EVERSHEDS SUTHERLAND

Eversheds Sutherland (US) LLP
999 Peachtree St., N.E., Suite 2300
Atlanta, GA 30309-3996

D: +1 404.853.8578
F: +1 404.853.8806

jamesorr@
eversheds-sutherland.com

Via Alternative Electronic Filing

September 9, 2021

Mr. Reece McAlister
Executive Secretary
Georgia Public Service Commission
244 Washington Street, S.W.
Atlanta, Georgia 30334

RE: Sawnee Electric Membership Corporation vs. Georgia Power Company
Docket No. 43899

Dear Mr. McAlister:

On behalf of Sawnee EMC, I enclose for filing in the above-referenced proceeding the direct testimony of Blake House and Kevin Mara, including exhibits. Please call me (404-358-4314) if you have any questions about this filing.

Sincerely,

James A. Orr

cc: Ms. Nancy Gibson, Hearing Officer
Parties of Record

BEFORE THE
PUBLIC SERVICE COMMISSION
STATE OF GEORGIA

SAWNEE ELECTRIC MEMBERSHIP CORPORATION	)	
Petitioner, v.	)	Docket No. 43899
GEORGIA POWER CORPORATION	)	
Respondent.	)	

PRE-FILED DIRECT TESTIMONY OF BLAKE HOUSE

September 9, 2021

PRE-FILED DIRECT TESTIMONY OF BLAKE HOUSE

ON BEHALF OF SAWNEE EMC

GPSC DOCKET NO. 43899

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. Blake House, 543 Atlanta Highway, Cumming, Georgia.

Q. BY WHOM ARE YOU EMPLOYED?

A. Sawnee EMC.

Q. HOW LONG HAVE YOU BEEN EMPLOYED BY SAWNEE EMC?

A. Since July 1996.

Q. WHAT IS YOUR POSITION WITH SAWNEE EMC?

A. Vice President, Member Services.

Q. WHAT ARE YOUR RESPONSIBILITIES AS VP, MEMBER SERVICES?

A. My responsibilities include marketing and member services to commercial and residential customers.

Q. ARE YOU FAMILIAR WITH THE ELECTRIC VEHICLE CHARGING SITE THAT IS THE SUBJECT OF THIS DISPUTE?

A. Yes, I am.

Q. WHERE IS THE CHARGING SITE LOCATED?

A. It is located in the parking lot of John's Creek Town Center Shopping Mall, on Peachtree Parkway, Suwanee, Georgia.

Q. IS IT LOCATED WITHIN THE GEOGRAPHIC AREA ASSIGNED TO SAWNEE EMC UNDER THE GEORGIA TERRITORIAL ELECTRIC SERVICE ACT?

A. Yes.

Q. USING SEMC EX. 1, WOULD YOU PLEASE DESCRIBE THE CHARGING SITE?

A. At this site there are 4 separate electric vehicle chargers (also referred to as dispensers). Each charger has two cords (one on each side). One end of the cord is affixed to the dispenser. The other end has a plug that can be plugged into a vehicle to charge the vehicle's battery. Each charger also has an LCD display that provides instructions and other information to the vehicle owner.

Q. ARE YOU AWARE THAT GEORGIA POWER WAS SELECTED TO SERVE THE CHARGING SITE?

A. Yes.

Q. DID SAWNEE VOICE ITS OBJECTION TO GEORGIA POWER?

A. Yes.

Q. AFTER THAT, DID YOU MONITOR CONSTRUCTION AT THE SITE?

A. Yes, I did.

Q. WHAT DID YOU OBSERVE?

A. I observed Georgia Power crews building electric facilities to the site, including boring under the parking lot and installing a 750 KVA transformer.

Q. **I SHOW YOU SEMC EX. 2. WHAT DOES THIS SHOW?**

A. This is a photo I took of the transformer Georgia Power installed to serve the charging site.

Q. I SHOW YOU SEMC EX. 3. WHAT DOES THIS SHOW?

A. This is a photo I took of the rating on the transformer installed by Georgia Power to serve the charging site.

Q. WHAT DOES IT SHOW?

A. The transformer is rated at 750 KVA.

Q. DID YOU OBSERVE WHEN THE FACILITY OPENED FOR OPERATION?

A. Yes, it opened for operation on April 7, 2021.

Q. ARE YOU FAMILIAR WITH THE LARGE LOAD EXCEPTION OF THE TERRITORIAL ACT, APPLICABLE TO CERTAIN CONSUMERS WHO HAVE A CONNECTED LOAD OF 900 KW OR GREATER AT THE TIME OF INITIAL FULL OPERATION?

A. Yes.

Q. DID SAWNEE EMC BELIEVE THIS CHARGING SITE QUALIFIED FOR THE LARGE LOAD EXCEPTION?

A. No, we did not.

Q. WHY NOT?

A. There is very little load at the charging site, other than the chargers. And the chargers only operate if and when a vehicle owner drives up and connects his or her vehicle. Additionally, a spreadsheet provided to us by Electrify America shows projected demand for the charging site substantially below 900 kw.

Q. I SHOW YOU SEMC EX. 4. IS THIS A TRUE AND ACCURATE COPY OF THE SPREADSHEET PROVIDED TO YOU BY ELECTRIFY AMERICA?

A. Yes, it is. Electrify America provided this in response to my request for usage data for a location that mirrors the charging site at issue here.

Q. WHAT DOES THIS DOCUMENT SHOW?

A. This shows that during the first month of operation, the monthly peak kw is projected to be 92 kw. During the second month, the monthly peak kw is projected to be 151 kw. During the first twelve months of operation, the highest peak in any given month is 225 kw.

Q. THIS SPREADSHEET COVERS A 10 YEAR PERIOD. WHAT IS THE HIGHEST MONTHLY PEAK KW FOR ANY MONTH DURING THIS PERIOD?

A. 467 kw.

Q. ARE YOU SPONSORING ANY EXHIBITS THROUGH YOUR TESTIMONY?

A. Yes. I am sponsoring the following Exhibits which are described in my testimony:

1. Photograph of Four Chargers	SEMC EX. 1
2. Photograph of Ga. Power Transformer	SEMC EX. 2
3. Photograph of Rating on GPC Transformer	SEMC EX. 3
4. Spreadsheet of Projected Demand	SEMC EX. 4

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

SEMC EX. 1


1112313
SEMC EX. 2


750 KVA
24940GRDY/14400
480Y/277
424239
00612001750 73
SEMC EX. 3

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PRE-FILED DIRECT TESTIMONY OF KEVIN MARA

September 9, 2021

PRE-FILED DIRECT TESTIMONY OF KEVIN MARA

ON BEHALF OF SAWNEE EMC

GPSC DOCKET NO. 43899

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. Kevin Mara, 1850 Parkway Place, Marietta, Georgia.

Q. BY WHOM ARE YOU EMPLOYED?

A. GDS Associates.

Q. HOW LONG HAVE YOU BEEN EMPLOYED BY GDS ASSOCIATES?

A. I joined GDS in 2000 so I have 21 years with GDS Associates.

Q. WHAT IS YOUR POSITION WITH GDS ASSOCIATES?

A. I am currently the Executive Vice President of GDS Associates. I also have responsibility for our distribution design department with 25 employees.

Q. DO YOU HOLD ANY DEGREES FROM COLLEGES OR UNIVERSITIES?

A. Yes, I have a Bachelor of Science Degree in Electrical Engineering from Georgia Institute of Technology.

Q. DO YOU HOLD ANY PROFESIONAL LICENSES?

A. Yes, I have a professional engineering license in Georgia and 22 other states.

Q. TO WHAT PROFESSIONAL ORGANIZATIONS DO YOU BELONG?

A. I am a senior member of IEEE. I am a voting member of the National Electric Safety Committee (NESC) and a member of the American Society of Civil Engineers (ASCE) where I am a voting member for the committee working on Minimum Design Loads for Structures Supporting Overhead Power Lines.

Q. PLEASE DESCRIBE YOUR DUTIES WITH GDS ASSOCIATES.

A. I have more than 30 years of experience as a utility engineer and consultant. My work includes power quality analysis, system reliability, loss analysis, electric system design, construction standards, territory matters, joint-use issues, privatization, as well as management and operation of electric utilities. I supervise and assist a team of professionals who design hundreds of miles of distribution lines each year.

Q. ARE YOU FAMILIAR WITH THE ELECTRIC VEHICLE CHARGING SITE THAT IS THE SUBJECT OF THIS DISPUTE?

A. Yes, I am.

Q. USING SEMC EXHIBITS 1 AND 5, WOULD YOU PLEASE DESCRIBE THE CHARGING SITE?

A. On this site, there are 4 separate electric vehicle chargers, also referred to as dispensers.. These are depicted on SEMC EX. 1. Each dispenser has two cords. Each cord has the capacity for direct current fast charging of an electric vehicle battery. One end of the cord is affixed to the dispenser which in turn is connected to an AC-to-DC inverter. The other end has a plug that can be plugged into a vehicle. The site also contains a set of AC-to-DC inverters. These are depicted on SEMC EX. 5.

Q. HAVE YOU REVIEWED THE SPECIFICATIONS AND DESIGN LAYOUT FOR THIS CHARGING SITE?

A. Yes, I have.

Q. PLEASE DESCRIBE WHAT IS SHOWN ON SEMC EX. 6.

A. This depicts the specifications and design layout for the charging site. It shows four chargers (labelled "dispensers"), eight inverters (labelled "power units") and a switchgear. This diagram also shows a vehicle pulled up to one of the chargers.

Q. WHAT IS AN INVERTER?

A. An electric charger of this type converts AC power to DC power for use in charging the batteries installed in electric vehicles. The main component of such a charger is the inverter. An inverter is a device that can convert alternating electric current (AC) to direct current (DC). It does so by changing the sine wave of AC power using a process that includes rectifying the sine wave and smoothing the resultant positive sine waves. The resulting DC power can be used to charge a vehicle's battery.

Q. WHAT DOES THE INVERTER ENABLE THE OWNER OF THE CHARGER TO DO?

A. The inverter enables the owner of the charger to provide DC power to the vehicle owner.

Q. IS AN INVERTER DRAWING POWER ALL THE TIME?

A. No. The inverter is essentially inert unless and until a vehicle pulls up and is connected to the charger. Unless and until a vehicle pulls up and is connected to the charger, the inverter is not converting AC power to DC power. It is not doing anything. It operates to change AC power to DC power if and only if a vehicle owner pulls up and is connected to the charger.

Q. HAVE YOU CONDUCTED LOAD COUNTS UNDER THE GEORGIA TERRITORIAL ELECTRIC SERVICE ACT?

A. Yes, several times.

Q. IN YOUR OPINION, SHOULD THE INVERTERS AT THIS CHARGING SITE BE COUNTED AS CONNECTED LOAD?

A. No.

Q. WHY NOT?

A. In a load count, a calculation or determination is made as to what load-consuming equipment, or load, is connected to an electrical system. An example would be HVAC equipment. A load count is not based on the size of an electric panel or the size of breakers. That would simply indicate the capacity of the electric system to service a potential load. An inverter is not load. It is a device that can convert one form of electric current (AC or alternating current) to another form of electric current (DC or direct current) by changing the sine wave. As noted above, it does not do anything – and has essentially zero connected load – unless and until a vehicle owner pulls up and connects. Unless and until that happens, it is a passive device. While an inverter has capacity, it does not have connected load unless and until a vehicle owner pulls up and connects his or her vehicle to the charger.

Q. WHO UTILIZES THE ELECTRIC CURRENT PRODUCED BY A VEHICLE CHARGER'S INVERTER?

A. The vehicle owner. The energy is used by the vehicle owner to charge the vehicle's battery.

Q. DOES THE OWNER OF THE CHARGING FACILITY UTILIZE ANY ELECTRICITY?

A. Yes, as this charging site is designed, the owner would use a small amount of auxiliary power to operate LCD panels on the chargers and other equipment.

Q. WHAT SIZE TRANSFORMER DID GEORGIA POWER INSTALL TO SERVE THE CHARGING STATION HERE?

A. A 750 KVA transformer.

Q. IS THERE ANY SIGNIFICANCE TO THE FACT THAT GEORGIA POWER INSTALLED A 750 KVA TRANSFORMER TO SERVE THE CHARGING STATION?

A. Yes. Under standard engineering practice, the size of the transformer should meet or exceed maximum expected demand. Otherwise, an overload situation could occur and trigger the operation of over-current devices, such as fuses. If that happened, the charging site would be without power until the situation was remedied. Assuming Georgia Power followed standard engineering practice, the maximum peak demand is expected to be less than 750 kW.

Q. ARE YOU SPONSORING ANY EXHIBITS THROUGH YOUR TESTIMONY?

A. Yes. I am sponsoring the following Exhibits which are described in my testimony:

1. Photograph of Inverters — SEMC EX. 5
2. Specs and Design Layout — SEMC EX. 6

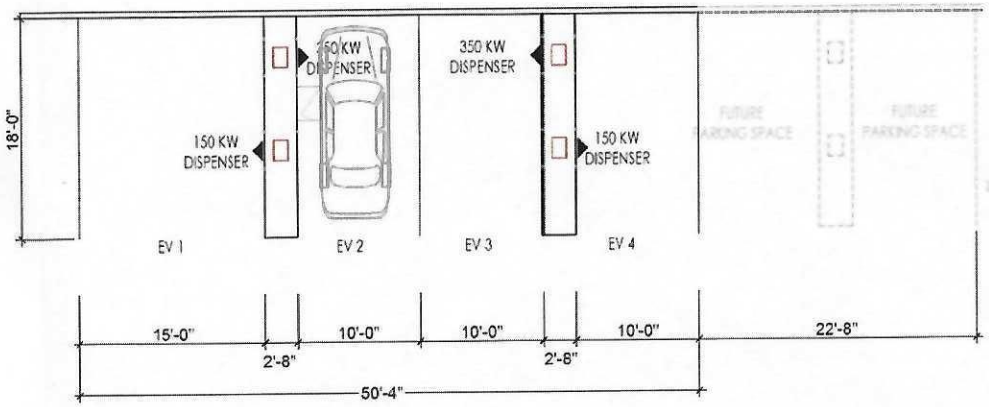
Q. DOES THIS CONCLUDE YOUR TESTIMONY?

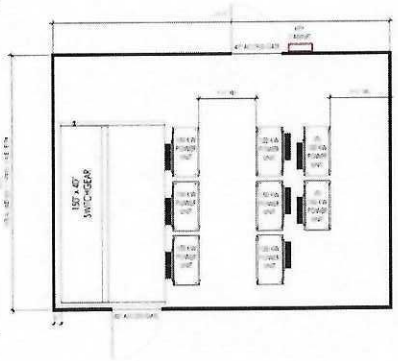
A. Yes.

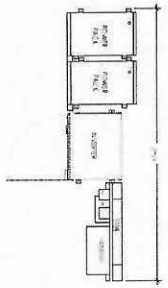
SEMC EX. 1


SEMC EX. 5

SPECIFICATIONS & DESIGN LAYOUT







DISPENSER DESIGN FOR ILLUSTRATION PURPOSES ONLY

STANDARD DESIGN FIT: NATIONAL HIGHWAY – SIDE BY SIDE – 4 DISPENSERS

NUMBER OF EV PARKING SPACES (DISPENSERS)	4
NUMBER OF EXISTING PARKING SPACES REQUIRED FOR EV PARKING (DISPENSERS)	6
NUMBER OF EXISTING PARKING SPACES REQUIRED FOR EQUIPMENT PAD, TRANSFORMER, BATTERY	5
EXISTING PARKING SPACE WIDTH (SINGLE SPACE)	10’
EXISTING PARKING SPACE DEPTH	18’
DRIVING AISLE WIDTH	25’
PARKING SPACE SLOPE (ALONG WIDTH / DEPTH)	<2%

SEMC EX. 6