Diamond Williams

100304-EU

From: Marchman, Vickie L. [VLMARCHM@southernco.com]

Sent: Wednesday, February 16, 2011 11:40 AM

To: Filings@psc.state.fl.us

Subject: Gulf Power Company's Expedited Motion for Extension of Time to File Direct Testimony

Attachments: 2011-2-16 Motion for Extension of Time to File Direct Testimony.pdf

A. s/Susan D. Ritenour
Gulf Power Company
One Energy Place
Pensacola FL 32520
850.444.6231
Sdriteno@southernco.com

B. Docket No. 1100304-EU

C. Gulf Power Company

D. Document consists of 23 pages.

E. The attached document is Gulf Power Company's Expedited Motion for Extension of Time to File Direct Testimony.

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Susan D. Ritenour
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GULF POWER
A SOUTHERN COMPANY

February 16, 2011

Ms. Ann Cole
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee FL 32399-0850

Dear Ms. Cole:

RE: Docket No. 100304-EU

Enclosed is Gulf Power Company's Expedited Motion for Extension of Time to File Direct Testimony, filed by electronic mail in the above referenced docket.

Sincerely,

Susan Ritenour

vm

Enclosure

cc: Beggs & Lane
Jeffrey A. Stone

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: Territorial Dispute Between Choctawhatchee Electric Cooperative, Inc. and Gulf Power Company	))))	Docket No. 100304-EU

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the foregoing was furnished by electronic mail this 16th day of February, 2011, on the following:

MS. LEIGH V. GRANTHAM
CHOCTAWHATCHEE ELECTRIC COOP., INC.
P. O. BOX 512
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WTHOMPSON@CHELCO.COM

NORMAN H. HORTON, JR./G. EARLY
MESSER LAW FIRM
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RALPH R JAEGER, ESQ.
FL PUBLIC SERVICE COMMISSION
2540 SHUMARD OAK BLVD
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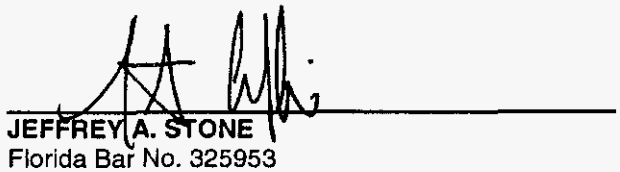

JEFFREY A. STONE
Florida Bar No. 325953
RUSSELL A. BADDERS
Florida Bar No. 007455
STEVEN R. GRIFFIN
Florida Bar No. 0627569
BEGGS & LANE
P. O. Box 12950
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(850) 432-2451
Attorneys for Gulf Power Company

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Territorial Dispute Between Choctawhatchee Electric Cooperative, Inc. and Gulf Power Company	))))	Docket No. 100304-EU Date: February 16, 2011

EXPEDITED MOTION FOR EXTENSION OF TIME TO FILE DIRECT TESTIMONY

Gulf Power Company ("Gulf Power" or "Gulf"), by and through its undersigned counsel, hereby moves for an extension of time for the filing of direct testimony in this proceeding, or in the alternative, for a stay of the testimonial deadlines pending the Commission's resolution of Gulf's Motion for Final Summary Order. In support thereof, Gulf Power states as follows:

1. The current deadline for filing direct testimony of the parties is February 21, 2011.

2. On the afternoon of February 15, 2011, Choctawhatchee Electric Cooperative, Inc. ("CHELCO") electronically filed Supplemental Responses to Gulf Power Company's First Request for Production of Documents (Item No. 3) and Third Set of Interrogatories (Item No. 55) (the "Supplemental Production").[1] See, Document No. 01039-11.

3. The Supplemental Production includes a two-page revision to a July 2010 engineering study by Patterson Dewar Engineers, Inc. which was commissioned by CHELCO for the specific purpose of determining whether CHELCO's existing electric system is capable of handling the load associated with the Freedom Walk Development. The Supplemental Production also apparently includes a CD-ROM containing additional information. Because the CD-ROM was sent by U.S. Mail, Gulf has yet to receive it and review its contents.

[1] A true and correct copy of CHELCO's written supplemental response is attached as Exhibit "1." It is worth noting that the two-page revision is dated February 1, 2011 --fourteen days before this information was provided to Gulf.

4. The original engineering study was provided by CHELCO to Gulf Power on August 3, 2010, in response to Gulf Power's First Request for Production of Documents.[2] The original engineering study addressed the changes CHELCO would need to make to its electric system based on an assumption that the load of the Freedom Walk Development upon full build-out would equal 3,700 kilowatts. This load projection is consistent with the load projection used by CHELCO in its petition. (CHELCO Petition at ¶ 8)

5. Based on CHELCO's Supplemental Production, it now appears that CHELCO has revised its engineering study --and perhaps other analyses-- based on an assumption that the load of the Freedom Walk Development upon full build-out will be 4,700 kilowatts. This change represents a 27% increase (equivalent to 1 megawatt) in planned load for the development.

6. The information contained in CHELCO's Supplemental Production directly impacts a number of specifically identified issues in this proceeding, including: (1) the planned load to be served in the Freedom Walk Development; (2) the necessary facilities and associated costs for CHELCO to extend service to the Freedom Walk Development; (3) whether the provision of service to the Freedom Walk Development by Gulf or CHELCO will result in uneconomic duplication of existing facilities; and (4) whether each utility is capable of providing adequate and reliable service to the Freedom Walk Development.

7. In developing its direct testimony, Gulf Power has relied upon the data and analysis contained in CHELCO's original engineering study. In light of the fact that this analysis has now changed, Gulf Power needs additional time to review the supplemental information -- some of which Gulf has yet to even see-- and modify its testimony accordingly. In the absence of an extension, Gulf Power will be required to mail its direct testimony on Friday, February 18. This will result in substantial prejudice to Gulf Power.

[2] A true and correct copy of CHELCO's July 2010 engineering study is attached as Exhibit "2."

8. For the foregoing reasons, Gulf Power respectfully requests that the Commission extend the deadline for the parties to file direct testimony for a period of ten days –March 3, 2011. In the alternative, Gulf requests that the Commission stay the deadlines for filing testimony until it has issued a ruling on Gulf Power's pending Motion for Summary Final Order.

9. Gulf Power has conferred with CHELCO and is authorized to represent that CHELCO does not object to the primary relief sought herein, but does object to the alternative relief sought herein.

10. Gulf Power respectfully requests an expedited ruling on this motion.

Respectfully submitted this 16th day of February, 2011.

JEFFREY A. STONE
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RUSSELL A. BADDERS
Florida Bar No.: 007455
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Florida Bar No.: 0627569
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(850) 432-2451
Attorneys for Gulf Power Company

EXHIBIT "1"

M C
& S
MESSER CAPARELLO & SELF, P.A.
Attorneys At Law
www.lawfla.com

February 15, 2011

BY ELECTRONIC FILING
Ms. Ann Cole, Director
Commission Clerk and Administrative Services
Room 110, Easley Building
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Re: Docket No. 100304-EU

Dear Ms. Cole:

Enclosed for filing on behalf of Choctawhatchee Electric Cooperative, Inc. is an electronic version of Choctawhatchee Electric Cooperative, Inc.'s Notice of Serving its Supplemental Responses to Gulf Power Company's First Request for Production of Documents (Item No. 3) and Third Set of Interrogatories (Item No. 55) in the above referenced docket.

Thank you for your assistance.

Sincerely,

Norman H. Horton, Jr.

NHH/amb
Enclosure
cc: Ms. Leigh V. Grantham
Parties of Record

Regional Center Office Park / 2618 Centennial Place / Tallahassee, Florida 32308
Mailing Address: P.O. Box 15579 / Tallahassee, Florida 32317
Main Telephone: (850) 222-0720 / *Fax:* (850) 224-4359

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

Petition to resolve territorial dispute with Gulf Power Company in Okaloosa County by Choctawhatchee Electric Cooperative, Inc.	))))	Docket No.: 100304-EG Filed: February 15, 2011

CHOCTAWHATCHEE ELECTRIC COOPERATIVE, INC.'S NOTICE OF SERVING SUPPLEMENTAL RESPONSES TO GULF POWER COMPANY'S FIRST REQUEST FOR PRODUCTION OF DOCUMENTS (ITEM NO. 3) AND THIRD SET OF INTERROGATORIES (ITEM NO. 55)

Choctawhatchee Electric Cooperative, Inc.'s ("CHELCO") by and through its undersigned counsel, hereby files and serves Notice that it has served its Supplemental Responses to Gulf Power Company's First Request for Production of Documents (Item No. 3) and Third Set of Interrogatories (Item No. 55) by electronic mail and U. S. Mail on Steven R. Griffin., Beggs and Lane, 501 Commendencia Street, Pensacola, FL 32502-5953 on this 15th day of February, 2011.

Respectfully Submitted,

Norman H. Horton, Jr.
Messer, Caparello & Self, P.A.
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Attorneys for Choctawhatchee Electric Cooperative, Inc.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

Petition to resolve territorial dispute with Gulf Power Company in Okaloosa County by Choctawhatchee Electric Cooperative, Inc.	)	Docket No.: 100304-EU

CHOCTAWHATCHEE ELECTRIC COOPERATIVE, INC.'S SUPPLEMENTAL RESPONSES TO GULF POWER COMPANY'S FIRST REQUEST FOR PRODUCTION OF DOCUMENTS (ITEM NO. 3) AND THIRD SET OF INTERROGATORIES (ITEM NO. 55)

Comes Now, Choctawhatchee Electric Cooperative, Inc. ("CHELCO") and serves this supplemental responses to Gulf Power Company's First Request for Production of Documents (Item No. 3) and Third Set of Interrogatories (Item No. 55).

FIRST REQEST FOR PRODUCTION OF DOCUMENTS

3. Please provide copies of all correspondence or other documents generated by Chelco agents or employees which mention or pertain to the Freedom Walk Development.

CHELCO'S RESPONSE: See attached. Supporting CD-ROM will be forwarded to parties.

THIRD SET OF INTERROGATORIES

55. Chelco objected to Gulf's interrogatory number 51 on the ground that project 300-RU 10-01 in Chelco's 2011-2014 CWP "would be built whether Freedom Walk is developed or not." Please provide all data which support Chelco's conclusion that the project 300-RU 10-01 will be undertaken regardless of whether Freedom Walk is developed, including a year-by-year forecast of peak load to be served by the feeder both with and without the Freedom Walk Development included and all related assumptions and planning criteria.

CHELCO'S RESPONSE: See attached. Supporting CD-ROM will be forwarded to parties.

RESPECTFULLY SUBMITTED this 15th day of February, 2011.

NORMAN H. HORTON, JR.
Florida Bar No. 156386
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Florida Bar No 325147
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Attorneys for Choctawhatchee Electric Cooperative, Inc.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been served on the following parties by Electronic Mail and/or U. S. Mail this 15th day of February, 2011.

Ralph Jaeger, Esq.
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P.O. Box 512
DeFuniak Springs, FL 32435-0512

Ms. Susan D. Ritenour
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Norman H. Horton, Jr.

CHOCTAWHATCHEE ELECTRIC COOPERATIVE, INC.
Florida 30
DeFuniak Springs, Florida
Engineering Study for Freedom Walk Development
Modeled Using 4,700 kW
February 1, 2011

General Information
Description: New subdivision with an estimated load of 4,700 kW to be served in 2011
Location: Near the intersection of Roberts Ave., & Old Bethel Road
Substation/circuit: Auburn substation, circuit 03

Analysis Results[1]

	2009 Peak Summer Model BSI[2]	2014 Peak Summer Model BSI[2]	2014 Peak Summer Model ASI[2]	2009 Peak Winter Model BSI[2]	2014 Peak Winter Model BSI[2]	2014 Peak Winter Model ASI[2]
Base System	Auburn Sub: 14,570 kW or 78% loaded Laurel Hill Sub: 4,550 kW or 61% loaded Conductor: 741 AAAC loaded to 291 A or 37% and 394 AAAC loaded to 55% and small section of 750 MCM UG (along Phil Tyner Road) loaded to 122 A or 27%. Voltage drop: Auburn sub ckt 03 meets CHELCO's SDOC[3].	Auburn Sub: 16,717 kW or 84% loaded Laurel Hill Sub: 4,919 kW or 66% loaded Conductor: 741 AAAC loaded to 383 A or 42%, 394 AAAC loaded to 63% and small section of 750 MCM UG (along Phil Tyner Road) loaded to 137 A or 30% Voltage drop on Auburn sub ckt 03 meets CHELCO's SDOC[3]	Auburn Sub: 16,717 kW or 84% loaded Laurel Hill Sub: 4,919 kW or 66% loaded Conductor: 741 AAAC loaded to 335 A or 42%, and small section of 750 MCM UG (along Phil Tyner Road) loaded to 137 A or 30% Voltage drop on Auburn sub ckt 03 meets CHELCO's SDOC[3]	Auburn Sub: 18,240 kW or 91% loaded Laurel Hill Sub: 5,800 kW or 77% loaded Conductor: 741 AAAC loaded to 327 A or 41% and 394 AAAC loaded to 61% and small section of 750 MCM UG (along Phil Tyner Road) loaded to 314 A or 69% Voltage drop on Auburn sub ckt 03 meets CHELCO's SDOC[3]	Auburn Sub: 20,641 kW or 103% loaded Laurel Hill Sub: 6,223 kW or 84% loaded Conductor: 741 AAAC loaded to 377 A or 48%, 394 AAAC loaded to 71% and small section of 750 MCM UG (along Phil Tyner Road) loaded to 155 A or 34% Voltage drop on Auburn sub ckt. 03 meets CHELCO's SDOC[3]	Auburn Sub: 20,641 kW or 103% loaded Laurel Hill Sub: 6,223 kW or 84% loaded Conductor: 741 AAAC loaded to 377 A or 48%, and small section of 750 MCM UG (along Phil Tyner Road) loaded to 155 A or 34% Voltage drop on Auburn sub ckt. 03 meets CHELCO's SDOC[3]
2011-2014 CWP Recommendations	This is referred to as the Base model for the CWP. The base model is grown to a future 2014 load (per the 2009 Load Forecast) and CWP projects are recommended based on the grown loads. See next column for summer 2014 recommendations.	Follow the capacitor placement recommendations in the 2011-2014 CWP and complete project 300-RU10-01 from the 2011-2014 CWP in 2014. Project 300-RU10-01 was recommended because the load on the 394 AAAC exceeds the SDOC and because it makes engineering sense to carry the 741 AAAC down to where the load splits almost 50/50.	No additional recommendations. The purpose of this column is to show how the system looks as a result of completing the recommended projects in the previous column, 2014 Peak Summer Model BSI.	This is referred to as the Base model for the CWP. The base model is grown to a future 2014 load (per the 2009 Load Forecast) and CWP projects are recommended based on the grown loads. See next column for winter 2014 recommendations.	No additional recommendations due to 2014 winter peak loads. Only recommendation is to follow the recommendations for 2014 Peak Summer Model BSI.	No additional recommendations. The purpose of this column is to show how the system looks as a result of completing the recommended projects in the previous column, 2014 Peak Winter Model BSI.
Base System w/ New Load	Auburn Sub: 19,226 kW or 96% loaded Laurel Hill Sub: 4,550 kW or 61% loaded Conductor: 741 AAAC loaded to 507 A or 64% and 394 AAAC loaded to 95% and 750 MCM UG loaded to 344 A or 75% Voltage drop: 114 V at the end of Auburn ckt 3, beyond new load. CWP project 300-RU10-01 will improve the voltage or add voltage regulators.	Auburn Sub: 21,225 kW or 106% loaded Laurel Hill Sub: 4,919 kW or 66% loaded Conductor: 741 AAAC loaded to 549 A or 69%, 394 AAAC loaded to 103% and 750 MCM UG loaded to 361 A or 79% Voltage drop: 113 V at the end of Auburn ckt 3, beyond new load. CWP project 300-RU10-01 will improve the voltage.	Auburn Sub: 21,399 kW or 107% loaded Laurel Hill Sub: 4,919 kW or 66% loaded Conductor: 741 AAAC loaded to 553 A or 70% and 750 MCM UG loaded to 358 A or 78% Voltage drop: Meets CHELCO's system design and operating criteria.	Auburn Sub: 22,928 kW or 115% loaded Laurel Hill Sub: 5,800 kW or 77% loaded Conductor: 741 AAAC loaded to 545 A or 69% and 394 AAAC loaded to 102% and 750 MCM UG loaded to 359 A or 79% Voltage drop: 113 V at the new load and downstream from it. CWP project 300-RU10-01 will improve most of the low voltage, with voltage regulators needed downline from the new load. Also, the project is needed b/c the 394 will be overloaded with the development at full capacity.	Auburn Sub: 25,270 kW or 126% loaded Laurel Hill Sub: 6,223 kW or 84% loaded Conductor: 741 AAAC loaded to 588 A or 75%, 394 AAAC loaded to 111% and 750 MCM UG loaded to 377 A or 82% Voltage drop: 113 V at the end of Auburn ckt 3, beyond new load. CWP project 300-RU10-01 will improve the voltage and also the capacitor placement recommendations in the CWP. May need to add additional capacitors.	Auburn Sub: 25,522 kW or 127% loaded Laurel Hill Sub: 6,223 kW or 84% loaded Conductor: 741 AAAC loaded to 598 A or 76% and 750 MCM UG loaded to 378 A or 83% Voltage drop: On some single phase taps on Auburn ckt 03 is 114 V, beyond new load. Everything else meets SDOC.
Results of All Recommendations (CWP and recommendations as a result of new load)	Auburn Sub: 19,226 kW or 96% loaded Laurel Hill Sub: 4,550 kW or 61% loaded Conductor: 741 AAAC loaded to 507 A or 64% and 750 MCM UG loaded to 344 A or 75% Voltage drop: Meets CHELCO's SDOC once voltage regulators are added downline from new load or project 300-RU10-01 is	Auburn Sub: 19,970 kW or 100% loaded Laurel Hill Sub: 6,332 kW or 84% loaded Conductor: Auburn ckt. 03: 741 AAAC loaded to 542 A or 69% and 750 MCM UG loaded to 358 A or 78%. Auburn ckt. 02: 394 AAAC loaded to 342 A or 64%. Laurel Hill ckt. 05: 1/0 AAAC loaded to 144 A or 62%. Voltage drop: Meets CHELCO's SDOC Additional Recommendations/Comments: See Note below.	see note above	Auburn Sub: 23,081 kW or 115% loaded Laurel Hill Sub: 5,800 kW or 77% loaded Conductor: 741 AAAC loaded to 552 A or 70% and 750 MCM UG loaded to 366 A or 80%. Voltage drop: Meets CHELCO's SDOC once voltage regulators are added downline from new load and project 300-RU10-01 is completed.	Auburn Sub: 23,463 kW or 117% loaded Laurel Hill Sub: 7,952kW or 107% loaded Conductor: 741 AAAC loaded to 584 A or 74% and 750 MCM UG loaded to 378 A or 83% Voltage drop: Meets CHELCO's SDOC Additional Recommendations/Comments: See Note below.	see note above

[1] 2009 base, before CWP system improvements and 2014 grown models, both before and after CWP system improvements from CHELCO's 2011-2014 CWP completed in May 2010
[2] System Design and Operating Criteria (SDOC) that was approved by CHELCO staff on January 12, 2010.
[3] Before system improvements (BSI) and After System improvements (ASI) are typical terms in CWPs. BSI is how the electric system is presently. ASI is how the electric system will be after the CWP projects are complete.

NOTE: For both the summer and winter 2014 ASI, the Auburn substation power transformer is carried to maximum capacity. Also, the lowside buswork at Auburn Substation circuit 03 is carried to its maximum capacity of 600A. It is for this reason that it is recommended that CHELCO and their G&T provider, PowerSouth EC evaluate substation options should Freedom Walk development be served by CHELCO and should it reach this estimated load of 4,700 kW. Options could be to upgrade the substation transformer at Auburn sub to a larger transformer or add a 2nd bank if there is room inside the substation or perhaps add a new delivery point to relieve the load on Auburn sub. Also, it is recommended that a 2nd circuit be constructed to help serve the load south of Auburn substation (if a new delivery point is not added nearby) to help serve the load south of Auburn substation and not exceed the rating on the lowside buswork and circuit breakers at the substation.

EXHIBIT "2"

Choctawhatchee Electric Cooperative, Inc.
DeFuniak Springs, Florida

Engineering Study for New Subdivision
Substation Recommendations

July 7, 2010

Results of Analysis: The analysis shows that CHELCO's existing electric system is capable of handling the additional 3,700 kW of load if it were added today. Should this additional load be added to CHELCO's system, it is recommended that CHELCO complete all Auburn Substation 2011-2014 Construction Work Plans in 2011 instead of 2014 to prepare for further growth in the area.

Data Used:

- The 2014 peak summer and 2014 peak winter Milsoft Windmil software models from CHELCO's 2011-2014 Construction Work Plan (CWP)
- The 2009 peak summer and 2009 peak winter Milsoft Windmil software base system models
- CHELCO's System Design & Operating Criteria

Details of Analysis:

A new subdivision with an anticipated load of 3,700 kW is to be located at the intersection of Roberts Avenue and Old Bethel Road. Should CHELCO serve this new load, Auburn Substation, circuit #3 would be the substation and circuit the new load would be served from.

Is CHELCO's system capable of serving this load today and into the future?

If so, what, if any, improvements would be necessary to serve this new load?

Patterson & Dewar (P&D) worked with CHELCO on their 2011-2014 Construction Work Plan, completed in May 2010. The 2014 peak summer and winter Milsoft Windmil models were used in this analysis along with CHELCO's existing base 2009 peak summer and winter models. CHELCO's System Design and Operating Criteria (SDOC) was also used. The portion of the SDOC that applies to this study is included below.

Substations:
The following maximum loading conditions as a percent of the full equipment nameplate ratings based on CHELCO's extreme load forecasts, are recommended. When these levels are projected to be exceeded, plans for uprating are to be scheduled:

Power Transformers - Summer loading – 100% continuous loading at 55° rating
Winter loading – 124% continuous loading at 55° rating

Conductor:
Primary conductors are not to be loaded for long periods of time, over 60% of operating capacity for summer loading conditions and 75% for winter.

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CHELCO's Supp. Resp. to
Gulf's 1st POD
Item No. 3, Page 2

Voltage Drop:

Voltage Ranges ANSI Standard C84.1 (120 volt base)

Range	Minimum			Maximum
	Utilization Voltage*		Service Voltage	Utilization & Service Voltage
	Non-lighting loads	Loads including lighting		
A	108	110	114	126
B	104	106	110	127

Where this new subdivision will be located, CHELCO already has a main 3-phase line that is presently serving customers on Roberts Avenue and Old Bethel Road. Adding this new 3,700 kW load would not require any additional 3-phase overhead construction to reach the new load. The only construction necessary would be for the new development itself.

Referring to the Excel document "new load analysis.xlsx", the 2009 peak summer and winter Windmil models:

Voltage Drop:
With the new load, there will be more voltage drop than without the new load (which is to be expected) but the additional drop in voltage is still within CHELCO's SDOC[1].

Conductor:
Some of the conductor, mainly the 394 AAAC will be loaded more than the SDOC recommends. In CHELCO's CWP that was completed in May 2010, it was already recommended (project 300-RU10-01) to upgrade this 394 AAAC to 741 AAAC; however, this recommendation was for 2014. Should CHELCO serve this new load, it is recommended that the CWP project 300-RU10-01 be completed in 2011 instead of 2014.

Substations:
Auburn substation will not exceed the SDOC for subs.

Referring to the Excel document "new load analysis.xlsx", the 2014[2] peak summer and winter Windmil models:

Voltage Drop:
With the new load, there will be more voltage drop than without the new load (which is to be expected) but the additional drop in voltage is still within CHELCO's SDOC. The voltage drop is not as low as with the 2009 models because the 2014 model includes capacitor recommendations and reconductoring recommendations from the CWP.

[1] The 2009 winter model shows one section of single phase conductor downline from the new load at 114 V. This is not unusual for winter peak conditions and typically only occurs for a short duration. Voltage drops that do not meet the SDOC, especially during winter peaks could happen anywhere on the system. Voltage drops that last for extended periods of time are easily addressed by adding voltage regulators.

[2] The 2014 peak summer and winter models include projected system growth for 2014 along with all recommended projects in the 2011-2014 CWP as if they were completed.

Conductor:
Some of the three phase 741 AAAC and 750 MCM UG conductor will be loaded more than the SDOC recommends but only by a small percentage (4%-8% more than the SDOC recommends). It should be noted that the SDOC is a guideline and is used as such. So, though the loading on the conductor is greater than the guideline, because it's only a small percentage greater, it is recommended that CHELCO not upgrade the conductor. Similar recommendations by P&D were made for other parts of CHELCO's system during the completion of their 2011-2014 CWP.

Substations:
Using 2014 grown loads, Auburn substation exceeds the SDOC for both the winter and summer models. While exceeding the SDOC guidelines for conductor is acceptable (within reason), doing so for substations is not recommended because substations can take up to a year or two before they are energized from the time the decision is made to add a new delivery point. Some things that a cooperative can do to relieve a heavily loaded substation; however, is switch load to nearby substations, uprate the existing power transformer or add a second power transformer.

In the case here, it is recommended to switch load to Laurel Hill substation to relieve Auburn sub and bring it back to within the SDOC guidelines. This is not an uncommon recommendation or approach for CHELCO as they used this very same approach with Santa Rosa Beach substation in an effort to delay the new substation, Hewett, for a few years.

Looking beyond 2014 and thus beyond the period of the 2011-2014 CWP, there may one day be a need to uprate the existing transformer in Auburn Substation or add a new delivery point, but with a projected load of 84% in the summer of 2014 and 105% in the winter of 2014 (not including the new 3,700 kW load), the possibility of adding a new delivery point nearby Auburn sub would have been evaluated regardless of this new load.

Docket 100304-EU
CHELCO's Supp. Resp.
to Gulf's 1st POD
Item No. 3, Page 5

CHOCTAWHATCHEE ELECTRIC COOPERATIVE, INC
Florida 30
DeFuniak Springs, Florida

Engineering Study for New Subdivision
July 7, 2010

General Information

Description: New subdivision with an estimated load of 3,700 kW to be served in 2010
Location: Near the intersection of Roberts Ave., & Old Bethel Road
Substation/circuit: Auburn substation, circuit 03

Analysis Results[1]

	2009 Peak Summer Model	2014 Peak Summer Model	2009 Peak Winter Model	2014 Peak Winter Model
Base System	Auburn Sub: 14,570 kW or 73% loaded Laurel Hill Sub: 4,550 kW or 61% loaded Conductor: 741 AAAC loaded to 291 A or 37% and 394 AAAC loaded to 55% and small section of 750 MCM UG (along Phil Tyner Road) loaded to 122 A or 27%. Voltage drop: Auburn sub ckt 03 meets CHELCO's SDOC[2].	Auburn Sub: 16,717 kW or 84% loaded Laurel Hill Sub: 4,919 kW or 66% loaded Conductor: 741 AAAC loaded to 335 A or 42%, and small section of 750 MCM UG (along Phil Tyner Road) loaded to 137 A or 30% Voltage drop on Auburn sub ckt 03 meets CHELCO's SDOC[2]	Auburn Sub: 18,240 kW or 91% loaded Laurel Hill Sub: 5,800 kW or 77% loaded Conductor: 741 AAAC loaded to 327 A or 41% and 394 AAAC loaded to 61% and small section of 750 MCM UG (along Phil Tyner Road) loaded to 314 A or 69% Voltage drop on Auburn sub ckt 03 meets CHELCO's SDOC[2]	Auburn Sub: 20,641 kW or 105% loaded Laurel Hill Sub: 6,223 kW or 84% loaded Conductor: 741 AAAC loaded to 377 A or 48%, and small section of 750 MCM UG (along Phil Tyner Road) loaded to 155 A or 34% Voltage drop on Auburn sub ckt. 03 meets CHELCO's SDOC[2]
Base System w/ New Load	Auburn Sub: 18,066 kW or 90% loaded Laurel Hill Sub: 4,550 kW or 61% loaded Conductor: 741 AAAC loaded to 463 A or 59% and 394 AAAC loaded to 87% and 750 MCM UG loaded to 300 A or 66% Voltage drop: Though still within SDOC, there is 115 V at the end of Auburn ckt 3, beyond new load on single phase line.	Auburn Sub: 20,225 kW or 101% loaded Laurel Hill Sub: 4,919 kW or 66% loaded Conductor: 741 AAAC loaded to 508 A or 64% and 750 MCM UG loaded to 313 A or 68% Voltage drop: Meets CHELCO's system design and operating criteria.	Auburn Sub: 21,736 kW or 109% loaded Laurel Hill Sub: 5,800 kW or 77% loaded Conductor: 741 AAAC loaded to 500 A or 63% and 394 AAAC loaded to 94% and 750 MCM UG loaded to 316 A or 69% Voltage drop: On one single phase tap on Auburn ckt 03 is 114 V, beyond new load. Everything else meets SDOC	Auburn Sub: 24,124 kW or 121% loaded Laurel Hill Sub: 6,223 kW or 84% loaded Conductor: 741 AAAC loaded to 554 A or 70% and 750 MCM UG loaded to 335 A or 73% Voltage drop: On one single phase tap on Auburn ckt 03 is 114 V, beyond new load. Everything else meets SDOC.
Recommendations	Follow the capacitor placement recommendations in the 2011-2014 CWP, but do the recommendations in 2011 and complete project 300-RU10-01 from the 2011-2014 CWP in 2011 instead of 2014.	Switch 1,050 kW from Auburn ckt. 01 to Laurel Hill ckt. 03 (making new open point near the intersection of Hwy 85 and Georgia Road). After load swap, on Laurel Hill ckt. 3, add 100 A voltage regulators on main 3 phase line near the intersection of Hwy 85 & Campton Street. In addition, on Auburn ckt. 3, it may be necessary to add capacitor banks upstream from the new load and/or voltage regulators downstream from the load; however, it's recommended that CHELCO monitor the circuit before doing this.	Follow recommendations for Summer 2009. In addition, on Auburn ckt. 3, it may be necessary to add capacitor banks upstream from the new load and/or voltage regulators downstream from the load; however, it's recommended that CHELCO monitor the circuit before doing this.	Follow recommendations for Summer 2014 model.
Results of Recommendations	Auburn Sub: 18,261 kW or 91% loaded Laurel Hill Sub: 4,550 kW or 61% loaded Conductor: 741 AAAC loaded to 465 A or 59% and 750 MCM UG loaded to 300 A or 66%. Voltage drop: Meets CHELCO's SDOC	Auburn Sub: 19,263 kW or 96% loaded Laurel Hill Sub: 5,595 kW or 75% loaded Conductor: No changes from 'Base System w/ New Load'. Voltage drop: Meets CHELCO's SDOC	Auburn Sub: 21,736 kW or 109% loaded Laurel Hill Sub: 5,800 kW or 77% loaded Conductor: 741 AAAC loaded to 500 A or 63% and 750 MCM UG loaded to 316 A or 69%. Voltage drop: Meets CHELCO's SDOC	Auburn Sub: 22,732 kW or 114% loaded Laurel Hill Sub: 7,525kW or 100% loaded Conductor: No changes from 'Base System w/ New Load'. Voltage drop: Meets CHELCO's SDOC

[1] 2009 base and 2014 grown models from CHELCO's 2011-2014 Construction Work Plan (CWP) completed in May 2010
[2] System Design and Operating Criteria

From: Nicole Mabe [mailto:NMabe@pdengineers.com]
Sent: Friday, July 02, 2010 2:22 PM
To: Matthew Avery
Subject: new 3,700 kW load

Matthew,

Attached are the results of my analysis of Auburn Substation with the additional 3,700 kW of residential load. I modeled the new load on 4 Milsoft models; summer 2009 base, summer 2014 after CWP system improvements, winter 2009 base and winter 2014 after system improvements.

One question, Matthew...what are the breakers rated for on ckt. 3, Auburn Sub?

Have a good holiday weekend!

J. Nicole Mabe, PE
Patterson & Dewar Engineers, Inc.
850 Center Way
Norcross, GA 30071
Phone: (770) 453-1410 Fax: (770) 453-1411
email: nmabe@pdengineers.com

General Information
New residential subdivision with estimated load of 3,700 kW
Substation: Auburn
Circuit: 03
Location: near the intersection of Roberts Ave. and Old Bethel Road

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2009 Summer Model

Base System
Auburn Sub: 14,570 kW or 73%
Laurel Hill Sub: 4,550 kW or 61%
Conductor Loading: 741 AAAC loaded to 291 A or 37% and 394 AAAC loaded to 55% and small section of 750 MCM UG (along Phil Tyner Road) loaded to 122 A or 27%
Voltage drop on Auburn sub ckt 03 meets CHELCO's system design and operating criteria

Base System w/ New Load
Auburn Sub: 18,066 kW or 90%
Conductor loading: 741 AAAC loaded to 463 A or 59% and 394 AAAC loaded to 87% and 750 MCM UG loaded to 300 A or 66%
Voltage drop at extremes as low as 115 V at the end of ckt 3

Recommendations:
Follow the CWP for the capacitor placements (do this in 2011 to help voltage) and do project 300-RU10-01 in 2011 instead of 2014.

Results of Recommendations:
Auburn Sub: 18,261 kW or 91%
Laurel Hill Sub: 4,550 kW or 61%
Conductor Loading: 741 AAAC will be loaded to 465 A or 59% and 750 MCM UG loaded to 300 A or 66%.
Voltage meets CHELCO's system design and operating criteria.

2014 Summer Model after CWP projects have been completed

Base Model
Auburn Substation: 16,717 kW or 84%
~~Laurel Hill Substation: 4,919 kW or 66%~~
Conductor Loading: 741 AAAC loaded to 335 A or 42%, and small section of 750 MCM UG (along Phil Tyner Road) loaded to 137 A or 30%
Voltage drop on Auburn sub ckt 03 meets CHELCO's system design and operating criteria

Base Model w/ New Load
Auburn Substation: 20,225 kW or 101%
Laurel Hill Substation: 4,919 kW or 66%
Conductor Loading: 741 AAAC loaded to 508 A or 64% and 750 MCM UG loaded to 313 A or 68%
Voltage drop meets CHELCO's system design and operating criteria.

Recommendations:
Switch 1,050 kW from Auburn ckt. 01 to Laurel Hill ckt. 03 (making new open point near the intersection of Hwy 85 and Georgia Road?). After load swap, on Laurel Hill ckt. 3, add 100 A voltage regulators on main 3 phase line near the intersection of Hwy 85 & Campton Street. In addition, on Auburn ckt. 3, it may be necessary to add capacitor banks upstream from the new load and/or voltage regulators downstream from the load; however, it's recommended that CHELCO monitor the circuit before doing this.

Results of Recommendations:
Auburn Sub: 19,263 kW or 96%
Laurel Hill Sub: 5,595 kW or 75%
Conductor Loading: no changes. 741 AAAC will be loaded to 64% and 750 MCM UG loaded to 68%.
Voltage meets CHELCO's system design and operating criteria.

2009 Winter Model

Base System
Auburn Sub: 18,240 kW or 91%
~~Laurel Hill Sub: 5,800 kW or 77%~~
Conductor Loading: 741 AAAC loaded to 327 A or 41% and 394 AAAC loaded to 61% and small section of 750 MCM UG (along Phil Tyner Road) loaded to 314 A or 69%
Voltage drop on Auburn sub ckt 03 meets CHELCO's system design and operating criteria

Base System w/ New Load
Auburn Sub: 21,736 kW or 109%
Conductor loading: 741 AAAC loaded to 500 A or 63% and 394 AAAC loaded to 94% and 750 MCM UG loaded to 316 A or 69%
Voltage drop on one single phase tap on Auburn ckt 03 is 114 V. Everything else looks good.

Recommendations:
Follow recommendations for Summer 2009. In addition, on Auburn ckt. 3, it may be necessary to add capacitor banks upstream from the new load and/or voltage regulators downstream from the load; however, it's recommended that CHELCO monitor the circuit before doing this.

Results of Recommendations:
Auburn Sub: 21,736 kW or 109%
Laurel Hill Sub: 5,800 kW or 77%
Conductor Loading: 741 AAAC will be loaded to 500 A or 63% and 750 MCM UG loaded to 316 A or 69%.
Voltage on Auburn ckt. 3 meets CHELCO's system design and operating criteria.

2014 Winter Model after CWP projects have been completed

Base Model
Auburn Substation: 20,641 kW or 105%
~~Laurel Hill Substation: 6,223 kW or 84%~~
Conductor Loading: 741 AAAC loaded to 377 A or 48%, and small section of 750 MCM UG (along Phil Tyner Road) loaded to 155 A or 34%
Voltage drop on Auburn sub ckt. 03 meets CHELCO's system design and operating criteria

Base Model w/ New Load
Auburn Substation: 24,124 kW or 121%
Conductor Loading: 741 AAAC loaded to 554 A or 70% and 750 MCM UG loaded to 335 A or 73%
Voltage drop on one single phase tap on Auburn ckt 03 is 114 V. Everything else looks good.

Recommendations:
Follow recommendations for Summer 2014 model.

Results of Recommendations:
Auburn Sub: 22,732 kW or 114%
Laurel Hill Sub: 7,525kW or 100%
Conductor Loading: no changes. 741 AAAC will be loaded to 70% and 750 MCM UG loaded to 73%.
Voltage on Auburn ckt. 3 meets CHELCO's design criteria.