



**Generation Interconnection
Feasibility Study Report
for**

Queue Project AG1-342

DRYBURG 115 KV

25.2 MW Capacity / 45 MW Energy

January 2021

Table of Contents

1	Introduction.....	4
2	Preface.....	4
3	General	5
4	Point of Interconnection.....	6
4.1	Primary Point of Interconnection	6
4.2	Secondary Point of Interconnection.....	6
5	Cost Summary	6
6	Transmission Owner Scope of Work.....	7
7	Schedule.....	8
8	Transmission Owner Analysis.....	8
8.1	Power Flow Analysis	9
9	Interconnection Customer Requirements.....	9
9.1	System Protection.....	9
9.2	Compliance Issues and Interconnection Customer Requirements	9
9.3	Power Factor Requirements.....	10
10	Revenue Metering and SCADA Requirements	10
10.1	PJM Requirements	10
10.2	Meteorological Data Reporting Requirements	10
10.3	Interconnected Transmission Owner Requirements.....	10
11	Summer Peak - Load Flow Analysis	11
11.1	Generation Deliverability	12
11.2	Multiple Facility Contingency	12
11.3	Contribution to Previously Identified Overloads.....	12
11.4	Potential Congestion due to Local Energy Deliverability.....	13
11.5	System Reinforcements - Summer Peak Load Flow - Primary POI.....	16
11.6	Flow Gate Details.....	19
11.6.1	Index 1	20
11.6.2	Index 2	23
11.6.3	Index 3	26
11.6.4	Index 4	29
11.6.5	Index 5	31

11.6.6	Index 6	34
11.6.7	Index 7	37
11.6.8	Index 8	40
11.6.9	Index 9	42
11.6.10	Index 10.....	45
11.6.11	Index 11.....	49
11.6.12	Index 12.....	52
11.6.13	Index 13.....	54
11.6.14	Index 14.....	57
11.6.15	Index 15.....	60
11.6.16	Index 16.....	63
11.7	Queue Dependencies	67
11.8	Contingency Descriptions.....	71
12	Short Circuit Analysis.....	77
12.1	System Reinforcements - Short Circuit.....	77
13	Affected Systems	78
13.1	TVA.....	78
13.2	Duke Energy Progress.....	78
14	Attachment 1: One Line Diagram	79

1 Introduction

This Feasibility Study has been prepared in accordance with the PJM Open Access Transmission Tariff, 36.2, as well as the Feasibility Study Agreement between the Interconnection Customer (IC), and PJM Interconnection, LLC (PJM), Transmission Provider (TP). The Interconnected Transmission Owner (ITO) is Dominion.

2 Preface

The intent of the feasibility study is to determine a plan, with ballpark cost and construction time estimates, to connect the subject generation to the PJM network at a location specified by the Interconnection Customer. The Interconnection Customer may request the interconnection of generation as a capacity resource or as an energy-only resource. As a requirement for interconnection, the Interconnection Customer may be responsible for the cost of constructing: (1) Direct Connections, which are new facilities and/or facilities upgrades needed to connect the generator to the PJM network, and (2) Network Upgrades, which are facility additions, or upgrades to existing facilities, that are needed to maintain the reliability of the PJM system.

In some instances a generator interconnection may not be responsible for 100% of the identified network upgrade cost because other transmission network uses, e.g. another generation interconnection, may also contribute to the need for the same network reinforcement. Cost allocation rules for network upgrades can be found in PJM Manual 14A, Attachment B. The possibility of sharing the reinforcement costs with other projects may be identified in the feasibility study, but the actual allocation will be deferred until the impact study is performed.

The Interconnection Customer seeking to interconnect a wind or solar generation facility shall maintain meteorological data facilities as well as provide that meteorological data which is required per Schedule H to the Interconnection Service Agreement and Section 8 of Manual 14D.

The Feasibility Study estimates do not include the feasibility, cost, or time required to obtain property rights and permits for construction of the required facilities. The project developer is responsible for the right of way, real estate, and construction permit issues. For properties currently owned by Transmission Owners, the costs may be included in the study.

3 General

The Interconnection Customer (IC), has proposed a Solar; Storage generating facility located in Halifax County, Virginia. The installed facilities will have a total capability of 45 MW with 25.2 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this project is December 01, 2023. This study does not imply a TO commitment to this in-service date.

Queue Number	AG1-342
Project Name	DRYBURG 115 KV
State	Virginia
County	Halifax
Transmission Owner	Dominion
MFO	45
MWE	45
MWC	25.2
Fuel	Solar; Storage
Basecase Study Year	2024

Any new service customers who can feasibly be commercially operable prior to June 1st of the basecase study year are required to request interim deliverability analysis.

4 Point of Interconnection

4.1 Primary Point of Interconnection

AG1-342 "Dryburg 115 kV" will interconnect with the Dominion transmission system. The primary POI is a direct connect to the Dryburg 115 kV substation.

The IC is responsible for securing right-of-way, permits, and constructing the proposed attachment line from the generating facility site to the Point of Interconnection. The IC may not install any facilities on Dominion's right-of-way without first obtaining the necessary approval from Dominion Energy.

Attachment 1 shows a one-line diagram of the proposed interconnection facilities.

4.2 Secondary Point of Interconnection

There is no secondary point of interconnection specified for AG1-342.

5 Cost Summary

The AG1-342 project will be responsible for the following costs:

Description	Total Cost
Total Physical Interconnection Costs	\$2,700,000
Total System Network Upgrade Costs	\$87,738,000 ¹
Total Costs	\$90,438,000

This cost excludes a Federal Income Tax Gross Up charges. This tax may or may not be charged based on whether this project meets the eligibility requirements of IRS Notice 2016-36, 2016-25 I.R.B. (6/20/2016). If at a future date it is determined that the Federal Income Tax Gross charge is required, the Transmission Owner shall be reimbursed by the Interconnection Customer for such taxes.

Cost allocations for any System Upgrades will be provided in the System Impact Study Report.

¹ This project currently causes and/or contributes to overloads of the Transmission System (see Summer Peak Load Flow Analysis section below) and therefore has potential to have cost allocation for the system reinforcements listed in the report. This will be re-evaluated in the System Impact phase. The results may vary with queue customers withdrawing from the queue and other generators deactivating over time. If a customer is the first to cause the need for a project (causes loading to exceed 100% of rating), then the customer is responsible. If a customer contributes to a facility that is already overloaded by a prior queue, then they may receive cost allocation.

6 Transmission Owner Scope of Work

The required Attachment Facilities, Direct Connection and Non-Direct Connection work for the interconnection of AG1-342 to the Dominion Transmission System is detailed in the following sections. The associated one-line showing the generation project attachment facilities and primary direct and non-direct connection is shown in Attachment 1.

Note that the ITO findings were made from a conceptual review of this project. A more detailed review of the connection facilities and their cost will be identified in a future study phase. Further note that the cost estimate data contained in this document should be considered high level estimates since it was produced without a detailed engineering review. The applicant will be responsible for the actual cost of construction. ITO herein reserves the right to return to any issues in this document and, upon appropriate justification, request additional monies to complete any reinforcements to the transmission systems.

The total physical interconnection costs are given in the table below:

Description	Total Cost
Attachment Facilities	\$1,700,000
New Breaker	\$1,000,000
Total Physical Interconnection Costs	\$2,700,000

AG1-342 "Dryburg 115 kV" will interconnect with the Dominion transmission system. The primary POI is a direct connect to the Dryburg 115 kV substation.

To accommodate the proposed Project, Dominion Energy will add one new 115 kV breaker to the existing Dryburg 115 kV substation to allow for the proposed interconnection. Dominion will install one span of overhead 115 kV line to the point of interconnection ("POI") including 115 kV interconnection metering.

It is estimated to take 18-30 months to complete this work upon execution of an Interconnection Construction Service Agreement (ICSA). These preliminary cost estimates are based on typical engineering costs. A more detailed engineering cost estimates are normally done when the IC provides an exact site plan location for the generation substation during the Facility Study phase.

Remote Terminal Work: During the Facilities Study, ITO's System Protection Engineering Department will review transmission line protection as well as anti-islanding required to accommodate the new generation and interconnection substation. System Protection Engineering will determine the minimal acceptable protection requirements to reliably interconnect the proposed generating facility with the transmission system. The review is based on maintaining system reliability by reviewing ITO's protection requirements with the known transmission system configuration which includes generating facilities in the area. This review may determine that transmission line protection and communication upgrades are required at remote substations.

7 Schedule

The estimated schedule for the Attachment Facilities, Direct Connection and Non-Direct Connection work is identified in the “Transmission Owner Scope of Work” section of this report.

The estimated schedule for the required Network Impact Reinforcements is identified in the “System Reinforcements” section of this report.

These schedules will be more clearly identified in future study phases.

If the customer is ultimately responsible for network upgrades, then the schedule for those upgrades will be refined in future study phases. The customer would need to wait for those upgrades to be completed prior to commercial operation unless determined deliverable by an interim deliverability study. The elapsed time to complete any network upgrades is provided in the System Reinforcements table of this report.

8 Transmission Owner Analysis

Dominion assessed the impact of the proposed AG1-342 for compliance with NERC Reliability Criteria on the Dominion Transmission System. The system was assessed using the summer 2024 AG1 case provided to Dominion by PJM.

When performing a generation analysis, Dominion’s main analysis includes load flow study results following a single contingency event for both normal and stressed system conditions. Dominion Criteria considers a transmission facility overloaded if it exceeds 94% of its emergency rating under normal and stressed system conditions. A full listing of Dominion’s Planning Criteria and interconnection requirements can be found in the Company’s Facility Connection Requirements which are publicly available at:

<http://www.dominionenergy.com>.

The results of these studies evaluate the system under a limited set of operating conditions and do not guarantee the full delivery of the capacity and associated energy of this proposed generation facility under all operating conditions. NERC Planning and Operating Reliability Criteria allow for the re-dispatch of generating units to resolve projected and actual deficiencies in real time and planning studies. Specifically, in Planning Studies, NERC Planning Event 3 and 6 Contingency Conditions (Loss of generator, transmission circuit, transformer, shunt device, or Single Pole of a DC line followed by the loss of a generator, transmission circuit, transformer, shunt device or single pole of a DC line) allow for re-dispatch of generating units to resolve potential reliability deficiencies. For Dominion Planning Criteria the re-dispatch of generating units for these contingency conditions is allowed as long as the projected loading does not exceed 100% of a facility Load Dump Rating.

8.1 Power Flow Analysis

PJM performed a power flow analysis of the transmission system using a 2024 summer peak load flow model and the results were verified by Dominion. Additionally, Dominion performed an analysis of its transmission system and no further deficiencies were identified.

9 Interconnection Customer Requirements

9.1 System Protection

The IC must design its Customer Facilities in accordance with all applicable standards, including the standards in Dominion’s “Dominion Energy Electric Transmission Generator Interconnection Requirements” documented in Dominion’s Facility Interconnection Requirements “Exhibit C” located at:

<https://www.dominionenergy.com/company/moving-energy/electric-transmission-access>. Preliminary Protection requirements will be provided as part of the Facilities Study. Detailed Protection Requirements will be provided once the project enters the construction phase.

9.2 Compliance Issues and Interconnection Customer Requirements

The proposed Customer Facilities must be designed in accordance with Dominion’s “Dominion’s Facility Interconnection Requirements” document located at: <https://www.dominionenergy.com/company/moving-energy/electric-transmission-access>. In particular, the IC is responsible for the following:

1. The purchase and installation of a fully rated protection device (circuit breaker, circuit switcher, fuse) to protect the IC’s GSU transformer(s).
2. The purchase and installation of the minimum required Dominion generation interconnection relaying and control facilities as described in the System Protection section noted above. This includes over/under voltage protection, over/under frequency protection, and zero sequence voltage protection relays.
3. The purchase and installation of supervisory control and data acquisition (“SCADA”) equipment to provide information in a compatible format to the Dominion Transmission System Control Center.
4. Compliance with the Dominion and PJM generator power factor and voltage control requirements.

The GSU(s) associated with the IC queue request shall meet the grounding requirements as noted in Dominion’s “Dominion’s Facility Interconnection Requirements” document located at: <https://www.dominionenergy.com/company/moving-energy/electric-transmission-access>.

The IC will also be required to meet all PJM, SERC, and NERC reliability criteria and operating procedures for standards compliance. For example, the IC will need to properly locate and report the over and under voltage and over and under frequency system protection elements for its units as well as the submission of the generator model and protection data required to satisfy the PJM and SERC audits. Failure to comply with

these requirements may result in a disconnection of service if the violation is found to compromise the reliability of the Dominion system.

9.3 Power Factor Requirements

The IC shall design its non-synchronous Customer Facility with the ability to maintain a power factor of at least 0.95 leading (absorbing VARs) to 0.95 lagging (supplying VARs) measured at the high-side of the facility substation transformer(s) connected to the Dominion transmission system.

10 Revenue Metering and SCADA Requirements

10.1 PJM Requirements

The Interconnection Customer will be required to install equipment necessary to provide Revenue Metering (KWH, KVARH) and real time data (KW, KVAR) for IC's generating Resource. See PJM Manuals M-01 and M-14D, and PJM Tariff Section 8 of Attachment O.

10.2 Meteorological Data Reporting Requirements

The solar generation facility shall provide the Transmission Provider with site-specific meteorological data including:

- Back Panel temperature (Fahrenheit) - (Required for plants with Maximum Facility Output of 3 MW or higher)
- Irradiance (Watts/meter²) - (Required for plants with Maximum Facility Output of 3 MW or higher)
- Ambient air temperature (Fahrenheit) - (Accepted, not required)
- Wind speed (meters/second) - (Accepted, not required)
- Wind direction (decimal degrees from true north) - (Accepted, not required)

10.3 Interconnected Transmission Owner Requirements

The IC will be required to comply with all Interconnected Transmission Owner's revenue metering requirements for generation interconnection customers located at the following link:

<http://www.pjm.com/planning/design-engineering/to-tech-standards/>

11 Summer Peak - Load Flow Analysis

The Queue Project AG1-342 was evaluated as a 45.0 MW (Capacity 25.2 MW) injection at the Mount Laurel 115 kV substation in the Dominion area. Project AG1-342 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AG1-342 was studied with a commercial probability of 53.0 %. Potential network impacts were as follows:

11.1 Generation Deliverability

(Single or N-1 contingencies for the Capacity portion only of the interconnection)

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPAC T
169005898	314559	3CAROLNA	115.0	DVP	314561	6CAROLNA	230.0	DVP	1	Base Case	single	226.539993286	99.93	100.5	DC	1.3
169209365	314696	3SEEDGE HILL	115.0	DVP	314697	6SEEDGE HILL	230.0	DVP	2	DVP_P1-2: LN 31-A	single	256.055999756	97.61	100.48	DC	7.35
169425940	314765	6MTEAGLE	230.0	DVP	314749	6CHARLV L	230.0	DVP	1	Base Case	single	661.760009766	99.79	100.11	DC	2.16

11.2 Multiple Facility Contingency

(Double Circuit Tower Line, Fault with a Stuck Breaker, and Bus Fault contingencies for the full energy output)

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPAC T
166957669	314267	3CHASCTY 2	115.0	DVP	314681	3CHASCT Y	115.0	DVP	Z1	DVP_P7-1: LN 158-235	tower	582.0	98.7	100.94	DC	13.03

11.3 Contribution to Previously Identified Overloads

(This project contributes to the following contingency overloads, i.e. "Network Impacts", identified for earlier generation or transmission interconnection projects in the PJM Queue)

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPAC T
166957566	313705	3KERRD P	115.0	DVP	314702	3KERR	115.0	DVP	1	DVP_P7-1: LN 171-1009	tower	195.0	101.44	102.48	DC	4.47
169005841	314562	3CLUBH SE	115.0	DVP	314563	6CLUBHSE	230.0	DVP	1	DVP_P1-2: LN 2201	single	182.641998291	204.53	205.59	DC	1.94
169005842	314562	3CLUBH SE	115.0	DVP	314563	6CLUBHSE	230.0	DVP	1	DVP_P1-2: LN 130	single	182.641998291	155.41	156.54	DC	2.06
169005843	314562	3CLUBH SE	115.0	DVP	314563	6CLUBHSE	230.0	DVP	1	Base Case	single	176.81401062	143.19	144.27	DC	1.9
169209277	314691	3FARMV IL	115.0	DVP	314692	6FARMVIL	230.0	DVP	2	DVP_P1-2: LN 235-A	single	182.641998291	251.76	253.45	DC	3.09
169209280	314691	3FARMV IL	115.0	DVP	314692	6FARMVIL	230.0	DVP	2	Base Case	single	176.81401062	149.66	150.69	DC	1.83
169209288	314691	3FARMV IL	115.0	DVP	314692	6FARMVIL	230.0	DVP	1	DVP_P1-2: LN 298	single	198.057998657	164.71	165.83	DC	2.21
169209347	314696	3SEEDGE HILL	115.0	DVP	314697	6SEEDGE HILL	230.0	DVP	1	DVP_P1-3: 6SEEDGE HILL-TX#2	single	226.727996826	145.9	150.62	DC	10.69
169209349	314696	3SEEDGE HILL	115.0	DVP	314697	6SEEDGE HILL	230.0	DVP	1	DVP_P1-2: LN 31-A	single	226.727996826	111.34	114.61	DC	7.42
169209363	314696	3SEEDGE HILL	115.0	DVP	314697	6SEEDGE HILL	230.0	DVP	2	DVP_P1-3: 6SEEDGE HILL-TX#1	single	256.055999756	128.8	132.96	DC	10.66
169209325	314697	6SEEDGE HILL	230.0	DVP	927250	AC1-221 TAP	230.0	DVP	1	DVP_P1-2: LN 556-D	single	674.91998291	179.39	180.78	DC	9.42
169209326	314697	6SEEDGE HILL	230.0	DVP	927250	AC1-221 TAP	230.0	DVP	1	DVP_P1-2: LN 556-C	single	674.91998291	179.42	180.81	DC	9.42

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPAC T
163744269	314702	3KERR	115.0	DVP	304102	3GW KING TAP	115.0	CPL E	1	DVP_P4-6: CAROLIN T122	breaker	199.0	180.64	181.78	DC	5.11
163744270	314702	3KERR	115.0	DVP	304102	3GW KING TAP	115.0	CPL E	1	DVP_P4-2: 13002	breaker	199.0	147.87	148.88	DC	4.43
163744271	314702	3KERR	115.0	DVP	304102	3GW KING TAP	115.0	CPL E	1	DVP_P4-2: 102802	breaker	199.0	147.87	148.88	DC	4.43
163744482	314702	3KERR	115.0	DVP	304102	3GW KING TAP	115.0	CPL E	1	DVP_P1-2: LN 90	single	199.0	113.62	114.78	DC	2.31
163744483	314702	3KERR	115.0	DVP	304102	3GW KING TAP	115.0	CPL E	1	Base Case	single	191.0	107.58	108.63	DC	2.02
163745144	314702	3KERR	115.0	DVP	304102	3GW KING TAP	115.0	CPL E	1	DVP_P7-1: LN 22-90	tower	199.0	177.39	178.51	DC	5.05
169209472	314702	3KERR	115.0	DVP	314673	3PALMERSPR NG	115.0	DVP	1	DVP_P1-2: LN 45	single	138.179992676	118.52	119.69	DC	1.62
169209473	314702	3KERR	115.0	DVP	314673	3PALMERSPR NG	115.0	DVP	1	EXT_304099 3WARREN TAP 115 304102 3GW KING TAP 115 1	single	138.179992676	117.94	119.11	DC	1.62
166957576	314781	3BLACK BR	115.0	DVP	314788	3JONESTO	115.0	DVP	1	DVP_P7-1: LN 171-1009	tower	301.0	101.72	102.33	DC	4.03
166957582	314788	3JONESTO	115.0	DVP	314683	3CLRKVILLE	115.0	DVP	1	DVP_P7-1: LN 171-1009	tower	301.0	100.36	100.97	DC	4.03
166957535	316115	AC1-105 TAP	115.0	DVP	314696	3SEEDGE HILL	115.0	DVP	1	DVP_P7-1: LN 158-235	tower	406.0	117.56	124.51	DC	28.29
163744436	927250	AC1-221 TAP	230.0	DVP	304070	6PERSON230 T	230.0	CPL E	1	DVP_P1-2: LN 556-D	single	718.0	180.59	181.9	DC	9.42
163744437	927250	AC1-221 TAP	230.0	DVP	304070	6PERSON230 T	230.0	CPL E	1	DVP_P1-2: LN 556-C	single	718.0	180.62	181.93	DC	9.42

11.4 Potential Congestion due to Local Energy Deliverability

PJM also studied the delivery of the energy portion of this interconnection request. Any problems identified below are likely to result in operational restrictions to the project under study. The developer can proceed with network upgrades to eliminate the operational restriction at their discretion by submitting a Merchant Transmission Interconnection request.

Note: Only the most severely overloaded conditions are listed below. There is no guarantee of full delivery of energy for this project by fixing only the conditions listed in this section. With a Transmission Interconnection Request, a subsequent analysis will be performed which shall study all overload conditions associated with the overloaded element(s) identified.

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADIN G %	POST PROJECT LOADIN G %	AC D C	MW IMPAC T
168197998	242631	05EDAN1	138.0	AEP	242620	05DANVL2	138.0	AEP	1	Base Case	operation	275.0	134.04	134.54	DC	3.02
168776063	314267	3CHASCT Y2	115.0	DVP	314681	3CHASCT Y	115.0	DVP	Z1	DVP_P1-2: LN 158	operation	449.320007324	124.44	127.33	DC	13.0

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CK T ID	CONT NAME	Type	Rating MVA	PRE PROJE C T LOADIN G %	POST PROJE C T LOADIN G %	AC D C	MW IMPAC T
169005839	314562	3CLUBHSE	115.0	DVP	314563	6CLUBHSE	230.0	DVP	1	DVP_P1-2: LN 2201	operati on	182.641998291	246.99	247.85	DC	3.47
169005840	314562	3CLUBHSE	115.0	DVP	314563	6CLUBHSE	230.0	DVP	1	Base Case	operati on	176.81401062	187.73	188.59	DC	3.39
169209509	314666	3ALTVSTA	115.0	DVP	314667	4ALTVSTA	138.0	DVP	1	DVP_P1-3: 4ALTVSTA-TX#4	operati on	126.524002075	111.82	113.17	DC	3.79
169209317	314677	6BUCKING	230.0	DVP	314747	6BREMO	230.0	DVP	1	DVP_P1-2: LN 556-C	operati on	571.520019531	269.09	270.73	DC	9.36
169209321	314677	6BUCKING	230.0	DVP	314747	6BREMO	230.0	DVP	1	Base Case	operati on	571.520019531	163.8	164.86	DC	6.12
169209610	314681	3CHASCTY	115.0	DVP	314708	3NORVIEW	115.0	DVP	1	DVP_P1-2: LN 298	operati on	326.179992676	111.7	112.28	DC	4.21
169209546	314684	3MT LREL	115.0	DVP	316115	AC1-105 TAP	115.0	DVP	1	DVP_P1-2: LN 40-A	operati on	331.820007324	101.01	109.57	DC	28.5
169209640	314690	6BLACK WALNU	230.0	DVP	314686	6CLOVER	230.0	DVP	1	DVP_P1-2: LN 296-A	operati on	814.979980469	101.28	103.68	DC	19.58
169209275	314691	3FARMVIL	115.0	DVP	314692	6FARMVIL	230.0	DVP	2	DVP_P1-2: LN 235-A	operati on	182.641998291	374.08	375.44	DC	5.52
169209278	314691	3FARMVIL	115.0	DVP	314692	6FARMVIL	230.0	DVP	2	Base Case	operati on	176.81401062	233.92	234.75	DC	3.26
169209289	314691	3FARMVIL	115.0	DVP	314692	6FARMVIL	230.0	DVP	1	Base Case	operati on	193.734008789	171.93	172.54	DC	2.63
169209296	314692	6FARMVIL	230.0	DVP	314677	6BUCKING	230.0	DVP	1	DVP_P1-2: LN 556-C	operati on	559.299987793	272.65	274.32	DC	9.36
169209300	314692	6FARMVIL	230.0	DVP	314677	6BUCKING	230.0	DVP	1	Base Case	operati on	559.299987793	162.65	163.74	DC	6.12
169209345	314696	3SEEDGE HILL	115.0	DVP	314697	6SEEDGE HILL	230.0	DVP	1	DVP_P1-3: 6SEEDGE HILL-TX#2	operati on	226.727996826	221.45	229.84	DC	19.1
169209348	314696	3SEEDGE HILL	115.0	DVP	314697	6SEEDGE HILL	230.0	DVP	1	Base Case	operati on	223.531997681	127.7	132.76	DC	11.31
169209361	314696	3SEEDGE HILL	115.0	DVP	314697	6SEEDGE HILL	230.0	DVP	2	DVP_P1-3: 6SEEDGE HILL-TX#1	operati on	256.055999756	195.49	202.91	DC	19.04
169209364	314696	3SEEDGE HILL	115.0	DVP	314697	6SEEDGE HILL	230.0	DVP	2	Base Case	operati on	253.235992432	111.59	116.02	DC	11.2
169209323	314697	6SEEDGE HILL	230.0	DVP	927250	AC1-221 TAP	230.0	DVP	1	DVP_P1-2: LN 556-D	operati on	674.91998291	238.68	241.16	DC	16.82
169209327	314697	6SEEDGE HILL	230.0	DVP	927250	AC1-221 TAP	230.0	DVP	1	Base Case	operati on	509.480010986	121.01	123.18	DC	11.05
163744477	314702	3KERR	115.0	DVP	304102	3GW KING TAP	115.0	CPL E	1	DVP_P1-2: LN 90	operati on	199.0	144.83	145.75	DC	4.13
163744478	314702	3KERR	115.0	DVP	304102	3GW KING TAP	115.0	CPL E	1	Base Case	operati on	191.0	137.92	138.76	DC	3.6
169209469	314702	3KERR	115.0	DVP	314673	3PALMERSPR NG	115.0	DVP	1	DVP_P1-2: LN 45	operati on	138.179992676	129.19	130.13	DC	2.89
169209620	314706	3MARTIN TAP	115.0	DVP	314687	3CREWE	115.0	DVP	1	DVP_P1-2: LN 84	operati on	326.179992676	105.9	106.47	DC	4.19
169209613	314708	3NORVIE W	115.0	DVP	314721	3SO HILL	115.0	DVP	1	DVP_P1-2: LN 298	operati on	326.179992676	110.78	111.36	DC	4.21

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC/DC	MW IMPACT
169209518	314714	3PERTH	115.0	DVP	942750	AE2-291 TAP	115.0	DVP	1	DVP_P1-2: LN 556-D	operation	285.760009766	111.06	113.04	DC	5.66
169209603	314721	3SO HILL	115.0	DVP	943910	AF1-059 TAP	115.0	DVP	1	DVP_P1-2: LN 298	operation	299.859985352	112.16	112.8	DC	4.21
169209623	314723	3VICTRIA	115.0	DVP	314725	3VICT DP	115.0	DVP	1	DVP_P1-2: LN 84	operation	269.779998779	102.62	103.32	DC	4.19
169209630	314725	3VICT DP	115.0	DVP	961890	AG1-030 TAP	115.0	DVP	1	DVP_P1-2: LN 84	operation	269.779998779	101.36	102.06	DC	4.19
169425979	316115	AC1-105 TAP	115.0	DVP	314696	3SEEDGE HILL	115.0	DVP	1	DVP_P1-2: LN 40-A	operation	331.820007324	137.03	145.6	DC	28.5
169425981	316115	AC1-105 TAP	115.0	DVP	314696	3SEEDGE HILL	115.0	DVP	1	Base Case	operation	331.820007324	118.41	126.7	DC	27.58
163744431	927250	AC1-221 TAP	230.0	DVP	304070	6PERSON230 T	230.0	CPL E	1	DVP_P1-2: LN 556-D	operation	718.0	241.71	244.04	DC	16.82
163744441	927250	AC1-221 TAP	230.0	DVP	304070	6PERSON230 T	230.0	CPL E	1	Base Case	operation	542.0	132.22	134.26	DC	11.05
168776094	936260	AD2-033 TAP	115.0	DVP	314427	3LUNENBURG	115.0	DVP	1	DVP_P1-2: LN 84	operation	269.779998779	108.7	109.4	DC	4.19
169209541	961890	AG1-030 TAP	115.0	DVP	314706	3MARTIN TAP	115.0	DVP	1	DVP_P1-2: LN 154-A	operation	269.779998779	117.85	118.55	DC	4.19

11.5 System Reinforcements - Summer Peak Load Flow - Primary POI

ID	Idx	Facility	Upgrade Description	Cost
169209288	8	3FARMVIL 115.0 kV - 6FARMVIL 230.0 kV Ckt 1	<u>DVP</u> dom-089 (1606) : Add additional 230/115 kV transformer at Farmville substation Project Type : CON Cost : \$6,000,000 Time Estimate : 16-18 Months	\$6,000,000
169209280,169 209277	7	3FARMVIL 115.0 kV - 6FARMVIL 230.0 kV Ckt 2		
169209363,169 209365	2	3SEEDGE HILL 115.0 kV - 6SEEDGE HILL 230.0 kV Ckt 2	<u>DVP</u> dom-046 (1556) : Add additional 230/115 kV transformer at Sedge Hill substation. Project Type : CON Cost : \$6,000,000 Time Estimate : 16-18 Months	\$6,000,000
169209347,169 209349	9	3SEEDGE HILL 115.0 kV - 6SEEDGE HILL 230.0 kV Ckt 1		
169005898	1	3CAROLNA 115.0 kV - 6CAROLNA 230.0 kV Ckt 1	<u>DVP</u> n6113 (1714) : Add additional 230/115 kV transformer at Carolina substation. Project Type : CON Cost : \$6,000,000 Time Estimate : 16-18 Months	\$6,000,000
166957582	14	3JONESTO 115.0 kV - 3CLRKVILLE 115.0 kV Ckt 1	<u>DVP</u> dom-372 (1930) : Reconductor 7.56 miles of 115 kV Line 36 from Jones Store to Clarksville with 768.2 ACS 250 C. Project Type : FAC Cost : \$4,536,000 Time Estimate : 30-36 Months	\$4,536,000
166957566	5	3KERRDP 115.0 kV - 3KERR 115.0 kV Ckt 1	<u>DVP</u> dom-263 (1821) : Reconductor 9.4 miles of 115 kV line 193 from Kerr DP to Kerr Dam with 636 ACS 150 C Project Type : FAC Cost : \$5,640,000 Time Estimate : 30-36 Months	\$5,640,000
169425940	3	6MTEAGLE 230.0 kV - 6CHARLVL 230.0 kV Ckt 1	<u>DVP</u> n6184 (1747) : Rebuild 6.47 miles of 230 kV Line 2028 from Mt Eagle to Charlottesville with 2-636 ACS. Project Type : FAC Cost : \$16,175,000 Time Estimate : 30-36 Months	\$16,175,000

ID	Idx	Facility	Upgrade Description	Cost
169005841,169005842,169005843	6	3CLUBHSE 115.0 kV - 6CLUBHSE 230.0 kV Ckt 1	<u>DVP</u> n6114 (1715) : Add additional 230/115 kV transformer at Clubhouse substation. Project Type : CON Cost : \$6,000,000 Time Estimate : 16-18 Months	\$6,000,000
163744269,163744271,163744270,163745144,163744482,163744483	11	3KERR 115.0 kV - 3GW KING TAP 115.0 kV Ckt 1	<u>DVP</u> n6115 (1503) : For DEV portion, rebuild 4.7 miles of 115 kV Line 45 from Kerr Dam to GW King Tap with 768 ACSS. Project Type : FAC Cost : \$6,123,000 Time Estimate : 30-36 Months	\$6,123,000
163744437,163744436	16	AC1-221 TAP 230.0 kV - 6PERSON230 T 230.0 kV Ckt 1	<u>DVP</u> n6449 (1510) : For DEV portion, rebuild 2 miles of 230 kV Line 296 from AC1-221 Tap to Persons DEP with 2-636 ACSR. Project Type : FAC Cost : \$3,000,000 Time Estimate : 30-36 Months dom-259 (1817) : For DEV portion, rebuild 2 miles of 230 kV Line 296 from AC1-221 Tap to Persons DEP with 2-795 ACSR. Project Type : FAC Cost : \$3,000,000 Time Estimate : 30-36 Months dom-387 (1945) : For DEV portion, rebuild 2 miles of 230 kV Line 296 from AC1-221 Tap to Persons DEP with 2-768.2 ACSS 250 C. Project Type : FAC Cost : \$3,000,000 Time Estimate : 30-36 Months	\$9,000,000
166957535	15	AC1-105 TAP 115.0 kV - 3SEGE HILL 115.0 kV Ckt 1	<u>DVP</u> dom-341 (1899) : Rebuild 10.76 mi miles of 115 kV Line 33 from Mt. Laurel to AC1-105 Tap to Sedge Hill with 2-636 ACSR 150 C. Replace Wave Trap, Line Lead at sedge Hill terminal. Replace Line Switch at Mt. Laurel terminal Project Type : FAC Cost : \$16,590,000 Time Estimate : 30-36 Months	\$16,590,000
169209326,169209325	10	6SEGE HILL 230.0 kV - AC1-221 TAP 230.0 kV Ckt 1	<u>DVP</u> No upgrade needed on Dominion system. Need coordination with CPLE. <u>CPL</u> The external (i.e. Non-PJM) Transmission Owner, CPLE, will not evaluate this violation until the impact study phase.	\$0

ID	Idx	Facility	Upgrade Description	Cost
166957576	13	3BLACKBR 115.0 kV - 3JONESTO 115.0 kV Ckt 1	<u>DVP</u> dom-370 (1928) : Reconductor 7.45 miles of 115 kV Line 36 from Black Branch to Jones Store with 768.2 ACS 250 C. Project Type : FAC Cost : \$4,470,000 Time Estimate : 30-36 Months	\$4,470,000
166957669	4	3CHASCTY2 115.0 kV - 3CHASCTY 115.0 kV Ckt Z1	<u>DVP</u> dom-296 (1854) : Replace circuit breaker T342 at Chase City 115 kV with a 2000 A breaker Project Type : FAC Cost : \$1,000,000 Time Estimate : 12-18 Months	\$1,000,000
169209473,169 209472	12	3KERR 115.0 kV - 3PALMERSPRN G 115.0 kV Ckt 1	<u>DVP</u> dom-352 (1910) : Reconductor 0.34 miles of 115 kV line 1019 from Kerr Dam to Palmer Springs with 636 ACSR 150 C Project Type : FAC Cost : \$204,000 Time Estimate : 30-36 Months	\$204,000
			TOTAL COST	\$87,738,000

11.6 Flow Gate Details

The following indices contain additional information about each facility presented in the body of the report. For each index, a description of the flowgate and its contingency was included for convenience. The intent of the indices is to provide more details on which projects/generators have contributions to the flowgate in question. All New Service Queue Requests, through the end of the Queue under study, that are contributors to a flowgate will be listed in the indices. Please note that there may be contributors that are subsequently queued after the queue under study that are not listed in the indices. Although this information is not used "as is" for cost allocation purposes, it can be used to gage the impact of other projects/generators. It should be noted the project/generator MW contributions presented in the body of the report are Full MW Impact contributions which are also noted in the indices column named "Full MW Impact", whereas the loading percentages reported in the body of the report, take into consideration the PJM Generator Deliverability Test rules such as commercial probability of each project as well as the ramping impact of "Adder" contributions. The MW Impact found and used in the analysis is shown in the indices column named "Gendeliv MW Impact".

11.6.1 Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
169005898	314559	3CAROLNA	DVP	314561	6CAROLNA	DVP	1	Base Case	single	226.54	99.93	100.5	DC	1.3

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
313506	AB1-173 C OP	8.4177	80/20	8.4177
313527	AB2-043 C	0.2539	80/20	0.2539
313719	3CHESTNUT	0.5734	80/20	0.5734
314429	3JTRSVLE	0.1311	80/20	0.1311
314572	3EMPORIA	0.2784	80/20	0.2784
314582	3KELFORD	0.1597	80/20	0.1597
314589	3MURPHYS	0.0733	80/20	0.0733
314704	3LAWRENC	0.1325	80/20	0.1325
315115	1S HAMPT1	1.0988	80/20	1.0988
315126	1ROARAP2	3.0266	80/20	3.0266
315128	1ROARAP4	2.8882	80/20	2.8882
315158	1KERR 1	0.3354	80/20	0.3354
315159	1KERR 2	0.9390	80/20	0.9390
315160	1KERR 3	0.9390	80/20	0.9390
315161	1KERR 4	0.9390	80/20	0.9390
315162	1KERR 5	0.9390	80/20	0.9390
315163	1KERR 6	0.9390	80/20	0.9390
315164	1KERR 7	0.9390	80/20	0.9390
315606	3AA2-053SOLA	2.7826	80/20	2.7826
315607	3AA1-063SOLA	2.4466	80/20	2.4466
315608	3AA2-088SOLA	1.0716	80/20	1.0716
316087	AB2-174 C	1.1458	80/20	1.1458
316103	AB2-015 C	5.8860	80/20	5.8860
316129	AC1-054 C	11.0315	80/20	11.0315
316131	AB2-060 C	0.7200	80/20	0.7200
316140	AB2-099 C (Suspended)	0.2525	80/20	0.2525
920591	AA2-165 C	0.0770	80/20	0.0770
923991	AB2-040 C O1	9.1678	80/20	9.1678
924301	AB2-077 C O1 (Suspended)	1.0351	80/20	1.0351
924311	AB2-078 C O1 (Suspended)	1.0351	80/20	1.0351
924321	AB2-079 C O1 (Suspended)	1.0351	80/20	1.0351
925611	AC1-036 C	0.0913	80/20	0.0913
926201	AC1-098 C	4.5000	80/20	4.5000
926211	AC1-099 C	1.5080	80/20	1.5080
927145	AC1-208 C	9.1366	80/20	9.1366
932631	AC2-084 C	6.4148	80/20	6.4148
936265	AD2-033 C	5.5146	80/20	5.5146
936361	AD2-046 C O1	7.2522	80/20	7.2522
936485	AD2-063 C	7.0443	80/20	7.0443

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
938771	AE1-103 C	1.8505	80/20	1.8505
939181	AE1-148 C	7.0438	80/20	7.0438
940661	AE2-053 O1	2.6088	80/20	2.6088
942451	AE2-258	1.2008	80/20	1.2008
943171	AE2-346 C	0.6060	80/20	0.6060
943911	AF1-059	7.8933	80/20	7.8933
946281	AF1-292 C	0.6467	80/20	0.6467
946301	AF1-294 C	1.3247	80/20	1.3247
957521	AF2-046 C	13.0149	80/20	13.0149
958211	AF2-115 C	0.7793	80/20	0.7793
958801	AF2-171 C	4.7025	80/20	4.7025
959311	AF2-222 C	6.5080	80/20	6.5080
960081	AF2-299 C	1.0899	80/20	1.0899
961091	AF2-400 C	0.3178	80/20	0.3178
961681	AG1-008 C	13.0410	80/20	13.0410
961791	AG1-021 C	0.6234	80/20	0.6234
961891	AG1-030 C	5.1552	80/20	5.1552
961931	AG1-036 C	0.8055	80/20	0.8055
961941	AG1-037 C	0.2164	80/20	0.2164
962041	AG1-048 C	3.8963	80/20	3.8963
962331	AG1-082 C	0.8657	80/20	0.8657
962341	AG1-083 C	0.8657	80/20	0.8657
963171	AG1-166 C	0.6234	80/20	0.6234
963181	AG1-167 C	0.6234	80/20	0.6234
963191	AG1-168 C	0.6234	80/20	0.6234
963201	AG1-169 C	0.6234	80/20	0.6234
963211	AG1-170 C	0.6234	80/20	0.6234
963301	AG1-179 C	2.6049	80/20	2.6049
963311	AG1-180	1.2692	80/20	1.2692
963321	AG1-181 C O1	7.0632	80/20	7.0632
963361	AG1-185 O1	3.4173	80/20	3.4173
963641	AG1-215 C	0.2909	80/20	0.2909
964111	AG1-272 C	1.0371	80/20	1.0371
964121	AG1-273 C	1.0371	80/20	1.0371
964131	AG1-274 C	1.0371	80/20	1.0371
964241	AG1-285 C O1	6.0202	80/20	6.0202
964501	AG1-313 C O1	7.0173	80/20	7.0173
964791	AG1-342 C	1.2996	80/20	1.2996
964801	AG1-343 C	6.2818	80/20	6.2818
964821	AG1-345 C	0.2502	80/20	0.2502
965191	AG1-384 C	1.0371	80/20	1.0371
965281	AG1-393 C	0.6234	80/20	0.6234
965291	AG1-394 C	2.2424	80/20	2.2424
965451	AG1-413 C O1	3.3181	80/20	3.3181
965591	AG1-427 C	5.6830	80/20	5.6830
965601	AG1-428 C O1	2.1747	80/20	2.1747
965721	AG1-440 C	8.1243	80/20	8.1243
965731	AG1-441 C	8.1243	80/20	8.1243
965771	AG1-445	4.6940	80/20	4.6940
965781	AG1-446	4.6940	80/20	4.6940
966621	AG1-532 C	0.5885	80/20	0.5885
966751	AG1-546 C	25.5735	80/20	25.5735

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
966811	AG1-552 C	4.8054	80/20	4.8054
WEC	WEC	0.0035	Confirmed LTF	0.0035
LGEE	LGEE	0.0094	Confirmed LTF	0.0094
CBM-W2	CBM-W2	0.0806	Confirmed LTF	0.0806
NY	NY	0.0387	Confirmed LTF	0.0387
TVA	TVA	0.0140	Confirmed LTF	0.0140
SIGE	SIGE	0.0096	Confirmed LTF	0.0096
CBM-S1	CBM-S1	0.0042	Confirmed LTF	0.0042
HAMLET	HAMLET	0.0450	Confirmed LTF	0.0450
MEC	MEC	0.0159	Confirmed LTF	0.0159
LAGN	LAGN	0.0123	Confirmed LTF	0.0123
CBM-W1	CBM-W1	0.1262	Confirmed LTF	0.1262

11.6.2 Index 2

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
169209363	314696	3SEEDGE HILL	DVP	314697	6SEEDGE HILL	DVP	2	DVP_P1-3: 6SEEDGE HILL-TX#1	single	256.06	128.8	132.96	DC	10.66

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
246843	05SMG1	0.5788	80/20	0.5788
246844	05SMG2	1.5733	80/20	1.5733
246845	05SMG3	0.9864	80/20	0.9864
246846	05SMG4	1.5489	80/20	1.5489
246847	05SMG5	0.6032	80/20	0.6032
247284	05LEESVG	0.7274	80/20	0.7274
313527	AB2-043 C	0.6441	80/20	0.6441
314429	3JTRSVLE	0.2972	80/20	0.2972
314704	3LAWRENC	0.1691	80/20	0.1691
315156	1HALLBR1	1.3508	80/20	1.3508
315158	1KERR 1	0.3688	80/20	0.3688
315159	1KERR 2	1.0326	80/20	1.0326
315160	1KERR 3	1.0326	80/20	1.0326
315161	1KERR 4	1.0326	80/20	1.0326
315162	1KERR 5	1.0326	80/20	1.0326
315163	1KERR 6	1.0326	80/20	1.0326
315164	1KERR 7	1.0326	80/20	1.0326
315266	1PLYWOOD A	3.5951	80/20	3.5951
316118	AC1-105 C	17.1420	80/20	17.1420
316123	AC1-075 C	2.2897	80/20	2.2897
316129	AC1-054 C	4.6689	80/20	4.6689
316131	AB2-060 C	1.8231	80/20	1.8231
924301	AB2-077 C O1 (Suspended)	2.6719	80/20	2.6719
924311	AB2-078 C O1 (Suspended)	2.6719	80/20	2.6719
924321	AB2-079 C O1 (Suspended)	2.6719	80/20	2.6719
925611	AC1-036 C	0.2212	80/20	0.2212
925661	AC1-042 C	2.1663	80/20	2.1663
926023	AC1-080 C	0.7652	80/20	0.7652
926645	AC1-145 C	0.4069	80/20	0.4069
927261	AC1-222 C	12.0926	80/20	12.0926
934311	AD1-055 C	8.3962	80/20	8.3962
935221	AD1-157 C (Withdrawn : 01/26/2021)	0.1442	80/20	0.1442
936265	AD2-033 C	13.5182	80/20	13.5182
936361	AD2-046 C O1	9.0864	80/20	9.0864
936485	AD2-063 C	17.6022	80/20	17.6022
938371	AE1-056 C	3.9394	80/20	3.9394

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939181	AE1-148 C	9.0639	80/20	9.0639
939941	AE1-230 C	0.9773	80/20	0.9773
940661	AE2-053 O1	3.3570	80/20	3.3570
941801	AE2-185 C	4.8863	80/20	4.8863
941821	AE2-187 C	4.8863	80/20	4.8863
942451	AE2-258	3.0456	80/20	3.0456
942461	AE2-259 C O1	3.4614	80/20	3.4614
942671	AE2-283 C	5.3749	80/20	5.3749
942751	AE2-291 C	19.2303	80/20	19.2303
942761	AE2-292 C O1	23.9436	80/20	23.9436
943901	AF1-058 C	6.8382	80/20	6.8382
943911	AF1-059	13.9753	80/20	13.9753
945081	AF1-173	1.8934	80/20	1.8934
946301	AF1-294 C	3.0019	80/20	3.0019
958211	AF2-115 C	1.7658	80/20	1.7658
958801	AF2-171 C	10.6686	80/20	10.6686
959311	AF2-222 C	15.6530	80/20	15.6530
960061	AF2-297 C	27.3528	80/20	27.3528
961121	AF2-403	1.0858	80/20	1.0858
961791	AG1-021 C	1.4126	80/20	1.4126
961891	AG1-030 C	12.0195	80/20	12.0195
962041	AG1-048 C	8.8290	80/20	8.8290
962441	AG1-093 C O1	45.7120	80/20	45.7120
963171	AG1-166 C	1.4126	80/20	1.4126
963181	AG1-167 C	1.4126	80/20	1.4126
963191	AG1-168 C	1.4126	80/20	1.4126
963201	AG1-169 C	1.4126	80/20	1.4126
963211	AG1-170 C	1.4126	80/20	1.4126
963301	AG1-179 C	3.7578	80/20	3.7578
963311	AG1-180	1.8309	80/20	1.8309
963321	AG1-181 C O1	17.2581	80/20	17.2581
963361	AG1-185 O1	8.3499	80/20	8.3499
963601	AG1-209 C	0.3800	80/20	0.3800
963641	AG1-215 C	0.6592	80/20	0.6592
964111	AG1-272 C	2.5135	80/20	2.5135
964121	AG1-273 C	2.5135	80/20	2.5135
964131	AG1-274 C	2.5135	80/20	2.5135
964141	AG1-275 C	1.6288	80/20	1.6288
964151	AG1-276 C	1.6288	80/20	1.6288
964241	AG1-285 C O1	15.1132	80/20	15.1132
964251	AG1-286 C	0.6204	80/20	0.6204
964261	AG1-287 C	5.1287	80/20	5.1287
964471	AG1-310 C	6.8479	80/20	6.8479
964791	AG1-342 C	10.6614	80/20	10.6614
964821	AG1-345 C	0.5676	80/20	0.5676
965191	AG1-384 C	2.5135	80/20	2.5135
965281	AG1-393 C	1.4126	80/20	1.4126
965451	AG1-413 C O1	5.8747	80/20	5.8747
965591	AG1-427 C	14.2570	80/20	14.2570
965601	AG1-428 C O1	3.1371	80/20	3.1371
965641	AG1-432 C O1	6.9228	80/20	6.9228
965721	AG1-440 C	6.1749	80/20	6.1749

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965731	AG1-441 C	6.1749	80/20	6.1749
965771	AG1-445	3.5677	80/20	3.5677
965781	AG1-446	3.5677	80/20	3.5677
965831	AG1-451	1.1538	80/20	1.1538
966691	AG1-539 C	10.0550	80/20	10.0550
966751	AG1-546 C	9.5834	80/20	9.5834
966761	AG1-547 C	4.4167	80/20	4.4167
966861	AG1-557 C O1 (Withdrawn : 12/14/2020)	0.6923	80/20	0.6923
WEC	WEC	0.0161	Confirmed LTF	0.0161
LGEE	LGEE	0.0503	Confirmed LTF	0.0503
CALDERWOOD	CALDERWOOD	0.1387	Confirmed LTF	0.1387
NY	NY	0.0553	Confirmed LTF	0.0553
PRAIRIE	PRAIRIE	0.0827	Confirmed LTF	0.0827
SIGE	SIGE	0.0180	Confirmed LTF	0.0180
CHEOAH	CHEOAH	0.1496	Confirmed LTF	0.1496
COTTONWOOD	COTTONWOOD	0.4284	Confirmed LTF	0.4284
HAMLET	HAMLET	0.6791	Confirmed LTF	0.6791
CATAWBA	CATAWBA	0.3035	Confirmed LTF	0.3035
CBM-W1	CBM-W1	0.7150	Confirmed LTF	0.7150

11.6.3 Index 3

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
169425940	314765	6MTEAGLE	DVP	314749	6CHARLVL	DVP	1	Base Case	single	661.76	99.79	100.11	DC	2.16

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
313506	AB1-173 C OP	2.1768	80/20	2.1768
313527	AB2-043 C	0.3168	80/20	0.3168
314250	6ROCKVILLE	0.0897	80/20	0.0897
314333	6POWHATN	0.4522	80/20	0.4522
314429	3JTRSVLE	0.4607	80/20	0.4607
314572	3EMPORIA	0.1379	80/20	0.1379
314677	6BUCKING	0.6971	80/20	0.6971
314704	3LAWRENC	0.1224	80/20	0.1224
315126	1ROARAP2	0.4093	80/20	0.4093
315153	1CLOVER1	6.0238	80/20	6.0238
315154	1CLOVER2	5.9637	80/20	5.9637
315158	1KERR 1	0.1867	80/20	0.1867
315159	1KERR 2	0.5227	80/20	0.5227
315160	1KERR 3	0.5227	80/20	0.5227
315161	1KERR 4	0.5227	80/20	0.5227
315162	1KERR 5	0.5227	80/20	0.5227
315163	1KERR 6	0.5227	80/20	0.5227
315164	1KERR 7	0.5227	80/20	0.5227
315191	1BEARGRDN G1	12.0635	80/20	12.0635
315192	1BEARGRDN G2	12.0635	80/20	12.0635
315193	1BEARGRDN S1	15.6005	80/20	15.6005
315266	1PLYWOOD A	0.5382	80/20	0.5382
316087	AB2-174 C	0.3601	80/20	0.3601
316118	AC1-105 C	2.7013	80/20	2.7013
316123	AC1-075 C	0.3229	80/20	0.3229
316129	AC1-054 C	2.9722	80/20	2.9722
316131	AB2-060 C	0.9365	80/20	0.9365
923991	AB2-040 C O1	2.3707	80/20	2.3707
924301	AB2-077 C O1 (Suspended)	1.2482	80/20	1.2482
924311	AB2-078 C O1 (Suspended)	1.2482	80/20	1.2482
924321	AB2-079 C O1 (Suspended)	1.2482	80/20	1.2482
925611	AC1-036 C	0.1999	80/20	0.1999
926023	AC1-080 C	0.1079	80/20	0.1079
926451	AC1-116 C	0.5110	80/20	0.5110
927261	AC1-222 C	1.5387	80/20	1.5387
932511	AC2-071 C (Withdrawn : 01/22/2021)	0.6868	80/20	0.6868
933501	AC2-165 C	13.7507	80/20	13.7507
934311	AD1-055 C	1.0683	80/20	1.0683

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934615	AD1-087 C	3.7722	80/20	3.7722
934625	AD1-088 C	10.9406	80/20	10.9406
935171	AD1-152 C O1	4.1434	80/20	4.1434
935221	AD1-157 C (Withdrawn : 01/26/2021)	0.2769	80/20	0.2769
936265	AD2-033 C	10.8748	80/20	10.8748
936361	AD2-046 C O1	4.5720	80/20	4.5720
936485	AD2-063 C	10.9863	80/20	10.9863
937481	AD2-202 C O1	1.1049	80/20	1.1049
938371	AE1-056 C	7.5664	80/20	7.5664
938551	AE1-074 C	0.1311	80/20	0.1311
938561	AE1-075 C	0.3932	80/20	0.3932
938821	AE1-108 C O1	24.9751	80/20	24.9751
939181	AE1-148 C	4.5549	80/20	4.5549
940661	AE2-053 O1	1.6870	80/20	1.6870
941011	AE2-092 C	19.9382	80/20	19.9382
941791	AE2-182 C	1.7775	80/20	1.7775
942451	AE2-258	1.4978	80/20	1.4978
942461	AE2-259 C O1	13.7400	80/20	13.7400
943901	AF1-058 C	0.8525	80/20	0.8525
943911	AF1-059	8.2941	80/20	8.2941
945811	AF1-246 C O1	3.1298	80/20	3.1298
946281	AF1-292 C	0.4956	80/20	0.4956
946291	AF1-293 C O1	33.0934	80/20	33.0934
946301	AF1-294 C	4.6538	80/20	4.6538
946591	AF1-323 C	7.9725	80/20	7.9725
957481	AF2-042 C	22.3560	80/20	22.3560
957911	AF2-085	1.5924	80/20	1.5924
958131	AF2-107 C	3.5020	80/20	3.5020
958211	AF2-115 C	2.7375	80/20	2.7375
958501	AF2-144 C	2.1186	80/20	2.1186
958801	AF2-171 C	16.3629	80/20	16.3629
959311	AF2-222 C	15.2360	80/20	15.2360
959531	AF2-244 C (Withdrawn : 01/06/2021)	1.9525	80/20	1.9525
959751	AF2-266	4.3240	80/20	4.3240
960061	AF2-297 C	3.4099	80/20	3.4099
960081	AF2-299 C	0.8352	80/20	0.8352
960111	AF2-302 C	2.8991	80/20	2.8991
961061	AF2-397 C	39.3416	80/20	39.3416
961791	AG1-021 C	2.1900	80/20	2.1900
961801	AG1-022 C	2.8991	80/20	2.8991
961891	AG1-030 C	15.3207	80/20	15.3207
962041	AG1-048 C	13.6875	80/20	13.6875
962441	AG1-093 C O1	7.2036	80/20	7.2036
962491	AG1-098 C O1	9.1515	80/20	9.1515
962561	AG1-105 C O1	4.9638	80/20	4.9638
962741	AG1-123 C O1	2.3028	80/20	2.3028
963171	AG1-166 C	2.1900	80/20	2.1900
963181	AG1-167 C	2.1900	80/20	2.1900
963191	AG1-168 C	2.1900	80/20	2.1900
963201	AG1-169 C	2.1900	80/20	2.1900
963211	AG1-170 C	2.1900	80/20	2.1900

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963271	AG1-176 C O1	14.5996	80/20	14.5996
963301	AG1-179 C	2.5178	80/20	2.5178
963311	AG1-180	1.2267	80/20	1.2267
963321	AG1-181 C O1	14.2891	80/20	14.2891
963361	AG1-185 O1	6.9134	80/20	6.9134
963641	AG1-215 C	1.0220	80/20	1.0220
964111	AG1-272 C	2.2720	80/20	2.2720
964121	AG1-273 C	2.2720	80/20	2.2720
964131	AG1-274 C	2.2720	80/20	2.2720
964231	AG1-284 C O1	14.6437	80/20	14.6437
964241	AG1-285 C O1	8.8103	80/20	8.8103
964261	AG1-287 C	0.6394	80/20	0.6394
964471	AG1-310 C	0.8793	80/20	0.8793
964791	AG1-342 C	2.1584	80/20	2.1584
964821	AG1-345 C	0.8740	80/20	0.8740
964841	AG1-347 C	9.1476	80/20	9.1476
964931	AG1-357 C	7.8972	80/20	7.8972
965191	AG1-384 C	2.2720	80/20	2.2720
965281	AG1-393 C	2.1900	80/20	2.1900
965451	AG1-413 C O1	3.4865	80/20	3.4865
965581	AG1-426	5.4412	80/20	5.4412
965591	AG1-427 C	8.4069	80/20	8.4069
965601	AG1-428 C O1	2.1019	80/20	2.1019
965641	AG1-432 C O1	27.4800	80/20	27.4800
965721	AG1-440 C	3.3511	80/20	3.3511
965731	AG1-441 C	3.3511	80/20	3.3511
965771	AG1-445	1.9362	80/20	1.9362
965781	AG1-446	1.9362	80/20	1.9362
965831	AG1-451	4.5800	80/20	4.5800
966251	AG1-494 C	1.2282	80/20	1.2282
966361	AG1-505 C	5.0436	80/20	5.0436
966371	AG1-506 C	5.0436	80/20	5.0436
966621	AG1-532 C	0.4510	80/20	0.4510
966751	AG1-546 C	6.3638	80/20	6.3638
966791	AG1-550 O1	20.6280	80/20	20.6280
966861	AG1-557 C O1 (Withdrawn : 12/14/2020)	2.7480	80/20	2.7480
WEC	WEC	0.0331	Confirmed LTF	0.0331
LGEE	LGEE	0.0716	Confirmed LTF	0.0716
CPL	CPL	2.2482	Confirmed LTF	2.2482
CBM-W2	CBM-W2	4.7040	Confirmed LTF	4.7040
NY	NY	0.3335	Confirmed LTF	0.3335
TVA	TVA	1.0780	Confirmed LTF	1.0780
SIGE	SIGE	0.0815	Confirmed LTF	0.0815
CBM-S2	CBM-S2	24.5340	Confirmed LTF	24.5340
CBM-S1	CBM-S1	0.2470	Confirmed LTF	0.2470
MEC	MEC	0.3957	Confirmed LTF	0.3957
LAGN	LAGN	1.3457	Confirmed LTF	1.3457
AA2-074	AA2-074	1.4819	LTF	1.4819
CBM-W1	CBM-W1	0.9393	Confirmed LTF	0.9393

11.6.4 Index 4

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
166957669	314267	3CHASCTY2	DVP	314681	3CHASCTY	DVP	Z1	DVP_P7-1: LN 158-235	tower	582.0	98.7	100.94	DC	13.03

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
313853	3PONTONDP	2.3263	50/50	2.3263
314429	3JTRSVLE	1.4681	50/50	1.4681
316118	AC1-105 C	6.3960	50/50	6.3960
316131	AB2-060 C	4.9915	50/50	4.9915
924162	AB2-060 E OP	14.8884	50/50	14.8884
926274	AC1-105 E	3.1424	50/50	3.1424
936265	AD2-033 C	45.3632	50/50	45.3632
936266	AD2-033 E	30.2422	50/50	30.2422
939181	AE1-148 C	6.7937	50/50	6.7937
939182	AE1-148 E	4.5292	50/50	4.5292
940661	AE2-053 O1	2.5162	50/50	2.5162
943912	AF1-059 BAT	26.2612	50/50	26.2612
946301	AF1-294 C	14.8303	50/50	14.8303
946302	AF1-294 E	9.8869	50/50	9.8869
958211	AF2-115 C	8.7237	50/50	8.7237
958212	AF2-115 E	5.8158	50/50	5.8158
961791	AG1-021 C	6.9790	50/50	6.9790
961792	AG1-021 E	4.6526	50/50	4.6526
961891	AG1-030 C	52.3422	50/50	52.3422
961892	AG1-030 E	34.8948	50/50	34.8948
962041	AG1-048 C	43.6185	50/50	43.6185
962042	AG1-048 E	29.0790	50/50	29.0790
962441	AG1-093 C O1	17.0559	50/50	17.0559
962442	AG1-093 E O1	5.1909	50/50	5.1909
963171	AG1-166 C	6.9790	50/50	6.9790
963172	AG1-166 E	4.6526	50/50	4.6526
963181	AG1-167 C	6.9790	50/50	6.9790
963182	AG1-167 E	4.6526	50/50	4.6526
963191	AG1-168 C	6.9790	50/50	6.9790
963192	AG1-168 E	4.6526	50/50	4.6526
963201	AG1-169 C	6.9790	50/50	6.9790
963202	AG1-169 E	4.6526	50/50	4.6526
963211	AG1-170 C	6.9790	50/50	6.9790
963212	AG1-170 E	4.6526	50/50	4.6526
963312	AG1-180 BAT	6.1563	50/50	6.1563
963362	AG1-185 BAT	30.2643	50/50	30.2643
963641	AG1-215 C	3.2568	50/50	3.2568
963642	AG1-215 E	4.8853	50/50	4.8853
964113	AG1-272 BAT	6.4480	50/50	6.4480
964123	AG1-273 BAT	6.4480	50/50	6.4480
964133	AG1-274 BAT	6.4480	50/50	6.4480

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
964791	AG1-342 C	7.2967	50/50	7.2967
964792	AG1-342 E	5.7331	50/50	5.7331
964821	AG1-345 C	2.7916	50/50	2.7916
964822	AG1-345 E	1.8611	50/50	1.8611
965193	AG1-384 BAT	2.7630	50/50	2.7630
965281	AG1-393 C	6.9790	50/50	6.9790
965282	AG1-393 E	4.6526	50/50	4.6526
965832	AG1-451 BAT	2.6648	50/50	2.6648
WEC	WEC	0.0608	Confirmed LTF	0.0608
LGEE	LGEE	0.1263	Confirmed LTF	0.1263
CPL	CPL	0.4914	Confirmed LTF	0.4914
CBM-W2	CBM-W2	2.4371	Confirmed LTF	2.4371
NY	NY	0.0625	Confirmed LTF	0.0625
TVA	TVA	0.4480	Confirmed LTF	0.4480
O-066	O-066	0.9018	Confirmed LTF	0.9018
SIG	SIG	0.0361	Confirmed LTF	0.0361
CBM-S2	CBM-S2	6.1178	Confirmed LTF	6.1178
CBM-S1	CBM-S1	0.1136	Confirmed LTF	0.1136
G-007	G-007	0.1418	Confirmed LTF	0.1418
MEC	MEC	0.3496	Confirmed LTF	0.3496
LAGN	LAGN	0.5513	Confirmed LTF	0.5513
CBM-W1	CBM-W1	2.5516	Confirmed LTF	2.5516

11.6.5 Index 5

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
166957566	313705	3KERRDP	DVP	314702	3KERR	DVP	1	DVP_P7-1: LN 171-1009	tower	195.0	101.44	102.48	DC	4.47

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
313527	AB2-043 C	0.4229	50/50	0.4229
313853	3PONTONDP	0.2999	Adder	0.35
314713	3PAMPLIN	0.6573	Adder	0.77
315266	1PLYWOOD A	0.9917	50/50	0.9917
316118	AC1-105 C	2.4718	Adder	2.91
316129	AC1-054 C	-7.0449	Adder	-8.29
316131	AB2-060 C	1.1992	50/50	1.1992
924022	AB2-043 E O1	2.3969	50/50	2.3969
924162	AB2-060 E OP	3.5768	50/50	3.5768
924301	AB2-077 C O1 (Suspended)	1.9992	50/50	1.9992
924302	AB2-077 E O1 (Suspended)	1.3328	50/50	1.3328
924311	AB2-078 C O1 (Suspended)	1.9992	50/50	1.9992
924312	AB2-078 E O1 (Suspended)	1.3328	50/50	1.3328
924321	AB2-079 C O1 (Suspended)	1.9992	50/50	1.9992
924322	AB2-079 E O1 (Suspended)	1.3328	50/50	1.3328
925611	AC1-036 C	0.1533	50/50	0.1533
925612	AC1-036 E	0.5817	50/50	0.5817
926274	AC1-105 E	1.2144	Adder	1.43
927261	AC1-222 C	1.2514	Adder	1.47
927262	AC1-222 E	1.1913	Adder	1.4
934311	AD1-055 C	0.8689	Adder	1.02
934312	AD1-055 E	0.2241	Adder	0.26
935222	AD1-157 E (Withdrawn : 01/26/2021)	0.4052	Adder	0.48
936265	AD2-033 C	9.2391	50/50	9.2391
936266	AD2-033 E	6.1594	50/50	6.1594
936485	AD2-063 C	11.7639	50/50	11.7639
936486	AD2-063 E	7.8426	50/50	7.8426
938371	AE1-056 C	2.6206	Adder	3.08
938372	AE1-056 E	1.4319	Adder	1.68
940662	AE2-053 BAT	5.6696	50/50	5.6696
942451	AE2-258	1.9998	50/50	1.9998
942461	AE2-259 C O1	2.8346	Adder	3.33
942462	AE2-259 E O1	1.8897	Adder	2.22
943901	AF1-058 C	0.7075	Adder	0.83

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
943902	AF1-058 E	0.4716	Adder	0.55
943911	AF1-059	6.4092	Adder	7.54
946301	AF1-294 C	1.9120	Adder	2.25
946302	AF1-294 E	1.2746	Adder	1.5
958211	AF2-115 C	1.1247	Adder	1.32
958212	AF2-115 E	0.7498	Adder	0.88
958801	AF2-171 C	6.7878	Adder	7.99
958802	AF2-171 E	4.5252	Adder	5.32
959311	AF2-222 C	10.9430	50/50	10.9430
959312	AF2-222 E	7.3318	50/50	7.3318
960061	AF2-297 C	2.8299	Adder	3.33
960062	AF2-297 E	1.8866	Adder	2.22
961791	AG1-021 C	0.4769	Adder	1.06
961792	AG1-021 E	0.3179	Adder	0.71
961891	AG1-030 C	3.9256	Adder	8.71
961892	AG1-030 E	2.6170	Adder	5.81
962041	AG1-048 C	2.9804	Adder	6.62
962042	AG1-048 E	1.9869	Adder	4.41
962441	AG1-093 C O1	3.4935	Adder	7.75
962442	AG1-093 E O1	1.0632	Adder	2.36
963171	AG1-166 C	0.4769	Adder	1.06
963172	AG1-166 E	0.3179	Adder	0.71
963181	AG1-167 C	0.4769	Adder	1.06
963182	AG1-167 E	0.3179	Adder	0.71
963191	AG1-168 C	0.4769	Adder	1.06
963192	AG1-168 E	0.3179	Adder	0.71
963201	AG1-169 C	0.4769	Adder	1.06
963202	AG1-169 E	0.3179	Adder	0.71
963211	AG1-170 C	0.4769	Adder	1.06
963212	AG1-170 E	0.3179	Adder	0.71
963301	AG1-179 C	0.7641	Adder	1.7
963311	AG1-180	0.3723	Adder	0.83
963321	AG1-181 C O1	11.8437	50/50	11.8437
963361	AG1-185 O1	5.7303	50/50	5.7303
963641	AG1-215 C	0.2225	Adder	0.49
963642	AG1-215 E	0.3338	Adder	0.74
964111	AG1-272 C	1.7417	50/50	1.7417
964112	AG1-272 E	0.5173	50/50	0.5173
964121	AG1-273 C	1.7417	50/50	1.7417
964122	AG1-273 E	0.5173	50/50	0.5173
964131	AG1-274 C	1.7417	50/50	1.7417
964132	AG1-274 E	0.5173	50/50	0.5173
964241	AG1-285 C O1	10.0455	50/50	10.0455
964242	AG1-285 E O1	6.6970	50/50	6.6970
964261	AG1-287 C	0.2812	Adder	0.62
964262	AG1-287 E	0.1875	Adder	0.42
964471	AG1-310 C	0.3757	Adder	0.83
964472	AG1-310 E	0.1850	Adder	0.41
964791	AG1-342 C	1.1283	Adder	2.5
964792	AG1-342 E	0.8865	Adder	1.97
964821	AG1-345 C	0.1914	Adder	0.42
964822	AG1-345 E	0.1276	Adder	0.28

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965191	AG1-384 C	1.7417	50/50	1.7417
965192	AG1-384 E	0.5173	50/50	0.5173
965281	AG1-393 C	0.4769	Adder	1.06
965282	AG1-393 E	0.3179	Adder	0.71
965451	AG1-413 C O1	1.4279	Adder	3.17
965452	AG1-413 E O1	0.9519	Adder	2.11
965591	AG1-427 C	9.4847	50/50	9.4847
965592	AG1-427 E	6.3365	50/50	6.3365
965601	AG1-428 C O1	0.6379	Adder	1.42
965602	AG1-428 E O1	0.4245	Adder	0.94
965641	AG1-432 C O1	3.0047	Adder	6.67
965642	AG1-432 E O1	2.0031	Adder	4.45
965772	AG1-445 BAT	6.4462	50/50	6.4462
965782	AG1-446 BAT	6.4462	50/50	6.4462
965831	AG1-451	0.5008	Adder	1.11
966753	AG1-546 BAT	6.4143	50/50	6.4143
966861	AG1-557 C O1 (Withdrawn : 12/14/2020)	0.3005	Adder	0.67
966862	AG1-557 E O1 (Withdrawn : 12/14/2020)	0.2003	Adder	0.44
G-007A	G-007A	0.1654	Confirmed LTF	0.1654
VFT	VFT	0.4451	Confirmed LTF	0.4451
CALDERWOOD	CALDERWOOD	0.0984	Confirmed LTF	0.0984
PRAIRIE	PRAIRIE	0.2144	Confirmed LTF	0.2144
CHEOAH	CHEOAH	0.1026	Confirmed LTF	0.1026
CBM-N	CBM-N	0.0828	Confirmed LTF	0.0828
COTTONWOOD	COTTONWOOD	0.3360	Confirmed LTF	0.3360
HAMLET	HAMLET	0.3274	Confirmed LTF	0.3274
GIBSON	GIBSON	0.0229	Confirmed LTF	0.0229
BLUEG	BLUEG	0.0590	Confirmed LTF	0.0590
TRIMBLE	TRIMBLE	0.0178	Confirmed LTF	0.0178
CATAWBA	CATAWBA	0.1431	Confirmed LTF	0.1431

11.6.6 Index 6

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
169005841	314562	3CLUBHSE	DVP	314563	6CLUBHSE	DVP	1	DVP_P1-2: LN 2201	single	182.64	204.53	205.59	DC	1.94

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
313506	AB1-173 C OP	14.9250	80/20	14.9250
313527	AB2-043 C	0.3856	80/20	0.3856
313719	3CHESTNUT	0.5206	80/20	0.5206
314429	3JTRSVLE	0.1956	80/20	0.1956
314572	3EMPORIA	1.2299	80/20	1.2299
314582	3KELFORD	0.1483	80/20	0.1483
314589	3MURPHYS	0.0389	80/20	0.0389
314623	3WITAKRS	0.0846	80/20	0.0846
314704	3LAWRENC	0.7289	80/20	0.7289
315115	1S HAMPT1	0.4811	80/20	0.4811
315126	1ROARAP2	1.1971	80/20	1.1971
315128	1ROARAP4	1.1424	80/20	1.1424
315136	1ROSEMG1	0.9301	80/20	0.9301
315137	1ROSEMS1	0.5767	80/20	0.5767
315138	1ROSEMG2	0.4359	80/20	0.4359
315139	1GASTONA	1.4047	80/20	1.4047
315141	1GASTONB	1.4047	80/20	1.4047
315158	1KERR 1	0.2620	80/20	0.2620
315159	1KERR 2	0.7337	80/20	0.7337
315160	1KERR 3	0.7337	80/20	0.7337
315161	1KERR 4	0.7337	80/20	0.7337
315162	1KERR 5	0.7337	80/20	0.7337
315163	1KERR 6	0.7337	80/20	0.7337
315164	1KERR 7	0.7337	80/20	0.7337
315266	1PLYWOOD A	0.3917	80/20	0.3917
315606	3AA2-053SOLA	1.1660	80/20	1.1660
315607	3AA1-063SOLA	0.9971	80/20	0.9971
315608	3AA2-088SOLA	0.4761	80/20	0.4761
316020	AB2-059 C OP	0.5459	80/20	0.5459
316087	AB2-174 C	2.7447	80/20	2.7447
316096	AB2-100 C1	0.4277	80/20	0.4277
316098	AB2-100 C2	0.4277	80/20	0.4277
316103	AB2-015 C	2.5605	80/20	2.5605
316118	AC1-105 C	2.0148	80/20	2.0148
316129	AC1-054 C	5.7187	80/20	5.7187
316131	AB2-060 C	1.0922	80/20	1.0922
316140	AB2-099 C (Suspended)	0.2281	80/20	0.2281
920591	AA2-165 C	0.0699	80/20	0.0699
922922	AB1-081 C OP	0.4632	80/20	0.4632
923991	AB2-040 C O1	16.2549	80/20	16.2549
924301	AB2-077 C O1 (Suspended)	1.5130	80/20	1.5130

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
924311	AB2-078 C O1 (Suspended)	1.5130	80/20	1.5130
924321	AB2-079 C O1 (Suspended)	1.5130	80/20	1.5130
925591	AC1-034 C	2.2414	80/20	2.2414
925611	AC1-036 C	0.1376	80/20	0.1376
926070	AC1-086 C	10.0123	80/20	10.0123
926201	AC1-098 C	3.1031	80/20	3.1031
926211	AC1-099 C	1.0399	80/20	1.0399
927145	AC1-208 C	5.2586	80/20	5.2586
932631	AC2-084 C	4.4236	80/20	4.4236
934331	AD1-057 C O1	3.8417	80/20	3.8417
935221	AD1-157 C (Withdrawn : 01/26/2021)	0.0980	80/20	0.0980
936265	AD2-033 C	8.3234	80/20	8.3234
936361	AD2-046 C O1	6.2368	80/20	6.2368
936485	AD2-063 C	10.6713	80/20	10.6713
938371	AE1-056 C	2.6788	80/20	2.6788
939181	AE1-148 C	6.1781	80/20	6.1781
940571	AE2-044 C	1.4680	80/20	1.4680
940661	AE2-053 O1	2.2882	80/20	2.2882
941541	AE2-151 C (Withdrawn : 01/08/2021)	0.0630	80/20	0.0630
942451	AE2-258	1.8236	80/20	1.8236
943171	AE2-346 C	0.5473	80/20	0.5473
943911	AF1-059	31.0992	80/20	31.0992
944141	AF1-082	0.9437	80/20	0.9437
946281	AF1-292 C	4.8137	80/20	4.8137
946301	AF1-294 C	1.9760	80/20	1.9760
957521	AF2-046 C	7.4161	80/20	7.4161
958211	AF2-115 C	1.1624	80/20	1.1624
958801	AF2-171 C	7.0200	80/20	7.0200
959311	AF2-222 C	9.8000	80/20	9.8000
960081	AF2-299 C	8.1131	80/20	8.1131
961091	AF2-400 C	0.1383	80/20	0.1383
961681	AG1-008 C	7.4310	80/20	7.4310
961791	AG1-021 C	0.9299	80/20	0.9299
961891	AG1-030 C	7.7229	80/20	7.7229
961931	AG1-036 C	0.5625	80/20	0.5625
961941	AG1-037 C	0.1955	80/20	0.1955
962041	AG1-048 C	5.8118	80/20	5.8118
962331	AG1-082 C	0.7819	80/20	0.7819
962341	AG1-083 C	0.7819	80/20	0.7819
962351	AG1-084 C	0.6452	80/20	0.6452
962361	AG1-085 C	0.6452	80/20	0.6452
962441	AG1-093 C O1	5.3728	80/20	5.3728
962571	AG1-106 C	2.7843	80/20	2.7843
963171	AG1-166 C	0.9299	80/20	0.9299
963181	AG1-167 C	0.9299	80/20	0.9299
963191	AG1-168 C	0.9299	80/20	0.9299
963201	AG1-169 C	0.9299	80/20	0.9299
963211	AG1-170 C	0.9299	80/20	0.9299
963301	AG1-179 C	12.9655	80/20	12.9655

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963311	AG1-180	6.3171	80/20	6.3171
963321	AG1-181 C O1	10.6630	80/20	10.6630
963361	AG1-185 O1	5.1590	80/20	5.1590
963641	AG1-215 C	0.4339	80/20	0.4339
964111	AG1-272 C	1.5637	80/20	1.5637
964121	AG1-273 C	1.5637	80/20	1.5637
964131	AG1-274 C	1.5637	80/20	1.5637
964241	AG1-285 C O1	9.1275	80/20	9.1275
964501	AG1-313 C O1	3.2212	80/20	3.2212
964791	AG1-342 C	1.9409	80/20	1.9409
964801	AG1-343 C	2.8707	80/20	2.8707
964821	AG1-345 C	0.3733	80/20	0.3733
965191	AG1-384 C	1.5637	80/20	1.5637
965281	AG1-393 C	0.9299	80/20	0.9299
965291	AG1-394 C	0.9982	80/20	0.9982
965451	AG1-413 C O1	13.0729	80/20	13.0729
965591	AG1-427 C	8.6159	80/20	8.6159
965601	AG1-428 C O1	10.8238	80/20	10.8238
965721	AG1-440 C	5.2753	80/20	5.2753
965731	AG1-441 C	5.2753	80/20	5.2753
965771	AG1-445	3.0480	80/20	3.0480
965781	AG1-446	3.0480	80/20	3.0480
966621	AG1-532 C	4.3810	80/20	4.3810
966751	AG1-546 C	12.7746	80/20	12.7746
966811	AG1-552 C	1.9007	80/20	1.9007
WEC	WEC	0.1181	Confirmed LTF	0.1181
LGEE	LGEE	0.2444	Confirmed LTF	0.2444
CPL	CPL	1.2353	Confirmed LTF	1.2353
CBM-W2	CBM-W2	4.9818	Confirmed LTF	4.9818
NY	NY	0.1526	Confirmed LTF	0.1526
TVA	TVA	0.9282	Confirmed LTF	0.9282
SIG	SIG	0.0771	Confirmed LTF	0.0771
CBM-S2	CBM-S2	13.8539	Confirmed LTF	13.8539
CBM-S1	CBM-S1	0.2329	Confirmed LTF	0.2329
MEC	MEC	0.6960	Confirmed LTF	0.6960
LAGN	LAGN	1.1515	Confirmed LTF	1.1515
CBM-W1	CBM-W1	4.9631	Confirmed LTF	4.9631

11.6.7 Index 7

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
169209277	314691	3FARMVIL	DVP	314692	6FARMVIL	DVP	2	DVP_P1-2: LN 235-A	single	182.64	251.76	253.45	DC	3.09

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
313506	AB1-173 C OP	2.1970	80/20	2.1970
313527	AB2-043 C	0.6200	80/20	0.6200
314429	3JTRSVLE	1.1615	80/20	1.1615
314572	3EMPORIA	0.1428	80/20	0.1428
314704	3LAWRENC	0.1773	80/20	0.1773
315158	1KERR 1	0.3023	80/20	0.3023
315159	1KERR 2	0.8464	80/20	0.8464
315160	1KERR 3	0.8464	80/20	0.8464
315161	1KERR 4	0.8464	80/20	0.8464
315162	1KERR 5	0.8464	80/20	0.8464
315163	1KERR 6	0.8464	80/20	0.8464
315164	1KERR 7	0.8464	80/20	0.8464
315266	1PLYWOOD A	0.5826	80/20	0.5826
316087	AB2-174 C	0.3670	80/20	0.3670
316118	AC1-105 C	3.1833	80/20	3.1833
316129	AC1-054 C	4.1416	80/20	4.1416
316131	AB2-060 C	1.8663	80/20	1.8663
923991	AB2-040 C O1	2.3927	80/20	2.3927
924301	AB2-077 C O1 (Suspended)	2.4036	80/20	2.4036
924311	AB2-078 C O1 (Suspended)	2.4036	80/20	2.4036
924321	AB2-079 C O1 (Suspended)	2.4036	80/20	2.4036
925611	AC1-036 C	0.4665	80/20	0.4665
927261	AC1-222 C	1.3197	80/20	1.3197
934311	AD1-055 C	0.9163	80/20	0.9163
935221	AD1-157 C (Withdrawn : 01/26/2021)	0.7121	80/20	0.7121
936265	AD2-033 C	24.7775	80/20	24.7775
936361	AD2-046 C O1	7.7284	80/20	7.7284
936485	AD2-063 C	23.4252	80/20	23.4252
938371	AE1-056 C	19.4582	80/20	19.4582
939181	AE1-148 C	7.7609	80/20	7.7609
940661	AE2-053 O1	2.8744	80/20	2.8744
942451	AE2-258	2.9317	80/20	2.9317
942461	AE2-259 C O1	36.8346	80/20	36.8346
943901	AF1-058 C	0.7463	80/20	0.7463
943911	AF1-059	13.9793	80/20	13.9793
946281	AF1-292 C	0.5181	80/20	0.5181
946301	AF1-294 C	11.7333	80/20	11.7333
958211	AF2-115 C	6.9020	80/20	6.9020

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958801	AF2-171 C	41.2074	80/20	41.2074
959311	AF2-222 C	36.0450	80/20	36.0450
960061	AF2-297 C	2.9851	80/20	2.9851
960081	AF2-299 C	0.8732	80/20	0.8732
961791	AG1-021 C	5.5216	80/20	5.5216
961891	AG1-030 C	37.7604	80/20	37.7604
962041	AG1-048 C	34.5098	80/20	34.5098
962441	AG1-093 C O1	8.4888	80/20	8.4888
963171	AG1-166 C	5.5216	80/20	5.5216
963181	AG1-167 C	5.5216	80/20	5.5216
963191	AG1-168 C	5.5216	80/20	5.5216
963201	AG1-169 C	5.5216	80/20	5.5216
963211	AG1-170 C	5.5216	80/20	5.5216
963301	AG1-179 C	3.8659	80/20	3.8659
963311	AG1-180	1.8835	80/20	1.8835
963321	AG1-181 C O1	32.7592	80/20	32.7592
963361	AG1-185 O1	15.8498	80/20	15.8498
963641	AG1-215 C	2.5767	80/20	2.5767
964111	AG1-272 C	5.3022	80/20	5.3022
964121	AG1-273 C	5.3022	80/20	5.3022
964131	AG1-274 C	5.3022	80/20	5.3022
964241	AG1-285 C O1	18.3810	80/20	18.3810
964261	AG1-287 C	0.5597	80/20	0.5597
964471	AG1-310 C	0.7473	80/20	0.7473
964791	AG1-342 C	3.0915	80/20	3.0915
964821	AG1-345 C	2.2020	80/20	2.2020
965191	AG1-384 C	5.3022	80/20	5.3022
965281	AG1-393 C	5.5216	80/20	5.5216
965451	AG1-413 C O1	5.8764	80/20	5.8764
965591	AG1-427 C	17.6058	80/20	17.6058
965601	AG1-428 C O1	3.2273	80/20	3.2273
965641	AG1-432 C O1	73.6692	80/20	73.6692
965721	AG1-440 C	5.1777	80/20	5.1777
965731	AG1-441 C	5.1777	80/20	5.1777
965771	AG1-445	2.9916	80/20	2.9916
965781	AG1-446	2.9916	80/20	2.9916
965831	AG1-451	12.2782	80/20	12.2782
966621	AG1-532 C	0.4715	80/20	0.4715
966751	AG1-546 C	8.6364	80/20	8.6364
966861	AG1-557 C O1 (Withdrawn : 12/14/2020)	7.3669	80/20	7.3669
WEC	WEC	0.0813	Confirmed LTF	0.0813
LGEE	LGEE	0.1659	Confirmed LTF	0.1659
CPL	CPL	1.2422	Confirmed LTF	1.2422
CBM-W2	CBM-W2	4.0768	Confirmed LTF	4.0768
NY	NY	0.1233	Confirmed LTF	0.1233
TVA	TVA	0.7980	Confirmed LTF	0.7980
SIGE	SIGE	0.0565	Confirmed LTF	0.0565
CBM-S2	CBM-S2	13.8748	Confirmed LTF	13.8748
CBM-S1	CBM-S1	0.1953	Confirmed LTF	0.1953
MEC	MEC	0.5180	Confirmed LTF	0.5180
LAGN	LAGN	0.9958	Confirmed LTF	0.9958

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
CBM-W1	CBM-W1	3.3508	Confirmed LTF	3.3508

11.6.8 Index 8

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
169209288	314691	3FARMVIL	DVP	314692	6FARMVIL	DVP	1	DVP_P1-2: LN 298	single	198.06	164.71	165.83	DC	2.21

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
313527	AB2-043 C	0.5190	80/20	0.5190
314429	3JTRSVLE	1.0409	80/20	1.0409
314704	3LAWRENC	0.1400	80/20	0.1400
315158	1KERR 1	0.2388	80/20	0.2388
315159	1KERR 2	0.6685	80/20	0.6685
315160	1KERR 3	0.6685	80/20	0.6685
315161	1KERR 4	0.6685	80/20	0.6685
315162	1KERR 5	0.6685	80/20	0.6685
315163	1KERR 6	0.6685	80/20	0.6685
315164	1KERR 7	0.6685	80/20	0.6685
316118	AC1-105 C	1.9644	80/20	1.9644
316129	AC1-054 C	3.1577	80/20	3.1577
316131	AB2-060 C	1.5710	80/20	1.5710
924301	AB2-077 C O1 (Suspended)	2.0004	80/20	2.0004
924311	AB2-078 C O1 (Suspended)	2.0004	80/20	2.0004
924321	AB2-079 C O1 (Suspended)	2.0004	80/20	2.0004
925611	AC1-036 C	0.4104	80/20	0.4104
935221	AD1-157 C (Withdrawn : 01/26/2021)	0.6410	80/20	0.6410
936265	AD2-033 C	21.6637	80/20	21.6637
936361	AD2-046 C O1	6.1935	80/20	6.1935
936485	AD2-063 C	20.1177	80/20	20.1177
938371	AE1-056 C	17.5166	80/20	17.5166
939181	AE1-148 C	6.2354	80/20	6.2354
940661	AE2-053 O1	2.3094	80/20	2.3094
942451	AE2-258	2.4541	80/20	2.4541
942461	AE2-259 C O1	33.4608	80/20	33.4608
943911	AF1-059	11.3951	80/20	11.3951
946301	AF1-294 C	10.5152	80/20	10.5152
958211	AF2-115 C	6.1854	80/20	6.1854
958801	AF2-171 C	36.9198	80/20	36.9198
959311	AF2-222 C	31.8180	80/20	31.8180
961791	AG1-021 C	4.9483	80/20	4.9483
961891	AG1-030 C	33.6627	80/20	33.6627
962041	AG1-048 C	30.9270	80/20	30.9270
962441	AG1-093 C O1	5.2385	80/20	5.2385
963171	AG1-166 C	4.9483	80/20	4.9483
963181	AG1-167 C	4.9483	80/20	4.9483
963191	AG1-168 C	4.9483	80/20	4.9483

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963201	AG1-169 C	4.9483	80/20	4.9483
963211	AG1-170 C	4.9483	80/20	4.9483
963301	AG1-179 C	3.0910	80/20	3.0910
963311	AG1-180	1.5060	80/20	1.5060
963321	AG1-181 C O1	28.6883	80/20	28.6883
963361	AG1-185 O1	13.8802	80/20	13.8802
963641	AG1-215 C	2.3092	80/20	2.3092
964111	AG1-272 C	4.6644	80/20	4.6644
964121	AG1-273 C	4.6644	80/20	4.6644
964131	AG1-274 C	4.6644	80/20	4.6644
964241	AG1-285 C O1	15.6870	80/20	15.6870
964791	AG1-342 C	2.2108	80/20	2.2108
964821	AG1-345 C	1.9730	80/20	1.9730
965191	AG1-384 C	4.6644	80/20	4.6644
965281	AG1-393 C	4.9483	80/20	4.9483
965451	AG1-413 C O1	4.7901	80/20	4.7901
965591	AG1-427 C	15.0419	80/20	15.0419
965601	AG1-428 C O1	2.5804	80/20	2.5804
965641	AG1-432 C O1	66.9216	80/20	66.9216
965721	AG1-440 C	4.0478	80/20	4.0478
965731	AG1-441 C	4.0478	80/20	4.0478
965771	AG1-445	2.3387	80/20	2.3387
965781	AG1-446	2.3387	80/20	2.3387
965831	AG1-451	11.1536	80/20	11.1536
966751	AG1-546 C	6.5405	80/20	6.5405
966861	AG1-557 C O1 (Withdrawn : 12/14/2020)	6.6922	80/20	6.6922
WEC	WEC	0.0236	Confirmed LTF	0.0236
LGEE	LGEE	0.0496	Confirmed LTF	0.0496
CPL	CPL	0.2361	Confirmed LTF	0.2361
CBM-W2	CBM-W2	0.9498	Confirmed LTF	0.9498
NY	NY	0.0321	Confirmed LTF	0.0321
TVA	TVA	0.1736	Confirmed LTF	0.1736
SIGE	SIGE	0.0158	Confirmed LTF	0.0158
CBM-S2	CBM-S2	2.5056	Confirmed LTF	2.5056
CBM-S1	CBM-S1	0.0441	Confirmed LTF	0.0441
MEC	MEC	0.1367	Confirmed LTF	0.1367
LAGN	LAGN	0.2135	Confirmed LTF	0.2135
CBM-W1	CBM-W1	0.9954	Confirmed LTF	0.9954

11.6.9 Index 9

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
169209347	314696	3SEEDGE HILL	DVP	314697	6SEEDGE HILL	DVP	1	DVP_P1-3: 6SEEDGE HILL-TX#2	single	226.73	145.9	150.62	DC	10.69

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
246843	05SMG1	0.5805	80/20	0.5805
246844	05SMG2	1.5779	80/20	1.5779
246845	05SMG3	0.9892	80/20	0.9892
246846	05SMG4	1.5534	80/20	1.5534
246847	05SMG5	0.6050	80/20	0.6050
247284	05LEESVG	0.7296	80/20	0.7296
313527	AB2-043 C	0.6460	80/20	0.6460
314429	3JTRSVLE	0.2980	80/20	0.2980
314704	3LAWRENC	0.1696	80/20	0.1696
315156	1HALLBR1	1.3548	80/20	1.3548
315158	1KERR 1	0.3699	80/20	0.3699
315159	1KERR 2	1.0357	80/20	1.0357
315160	1KERR 3	1.0357	80/20	1.0357
315161	1KERR 4	1.0357	80/20	1.0357
315162	1KERR 5	1.0357	80/20	1.0357
315163	1KERR 6	1.0357	80/20	1.0357
315164	1KERR 7	1.0357	80/20	1.0357
315266	1PLYWOOD A	3.6058	80/20	3.6058
316118	AC1-105 C	17.1934	80/20	17.1934
316123	AC1-075 C	2.2966	80/20	2.2966
316129	AC1-054 C	4.6827	80/20	4.6827
316131	AB2-060 C	1.8286	80/20	1.8286
924301	AB2-077 C O1 (Suspended)	2.6800	80/20	2.6800
924311	AB2-078 C O1 (Suspended)	2.6800	80/20	2.6800
924321	AB2-079 C O1 (Suspended)	2.6800	80/20	2.6800
925611	AC1-036 C	0.2218	80/20	0.2218
925661	AC1-042 C	2.1728	80/20	2.1728
926023	AC1-080 C	0.7675	80/20	0.7675
926645	AC1-145 C	0.4081	80/20	0.4081
927261	AC1-222 C	12.1290	80/20	12.1290
934311	AD1-055 C	8.4214	80/20	8.4214
935221	AD1-157 C (Withdrawn : 01/26/2021)	0.1446	80/20	0.1446
936265	AD2-033 C	13.5587	80/20	13.5587
936361	AD2-046 C O1	9.1138	80/20	9.1138
936485	AD2-063 C	17.6553	80/20	17.6553
938371	AE1-056 C	3.9510	80/20	3.9510

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939181	AE1-148 C	9.0914	80/20	9.0914
939941	AE1-230 C	0.9802	80/20	0.9802
940661	AE2-053 O1	3.3672	80/20	3.3672
941801	AE2-185 C	4.9010	80/20	4.9010
941821	AE2-187 C	4.9010	80/20	4.9010
942451	AE2-258	3.0548	80/20	3.0548
942461	AE2-259 C O1	3.4716	80/20	3.4716
942671	AE2-283 C	5.3911	80/20	5.3911
942751	AE2-291 C	19.2878	80/20	19.2878
942761	AE2-292 C O1	24.0152	80/20	24.0152
943901	AF1-058 C	6.8587	80/20	6.8587
943911	AF1-059	14.0170	80/20	14.0170
945081	AF1-173	1.8992	80/20	1.8992
946301	AF1-294 C	3.0108	80/20	3.0108
958211	AF2-115 C	1.7711	80/20	1.7711
958801	AF2-171 C	10.7010	80/20	10.7010
959311	AF2-222 C	15.7000	80/20	15.7000
960061	AF2-297 C	27.4349	80/20	27.4349
961121	AF2-403	1.0891	80/20	1.0891
961791	AG1-021 C	1.4168	80/20	1.4168
961891	AG1-030 C	12.0555	80/20	12.0555
962041	AG1-048 C	8.8552	80/20	8.8552
962441	AG1-093 C O1	45.8491	80/20	45.8491
963171	AG1-166 C	1.4168	80/20	1.4168
963181	AG1-167 C	1.4168	80/20	1.4168
963191	AG1-168 C	1.4168	80/20	1.4168
963201	AG1-169 C	1.4168	80/20	1.4168
963211	AG1-170 C	1.4168	80/20	1.4168
963301	AG1-179 C	3.7689	80/20	3.7689
963311	AG1-180	1.8363	80/20	1.8363
963321	AG1-181 C O1	17.3096	80/20	17.3096
963361	AG1-185 O1	8.3749	80/20	8.3749
963601	AG1-209 C	0.3812	80/20	0.3812
963641	AG1-215 C	0.6612	80/20	0.6612
964111	AG1-272 C	2.5210	80/20	2.5210
964121	AG1-273 C	2.5210	80/20	2.5210
964131	AG1-274 C	2.5210	80/20	2.5210
964141	AG1-275 C	1.6337	80/20	1.6337
964151	AG1-276 C	1.6337	80/20	1.6337
964241	AG1-285 C O1	15.1590	80/20	15.1590
964251	AG1-286 C	0.6223	80/20	0.6223
964261	AG1-287 C	5.1440	80/20	5.1440
964471	AG1-310 C	6.8684	80/20	6.8684
964791	AG1-342 C	10.6934	80/20	10.6934
964821	AG1-345 C	0.5693	80/20	0.5693
965191	AG1-384 C	2.5210	80/20	2.5210
965281	AG1-393 C	1.4168	80/20	1.4168
965451	AG1-413 C O1	5.8922	80/20	5.8922
965591	AG1-427 C	14.2996	80/20	14.2996
965601	AG1-428 C O1	3.1464	80/20	3.1464
965641	AG1-432 C O1	6.9432	80/20	6.9432
965721	AG1-440 C	6.1934	80/20	6.1934

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965731	AG1-441 C	6.1934	80/20	6.1934
965771	AG1-445	3.5784	80/20	3.5784
965781	AG1-446	3.5784	80/20	3.5784
965831	AG1-451	1.1572	80/20	1.1572
966691	AG1-539 C	10.0851	80/20	10.0851
966751	AG1-546 C	9.6117	80/20	9.6117
966761	AG1-547 C	4.4300	80/20	4.4300
966861	AG1-557 C O1 (Withdrawn : 12/14/2020)	0.6943	80/20	0.6943
WEC	WEC	0.0164	Confirmed LTF	0.0164
LGEE	LGEE	0.0509	Confirmed LTF	0.0509
CALDERWOOD	CALDERWOOD	0.1387	Confirmed LTF	0.1387
NY	NY	0.0547	Confirmed LTF	0.0547
PRAIRIE	PRAIRIE	0.0827	Confirmed LTF	0.0827
SIGE	SIGE	0.0181	Confirmed LTF	0.0181
CHEOAH	CHEOAH	0.1496	Confirmed LTF	0.1496
COTTONWOOD	COTTONWOOD	0.4284	Confirmed LTF	0.4284
HAMLET	HAMLET	0.6809	Confirmed LTF	0.6809
CATAWBA	CATAWBA	0.3041	Confirmed LTF	0.3041
CBM-W1	CBM-W1	0.7290	Confirmed LTF	0.7290

11.6.10 Index 10

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
169209326	314697	6SEEDGE HILL	DVP	927250	AC1-221 TAP	DVP	1	DVP_P1-2: LN 556-C	single	674.92	179.42	180.81	DC	9.42

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
247284	05LEESVG	0.4591	80/20	0.4591
313527	AB2-043 C	0.6777	80/20	0.6777
314333	6POWHATN	0.1206	80/20	0.1206
314429	3JTRSVLE	0.6020	80/20	0.6020
314677	6BUCKING	0.3988	80/20	0.3988
314704	3LAWRENC	0.1701	80/20	0.1701
315153	1CLOVER1	35.6962	80/20	35.6962
315154	1CLOVER2	35.3404	80/20	35.3404
315156	1HALLBR1	1.0288	80/20	1.0288
315158	1KERR 1	0.3313	80/20	0.3313
315159	1KERR 2	0.9277	80/20	0.9277
315160	1KERR 3	0.9277	80/20	0.9277
315161	1KERR 4	0.9277	80/20	0.9277
315162	1KERR 5	0.9277	80/20	0.9277
315163	1KERR 6	0.9277	80/20	0.9277
315164	1KERR 7	0.9277	80/20	0.9277
315191	1BEARGRDN G1	3.3141	80/20	3.3141
315192	1BEARGRDN G2	3.3141	80/20	3.3141
315193	1BEARGRDN S1	4.2858	80/20	4.2858
315266	1PLYWOOD A	3.0479	80/20	3.0479
316118	AC1-105 C	14.6956	80/20	14.6956
316123	AC1-075 C	1.8835	80/20	1.8835
316129	AC1-054 C	4.0299	80/20	4.0299
316131	AB2-060 C	1.9554	80/20	1.9554
924301	AB2-077 C O1 (Suspended)	2.7590	80/20	2.7590
924311	AB2-078 C O1 (Suspended)	2.7590	80/20	2.7590
924321	AB2-079 C O1 (Suspended)	2.7590	80/20	2.7590
925611	AC1-036 C	0.3165	80/20	0.3165
925661	AC1-042 C	1.5979	80/20	1.5979
926023	AC1-080 C	0.6295	80/20	0.6295
926451	AC1-116 C	0.0446	80/20	0.0446
926645	AC1-145 C	0.3001	80/20	0.3001
927251	AC1-221 C	-2.4502	Adder	-2.88
927261	AC1-222 C	10.1051	80/20	10.1051
932511	AC2-071 C (Withdrawn : 01/22/2021)	0.3929	80/20	0.3929
933501	AC2-165 C	3.6987	80/20	3.6987
934311	AD1-055 C	7.0162	80/20	7.0162
934341	AD1-058 C	-6.1424	Adder	-7.23

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934615	AD1-087 C	22.4303	80/20	22.4303
934625	AD1-088 C	29.6903	80/20	29.6903
935171	AD1-152 C O1	24.6374	80/20	24.6374
935221	AD1-157 C (Withdrawn : 01/26/2021)	0.3412	80/20	0.3412
936265	AD2-033 C	18.1139	80/20	18.1139
936361	AD2-046 C O1	8.4650	80/20	8.4650
936485	AD2-063 C	20.6649	80/20	20.6649
937481	AD2-202 C O1	6.5700	80/20	6.5700
938371	AE1-056 C	9.3221	80/20	9.3221
938561	AE1-075 C	0.1048	80/20	0.1048
938821	AE1-108 C O1	7.2807	80/20	7.2807
939181	AE1-148 C	8.5007	80/20	8.5007
939941	AE1-230 C	0.7209	80/20	0.7209
940661	AE2-053 O1	3.1484	80/20	3.1484
941011	AE2-092 C	6.3234	80/20	6.3234
941791	AE2-182 C	4.8236	80/20	4.8236
941801	AE2-185 C	3.6043	80/20	3.6043
941821	AE2-187 C	3.6043	80/20	3.6043
942451	AE2-258	3.2048	80/20	3.2048
942461	AE2-259 C O1	14.7132	80/20	14.7132
942671	AE2-283 C	3.9648	80/20	3.9648
942751	AE2-291 C	15.6354	80/20	15.6354
942761	AE2-292 C O1	19.4676	80/20	19.4676
943901	AF1-058 C	5.7308	80/20	5.7308
943911	AF1-059	14.4227	80/20	14.4227
945081	AF1-173	1.3967	80/20	1.3967
945811	AF1-246 C O1	21.5242	80/20	21.5242
946291	AF1-293 C O1	9.4568	80/20	9.4568
946301	AF1-294 C	6.0812	80/20	6.0812
946591	AF1-323 C	2.4073	80/20	2.4073
957481	AF2-042 C	153.7440	80/20	153.7440
958211	AF2-115 C	3.5772	80/20	3.5772
958501	AF2-144 C	0.5649	80/20	0.5649
958801	AF2-171 C	21.4497	80/20	21.4497
959311	AF2-222 C	23.4030	80/20	23.4030
959531	AF2-244 C (Withdrawn : 01/06/2021)	0.5206	80/20	0.5206
959751	AF2-266	25.6235	80/20	25.6235
960061	AF2-297 C	22.9234	80/20	22.9234
960111	AF2-302 C	0.8754	80/20	0.8754
961061	AF2-397 C	7.1206	80/20	7.1206
961121	AF2-403	0.8010	80/20	0.8010
961791	AG1-021 C	2.8618	80/20	2.8618
961801	AG1-022 C	0.8754	80/20	0.8754
961891	AG1-030 C	21.3030	80/20	21.3030
962041	AG1-048 C	17.8860	80/20	17.8860
962441	AG1-093 C O1	39.1883	80/20	39.1883
962491	AG1-098 C O1	34.5765	80/20	34.5765
962561	AG1-105 C O1	31.8432	80/20	31.8432
963171	AG1-166 C	2.8618	80/20	2.8618
963181	AG1-167 C	2.8618	80/20	2.8618
963191	AG1-168 C	2.8618	80/20	2.8618

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963201	AG1-169 C	2.8618	80/20	2.8618
963211	AG1-170 C	2.8618	80/20	2.8618
963271	AG1-176 C O1	36.0621	80/20	36.0621
963301	AG1-179 C	3.8207	80/20	3.8207
963311	AG1-180	1.8616	80/20	1.8616
963321	AG1-181 C O1	23.4953	80/20	23.4953
963361	AG1-185 O1	11.3677	80/20	11.3677
963601	AG1-209 C	0.2803	80/20	0.2803
963641	AG1-215 C	1.3355	80/20	1.3355
964111	AG1-272 C	3.5975	80/20	3.5975
964121	AG1-273 C	3.5975	80/20	3.5975
964131	AG1-274 C	3.5975	80/20	3.5975
964141	AG1-275 C	1.2014	80/20	1.2014
964151	AG1-276 C	1.2014	80/20	1.2014
964231	AG1-284 C O1	3.9711	80/20	3.9711
964241	AG1-285 C O1	17.1705	80/20	17.1705
964251	AG1-286 C	0.4497	80/20	0.4497
964261	AG1-287 C	4.2981	80/20	4.2981
964471	AG1-310 C	5.7147	80/20	5.7147
964791	AG1-342 C	9.4188	80/20	9.4188
964821	AG1-345 C	1.1444	80/20	1.1444
964841	AG1-347 C	22.4655	80/20	22.4655
964931	AG1-357 C	61.4988	80/20	61.4988
965191	AG1-384 C	3.5975	80/20	3.5975
965281	AG1-393 C	2.8618	80/20	2.8618
965451	AG1-413 C O1	6.0628	80/20	6.0628
965581	AG1-426	1.5862	80/20	1.5862
965591	AG1-427 C	16.2855	80/20	16.2855
965601	AG1-428 C O1	3.1896	80/20	3.1896
965641	AG1-432 C O1	29.4264	80/20	29.4264
965721	AG1-440 C	5.4864	80/20	5.4864
965731	AG1-441 C	5.4864	80/20	5.4864
965771	AG1-445	3.1699	80/20	3.1699
965781	AG1-446	3.1699	80/20	3.1699
965831	AG1-451	4.9044	80/20	4.9044
966691	AG1-539 C	8.1754	80/20	8.1754
966751	AG1-546 C	8.2011	80/20	8.2011
966761	AG1-547 C	3.2579	80/20	3.2579
966791	AG1-550 O1	2.6947	80/20	2.6947
966861	AG1-557 C O1 (Withdrawn : 12/14/2020)	2.9426	80/20	2.9426
G-007A	G-007A	0.4891	Confirmed LTF	0.4891
VFT	VFT	1.2964	Confirmed LTF	1.2964
CALDERWOOD	CALDERWOOD	1.4443	Confirmed LTF	1.4443
PRAIRIE	PRAIRIE	4.6726	Confirmed LTF	4.6726
AC1-131	AC1-131	5.2830	LTF	5.2830
CHEOAH	CHEOAH	1.4865	Confirmed LTF	1.4865
CBM-N	CBM-N	0.2328	Confirmed LTF	0.2328
COTTONWOOD	COTTONWOOD	5.2395	Confirmed LTF	5.2395
HAMLET	HAMLET	3.2011	Confirmed LTF	3.2011
GIBSON	GIBSON	0.7912	Confirmed LTF	0.7912
BLUEG	BLUEG	2.4078	Confirmed LTF	2.4078

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
TRIMBLE	TRIMBLE	0.7618	Confirmed LTF	0.7618
CATAWBA	CATAWBA	1.6965	Confirmed LTF	1.6965

11.6.11 Index 11

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
163744269	314702	3KERR	DVP	304102	3GW KING TAP	CPL	1	DVP_P4-6: CAROLIN T122	breaker	199.0	180.64	181.78	DC	5.11

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
313527	AB2-043 C	0.5797	50/50	0.5797
313853	3PONTONDP	0.4064	Adder	0.48
314713	3PAMPLIN	0.8873	Adder	1.04
315158	1KERR 1	0.8424	50/50	0.8424
315159	1KERR 2	2.3588	50/50	2.3588
315160	1KERR 3	2.3588	50/50	2.3588
315161	1KERR 4	2.3588	50/50	2.3588
315162	1KERR 5	2.3588	50/50	2.3588
315163	1KERR 6	2.3588	50/50	2.3588
315164	1KERR 7	2.3588	50/50	2.3588
316118	AC1-105 C	2.4862	Adder	2.92
316129	AC1-054 C	15.8416	50/50	15.8416
316131	AB2-060 C	1.6441	50/50	1.6441
924022	AB2-043 E O1	3.2854	50/50	3.2854
924162	AB2-060 E OP	4.9039	50/50	4.9039
924301	AB2-077 C O1 (Suspended)	2.3786	50/50	2.3786
924302	AB2-077 E O1 (Suspended)	1.5858	50/50	1.5858
924311	AB2-078 C O1 (Suspended)	2.3786	50/50	2.3786
924312	AB2-078 E O1 (Suspended)	1.5858	50/50	1.5858
924321	AB2-079 C O1 (Suspended)	2.3786	50/50	2.3786
924322	AB2-079 E O1 (Suspended)	1.5858	50/50	1.5858
925611	AC1-036 C	0.2090	50/50	0.2090
925612	AC1-036 E	0.7934	50/50	0.7934
925785	AC1-054 E	7.2978	50/50	7.2978
926274	AC1-105 E	1.2215	Adder	1.44
935222	AD1-157 E (Withdrawn : 01/26/2021)	0.5470	Adder	0.64
936265	AD2-033 C	12.6220	50/50	12.6220
936266	AD2-033 E	8.4146	50/50	8.4146
936361	AD2-046 C O1	18.0396	50/50	18.0396
936362	AD2-046 E O1	8.2956	50/50	8.2956
936485	AD2-063 C	16.0974	50/50	16.0974
936486	AD2-063 E	10.7316	50/50	10.7316
938371	AE1-056 C	3.5374	Adder	4.16
938372	AE1-056 E	1.9328	Adder	2.27

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939181	AE1-148 C	17.4836	50/50	17.4836
939182	AE1-148 E	11.6557	50/50	11.6557
940661	AE2-053 O1	6.4754	50/50	6.4754
942451	AE2-258	2.7410	50/50	2.7410
942461	AE2-259 C O1	3.7689	Adder	4.43
942462	AE2-259 E O1	2.5126	Adder	2.96
943911	AF1-059	10.7887	Adder	12.69
946301	AF1-294 C	2.5908	Adder	3.05
946302	AF1-294 E	1.7272	Adder	2.03
958211	AF2-115 C	1.5240	Adder	1.79
958212	AF2-115 E	1.0160	Adder	1.2
958801	AF2-171 C	9.1968	Adder	10.82
958802	AF2-171 E	6.1312	Adder	7.21
959311	AF2-222 C	14.9130	50/50	14.9130
959312	AF2-222 E	9.9917	50/50	9.9917
961791	AG1-021 C	0.6462	Adder	1.43
961792	AG1-021 E	0.4308	Adder	0.96
961891	AG1-030 C	11.8413	50/50	11.8413
961892	AG1-030 E	7.8942	50/50	7.8942
962041	AG1-048 C	4.0386	Adder	8.96
962042	AG1-048 E	2.6924	Adder	5.98
962441	AG1-093 C O1	3.5138	Adder	7.8
962442	AG1-093 E O1	1.0694	Adder	2.37
963171	AG1-166 C	0.6462	Adder	1.43
963172	AG1-166 E	0.4308	Adder	0.96
963181	AG1-167 C	0.6462	Adder	1.43
963182	AG1-167 E	0.4308	Adder	0.96
963191	AG1-168 C	0.6462	Adder	1.43
963192	AG1-168 E	0.4308	Adder	0.96
963201	AG1-169 C	0.6462	Adder	1.43
963202	AG1-169 E	0.4308	Adder	0.96
963211	AG1-170 C	0.6462	Adder	1.43
963212	AG1-170 E	0.4308	Adder	0.96
963301	AG1-179 C	1.5479	Adder	3.44
963311	AG1-180	0.7542	Adder	1.67
963321	AG1-181 C O1	16.1673	50/50	16.1673
963361	AG1-185 O1	7.8222	50/50	7.8222
963641	AG1-215 C	0.3016	Adder	0.67
963642	AG1-215 E	0.4523	Adder	1.0
964111	AG1-272 C	2.3755	50/50	2.3755
964112	AG1-272 E	0.7055	50/50	0.7055
964121	AG1-273 C	2.3755	50/50	2.3755
964122	AG1-273 E	0.7055	50/50	0.7055
964131	AG1-274 C	2.3755	50/50	2.3755
964132	AG1-274 E	0.7055	50/50	0.7055
964241	AG1-285 C O1	13.7527	50/50	13.7527
964242	AG1-285 E O1	9.1685	50/50	9.1685
964791	AG1-342 C	1.2895	Adder	2.86
964792	AG1-342 E	1.0132	Adder	2.25
964821	AG1-345 C	0.2594	Adder	0.58
964822	AG1-345 E	0.1729	Adder	0.38
965191	AG1-384 C	2.3755	50/50	2.3755

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965192	AG1-384 E	0.7055	50/50	0.7055
965281	AG1-393 C	0.6462	Adder	1.43
965282	AG1-393 E	0.4308	Adder	0.96
965451	AG1-413 C O1	2.4036	Adder	5.34
965452	AG1-413 E O1	1.6024	Adder	3.56
965591	AG1-427 C	12.9843	50/50	12.9843
965592	AG1-427 E	8.6745	50/50	8.6745
965601	AG1-428 C O1	1.2922	Adder	2.87
965602	AG1-428 E O1	0.8600	Adder	1.91
965641	AG1-432 C O1	3.9950	Adder	8.87
965642	AG1-432 E O1	2.6634	Adder	5.91
965721	AG1-440 C	16.0191	50/50	16.0191
965722	AG1-440 E	10.6794	50/50	10.6794
965731	AG1-441 C	16.0191	50/50	16.0191
965732	AG1-441 E	10.6794	50/50	10.6794
965771	AG1-445	9.2555	50/50	9.2555
965781	AG1-446	9.2555	50/50	9.2555
965831	AG1-451	0.6658	Adder	1.48
966751	AG1-546 C	34.7517	50/50	34.7517
966752	AG1-546 E	18.6468	50/50	18.6468
966861	AG1-557 C O1 (Withdrawn : 12/14/2020)	0.3995	Adder	0.89
966862	AG1-557 E O1 (Withdrawn : 12/14/2020)	0.2663	Adder	0.59
G-007A	G-007A	0.1654	Confirmed LTF	0.1654
VFT	VFT	0.4386	Confirmed LTF	0.4386
CALDERWOOD	CALDERWOOD	0.3713	Confirmed LTF	0.3713
PRAIRIE	PRAIRIE	1.2528	Confirmed LTF	1.2528
CHEOAH	CHEOAH	0.3809	Confirmed LTF	0.3809
CBM-N	CBM-N	0.0792	Confirmed LTF	0.0792
COTTONWOOD	COTTONWOOD	1.3629	Confirmed LTF	1.3629
HAMLET	HAMLET	0.8062	Confirmed LTF	0.8062
GIBSON	GIBSON	0.2184	Confirmed LTF	0.2184
BLUEG	BLUEG	0.6701	Confirmed LTF	0.6701
TRIMBLE	TRIMBLE	0.2126	Confirmed LTF	0.2126
CATAWBA	CATAWBA	0.4161	Confirmed LTF	0.4161

11.6.12 Index 12

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
169209473	314702	3KERR	DVP	314673	3PALMERSPRNG	DVP	1	EXT_304099 3WARREN TAP 115 304102 3GW KING TAP 115 1	single	138.18	117.94	119.11	DC	1.62

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
313527	AB2-043 C	0.3145	80/20	0.3145
314429	3JTRSVLE	0.1632	80/20	0.1632
315158	1KERR 1	0.4757	80/20	0.4757
315159	1KERR 2	1.3319	80/20	1.3319
315160	1KERR 3	1.3319	80/20	1.3319
315161	1KERR 4	1.3319	80/20	1.3319
315162	1KERR 5	1.3319	80/20	1.3319
315163	1KERR 6	1.3319	80/20	1.3319
315164	1KERR 7	1.3319	80/20	1.3319
315266	1PLYWOOD A	0.4101	80/20	0.4101
316129	AC1-054 C	3.5524	80/20	3.5524
316131	AB2-060 C	0.8921	80/20	0.8921
924301	AB2-077 C O1 (Suspended)	1.2964	80/20	1.2964
924311	AB2-078 C O1 (Suspended)	1.2964	80/20	1.2964
924321	AB2-079 C O1 (Suspended)	1.2964	80/20	1.2964
925611	AC1-036 C	0.1133	80/20	0.1133
935221	AD1-157 C (Withdrawn : 01/26/2021)	0.0823	80/20	0.0823
936265	AD2-033 C	6.8422	80/20	6.8422
936361	AD2-046 C O1	10.1468	80/20	10.1468
936485	AD2-063 C	8.7300	80/20	8.7300
938371	AE1-056 C	2.2488	80/20	2.2488
939181	AE1-148 C	9.8258	80/20	9.8258
940661	AE2-053 O1	3.6392	80/20	3.6392
942451	AE2-258	1.4873	80/20	1.4873
943911	AF1-059	5.1118	80/20	5.1118
946301	AF1-294 C	1.6486	80/20	1.6486
958211	AF2-115 C	0.9698	80/20	0.9698
958801	AF2-171 C	5.8518	80/20	5.8518
959311	AF2-222 C	8.0790	80/20	8.0790
961791	AG1-021 C	0.7758	80/20	0.7758
961891	AG1-030 C	6.4098	80/20	6.4098
962041	AG1-048 C	4.8487	80/20	4.8487
963171	AG1-166 C	0.7758	80/20	0.7758
963181	AG1-167 C	0.7758	80/20	0.7758
963191	AG1-168 C	0.7758	80/20	0.7758
963201	AG1-169 C	0.7758	80/20	0.7758

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963211	AG1-170 C	0.7758	80/20	0.7758
963321	AG1-181 C O1	8.7625	80/20	8.7625
963361	AG1-185 O1	4.2395	80/20	4.2395
963641	AG1-215 C	0.3620	80/20	0.3620
964111	AG1-272 C	1.2873	80/20	1.2873
964121	AG1-273 C	1.2873	80/20	1.2873
964131	AG1-274 C	1.2873	80/20	1.2873
964241	AG1-285 C O1	7.4595	80/20	7.4595
964791	AG1-342 C	1.6188	80/20	1.6188
964821	AG1-345 C	0.3114	80/20	0.3114
965191	AG1-384 C	1.2873	80/20	1.2873
965281	AG1-393 C	0.7758	80/20	0.7758
965451	AG1-413 C O1	2.1488	80/20	2.1488
965591	AG1-427 C	7.0425	80/20	7.0425
966751	AG1-546 C	6.2252	80/20	6.2252
WEC	WEC	0.0047	Confirmed LTF	0.0047
LGEE	LGEE	0.0126	Confirmed LTF	0.0126
CALDERWOOD	CALDERWOOD	0.0035	Confirmed LTF	0.0035
CBM-W2	CBM-W2	0.0269	Confirmed LTF	0.0269
NY	NY	0.0171	Confirmed LTF	0.0171
SIGE	SIGE	0.0056	Confirmed LTF	0.0056
CHEOAH	CHEOAH	0.0045	Confirmed LTF	0.0045
CBM-S1	CBM-S1	0.0004	Confirmed LTF	0.0004
COTTONWOOD	COTTONWOOD	0.0126	Confirmed LTF	0.0126
HAMLET	HAMLET	0.0733	Confirmed LTF	0.0733
MEC	MEC	0.0175	Confirmed LTF	0.0175
CATAWBA	CATAWBA	0.0175	Confirmed LTF	0.0175
CBM-W1	CBM-W1	0.2103	Confirmed LTF	0.2103

11.6.13 Index 13

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
166957576	314781	3BLACKBR	DVP	314788	3JONESTO	DVP	1	DVP_P7-1: LN 171-1009	tower	301.0	101.72	102.33	DC	4.03

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
313527	AB2-043 C	0.6786	50/50	0.6786
313853	3PONTONDP	0.5479	50/50	0.5479
314429	3JTRSVLE	0.3458	50/50	0.3458
314713	3PAMPLIN	1.1895	50/50	1.1895
316129	AC1-054 C	-3.5586	Adder	-4.19
316131	AB2-060 C	1.9221	50/50	1.9221
924022	AB2-043 E O1	3.8463	50/50	3.8463
924162	AB2-060 E OP	5.7331	50/50	5.7331
924301	AB2-077 C O1 (Suspended)	3.3240	50/50	3.3240
924302	AB2-077 E O1 (Suspended)	2.2160	50/50	2.2160
924311	AB2-078 C O1 (Suspended)	3.3240	50/50	3.3240
924312	AB2-078 E O1 (Suspended)	2.2160	50/50	2.2160
924321	AB2-079 C O1 (Suspended)	3.3240	50/50	3.3240
924322	AB2-079 E O1 (Suspended)	2.2160	50/50	2.2160
925611	AC1-036 C	0.2426	50/50	0.2426
925612	AC1-036 E	0.9209	50/50	0.9209
935221	AD1-157 C (Withdrawn : 01/26/2021)	0.1736	50/50	0.1736
935222	AD1-157 E (Withdrawn : 01/26/2021)	0.7334	50/50	0.7334
936265	AD2-033 C	14.6671	50/50	14.6671
936266	AD2-033 E	9.7781	50/50	9.7781
936485	AD2-063 C	18.7920	50/50	18.7920
936486	AD2-063 E	12.5280	50/50	12.5280
938371	AE1-056 C	4.7425	50/50	4.7425
938372	AE1-056 E	2.5913	50/50	2.5913
940662	AE2-053 BAT	2.9720	50/50	2.9720
942451	AE2-258	3.2090	50/50	3.2090
942461	AE2-259 C O1	4.1764	Adder	4.91
942462	AE2-259 E O1	2.7843	Adder	3.28
943911	AF1-059	13.6212	50/50	13.6212
946301	AF1-294 C	3.4930	50/50	3.4930
946302	AF1-294 E	2.3287	50/50	2.3287
958211	AF2-115 C	2.0547	50/50	2.0547
958212	AF2-115 E	1.3698	50/50	1.3698

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958801	AF2-171 C	12.4101	50/50	12.4101
958802	AF2-171 E	8.2734	50/50	8.2734
959311	AF2-222 C	17.2850	50/50	17.2850
959312	AF2-222 E	11.5809	50/50	11.5809
961791	AG1-021 C	1.6438	50/50	1.6438
961792	AG1-021 E	1.0958	50/50	1.0958
961891	AG1-030 C	13.6368	50/50	13.6368
961892	AG1-030 E	9.0912	50/50	9.0912
962041	AG1-048 C	10.2735	50/50	10.2735
962042	AG1-048 E	6.8490	50/50	6.8490
963171	AG1-166 C	1.6438	50/50	1.6438
963172	AG1-166 E	1.0958	50/50	1.0958
963181	AG1-167 C	1.6438	50/50	1.6438
963182	AG1-167 E	1.0958	50/50	1.0958
963191	AG1-168 C	1.6438	50/50	1.6438
963192	AG1-168 E	1.0958	50/50	1.0958
963201	AG1-169 C	1.6438	50/50	1.6438
963202	AG1-169 E	1.0958	50/50	1.0958
963211	AG1-170 C	1.6438	50/50	1.6438
963212	AG1-170 E	1.0958	50/50	1.0958
963301	AG1-179 C	3.4390	50/50	3.4390
963311	AG1-180	1.6756	50/50	1.6756
963321	AG1-181 C O1	18.7936	50/50	18.7936
963361	AG1-185 O1	9.0929	50/50	9.0929
963641	AG1-215 C	0.7671	50/50	0.7671
963642	AG1-215 E	1.1506	50/50	1.1506
964111	AG1-272 C	2.7573	50/50	2.7573
964112	AG1-272 E	0.8189	50/50	0.8189
964121	AG1-273 C	2.7573	50/50	2.7573
964122	AG1-273 E	0.8189	50/50	0.8189
964131	AG1-274 C	2.7573	50/50	2.7573
964132	AG1-274 E	0.8189	50/50	0.8189
964241	AG1-285 C O1	16.0687	50/50	16.0687
964242	AG1-285 E O1	10.7125	50/50	10.7125
964791	AG1-342 C	1.0172	Adder	2.26
964792	AG1-342 E	0.7992	Adder	1.77
964821	AG1-345 C	0.6599	50/50	0.6599
964822	AG1-345 E	0.4399	50/50	0.4399
965191	AG1-384 C	2.7573	50/50	2.7573
965192	AG1-384 E	0.8189	50/50	0.8189
965281	AG1-393 C	1.6438	50/50	1.6438
965282	AG1-393 E	1.0958	50/50	1.0958
965451	AG1-413 C O1	5.7258	50/50	5.7258
965452	AG1-413 E O1	3.8172	50/50	3.8172
965591	AG1-427 C	15.1685	50/50	15.1685
965592	AG1-427 E	10.1336	50/50	10.1336
965601	AG1-428 C O1	2.8710	50/50	2.8710
965602	AG1-428 E O1	1.9106	50/50	1.9106
965641	AG1-432 C O1	4.4270	Adder	9.83
965642	AG1-432 E O1	2.9513	Adder	6.55
965772	AG1-445 BAT	3.3454	50/50	3.3454
965782	AG1-446 BAT	3.3454	50/50	3.3454

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965831	AG1-451	0.7378	Adder	1.64
966753	AG1-546 BAT	1.7033	Merchant Transmission	1.7033
966861	AG1-557 C O1 (Withdrawn : 12/14/2020)	0.4427	Adder	0.98
966862	AG1-557 E O1 (Withdrawn : 12/14/2020)	0.2951	Adder	0.66
G-007A	G-007A	0.2062	Confirmed LTF	0.2062
VFT	VFT	0.5483	Confirmed LTF	0.5483
CALDERWOOD	CALDERWOOD	0.1387	Confirmed LTF	0.1387
PRAIRIE	PRAIRIE	0.4314	Confirmed LTF	0.4314
CHEOAH	CHEOAH	0.1426	Confirmed LTF	0.1426
CBM-N	CBM-N	0.1008	Confirmed LTF	0.1008
COTTONWOOD	COTTONWOOD	0.4977	Confirmed LTF	0.4977
HAMLET	HAMLET	0.3182	Confirmed LTF	0.3182
GIBSON	GIBSON	0.0710	Confirmed LTF	0.0710
BLUEG	BLUEG	0.2153	Confirmed LTF	0.2153
TRIMBLE	TRIMBLE	0.0684	Confirmed LTF	0.0684
CATAWBA	CATAWBA	0.1614	Confirmed LTF	0.1614

11.6.14 Index 14

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
166957582	314788	3JONESTO	DVP	314683	3CLRKVILLE	DVP	1	DVP_P7-1: LN 171-1009	tower	301.0	100.36	100.97	DC	4.03

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
313527	AB2-043 C	0.6786	50/50	0.6786
313853	3PONTONDP	0.5479	50/50	0.5479
314429	3JTRSVLE	0.3458	50/50	0.3458
314713	3PAMPLIN	1.1895	50/50	1.1895
316129	AC1-054 C	-3.5586	Adder	-4.19
316131	AB2-060 C	1.9221	50/50	1.9221
924022	AB2-043 E O1	3.8463	50/50	3.8463
924162	AB2-060 E OP	5.7331	50/50	5.7331
924301	AB2-077 C O1 (Suspended)	3.3240	50/50	3.3240
924302	AB2-077 E O1 (Suspended)	2.2160	50/50	2.2160
924311	AB2-078 C O1 (Suspended)	3.3240	50/50	3.3240
924312	AB2-078 E O1 (Suspended)	2.2160	50/50	2.2160
924321	AB2-079 C O1 (Suspended)	3.3240	50/50	3.3240
924322	AB2-079 E O1 (Suspended)	2.2160	50/50	2.2160
925611	AC1-036 C	0.2426	50/50	0.2426
925612	AC1-036 E	0.9209	50/50	0.9209
935221	AD1-157 C (Withdrawn : 01/26/2021)	0.1736	50/50	0.1736
935222	AD1-157 E (Withdrawn : 01/26/2021)	0.7334	50/50	0.7334
936265	AD2-033 C	14.6671	50/50	14.6671
936266	AD2-033 E	9.7781	50/50	9.7781
936485	AD2-063 C	18.7920	50/50	18.7920
936486	AD2-063 E	12.5280	50/50	12.5280
938371	AE1-056 C	4.7425	50/50	4.7425
938372	AE1-056 E	2.5913	50/50	2.5913
940662	AE2-053 BAT	2.9720	50/50	2.9720
942451	AE2-258	3.2090	50/50	3.2090
942461	AE2-259 C O1	4.1764	Adder	4.91
942462	AE2-259 E O1	2.7843	Adder	3.28
943911	AF1-059	13.6212	50/50	13.6212
946301	AF1-294 C	3.4930	50/50	3.4930
946302	AF1-294 E	2.3287	50/50	2.3287
958211	AF2-115 C	2.0547	50/50	2.0547
958212	AF2-115 E	1.3698	50/50	1.3698

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
958801	AF2-171 C	12.4101	50/50	12.4101
958802	AF2-171 E	8.2734	50/50	8.2734
959311	AF2-222 C	17.2850	50/50	17.2850
959312	AF2-222 E	11.5809	50/50	11.5809
961791	AG1-021 C	1.6438	50/50	1.6438
961792	AG1-021 E	1.0958	50/50	1.0958
961891	AG1-030 C	13.6368	50/50	13.6368
961892	AG1-030 E	9.0912	50/50	9.0912
962041	AG1-048 C	10.2735	50/50	10.2735
962042	AG1-048 E	6.8490	50/50	6.8490
963171	AG1-166 C	1.6438	50/50	1.6438
963172	AG1-166 E	1.0958	50/50	1.0958
963181	AG1-167 C	1.6438	50/50	1.6438
963182	AG1-167 E	1.0958	50/50	1.0958
963191	AG1-168 C	1.6438	50/50	1.6438
963192	AG1-168 E	1.0958	50/50	1.0958
963201	AG1-169 C	1.6438	50/50	1.6438
963202	AG1-169 E	1.0958	50/50	1.0958
963211	AG1-170 C	1.6438	50/50	1.6438
963212	AG1-170 E	1.0958	50/50	1.0958
963301	AG1-179 C	3.4390	50/50	3.4390
963311	AG1-180	1.6756	50/50	1.6756
963321	AG1-181 C O1	18.7936	50/50	18.7936
963361	AG1-185 O1	9.0929	50/50	9.0929
963641	AG1-215 C	0.7671	50/50	0.7671
963642	AG1-215 E	1.1506	50/50	1.1506
964111	AG1-272 C	2.7573	50/50	2.7573
964112	AG1-272 E	0.8189	50/50	0.8189
964121	AG1-273 C	2.7573	50/50	2.7573
964122	AG1-273 E	0.8189	50/50	0.8189
964131	AG1-274 C	2.7573	50/50	2.7573
964132	AG1-274 E	0.8189	50/50	0.8189
964241	AG1-285 C O1	16.0687	50/50	16.0687
964242	AG1-285 E O1	10.7125	50/50	10.7125
964791	AG1-342 C	1.0172	Adder	2.26
964792	AG1-342 E	0.7992	Adder	1.77
964821	AG1-345 C	0.6599	50/50	0.6599
964822	AG1-345 E	0.4399	50/50	0.4399
965191	AG1-384 C	2.7573	50/50	2.7573
965192	AG1-384 E	0.8189	50/50	0.8189
965281	AG1-393 C	1.6438	50/50	1.6438
965282	AG1-393 E	1.0958	50/50	1.0958
965451	AG1-413 C O1	5.7258	50/50	5.7258
965452	AG1-413 E O1	3.8172	50/50	3.8172
965591	AG1-427 C	15.1685	50/50	15.1685
965592	AG1-427 E	10.1336	50/50	10.1336
965601	AG1-428 C O1	2.8710	50/50	2.8710
965602	AG1-428 E O1	1.9106	50/50	1.9106
965641	AG1-432 C O1	4.4270	Adder	9.83
965642	AG1-432 E O1	2.9513	Adder	6.55
965772	AG1-445 BAT	3.3454	50/50	3.3454
965782	AG1-446 BAT	3.3454	50/50	3.3454

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965831	AG1-451	0.7378	Adder	1.64
966753	AG1-546 BAT	1.7033	Merchant Transmission	1.7033
966861	AG1-557 C O1 (Withdrawn : 12/14/2020)	0.4427	Adder	0.98
966862	AG1-557 E O1 (Withdrawn : 12/14/2020)	0.2951	Adder	0.66
G-007A	G-007A	0.2062	Confirmed LTF	0.2062
VFT	VFT	0.5483	Confirmed LTF	0.5483
CALDERWOOD	CALDERWOOD	0.1387	Confirmed LTF	0.1387
PRAIRIE	PRAIRIE	0.4314	Confirmed LTF	0.4314
CHEOAH	CHEOAH	0.1426	Confirmed LTF	0.1426
CBM-N	CBM-N	0.1008	Confirmed LTF	0.1008
COTTONWOOD	COTTONWOOD	0.4977	Confirmed LTF	0.4977
HAMLET	HAMLET	0.3182	Confirmed LTF	0.3182
GIBSON	GIBSON	0.0710	Confirmed LTF	0.0710
BLUEG	BLUEG	0.2153	Confirmed LTF	0.2153
TRIMBLE	TRIMBLE	0.0684	Confirmed LTF	0.0684
CATAWBA	CATAWBA	0.1614	Confirmed LTF	0.1614

11.6.15 Index 15

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
166957535	316115	AC1-105 TAP	DVP	314696	3SEEDGE HILL	DVP	1	DVP_P7-1: LN 158-235	tower	406.0	117.56	124.51	DC	28.29

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
313527	AB2-043 C	0.7646	50/50	0.7646
313853	3PONTONDP	1.0270	50/50	1.0270
314429	3JTRSVLE	0.6481	50/50	0.6481
314713	3PAMPLIN	1.0747	Adder	1.26
315161	1KERR 4	0.9067	50/50	0.9067
315162	1KERR 5	0.9067	50/50	0.9067
315163	1KERR 6	0.9067	50/50	0.9067
315164	1KERR 7	0.9067	50/50	0.9067
316118	AC1-105 C	26.2631	50/50	26.2631
316129	AC1-054 C	3.6751	Adder	4.32
316131	AB2-060 C	2.2037	50/50	2.2037
924022	AB2-043 E O1	4.3333	50/50	4.3333
924162	AB2-060 E OP	6.5731	50/50	6.5731
924301	AB2-077 C O1 (Suspended)	2.8934	50/50	2.8934
924302	AB2-077 E O1 (Suspended)	1.9290	50/50	1.9290
924311	AB2-078 C O1 (Suspended)	2.8934	50/50	2.8934
924312	AB2-078 E O1 (Suspended)	1.9290	50/50	1.9290
924321	AB2-079 C O1 (Suspended)	2.8934	50/50	2.8934
924322	AB2-079 E O1 (Suspended)	1.9290	50/50	1.9290
925611	AC1-036 C	0.2684	50/50	0.2684
925612	AC1-036 E	1.0189	50/50	1.0189
925785	AC1-054 E	1.6930	Adder	1.99
926274	AC1-105 E	12.9032	50/50	12.9032
927261	AC1-222 C	-1.9440	Adder	-2.29
934311	AD1-055 C	-1.3497	Adder	-1.59
935222	AD1-157 E (Withdrawn : 01/26/2021)	0.6626	Adder	0.78
936265	AD2-033 C	20.0273	50/50	20.0273
936266	AD2-033 E	13.3515	50/50	13.3515
936361	AD2-046 C O1	8.5850	50/50	8.5850
936362	AD2-046 E O1	3.9478	50/50	3.9478
936485	AD2-063 C	21.0465	50/50	21.0465
936486	AD2-063 E	14.0310	50/50	14.0310
938371	AE1-056 C	4.2848	Adder	5.04
938372	AE1-056 E	2.3412	Adder	2.75
939181	AE1-148 C	8.6800	50/50	8.6800

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
939182	AE1-148 E	5.7866	50/50	5.7866
940661	AE2-053 O1	3.2148	50/50	3.2148
942451	AE2-258	3.6154	50/50	3.6154
942461	AE2-259 C O1	4.1560	Adder	4.89
942462	AE2-259 E O1	2.7707	Adder	3.26
943901	AF1-058 C	-1.0975	Adder	-1.29
943911	AF1-059	16.8253	50/50	16.8253
946301	AF1-294 C	6.5474	50/50	6.5474
946302	AF1-294 E	4.3649	50/50	4.3649
958211	AF2-115 C	3.8514	50/50	3.8514
958212	AF2-115 E	2.5676	50/50	2.5676
958801	AF2-171 C	13.3857	50/50	13.3857
958802	AF2-171 E	8.9238	50/50	8.9238
959311	AF2-222 C	19.0690	50/50	19.0690
959312	AF2-222 E	12.7762	50/50	12.7762
961791	AG1-021 C	3.0811	50/50	3.0811
961792	AG1-021 E	2.0541	50/50	2.0541
961891	AG1-030 C	23.1084	50/50	23.1084
961892	AG1-030 E	15.4056	50/50	15.4056
962041	AG1-048 C	19.2570	50/50	19.2570
962042	AG1-048 E	12.8380	50/50	12.8380
962441	AG1-093 C O1	70.0350	50/50	70.0350
962442	AG1-093 E O1	21.3150	50/50	21.3150
963171	AG1-166 C	3.0811	50/50	3.0811
963172	AG1-166 E	2.0541	50/50	2.0541
963181	AG1-167 C	3.0811	50/50	3.0811
963182	AG1-167 E	2.0541	50/50	2.0541
963191	AG1-168 C	3.0811	50/50	3.0811
963192	AG1-168 E	2.0541	50/50	2.0541
963201	AG1-169 C	3.0811	50/50	3.0811
963202	AG1-169 E	2.0541	50/50	2.0541
963211	AG1-170 C	3.0811	50/50	3.0811
963212	AG1-170 E	2.0541	50/50	2.0541
963301	AG1-179 C	2.0596	Adder	4.57
963311	AG1-180	1.0035	Adder	2.23
963321	AG1-181 C O1	20.8619	50/50	20.8619
963361	AG1-185 O1	10.0936	50/50	10.0936
963641	AG1-215 C	1.4379	50/50	1.4379
963642	AG1-215 E	2.1568	50/50	2.1568
964111	AG1-272 C	3.0507	50/50	3.0507
964112	AG1-272 E	0.9061	50/50	0.9061
964121	AG1-273 C	3.0507	50/50	3.0507
964122	AG1-273 E	0.9061	50/50	0.9061
964131	AG1-274 C	3.0507	50/50	3.0507
964132	AG1-274 E	0.9061	50/50	0.9061
964241	AG1-285 C O1	18.0293	50/50	18.0293
964242	AG1-285 E O1	12.0195	50/50	12.0195
964791	AG1-342 C	15.8415	50/50	15.8415
964792	AG1-342 E	12.4469	50/50	12.4469
964821	AG1-345 C	1.2324	50/50	1.2324
964822	AG1-345 E	0.8216	50/50	0.8216
965191	AG1-384 C	3.0507	50/50	3.0507

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
965192	AG1-384 E	0.9061	50/50	0.9061
965281	AG1-393 C	3.0811	50/50	3.0811
965282	AG1-393 E	2.0541	50/50	2.0541
965451	AG1-413 C O1	7.0727	50/50	7.0727
965452	AG1-413 E O1	4.7152	50/50	4.7152
965591	AG1-427 C	17.0142	50/50	17.0142
965592	AG1-427 E	11.3667	50/50	11.3667
965601	AG1-428 C O1	1.7194	Adder	3.82
965602	AG1-428 E O1	1.1442	Adder	2.54
965641	AG1-432 C O1	4.4053	Adder	9.78
965642	AG1-432 E O1	2.9369	Adder	6.52
965721	AG1-440 C	2.4799	Adder	5.5
965722	AG1-440 E	1.6533	Adder	3.67
965731	AG1-441 C	2.4799	Adder	5.5
965732	AG1-441 E	1.6533	Adder	3.67
965771	AG1-445	1.4329	Adder	3.18
965781	AG1-446	1.4329	Adder	3.18
965831	AG1-451	0.7342	Adder	1.63
966751	AG1-546 C	4.0416	Adder	8.97
966752	AG1-546 E	2.1686	Adder	4.81
966861	AG1-557 C O1 (Withdrawn : 12/14/2020)	0.4405	Adder	0.98
966862	AG1-557 E O1 (Withdrawn : 12/14/2020)	0.2937	Adder	0.65
G-007A	G-007A	0.1175	Confirmed LTF	0.1175
VFT	VFT	0.3096	Confirmed LTF	0.3096
CALDERWOOD	CALDERWOOD	0.1218	Confirmed LTF	0.1218
PRAIRIE	PRAIRIE	0.5011	Confirmed LTF	0.5011
CHEOAH	CHEOAH	0.1231	Confirmed LTF	0.1231
CBM-N	CBM-N	0.0564	Confirmed LTF	0.0564
COTTONWOOD	COTTONWOOD	0.4599	Confirmed LTF	0.4599
HAMLET	HAMLET	0.1438	Confirmed LTF	0.1438
GIBSON	GIBSON	0.0994	Confirmed LTF	0.0994
BLUEG	BLUEG	0.3177	Confirmed LTF	0.3177
TRIMBLE	TRIMBLE	0.1013	Confirmed LTF	0.1013
CATAWBA	CATAWBA	0.1033	Confirmed LTF	0.1033

11.6.16 Index 16

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC DC	MW IMPACT
163744437	927250	AC1-221 TAP	DVP	304070	6PERSON230 T	CPL	1	DVP_P1-2: LN 556-C	single	718.0	180.62	181.93	DC	9.42

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
247284	05LEESVG	0.4591	80/20	0.4591
313527	AB2-043 C	0.6777	80/20	0.6777
314333	6POWHATN	0.1206	80/20	0.1206
314429	3JTRSVLE	0.6020	80/20	0.6020
314677	6BUCKING	0.3988	80/20	0.3988
314704	3LAWRENC	0.1701	80/20	0.1701
315153	1CLOVER1	35.6962	80/20	35.6962
315154	1CLOVER2	35.3404	80/20	35.3404
315156	1HALLBR1	1.0288	80/20	1.0288
315158	1KERR 1	0.3313	80/20	0.3313
315159	1KERR 2	0.9277	80/20	0.9277
315160	1KERR 3	0.9277	80/20	0.9277
315161	1KERR 4	0.9277	80/20	0.9277
315162	1KERR 5	0.9277	80/20	0.9277
315163	1KERR 6	0.9277	80/20	0.9277
315164	1KERR 7	0.9277	80/20	0.9277
315191	1BEARGRDN G1	3.3141	80/20	3.3141
315192	1BEARGRDN G2	3.3141	80/20	3.3141
315193	1BEARGRDN S1	4.2858	80/20	4.2858
315266	1PLYWOOD A	3.0479	80/20	3.0479
316118	AC1-105 C	14.6956	80/20	14.6956
316123	AC1-075 C	1.8835	80/20	1.8835
316129	AC1-054 C	4.0299	80/20	4.0299
316131	AB2-060 C	1.9554	80/20	1.9554
924301	AB2-077 C O1 (Suspended)	2.7590	80/20	2.7590
924311	AB2-078 C O1 (Suspended)	2.7590	80/20	2.7590
924321	AB2-079 C O1 (Suspended)	2.7590	80/20	2.7590
925611	AC1-036 C	0.3165	80/20	0.3165
925661	AC1-042 C	1.5979	80/20	1.5979
926023	AC1-080 C	0.6295	80/20	0.6295
926451	AC1-116 C	0.0446	80/20	0.0446
926645	AC1-145 C	0.3001	80/20	0.3001
927251	AC1-221 C	11.7174	80/20	11.7174
927261	AC1-222 C	10.1051	80/20	10.1051
932511	AC2-071 C (Withdrawn : 01/22/2021)	0.3929	80/20	0.3929
932761	AC2-100 C	26.9660	80/20	26.9660
933501	AC2-165 C	3.6987	80/20	3.6987
934311	AD1-055 C	7.0162	80/20	7.0162

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
934341	AD1-058 C	29.3737	80/20	29.3737
934615	AD1-087 C	22.4303	80/20	22.4303
934625	AD1-088 C	29.6903	80/20	29.6903
934991	AD1-131 C	9.6307	80/20	9.6307
935171	AD1-152 C O1	24.6374	80/20	24.6374
935221	AD1-157 C (Withdrawn : 01/26/2021)	0.3412	80/20	0.3412
936265	AD2-033 C	18.1139	80/20	18.1139
936361	AD2-046 C O1	8.4650	80/20	8.4650
936485	AD2-063 C	20.6649	80/20	20.6649
937481	AD2-202 C O1	6.5700	80/20	6.5700
938371	AE1-056 C	9.3221	80/20	9.3221
938561	AE1-075 C	0.1048	80/20	0.1048
938821	AE1-108 C O1	7.2807	80/20	7.2807
939181	AE1-148 C	8.5007	80/20	8.5007
939941	AE1-230 C	0.7209	80/20	0.7209
940661	AE2-053 O1	3.1484	80/20	3.1484
941011	AE2-092 C	6.3234	80/20	6.3234
941791	AE2-182 C	4.8236	80/20	4.8236
941801	AE2-185 C	3.6043	80/20	3.6043
941821	AE2-187 C	3.6043	80/20	3.6043
942451	AE2-258	3.2048	80/20	3.2048
942461	AE2-259 C O1	14.7132	80/20	14.7132
942671	AE2-283 C	3.9648	80/20	3.9648
942751	AE2-291 C	15.6354	80/20	15.6354
942761	AE2-292 C O1	19.4676	80/20	19.4676
943901	AF1-058 C	5.7308	80/20	5.7308
943911	AF1-059	14.4227	80/20	14.4227
945081	AF1-173	1.3967	80/20	1.3967
945811	AF1-246 C O1	21.5242	80/20	21.5242
946291	AF1-293 C O1	9.4568	80/20	9.4568
946301	AF1-294 C	6.0812	80/20	6.0812
946591	AF1-323 C	2.4073	80/20	2.4073
957481	AF2-042 C	153.7440	80/20	153.7440
958211	AF2-115 C	3.5772	80/20	3.5772
958501	AF2-144 C	0.5649	80/20	0.5649
958801	AF2-171 C	21.4497	80/20	21.4497
959311	AF2-222 C	23.4030	80/20	23.4030
959531	AF2-244 C (Withdrawn : 01/06/2021)	0.5206	80/20	0.5206
959751	AF2-266	25.6235	80/20	25.6235
960061	AF2-297 C	22.9234	80/20	22.9234
960111	AF2-302 C	0.8754	80/20	0.8754
961061	AF2-397 C	7.1206	80/20	7.1206
961121	AF2-403	0.8010	80/20	0.8010
961791	AG1-021 C	2.8618	80/20	2.8618
961801	AG1-022 C	0.8754	80/20	0.8754
961891	AG1-030 C	21.3030	80/20	21.3030
962041	AG1-048 C	17.8860	80/20	17.8860
962441	AG1-093 C O1	39.1883	80/20	39.1883
962491	AG1-098 C O1	34.5765	80/20	34.5765
962561	AG1-105 C O1	31.8432	80/20	31.8432
963171	AG1-166 C	2.8618	80/20	2.8618

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
963181	AG1-167 C	2.8618	80/20	2.8618
963191	AG1-168 C	2.8618	80/20	2.8618
963201	AG1-169 C	2.8618	80/20	2.8618
963211	AG1-170 C	2.8618	80/20	2.8618
963271	AG1-176 C O1	36.0621	80/20	36.0621
963301	AG1-179 C	3.8207	80/20	3.8207
963311	AG1-180	1.8616	80/20	1.8616
963321	AG1-181 C O1	23.4953	80/20	23.4953
963361	AG1-185 O1	11.3677	80/20	11.3677
963601	AG1-209 C	0.2803	80/20	0.2803
963641	AG1-215 C	1.3355	80/20	1.3355
964111	AG1-272 C	3.5975	80/20	3.5975
964121	AG1-273 C	3.5975	80/20	3.5975
964131	AG1-274 C	3.5975	80/20	3.5975
964141	AG1-275 C	1.2014	80/20	1.2014
964151	AG1-276 C	1.2014	80/20	1.2014
964231	AG1-284 C O1	3.9711	80/20	3.9711
964241	AG1-285 C O1	17.1705	80/20	17.1705
964251	AG1-286 C	0.4497	80/20	0.4497
964261	AG1-287 C	4.2981	80/20	4.2981
964471	AG1-310 C	5.7147	80/20	5.7147
964791	AG1-342 C	9.4188	80/20	9.4188
964821	AG1-345 C	1.1444	80/20	1.1444
964841	AG1-347 C	22.4655	80/20	22.4655
964931	AG1-357 C	61.4988	80/20	61.4988
965191	AG1-384 C	3.5975	80/20	3.5975
965281	AG1-393 C	2.8618	80/20	2.8618
965451	AG1-413 C O1	6.0628	80/20	6.0628
965581	AG1-426	1.5862	80/20	1.5862
965591	AG1-427 C	16.2855	80/20	16.2855
965601	AG1-428 C O1	3.1896	80/20	3.1896
965641	AG1-432 C O1	29.4264	80/20	29.4264
965721	AG1-440 C	5.4864	80/20	5.4864
965731	AG1-441 C	5.4864	80/20	5.4864
965771	AG1-445	3.1699	80/20	3.1699
965781	AG1-446	3.1699	80/20	3.1699
965831	AG1-451	4.9044	80/20	4.9044
966691	AG1-539 C	8.1754	80/20	8.1754
966751	AG1-546 C	8.2011	80/20	8.2011
966761	AG1-547 C	3.2579	80/20	3.2579
966791	AG1-550 O1	2.6947	80/20	2.6947
966861	AG1-557 C O1 (Withdrawn : 12/14/2020)	2.9426	80/20	2.9426
G-007A	G-007A	0.4891	Confirmed LTF	0.4891
VFT	VFT	1.2964	Confirmed LTF	1.2964
CALDERWOOD	CALDERWOOD	1.4443	Confirmed LTF	1.4443
PRAIRIE	PRAIRIE	4.6726	Confirmed LTF	4.6726
AC1-131	AC1-131	5.2830	LTF	5.2830
CHEOAH	CHEOAH	1.4865	Confirmed LTF	1.4865
CBM-N	CBM-N	0.2328	Confirmed LTF	0.2328
COTTONWOOD	COTTONWOOD	5.2395	Confirmed LTF	5.2395
HAMLET	HAMLET	3.2011	Confirmed LTF	3.2011

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
GIBSON	GIBSON	0.7912	Confirmed LTF	0.7912
BLUEG	BLUEG	2.4078	Confirmed LTF	2.4078
TRIMBLE	TRIMBLE	0.7618	Confirmed LTF	0.7618
CATAWBA	CATAWBA	1.6965	Confirmed LTF	1.6965

11.7 Queue Dependencies

The Queue Projects below are listed in one or more indices for the overloads identified in your report. These projects contribute to the loading of the overloaded facilities identified in your report. The percent overload of a facility and cost allocation you may have towards a particular reinforcement could vary depending on the action of these earlier projects. The status of each project at the time of the analysis is presented in the table. This list may change as earlier projects withdraw or modify their requests.

Queue Number	Project Name	Status
AA1-063	Huntsville (Cabin Creek) 69kV	Withdrawn
AA2-053	Carolina-Jackson 115kV	In Service
AA2-074	CPLP-PJM	Confirmed
AA2-088	Boykins-Handsome 115kV	In Service
AA2-165	Hornertown-Whitakers 115kV	In Service
AB1-081	Anaconda-Mayo Dunbar 115kV	In Service
AB1-173	Brink-Trego 115kV	Engineering and Procurement
AB2-015	Franklin 115kV	Engineering and Procurement
AB2-040	Brink 115kV	Engineering and Procurement
AB2-043	Chase City 115kV	Under Construction
AB2-059	Benson-Dunbar 115kV	Partially in Service - Under Construction
AB2-060	Chase City-Lunenburg 115kV	In Service
AB2-077	Buggs Island-Chase City 115kV	Suspended
AB2-078	Buggs Island-Chase City 115kV	Suspended
AB2-079	Buggs Island-Chase City 115kV	Suspended
AB2-099	Ahoskie 34.5kV	Suspended
AB2-100	Clubhouse-Lakeview 230kV	Partially in Service - Under Construction
AB2-174	Emporia-Trego 115kV	In Service
AC1-034	Heartsease DP - Mayo Dunbar 115kV	Engineering and Procurement
AC1-036	Twittys Creek 34.5kV	Partially in Service - Under Construction
AC1-042	Altavista-Mt. Airy 69kV	Engineering and Procurement
AC1-054	Kerr Dam-Eatons Ferry 115 kV	Engineering and Procurement
AC1-075	Perth-Hickory Grove 115kV	Engineering and Procurement
AC1-080	Perth-Hickory Grove 115kV	Engineering and Procurement
AC1-086	Thelma 230kV	Active
AC1-098	Dawson-South Justice 115kV	Engineering and Procurement
AC1-099	Dawson-South Justice 115kV	Engineering and Procurement
AC1-105	Halifax-Mt. Laurel 115kV	Engineering and Procurement
AC1-116	Mount Eagle 34.5kV	Engineering and Procurement
AC1-131	PJM-CPLP	Confirmed
AC1-145	Gretna DP 69 kV	Engineering and Procurement
AC1-208	Cox-Whitakers 115kV	Engineering and Procurement
AC1-221	Halifax-Person 230kV	Engineering and Procurement
AC1-222	Crystal Hill-Halifax 115kV	Engineering and Procurement
AC2-071	Buckingham 35kV	Withdrawn
AC2-084	Dawson-South Justice 115kV	Active
AC2-100	Halifax-Person 230kV	Engineering and Procurement
AC2-165	Bremo-Powhatan 230kV	Engineering and Procurement
AD1-055	Crystal Hill-Halifax 115 kV	Engineering and Procurement

Queue Number	Project Name	Status
AD1-057	Hornertown-Hathaway 230 kV	Active
AD1-058	Halifax-Person 230 kV	Engineering and Procurement
AD1-087	Clover-Sedge Hill 230 kV	Active
AD1-088	Briery-Clover 230 kV	Active
AD1-131	Sedge Hill-Person 230 kV	Engineering and Procurement
AD1-152	Clover-Sedge Hill 230 kV	Active
AD1-157	South Creek 34.5 kV	Withdrawn
AD2-033	Chase City-Lunenburg 115 kV	Active
AD2-046	Boydton DP-Kerr Dam 115 kV	Active
AD2-063	Central-Chase City 115kV	Active
AD2-202	Clover-Sedge Hill 230kV	Active
AE1-056	Red House-South Creek 115 kV	Active
AE1-074	Winterpock 34.5 kV	Engineering and Procurement
AE1-075	Powhatan 34.5 kV	Engineering and Procurement
AE1-103	Holland-Union Camp 115 kV	Active
AE1-108	Bremo-Scottsville 138 kV	Active
AE1-148	Kerr Dam-Ridge Rd 115 kV	Active
AE1-230	Shockoe 69 kV	Active
AE2-044	Anaconda-Dunbar 115 kV	Active
AE2-053	Kerr Dam-Ridge Road 115 kV	Active
AE2-092	Kidds Store-Sherwood 115 kV	Active
AE2-151	Earleys 34.5kV	Withdrawn
AE2-182	Briery-Clover 230 kV	Active
AE2-185	Gladys DP-Stonemill Switching Station 69 kV	Active
AE2-187	Shockoe DP-Chatham 69 kV	Active
AE2-258	Chase City 115 kV	Active
AE2-259	Curdsville-Willis Mtn 115 kV	Active
AE2-283	Gladys-Stone Mill 69 kV	Active
AE2-291	Grit DP-Perth 115 kV	Active
AE2-292	Grit DP-Perth 115 kV	Active
AE2-346	Ahoskie 34.5 kV	Active
AF1-058	Welco 34.5 kV	Engineering and Procurement
AF1-059	Brodnax-South Hill 115 kV	Active
AF1-082	Heartsease-Mayo Dunbar DP	Active
AF1-173	Gretna DP-Shockoe DP 69 kV	Active
AF1-246	Clover-Rawlings 500 kV	Active
AF1-292	Fields 34.5kV	Active
AF1-293	Kidds Store-Fort Union 115 kV	Active
AF1-294	Jetersville-Ponton 115 kV	Active
AF1-323	Scottsville-Colleen 138 kV	Active
AF2-042	Clover-Rawlings 500 kV	Active
AF2-046	Tunis-Mapleton 115 kV	Active
AF2-085	Midlothian 34.5 kV	Engineering and Procurement
AF2-107	Clifford 138 kV	Active
AF2-115	Jetersville-Ponton 115 kV	Active
AF2-144	Powhatan 34.5 kV	Active
AF2-171	Madisonville 115 kV	Active
AF2-222	Madisonville DP-Twitty's Creek 115 kV	Active
AF2-244	Powhatan 34.5 kV	Withdrawn
AF2-266	Clover 230 kV	Active
AF2-297	Sedge Hill 115 kV	Active
AF2-299	Fields 34.5 kV	Active

Queue Number	Project Name	Status
AF2-302	Scottsville-Colleen 138 kV	Active
AF2-397	Fork Union-Mt. Eagle 230 kV	Active
AF2-400	Franklin 13.2 kV	Engineering and Procurement
AF2-403	Shockoe DP-Chatham 69 kV	
AG1-008	Tunis-Mapleton 115 kV	Active
AG1-021	Jetersville-Ponton 115 kV	Active
AG1-022	Scottsville-Colleen 138 kV	Active
AG1-030	Victoria DP-Martin DP 115 kV	Active
AG1-036	Tunis 34.5 kV	Active
AG1-037	Ahoskie 34.5 kV	Active
AG1-048	Jetersville-Ponton 115 kV	Active
AG1-082	Ahoskie 34.5 kV	Active
AG1-083	Ahoskie 34.5 kV	Active
AG1-084	Earlys 34.5 kV	Active
AG1-085	Earlys 34.5	Active
AG1-093	Halifax-Chase City 115 kV	Active
AG1-098	Briery-Clover 230 kV	Active
AG1-105	Clover-Sedge Hill 230 kV	Active
AG1-106	Thelma 230 kV	Active
AG1-123	Amherst-Riverville 138 kV	Active
AG1-166	Lone Pine 115 kV	Active
AG1-167	Lone Pine 115 kV	Active
AG1-168	Lone Pine 115 kV	Active
AG1-169	Lone Pine 115 kV	Active
AG1-170	Lone Pine 115 kV	Active
AG1-176	Briery-Clover 230 kV	Active
AG1-179	Brunswick 69 kV	Active
AG1-180	Brunswick 69 kV	Active
AG1-181	Pamplin-Chase City 115 kV	Active
AG1-185	Pamplin-Chase City 115 kV	Active
AG1-209	Gretna 12.5 kV	Active
AG1-215	Fort Pickett 13.2 kV	Active
AG1-272	Twitty's Creek 115 kV	Active
AG1-273	Twitty's Creek 115 kV	Active
AG1-274	Twitty's Creek 115 kV	Active
AG1-275	Gladys DP-Stone Mill 69 kV	Active
AG1-276	Gladys DP-Stone Mill 69 kV	Active
AG1-284	Bremo-Cunningham DP 115 kV	Active
AG1-285	Chase City-Central 115 kV	Active
AG1-286	Johnson Mountain 138 kV	Active
AG1-287	South Boston 12.5 kV	Active
AG1-310	Crystal Hill-Perth 115 kV	Active
AG1-313	Jackson DP-Oconeechee 115 kV	Active
AG1-342	Dryburg 115 kV	Active
AG1-343	Boykins-Murphy 115 kV	Active
AG1-345	Crewe 12.5 kV	Active
AG1-347	Briery DP-Clover 230 kV	Active
AG1-357	Clover-Rawlings 500 kV	Active
AG1-384	Twitty's Creek 115 kV	Active
AG1-393	Fort Pickett DP 34.5 kV	Active
AG1-394	Boykins 34.5 kV	Active
AG1-413	South Hill-Bordnax 115 kV	Active

Queue Number	Project Name	Status
AG1-426	Bremo-Scottsville 138 kV	Active
AG1-427	Chase City-Drakes Branch 115 kV	Active
AG1-428	Danieltown 69 kV	Active
AG1-432	Curdsville DP-Willis Mt. 115 kV	Active
AG1-440	Palmer Springs 115 kV	Active
AG1-441	Palmer Springs 115 kV	Active
AG1-445	Palmer Spring 115 kV	Active
AG1-446	Palmer Springs 115 kV	Active
AG1-451	Curdsville DP-Willis Mt. 115 kV	Active
AG1-494	Boxwood-Riverville 138 kV	Active
AG1-505	Rawlings-Clover 500 kV	Active
AG1-506	Rawlings-Clover 500 kV	Active
AG1-532	Fields 34.5 kV	Active
AG1-539	Grit DP-Perth 115 kV	Active
AG1-546	Ebony-Elams Road 115 kV	Active
AG1-547	Mount Airy-Chatham 69 kV	Active
AG1-550	Mount Eagle-Fork Union 230 kV	Active
AG1-552	Carolina 13.2 kV	Active
AG1-557	Curdsville DP 115 kV	Withdrawn

11.8 Contingency Descriptions

Contingency Name	Contingency Definition
DVP_P4-2: 102802	CONTINGENCY 'DVP_P4-2: 102802' /* CAROLINA 115 KV OPEN BRANCH FROM BUS 313722 TO BUS 314559 CKT 1 /* 3OCCONEECHEE115.00 - 3CAROLNA 115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314571 CKT 1 /* 3CAROLNA 115.00 - 3EATON F 115.00 OPEN BRANCH FROM BUS 313723 TO BUS 314559 CKT 1 /* 3PECAN 115.00 - 3CAROLNA 115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314835 CKT 1 /* 3CAROLNA 115.00 - 3CAROL_1 115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314600 CKT 1 /* 3CAROLNA 115.00 - 3PLHITP 115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314561 CKT 1 /* 3CAROLNA 115.00 - 6CAROLNA 230.00 END
DVP_P1-2: LN 90	CONTINGENCY 'DVP_P1-2: LN 90' OPEN BRANCH FROM BUS 314265 TO BUS 314584 CKT 1 /* 3FIVEFORKSDP115.00 - 3LITTLTN 115.00 OPEN BRANCH FROM BUS 314265 TO BUS 314673 CKT 1 /* 3FIVEFORKSDP115.00 - 3PALMERSPRNG115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314585 CKT 1 /* 3CAROLNA 115.00 - 3L GASTN 115.00 OPEN BRANCH FROM BUS 314584 TO BUS 314585 CKT 1 /* 3LITTLTN 115.00 - 3L GASTN 115.00 OPEN BUS 314265 /* ISLAND: 3FIVEFORKSDP115.00 OPEN BUS 314584 /* ISLAND: 3LITTLTN 115.00 OPEN BUS 314585 /* ISLAND: 3L GASTN 115.00 END
DVP_P1-2: LN 130	CONTINGENCY 'DVP_P1-2: LN 130' OPEN BRANCH FROM BUS 314559 TO BUS 314600 CKT 1 /* 3CAROLNA 115.00 - 3PLHITP 115.00 OPEN BRANCH FROM BUS 314595 TO BUS 314600 CKT 1 /* 3PL HILL 115.00 - 3PLHITP 115.00 OPEN BRANCH FROM BUS 314600 TO BUS 314615 CKT 1 /* 3PLHITP 115.00 - 3SKIPERS 115.00 OPEN BUS 314595 /* ISLAND: 3PL HILL 115.00 OPEN BUS 314600 /* ISLAND: 3PLHITP 115.00 END
DVP_P1-2: LN 40-A	CONTINGENCY 'DVP_P1-2: LN 40-A' OPEN BRANCH FROM BUS 314675 TO BUS 943910 CKT 1 /* 3BRODNAX 115.00 - AF1-059 TAP 115.00 END

Contingency Name	Contingency Definition
DVP_P7-1: LN 171-1009	CONTINGENCY 'DVP_P7-1: LN 171-1009' /* . OPEN BRANCH FROM BUS 313806 TO BUS 314681 CKT 1 /* 3HERBERT 115.00 - 3CHASCTY 115.00 OPEN BRANCH FROM BUS 313849 TO BUS 314267 CKT 1 /* 3RIDGERD 115.00 - 3CHASCTY2 115.00 END
DVP_P1-2: LN 158	CONTINGENCY 'DVP_P1-2: LN 158' OPEN BRANCH FROM BUS 313755 TO BUS 314701 CKT 1 /* 3FLAT CREEK 115.00 - 3LONEPN 115.00 OPEN BRANCH FROM BUS 313755 TO BUS 314707 CKT 1 /* 3FLAT CREEK 115.00 - 3MORAN 115.00 OPEN BRANCH FROM BUS 314519 TO BUS 314701 CKT 1 /* 3LONEPINE_1 115.00 - 3LONEPN 115.00 OPEN BRANCH FROM BUS 314691 TO BUS 314707 CKT 1 /* 3FARMVIL 115.00 - 3MORAN 115.00 OPEN BUS 313755 /* ISLAND: 3FLAT CREEK 115.00 OPEN BUS 314519 /* ISLAND: 3LONEPINE_1 115.00 OPEN BUS 314707 /* ISLAND: 3MORAN 115.00 END
DVP_P1-2: LN 2201	CONTINGENCY 'DVP_P1-2: LN 2201' OPEN BRANCH FROM BUS 313725 TO BUS 314563 CKT 1 /* 6DRY BREAD 230.00 - 6CLUBHSE 230.00 END
DVP_P1-2: LN 45	CONTINGENCY 'DVP_P1-2: LN 45' OPEN BUS 304099 /* ISLAND: 3WARREN TAP 115.00 OPEN BUS 304100 /* ISLAND: 3HEND
DVP_P1-3: 6SEEDGE HILL-TX#1	CONTINGENCY 'DVP_P1-3: 6SEEDGE HILL-TX#1' OPEN BRANCH FROM BUS 314696 TO BUS 314697 CKT 1 /* 3SEEDGE HILL 115.00 - 6SEEDGE HILL 230.00 END
DVP_P1-3: 6SEEDGE HILL-TX#2	CONTINGENCY 'DVP_P1-3: 6SEEDGE HILL-TX#2' OPEN BRANCH FROM BUS 314696 TO BUS 314697 CKT 2 /* 3SEEDGE HILL 115.00 - 6SEEDGE HILL 230.00 END
Base Case	
DVP_P1-2: LN 556-D	CONTINGENCY 'DVP_P1-2: LN 556-D' OPEN BRANCH FROM BUS 966360 TO BUS 314936 CKT 1 /* AG1-055 TAP 500.00 - 8RAWLINGS 500.00 END

Contingency Name	Contingency Definition
DVP_P4-6: CAROLIN T122	CONTINGENCY 'DVP_P4-6: CAROLIN T122' /* CAROLINA 115 KV OPEN BRANCH FROM BUS 314559 TO BUS 315126 CKT 1 /* 3CAROLNA 115.00 - 1ROARAP2 14.400 OPEN BRANCH FROM BUS 314559 TO BUS 315128 CKT 1 /* 3CAROLNA 115.00 - 1ROARAP4 14.400 OPEN BUS 315126 /* ISLAND: 1ROARAP2 14.400 OPEN BUS 315128 /* ISLAND: 1ROARAP4 14.400 OPEN BRANCH FROM BUS 314559 TO BUS 314571 CKT 1 /* 3CAROLNA 115.00 - 3EATON F 115.00 OPEN BRANCH FROM BUS 313722 TO BUS 314559 CKT 1 /* 3OCCONEECHEE115.00 - 3CAROLNA 115.00 OPEN BRANCH FROM BUS 313723 TO BUS 314559 CKT 1 /* 3PECAN 115.00 - 3CAROLNA 115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314835 CKT 1 /* 3CAROLNA 115.00 - 3CAROL_1 115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314578 CKT 1 /* 3CAROLNA 115.00 - 3HORNRTN 115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314585 CKT 1 /* 3CAROLNA 115.00 - 3L GASTN 115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314600 CKT 1 /* 3CAROLNA 115.00 - 3PLHITP 115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314561 CKT 1 /* 3CAROLNA 115.00 - 6CAROLNA 230.00 OPEN BUS 314559 /* 3CAROLNA 115.00 KV OPEN BUS 314835 /* ISLAND: 3CAROL_1 115.00 END
DVP_P1-2: LN 296-A	CONTINGENCY 'DVP_P1-2: LN 296-A' OPEN BRANCH FROM BUS 304070 TO BUS 927250 CKT 1 /* 6PERSON230 T230.00 - AC1-221 TAP 230.00 END
DVP_P1-2: LN 84	CONTINGENCY 'DVP_P1-2: LN 84' OPEN BRANCH FROM BUS 314521 TO BUS 314713 CKT 1 /* 3PAMPL_1 115.00 - 3PAMPLIN 115.00 OPEN BRANCH FROM BUS 314691 TO BUS 314726 CKT 1 /* 3FARMVIL 115.00 - 3WILLIS 115.00 OPEN BRANCH FROM BUS 314713 TO BUS 314726 CKT 1 /* 3PAMPLIN 115.00 - 3WILLIS 115.00 OPEN BUS 314521 /* ISLAND: 3PAMPL_1 115.00 OPEN BUS 314726 /* ISLAND: 3WILLIS 115.00 END

Contingency Name	Contingency Definition
DVP_P1-2: LN 298	CONTINGENCY 'DVP_P1-2: LN 298' OPEN BRANCH FROM BUS 314677 TO BUS 314692 CKT 1 /* 6BUCKING 230.00 - 6FARMVIL 230.00 OPEN BRANCH FROM BUS 314677 TO BUS 314747 CKT 1 /* 6BUCKING 230.00 - 6BREMO 230.00 OPEN BRANCH FROM BUS 314691 TO BUS 314692 CKT 2 /* 3FARMVIL 115.00 - 6FARMVIL 230.00 OPEN BUS 314677 /* ISLAND: 6BUCKING 230.00 OPEN BUS 924032 /* ISLAND: AB2-045 E 230.00 OPEN BUS 932511 /* ISLAND: AC2-071 C 230.00 OPEN BUS 932512 /* ISLAND: AC2-071 E 230.00 END
DVP_P7-1: LN 22-90	CONTINGENCY 'DVP_P7-1: LN 22-90' /* . OPEN BRANCH FROM BUS 314559 TO BUS 314571 CKT 1 /* 3CAROLNA 115.00 - 3EATON F 115.00 OPEN BRANCH FROM BUS 314571 TO BUS 316125 CKT 1 /* 3EATON F 115.00 - AC1-054 TAP 115.00 OPEN BRANCH FROM BUS 314702 TO BUS 316125 CKT 1 /* 3KERR 115.00 - AC1-054 TAP 115.00 OPEN BUS 314571 /* ISLAND: 3EATON F 115.00 OPEN BUS 316125 /* ISLAND: AC1-054 TAP 115.00 OPEN BUS 316126 /* ISLAND: AC1-054 MAIN115.00 OPEN BUS 316127 /* ISLAND: AC1-054 COL222.860 OPEN BUS 316128 /* ISLAND: AC1-054 COL122.860 OPEN BUS 316129 /* ISLAND: AC1-054 C 0.3850 OPEN BUS 925785 /* ISLAND: AC1-054 E 0.3850 OPEN BRANCH FROM BUS 314265 TO BUS 314584 CKT 1 /* 3FIVEFORKSDP115.00 - 3LITTLTN 115.00 OPEN BRANCH FROM BUS 314265 TO BUS 314673 CKT 1 /* 3FIVEFORKSDP115.00 - 3PALMERSPRNG115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314585 CKT 1 /* 3CAROLNA 115.00 - 3L GASTN 115.00 OPEN BRANCH FROM BUS 314584 TO BUS 314585 CKT 1 /* 3LITTLTN 115.00 - 3L GASTN 115.00 OPEN BUS 314265 /* ISLAND: 3FIVEFORKSDP115.00 OPEN BUS 314584 /* ISLAND: 3LITTLTN 115.00 OPEN BUS 314585 /* ISLAND: 3L GASTN 115.00 END
DVP_P1-2: LN 31-A	CONTINGENCY 'DVP_P1-2: LN 31-A' OPEN BRANCH FROM BUS 314666 TO BUS 314712 CKT 1 /* 3ALTVSTA 115.00 - 3OTTER R 115.00 OPEN BRANCH FROM BUS 314694 TO BUS 314712 CKT 1 /* 3GRIT 115.00 - 3OTTER R 115.00 OPEN BRANCH FROM BUS 314694 TO BUS 942750 CKT 1 /* 3GRIT 115.00 - AE2-291 TAP 115.00 OPEN BUS 314694 /* ISLAND: 3GRIT 115.00 OPEN BUS 314712 /* ISLAND: 3OTTER R 115.00 END

Contingency Name	Contingency Definition
DVP_P1-2: LN 556-C	CONTINGENCY 'DVP_P1-2: LN 556-C' OPEN BRANCH FROM BUS 964930 TO BUS 966360 CKT 1 /* AG1-357 TAP 500.00 - AG1-055 TAP 500.00 END
DVP_P7-1: LN 158-235	CONTINGENCY 'DVP_P7-1: LN 158-235' /* . OPEN BRANCH FROM BUS 313755 TO BUS 314701 CKT 1 /* 3FLAT CREEK 115.00 - 3LONEPN 115.00 OPEN BRANCH FROM BUS 313755 TO BUS 314707 CKT 1 /* 3FLAT CREEK 115.00 - 3MORAN 115.00 OPEN BRANCH FROM BUS 314519 TO BUS 314701 CKT 1 /* 3LONEPINE_1 115.00 - 3LONEPN 115.00 OPEN BRANCH FROM BUS 314691 TO BUS 314707 CKT 1 /* 3FARMVIL 115.00 - 3MORAN 115.00 OPEN BUS 313755 /* ISLAND: 3FLAT CREEK 115.00 OPEN BUS 314519 /* ISLAND: 3LONEPINE_1 115.00 OPEN BUS 314707 /* ISLAND: 3MORAN 115.00 OPEN BRANCH FROM BUS 313802 TO BUS 314268 CKT 1 /* 6PRINCE EDW 230.00 - 6BRIERY 230.00 OPEN BRANCH FROM BUS 313802 TO BUS 314692 CKT 1 /* 6PRINCE EDW 230.00 - 6FARMVIL 230.00 OPEN BRANCH FROM BUS 314268 TO BUS 964840 CKT 1 /* 6BRIERY 230.00 - AG1-347 TAP 230.00 OPEN BRANCH FROM BUS 314686 TO BUS 962490 CKT 1 /* 6CLOVER 230.00 - AG1-098 TAP 230.00 OPEN BRANCH FROM BUS 314691 TO BUS 314692 CKT 1 /* 3FARMVIL 115.00 - 6FARMVIL 230.00 OPEN BUS 313802 /* ISLAND: 6PRINCE EDW 230.00 OPEN BUS 314268 /* ISLAND: 6BRIERY 230.00 OPEN BUS 934620 /* ISLAND: AD1-088 TAP 230.00 OPEN BUS 934621 /* ISLAND: AD1-088 MAIN230.00 OPEN BUS 934622 /* ISLAND: AD1-088 COL134.500 OPEN BUS 934623 /* ISLAND: AD1-088 TER 13.800 OPEN BUS 934624 /* ISLAND: AD1-088 COL234.500 OPEN BUS 934625 /* ISLAND: AD1-088 C 0.6600 OPEN BUS 934626 /* ISLAND: AD1-088 E 0.6600 END
DVP_P1-2: LN 235-A	CONTINGENCY 'DVP_P1-2: LN 235-A' OPEN BRANCH FROM BUS 313802 TO BUS 314268 CKT 1 /* 6PRINCE EDW 230.00 - 6BRIERY 230.00 OPEN BRANCH FROM BUS 313802 TO BUS 314692 CKT 1 /* 6PRINCE EDW 230.00 - 6FARMVIL 230.00 OPEN BRANCH FROM BUS 314268 TO BUS 964840 CKT 1 /* 6BRIERY 230.00 - AG1-347 TAP 230.00 OPEN BRANCH FROM BUS 314691 TO BUS 314692 CKT 1 /* 3FARMVIL 115.00 - 6FARMVIL 230.00 OPEN BUS 313802 /* ISLAND: 6PRINCE EDW 230.00 OPEN BUS 314268 /* ISLAND: 6BRIERY 230.00 END

Contingency Name	Contingency Definition
EXT_304099 3WARREN TAP 115 304102 3GW KING TAP 115 1	CONTINGENCY 'EXT_304099 3WARREN TAP 115 304102 3GW KING TAP 115 1' OPEN BRANCH FROM BUS 304099 TO BUS 304102 CKT 1 END
DVP_P1-3: 4ALTVSTA-TX#4	CONTINGENCY 'DVP_P1-3: 4ALTVSTA-TX#4' OPEN BRANCH FROM BUS 314666 TO BUS 314667 CKT 2 /* 3ALTVSTA 115.00 - 4ALTVSTA 138.00 END
DVP_P4-2: 13002	CONTINGENCY 'DVP_P4-2: 13002' /* CAROLINA 115 KV OPEN BRANCH FROM BUS 314559 TO BUS 314600 CKT 1 /* 3CAROLNA 115.00 - 3PLHITP 115.00 OPEN BRANCH FROM BUS 314595 TO BUS 314600 CKT 1 /* 3PL HILL 115.00 - 3PLHITP 115.00 OPEN BRANCH FROM BUS 314600 TO BUS 314615 CKT 1 /* 3PLHITP 115.00 - 3SKIPPER 115.00 OPEN BUS 314595 /* ISLAND: 3PL HILL 115.00 OPEN BUS 314600 /* ISLAND: 3PLHITP 115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314571 CKT 1 /* 3CAROLNA 115.00 - 3EATON F 115.00 OPEN BRANCH FROM BUS 313722 TO BUS 314559 CKT 1 /* 3OCCONEECHEE115.00 - 3CAROLNA 115.00 OPEN BRANCH FROM BUS 313723 TO BUS 314559 CKT 1 /* 3PECAN 115.00 - 3CAROLNA 115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314835 CKT 1 /* 3CAROLNA 115.00 - 3CAROL_1 115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314561 CKT 1 /* 3CAROLNA 115.00 - 6CAROLNA 230.00 END
DVP_P1-2: LN 154-A	CONTINGENCY 'DVP_P1-2: LN 154-A' OPEN BRANCH FROM BUS 314713 TO BUS 314715 CKT 1 /* 3PAMPLIN 115.00 - 3MADSONV 115.00 OPEN BRANCH FROM BUS 314715 TO BUS 959310 CKT 1 /* 3MADSONV 115.00 - AF2-222 TAP 115.00 OPEN BUS 314715 /* ISLAND: 3MADSONV 115.00 END

12 Short Circuit Analysis

The following Breakers are overdutied:

None.

12.1 System Reinforcements - Short Circuit

None.

13 Affected Systems

13.1 TVA

TVA Impacts to be determined during later study phases (as applicable).

13.2 Duke Energy Progress

Duke Energy Progress Impacts to be determined during later study phases (as applicable).

14 Attachment 1: One Line Diagram