Procedure #: BPO-1

SUBJECT: Voltage Schedules and Reactive Resources in the Southern Balancing Area (SBA)

ASSOCIATED NERC STANDARD(S):
- VAR-001 (Voltage and Reactive Control)
- VAR-002 (Generator Operation for Maintaining Network Voltage Schedules)
- TOP-002 (Normal Operations Planning)
- TOP-004 (Transmission Operations)
- TOP-007 (SOL & IROL)

ASSOCIATED BPO PROCEDURE(S):
None

ASSOCIATED RC PROCEDURE(S):
None

PURPOSE:
The purpose of this procedure is to describe the expectations and operating communications protocols to manage transmission voltage schedules in order to reduce VAR flow on transmission lines, reduce losses, provide for adequate area voltage support, protect equipment, and increase power transfer capability. A well-managed Voltage Schedule will better coordinate operations between generators, provide for adequate area voltage support, and support the efficient and reliable operation of the Interconnection.

DISCUSSION:

Transmission System Voltage Philosophy

As a general system philosophy for operating within Interconnection Reliability Operating Limits (IROL) and System Operating Limits (SOL), voltages on the transmission system in the Southern Balancing Area (SBA) are monitored and generally managed to remain within a range of +/- 5% around nominal voltage. Within that general philosophy, however, the transmission system normally operates at or above nominal rating to increase power transfer capability and to reduce system losses. The Transmission Operator is responsible for monitoring, coordinating, and directing the operation of shunt reactors, shunt capacitors, distribution capacitors, and generator reactive support to maintain acceptable transmission voltages. Hydro units may also be requested to operate as synchronous condensers to maintain acceptable transmission voltages. Sufficient reactive resources shall be acquired within the system to protect

the voltage levels under normal and first Contingency conditions[1] and shall disperse and locate the reactive resources so that the resources can be applied effectively and quickly when contingencies occur.[2] This includes the system's share of the reactive requirements of interconnecting transmission circuits. When utilizing reactive capacity to manage voltage, reactive reserves should be maintained primarily in dynamic reactive resources (e.g. generating units) when possible.

The Transmission Operator directs the operation of capacitive and inductive reactive resources within its area, including reactive generation scheduling; transmission line and reactive resource switching to maintain system and Interconnection voltages within established limits. If necessary, the Transmission Operator shall direct corrective action, including load reduction, to prevent voltage collapse when reactive resources are insufficient. The Transmission Operator will perform contingency analysis and will correct IROL and SOL violations resulting from reactive resource deficiencies within 30 minutes and complete the required IROL or SOL violation reporting.[3] The Transmission Operator will coordinate voltage control activities which impact neighboring systems with the Transmission Operators of those systems.[4]

General Expectations

To provide for reliable and coordinated operations:

- Generating units connected to the transmission system in the SBA will operate to meet the voltage schedules provided in Attachment A.[5]
- Generating units exempt from following the voltage schedule are listed in Attachment B.
- Generating units exempt from having its automatic voltage regulator (AVR) in service or from being in voltage control mode are listed in Attachment B
- Generating units connected to the transmission system in the SBA will operate with their excitation systems in automatic voltage control mode:
  - Unless otherwise exempted by the Transmission Operator (Reference Attachment B).
  - During start-up and shut-down, generators are exempt from having its automatic voltage regulator (AVR) in service and are exempt from having to make any associated notifications to the Transmission Operator.[6]
- All generating units which have Power System Stabilizers (PSS) that have been deemed important to operations must telemeter the PSS status to the PCC.

[1] VAR-001-4.1 R2
[2] VAR-001-4.1 R2
[3] TOP-007-0 R2, R3; TOP-002-2.1b R10; TOP-004-2 R1
[4] TOP-004-2 R6; VAR-001-4.1 R1, R3
[5] VAR-002-4.1 R1
[6] VAR-002-4.1 R1

- The Generator Owner will provide GSU information upon request and will consult with the Transmission Operator in advance regarding changes in generator parameters (such as excitation systems) and GSU equipment in accordance with NERC requirements.

Voltage Control

The Transmission Operator is responsible for monitoring and controlling system voltage. Generator Operators shall adjust voltage to meet the system requirements as directed by the Transmission Operator, while observing the following notes:

1. The Generator Operator shall abide by the applicable ***Reactive Policy for Generating Facilities Interconnecting to the Southern Companies' Transmission System***. The most recent version, applicable to generators interconnecting on or after October 1, 2016, can be found on the Generator Operating Requirements folder of the Southern Company OASIS (www.oasis.oati.com).
2. The Generator Operator shall observe the current applicable Voltage Schedules (Attachment A) whenever the unit is on-line unless otherwise directed by the Transmission Operator.[7]
3. Unit operating limits should be observed and communicated to the Transmission Operator.
4. Where plants have multiple units connected to common transmission busses of the same nominal voltage level, reactive loading should be shared proportionally.
   a. First priority - adjust loading to hold voltage schedule.
   b. Second priority - proportion reactive loading according to unit size and rating.

Meeting Voltage Schedule and Notification Requirements

Voltage Schedules (Attachment A) for generating plants connected to the transmission system in the SBA shall be observed at all times unless otherwise instructed by the Transmission Operator[8]. Generating plants not listed in Attachment A shall maintain bus voltage as requested by the Transmission Operator. The Transmission Operator is responsible for coordinating voltage schedules for all generators connected to the transmission system in the SBA.

Voltage Schedules:[9] Generator Operators shall maintain the generator voltage (within applicable Facility Ratings) as directed by the Transmission Operator. To maintain the generator voltage at the Transmission Operator's directed value, the Generator Operator shall operate the generator(s) within the following Voltage Schedule Bands:

Voltage Schedule Bands:

a. +/- 1.0kV at 115kV buses

[7] VAR-001-4.1 R1
[8] VAR-001-4.1 R5, R5.1
[9] VAR-001-4.1 R1

b. +/- 2.0kV at 161kV and 230kV buses

c. +/- 4.0kV at 500kV buses

Notification Requirements: When online, except during start-up or shut-down, the Generator Operator shall notify the Transmission Operator (PCC) and the associated local Transmission Control Center (TCC) of any status change in automated voltage regulator control, PSS controls (if so equipped) or alternative voltage controlling device[10]. One of two methods must be used to provide this notification:

a) Where equipped, real-time telemetry status of the AVR and/or PSS into the EMS of the PCC/TCC. This is the preferred notification method and, in some locations defined by the Transmission Operator, may be required, or,

b) A Transmission GenComm message to the PCC and local TCC within 30 minutes of the status change. In addition, a phone call to the local Transmission Control Center as follow-up to the GenComm message is requested.

In either case a) or b) above, the Transmission Operator shall respond by GenComm with corresponding direction regarding continued operations.

The Generator Operator shall notify the Transmission Operator (PCC) and the associated local Transmission Control Center (TCC) within 30 minutes of becoming aware of a change in reactive capability due to factors other than a status change described above. If the capability has been restored within 30 minutes of the Generator Operator becoming aware of such change, then the Generator Operator is not required to notify the Transmission Operator of the change in reactive capability[11].

Unless the Notification Exemption applies, the following notifications shall be made:

If the generator is operated outside the Voltage Schedule Bands but within the Excursion Bands, for **periods exceeding twelve hours**, then the Generator Operator shall notify[12] the Transmission Operator of the reason why the Voltage Schedule cannot be met and an estimate for when the issue will be resolved.

If the generator is operated outside of the Excursion Bands for **periods exceeding two hours**, then the Generator Operator shall notify[12] the Transmission Operator of the reason why the Voltage Schedule cannot be met and an estimate for when the issue will be resolved.

Excursion Bands:

a. +/- 2.0kV at 115kV buses

b. +/- 3.0kV at 161kV and 230kV buses

c. +/- 5.0kV at 500kV buses

[10] VAR-002-4 R3
[11] VAR-002-4 R4
[12] VAR-001-4.1 R5.2

The Generator Operator shall notify[12] the Transmission Operator when the issue associated with the notification of the inability to operate within the Voltage Schedule or Excursion band is resolved and the generator can return to operation within the Voltage Schedule bands. Only one notification per issue is required.

Notification Exemption

If a generator is unable to maintain voltage within the Voltage Schedule Bands, **and** it is operating at full lead MVARs to be as close to the upper band limit as possible in an attempt to stay within its voltage schedule maximum limit or at full lag MVARs to be as close to the lower band limit as possible in an attempt to stay within its voltage schedule minimum limit, notification is not required. Full lead or lag capability is based on the submitted Facility Reactive Capability Curves (D-Curves), which can include applicable in-service limiting protection and limiter characteristics, or based on a subsequent notification from the Generator Operator of a temporary limitation.

Voltage Schedule Communications

Daily Notification: Prior to 04:00 CT, under the direction of the Transmission Operator, the PCC Balancing Desk will determine the appropriate Voltage Schedule (i.e. Schedule #1, Schedule #2, etc.) based upon the forecasted system load. The Voltage Schedule selected will be posted on the EMS Spectrum Display "BA Voltages" ("voltsum") and will be communicated to all Transmission Control Centers and all applicable plants via GenComm. The Voltage Schedule will be communicated each morning even if the schedule doesn't change.[13]

Voltage Schedule Changes: Changes in BPO-1, including changes to the SBA Voltage Schedules provided in Attachment A and the Voltage Schedule Exemptions listed in Attachment B, will be communicated by SCS Operations Planning to all Transmission Control Centers and all applicable plants via email. The SBA Voltage Schedules are developed by SCS Transmission Planning based upon the network topology of the Southern Electric System and also of neighboring systems as communicated through transmission planning models. Updates to BPO-1 are also provided to operational planners in SERC by email to the SERC OPS distribution list and to FRCC participants by email to the FSCG distribution list. Transmission Planning solicits input from neighboring planning organizations during its annual review of the voltage schedules. The SBA Voltage Schedules are updated as required based upon changes in system topology or operating parameters.

General Guidelines

1. The Voltage Schedules (Attachment A) should be observed at all times by the plant operator unless otherwise directed by the Transmission Operator.
2. It is recognized that excursions outside of the Voltage Schedule Bands during start-up, shut-down, or during MW loading at multiple units and plants by

[13] VAR-001-4.1 R5, R5.1

centralized control, or during time of relatively quick transmission system loading changes, may be greater than when the unit is in a normal mode of operation.

3. It is recognized that excursions outside the Voltage Schedule Bands during the top of an hour where the Voltage Schedule in effect specifies a step change in the voltage schedule target may be greater than normal to allow time for a reasonable voltage ramp by the generator.
4. Respond promptly to specific instructions by the Transmission Operator.
5. Voltage will be referenced to a potential device that is mutually agreed upon between the Transmission Operator and the Generator Operator.
6. Unit capability curves should be adhered to when attempting to maintain bus voltage schedule.
7. Station service voltage limits should be observed when attempting to maintain bus voltage. The Generator Operator will communicate the station service limits to the Transmission Operator. To the extent a unit outage or other plant operating parameter results in temporarily more restrictive station service limits, the Generator Operator should request that the Transmission Operator establish a temporary adjustment to the voltage schedule.
8. Avoid sudden voltage changes; ramp voltage slowly. Contact the Transmission Operator prior to significant changes. Contact the Transmission Operator if unusual adjustments are required to meet the voltage schedule.
9. Voltage subject to change at the request of the Transmission Operator. Transmission Operator requests shall be met in a timely manner. Response to emergency requests shall begin immediately.
10. In the case of plants having multiple units connected to common transmission busses at the same nominal voltage level, reactive loading should be shared proportionally.
11. Plants located electrically near one another at the same nominal voltage level will be treated like multiple units. The Transmission Operator will direct reactive loading to be shared proportionally.
12. Frequently reoccurring voltage excursions by a generator that are outside the Voltage Schedule Bands and Excursion Bands will result in a written notification by the Transmission Operator to the Generator Operator:
    - to formally document the observed problem, and,
    - to request an explanation from Generator Operator about the reasons for the excursions and what will be done by when to avoid the excursions.

Documentation Requirements

1. Generator Owner shall submit any desired changes in GSU tap settings to the Transmission Operator for review. When GSU tap changes are necessary to coordinate with transmission system voltage requirements, the Transmission

Operator will provide the Generator Owner with documentation specifying the required tap changes, a timeframe for making the changes, and justification.[14]

2. In the event of a failure of a GSU transformer or other equipment which may impact the ability of the plant to provide reactive support to the transmission system, the Generator shall consult with the Transmission Operator in advance of the purchase of replacement equipment. In such cases, temporary generator operational limits may be assigned until analysis of the replacement equipment data can be completed. Upon completion of the analysis of the replacement equipment data, any applicable modification of the generator operational limits will be communicated to the Generator Operator by the Transmission Operator. Generator shall provide the data for replacement equipment within five business days of the installation.
3. The Transmission Operator shall have evidence:
    - It provided a voltage schedule to each generator, or for exempt generators, it provided notification of their exemption status.
        - That in addition to providing a copy of BPO-1 and thus the voltage schedules to its Reliability Coordinator and adjacent TOPs upon each revision via e-mail, and by making BPO-1 continuously available on Southern's Oasis site (www.oasis.oati.com), it provided a copy of the voltage schedules to its Reliability Coordinator and adjacent Transmission Operators within 30 days of a request.[15]
    - It provided the criteria used to develop voltage schedules to the Generator Operator within 30 days of receiving a request.[16]
    - It responded and, if necessary, issued additional instructions related to generating units reporting that their automatic voltage control was off normal.
    - It provided consultation and documentation in response to a change in GSU parameters.
4. The Generator Operator shall have evidence it supported system voltage and reactive requirements in accordance with applicable NERC Standards.

[14] VAR-001-4.1 R6
[15] VAR-001-4.1 R1.1
[16] VAR-001-4.1 R5.3

Document Change Log

Date	Description of Change
October 1, 2007	Added Document Change Log and updated voltage schedule tables in Appendix A and B to show Lloyd Shoals as an exempt unit
May 27, 2008	Added clarifying language related to contingency analysis and the communication of voltage schedules.
July 17, 2009	• Added notification options to AVR/PSS status changes • Added written notification by TOP to GOP of recurring voltage excursions • Removed last bullet under Guidelines • Change SCA to SBA • Converted document to current BPO procedure template formatting
March 22, 2010	• Updated title of Reactive Power Requirements in "Voltage Schedule" section, item 1 and made reference to OASIS location • Updated Attachment A (Voltage Schedules) and Attachment B (Voltage Schedule Exemptions)
September 29, 2011	• Updated Attachment A (Voltage Schedules), clarified communication of timeframe by TOP to GOP
October 3, 2011	• Updated Attachment A (Voltage Schedules) to correct inadvertent omission of voltage schedule for Goat Rock hydro
January 4, 2013	• Updated Attachment A (Voltage Schedules) to add Piedmont Green
June 5, 2013	• Updated Attachment A (Voltage Schedules) adjust Harris CC voltage schedule, removed Eaton from the Mississippi worksheet, reflected the renaming of Conasauga and Loopers Farm CC's to T.A. Smith 1 and 2
June 27, 2013	• Revised item 2 of "General Guidelines" section of "Discussion" to recognize conditions where excursions from scheduled voltages could be reasonably expected.
August 28, 2013	• Updated Attachment A (Voltage Schedules) to add Ratcliffe
October 21, 2013	• Updated Voltage Schedule
September 29, 2014	• Updated to clarify expectations per VAR-001-4 and VAR-002-3 such as AVR exemption criteria, and expectations for GO to notify TOP regarding inability to hold voltage schedule. Clarification to voltage regulator exemption and listings in Att. B

July 27, 2015	• Refined discussion on Transmission System Voltage Philosophy and Meeting Voltage Schedule sections. Modified voltage schedules for Ratcliffe, Lindsey Hill, Central Alabama, Miller, Harris, Santa Rosa, Holt Dam. Added Voltage Schedule for Dublin Biomass and Flint River. Exemption language updated and exemptions noted for Lancaster and SR Hazelhurst. Updated references to Siemens EMS and Oati Oasis
August 6, 2015	• Remove Plant Branch and Scholz from the voltage schedule to reflect their retirement. Refine Transmission Operator expectations to responding to voltage schedule and voltage schedule criteria requests in the "Documentation Requirements" section.
March 25, 2016	• Change 500kV tolerance band to +/- 5.0kV • Updated Attachment A (Voltage Schedules) to add White Pine Solar (fka Rogers Solar), GPC Stewart A-18, GPC Gordon Site 5, Rincon Solar, Richland Creek Landfill, Pine Ridge Landfill, and Decatur Parkway • Updated Attachment A (Voltage Schedules) to reflect the retirement of Yates 115kV, McManus 1and 2, and Kraft 115kV • Updated Attachment A (Voltage Schedules) to adjust voltage schedules for Bouldin Dam and East Bainbridge • Updated Attachment B (Voltage Schedule Exemptions) to add Paw Paw Solar, GPC Fort Benning Dove Solar, and Butler Solar Farm (Fall Line) • Updated Attachment B (Voltage Schedule Exemptions) to reflect the retirement of Boulevard 2 and 3, Bowen CT, and Kraft 1, 2, 4, and CT • Updated Attachment B (Voltage Schedule Exemptions), to include the voltage control expectation for 44/46 kV interconnected unit(s)
June 30, 2016	• Updated Attachment A (Voltage Schedules) to add White Oak Solar, Sandhills Solar Facility, Kings Bay Solar, Butler Solar, and Live Oak Solar • Updated Attachment B (Voltage Schedule Exemptions) to add Decatur County Solar, Old Midville Road Solar, and Georgia-Pacific Brewton, LLC • Updated Attachment A (Voltage Schedules) to correct the names of GPC Gordon Site 5 to Fort Gordon Solar, GPC Stewart A-18 to Fort Stewart Solar, Pine Ridge to Pine Ridge LFGTE Plant, Richland Creek to Richland Creek Landfill, and Decatur Parkway to

	Decatur Parkway Solar • Updated Attachment B (Voltage Schedule Exemptions) to reflect the renaming of GPC Fort Benning Dove Solar to Fort Benning – Dove Solar
November 15, 2016	• Updated Attachment B (Voltage Schedule Exemptions) to add Glynn Solar • Updated Attachment A (Voltage Schedules) to modify voltage schedules for L. Smith 230kV, Butler Solar, Fort Gordon Solar, Fort Stewart Solar, Kings Bay Solar, Sandhills Solar, White Oak Solar, and White Pine Solar
January 12, 2017	• Moved Rincon Solar, Pine Ridge LFGTE Plant, and Richland Creek Landfill from Attachment A (Voltage Schedules) to Attachment B (Voltage Schedule Exemptions) • Updated Attachment A (Voltage Schedules) to include MCLB-Albany Solar Facility, Albany Green Energy, and Hazlehurst II • Updated Attachment A (Voltage Schedules) to modify voltage schedules for L. Smith 230kV and Kings Bay Solar • Updated Attachment A (Voltage Schedules) to reflect retirement of Mitchell units on GA tab
April 6, 2017	• Updated Voltage Schedule Bands, added Excursion Bands, and revised notification requirements • Removed 46kV from the Voltage Schedule Bands description • Revised documentation requirements related to purchasing GSUs • Added reactive language from the Brown Book • Updated Attachment A (Voltage Schedules) to add Eglin Solar, MS Solar 2,Hattiesburg Farm Solar, Holley Solar, and Saufley Solar • Updated Attachment B (Voltage Schedule Exemptions) to include Port Wentworth Biomass and Camilla Solar
June 6, 2017	• Updated Attachment A (Voltage Schedules) to modify voltage schedules for Hattiesburg Solar Farm, Holley Solar, and Saufley Solar
September 26, 2017	• Updated Attachment A (Voltage Schedules) to modify voltage schedules for Hazlehurst II Solar • Updated Attachment A (Voltage Schedules) to include LaFayette Solar

Attachment A - SBA Voltage Schedules

Voltage Schedules[17]

Attachment B - Generating Units Exempt from the SBA Voltage Schedule

Voltage Schedule Exemptions[18]

Listed in Attachment B are Generating units which are impractical to include in the system Voltage Schedule due to their relative size or other parameters. If equipped, these units are nonetheless required to operate in automatic voltage control mode or, if connected to 44/46 kV, constant power factor mode as prescribed by the Transmission Owner / Operator and support transmission system voltage nearby. All other requirements of this procedure apply.

[17] VAR-001-4.1 R5
[18] VAR-001-4.1 R4

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SOUTHERN BALANCING AREA
TARGET VOLTAGE SCHEDULE
ALABAMA

9/26/2017

Sort by Type, KV, Plant

Sort by Plant, KV

				Schedule #1				Schedule #2				Schedule #3				Schedule #4			
				SBA Load > 37,000				37,000 > SBA Load > 30,000				30,000 > SBA Load > 25,000				SBA Load < 25,000			
Plant	Own	KV	Type	00:01-6:00	6:01-09:00	09:01-21:00	21:01-24:00	00:01-6:00	6:01-12:00	12:01-21:00	21:01-24:00	00:01-6:00	6:01-18:00	18:01-21:00	21:01-24:00	00:01-6:00	6:01-18:00	18:01-21:00	21:01-24:00
AMEA	I	115	Fossil	115	116	116	115	115	115	116	115	115	115	115	115	115	115	115	115
Bankhead	APC	115	Hydro	116	117	117	116	116	116	117	116	116	116	116	116	116	116	116	116
Barry	APC	115	Fossil	116	117	117	116	116	117	117	116	116	116	117	116	116	116	116	116
Barry	APC	230	Fossil	238	239	240	239	237	238	239	238	237	238	238	237	237	237	238	237
Barry CC6	APC	230	Fossil	238	239	240	239	237	238	239	238	237	238	238	237	237	237	238	237
Barry CC7	APC	230	Fossil	238	239	240	239	237	238	239	238	237	238	238	237	237	237	238	237
Bouldin	APC	115	Hydro	116	117	117	116	116	116	117	116	116	116	117	116	116	116	116	116
Calhoun	I	115	Fossil	117	118	119	117	117	118	118	117	117	117	117	117	116	117	117	116
Calhoun	I	230	Fossil	237	239	239	238	237	238	239	237	235	236	237	235	234	235	236	234
Farley	APC	230	Nuclear	237	239	239	237	236	239	239	237	236	239	239	237	235	237	237	236
Farley	APC	500	Nuclear	518	522	522	520	515	522	522	518	515	522	522	518	513	518	518	515
Gadsden	APC	115	Fossil	116	117	117	116	116	116	117	116	116	116	116	116	116	116	116	116
Gaston	APC	230	Fossil	237	239	240	238	235	238	239	237	235	236	237	235	234	236	237	234
GE Plastics	APC	115	Fossil	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116
Gorgas	APC	115	Fossil	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Gorgas	APC	230	Fossil	239	239	240	239	239	239	239	239	239	239	239	239	239	239	239	239
Greene Co	APC	115	Fossil	115	116	117	115	115	116	117	115	115	115	116	115	115	115	115	115
Greene Co	APC	230	Fossil	237	238	239	237	237	238	239	237	237	237	238	237	237	237	237	237
Harris	APC	230	Fossil	237	238	239	237	236	238	239	237	236	237	238	236	236	236	236	236
Harris	I	500	Fossil	518	522	522	520	515	522	522	518	516	521	521	518	514	518	518	516
Harris	APC	115	Hydro	116	117	117	116	116	116	117	116	116	116	116	116	116	116	116	116
Henry	APC	115	Hydro	116	117	117	116	116	116	117	116	116	116	116	116	116	116	116	116
Hillabee	I	230	Fossil	237	239	240	238	235	238	239	237	235	236	237	235	234	236	237	234
Hog Bayou	I	115	Fossil	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Holt	APC	115	Hydro	116	116	116	116	116	116	116	116	117	116	116	117	117	116	116	117
Jordan	APC	115	Hydro	116	117	117	116	116	116	117	116	116	116	117	116	116	116	116	116
LaFayette Solar	I	115	Solar	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118
Lay	APC	115	Hydro	116	117	117	116	116	116	117	116	115	116	116	115	115	115	115	115
Lindsay Hill & Central AL	I	500	Fossil	520	522	525	520	517	522	525	520	517	521	522	518	515	518	520	516
Logan Martin	APC	115	Hydro	116	117	117	116	116	116	117	116	116	116	117	116	116	116	116	116
Martin	APC	115	Hydro	115	116	117	115	115	116	117	116	115	116	116	115	115	115	115	115
Miller	APC	230	Fossil	239	239	240	239	239	239	239	239	239	239	239	239	239	239	239	239
Miller	APC	500	Fossil	520	522	525	520	517	522	525	520	517	520	522	517	516	517	520	516
Millers Ferry	SEPA	115	Hydro	116	117	117	116	116	116	117	116	116	116	117	116	116	116	116	116
Mitchell	APC	115	Hydro	116	117	117.5	116	116	116	117	116	116	116	117	116	116	116	116	116
R.F. Henry	SEPA	115	Hydro	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115
Smith	APC	161	Hydro	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
Theodore	APC	115	Fossil	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Thurlow	APC	115	Hydro	115	116	116.5	115	115	116	117	116	115	116	116	115	115	115	115	115
Washington Co	APC	115	Fossil	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115
Weiss	APC	115	Hydro	116	117	117	116	116	116	117	116	116	116	117	116	116	116	116	116
Yates	APC	115	Hydro	115	116	116.5	115	115	116	117	116	115	116	116	115	115	115	115	115

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SOUTHERN BALANCING AREA
TARGET VOLTAGE SCHEDULE
FLORIDA
9/26/2017
Sorted by Type, KV, Plant

				Schedule #1				Schedule #2				Schedule #3				Schedule #4			
				SBA Load > 37,000				37,000 > SBA Load > 30,000				30,000 > SBA Load > 25,000				SBA Load < 25,000			
Plant	Own	KV	Type	00:01-6:00	6:01-09:00	09:01-21:00	21:01-24:00	00:01-6:00	6:01-12:00	12:01-21:00	21:01-24:00	00:01-6:00	6:01-18:00	18:01-21:00	21:01-24:00	00:01-6:00	6:01-18:00	18:01-21:00	21:01-24:00
Crist	Gulf	115	Fossil	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115
Crist	Gulf	230	Fossil	236	237	238	237	236	237	238	237	235	236	236	235	235	235	235	235
Eglin Solar	I	115	Solar	116	117	117	116	116	117	117	116	116	116	116	116	116	116	116	116
Holley Solar	I	115	Solar	116	116	117	116	116	116	117	116	117	116	116	117	117	116	117	117
L. Smith	Gulf	115	Fossil	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115
L. Smith	Gulf	230	Fossil	237	237	237	237	236	237	237	236	235	236	236	235	235	235	235	235
Santa Rosa	I	230	Fossil	236	237	238	237	236	237	238	237	235	236	236	235	235	235	235	235
Saufley Solar	I	230	Solar	236	237	238	237	236	237	238	237	235	236	236	235	235	235	235	235

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SOUTHERN BALANCING AREA
TARGET VOLTAGE SCHEDULE
GEORGIA

9/26/2017

Sort by Type, KV, Plant

Sort by Plant, KV

				Schedule #1				Schedule #2				Schedule #3				Schedule #4			
				SBA Load > 37,000				37,000 > SBA Load > 30,000				30,000 > SBA Load > 25,000				SBA Load < 25,000			
Plant	Own	KV	Type	00:01-6:00	6:01-09:00	09:01-21:00	21:01-24:00	00:01-6:00	6:01-12:00	12:01-21:00	21:01-24:00	00:01-6:00	6:01-18:00	18:01-21:00	21:01-24:00	00:01-6:00	6:01-18:00	18:01-21:00	21:01-24:00
Albany Green Energy	I	115	Biomass	117	118	118	117	117	118	118	117	117	117	117	117	117	117	117	117
Allatoona	SEPA	115	Hydro	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Baconton, Sowega	I-GTC	230	Fossil	236	237	238	236	235	237	238	236	235	236	236	236	234	236	234	234
Bartletts Ferry	GPC	115	Hydro	117	117	118	117	116	117	117	117	116	117	117	116	116	117	116	116
Bowen	GPC	500	Fossil	515	520	522	517	515	520	522	515	515	520	522	515	515	515	515	515
Bowen	GPC	230	Fossil	236	238	238	236	235	237	238	236	235	236	236	236	235	236	235	235
Buford	SEPA	115	Hydro	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Butler Solar	I	230	Solar	236	237	238	236	236	237	238	236	236	237	237	236	236	237	237	236
Carters	SEPA	230	Hydro	235	235	236	235	235	235	236	235	235	235	235	235	234	235	235	235
Chattahoochee Energy (Smarr EMC)	I-GTC	230	Fossil	236	238	238	236	235	237	238	236	235	236	236	236	235	236	235	235
Dahlberg	I	230	Fossil	236	237	238	236	235	237	238	236	235	236	236	236	234	236	234	234
Decatur Parkway Solar	I	115	Solar	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118
Doyle	I-GTC	115	Fossil	116	117	117	116	116	117	117	116	116	117	117	116	116	116	116	116
Doyle	I-GTC	230	Fossil	236	238	238	236	235	237	238	236	235	236	236	236	233	236	234	234
Dublin Biomass	I-GTC	115	Biomass	117	118	118	117	117	118	118	117	117	117	117	117	117	117	117	117
East Bainbridge	I-GTC	115	Fossil	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118
Effingham Power (PEV)	I-GTC	230	Fossil	236	237	237	236	236	237	237	236	235	236	236	235	235	236	236	235
Flint River	I-GTC	115	Biomass	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Fort Gordon Solar	GPC	115	Solar	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Fort Stewart Solar	GPC	115	Solar	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Franklin	I	230	Fossil	236	237	238	236	235	237	238	236	235	236	236	236	234	236	234	234
George	SEPA	115	Hydro	117	118	118	117	117	118	118	117	117	117	117	117	117	117	117	117
Goat Rock	GPC	115	Hydro	117	117	118	117	116	117	117	117	116	117	117	116	116	117	116	116
Hammond	GPC	115	Fossil	117	117	118	117	117	117	117	117	116	117	117	117	116	117	116	116
Hammond	GPC	230	Fossil	236	238	238	236	235	237	238	236	235	236	236	236	233	236	233	233
Hartwell Energy	I-GTC	230	Fossil	236	237	238	236	235	237	238	236	235	236	236	236	234	236	234	234
Hatch	GPC	230	Nuclear	237	238	238	237	237	238	238	237	237	237	237	237	237	237	237	237
Hatch	GPC	500	Nuclear	522	522	522	522	522	522	522	522	522	522	522	522	522	522	522	522
Hawk Road Energy Facility (OPC)	I-GTC	500	Fossil	515	522	522	517	515	520	522	515	515	520	522	515	515	515	515	515
Hazlehurst II	I-GTC	230	Solar	237	238	237	237	237	238	237	237	237	237	237	237	237	237	237	237
T.A. Smith 2 (Loopers Farm)	I-DU	230	Fossil	235	236	237	236	235	236	237	236	235	236	236	236	233	236	233	233
T.A. Smith 1 (Conasauga)	I	500	Fossil	520	522	522	520	520	522	522	520	520	522	522	520	520	520	520	520
Kgen Sandersville (Warthen)	I	500	Fossil	520	522	522	520	520	522	522	520	520	522	522	520	520	520	520	520
Kings Bay Solar	GPC	230	Solar	238	238	238	238	239	239	239	239	240	240	240	240	240	240	240	240
Lee Road	I-GTC	230	Fossil	236	237	238	236	235	237	238	236	235	236	236	236	234	236	234	234
Live Oak Solar	I	115	Solar	117	118	118	117	117	118	118	117	117	117	117	117	117	117	117	117
McDonough	GPC	115	Fossil	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
McDonough	GPC	230	Fossil	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235
McIntosh	GPC	230	Fossil	236	237	237	236	236	237	237	236	235	236	236	235	235	236	236	235
MCLB-Albany Solar Facility	GPC	115	Solar	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
McManus	GPC	115	Fossil	117	117	118	117	117	117	117	117	117	117	117	117	116	117	116	116
McManus	GPC	230	Fossil	236	237	237	236	236	237	237	236	235	236	236	235	235	236	236	235
Mid GA CoGen	I	230	Fossil	235	237	238	236	235	237	238	235	235	237	238	235	235	235	235	235
Monroe Power Co Generating (PEV)	I	230	Fossil	236	237	238	236	235	237	238	236	235	236	236	236	234	236	234	234
Oliver	GPC	115	Hydro	117	117	117	117	116	117	117	117	116	117	117	116	115	117	115	115
Piedmont Green	I	115	Biomass	116	117	118	116	116	117	117	116	116	117	117	116	116	116	116	116

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SOUTHERN BALANCING AREA
TARGET VOLTAGE SCHEDULE
GEORGIA

9/26/2017

Sort by Type, KV, Plant

Sort by Plant, KV

				Schedule #1				Schedule #2				Schedule #3				Schedule #4			
				SBA Load > 37,000				37,000 > SBA Load > 30,000				30,000 > SBA Load > 25,000				SBA Load < 25,000			
Plant	Own	KV	Type	00:01-6:00	6:01-09:00	09:01-21:00	21:01-24:00	00:01-6:00	6:01-12:00	12:01-21:00	21:01-24:00	00:01-6:00	6:01-18:00	18:01-21:00	21:01-24:00	00:01-6:00	6:01-18:00	18:01-21:00	21:01-24:00
Rabun Gap	I-GTC	115	Biomass	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116
Robins	GPC	115	Fossil	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Rocky Mountain	I-GTC	230	Hydro	236	238	238	236	235	237	238	236	235	236	236	236	233	236	234	234
Sandhills Solar Facility	I	230	Solar	236	237	238	236	236	237	238	236	236	237	237	236	236	237	237	236
Scherer	GPC	500	Fossil	517	522	522	519	517	520	522	517	517	520	522	517	517	517	517	517
Sewell Creek	I-GTC	230	Fossil	236	237	238	236	235	237	238	236	235	236	236	236	233	236	234	234
Simon Solar	I-GTC	115	Solar	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Sinclair	GPC	115	Hydro	117	117	117	117	116	117	117	117	116	117	117	116	115	117	115	115
Smarr Energy (Rumble Road)	I-GTC	115	Fossil	116	117	118	116	116	117	117	116	116	117	117	116	116	116	116	116
Talbot County	I-GTC	230	Fossil	236	237	238	236	235	237	238	236	235	236	236	236	233	236	234	234
Tallulah	GPC	115	Hydro	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Tenaska Georgia	I	500	Fossil	515	522	522	517	515	520	522	515	515	520	522	515	515	515	515	515
Terrora	GPC	115	Hydro	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Tugalo	GPC	115	Hydro	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Vogtle	GPC	230	Nuclear	236	236	236	236	235	236	236	236	235	236	236	236	235	236	235	235
Vogtle	GPC	500	Nuclear	517	520	521	517	517	520	521	517	517	520	521	517	517	517	517	517
Wallace	GPC	230	Hydro	236	237	238	236	233	236	238	236	233	236	238	236	233	236	233	233
Walton County (PEV)	I-GTC	230	Fossil	236	237	238	236	235	237	238	236	235	236	236	236	234	236	234	234
Wanlsey 9 (MEAG)	I-MEAG	230	Fossil	236	238	238	236	235	237	238	236	235	236	236	236	235	236	235	235
Wansley	GPC	500	Fossil	515	522	522	517	515	520	522	515	515	520	522	515	515	515	515	515
Washington County (PEV)	I-GTC	230	Fossil	236	238	238	236	235	237	238	236	235	236	236	236	235	236	235	235
West Georgia Generating	I	230	Fossil	235	237	238	236	235	237	238	235	235	237	238	235	235	235	235	235
West Point	SEPA	115	Hydro	116	117	117	116	116	116	117	116	116	116	117	116	116	116	116	116
White Oak Solar	I	230	Solar	236	237	237	236	236	237	237	236	236	237	237	236	236	237	237	236
White Pine Solar	I	230	Solar	236	237	238	236	236	237	238	236	236	237	237	236	236	237	237	236
Wilson	GPC	230	Fossil	236	236	236	236	235	236	236	236	235	236	236	236	235	236	235	235
Yates	GPC	230	Fossil	237	238	238	237	236	237	237	237	236	237	237	237	235	237	235	235
Yonah	GPC	115	Hydro	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117

Franklin 230 kV includes the following units: Franklin CC 1, CC 2 and CC 3.
McDonough 115 kV includes the following units: McDonough Units 3A, 4A, and 5A.
McDonough 230 kV includes the following units: McDonough Units 3B, 4, 4B, 5, 5B, 6, 6A, and 6B.
McIntosh 230 kV includes the following units: McIntosh Unit 1, McIntosh CTs, and McIntosh CCs 10 & 11.
McManus 115 kV includes the following units: McManus CTs 3A-3C.
McManus 230 kV includes the following units: McManus CTs 4A-4F.
Wansley 500 kV includes the following units: Wansley 1 and 2 and Wansley CCs 6 and 7.
Dublin Biomass includes generation facilites owned by SP Fiber Technologies (SPFT) and Green Power Solutions (GPS)
Dublin Biomass SPFT will only be required to follow voltage schedule when it is injecting power into the transmission system.
I-GTC indicates interconnected to GTC. I-DU indicates interconnected to Dalton Utilities. I-MEAG indicates interconnected to MEAG.

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SOUTHERN BALANCING AREA
TARGET VOLTAGE SCHEDULE
MISSISSIPPI
9/26/2017
Sorted by Type, KV, Plant

				Schedule #1				Schedule #2				Schedule #3				Schedule #4			
				SBA Load > 37,000				37,000 > SBA Load > 30,000				30,000 > SBA Load > 25,000				SBA Load < 25,000			
Plant	Own	KV	Type	00:01-6:00	6:01-09:00	09:01-21:00	21:01-24:00	00:01-6:00	6:01-12:00	12:01-21:00	21:01-24:00	00:01-6:00	6:01-18:00	18:01-21:00	21:01-24:00	00:01-6:00	6:01-18:00	18:01-21:00	21:01-24:00
Chevron	MPC	115	Fossil	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115
Daniel	MPC	230	Fossil	237	238	239	237	236	238	239	237	235	237	238	235	234	235	236	234
Hattiesburg Solar Farm	MPC	115	Solar	117	116	116	117	117	117	117	117	118	118	118	118	118	118	118	118
Ratcliffe	MPC	230	Fossil	237	238	239	237	237	238	239	237	237	237	238	237	235	235	236	235
MS Solar 2	I	115	Solar	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118
Sweatt	MPC	115	Fossil	115	116	117	116	115	116	117	116	115	115	115	115	117	116	116	117
Watson	MPC	115	Fossil	116	117	118	116	116	117	118	116	116	116	116	116	116	116	116	116
Watson	MPC	230	Fossil	236	237	238	236	235	236	238	236	234	236	237	234	233	234	235	233

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Southern Balancing Area Voltage Schedule and Voltage Regulator Exemptions

ALABAMA

4/6/2017

Unless specifically listed in the SBA Voltage Schedules in Appendix A, the Transmission Operator has determined that generators comprising the following classes will be exempt from maintaining a specific voltage schedule. If equipped, these units are nonetheless required to operate in automatic voltage control mode or, if connected to 44/46 kV, constant power factor mode as prescribed by the Transmission Owner / Operator. All other requirements of BPO-1 apply.

Exemption Criteria: For units meeting one or more of the following five critera, exemption on following a voltage or Reactive Power schedule and from having to make any associated notifications will be considered and possibly granted by PCC.

1. Units interconnected to the transmission system at less than 100 kV, or
2. Units with less than 20 MVA of capacity, or
3. Generating Sites with less than 100 MVA of total capacity, or
4. Co-generation facilities which have significant customer load served from the generator bus, or
5. Units with a capacity factor less than 0.5%.

Reasons for not granting exemptions even when meeting one or more of the Exemption Criteria could include:

a) though interconnected at less than 100 kV, the MVA capacity of the interconnected unit(s) is significant
b) though an individual unit(s) may have a rating of less than 20 MVA, the sum total of units in the area is signficant
c) the facility is determined to have material influence on the voltage in the transmission system where it is connected
d) generation is located in a region that studies indicate the dynamic Mvar support could be needed for certain scenarios
e) operational experience has shown the need for dynamic Mvar support and/or steady state voltage profile support in the region

Automatic Voltage Regulator (AVR) Exemption Criteria:

1. Request for exemption will be considered by the PCC for units > 40 years old interconnected 115 kV or below with non-functioning or non-existent AVRs and Transmission Planning studies have not indicated a reliablity need to install new AVRs Granted exemptions would include the GOP not having to make any associated notifications
2. Units that the PCC instructs to operate at "unity power factor" are automatically exempted from being in voltage control mode and from having to make any associated notification of not operating in voltage control mode
3. Requests for exemptions for units having its automatic voltage requlator in service or from being in voltage control mode and from having to make any associated notifications, especially during normal startup and shutdown, will be considered by the PCC

Specific Exemptions and Exceptions

The following additional units have requested exemption from maintaining a specific voltage schedule or from having a voltage regulator in service and have been reviewed and approved by the Transmission Operator. If equipped, these units are nonetheless required to operate in automatic voltage control mode or, if connected to 44/46 kV, constant power factor mode as prescribed by the Transmission Owner / Operator. All other requirements of BPO-1 apply.

Plant	ID	MVA	kV	Comments
Georgia-Pacific Brewton, LLC		40	46	Voltage Schedule Exemption - Sub-Transmission System
Gaston	CT	25	4.16	Voltage Schedule Exemption - Expected to run < 25 hours a year

Exception:

Plant	ID	MVA	kV	Comments
Farley	2	1045	500	The voltage schedule for the in service 500 kV connected unit could be requested to hold the 230 kV bus voltage schedule (instead of continuing to hold the original 500 kV schedule)

Southern Balancing Area Voltage Schedule and Voltage Regulator Exemptions

FLORIDA

4/6/2017

Unless specifically listed in the SBA Voltage Schedules in Appendix A, the Transmission Operator has determined that generators comprising the following classes will be exempt from maintaining a specific voltage schedule. If equipped, these units are nonetheless required to operate in automatic voltage control mode or, if connected to 44/46 kV, constant power factor mode as prescribed by the Transmission Owner / Operator. All other requirements of BPO-1 apply.

Exemption Criteria: For units meeting one or more of the following five critera, exemption on following a voltage or Reactive Power schedule and from having to make any associated notifications will be considered and possibly granted by PCC.

1. Units interconnected to the transmission system at less than 100 kV, or
2. Units with less than 20 MVA of capacity, or
3. Generating Sites with less than 100 MVA of total capacity, or
4. Co-generation facilities which have significant customer load served from the generator bus, or
5. Units with a capacity factor less than 0.5%.

Reasons for not granting exemptions even when meeting one or more of the Exemption Criteria could include:

a) though interconnected at less than 100 kV, the MVA capacity of the interconnected unit(s) is significant
b) though an individual unit(s) may have a rating of less than 20 MVA, the sum total of units in the area is signficant
c) the facility is determined to have material influence on the voltage in the transmission system where it is connected
d) generation is located in a region that studies indicate the dynamic Mvar support could be needed for certain scenarios
e) operational experience has shown the need for dynamic Mvar support and/or steady state voltage profile support in the region

Automatic Voltage Regulator (AVR) Exemption Criteria:

1. Request for exemption will be considered by the PCC for units > 40 years old interconnected 115 kV or below with non-functioning or non-existent AVRs and Transmission Planning studies have not indicated a reliablity need to install new AVRs Granted exemptions would include the GOP not having to make any associated notifications
2. Units that the PCC instructs to operate at "unity power factor" are automatically exempted from being in voltage control mode and from having to make any associated notification of not operating in voltage control mode
3. Requests for exemptions for units having its automatic voltage requlator in service or from being in voltage control mode and from having to make any associated notifications, especially during normal startup and shutdown, will be considered by the PCC

Specific Exemptions

The following additional units have requested exemption from maintaining a specific voltage schedule or from having a voltage regulator in serviceand have been reviewed and approved by the Transmission Operator. If equipped, these units are nonetheless required to operate in automatic voltage control mode or, if connected to 44/46 kV, constant power factor mode as prescribed by the Transmission Owner / Operator. All other requirements of BPO-1 apply.

Plant	ID	MVA	kV	Comments
Monsanto	A	108.3	115	Voltage Schedule Exemption - Co-gen Qualified Facility primarily serving local industrial load
Champion	A	28	115	Voltage Schedule Exemption - Co-gen Qualified Facility primarily serving local industrial load
Stone Container	A	10	115	Voltage Schedule Exemption - Co-gen Qualified Facility primarily serving local industrial load
Bay County	A	13	115	Voltage Schedule Exemption - Co-gen Qualified Facility primarily serving local industrial load
Pea Ridge	1	14	115	Voltage Schedule Exemption - <100 MVA at site

Southern Balancing Area Voltage Schedule and Voltage Regulator Exemptions

GEORGIA

4/6/2017

Unless specifically listed in the SBA Voltage Schedules in Appendix A, the Transmission Operator has determined that generators comprising the following classes will be exempt from maintaining a specific voltage schedule. If equipped, these units are nonetheless required to operate in automatic voltage control mode or, if connected to 44/46 kV, constant power factor mode as prescribed by the Transmission Owner / Operator. All other requirements of BPO-1 apply.

Exemption Criteria: For units meeting one or more of the following five critera, exemption on following a voltage or Reactive Power schedule and from having to make any associated notifications will be considered and possibly granted by PCC.

1. Units interconnected to the transmission system at less than 100 kV, or
2. Units with less than 20 MVA of capacity, or
3. Generating Sites with less than 100 MVA of total capacity, or
4. Co-generation facilities which have significant customer load served from the generator bus, or
5. Units with a capacity factor less than 0.5%.

Reasons for not granting exemptions even when meeting one or more of the Exemption Criteria could include:

a) though interconnected at less than 100 kV, the MVA capacity of the interconnected unit(s) is significant
b) though an individual unit(s) may have a rating of less than 20 MVA, the sum total of units in the area is signficant
c) the facility is determined to have material influence on the voltage in the transmission system where it is connected
d) generation is located in a region that studies indicate the dynamic Mvar support could be needed for certain scenarios
e) operational experience has shown the need for dynamic Mvar support and/or steady state voltage profile support in the region

Automatic Voltage Regulator (AVR) Exemption Criteria:

1. Request for exemption will be considered by the PCC for units > 40 years old interconnected 115 kV or below with non-functioning or non-existent AVRs and Transmission Planning studies have not indicated a reliablity need to install new AVRs Granted exemptions would include the GOP not having to make any associated notifications
2. Units that the PCC instructs to operate at "unity power factor" are automatically exempted from being in voltage control mode and from having to make any associated notification of not operating in voltage control mode
3. Requests for exemptions for units having its automatic voltage requlator in service or from being in voltage control mode and from having to make any associated notifications, especially during normal startup and shutdown, will be considered by the PCC

Specific Exemptions and Exceptions

The following additional units have requested exemption from maintaining a specific voltage schedule or from having a voltage regulator in service and have been reviewed and approved by the Transmission Operator. If equipped, these units are nonetheless required to operate in automatic voltage control mode or, if connected to 44/46 kV, constant power factor mode as prescribed by the Transmission Owner / Operator. All other requirements of BPO-1 apply.

Plant	ID	MVA	kV	Comments
Allatoona Dam	4	3	115	Voltage Schedule Exemption - For station service load
Barnett Shoals Dam		2.8	12	Voltage Schedule Exemption - Distribution System
Boulevard	1	22	115	Voltage Schedule Exemption - <100 MVA at site
Buford Dam	3	7.87	115	Voltage Schedule Exemption - For station service load
Burton Dam		6.12	46	Voltage Schedule Exemption - Sub-Transmission System
Butler Solar Farm (Fall Line)		19.6	46	Voltage Schedule Exemption - Sub-Transmission System
Camilla Solar		16	46	Voltage Schedule Exemption - Sub-Transmission System
Crisp County Dam	1~3	25	46	Voltage Schedule Exemption - Sub-Transmission System
Decatur County Solar		19.4	12	Voltage Schedule Exemption - Distribution System
Estatoah Dam		0.24	25	Voltage Schedule Exemption - Distribution System
Flint River Dam	1~3	7	46	Voltage Schedule Exemption - Sub-Transmission System
Glynn Solar		17.68	12	Voltage Schedule Exemption - Distribution System
Goat Rock Dam	5~6	6.25	115	Voltage Regulator Exemption (no voltage regulator in service [no ability for AVR or voltage control mode])
Fort Benning - Dove Solar		29.8	46	Voltage Schedule Exemption - Sub-Transmission System
Lancaster		22	115	Voltage Schedule Exemption
Langdale Dam		1.04	12	Voltage Schedule Exemption - Distribution System
Lloyd Shoals	1~6	14.4	12	Voltage Schedule Exemption - Distribution System
McDonough	CT 3A	46.5	115	Voltage Schedule Exemption - Expected to run < 25 hours a year
McDonough	CT 3B	46.5	230	Voltage Schedule Exemption - Expected to run < 25 hours a year
Morgan Falls Dam		17	20	Voltage Schedule Exemption - Distribution System
Nacoochee Dam		4.8	46	Voltage Schedule Exemption - Sub-Transmission System
North Highlands Dam	1~4	46	12	Voltage Schedule Exemption - Distribution System
Old Midville Road Solar		20	46	Voltage Schedule Exemption - Sub-Transmission System
Paw Paw Solar		30	46	Voltage Schedule Exemption - Sub-Transmission System
Pine Ridge LFGTE Plant		6.3	115	Voltage Schedule Exemption- Less than 20 MVA of capacity
Port Wentworth Biomass		20	46	Voltage Schedule Exemption - Sub-Transmission System
Richland Creek Landfill		10.5	115	Voltage Schedule Exemption- Less than 20 MVA of capacity
Rincon Solar		15.7	230	Voltage Schedule Exemption- Less than 20 MVA of capacity
Riverview Dam		0.48	12	Voltage Schedule Exemption - Distribution System
SR Hazelhurst		19	25 / 115	Voltage Schedule Exemption
Wansley	CT 5A	58.667	115	Voltage Schedule Exemption - Expected to run < 25 hours a year
West Point Dam	1	3.75	115	Voltage Schedule Exemption - For station service load

Exception:

Plant	ID	MVA	kV	Comments
Vogtle	2	1350	500	The voltage schedule for the in service 500 kV connected unit may be asked to hold the 230 kV bus voltage schedule (instead of continuing to hold the original 500 kV schedule)
Hatch	2	1050	500	The voltage schedule for the in service 500 kV connected unit may be asked to hold the 230 kV bus voltage schedule (instead of continuing to hold the original 500 kV schedule)

Southern Balancing Area Voltage Schedule and Voltage Regulator Exemptions

MISSISSIPPI

4/6/2017

Unless specifically listed in the SBA Voltage Schedules in Appendix A, the Transmission Operator has determined that generators comprising the following classes will be exempt from maintaining a specific voltage schedule. If equipped, these units are nonetheless required to operate in automatic voltage control mode or, if connected to 44/46 kV, constant power factor mode as prescribed by the Transmission Owner / Operator. All other requirements of BPO-1 apply.

Exemption Criteria: For units meeting one or more of the following five critera, exemption on following a voltage or Reactive Power schedule and from having to make any associated notifications will be considered and possibly granted by PCC.

1. Units interconnected to the transmission system at less than 100 kV, or
2. Units with less than 20 MVA of capacity, or
3. Generating Sites with less than 100 MVA of total capacity, or
4. Co-generation facilities which have significant customer load served from the generator bus, or
5. Units with a capacity factor less than 0.5%.

Reasons for not granting exemptions even when meeting one or more of the Exemption Criteria could include:

a) though interconnected at less than 100 kV, the MVA capacity of the interconnected unit(s) is significant
b) though an individual unit(s) may have a rating of less than 20 MVA, the sum total of units in the area is signficant
c) the facility is determined to have material influence on the voltage in the transmission system where it is connected
d) generation is located in a region that studies indicate the dynamic Mvar support could be needed for certain scenarios
e) operational experience has shown the need for dynamic Mvar support and/or steady state voltage profile support in the region

Automatic Voltage Regulator (AVR) Exemption Criteria:

1. Request for exemption will be considered by the PCC for units > 40 years old interconnected 115 kV or below with non-functioning or non-existent AVRs and Transmission Planning studies have not indicated a reliablity need to install new AVRs Granted exemptions would include the GOP not having to make any associated notifications
2. Units that the PCC instructs to operate at "unity power factor" are automatically exempted from being in voltage control mode and from having to make any associated notification of not operating in voltage control mode
3. Requests for exemptions for units having its automatic voltage requlator in service or from being in voltage control mode and from having to make any associated notifications, especially during normal startup and shutdown, will be considered by the PCC

Specific Exemptions

The following additional units have requested exemption from maintaining a specific voltage schedule or from having a voltage regulator in service and have been reviewed and approved by the Transmission Operator. If equipped, these units are nonetheless required to operate in automatic voltage control mode or, if connected to 44/46 kV, constant power factor mode as prescribed by the Transmission Owner / Operator. All other requirements of BPO-1 apply.

Plant	ID	MVA	kV	Comments