enhancements to battery maintenance system programming, was complete as of September 12, 2008. Upon reviewing the

⁶ See 18 C.F.R § 39.7(d)(7).

evidence submitted by MEC, MRO notified MEC on December 5, 2008 that it found MEC to be fully compliant with Reliability Standard PRC-005-1 R2.1.

Statement Describing the Proposed Penalty, Sanction or Enforcement Action Imposed⁷

Basis for Determination

Taking into consideration the Commission's direction in Order No. 693, the NERC Sanction Guidelines and the Commission's July 3, 2008 Guidance Order,⁸ the NERC BOTCC reviewed the NOCV and supporting documentation on February 8, 2008. The NERC BOTCC approved the assessment of a zero dollar (\$) penalty against MEC based upon MRO's findings and determinations, the NERC BOTCC's review of the applicable requirements of the Commission-approved Reliability Standards and the underlying facts and circumstances of the violation at issue.

In reaching this determination, NERC BOTCC considered the following:

- The violation of PRC-005-1 R2.1 was deemed not to be a violation that put bulk power system reliability at serious or substantial risk;
- The violation is the first incidence of the Requirement at issue by MEC;
- MEC had a previous unrelated violation of FAC-003-1 R2 for failure to maintain the appropriate clearance between a tree and a conductor in accordance with its Vegetation Management Plan;⁹
- MEC worked cooperatively with MRO by providing its updated Mitigation Plan with additional supporting evidence at MRO's request;
- MEC has corrected the violations;
- The violation was promptly mitigated and MRO has verified MEC's Certification of Completion, as discussed above; and
- The actions taken by MEC ensure that reliability is maintained.

Therefore, NERC believes that the proposed zero dollar (\$) financial penalty is appropriate and consistent with NERC's goal to ensure reliability of the bulk power system.

Pursuant to Order No. 693, the penalty will be effective upon expiration of the thirty (30) day period following the filing of this Notice of Penalty with FERC, or, if FERC decides to review the penalty, upon final determination by FERC.

⁷ See 18 C.F.R § 39.7(d)(4).

⁸ *Guidance on Filing Reliability Notices of Penalty*, 124 FERC ¶ 61,015 (2008).

⁹ As noted above, the Notice of Penalty for MEC's violation of FAC-003-1 R2 was filed with the Commission on June 4, 2008 in Docket No. NP08-2-000. See also *Guidance on Filing Reliability Notices of Penalty*, 124 FERC ¶ 61,015.

Attachments to be Included as Part of this Notice of Penalty

The attachments to be included as part of this Notice of Penalty are the following documents and material:

- a) MEC's Self Report dated May 1, 2008, included as Attachment a;
- b) MEC's Response dated September 12, 2008, included as Attachment b;
- c) Mitigation Plan designated as MIT-08-1076 submitted September 12, 2008, included as Attachment c;
- d) MEC's Mitigation Plan Update dated November 25, 2008, included as Attachment d;
- e) MEC's Certification of Completion of the Mitigation Plan dated December 3, 2008, included as Attachment e; and
- f) MRO's Verification of Completion of the Mitigation Plan dated December 5, 2008, included as Attachment f.

A Form of Notice Suitable for Publication¹⁰

A copy of a notice suitable for publication is included in Attachment g.

¹⁰ See 18 C.F.R § 39.7(d)(6).

Notices and Communications

Notices and communications with respect to this filing may be addressed to the following:

Rick Sergel
President and Chief Executive Officer
David N. Cook*
Vice President and General Counsel
North American Electric Reliability Corporation
116-390 Village Boulevard
Princeton, NJ 08540-5721
(609) 452-8060
(609) 452-9550 – facsimile
david.cook@nerc.net

For MEC:
James Averweg*
VP, Standards and Compliance
MidAmerican Energy Company
106 East Second Street
Davenport, IA 52801
Phone: 563-333-8110
Email: javerweg@midamerican.com

*Persons to be included on the Commission's service list are indicated with an asterisk. NERC requests waiver of the Commission's rules and regulations to permit the inclusion of more than two people on the service list.

Rebecca J. Michael*
Assistant General Counsel
Holly A. Hawkins*
North American Electric Reliability Corporation
1120 G Street, N.W.
Suite 990
Washington, D.C. 20005-3801
(202) 393-3998
(202) 393-3955 – facsimile
rebecca.michael@nerc.net
holly.hawkins@nerc.net

For MRO:
Daniel P. Skaar*
President
Midwest Reliability Organization
2774 Cleveland Avenue North
Roseville, MN 55113
Phone: 651-855-1731
Email: dp.skaar@midwestreliability.org

Sara E. Patrick*
Director of Regulatory Affairs and Enforcement
Midwest Reliability Organization
2774 Cleveland Avenue North
Roseville, MN 55113
Phone: 651-855-1708
Email: se.patrick@midwestreliability.org

Conclusion

NERC respectfully requests that the Commission accept this Notice of Penalty as compliant with its rules, regulations and orders.

Respectfully submitted,

Rick Sergel
President and Chief Executive Officer
David N. Cook
Vice President and General Counsel
North American Electric Reliability Corporation
116-390 Village Boulevard
Princeton, NJ 08540-5721
(609) 452-8060
(609) 452-9550 – facsimile
david.cook@nerc.net

Rebecca J. Michael
Rebecca J. Michael
Assistant General Counsel
Holly A. Hawkins
Attorney
North American Electric Reliability
Corporation
1120 G Street, N.W.
Suite 990
Washington, D.C. 20005-3801
(202) 393-3998
(202) 393-3955 – facsimile
rebecca.michael@nerc.net
holly.hawkins@nerc.net

cc: MidAmerican Energy Company
Midwest Reliability Organization

Attachments