

Reliability Standard Audit Worksheet¹

COM-002-4 – Operating Personnel Communications Protocols

This section to be completed by the Compliance Enforcement Authority.

Audit ID: Audit ID if available; or REG-NCRnnnnn-YYYYMMDD
Registered Entity: Registered name of entity being audited
NCR Number: NCRnnnnn
Compliance Enforcement Authority: Region or NERC performing audit
Compliance Assessment Date(s)²: Month DD, YYYY, to Month DD, YYYY
Compliance Monitoring Method: Audit
Names of Auditors: Supplied by CEA

Applicability of Requirements *[RSAW developer to insert correct applicability]*

	BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	RSG	TO	TOP	TP	TSP
R1	X								X				X		
R2		X		X											
R3	X								X				X		
R4		X		X											
R5	X								X				X		

¹ NERC developed this Reliability Standard Audit Worksheet (RSAW) language in order to facilitate NERC’s and the Regional Entities’ assessment of a registered entity’s compliance with this Reliability Standard. The NERC RSAW language is written to specific versions of each NERC Reliability Standard. Entities using this RSAW should choose the version of the RSAW applicable to the Reliability Standard being assessed. While the information included in this RSAW provides some of the methodology that NERC has elected to use to assess compliance with the requirements of the Reliability Standard, this document should not be treated as a substitute for the Reliability Standard or viewed as additional Reliability Standard requirements. In all cases, the Regional Entity should rely on the language contained in the Reliability Standard itself, and not on the language contained in this RSAW, to determine compliance with the Reliability Standard. NERC’s Reliability Standards can be found on NERC’s website. Additionally, NERC Reliability Standards are updated frequently, and this RSAW may not necessarily be updated with the same frequency. Therefore, it is imperative that entities treat this RSAW as a reference document only, and not as a substitute or replacement for the Reliability Standard. It is the responsibility of the registered entity to verify its compliance with the latest approved version of the Reliability Standards, by the applicable governmental authority, relevant to its registration status.

The NERC RSAW language contained within this document provides a non-exclusive list, for informational purposes only, of examples of the types of evidence a registered entity may produce or may be asked to produce to demonstrate compliance with the Reliability Standard. A registered entity’s adherence to the examples contained within this RSAW does not necessarily constitute compliance with the applicable Reliability Standard, and NERC and the Regional Entity using this RSAW reserves the right to request additional evidence from the registered entity that is not included in this RSAW. Additionally, this RSAW includes excerpts from FERC Orders and other regulatory references. The FERC Order cites are provided for ease of reference only, and this document does not necessarily include all applicable Order provisions. In the event of a discrepancy between FERC Orders, and the language included in this document, FERC Orders shall prevail.

² Compliance Assessment Date(s): The date(s) the actual compliance assessment (on-site audit, off-site spot check, etc.) occurs.

DRAFT NERC Reliability Standard Audit Worksheet

Subject Matter Experts

Identify Subject Matter Expert(s) responsible for this Reliability Standard. (Insert additional rows if necessary)

Registered Entity Response (Required):

SME Name	Title	Organization	Requirement(s)

DRAFT

R1 Supporting Evidence and Documentation

- R1.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall have documented communications protocols. The protocols shall, at a minimum:
- 1.1.** Require the issuer of a Reliability Directive to identify the action as a Reliability Directive to the recipient.
 - 1.2.** Require the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
 - 1.3.** Require the issuer of an oral two-party, person-to-person Operating Instruction to wait for a response from the receiver. Once a response is received, or if no response is received, require the issuer to take one of the following actions:
 - Confirm the receiver’s response if the repeated information is correct.
 - Reissue the Operating Instruction if the repeated information is incorrect, if the receiver does not issue a response, or if requested by the receiver..
 - 1.4.** Require the receiver of an oral two-party, person-to-person Operating Instruction to take one of the following actions:
 - Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.
 - Request that the issuer reissue the Operating Instruction.
 - 1.5.** Require the issuer of an oral Operating Instruction to verbally or electronically confirm receipt by at least one receiver when issuing the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (*e.g.*, an all call system).
 - 1.6.** Require the receiver of an oral Operating Instruction to request clarification from the issuer if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (*e.g.*, an all call system).
 - 1.7.** Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
 - 1.8.** Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.
 - 1.9.** Specify the instances where alpha-numeric clarifiers are required when issuing an oral Operating Instruction and the format for those clarifiers.

Definition of Operating Instruction

A command by operating personnel responsible for the Real-time generation control and operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. A discussion of general information and of potential

DRAFT NERC Reliability Standard Audit Worksheet

options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction. A Reliability Directive is one type of an Operating Instruction.

M1. Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide its documented communications protocols developed for Requirement R1.

Registered Entity Response to General Compliance with this Requirement (Required):

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested³:

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

A copy of the documented communication protocols that cover the Requirements outlined in Requirement R1 Parts 1.1 to 1.9.

Registered Entity Evidence (Required):

The following information is recommended for all evidence submitted:
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to COM-002-4, R1

This section to be completed by the Compliance Enforcement Authority

	Review the documented communications protocols provided by entity and ensure they address the sub-requirements of R1 as follows:
	(1.1) Requires the issuer of a Reliability Directive to identify the action as a Reliability Directive to the

³ Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.

DRAFT NERC Reliability Standard Audit Worksheet

	recipient
(1.2)	Requires the issuer and receiver of an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
(1.3)	Requires the issuer of an oral two party, person-to-person Operating Instruction to wait for a repetition from the receiver and if the repetition is correct confirm the repetition. If the repetition is incorrect, or if no repetition is received, or if the receiver requests, requires the issuer to reissue the Operating Instruction.
(1.4)	Requires the receiver of an oral two party, person-to-person Operating Instruction to take one of the following actions: <ul style="list-style-type: none">• Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct• Request that the issuer reissue the Operating Instruction.
(1.5)	Requires the issuer of an oral Operating Instruction to verbally or electronically confirm receipt by at least one receiving party when issuing the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g., an all call system)
(1.6)	Requires the receiver of an oral Operating Instruction to request clarification from the initiator if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system).
(1.7)	Specifies the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.
(1.8)	Specifies the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.
(1.9)	Specifies the instances where alpha-numeric clarifiers are required when issuing an oral Operating Instruction and the format for those clarifiers

Note to Auditor:

Auditor Notes:

R2 Supporting Evidence and Documentation

- R2.** Each Distribution Operator and Distribution Operator shall have documented communications protocols. The protocols shall, at a minimum:
- 2.1.** Require the receiver of an oral or written Operating Instruction to respond using the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
 - 2.2.** Require the receiver of an oral two-party, person-to-person Operating Instruction to take one of the following actions:
 - Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.
 - Request that the issuer reissue the Operating Instruction.
 - 2.3.** Require the receiver of an oral Operating Instruction to request clarification from the issuer if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g., an all call system).
- M2.** Each Distribution Provider and Generator Operator shall provide its documented communications protocols developed for Requirement R2.

Registered Entity Response to General Compliance with this Requirement (Required):

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested⁴:

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

A copy of the documented communication protocols that cover the Requirements outlined in Requirement R2 Parts 2.1 to 2.3.

Registered Entity Evidence (Required):

The following information is recommended for all evidence submitted:
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

⁴ Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.

DRAFT NERC Reliability Standard Audit Worksheet

--

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to COM-002-4, R2

This section to be completed by the Compliance Enforcement Authority

	Review the documented communications protocols provided by entity and ensure they address the sub-requirements of R2 as follows:
(2.1)	Requires the receiver of an oral or written Operating Instruction to respond using the English language, unless agreed to otherwise. An alternate language may be used for internal operations.
(2.2)	Requires the receiver of an oral two party, person-to-person Operating Instruction to take one of the following actions: <ul style="list-style-type: none">• Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct• Request that the issuer reissue the Operating Instruction.
(2.3)	Requires the receiver of an oral Operating Instruction to request clarification from the initiator if the communication is not understood when receiving the Operating Instruction through a one-way burst messaging system used to communicate a common message to multiple parties in a short time period (e.g. an all call system).

Note to Auditor:

--

Auditor Notes:

--

R3 Supporting Evidence and Documentation

- R3.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement the documented communications protocols developed in Requirement R1.

- M3.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide evidence that it implemented the documented communication protocols which may include, but is not limited to, descriptions of the management practices in place that provide the entity reasonable assurance that protocols established in Requirement R1 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System, spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel’s adherence to the protocols established in Requirement R1 and the remediation of noted exceptions in fulfillment of Requirement R5.

Registered Entity Response to General Compliance with this Requirement (Required):

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested⁵:

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

Descriptions of the management practices in place that provide the entity reasonable assurance that protocols established in Requirement R1 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System.

Spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel’s adherence to the protocols established in Requirement R1 and the remediation of noted exceptions.

Registered Entity Evidence (Required):

The following information is recommended for all evidence submitted:
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

⁵ Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity’s discretion.

DRAFT NERC Reliability Standard Audit Worksheet

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to COM-002-4, R3

This section to be completed by the Compliance Enforcement Authority

	Review the design of the entity’s management practices related to communication protocols to gain reasonable assurance that they are effective. Design considerations include frequency, volume of communications reviewed, and independence of the reviewing party. Identify if management practices proactively identify and correct issues with communications protocols.
	Review the evidence provided to gain reasonable assurance that the management practices asserted above are actually occurring, and are reasonably effective.
	If above management practices are deemed insufficient to provide reasonable assurance that communication protocols are being followed, apply other audit procedures as necessary to gain confidence regarding the implementation of the communication protocols. See ‘Note to Auditor’ section for additional details.

Note to Auditor:

The nature and extent of audit procedures applied related to this requirement will vary depending on certain risk factors to the Bulk Electric System and the auditor’s assessment of management practices specific to this requirement. In general, more extensive audit procedures will be applied where risks to the Bulk Electric System are higher and management practices are determined to be less effective.

Based on the assessment of risk and internal controls, as described above, specific audit procedures applied for this requirement may range from exclusion of this requirement from audit scope to the auditor reviewing a sample of voice recordings to ensure the protocols related to Operating Instructions were followed. Auditors may also interview entity operating personnel to understand how they comply with the protocols and observe them performing their duties. In circumstances where voice recordings are reviewed, auditors should consider requesting recordings commensurate with known events in the entity’s footprint during the audit period, as Operating Instructions may be more likely to occur during, and related to, such events, although other sampling methods for selecting voice recordings may also be employed.

An auditor should first examine the internal controls for this Requirement, not the actual communications. The focus is on understanding the entity’s internal control processes, verifying they are actually performing the control, and that the control is reasonably designed. Sampling is not a part of the audit process unless the auditor determines that the internal control is not properly designed or is ineffective. If the auditor cannot

DRAFT NERC Reliability Standard Audit Worksheet

rely on the entity's controls to gain reasonable assurance of compliance, then the auditor can pull a sample of the entity's communications from their available voice recordings (limited to the prior 90 calendar days) and if instances of noncompliance with the protocols are found, they will be turned over to Enforcement, which will make the determination whether the entity demonstrates a consistent pattern of not using their documented communications protocols and, if applicable, the severity of the violation.

Auditor Notes:

DRAFT

R4 Supporting Evidence and Documentation

- R4.** Each Distribution Provider and Generator Operator shall implement the documented communications protocols developed in Requirement R2.

- M4.** Each Distribution Provider and Generator Operator shall provide evidence that it implemented the documented communication protocols which may include, but is not limited to, descriptions of the management practices in place that provide the entity reasonable assurance that protocols established in Requirement R2 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System, spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel’s adherence to the protocols established in Requirement R2.

Registered Entity Response to General Compliance with this Requirement (Required):

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested⁶:

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.

Descriptions of the management practices in place that provide the entity reasonable assurance that protocols established in Requirement R2 are being followed by personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System.

Spreadsheets, memos, or logs, evidencing periodic, independent review of operating personnel’s adherence to the protocols established in Requirement R2 and the remediation of noted exceptions.

Registered Entity Evidence (Required):

The following information is recommended for all evidence submitted:
File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description.
Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.

⁶ Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity’s discretion.

DRAFT NERC Reliability Standard Audit Worksheet

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to COM-002-4, R4

This section to be completed by the Compliance Enforcement Authority

	Review the design of the entity’s management practices related to communication protocols to gain reasonable assurance that they are effective. Design considerations include frequency, volume of communications reviewed, and independence of the reviewing party. Identify if management practices proactively identify and correct issues that could lead to failure of communications protocols.
	Review the evidence provided to gain reasonable assurance that the management practices asserted above are actually occurring, and are reasonably effective.
	If above management practices are deemed insufficient to provide reasonable assurance that communication protocols are being followed, apply other audit procedures as necessary to gain confidence regarding the implementation of the communication protocols. See ‘Note to Auditor’ section for additional details.

Note to Auditor: The nature and extent of audit procedures applied related to this requirement will vary depending on certain risk factors to the Bulk Electric System and the auditor’s assessment of management practices specific to this requirement. In general, more extensive audit procedures will be applied where risks to the Bulk Electric System are higher and management practices are determined to be less effective.

Based on the assessment of risk and internal controls, as described above, specific audit procedures applied for this requirement may range from exclusion of this requirement from audit scope to the auditor reviewing a sample of voice recordings to ensure the protocols related to Operating Instructions were followed. Auditors may also interview entity operating personnel to understand how they comply with the protocols and observe them performing their duties. In circumstances where voice recordings are reviewed, auditors should consider requesting recordings commensurate with known events in the entity’s footprint during the audit period, as Operating Instructions may be more likely to occur during, and related to, such events, although other sampling methods for selecting voice recordings may also be employed.

An auditor should first examine the internal controls for this Requirement, not the actual communications. The focus is on understanding the entity’s internal control processes, verifying they are actually performing the control, and that the control is reasonably designed. Sampling is not a part of the audit process unless the auditor determines that the internal control is not properly designed or is ineffective. If the auditor cannot rely on the entity’s controls to gain reasonable assurance of compliance, then the auditor can pull a sample of the entity’s communications from their available voice recordings (limited to the prior 90 calendar days) and if instances of noncompliance with the protocols are found, they will be turned over to Enforcement, which will make the determination whether the entity demonstrates a consistent pattern of not using their documented communications protocols and, if applicable, the severity of the violation.

Auditor Notes:

--

DRAFT

R5 Supporting Evidence and Documentation

- R5.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall implement a method to evaluate the communications protocols developed in Requirement R1 that:
 - 5.1.** Assesses adherence to the communication protocols to provide feedback to issuers and receivers of Operating Instructions.
 - 5.2.** Assesses the effectiveness of the communication protocols and modifies those protocols, as necessary.

- M5.** Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall provide descriptions and associated evidence of the management practices in place that demonstrate a review of communications with operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System and evidence that the entity evaluates the effectiveness of its documented communications protocols in fulfillment of Requirement R5.

Registered Entity Response to General Compliance with this Requirement (Required):

Describe, in narrative form, how you meet compliance with this Requirement. Provide a brief explanation, in your own words, of how you meet compliance with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested⁷:

Provide the following evidence, or other evidence to demonstrate compliance. If the provisioning of this evidence is burdensome or otherwise unreasonable, contact your CEA to arrange for sampling or other means of reduction of the quantity of evidence submitted.
--

Provide evidence that entity evaluates the effectiveness of the documented protocols.

Provide evidence that entity provides feedback to improve the effectiveness of operator communication.
--

Registered Entity Evidence (Required):

The following information is recommended for all evidence submitted: File Name, Document Title, Revision, Date, Page(s), Section(s), Section Title(s), and Description. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.
--

⁷ Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity's discretion.

DRAFT NERC Reliability Standard Audit Worksheet

Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

Compliance Assessment Approach Specific to COM-003-1, R5

This section to be completed by the Compliance Enforcement Authority

	Understand the method and review the evidence provided by the entity to gain confidence that the entity is evaluating its documented communications protocols developed in Requirement R1. Gain confidence that evaluation addresses sub-requirements R5.1-R5.2.
--	--

Note to Auditor: Auditor should assess whether evidence related to the management practices providing reasonable assurance of implementation of communication protocols provided by entity for Requirement R3 also satisfies Requirement R5, in part or in whole.

Auditor Notes:

--

Additional Information:

Reliability Standard

The RSAW developer should provide the following information without hyperlinks. Update the information below as appropriate.

The full text of STD-OXX-N may be found on the NERC Web Site (www.nerc.com) under “Program Areas & Departments”, “Reliability Standards.”

In addition to the Reliability Standard, there is an applicable Implementation Plan available on the NERC Web Site.

In addition to the Reliability Standard, there is background information available on the NERC Web Site.

Capitalized terms in the Reliability Standard refer to terms in the NERC Glossary, which may be found on the NERC Web Site.

Sampling Methodology [If developer deems reference applicable]

Sampling is essential for auditing compliance with NERC Reliability Standards since it is not always possible or practical to test 100% of either the equipment, documentation, or both, associated with the full suite of enforceable standards. The [Sampling Methodology Guidelines and Criteria](#), or sample guidelines, provided by the Electric Reliability Organization help to establish a minimum sample set for monitoring and enforcement uses in audits of NERC Reliability Standards.

Regulatory Language [Developer to ensure RSAW has been provided to NERC Legal for links to appropriate Regulatory Language – See example below]

E.g. FERC Order No. 742 paragraph 34: “Based on NERC’s.....”

E.g. FERC Order No. 742 Paragraph 55, Commission Determination: “We affirm NERC’s.....”

Selected Glossary Terms [If developer deems applicable]

The following Glossary terms are provided for convenience only. Please refer to the NERC web site for the current enforceable terms.

DRAFT NERC Reliability Standard Audit Worksheet

Revision History

Version	Date	Reviewers	Revision Description
1	10/18/2013	NERC Compliance, NERC Standards	New Document

DRAFT