November 16, 2018

VIA ELECTRONIC FILING

The Honorable Jocelyn Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive
Columbia, SC 29210

Re: Friends of the Earth and Sierra Club, Complainant/Petitioner v. South Carolina Electric & Gas Company, Defendant/Respondent
Docket No. 2017-207-E

Request of the South Carolina office of Regulatory Staff for Rate Relief to SCE&G Rates Pursuant to S.C. Code Ann. § 58-27-920
Docket No. 2017-305-E

Joint Application and Petition of South Carolina Electric & Gas Company and Dominion Energy, Inc. for review and approval of a proposed business combination between SCANA Corporation and Dominion Energy, Inc., as may be required, and for a prudency determination regarding the abandonment of the V.C. Summer Units 2 & 3 Project and associated merger benefits and cost recovery plans
Docket No. 2017-370-E

Dear Ms. Boyd:

Enclosed for filing on behalf of South Carolina Electric & Gas Company is a red-lined version and a clean version of the Corrected Exhibit__ (JWR-3) with regard to the Direct Testimony and Exhibits of Joseph Wade Richards filed in Docket No. 2017-370-E.

By copy of this letter and per the electronic service agreement in the above-captioned dockets, we are serving a copy of the red-lined version and clean version upon the parties of record.

(Continued, ...)
If you have any questions, please advise.

Very truly yours,

Matthew W. Gissendanner

MWG/kms
Enclosure

cc: All parties of record in Docket No. 2017-207-E
All parties of record in Docket No. 2017-305-E
All parties of record in Docket No. 2017-370-E
(via electronic mail only w/enclosure)
Preface

In the System Impact Studies (SIS) performed to evaluate interconnection of V.C. Summer Units #2 and #3, Power Flow analyses were performed. The Transmission Upgrade Projects, which will all be completed by the third quarter of 2018 January of 2019, were identified in the SIS reports due to the additional generation. Transmission Planning has now performed thorough studies of the SCE&G system without these upgrades and without V.C. Summer Units #2 and #3 and populated the following report.

Power Flow Analysis

N-1 Scenario

Without the Transmission Upgrade Projects in place, the SCE&G system has the following thermally heavily loaded facilities (>90%):

- Canadys - Church Creek 230 kV line
- Canadys - Goose Creek 230 kV line
- Canadys - SRS 230 kV line
- Colit - Edenwood 115 kV #2 line
- Edmund SIS - Owens Corning 115 kV line
- McMechin - Saluda Hydro 115 kV line
- Orangeburg East - St. George 115 kV #1 line
- Owens Corning - Toolebeck 115 kV line
- St. George - St. George 115 kV #1 SCPSA Tieline
- St. George - St. George 115 kV #2 SCPSA Tieline
- Stevens Creek - Thurmond 115 kV SEPA Tieline
- Urquhart - Toolebeck 115 kV line
- Orangeburg East 230/115 kV #1 Transformer
- Orangeburg East 230/115 kV #2 Transformer

Without the Transmission Upgrade Projects in place, the SCE&G system has the following thermally overloaded facilities:

- Dunbar Road - Orangeburg East 115 kV line (103%)
- Killian - Pineland 115 kV #2 line (104%)
- McMechin - Lyles 115 kV line (112%)
- Okatie - McIntosh 115 kV SOCO Tieline (103%)
- Canadys 230/115 kV Transformer (112%)

N-1-1 and N-2 Scenarios

Without the Transmission Upgrade Projects in place, the SCE&G system has the following thermally heavily loaded facilities (>90%):

- Canadys - Goose Creek 230 kV line
- Church Creek - Faber Place 115 kV line
- Graniteville - Ward 230 kV line
- Graniteville #2 - Toolebeck 115 kV line
- Parr - Denny Terrace 115 kV #2 line
- Ritter - Yemassee 230 kV line
- Saluda Hydro - Bush River 115 kV #1 DEC Tieline
- Saluda Hydro - Bush River 115 kV #2 DEC Tieline
Without the Transmission Upgrade Projects in place, the SCE&G system has the following thermally overloaded facilities:

- Barnwell – Denmark 115 kV line (101%)
- Canadys – Church Creek 230 kV line (119%)
- Canadys – SRS 230 kV line (102%)
- Coit – Edenwood 115 kV #2 line (100%)
- Coit – Williams Street 115 kV line (104%)
- Cope – Denmark 115 kV line (107%)
- Dunbar Terrace – Lyles 115 kV #2 line (106%)
- Dunbar Road – Orangeburg East 115 kV line (104%)
- Edenwood – Edmund SS 115 kV line (106%)
- Edmund SS – Owens Corning 115 kV line (100%)
- Jasper – Yemassee 230 kV #1 line (102%)
- Jasper – Yemassee 230 kV #2 line (102%)
- Killian – Pineland 115 kV #2 line (157%)
- McMeekin – Lake Murray 115 kV line (106%)
- McMeekin – Lyles 115 kV line (189%)
- McMeekin – Saluda Hydro 115 kV line (111%)
- Okatie – McIntosh 115 kV SOCO Tieline (103%)
- Orangeburg East – St. George 115 kV #1 line (125%)
- Stevens Creek – Thurmond 115 kV SEPA Tieline (101%)
- Canadys 230/115 kV Transformer (109%)
- Cope 230/115 kV Transformer (101%)
- Killian 230/115 kV Transformer (101%)
- Orangeburg East 230/115 kV #1 Transformer (116%)
- Orangeburg East 230/115 kV #2 Transformer (116%)
- Pineland 230/115 kV #1 Transformer (103%)
- Pineland 230/115 kV #2 Transformer (103%)

**Summary**

For the cases without the Transmission Upgrade Projects in service, approximately 97 miles of 115 kV line, approximately 124 miles of 230 kV line and one transformer with a total of 224 MVA are heavily loaded; and approximately 180 miles of 115 kV line, approximately 171 miles of 230 kV line and seven transformers with a total of 2128 MVA capacity are overloaded.

These results back the statement that SCE&G's system is more reliable with the Transmission Upgrade Projects in service.
Preface

In the System Impact Studies (SIS) performed to evaluate interconnection of V.C. Summer Units #2 and #3, Power Flow analyses were performed. The Transmission Upgrade Projects, which will all be completed by January of 2019, were identified in the SIS reports due to the additional generation. Transmission Planning has now performed thorough studies of the SCE&G system without these upgrades and without V.C. Summer Units #2 and #3 and populated the following report.

Power Flow Analysis

N-1 Scenario

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- Edmund SIS– Owens Corning 115 kV line
- McMeekin– Saluda Hydro 115 kV line
- Orangeburg East– St. George 115 kV #1 line
- Owens Corning– Toolebeck 115 kV line
- St. George– St. George 115 kV #1 SCPSA Tieline
- St. George– St. George 115 kV #2 SCPSA Tieline
- Stevens Creek– Thurmond 115 kV SEPA Tieline
- Urquhart– Toolebeck 115 kV line
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- Parr– Denny Terrace 115 kV #2 line
- Ritter– Yemassee 230 kV line
- Saluda Hydro– Bush River 115 kV #1 DEC Tieline
- Saluda Hydro– Bush River 115 kV #2 DEC Tieline
VCS1 – Blythewood 230 kV SCSPA Tieline
VCS1 – Parr 230 kV #1 line
VCS1 – Parr 230 kV #2 line
VCS1 – Ward 230 kV line
Wateree – Sumter 230 kV DEP Tieline
Yemassee – Yemassee 230 kV SCSPA Tieline
Church Creek 230/115 kV #3 Transformer

Without the Transmission Upgrade Projects in place, the SCE&G system has the following thermally overloaded facilities:

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- Cope – Denmark 115 kV line (107%)
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