# UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

NOTICE OF PROPOSED RULEMAKING	)	<b>Docket No. RM08-3-000</b>
MANDATORY RELIABILITY STANDARD	)	
FOR NUCLEAR PLANT INTERFACE	)	
COORDINATION	)	

# COMMENTS OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION ON THE NOTICE OF PROPOSED RULEMAKING FOR MANDATORY RELIABILITY STANDARD FOR NUCLEAR PLANT INTERFACE COORDINATION

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
Assistant General Counsel
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

#### **TABLE OF CONTENTS**

	Page
I. INTRODUCTION	1
II. NOTICES AND COMMUNICATIONS	2
III. BACKGROUND	2
A. Regulatory Framework	2
B. Basis for Approval of Additional Proposed Reliability Standards	2
C. Reliability Standards Development Procedure	3
D. Overview of the Nuclear Plant Interface Coordination Standard	4
IV. DISCUSSIONS OF MAJOR ISSUES OUTLINED IN THE NOPR	5
A. NUC-001-1 (Nuclear Plant Interface Coordination Standard)	5
1. Commission Proposal	5
<ul> <li>a. Nuclear Plant Generator Operator obligation to identify and contact Transmission Entities re: NUC-001-1</li> </ul>	6
b. NERC's authority to register all Users, Owners, and Operate that provide off-site power supply or delivery services	ors 7
c. NERC Registration of Transmission Entities	9
d. Designation of Transmission Entity	10
e. Need for Agreement when Nuclear Plant Generator Operato and Transmission Entity may be same entity	r 11
f. Strategy when Attempts to Draft Interface Agreement Fails	13
g. Provisions to Reflect Interim Changes to Agreements	14
h. Required Coordination Among Transmission Entities Servir Same Nuclear Plant	ng 17
B. Violation Risk Factors	18
a. Violation Risk Factor R2	20
b. Violation Risk Factor R4	23
c. Violation Risk Factor R5	26
d. Violation Risk Factors R7 and R8	27
e. Violation Risk Factor R9	29
C. Violation Severity Levels	31
V. CONCLUSIONS AND ACTIONS REQUESTED OF THE COMMISSION	32

## UNITED STATES OF AMERICA BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

NOTICE OF PROPOSED RULEMAKING	)	<b>Docket No. RM08-3-000</b>
MANDATORY RELIABILITY STANDARD	)	
FOR NUCLEAR PLANT INTERFACE	)	
COORDINATION	)	

# COMMENTS OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION ON THE NOTICE OF PROPOSED RULEMAKING FOR MANDATORY RELIABILITY STANDARD FOR NUCLEAR PLANT INTERFACE COORDINATION

#### I. INTRODUCTION

The North American Electric Reliability Corporation ("NERC")<sup>1</sup> is pleased to provide these comments in response to the Notice of Proposed Rulemaking ("NOPR")<sup>2</sup> for the proposed reliability standard dealing with nuclear plant interface coordination and commends the Federal Energy Regulatory Commission's ("FERC" or the "Commission") determination to approve the proposed reliability standard in accordance with Section 215(d)(1) of the Federal Power Act ("FPA")<sup>3</sup> and Section 39.5 of the Commission's regulations.<sup>4</sup> The proposed standard Nuclear Plant Interface Coordination Reliability Standard (NUC-001-1) requires coordination between Nuclear Plant Generator Operators and Transmission Entities for the purpose of ensuring nuclear plant safety operation and shutdown.

The comments that NERC is submitting in this filing support the Commission's proposed actions and respond to questions posed by the Commission in the NOPR.

<sup>&</sup>lt;sup>1</sup> NERC has been certified by the Commission as the electric reliability organization ("ERO") authorized by Section 215 of the Federal Power Act. The Commission certified NERC as the ERO in its order issued July 20, 2006 in Docket No. RR06-1-000. 116 FERC ¶ 61,062 (2006) ("ERO Certification Order").

<sup>&</sup>lt;sup>2</sup> Mandatory Reliability Standard for Nuclear Plant Interface Coordination, 122 FERC ¶ 61,254 (2008) ("NOPR").
<sup>3</sup> 16 U.S.C. 8240.

<sup>&</sup>lt;sup>4</sup> 18 C.F.R. § 39.5 (2006). See NOPR at P 1.

#### II. NOTICES AND COMMUNICATIONS

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

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\*
Assistant General Counsel
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

\*Persons to be included on the Commission's service list are indicated with an asterisk.

#### III. BACKGROUND

#### a. Regulatory Framework

By enacting the Energy Policy Act of 2005,<sup>5</sup> Congress entrusted the Commission with the duties of approving and enforcing rules to ensure the reliability of the Nation's bulk power system, and with the duties of certifying an electric reliability organization ("ERO") that would be charged with developing and enforcing mandatory reliability standards, subject to Commission approval. Section 215 states that all users, owners and operators of the bulk power system in the United States will be subject to Commission approved reliability standards.

#### b. Basis for Approval of Additional Proposed Reliability Standards

Section 39.5(a) of the Commission's regulations requires the ERO to file with the

<sup>&</sup>lt;sup>5</sup> Energy Policy Act of 2005, Pub. L. No. 109-58, Title XII, Subtitle A, 119 Stat. 594, 941 (2005) (to be codified at 16 U.S.C. § 824o).

Commission for its approval each reliability standard that the ERO proposes to become mandatory and enforceable in the United States, and each modification to a reliability standard that the ERO proposes to be made effective. The Commission has the regulatory responsibility to approve standards that protect the reliability of the bulk power system. In discharging its responsibility to review, approve, and enforce mandatory reliability standards, the Commission is authorized to approve those proposed standards that meet the criteria detailed by Congress:

The Commission may approve, by rule or order, a proposed reliability standard or modification to a reliability standard if it determines that the standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest.<sup>6</sup>

When evaluating proposed reliability standards, the Commission is expected to give "due weight" to the technical expertise of the ERO. Order No. 672 provides guidance on the factors the Commission will consider when determining whether proposed reliability standards meet the statutory criteria.<sup>7</sup>

#### c. Reliability Standards Development Procedure

NERC develops reliability standards in accordance with Section 300 (Reliability Standards Development) of its Rules of Procedure and the NERC *Reliability Standards*Development Procedure, which is Appendix 3A of the Rules of Procedure.<sup>8</sup> In its ERO

Certification Order, the Commission found that NERC's rules provide for reasonable notice and opportunity for public comment, due process, openness and a balance of interests in developing reliability standards.<sup>9</sup>

<sup>&</sup>lt;sup>6</sup> Section 215(d)(2) of the FPA, to be codified at 16 U.S.C. § 824o(d)(2).

<sup>&</sup>lt;sup>7</sup> See Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards, Order No. 672, 71 FR 8,662 (Feb. 17, 2006), FERC Stats. & Regs. Regulations Preambles ¶ 31,204 (2006) at PP 320-338.

<sup>&</sup>lt;sup>8</sup> The Commission approved Version 6.1 of the standards development procedure on June 7, 2007 *Order on Compliance Filing*, 119 FERC  $\P$  61,248 (2007).

<sup>&</sup>lt;sup>9</sup> ERO Certification Order at P 250.

The development process is open to any person or entity with a legitimate interest in the reliability of the bulk power system. NERC considers the comments of all stakeholders and a vote of stakeholders is required to approve a reliability standard for submission to the Commission.

The proposed standard in this proceeding has been developed and approved by industry stakeholders using NERC's *Reliability Standards Development Procedure*, and was approved by the NERC Board of Trustees on May 2, 2007 for filing with the Commission.

#### d. Overview of the Nuclear Plant Interface Coordination Standard

On November 19, 2007, NERC filed the NUC-001-1 reliability standard (Nuclear Plant Interface Coordination) and on December 11, 2007, NERC filed an amendment to the November filing to expressly request approval of the addition of four terms and definitions to the Commission-approved NERC Glossary of Terms Used in Reliability Standards<sup>10</sup> ("NERC Glossary"): "Nuclear Plant Generator Operator," "Nuclear Plant Off-site Power Supply (Off-site Power)," "Nuclear Plant Licensing Requirements ("NPLRs")" and "Nuclear Plant Interface Requirements ("NPIRs")." The reliability standard was assigned to a new rulemaking proceeding, Docket No. RM08-3-000, and it is the subject of the current NOPR.

This new standard requires coordination between Nuclear Plant Generator Operators (defined as generator owners or generator operators) and Transmission Entities (as defined in Section 4.2 of the proposed standard) for the purpose of ensuring nuclear plant safe operation and shutdown. This proposed reliability standard, NUC-001-1 — Nuclear Plant Interface Coordination standard, addresses the coordination of interface requirements for two domains: (i)

Page 4

\_

<sup>&</sup>lt;sup>10</sup> The Commission approved the NERC Glossary in *Mandatory Reliability Standards for the Bulk-Power System*, 118 FERC ¶ 61,218, FERC Stats. & Regs. ¶ 31,242 (2007) (Order No. 693), *order on reh'g*, *Mandatory Reliability Standards for the Bulk-Power System*, 120 FERC ¶ 61,053 (Order No. 693-A) (2007).

the bulk power system planning and operations; and (ii) the NPLRs for off-site power necessary to enable safe nuclear plant shutdown. The proposed reliability standard represents the first such reliability standard that expressly addresses the interface between the bulk power system and the nuclear power plant.

In its November 2007 filing of this reliability standard, NERC requested an effective date of the first day of the first quarter 15 months after applicable regulatory approval. To ensure adequate time for compliance with the Final Rule, NERC requests that the Commission continue to adopt an effective date for reliability standard NUC-001-1 as the first day of the quarter no sooner than 15 months after approval by the Commission.

#### IV. DISCUSSIONS OF MAJOR ISSUES OUTLINED IN THE NOPR

NERC will now specifically address the issues raised by the Commission in its NOPR.

#### A. NUC-001-1 (Nuclear Plant Interface Coordination)

#### 1. <u>Commission Proposal</u>

The Commission proposes to approve reliability standard NUC-001-1 as a mandatory and enforceable reliability standard. In the NOPR, the Commission proposes to accept NERC's four related definitions for addition to the NERC Glossary. The Commission also proposes to direct various changes to the proposed violation risk factors, which measure the potential impact of violations of the Reliability Standard on the reliability of the Bulk-Power System. In addition, the Commission seeks ERO clarification and public comment on several matters discussed below.

-

<sup>&</sup>lt;sup>11</sup> NOPR at P 1.

#### a. Nuclear Plant Generator Operator obligation to identify and contact Transmission Entities re: NUC-001-1

#### **Commission Paragraphs**

- 20. Requirement R1 provides: "The Nuclear Plant Generator Operator shall provide the proposed NPIRs in writing to the applicable transmission entities and shall verify receipt." Thus, it is the responsibility of a nuclear plant generator operator to notify its appropriate transmission entities that they are responsible for meeting the provisions of NUC-001-1. In response, a nuclear plant generator operator and its transmission entities are expected to negotiate and execute interface agreements "that include mutually agreed to NPIRs."
- 21. The Commission understands Requirement R1 to provide that, if a nuclear plant generator operator fails to provide all appropriate NPIRs to an applicable transmission entity, the nuclear plant generator operator will not be in compliance with the Reliability Standard. However, the Commission also understands that the impact of such an implication is limited, because a nuclear plant generator operator will know, as a result of the NRC licensing approval and review processes, which applicable entities to contact and what services are needed to meet NRC licensing requirements. Thus, it is unlikely that a nuclear plant generator operator would fail to obtain appropriate services and contact the necessary off-site power suppliers and transmission entities. With this understanding, the Commission preliminarily finds that the Requirement R1 obligation on a nuclear plant generator operator to contact transmission entities that will be subject to NUC-001-1 is appropriate.

#### **NERC Response**

In the NOPR, the Commission stated that, if a Nuclear Plant Generator Operator failed to provide all appropriate NPIRs to an applicable Transmission Entity, the Nuclear Plant Generator Operator would not be in compliance with the Reliability Standard. However, the Commission also stated that the impact of such an implication is limited, because a Nuclear Plant Generator Operator will know, as a result of the Nuclear Regulatory Commission's ("NRC") licensing approval and review processes, which applicable entities to contact and what services are needed to meet NRC licensing requirements. The Commission further stated that, with this understanding, the Commission preliminarily found that the Requirement R1 obligation on a

Nuclear Plant Generator Operator to contact Transmission Entities that will be subject to NUC-001-1 is appropriate.<sup>12</sup>

NERC agrees that it is unlikely that a Nuclear Plant Generator Operator would fail to obtain the appropriate services. The Nuclear Plant Generator Operator will know the applicable services needed through the NRC licensing approval and review process, ensuring all Transmission Entities providing services to the nuclear plant are identified. As a licensing requirement, the Nuclear Plan Generator Operator would have previously coordinated with the Transmission Entities, although not under the obligations of the proposed NERC Reliability Standard, to the extent needed to meet those requirements. As such, the Nuclear Plant Generator Operator and the Transmission Entity have the foundation established upon which to implement the proposed reliability standard.

## b. <u>NERC's authority to register all Users, Owners, and Operators that</u> <u>provide off-site power supply or delivery services</u>

#### **Commission Paragraphs**

25. The Commission proposes to accept the identification and registration process set forth in the November 19, 2007 Petition to determine applicability for NUC-001-1. This proposed acceptance comes with the Commission's understanding that NERC will use its authority under the compliance registry process to register all users, owners and operators of the Bulk-Power System that provide transmission or generating services relating to off-site power supply or delivery.

26. Certain auxiliary power suppliers and transmission service providers may serve nuclear power plants through facilities that fall outside of the current Regional Entity definitions of bulk electric system that NERC uses to establish the applicability of the Reliability Standards. For instance, some nuclear power plants may obtain auxiliary power through lower voltage facilities that are not included in the Regional Entity's definition of bulk electric system. Other nuclear power plants may retain alternate sources of auxiliary power provided through lower voltage facilities operated by a small utility or cooperative that is not included in a Regional Entity's definition of bulk electric system. The Commission understands that NERC and the Regional Entities will register these and other

-

<sup>&</sup>lt;sup>12</sup> *Id.* at P 21.

service providers that provide interconnection and/or auxiliary power facilities vital to nuclear plant operation through NERC's authority to register an owner or operator of an otherwise exempt facility that is needed for Bulk-Power System reliability, on a facility-by-facility basis. Once registered, the transmission entity providing such services to a nuclear generating plant may be subject to other Reliability Standards applicable to the functional class within the NERC functional model for which the transmission entity has been registered, as deemed appropriate through the registration process. With this understanding, the Commission proposes to accept the scope of the definition of transmission entities as appropriate.

#### **NERC Response**

NERC concurs with the Commission's understanding that NERC will use its authority under the compliance registry process to register all users, owners and operators of the bulk power system that provide transmission or generating services relating to offsite power supply or delivery. As the Commission notes, service providers that provide interconnection and/or auxiliary power facilities vital to nuclear plant operation will be registered through NERC's authority to register an owner or operator of an otherwise exempt facility that is needed for bulk power system reliability, on a facility-by-facility basis. NERC also agrees with the Commission's determination that, once registered, the Transmission Entity providing such services to a nuclear generating plant may be subject to other Reliability Standards applicable to the functional class within the NERC Functional Model for which the Transmission Entity has been registered, as deemed appropriate through the registration process.

NERC adds an important clarification: for lower voltage facilities that provide such services to a Nuclear Power Plant, the registration of those entities and the applicability of the NERC Reliability Standards therein to that functional class of entities will be limited to those facilities identified by the Nuclear Plant Generator Operator in its NPIRs. These Transmission Entities' remaining facilities are not included for purposes

of compliance to NERC's Reliability Standards relevant to that functional class of entities.

#### c. NERC Registration of Transmission Entities

#### **Commission Paragraph**

28. First, the Commission asks NERC to clarify its statement in the November 19, 2007 Petition that the registry process will identify on a plant-by-plant basis the specific transmission entities that provide services relating to NPIRs. Specifically, does NERC intend, for entities that are not otherwise registered, to limit registration to those facilities that provide such services? How does this relate to the definition of bulk electric system? For example, when identifying "on a plant-by-plant basis the specific transmission entities required to identify NPIRs and develop the requisite agreement," would the "plant" be identified as a critical facility that is included in the bulk electric system?

#### **NERC Response**

Yes, NERC intends, for those entities not otherwise required to be registered, to limit registration and the application of reliability standards to the facilities used to provide services related to NPIRs. In addition, NERC clarifies that, for Transmission Entities that are not otherwise registered but that provide services to nuclear plants, it will limit registration of those Transmission Entities to those facilities they use to provide NPIR services.

This approach is consistent with the definition of bulk power system. "Bulk power system" is defined in Section 215(a)(1) as follows:

The term 'bulk-power system' means—

- (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and
- (B) electric energy from generation facilities needed to maintain transmission system reliability.

The term does not include facilities used in the local distribution of electric energy.

In the case of lower voltage facilities used to provide transmission services required for the operation of a nuclear power plant, such lower voltage facilities are not exclusively being used in the local distribution of electric energy, but instead are serving as facilities and control systems necessary for operating a portion of an interconnected electric energy transmission network and the output of generation facilities needed to maintain transmission system reliability. Absent the transmission services from those lower voltage facilities, the nuclear power plant would be unable to operate, and its real and reactive output would be unavailable to the system.

Further, NERC does not currently have an approved NERC Glossary definition for "critical facility" but recognizes that it is instructed to develop this definition as directed in Order No. 693. Until such time as this definition is developed and approved, NERC refrains from using the term in its response here. The determination of whether a plant is material to the bulk power system is determined at the Regional Entity level, but nuclear power plants typically provide both real and reactive power to the transmission grid.

#### d. Designation of Transmission Entity

#### **Commission Paragraph**

29. Second, the Commission understands the Nuclear Reliability Standard is not enforceable against an entity, other than a nuclear plant generator operator, until it executes an interface agreement. Upon execution, such an entity becomes a "transmission entity" subject to the Nuclear Reliability Standard and other Reliability Standards as noted above. The Commission requests comment on this understanding.

#### **NERC Response**

The Commission stated that it understands the Nuclear Plant Interface Coordination standard is not enforceable against an entity, other than a Nuclear Plant Generator Operator, until it executes an interface agreement. The Commission requested comment on the understanding that upon execution of an interface agreement, an entity becomes a "Transmission Entity" subject to the Nuclear Reliability Standard and other Reliability Standards.<sup>13</sup>

.

<sup>&</sup>lt;sup>13</sup> Id. at P 29.

The interface agreement with a Nuclear Plant Generator Operator is not the mechanism that determines whether an entity is a Transmission Entity subject to NUC-001-1, nor does NERC believe the proposed standard states this. The Nuclear Plant Generator Operator in the first instance proposes NPIRs to applicable Transmission Entities as stated in Requirement R1. NERC's Compliance Registration process will then be implemented by the Regional Entities to confirm with and register the identified Transmission Entities on the Compliance Registry. It is at this point the identified applicable Transmission Entities are placed on the Compliance Registry that they become subject to the requirements in the proposed standard, not when the agreement required in Requirement R2 is established. The Transmission Entities identified by the Nuclear Plant Generator Operator in Requirement R1 and registered on NERC's Compliance Registry then are obligated to develop the agreement required in Requirement R2, and implement the agreement consistent with the remaining requirements in the proposed standard.

## e. <u>Need for Agreement when Nuclear Plant Generator Operator and</u> <u>Transmission Entity may be same entity</u>

#### **Commission Paragraph**

30. Third, the Commission has concerns regarding the implementation of NUC-001-1 in the context of a single entity that both operates a nuclear plant and is responsible to provide services related to NPIRs, as may be the case with an integrated utility. In that situation, a single entity would be both the nuclear plant generator operator and the transmission entity. The Commission seeks clarification from the ERO, and public comment, on whether an agreement or arrangement would be required in a situation where one entity both operates the nuclear plant and provide services related to NPIRs. If an agreement or arrangement is required, who would execute it, e.g., different functional units or divisions within the same entity? Would such an agreement or arrangement be accessible during a compliance audit? If an agreement is not required in this situation, will there be reasonable assurance of adequate coordination between the nuclear plant operator and other units within the entity that are responsible to provide services related NPIRs?

#### **NERC Response**

The Commission stated that it had concerns regarding the implementation of NUC-001-1 in the context of a single entity that both operates a nuclear plant and is responsible to provide services related to NPIRs, as may be the case with an integrated utility. The Commission sought clarification from the ERO, and public comment, on whether an agreement or arrangement would be required in a situation where one entity both operated the nuclear plant and provided services related to NPIRs. NERC believes that this Standard is written to accommodate the various industry structures and situations, including an integrated utility structure. Appropriate agreements or arrangements are still required to ensure the mutually agreed upon NPIRs are established. This agreement, or arrangement, can include "mutually agreed upon procedures or protocols" per Footnote 1 of Requirement R2 and not necessarily be in the form of a formally executed agreement between officers of the respective companies, which, in the case of this question, may be the same person. Therefore, the expectation for a formal agreement does not make sense given the context of the organizational structure noted in the example. The NERC Glossary defines the capitalized term "Agreement" as "A contract or arrangement, either written or verbal and sometimes enforceable by law." Currently, this is typically how integrated utilities function.

Depending upon a specific utility's structure or situation, these agreements, or arrangements, may be in various forms and executed between different departments or divisions, functional organizations, affiliated companies, *etc*. For example, two functional organizations within a single company may have procedures in place that address the required communications and actions by the transmission operator and the Nuclear Generator Plant Operator in the event of degraded voltage levels at the transmission bus(es) supplying offsite power to the plant's safe

shutdown equipment. Measure M2 requires copies of such Agreements (in this case, the procedures) that address the applicable requirements. This will ensure that auditable documentation exists. Measures M3 through M8 require additional documentation and/or evidence that the applicable requirements are being met. This proposed standard, as written, will promote improved documentation and retention of evidence, as well as coordination beyond what may exist in an integrated utility today. At the end of the day, there must be sufficient evidence that the activities to be included in an agreement per the proposed standard are indeed in place irrespective of the organizational structure.

#### f. Strategy when Attempts to Draft Interface Agreement Fails

#### **Commission Paragraphs**

- 34. The Commission proposes to find this consensus approach an acceptable and appropriate means to resolve concerns with the differing operational requirements faced by nuclear plant generator operators and transmission entities, as well as the variety of issues that could arise among them. However, the Commission seeks clarification of what compliance options are available under the reliability Standard when nuclear plant generator operators and transmission entities fail to reach agreement.
- 36. The Commission is concerned with the possibility that nuclear plant generator operators and transmission entities may fail to come to agreement while attempting to draft an interface agreement. The Commission therefore asks NERC to clarify what compliance options are available when a nuclear plant generator operator and a designated transmission entity fail to come to agreement over a proposed NPIR or a suitable approach to resolve any failure to agree.
- 37. It appears that, prior to executing an interface agreement, no compliance registry process would be triggered and no agreed-to NPIRs would exist to support the remaining Requirements of the Reliability Standard. The Commission seeks clarification from NERC, and public comment, on a circumstance involving an off-site power supplier or other potential transmission entity that disagrees with the nuclear plant generator operator that it should execute an interface agreement. In such circumstance, how would NERC resolve the impasse? Also, would NERC proceed to register such an entity (if not previously registered) without an executed interface agreement?

#### **NERC Response**

In the event that Nuclear Plant Generator Operators and Transmission Entities fail to reach agreement, NERC proposes to find each entity in non-compliance with Requirement R2 and subject to penalties, sanctions, mitigation and remedial actions until such an agreement is reached. Transmission Entities and the Nuclear Plant Generator Owners or Operators are notified of required compliance with applicable reliability standards when identified through the compliance registration process, not when the agreement is reached. In its submission of Violation Severity Levels ("VSLs") on March 4, 2008, NERC identified the failure to reach an agreement as required in Requirement R2 as a Severe VSL. As part of such a mitigation or remedial action strategy, NERC may require mediation or arbitration of such a dispute.

#### g. Provisions to Reflect Interim Changes to Agreements

#### **Commission Paragraphs**

- 41. The Commission is concerned that an interface agreement may not be updated for significant system changes outside of the three-year review process. However, the Commission does not at this time expect revisions to the Reliability Standard to be necessary to address its concern. The Commission, therefore, proposes to find acceptable the provisions for revision to interface agreements, but seeks comment on whether NUC- 001-1 adequately provides for revisions to reflect interim changes.
- 42. The Commission notes that the Requirements of NUC-001-1 describe a minimum set of elements that must be included in an interface agreement. The Commission understands that the NRC requires a nuclear plant generator operator to have operationally feasible solutions in place prior to authorizing plant start up or continued operation following licensing review procedures. As operating solutions are worked out in advance, the Commission would prefer that the updated operational procedures be reflected in the interface agreements prior to being implemented upon plant start up or reauthorization, or shortly thereafter. The Commission therefore seeks comment whether it is feasible for the nuclear plant interface agreements to provide for negotiation and amendments to address emerging transmission and generating system limits and revised nuclear plant licensing requirements prior to, or contemporaneously with, implementing operations solutions. At this time, the Commission anticipates that such an approach would not require revision to the Reliability Standard itself, and that such provision could be made to implement the standard contractual practice

requiring negotiation and revision whenever external circumstances represent a material change to the original assumptions that forms the basis of the agreement. The Commission views such a provision as being consistent with Requirement R9.1.3, providing for review and update of an agreement "at least every three years," and Requirement R9.3.4, providing for review and updates to address mitigation actions needed to avoid violating NPIRs.

#### **NERC Response**

The Commission stated in the NOPR that it had concerns that an interface agreement may not be updated for significant system changes outside of the three-year review process.

However, the Commission also stated that it proposed to find acceptable the provisions for revision to interface agreements, but sought comment on whether NUC-001-1 adequately provides for revisions to reflect interim changes.

The purpose of the three-year review discussed in NUC-001-1 Requirement R9.1.3 is to ensure that a periodic review of the agreements is performed to identify and incorporate any administrative, communicative and technical issues. NUC-001-1 Requirements R7 and R8 ensure that actual or proposed changes to either the nuclear plant design or to the electric system design are communicated and reviewed to determine if there is potential impact on the NPIRs. In addition, the Commission previously stated that "Requirement R9.3.4, providing for review and updates to address mitigation actions needed to avoid violating NPIRs." Requirement R9.3.4 further states: "These provisions shall include responsibility to notify the Nuclear Plant Generator Operator within a specified time frame." Furthermore, Requirement R9.4 and specifically Requirement R9.4.1 require that communication protocols and notification time requirements be established between the Nuclear Plant Generator Operator and the Transmission Entities. Therefore, NERC believes that the combination of these Requirements adequately

Page 15

<sup>&</sup>lt;sup>14</sup> *Id.* at P 42.

provides for the updating of NPIRs outside the three-year review window as circumstances dictate.

The Commission noted that the Requirements of NUC-001-1 describe a minimum set of elements that must be included in an interface agreement. The Commission understood that the NRC requires a Nuclear Plant Generator Operator to have operationally feasible solutions in place prior to authorizing plant start up or continued operation following licensing review procedures. The Commission is seeking comment as to the feasibility of the nuclear plant interface agreements to provide for negotiation and amendments to address emerging transmission and generating system limits and revised NPLRs prior to, or contemporaneously with, implementing operations solutions. <sup>15</sup>

The nuclear plant owner must have the necessary procedures and agreements to ensure it meets its NPLRs. Note there is a significant difference between NPLRs and NPIRs. NPLRs and bulk power system Requirements are the basis for the development of the NPIRs. Since NPIRs contain agreed upon elements, the NPIRs are negotiated and amended on flexible time horizons per the individual Agreement, unlike the NPLRs and bulk power system Requirements which require much longer time horizons to modify and also require regulatory approval. If at any time the nuclear plant cannot meet a NPLR it is required to enter an action statement under NRC regulations (Limiting Conditions for Operation – LCO) until the licensing requirement is restored. These actions could include unit shutdown within a specified period of time. The nuclear plant under extreme conditions could also require licensing relief from the NRC.

Requirement R9.4.2 requires that the Nuclear Plant Generator Operator and the Transmission Entities establish provisions for coordinating activities during an off-normal or emergency event. As stated in the footnote to NUC-001-1 Requirement R2 "Agreements may

<sup>&</sup>lt;sup>15</sup> Id

include mutually agreed upon procedures or protocols." The use of electric system and nuclear plant operating procedures/protocols, which can be amended in short time horizons, provide the flexibility needed to respond to emerging issues, which could have an impact on assumptions used to form the basis of the NPIRs or agreements, until such time is deemed necessary to modify the Agreement to address the issues.

### h. Required Coordination Among Transmission Entities Serving Same Nuclear Plant

#### **Commission Paragraph**

45. The NUC-001-1 Requirements cited above explicitly provide for bilateral coordination between the nuclear plant generator operator and each individual transmission entity. However, the Reliability Standard does not explicitly require communication and coordination among the transmission entities necessary to meet the NPIRs. The Commission understands that the historical practice is for the interface agreement to provide for all necessary coordination, typically by obligating control area operators to communicate with neighboring entities, including Regional Transmission Organization-type grid operators and other interconnected utilities and load serving entities, when necessary. The Commission anticipates that, pursuant to the Requirements of the proposed Reliability Standard, the parties to nuclear plant interface agreements will continue to provide for coordination among transmission entities, in order to comply with NUC-001-1 Requirement R9.3.1 obligations to provide for coordination of interface facilities. Interface agreement parties may continue to designate former integrated control area operators when appropriate or may revise their approach, reflecting changes under restructuring to grid operations when necessary, consistent with coordination responsibilities provided for in existing Reliability Standards. Consistent with this understanding, the Commission proposes to accept the coordination provisions as requiring all appropriate coordination among transmission entities.

#### **NERC Response**

In the NOPR, the Commission stated that the NUC-001-1 Requirements cited above explicitly provide for bilateral coordination between the Nuclear Plant Generator Operator and each individual Transmission Entity. However, the Commission noted that the Reliability Standard does not explicitly require communication and coordination among the Transmission Entities necessary to meet the NPIRs. The Commission proposed to accept the coordination

provisions as requiring all appropriate coordination among Transmission Entities with the understanding that, pursuant to the Requirements of the proposed Reliability Standard, the parties to nuclear plant interface agreements will continue to provide for coordination among Transmission Entities, in order to comply with the NUC-001-1 Requirement R9.3.1 obligations to provide for coordination of interface facilities.<sup>16</sup>

The NUC-001-1 Reliability Standard addresses all nuclear plant interfaces subject to the NERC standards. Due to the many variations of the types of entities involved for each interface, there could not be a one-size fits all approach. To recognize this variation, the use of NPLRs, Functional Entities and the associated registration processes ensure all of the impacted parties are involved in the agreements. As the Commission stated, Requirement R9.3.1 ensures coordination among all entities that have electrical facilities at the interface. However, there may be other entities, such as a remote generator providing the energy necessary for auxiliaries systems following a unit trip, that do not have electrical facilities at the interface. Requirement R9.4 further provides for the necessary communication and coordination *among* Transmission Entities and the Nuclear Plant Generator Operators at each interface.

#### **B. Violation Risk Factors**

#### **Commission Paragraph**

51. The Commission proposes to direct NERC to raise violation risk factors for several Requirements, as discussed below. The Commission generally views a Reliability Standard that ensures safe and reliable nuclear power plant operation and shutdown as meriting violation risk factors of medium or high, rather than lower, due to the reliability benefits of nuclear power and the impact of separating a plant from the grid. While it is true that many of the Requirements are administrative in nature, these same Requirements provide for the development of procedures to ensure the safe and reliable operation of the grid, and responses to potential emergency conditions. If the Requirements are not met, the procedures will not be in place to address changing or emergency conditions

Page 18

<sup>&</sup>lt;sup>16</sup> *Id.* at P 45.

<sup>17</sup> Id

or provide for safe operation and shutdown of a nuclear power plant. In short, the Requirements co-mingle the administrative tasks with the more critical reliability objective of ensuring safe nuclear power plant operation and shutdown. The Commission understands that NERC will apply the violation risk factor for the main Requirement to any violation of a sub-Requirement, unless separate violation risk factors are assigned to the Requirement and the sub-Requirement. The Commission discusses individual Requirements of NUC-001-1 and proposes changes, below.

#### **NERC Response**

The Commission is proposing to direct NERC to raise VRF for several Requirements, as discussed below. The Commission generally views a Reliability Standard that ensures safe and reliable nuclear power plant operation and shutdown as meriting VRFs of "Medium" or "High," rather than "Lower," due to the reliability benefits of nuclear power and the impact of separating a plant from the grid. The Commission also states that, although many of the Requirements are administrative in nature, these same Requirements provide for the development of procedures to ensure the safe and reliable operation of the grid, and responses to potential emergency conditions. The Commission states that these Requirements co-mingle the administrative tasks with the more critical reliability objective of ensuring safe nuclear power plant operation and shutdown.<sup>18</sup>

As the Commission stated in the NOPR, NERC has assigned VRFs in accordance with the approved definitions.<sup>19</sup> These VRFs also were developed in accordance with other similar requirements in presently approved Standards. The determination of individual VRF levels for those Requirements identified by the Commission is discussed in the following paragraphs.

In its general basis for justifying changes to VRFs, the Commission cited the reliability benefits of nuclear power and the impact of separating a plant from the grid. NERC fully appreciates the unique characteristics of nuclear power generation and the special conditions

<sup>&</sup>lt;sup>18</sup> *Id.* at P 51.

<sup>&</sup>lt;sup>19</sup> *Id.* at PP 48, 49.

under which it must operate to satisfy the vital public issue of safety. However, NERC believes the Commission's use of these characteristics and conditions as a basis for elevating the VRFs is flawed. The reliability benefits of nuclear power and the impact of separation from the grid are not vastly different to the reliability of the interconnected grid than a large output fossil generating facility, for example. Provided the Balancing Authority operator meets the disturbance control recovery criteria, through employment of contingency reserves as required in BAL-002-0 Reliability Standard, and that sufficient operating reserves are in place to prevent an energy emergency, there is no adverse impact to the bulk power system. To the extent that this proposed standard does satisfy a vital public interest, the Commission has further impetus to approve it, but that factor does not create an increased impact to grid reliability. A Transmission Operator must have knowledge of the operating limits for all generating facilities, regardless of the energy source, that are connected and operating on the interconnected grid. This proposed standard sharpens the focus on these limits for nuclear generating plants by requiring agreements to be established. However, this increased focus is based on nuclear safety and not grid reliability. VRFs measure impact to the grid. As such, the Commission's generic basis for its decision that all requirements related to nuclear plants should have VRFs of "Medium" or "High" is not grounded in matters related to the reliability of the bulk power system.

#### a. Violation Risk Factor R2

#### **Commission Paragraph**

52. The Commission proposes to direct NERC to raise the violation risk factor for Requirement R2 from lower to medium and seeks comment on this proposal. Requirement R2 places an obligation on a nuclear plant generator operator and transmission entities that agree to provide services relating to NPIRs to have an interface agreement in place to document how nuclear licensing requirements and transmission system limits will be addressed. Thus, the Requirement co-mingles the administrative element of having an executed agreement in place with the operational element of determining how the parties to the interface agreement will address nuclear plant licensing requirements and SOLs in order to provide

for safe nuclear plant operation and shutdown. The operational requirements established in the interface agreements include requirements for off-site power to enable safe operation and shutdown during an electric system or plant event and requirements for avoiding nuclear safety issues as a result of changes in electric system conditions during a disturbance, transient or normal conditions. Therefore, because a violation of Requirement R2 "could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly affect the electrical state or capability of the Bulk-Power System," a medium violation risk factor is appropriate for this Requirement.

#### **NERC Response**

The Commission proposes to direct NERC to raise the VRF for Requirement R2 from "Lower" to "Medium" in accordance with guideline five (5). The Commission states that Requirement R2 places an obligation on a Nuclear Plant Generator Operator and Transmission Entities that agree to provide services relating to NPIRs to have an interface agreement in place to document how NPLRs and transmission system limits will be addressed. The Commission believes that this Requirement co-mingles the administrative element of having an executed agreement in place with the operational element of determining how the parties to the interface agreement will address NPLRs and system operating limits ("SOLs") in order to provide for safe nuclear plant operation and shutdown.<sup>21</sup>

The Nuclear Standard NUC-001-1 Requirement R2 addresses establishment of the Agreements. Thus, NERC assigned it a "Lower" VRF and believes this designation is appropriate and consistent with the VRF guideline established by NERC and approved by the FERC.

This is consistent with administrative requirements in other NERC standards. It is important to observe that the more critical requirements in this standard relative to planning, operation, control, monitoring and restoration of the bulk power system are encompassed in

<sup>21</sup> *Id.* at P 52.

<sup>&</sup>lt;sup>20</sup> *Id.* at PP 50, 52.

Requirements R3 through R8 that require implementation of the concepts in the established Agreement. Therefore, NERC believes it is appropriate to retain the "Lower" VRF for Requirement R2.

Operators of the bulk power system are required to operate within SOLs and interconnection reliability operating limits ("IROLs") per requirements in the TOP and IRO family of Reliability Standards. Thus, these obligations are already in place. The focus of this proposed standard is to ensure the safe operation and shutdown of the nuclear power plant facilities. In the absence of this proposed standard, the Transmission Operators and Reliability Coordinators are still required to operate in accord with SOLs and IROLs. Limits imposed by the nuclear power plant are part of the many SOLs or IROLs the grid operators must operate within. Likewise, the Nuclear Plant Generator Operators will be required to operate within its licensing requirements. Absent this proposed standard, they will continue to do so. The development of the interface agreement proposed in this standard reinforces the need for Nuclear Plant Generator Operators' and the Transmission Entities' coordination and formalizes the performance expectations already in place independently for both parties. To that end, the development of this agreement is administrative in that it documents formally the expectations that heretofore have been and will continue to be implemented by the parties. On this basis, NERC believes that the VRF assignment of "Lower" is appropriate, because absence of the agreement will not "directly affect the electrical state or the capability of the bulk power system," as set out in the definition for a "Medium" VRF. Furthermore, the use of the NPIR is a naming convention used for clarity. The limits represented by the NPIRs have been identified and were operated to before the term NPIR was introduced, and before a formalized agreement as proposed in the standard was required.

Finally, Reliability Standard EOP-005-1 – System Restoration Plans – already addresses the importance of restoration of supply to a nuclear power plant following a system disturbance.

#### b. Violation Risk Factor R4

#### **Commission Paragraphs**

- 53. The Commission proposes to direct NERC to raise the violation risk factors for sub-Requirements R4.2 and R4.3 to high, and seeks comment on its proposal. NERC proposes a medium violation risk factor for sub-Requirement R4.1, R4.2, and R4.3, which state that transmission entities shall incorporate the NPIRs into operating analyses, operate to meet the NPIRs and inform the nuclear plant generator operator when it loses the ability to assess its performance to meet the NPIRs.
- 54. Requirement R4.2 states that transmission entities shall operate their electric systems to meet the NPIRs established in the interface agreements. According to NERC, the NPIRs form the basis under which nuclear plant generator operators and transmission entities will "coordinate planning, assessment, analysis, and operation of the bulk power system to ensure safe nuclear plant operations and shutdowns." Therefore, under emergency, abnormal, or restorative conditions a violation of Requirement R4.2 could directly cause or contribute to Bulk-Power System instability, separation, or a cascading sequence of failures, or could place the Bulk-Power System at an unacceptable risk of instability, separation, or cascading failures. [footnote omitted] For these reasons, the Commission believes that a high violation risk factor is appropriate for Requirement R4.2.
- 55. Under Requirement R4.3, when the transmission entities have lost the ability to monitor the system to ensure that NPIRs are met, they must inform the nuclear plant generator operators. The Commission believes that, if a nuclear plant generator operator is unaware of the fact that a transmission entity can no longer guarantee that NPIRs are met, the nuclear plant generator operator's ability to respond to, or anticipate, emergencies and changing system conditions will be impaired. Such an event could increase the likelihood that the plant is separated from the transmission system, causing significant degradation in Bulk-Power System reliability, characterized by instability, uncontrolled islanding and cascading. Therefore, the Commission proposes to direct NERC to raise the violation risk factor for Requirements R4.2 and R4.3 from medium to high, and requests comment on this proposal.

#### **NERC Response**

The Commission proposes to direct NERC to raise the VRFs for sub-Requirements R4.2 and R4.3 from "Medium" to "High" in accordance with guideline four (4).<sup>22</sup>

The Commission states that Requirement R4.2 mandates the Transmission Entities to operate their electric systems to meet the NPIRs established in the interface agreements. The Commission further states that according to NERC, the NPIRs form the basis under which Nuclear Plant Generator Operators and Transmission Entities will "coordinate planning, assessment, analysis, and operation of the bulk power system to ensure safe nuclear plant operations and shutdowns." Therefore, under emergency, abnormal, or restorative conditions the Commission believes that a violation of Requirement R4.2 could directly cause or contribute to Bulk-Power System instability, separation, or a cascading sequence of failures, or could place the Bulk-Power System at an unacceptable risk of instability, separation, or cascading failures.<sup>23</sup>

The Commission also states that under Requirement R4.3, when the Transmission Entities have lost the ability to monitor the system to ensure that NPIRs are met, they must inform the Nuclear Plant Generator Operators. The Commission believes that, if a Nuclear Plant Generator Operator is unaware of the fact that a Transmission Entity can no longer guarantee that NPIRs are met, the Nuclear Plant Generator Operator's ability to respond to, or anticipate, emergencies and changing system conditions will be impaired. Such an event could increase the likelihood that the plant is separated from the transmission system, causing significant degradation in Bulk-Power System reliability, characterized by instability, uncontrolled islanding and cascading.<sup>24</sup>

<sup>22</sup> *Id.* at PP 50, 53. <sup>23</sup> *Id.* at 54.

<sup>&</sup>lt;sup>24</sup> *Id.* at 55.

The emphasis on prevention of severe events due to loss of a single generator, regardless of the type, is already correctly and appropriately addressed in the Transmission Planning, Transmission Operations and Reliability Operation Standards (TPLs, TOPs, IROs). These require the transmission system to be designed, constructed and operated to be robust enough to avoid a high risk of power system instability, separation or cascading due to loss of a single element, including a nuclear generator. The Transmission Planner, Transmission Operator, and Reliability Coordinator presently factor the nuclear plant's limitations (*ex*: degraded voltage limits) into their studies and analyses when planning, operating, and assessing the reliability of the system, recognizing contingencies that could result in degraded voltage or instability at a nuclear facility could impact multiple units at a single plant or nearby facilities.

Failure to meet Requirement R4 may affect control and operations of the bulk power system or compromise the generation capability of the power grid due to the need to shut down the plant, but it would not cause significant degradation in bulk power system reliability characterized by instability, uncontrolled islanding and cascading since the shut down of a power plant is a controlled process, not a contingency. Further, the loss of a single nuclear unit is already contemplated in several TOP and BAL reliability standards and is considered a single contingency for which the system should be positioned to absorb. If not true, the Transmission Operator or Balancing Authority operator should be implementing emergency procedures to restore the bulk power system to a reliable state. However, the loss of the nuclear plant in this instance will not "directly cause or contribute to Bulk-Power System instability, separation, or a cascading sequence of failures," as required by the definition of a "High" VRF. The potential risk to bulk power system control should be, according to the definition, assigned a "Medium" but not a "High" VRF for Requirement R4 in total.

#### c. Violation Risk Factor R5

#### **Commission Paragraph**

56. The Commission proposes to direct NERC to raise the violation risk factor for Requirement R5 from medium to high, and seeks comment on its proposal. Requirement R5 states that a nuclear plant generator operator shall operate its system consistent with the interface agreement developed under NUC-001-1. Due to the size of nuclear power plants, the separation of a nuclear power plant from the grid may significantly affect grid operations. Not all nuclear power plant service interruptions are initiated by incidents occurring off the nuclear power plant system. For instance, if a nuclear power plant breaker opens, separating a turbine from the grid, the resulting lack of power could cause degraded voltage near the plant. As a result, the transmission system may be unable to deliver offsite power to the plant, causing the entire plant to separate from the grid. [footnote omitted] Due to the possibility for a violation of Requirement R5 to directly affect the reliability of the system, the Commission proposes to direct NERC to raise the violation risk factor for this Requirement from medium to high.

#### **NERC Response**

The Commission proposes to direct NERC to raise the VRF for Requirement R5 from "Medium" to "High" in accordance with guideline four (4).<sup>25</sup> The Commission cites that Requirement R5 states that a Nuclear Plant Generator Operator shall operate its system consistent with the interface agreement developed under NUC-001-1. The Commission states that, due to the size of nuclear power plants, the separation of a nuclear power plant from the grid may significantly affect grid operations.<sup>26</sup>

As stated in the request for comment to the VRF for Requirement R4, the purpose of the proposed standard is to ensure the safe operation and shutdown of nuclear power plants. This is accomplished by requiring both the Nuclear Plant Generator Operator and Transmission Entities to mutually agree to the NPIRs and include them into the operation of both the nuclear plant and the bulk power system. The intent of Requirement R5 is simply to ensure that the Nuclear Plant Generator Operator understands and operates the plant in accordance with the established

<sup>&</sup>lt;sup>25</sup> *Id.* at PP 50, 56.

<sup>&</sup>lt;sup>26</sup> *Id.* at 56.

Agreements. Operation of the bulk power system to address the risk of instability, separation, or cascading failures is appropriately covered in other Reliability Standards such as the BAL, IRO and TOP families. Further, the loss of a generating unit is a single contingency for which the operators of the grid have prepared the system, both in the planning realm and in real-time operations, to absorb without risk of cascading outages. NERC agrees that failure to meet this requirement may affect grid control and operation, but not "directly cause or contribute to Bulk-Power System instability, separation, or a cascading sequence of failures," as required by the definition of a "High" VRF. Therefore, NERC believes that a VRF of "Medium" is appropriate for Requirement R5.

#### d. Violation Risk Factors R7 and R8

#### **Commission Paragraphs**

57. The Commission proposes to direct NERC to raise the violation risk factors for Requirements R7 and R8 from medium to high, and seeks comment on its proposal. Requirements R7 and R8 state that a nuclear plant generator operator and its transmission entities must inform each other of actual or proposed changes to their facilities that affect their ability to meet NPIRs. The information to be exchanged, such as "limits" and "protection systems," is relevant for a transmission entity to determine its system capability and configuration, which affect the ability of a plant to remain connected to the Bulk-Power System. Due to the safety implications of nuclear generation, a transmission entity must plan and operate to meet a nuclear power plant's operating requirements, which are more stringent than for other generators. To permit the necessary planning and system operations, a nuclear plant generator operator and its applicable transmission entities must exchange information relating to proposed and actual system changes. If transmission entities and nuclear plant generator operators do not provide information concerning system changes to each other, their planning and operating analyses may not be based on accurate data. As a result, unanticipated events could result in the nuclear plant disconnecting from the Bulk-Power System, placing the Bulk-Power System at risk for cascading outages.

58. The Blackout Report highlighted the importance of coordinated planning and operations between the Bulk-Power System and nuclear power plants, stating "[a]s the design and operation of the electricity grid is taken into account when evaluating the safety analysis of nuclear power plants, changes to the electricity grid must be evaluated for the impact on plant safety." [footnote omitted] To account for the potential impact on safety and the integrity of the transmission

system, the Commission proposes to direct NERC to raise the violation risk factors for Requirements R7 and R8 from medium to high.

#### **NERC Response**

The Commission proposes to direct NERC to raise the VRFs for Requirements R7 and R8 from "Medium" to "High." The Commission bases this proposal on guideline one (1).<sup>27</sup>

The Commission cites that Requirements R7 and R8 state that a Nuclear Plant Generator Operator and its Transmission Entities must inform each other of actual or proposed changes to their facilities that affect their ability to meet NPIRs. The Commission states that due to the safety implications of nuclear generation, a Transmission Entity must plan and operate to meet a nuclear power plant's operating requirements, which are more stringent than for other generators. The Commission further states that if Transmission Entities and Nuclear Plant Generator Operators do not provide information concerning system changes to each other, their planning and operating analyses may not be based on accurate data, thus resulting in unanticipated events that could result in the nuclear plant disconnecting from the Bulk-Power System, placing the Bulk-Power System at risk for cascading outages.<sup>28</sup>

As stated in earlier discussions, the Commission's emphasis on prevention of severe events due to loss of a single generator, regardless of the type, is already correctly and appropriately addressed in the Transmission Planning, Balancing Resources and Demand, Transmission Operations and Reliability Operation Standards. These groups of standards require the transmission system to be designed, constructed, and operated to be robust enough to avoid a high risk of power system instability, separation, or cascading due to loss of a single element, including a nuclear generator. The Balancing Authority, Transmission Planner, Transmission Operator, and Reliability Coordinator presently factor the nuclear plant's limitations (*i.e.*,

<sup>&</sup>lt;sup>27</sup> *Id.* at PP 50, 57, 58.

<sup>&</sup>lt;sup>28</sup> *Id.* at P 57.

degraded voltage limits) into their studies, analyses, and operational planning when planning and operating the system.

The intent of Requirements R7 and R8 in NUC-001-1 is to ensure the Nuclear Plant Generator Operator and the Transmission Entities communicate actual or proposed changes to their facilities for the purpose of ensuring nuclear plant safe operation and shutdown. NERC believes the assignment of a "Medium" VRF is appropriate and consistent with the VRF definitions established by NERC and approved by the FERC.

#### e. Violation Risk Factor R9

#### **Commission Paragraph**

59. The Commission proposes to direct NERC to raise the violation risk factor for Requirement R9 from lower to medium, and seeks comment on its proposal. According to NERC, Requirement R9 sets forth the specific administrative, technical, operations, maintenance, coordination, communications, and training elements that a nuclear plant generator operator and its transmission entities must include in their interface agreement. Thus, similar to Requirement R2, Requirement R9 co-mingles the administrative element of incorporating the various elements into the interface agreement with the operational element of determining how the parties to the interface agreement will address the administrative, technical, operations, maintenance, coordination, communications, and training issues in order to provide for safe nuclear plant operation and shutdown. A violation of Requirement R9 may mean that the necessary operational or emergency planning elements are not in place, resulting in an inability to resolve system conditions in an emergency. Therefore, a violation of Requirement R9 "could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly affect the electrical state or capability of the Bulk-Power System." Consequently, the Commission proposes to find that a medium violation risk factor is appropriate for Requirement R9. Should NERC wish to assign a lower violation risk factor to any of the purely administrative sub-Requirements of Requirement R9, it may propose appropriate differentiation in its comments.

#### **NERC Response**

The Commission proposes to direct NERC to raise the VRF for Requirement R9 from "Lower" to "Medium."<sup>29</sup> The Commissions proposal is based on guideline five (5).<sup>30</sup>

The Commission cites that, according to NERC, Requirement R9 sets forth the specific administrative, technical, operations, maintenance, coordination, communications, and training elements that a Nuclear Plant Generator Operator and its Transmission Entities must include in their interface agreement. Therefore, Requirement R9 co-mingles the administrative element of incorporating the various elements into the interface agreement with the operational element of determining how the parties to the interface agreement will address the administrative, technical, operations, maintenance, coordination, communications, and training issues in order to provide for safe nuclear plant operation and shutdown. The Commission further states that a violation of Requirement R9 could mean that the necessary operational or emergency planning elements are not in place, resulting in an inability to resolve system conditions in an emergency.<sup>31</sup>

NUC-001-1 Reliability Standard Requirement R9 addresses specific elements that need to be included in Agreements. The elements listed in Requirement R9 serve as a checklist of elements to facilitate development of the Agreements (i.e., NPIRs, procedures, protocols, etc.) which are used in Requirements R3 through R8 for the purpose of ensuring nuclear plant safe operation and shutdown. This is considered to be administrative in nature. Additionally, all registered entities, including the subset of Transmission Operators and Generation Operators that are expected to be identified as Transmission Entities or otherwise held applicable to the requirements in this proposed standard, are required to comply with applicable NERC Standards (including BAL, IRO, PRC, TPL and TOP) which are intended to prevent the likelihood of

<sup>&</sup>lt;sup>29</sup> *Id.* at P 59. <sup>30</sup> *Id.* at PP 50, 59.

<sup>&</sup>lt;sup>31</sup> *Id.* at P 59.

separation or instability of the grid. Therefore, NERC believes the assignment of a "Lower" VRF for Requirement R9 is appropriate and consistent with the VRF guideline established by NERC and approved by the FERC.

#### C. Violation Severity Levels

#### **Commission Paragraph**

62. Because NERC has recently filed new Requirement and sub-Requirementspecific violation severity levels in Docket No. RR08-4-000, the Commission intends to address all issues relating to NUC-001-1 violation severity levels in that proceeding. In the interim, should the review process in Docket No. RR08-4-000 not approve revised violation risk factors before the NUC-001-1 effective date, the Commission proposes to approve the interim violation severity levels proposed in this proceeding, until acceptance of the superseding violation severity levels. The Commission notes that the proposed violation severity levels for NUC-001-1 resemble the levels of non-compliance that will also be replaced by NERC's compliance filing in Docket No. RR08-4-000 because they describe violation severity levels for groups of Requirements in the Reliability Standard rather than on a per-Requirement and sub-Requirement basis. Because NERC's proposed violation severity levels do not specifically refer to each Requirement and sub-Requirement in NUC-001-1, the Commission is concerned that, if the new violation risk factors are not approved by the time NUC-001-1 takes effect, Regional Entities may have difficulty using NERC's Base Penalty Amount Table to compute penalties for violations of all Requirements and sub-Requirements.[footnote omitted] While the Commission believes that the proposed effective date for NUC-001-1 provides ample time to address the violation severity levels filed in Docket No. RR08-4-000, the Commission proposes to treat the proposed, undifferentiated violation severity levels for NUC-001-1 consistent with the treatment adopted for levels of non-compliance, until Requirement and sub-Requirement specific violation severity levels are in place. [footnote omitted]

#### **NERC Response**

NERC filed VSLs for each requirement and sub-requirement of NUC-001-1 in a March 3, 2008 compliance filing in Docket No. RR08-4-000. NERC understands the Commission intends to address the VSLs associated with NUC-001-1 as part of its decision on NERC's March 3 compliance filing. NERC understands the Commission's direction on VSLs to be that in the absence of VSLs for each requirement and sub-requirement that contains a VRF, the

Commission expects NERC to use the generic VSLs submitted with the filing of this NUC-001-1 reliability standard in November 2007 as a surrogate for determining Base Penalty Amount ranges for identified violations and shall consider the facts of each case when determining a proposed penalty amount. NERC concurs with the Commission's proposed approach.

#### V. CONCLUSIONS AND ACTIONS REQUESTED OF THE COMMISSION

NERC appreciates the opportunity to submit these comments and urges the Commission to take action consistent with the comments herein. Specifically, NERC proposes that the Commission take the following action in its Final Rule:

- NERC requests that the Commission approve the NUC-001-1 Nuclear Plant Interface Coordination Reliability Standard.
- 2. NERC requests that the Commission adopt an effective date of the first day of the quarter no sooner than 15 months following Commission approval for reliability standard NUC-001-1.
- 3. NERC requests that the Commission approve the VRFs for NUC-001-1 as filed by NERC.

Respectfully submitted,

/s/ Rebecca J. Michael

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
Assistant General Counsel
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

#### **CERTIFICATE OF SERVICE**

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 13th day of May, 2008.

/s/ Rebecca J. Michael
Rebecca J. Michael

Attorney for North American Electric Reliability Corporation