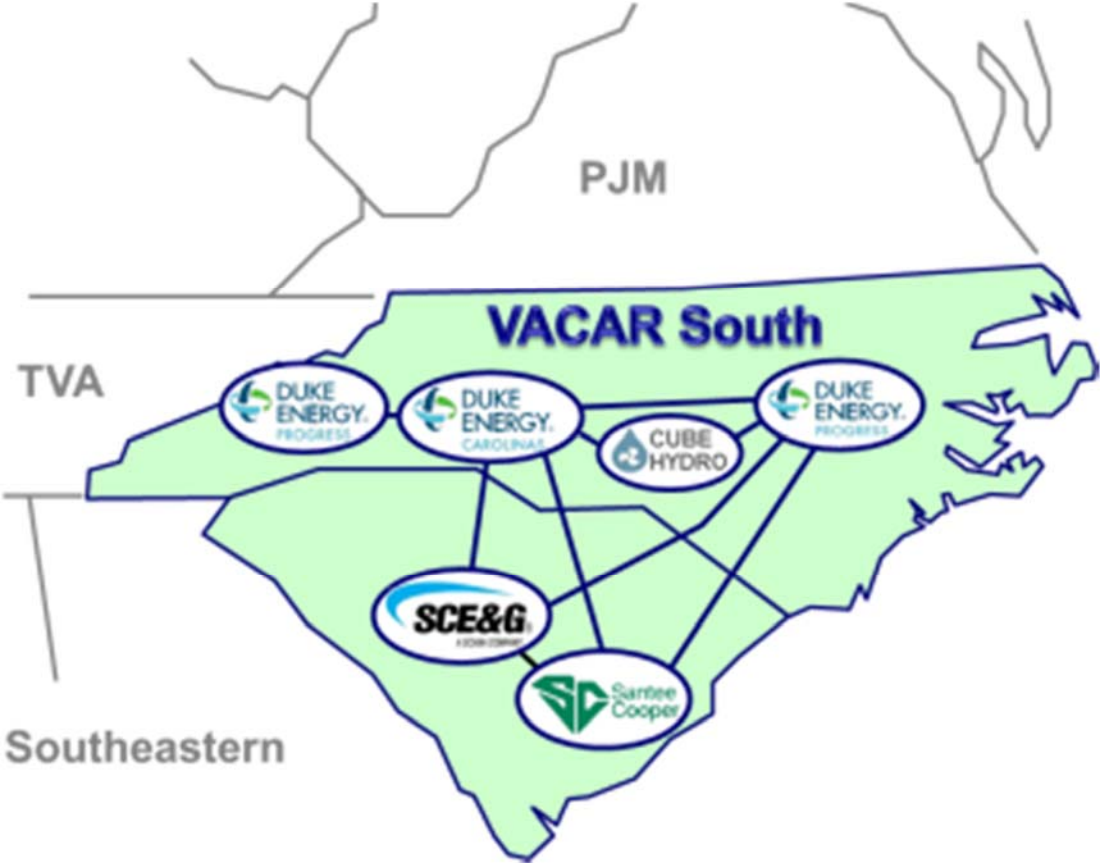


# VACAR SOUTH RELIABILITY PLAN



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## Revision History

Revision	Date	Revised By	Comments
0	May 10, 2005		Original 2005 VACAR South RC Plan
1	September 17, 2008		Plan reviewed by VACAR South RC companies with no changes. Reviewed and re-approved by NERC ORS on this date
2	February 16, 2012	VACAR South Members Committee	Plan reviewed and updated. Approved by VACAR South RC Principals effective with date of last signature. To be effective upon review and approval of NERC OC and ORS.
2a	May 8, 2012	Greg Stone	Plan was reviewed and approved by the NERC ORS. Additionally, the ORS indicated that the changes were not sufficient to rise to the level needed to be sent to the NERC OC; the OC has given the ORS the authority to review and approve plan updates such as ours. As a result, the plan effective date is May 8, 2012.
2b	September 14, 2012	Greg Stone	Revised Appendix A to remove SEPA from the VACAR S RC footprint. Conforming change made to page one artwork.  This change is effective Oct 1, 2012. No other plan changes required.  This footprint change was approved by the NERC ORS during its meeting the week of September 10, 2012.
3	October 6, 2015	VACAR South Members Committee	Plan reviewed and updated Appendix B and Appendix D. Approved by VACAR South RC Principals effective with date of last signature. To be effective upon review and approval of NERC OC and ORS.
3a	November 10, 2015	Don Reichenbach	Plan was reviewed and approved by the SERC OC on 10/7/15 and the NERC ORS on 11/10/15. <b>The plan effective date is November 10, 2015</b>
4	February 27, 2017	VACAR South Members Committee	Plan edited for Cube Hydro Carolinas purchase of Alcoa Yadkin and updated Appendix B <b>This plan effective date is March 22, 2017</b>
5	November 9, 2018	VACAR South Members Committee	Updates made to make consistent use of terms throughout document. Facilities section was updated as well. Plan was reviewed and approved by the SERC OC on 10/##/15 and the NERC ORS on 11/##/18. <b>The plan effective date is November 9, 2018</b>

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## Introduction

NERC requires that each Regional Entity, subregion, or interregional coordinating group establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries. This Reliability Plan is the plan for the area within the SERC Region referred to as “VACAR South”.

The VACAR South area includes the territories of the VACAR South RC Members (Participating Companies) as listed in Appendix A. The VACAR South Reliability Coordinator (RC) was established by contractual arrangement of the Participating Companies. VACAR South is registered with SERC as the Reliability Coordinator for the territories of the Members. The VACAR South RC utilizes an “Agent” to perform certain Reliability Coordinator tasks. The entity performing these tasks is identified as the “VACAR South RC Agent” throughout this document. The relationship between the VACAR South RC Agent and the Participating Companies is described in the VACAR South Reliability Coordination Agreement, a copy of which is incorporated by reference in Appendix C.

This document constitutes the Reliability Plan for the VACAR South Reliability Coordinator area and supersedes all previous plans.

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## **A. Responsibilities - Authorization**

The VACAR South RC Agent has clear decision-making authority to act and to issue Operating Instructions to be taken by Balancing Authorities, Generator Operators, Transmission Operators, Distribution Providers and Transmission Service Providers within the VACAR South RC Area to preserve the integrity and reliability of the Bulk Electric System (BES) within the VACAR South RC Area. This authority includes directing the shedding of load within the VACAR South RC Area. In no event, however, will a Member shed firm load solely to address the capacity deficiency of another Member or any other entity. The VACAR South Members assign tasks to the VACAR South RC Agent to perform on its behalf.

The VACAR South RC Agent and the Members will act in the interests of reliability for the overall VACAR South RC Area and the Eastern Interconnection before the interests of any other entity. The tools, processes and procedures utilized by the VACAR South RC Agent provide it the capability to have the Wide Area view of the VACAR South RC Area in both the next day and real-time operating environment.

Balancing Authorities, Generator Operators, Transmission Operators, Distribution Providers and Transmission Service Providers, within the VACAR South RC Area will comply with Operating Instructions needed to support system reliability identified by the VACAR South RC Agent where it has been assigned specific tasks, unless such actions would violate safety, equipment, regulatory or statutory requirements. These decisions may be based on specific system conditions or additional system information known to the Balancing Authorities, Generator Operators, Transmission Operators, Distribution Providers and Transmission Service Providers. Where an entity is unable to perform an action, the entity will immediately inform the VACAR South RC Agent so that alternate remedial actions may be implemented.

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## **B. Responsibilities – Assignment of Tasks**

All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the VACAR South RC, unless this responsibility has been specifically assigned and clearly specified in the VACAR South Reliability Plan. The VACAR South RC will use existing relationships between Balancing Authorities/Transmission Operators and other registered entities for any Reliability Coordinator needs related to those registered entities.

Where the VACAR South RC Members make such assignments to the VACAR South RC Agent, the Agent will have clear decision-making authority to act and issue Operating Instructions related to the specific assigned tasks to preserve the integrity and reliability of the BES. The VACAR South RC Members ensure that any tasks assigned to the VACAR South RC Agent are understood, communicated, and addressed within the VACAR South RC Area. The tasks performed by the VACAR South RC Agent, the tasks performed by the Members, and the tasks performed by the RC Agent in coordination with the Members is documented in the VACAR South RC Task Matrix that is listed in Appendix C.

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## **C. Common Tasks for Next Day and Current-Day Operations**

The VACAR South RC Agent and the Members will perform real-time and next day analysis and monitoring of the BES (pursuant to Sections D and E below) and communicate the results as appropriate to ensure that the BAs and TOPs within the VACAR South RC Area do not burden others and operate under known and studied conditions. The VACAR South RC Agent or the Members will identify actions necessary to remain in known and studied conditions. Operating Instructions to re-dispatch generation, reconfigure transmission, reduce interchange transactions, utilizing the Transmission Loading Relief (TLR) procedure if time permits, utilize Operating Procedures, or reduce system demand to mitigate the exceedance of an IROL, to return the system to a reliable state shall be issued by the VACAR South RC Agent as described in Section A. - Responsibilities - Authorization. Following contingency events, the Members will take necessary corrective actions.

The VACAR South RC Agent and/or the Members will determine System Operating Limits (SOLs) and Interconnection Reliability Operating Limits (IROLs) and take actions to operate within SOLs/IROLs, including communication among themselves as well as with neighboring RCs (consistent with the procedures referenced in Appendix B: VACAR South Next Day Operational Planning Analysis Procedure; VACAR South Situational Awareness Procedure; and VACAR South Operating Limits Procedure). The VACAR South RC Agent and/or Members will determine any IROLs. The VACAR South RC Agent will coordinate with any neighboring RCs that are impacted by IROLs found in VACAR South studies.

The VACAR South RC Agent and the Members will communicate Operating Instructions and all other operating information in a clear, concise, and definitive manner (consistent with the procedure referenced in Appendix B: VACAR South Communications Procedure).

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## **D. Next Day Operations**

The VACAR South RC Agent will perform next day Operational Planning Analysis (OPA) that includes results from Member BA and TOP OPAs and share the results in accordance with the VACAR South Next Day Operational Planning Analysis Procedure as referenced in Appendix B. Results will be shared to the extent permitted by the Standards of Conduct adopted by the Federal Energy Regulatory Commission (FERC).

The VACAR South RC Agent and the Members will exchange operations planning information in accordance with the VACAR South Next Day Operational Planning Analysis Procedure and the VACAR South Reliability Data Specification.

The Operational Planning Analysis shall identify any Operating Plan that may be required, including reconfiguring the transmission system, re-dispatching generation, or reducing or curtailing interchange transactions to maintain transmission loading within acceptable limits. As appropriate, the VACAR South RC Agent will consult with affected Members, and neighboring Reliability Coordinators in developing and revising Operating Plans governing its responsibilities hereunder (consistent with the procedures referenced in Appendix B: VACAR South Next Day Operational Planning Analysis Procedure and VACAR South Operating Limits Procedure).



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## **E. Current-Day Operations**

The VACAR South RC Agent will continuously monitor via the provision of Real-time data from the Members and neighboring RCs, BES and identified non-BES facilities for the VACAR South RC Area and for certain key facilities in neighboring RC Areas in order to determine the current and planned facility status. Monitoring of these facilities allows the VACAR South RC Agent to have a Wide Area view of the VACAR South RC Area as well as a portion of neighboring RC Areas.

Planned facility status will be communicated by the Members to the VACAR South RC Agent via teleconferences and through the System Data Exchange (SDX) or through other mutually accepted means (consistent with the procedure referenced in Appendix B: VACAR South Situational Awareness Procedure).

The VACAR South RC Agent will continuously monitor system conditions for the VACAR South RC Wide Area and each Member will continuously monitor its TOP Area to identify SOL or IROL exceedances. If an SOL or IROL is exceeded, the Members will implement actions, including any Operating Instructions issued by the VACAR South RC Agent, necessary to correct the problem (consistent with the procedures referenced in Appendix B: VACAR South Situational Awareness Procedure, VACAR South Operating Limit Procedure, VACAR South Emergency Operations and Problem Resolution Procedure, and VACAR South Communications Procedure).

Through coordination with the Members and other RCs, the VACAR South RC Agent may request curtailment of Interchange Schedules to prevent or manage SOL and IROL exceedances. This is accomplished through the use of the Eastern Interconnection TLR procedure or other appropriately approved congestion management actions to maintain reliability of the BES.

The VACAR South RC Agent will monitor the required amounts of Operating Reserves provided by the Members. Deficient Member BA(s) will be required to replenish reserves when deficiencies are identified. If necessary, the VACAR South RC Agent will assist the BA(s) in the VACAR South RC Area in arranging for assistance from neighboring areas (Balancing Authorities, regions, etc.). The VACAR South RC Agent will issue Energy Emergency Alerts as appropriate (consistent with the procedures referenced in Appendix B: VACAR South Situational Awareness Procedure and VACAR South Communications Procedure and Appendix C: Operating Manual for the VACAR Reserve Sharing Arrangement).

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The VACAR South RC Agent will continuously monitor BES and identified non-BES facilities of Members via the tools and processes described in this document and appendices in order to maintain the reliability of the BES. The VACAR South RC Agent working in collaboration with the Members, will identify the cause(s) of any transmission constraints that impair the reliability of the Members' transmission systems and will notify the Members of the appropriate corrective action(s) according to stated procedures – including, but not necessarily limited to, loading relief (up to and including load shedding), TLR, and implementation of Operating Plans developed with, and agreed upon by the Members.

The VACAR South RC Agent will communicate start and end times for Time Error Corrections to each Member and will ensure each Member is made aware of Geo-Magnetic Disturbance (GMD) forecast information, and assist as requested in the development of any required response plans (consistent with the procedures referenced in Appendix B: VACAR South GMD Operating Plan).

The VACAR South RC Agent will participate in NERC Hotline discussions, assist in the assessment of reliability of the Regions and the Eastern Interconnection, and coordinate actions in anticipated or actual Emergency situations. The VACAR South RC Agent will disseminate information within the VACAR South RC Area.

Each of the Members as BAs will provide frequency data values to the VACAR South RC Agent. The VACAR South RC Agent will monitor these frequency values (consistent with the procedure referenced in Appendix B: VACAR South Situational Awareness Procedure) and coordinate with the Members and neighboring RCs to identify the source of frequency deviations and Real-time trends. The VACAR South RC Agent will notify the Members of the action(s) needed to correct the deviations.

The VACAR South RC Agent will coordinate with other RCs and the Members as needed to develop appropriate Operating Plans to mitigate negative impacts of potential, expected, or actual operating conditions. This includes coordination of pending generation and transmission maintenance outages in both the operating and planning timeframes (consistent with the procedure referenced in Appendix B: VACAR South Outage Coordination Procedure). As part of the coordination necessary to avoid a negative impact on grid reliability, the VACAR South RC Agent will notify the Members of the need to cancel or change a scheduled outage of a facility due to system reliability issues and the Members will take corrective actions as needed.

The VACAR South RC Agent will notify impacted RCs of forced generators outages, transmission line outages, and other equipment outages within the VACAR South RC Area that would impact areas outside of the VACAR South RC Area (consistent with the procedure referenced in Appendix B: VACAR South Communications Procedure and VACAR South RCIS Posting Procedure).

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As requested, the VACAR South RC Agent will assist the Members in arranging for assistance from neighboring areas (consistent with the procedure referenced in Appendix B: VACAR South Situational Awareness Procedure and VACAR South Emergency Operations and Problem Resolution Procedure).

The VACAR South RC Agent will continuously monitor Area Control Error (ACE) for each Member BA within the VACAR South RC Area, identify sources of large ACE deviations that may be adversely contributing to frequency, Time Error, or Inadvertent Interchange problems, and notify the appropriate Member(s) of the corrective action(s) needed that the Member(s) will take. If a frequency, Time Error, or Inadvertent Interchange problem occurs outside of the VACAR South RC Area, the VACAR South RC Agent will discuss such problems on the NERC Hotline with other RCs (consistent with the procedure referenced in Appendix B: VACAR South Situational Awareness Procedure and VACAR South Communications Procedure).

The VACAR South RC Agent shall be aware of the impact of the operation of Special Protection Systems/Remedial Action Schemes on inter-area flows. The Members shall immediately inform the VACAR South RC Agent of the status of the Special Protection System/Remedial Action Schemes including any degradation or potential failure to operate as expected (consistent with the procedure referenced in Appendix B: VACAR South Communications Procedure). Special Protection Systems/Remedial Action Schemes in the VACAR South RC Area are listed in Appendix D.

The VACAR South RC Agent will notify the Members of potential transmission problems by telephone or other communication means as appropriate. Additionally, the VACAR South RC Agent will notify RCs via RCIS, NERC Hotline, or other means of such problems as appropriate. The VACAR South RC Agent and Members will conduct operational calls to discuss reliability issues (consistent with the procedures referenced in Appendix B: VACAR South Communications Procedure, VACAR South RCIS Posting Procedure and the VACAR South Next Day Operational Planning Analysis Procedure).

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## **F. Emergency Operations**

The VACAR South RC Agent will work with the Members to identify and manage the system within IROLs. The VACAR South RC Agent will notify the Members of the actions needed to return the transmission system to within the IROL as soon as possible, but no longer than TV (30 minutes or less). Notifications to redispatch generation, reconfigure transmission, reduce interchange transactions utilizing the Transmission Loading Relief (TLR) procedure if time permits, utilize Operating Plans, or reduce system demand (up to and including shedding of firm load) to mitigate the exceedance of an IROL, to return the system to a reliable state shall be issued as described in Section A.- Responsibilities-Authorization.

The VACAR South RC Agent will notify the Members to take appropriate actions when the VACAR South RC Agent deems that an IROL may be exceeded. The VACAR South RC Agent will coordinate its alert and emergency procedures with other Reliability Coordinators (consistent with the procedures referenced in Appendix B: VACAR South Communications Procedure; and Appendix C: RC Coordination Agreements).

In the event the loading of transmission facilities progresses to or is projected to progress to a SOL or IROL exceedance, the VACAR South RC Agent will notify the Members of the need to take necessary action, up to and including shedding firm load, to address the exceedance (consistent with the procedure referenced in Appendix B: VACAR South Operating Limits Procedure and VACAR South Communications Procedure).

When the Interconnection Frequency Error is excessive, the VACAR South RC Agent and the Members will review relevant information (Actual Frequency, Scheduled Frequency, Area Control Error, Tie Line flows, etc.) to determine if the source of the frequency error is one of the Members. If it is determined that one of the Members is the source of the Frequency Error, then that Member will take action, up to and including shedding firm load if necessary, to correct the Frequency Error.

The VACAR South RC Agent and Members will address a Capacity Emergency/Energy Emergency Alert situation by taking such action, up to and including shedding firm load if necessary, as is deemed necessary (consistent with the procedures referenced in Appendix B: VACAR South Communications Procedure and VACAR South Situational Awareness Procedure; and Appendix C: Operating Manual for the VACAR Reserve Sharing Arrangement).

In the event a Member identifies a potential reliability problem in its own or in another Member's area, it shall make reasonable efforts to provide notice to the impacted area, as applicable, and to the VACAR South RC Agent. This provision shall also include the identification of any Interconnection Frequency Error.

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## **G. System Restoration**

The VACAR South RC Agent and the Members shall be aware of each other's restoration plans and have access to copies of said plans. The VACAR South RC shall review and approve the Members' restoration plans as required by the NERC Reliability Standards.

The VACAR South RC Agent has access to the "VACAR South RC Restoration Plan", as identified in Appendix B, and will be knowledgeable of this plan. This is the plan that the VACAR South RC Agent and Members will use in the event of a wide-area problem. This restoration plan documents the responsibilities during such an event, the synchronization points between Transmission Operators and the local procedures that would be used during these events.

During system restoration, the VACAR South RC Agent in collaboration with the Members will monitor restoration progress and act to coordinate any needed assistance. The VACAR South RC Agent will serve as the primary contact for disseminating information regarding restoration to neighboring Reliability Coordinators and Members not immediately involved in restoration (consistent with the procedure referenced in Appendix B: VACAR South RC Restoration Plan). The VACAR South RC Agent will assist the Members in re-establishing normal system configuration and coordinate communications as required.

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## **H. Coordination Agreements and Data Sharing**

All of the Members have agreements that address reliability with their adjacent systems. The coordination of planning and operating generation and transmission facilities not only supports the reliability of the Members individual systems but also ensures the reliability of the VACAR South RC Area.

The VACAR South RC maintains reliability coordination agreements with adjacent RCs. These agreements address data exchange, coordination of operations, coordination of actions to address SOLs/IROLs that cross RC area boundaries, and emergency operations. These agreements are listed in Appendix C.

The VACAR South RC Agent and Members exchange system modeling information, SCADA/EMS data, and other significant data (consistent with the procedure referenced in Appendix B: VACAR South Reliability Data Specification).

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## I. Facilities

The VACAR South RC Members agree collectively that VACAR South, as a registered entity, does not own any BES Cyber Systems and associated BES Cyber Assets outside of those which are owned by each of the VACAR South RC Member Companies.

The VACAR South RC registered entity is included in the Duke Energy CIP Program with Duke Energy Carolinas (DEC), as the RC Agent. The assets of Duke Energy Carolinas, as the host entity, are leveraged by the RC Agent to perform the functional obligations of the RC. Therefore, VACAR South RC does not share compliance responsibility for CIP-002 because the entity does not own any BES Cyber Systems and their associated BES Cyber Assets. Work related to the identification of BES Cyber Systems and their associated BES Cyber Assets will be performed individually by each VACAR South RC Member using its company-specific process, associated procedures, and evaluation criteria. The results will be covered under that Member's implementation of the CIP Standards for Responsible Entities including BA, DP, GO, GOP, TO, and TOP.

The VACAR South RC Agent operates from the Duke Energy Carolinas Energy Control Center, which is staffed 24 hours a day/7 days a week with NERC RC certified System Operators. The primary and backup Control Centers for the VACAR South RC Agent utilize the same type systems, have backup power supplies, and have fully redundant communications independent of each other. Transfer to the backup Control Center (BCC) is essentially transparent to other RCs and to other entities as a phone script rolls the VACAR South RC Agent's numbers from the primary to the BCC. Once the VACAR South RC Agent is in place at the BCC, a notice is posted on the RCIS or through other mutually accepted means that the VACAR South RC Agent has relocated to the BCC.

The VACAR South RC Agent has multi-directional communications capabilities between it and the Members and also between it and its neighboring Reliability Coordinator(s) for both voice and data exchange to act in addressing a real time emergency condition as required to meet reliability needs of the Eastern Interconnection.

The VACAR South RC Agent has real-time monitoring capability of the VACAR South RC Area and sufficient monitoring capability of surrounding RC Areas to identify potential or actual SOL or IROL concerns. The VACAR South RC Agent has monitoring systems that provide information that can be easily understood and interpreted. Redundant and highly reliable infrastructure exists for: alarm management and awareness systems, automated data transfers, synchronized information systems (consistent with the procedure referenced in Appendix B: VACAR South Situational Awareness Procedure).

The VACAR South RC Agent monitors BES elements (generators, transmission lines, busses, transformers, breakers, etc.) that could result in an SOL or IROL being exceeded within the VACAR South RC Area. The VACAR South RC Agent monitors both real and reactive power system flows, operating reserves, and the status of BES elements that are or could be critical to SOLs and IROLs and system restoration requirements within the VACAR South RC area (consistent with the procedure referenced in Appendix B: VACAR South Situational Awareness Procedure).

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The VACAR South RC Agent utilizes real-time analysis tools including state estimation, pre- and post-contingency analysis capabilities, and wide-area overview displays (consistent with the procedures referenced in Appendix B: VACAR South Situational Awareness Procedure and VACAR South Guidelines for the Use of Network Applications).

The VACAR South RC Agent has provisions for backup facilities (as described above) that shall be exercised if the primary (main) monitoring system is unavailable (see the procedure referenced in Appendix C -VACAR South RC Agent Specific Procedures.).

The VACAR South RC Agent has processes and procedures to be used in ensuring control of analysis tools utilized, including approvals for planned maintenance (consistent with the procedures referenced in Appendix B: VACAR South Situational Awareness Procedure and Appendix C – VACAR South RC Agent Specific Procedures). The VACAR South RC Agent has procedures in place to mitigate the effects of analysis tool outages.

The VACAR South RC Agent receives SCADA information at scan rates and update intervals that meets current NERC Reliability Standards.

NERC requires the establishment of a data sharing network to facilitate the exchange of information needed by System Operators for transmission reliability purposes. The Members have established and will maintain the necessary telecommunications and other facilities required to enable the transfer of data between the Members and other Reliability Coordinators on the data sharing network in accordance with NERC and Regional Entity reliability policies, procedures and requirements. The VACAR South RC Agent and the Members have processes for telecommunication outage coordination among the Operating Entities and with other Reliability Coordinator (RC) Areas (consistent with the procedure referenced in Appendix B: VACAR South Telecommunications Procedure).

The VACAR South RC Agent has processes for facility access and emergency evacuation (reference Appendix C – VACAR South RC Agent Specific Procedures).



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## **J. Staffing**

The VACAR South RC Agent is staffed with adequately trained and NERC Certified RC System Operators, 24 hours/day, seven days/week. The VACAR South RC Agent also has dedicated staff for emergency preparedness. The VACAR South RC Agent requires its RC System Operators to complete all NERC annual requirements for training and drills using realistic simulations of system emergencies, in addition to other training required to maintain qualified operating personnel.

Through ongoing training of staff, use of wide-area visualization technology and utilization of system knowledge of the Members, the VACAR South RC Agent ensures that its RC System Operators have a comprehensive understanding of the VACAR South RC Area and interaction with neighboring RC areas.

The VACAR South RC Agent System Operators have an extensive understanding of the Balancing Authorities, Transmission Operators, and Generator Operators within the VACAR South RC Area, such as staff, operating practices and procedures, restoration priorities and objectives, outage plans, equipment capabilities and restrictions.

Protocols to ensure that the best available information at all times is available to the VACAR South RC Agent System Operators are defined in the procedures referenced in Appendix B: VACAR South Situational Awareness Procedure and VACAR South Next Day Operational Planning Analysis Procedure.

The VACAR South RC Agent has signed and will adhere to the NERC Reliability Coordinator Standards of Conduct.

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## **Appendix A – VACAR South RC Members**

**The VACAR South RC Area includes the territories of the following Members:**

Cube Hydro Carolinas, LLC

Duke Energy Carolinas, LLC

Duke Energy Progress, LLC

South Carolina Electric & Gas Company

South Carolina Public Service Authority

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## **Appendix B – VACAR South RC Procedures**

### **VACAR South RC Procedures Manual Index**

- VACAR South Operating Limits Procedure
- VACAR South Communications Procedure
- VACAR South Outage Coordination Procedure
- VACAR South Guidelines for the Use of EMS Network Applications
- VACAR South Emergency Operations and Problem Resolution Procedures
- VACAR South Next Day Operational Planning Analysis Procedure
- VACAR South Updating Procedures Procedure
- VACAR South Situational Awareness Procedure
- VACAR South RC Restoration Plan
- VACAR South Telecommunications Procedure
- VACAR South RCIS Posting Guidelines
- VACAR South RC Event Reporting Operating Plan
- VACAR South RC GMD Operating Plan
- VACAR South Reliability Data Specification
- VACAR South RC Emergency Operating Plan Review Procedure

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## **Appendix C – Additional References**

### **Additional documents/procedures/agreements referenced in this VACAR South Reliability Plan:**

- VACAR South Reliability Coordination Agreement
- Operating Manual for the VACAR Reserve Sharing Arrangement
- NERC Reliability Coordinator Standards of Conduct
- RC Coordination Agreements with:
  - PJM RC
  - Southeastern RC
  - TVA RC
- VACAR South RC Task Matrix

### **VACAR South RC Agent Specific Procedures**

- Critical Application “Tag-Out” Procedures for EMS and Other Critical Applications


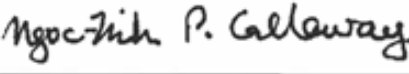


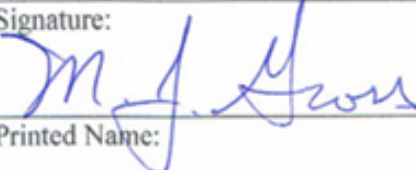
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## Appendix D – SPS/RAS

### SPS/RAS in use in the VACAR South Area

<b>Member TOP Area</b>	<b>SPS/RAS Description</b>
Duke Energy Carolinas	Conley Switching Station Special Protection System

Representatives of the following VACAR South RC Operating Entities have approved this VACAR Reliability Plan.

<u>Duke Energy Progress</u>	<u>Duke Energy Carolinas</u>
Signature: 	Signature: 
Printed Name: LAURA LEE	Printed Name: Ngoc-Minh P. Callaway
Date: 9-27-2018	Date: 9/10/18
<u>South Carolina Electric &amp; Gas</u>	<u>South Carolina Public Service Authority</u>
Signature: 	Signature: 
Printed Name: Lee Xanthakos	Printed Name: Arnold Singleton: ARNOLD SINGLETON
Date: September 27, 2018	Date: 9/10/2018
<u>Cube Hydro Carolinas</u>	
Signature: 	
Printed Name: Mark J. Gross	
Date: 9-27-18	