



**Michael S. McWaters**  
Executive Vice President & CEO

---

December 11, 2017

**VIA ELECTRONIC FILING**

Mr. Wesley Taylor  
Attorney  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850

Re: Docket No. 20170215-EU

Dear Mr. Taylor,

Please find enclosed for electronic filing, Suwannee Valley Electric Cooperative, Inc.'s response to Staff's First Data Request.

If you have any questions, do not hesitate to contact me.

Sincerely,

Michael S. McWaters

**SUWANNEE VALLEY ELECTRIC COOPERATIVE, INC.'S RESPONSE TO STAFF'S  
FIRST DATA REQUEST REGARDING REVIEW OF ELECTRIC UTILITY  
HURRICANE PREPAREDNESS AND RESTORATION ACTIONS**

**Docket No. 20170215-EU**

**Introduction**

On October 12, 2004, the Rural Utility Service (RUS) issued requirements of RUS borrowers to expand and/or develop Emergency Restoration Plans (ERPs) as a condition of obtaining loan approval. An ERP was to be completed by January 12, 2006 and an annual exercise of the ERP was to be implemented. Suwannee Valley Electric Cooperative, Inc.'s (SVEC) ERP was developed January 3, 2006. This ERP is exercised annually and has been updated each year since.

SVEC's service territory consisting of portions of Suwannee, Columbia, Hamilton and Lafayette counties received immaterial damage from Hurricanes Maria and Nate. Therefore, this response includes data from Hurricanes Hermine, Matthew and Irma.

**Staging for Utility Personnel and Mutual Aid**

1. Please describe the pre-storm coordination process for Hurricanes Hermine, Matthew, Irma, Maria, and Nate. The description should include:
  - a. Dates and topics of internal meetings held after each storm was named.
  - b. Dates and topics of external communication pertaining to mutual aid held after each storm was named.
  - c. Date mutual aid was requested and nature of request.

**Response:**

Level 1 – A Weather Alert Activation is a response to a potentially severe weather event that is likely to cause widespread outages. Under Level 1 activation, SVEC takes steps to prepare crews to respond to outages such as preloading materials, repositioning assets, etc.

Level 2 – Partial ERP Activation is declared when system damage is forecasted to be greater than normal restoration efforts can restore. SVEC activates all personnel and incumbent contractor resources assigned to SVEC.

Level 3 – Complete Activation is an upgrade from Partial Activation after confirming that forecasted system damage will require extensive repairs and justifies mobilization of SVEC personnel, incumbent contractor resources and mutual aid assistance.

System ERP meetings start 72 hours in advance of the imminent emergency.

\*Note. All of SVEC's management team is on the same campus therefore conversations regarding emergency events take place many times during the days leading up to a severe weather event. These conversations are not classified as meetings but are certainly where a lot of preparation takes place.

	<b>Hermine</b>	<b>Matthew</b>	<b>Irma</b>
SVEC ERP Meetings	Aug 30	Oct 5	Sept 6
	Aug 31	Oct 6	Sept 7
	Sept 1	Oct 7	Sept 8
	Sept 2		
	Sept 3		
FECA Mutual Aid	Sept 1	Oct 4	Sept 6
		Oct 5	Sept 7
			Sept 8
			Sept 9
			Sept 10
			Sept 11
			Sept 12
			Sept 13
			Sept 14
			Sept 15
EOC Meetings		Oct 6	Jun 6 (pre-season prep)
		Oct 7	Aug 9 (pre-season prep)
		Oct 27 (post-season review)	Sept 6
		Nov 3 (post-season review)	Sept 9
		Nov 8 (post-season review)	
		Nov 9 (post-season review)	
Mutual Aid Request	Aug 31	Oct 5	Sept 7
	5 service crews	5 service crews	23 service crews
		5 constr. crews	

2. Please provide a detailed description of the utility’s allocation of storm duties for all personnel. This should include a description of each function and the number of utility personnel assigned.

**Response:**

ERP Organization Chart can be seen in Figure 1.

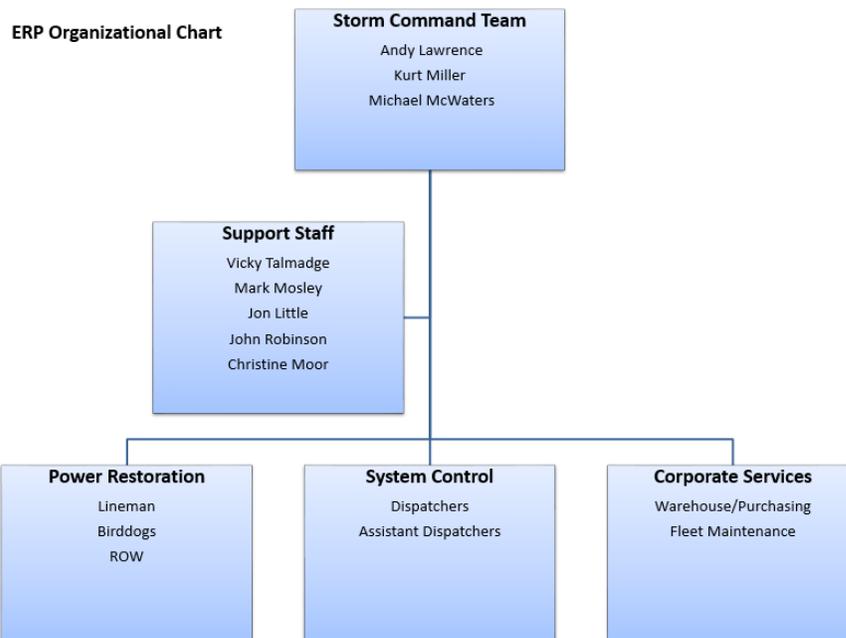


Figure 1

Function	SVEC Resources*
Lineman	22 employees
Bird dogs	28 employees
ROW	5 employees
Dispatchers	6 employees**
Corporate Services	5 employees
Member Service Reps	11 employees***
Support Staff	6 employees
Storm Command Team	3 employees
<b>TOTAL</b>	<b>86 employees</b>

\*There has been no material change in SVEC resources since 2006. SVEC maintains an on-going contractual relationship with a vegetation management company and a utility line construction company.

\*\*One employee in this group is bi-lingual.

\*\*\*Two employees in this group are bi-lingual.

- When did the costs for Hurricanes Hermine, Matthew, Irma, Maria, and Nate begin to accrue for receiving mutual aid?

**Response:**

Mutual Aid costs begin to accrue when the assisting utility's crews leave their home facilities. Mutual aid costs cease to accrue when the assisting utility's crews return to their home facilities. While on-site, mutual aid is billed for hours worked.

**Damage Assessment Process**

- Please provide a detailed overview of the initial damage assessment process for Hurricanes Hermine, Matthew, Irma, Maria, and Nate, including the number of utility employees or

contractors involved, their duties, and how initial damage assessment is disseminated within the utility to assist in restoration activities. Additionally, please provide photographs or other visual media that memorializes storm damage, which was documented during the initial damage assessment process.

**Response:**

SVEC has 41 system feeders. Each bird dog is assigned a feeder with damage. The bird dog is responsible for leading his crew(s) to work locations and riding the feeder for damage assessment. At the end of every workday, each bird dog meets with command team to review data collected during the day (notes, pictures, etc.). Bird dogs also give a status report of what has been rebuilt and/or reenergized. Once system feeders are restored, meters are interrogated to determine their status. Reports are then generated showing individual accounts that are out of power prior to commencement of work each day. This data is continually shared with bird dogs.

SVEC does not wait for damage assessment to be completed before beginning restoration efforts.

5. Please provide a description of how damage assessment data is updated and communicated internally.

**Response:**

All employees have access to SVEC's system outage map. SVEC's director of communications serves as a liaison between command team and member service representatives (MSRs). MSRs are updated on restoration progress via e-mail twice per day. All employees are updated on restoration progress via mass texts at least once per day.

**Restoration Workload**

6. Please provide a detailed description of how the utility determines when and where to start restoration efforts.

**Response:**

The order of service restoration can be seen in Figure 2.

Service Restoration Order	Priority
Transmission Lines/Substations	Priority # 1
Distribution Substations	Priority # 2
Distribution Circuits	Priority # 3
Three Phase Distribution Lines	Priority # 4
Two Phase Distribution Lines	Priority # 5
Single Phase Distribution Lines	Priority # 6
Secondary Services and Meter Issues (for repairs)	Priority # 7
Disconnects / Reconnects (for non-pay)	Priority # 8
Security Lighting	Priority # 9

Figure 2

7. For Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please complete the following table on workload priority:

Personnel Responsible for Restoration Workload Assignments		
Title	Years of experience	Number of crews managed
Andy Lawrence (Dir. Ops)	40 years	Command Team
Kurt Miller (Dir. Eng)	29 years	Command Team
Michael McWaters (CEO)	23 years	Command Team
Bird dogs:		
Jason Carroll	14 years	1 crew
Alex Fountain	19 years	1 crew
Brad Boswell	18 years	1 crew
Russell Summers	37 years	1 crew
Kirk Head	34 years	1 crew
Daniel Carver	17 years	2 crews
Leslie Laffoon	28 years	2 crews
Anthony Thompkins	28 years	1 crew
Tray Boatright	17 years	2 crews
Luke Milton	11 years	1 crew
Cecil Cheshire	25 years	1 crew
Trey Jackson	11 years	1 crew
Jason Hurst	25 years	2 crews
Bruce Spradley	23 years	1 crew
Patrick Swinney	21 years	1 crew
Billy Starling	9 months (at SVEC)	1 crew
Shack Roberson	19 years	1 crew
Dale Turman	20 years	1 crew
Derek Fillyaw	11 years	1 crew
Braxton Hicks	7 months	1 crew
Trevor Touchton	4 years	1 crew
Leon Edwards	27 years	2 crews
Jimmy Bell	37 years	1 crew
Mike Guillery	29 years	2 crews
Craig Ragan	28 years	1 crew
Bryan Gamble	26 years	2 crews
Bill Roberts	27 years	1 crew
Joe Barclay	12 years	2 crews
Bruce Branch	25 years	2 crews

8. Please provide a description of how restoration workload adjusts based on work completed and updates to damage assessments.

**Response:**

As crews complete the restoration of their feeder, they are reassigned to assist crews working on other feeders.

9. If applicable, please describe how mutual aid was determined to be no longer needed following Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

**Response:**

SVEC releases mutual aid crews when all members that can receive power have been restored.

**Staffing Considerations**

10. Regarding Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please respond to the following, please provide the following:
- a. Days of lodging provided for Utility personnel (Person-Days)
  - b. Days of lodging provided for mutual aid partners (Person-Days)
  - c. Number of meals provided for Utility personnel
  - d. Number of meals provided for mutual aid partners
  - e. Number of Utility personnel injuries
  - f. Number of mutual aid partner injuries
  - g. Number of Utility personnel fatalities
  - h. Number of mutual aid partner fatalities

Please note any delays in restoration associated with items e-h above.

**Response:**

	Hermine	Matthew	Irma
Lodging for SVEC personnel	0	0	0
Lodging for mutual aid	52 person days	0	226 person days
Meals provided for SVEC personnel	380	0	650
Meals provided for mutual aid	412	0	835
SVEC injuries (no lost time)	0	0	1
Mutual aid injuries	0	0	0
SVEC fatalities	0	0	0
Mutual aid fatalities	0	0	0

\*Note: SVEC’s employees live in our service territory and do not have to be staged or housed during severe weather events.

11. Please provide a detailed description of when your Utility was considered fully restored from each named storm event.

**Response:**

SVEC is considered fully restored when power has been restored to every occupied dwelling that can receive service.

**Customer Communication**

12. Regarding Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please respond to the following for each county in the Utility’s service territory affected by the storms.
- a. Total number of customer accounts
  - b. Peak number of outages

**Response:**

	Suwannee	Hamilton	Lafayette	Columbia	TOTAL
<b>Hermine</b>					
# of meters	16,374	3,666	3,083	1,814	24,937
Peak outage #	12,615	2,867	2,485	1,146	19,113
<b>Matthew</b>					
# of meters	16,369	3,671	3,082	1,821	24,943
Peak outage #	1,361	1,189	1,200	1,457	5,207
<b>Irma</b>					
# of meters	16,854	3,785	3,143	1,869	25,651
Peak outage #	15,732	3,554	3,129	1,869	24,284

13. Please provide how call center customer service representatives were utilized before, during and after Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

**Response:**

SVEC Member Service Representatives are available to answer member questions in person at SVEC's office (11340 100th Street in Live Oak), through live online chat services or via telephone during standard business hours - weekdays from 8:00 a.m. To 5:00 p.m. If needed, SVEC will open its office to members on Saturday and Sunday. SVEC dedicates a member service representative to monitor and respond to questions and messages submitted from members via social media (Facebook). SVEC also employs a social media contractor located on the west coast to allow for extended periods of response to members on Facebook. SVEC also partners with Cooperative Response Center (CRC) who receives overflow phone calls when SVEC's MSRs are busy assisting members.

14. Please provide the number of customer service representatives the Utility had during Hurricanes Hermine, Matthew, Irma, Maria, and Nate.
- a. Were there additional personal deployed or 3rd party entities utilized to help address customer contacts during each named storm event? If so, how many?

**Response:**

SVEC employs ten (10) Member Service Representatives including one department manager and two (2) bi-lingual employees. SVEC also employees a bi-lingual control center supervisor. These resources were available for Hurricanes Hermine, Matthew and Irma.

In January 2017, SVEC became a member of CRC. CRC accepts overflow member telephone calls on a 24/7/365 basis. While CRC's capacity is proprietary information, it should be noted CRC can complete over 30,000 calls per hour.

15. Please provide the number of customer contacts received by the customer call center(s) during Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

**Response:**

**Hermine**

	IVR	Human	TOTAL
CRC	0	0	0
NISC	3,996	0	3,996
Milsoft	6,531	0	6,531
SVEC	0	1,512	1,512
TOTAL	10,527	1,512	12,039

**Matthew**

	IVR	Human	TOTAL
CRC	0	0	0
NISC	2	0	2
Milsoft	1,295	0	1,295
SVEC	0	348	348
TOTAL	1,295	348	1,645

**Irma**

	IVR	Human	TOTAL
CRC	22,322	762	23,084
NISC	6,570	0	6,570
Milsoft	5,885	0	5,885
SVEC	0	3,060	3,060
TOTAL	34,777	3,822	38,599

16. Please provide all methods (call centers, email, Utility website, etc.) utilized to submit and collect customer contacts before, during, and after Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

**Response:**

Members can contact SVEC using several methods:

- Calling SVEC's interactive voice response system at 386-362-2226 or 800-447-4509.
- Calling SVEC's automated outage reporting line at 800-752-0025
- Initiating an online chat via SVEC's website.
- Using the "contact us" function of SVEC's SmartHub account self-management tool (available on SVEC's website and mobile app).
- Sending a message through Facebook.
- Visiting SVEC's office.

17. Please describe the step by step process(es) by which customer contacts are addressed before, during, and after a named storm event. If different during each timeframe, please describe the step by step process during each separately.

**Response:**

Before the storm, customer contacts are categorized as described in the response to question 18 below. Members can contact SVEC using the methods described in the response to question 16 above. Members' questions and issues are addressed. Service orders are created, if needed.

During the storm, members can report outages using SVEC's automated outage reporting on-line and the SmartHub mobile app. Additionally, Since before Irma, members can contact SVEC's contracted remote call center operated by CRC. Service orders are only created for outages that cannot be restored due to some extenuating circumstance such as flooding. All other outages are set in the OMS system by the member, member service rep, or CRC.

After the storm, customer contacts are categorized as described in the response to question 18 below. Members can contact SVEC using the methods described in the response to question 16 above. Members' questions and issues are addressed. Service orders are created for outages that cannot be restored due to some extenuating circumstance such as flooding. All other outages are set in the OMS system by the member, member service rep, or CRC.

- 17 a. Did the Utility identify any delays in restoration as a result of addressing customer contacts related to Hurricanes Hermine, Matthew, Irma, Maria, and Nate? If so, please provide detail.

**Response:**

SVEC did not identify any delays in restoration as a result of addressing customer contacts related to Hurricanes Hermine, Matthew or Irma.

18. Please provide whether or not customer contacts are categorized (by concern, complaint, information request, etc.) If so, how are they categorized? If not, why not?

**Response:**

Customer contacts are categorized by contact type (e.g., Power Outage, ROW Issue, Area Light out). Control center and call center personnel have the capability to log contacts and set outages in the Outage Management System.

19. Please provide a detailed description of how customer service representatives are informed of restoration progress. Is there a script provided to each customer service representative to relay restoration progress to customers? If so, what is the process by which the script is created?

**Response:**

The primary method for informing member service representatives of restoration process is internal e-mail. Answers to frequently asked questions, including those about restoration progress are provided to customer service representatives. These answers are created by the director of communications in consultation with the command team.

20. Please describe the process the Utility uses to notify customers of approximate restoration times. The response should include at a minimum:
- a. How restoration time estimates were determined.
  - b. How customers are notified.
  - c. How restoration time estimates are updated.
  - d. How restoration time estimates are disseminated internally, to the county and state Emergency Operations Centers, and to the public.

**Response:**

- a. Human judgement call made by weighing numbers of outages and damaged equipment with the resources available including inhouse, mutual aid, and contract crews.
- b. SVEC notifies its members of estimated restoration times and other storm-related news using website and social media posts, mass e-mails, and text notifications sent via the SmartHub mobile account self-management app. To retain its ability to contact members, SVEC maintains a database of member e-mail addresses, landline phone numbers and cell phone numbers. Throughout the year, member service representatives solicit updated contact information from members when they visit or call the office. Prior to storm season and before individual hurricanes, SVEC solicits updated contact information from all members using its member newsletter, Facebook page and e-mails. Members can update their contact information by calling or e-mailing a member service representative or using SmartHub.
- c. Updates are posted via system automated voice response and company outage webpage. Frequency of updates depends on the number of outages.
- d. Local media (newspapers and radio stations) are updated on restoration progress through news releases issued by SVEC. The news releases are also e-mailed to county and state emergency operations personnel. The public can access the information posted on SVEC's

website and social media pages, and can receive the information as it is reported by local media. Information is disseminated internally using e-mail and text messages. During extended outages, SVEC's CEO sends daily group text messages to sheriffs in the four counties served by the cooperative.

## **Material Considerations**

21. Regarding Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please provide a description of how vehicle fuel was procured for Utility personnel and mutual aid partners. As part of the response, please answer the following:
- a. Whether or not the Utility has fuel stored for these types of events
  - b. Whether or not fuel shortage was an issue during these events
  - c. Whether or not there were any delays due to fuel shortage
  - d. Whether or not there were enough vehicles available during these events/any issues mobilizing crews

### **Response:**

- a. During the period of time associated with Hurricane Hermine, Matthew and Irma, SVEC did not have a fuel farm that provided on-site fuel storage.  
  
SVEC has a fuel card program with S&S Convenience stores located throughout its service territory. For Hurricanes Hermine and Matthew this program was the primary source of fuel. During Hurricane Irma, SVEC's primary fuel sources were W.B. Howland and Hinton Oil Co. in Live Oak, and W.R. Williams in Mayo. SVEC is in the process of building a fuel farm at its headquarters facility. This fuel farm will be operational prior to the 2018 storm season.
  - b. Fuel shortage was not an issue. At no time during Hurricanes Hermine, Matthew or Irma did SVEC have issues acquiring fuel for its vehicle fleet or for the fleets of those providing mutual aid assistance.
  - c. There were no delays in restoration of service due to fuel shortage.
  - d. Vehicle availability is not an issue for SVEC. SVEC's only issues with crew mobilization was traffic congestion on Florida's interstate system for mutual aid crews coming into Florida.
22. Please detail any complications or delays such as shortage or delayed delivery of materials for Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

### **Response:**

SVEC did not have major complications or delays associated with delivery of materials for Hurricanes Hermine, Matthew or Irma. On two occasions during Hurricane Irma, SVEC sent a warehouseman to pick up material from vendors who were not able to procure fuel.

## **Restoration Process**

23. Please provide a summary timeline of the utility's restoration process for each hurricane: Hermine, Matthew, Irma, Maria, and Nate. The timeline should include, but not limited to, staging, stand-down, deployment, re-deployment, allocation, mutual aid, release of mutual aid, and date last outage was restored.

**Response:**

Because 100 percent of SVEC's resources are local, SVEC is not required to reposition resources.

Hermine. Storm hit SVEC's service territory at 3:00 a.m. on Friday, September 2, 2016. Restoration efforts started at 7:00 a.m. on September 2, 2016 and were completed on September 6, 2016 by 10:00 p.m.

Matthew. Storm hit SVEC's service territory at 7:00 a.m. on Friday, October 7, 2016. Restoration efforts started at 7:00 a.m. on Friday October 7, 2016 and were completed on Friday October 7, 2016 by 11:00 p.m.

Irma. Storm hit SVEC's service territory on Sunday, September 10, 2017. Restoration efforts started at 3:00 p.m. on Monday, September 11, 2017 and were completed on Monday, September 18, 2017.

24. Please explain how the Utility validates adherences and departures from its storm preparation plan.
- a. If the Utility does not assess departures from its storm plan, explain why not.
  - b. If the Utility does not document or otherwise memorialize departures from its storm plan, explain why not.
  - c. Have departures from the Utility's storm preparation plan resulted in modification of the storm preparation plan during 2015 through 2017? If so, please explain how with examples.

**Response:**

Please see response to question 25 below.

25. Please explain how the Utility validates adherences and departures from its storm restoration plan.
- a. If the Utility does not assess departures from its storm restoration plan, explain why not.
  - b. If the Utility does not document or otherwise memorialize departures from its restoration storm plan, explain why not.
  - c. Have departures from the Utility's storm restoration plan resulted in modification of the storm restoration plan during 2015 through 2017? If so, please explain how with examples.

**Response to questions 24 and 25:**

Suwannee Valley Electric Cooperative's ERP serves as both a preparation and restoration plan. That is, the plan contains pre-storm preparation and post-storm restoration responsibilities for every department. Adherences and departures from the plan are reviewed at post-storm debrief meetings. Lessons learned are memorialized in

modifications made to the ERP that reflect steps taken to improve our preparation and restoration processes.

Examples of modifications made to the ERP as a result of experiences during the storms of 2015-2017 include:

- Communicate information about county special needs shelters to members and member service representatives
- Use mass texting system to communicate quickly with employees
- Conduct pre-storm call with CRC
- Waive late payment penalties after the storm
- Suspend daily usage calculations on pre-pay accounts
- Add space for allergy information on visiting crew intake form
- Send pick lists to warehouse each afternoon to speed materials distribution the next morning
- Update priority list of members with assistance from EOCs

**Outages**

26. Please identify all counties, including reporting regions/division for each county if applicable, that were impacted (had outages or damage) due to Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

**Response:**

Matthew, Hermine, Irma: Suwannee, Lafayette, Hamilton, Columbia

27. Please complete the table below summarizing the wind speed and flooding impacts by county in the utility’s service area. If the requested information is not available by county, please provide the information on a system basis. Please provide this information for Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

**Response:**

SVEC has no weather monitoring equipment or service to provide requested information.

Weather Impact				
County	Maximum Sustained Winds (MPH)	Maximum Gusts (MPH)	Maximum Rainfall (inches)	Maximum Storm Surge (Feet)

**Hardened and Non-Hardened Structures**

28. Please provide a county map or graphic indicating the geographic locations where the Utility's infrastructure was storm hardened after 2006. For purposes of this question, do not include vegetation management.

**Response:**

No map is available.

29. Please complete the table below summarizing hardened facilities that required repair or replacement as a result of Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

<b>Hardened Facilities</b>		
<b>Hurricane</b>	<b>Number of Facilities Requiring</b>	
	<b>Repair</b>	<b>Replacement</b>
<b><i>Transmission</i></b>		
Structures		
Substations		
<b>Total</b>		
<b><i>Distribution</i></b>		
Poles		Hermine (70) Irma (240)
Substation		
Feeder OH		
Feeder UG		
Feeder Combined		
Lateral OH		
Lateral UG		
Lateral Combined		
<b>Total</b>		
<b><i>Service</i></b>		
Service OH		
Service UG		
Service Combined		
<b>Total</b>		

30. Please complete the table below summarizing non-hardened facilities that required repair or replacement as a result of Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

<b>Non-Hardened Facilities</b>		
<b>Hurricane</b>	<b>Number of Facilities Requiring</b>	
	<b>Repair</b>	<b>Replacement</b>
<b><i>Transmission</i></b>		
Structures		
Substations		
<b>Total</b>		
<b><i>Distribution</i></b>		
Poles		
Substation		
Feeder OH		
Feeder UG		
Feeder Combined		
Lateral OH		
Lateral UG		
Lateral Combined		
<b>Total</b>		
<b><i>Service</i></b>		
Service OH		
Service UG		
Service Combined		
<b>Total</b>		

**Response:**

SVEC builds its system to Class C construction standards which meet the National Electric Safety Code (NESC) wind loading requirements for our service territory. At this time, SVEC considers all structures designed and constructed to Class C standards hardened.

31. For Hurricanes Matthew, Hermine, Irma, Maria, and Nate, please provide a ranking of the five highest volume of outage causation that impacted the Utility's service area.

**Response:**

1. Windspeed coupled with water weight on tree foliage adjacent to overhead electric utility ROWs. There are no other causations for these events.

32. For Hurricanes Matthew, Hermine, Irma, Maria, and Nate, please provide a ranking of the top five drivers that protracted service restoration time.

**Response:**

1. Number of outages
2. Number of restoration crews.\*
3. Number of failed structures

\* In theory, more restoration crews would decrease amount of time needed for restoration. However, there is a tipping point from a safety and operational standpoint where more is not better. While restoration time is important, the safety of our employees and the public is our first priority.

33. If applicable, please describe any damage prevented by flood monitors during Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

**Response:**

Not applicable

34. How many outages were avoided by automated feeder switches during Hurricanes Matthew, Hermine, Irma, Maria, and Nate? Please explain how the data for each event was collected.

**Response:**

None

**Critical Infrastructure Restoration**

35. Please complete the table below for all critical infrastructure facilities (CIFs), by location (city/county) and facility type, which lost power, the restoration time for the CIFs and the cause of the outage (such as wind, storm-surge, flooding, debris, etc.) and facilities structure type that required replacement and/or repair. Please provide this information for Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

Hurricane (Hermine) – CIF						
CIF Name/Type (i.e. Hospital)	County/ Location	Restoration Time	Outage Cause	Number of Facilities Requiring		
None					Repair	Replace
				<i>Transmission</i>		
ACV Community Services LLC / (Good Sam)	Suwannee/ Dowling Park	14 hours	Tree	Structures		
<i>HQM At Live Oak Inc (Surrey place)</i>	<i>Suwannee</i>	4.5 hours	Tree	Substations		
				<b>Total</b>		
				<i>Distribution</i>		
				Poles		
				Substation		
				Feeder OH	2	0
				Feeder UG		
				Feeder Combined		
				Lateral OH		
				Lateral UG		
				Lateral Combined		
				<b>Total</b>		
				<i>Service</i>		
				Service OH		
				Service UG		
				Service Combined		
				<b>Total</b>	2	0

<b>Hurricane (Matthew) – CIF</b>						
<b>CIF Name/Type (i.e. Hospital)</b>	<b>County/ Location</b>	<b>Restoration Time</b>	<b>Outage Cause</b>	<b>Number of Facilities Requiring</b>		
None					<b>Repair</b>	<b>Replace</b>
				<i>Transmission</i>		
ACV Community Services LLC / (Good Sam)	Suwannee/ Dowling Park	0 hours	Tree	Structures		
<i>HQM At Live Oak Inc (Surrey place)</i>	<i>Suwannee</i>	0 hours	Tree	Substations		
				<b>Total</b>		
				<i>Distribution</i>		
				Poles		
				Substation		
				Feeder OH		
				Feeder UG		
				Feeder Combined		
				Lateral OH		
				Lateral UG		
				Lateral Combined		
				<b>Total</b>		
				<i>Service</i>		
				Service OH		
				Service UG		
				Service Combined		
				<b>Total</b>	2	0

Hurricane (Irma) – CIF						
CIF Name/Type (i.e. Hospital)	County/ Location	Restoration Time	Outage Cause	Number of Facilities Requiring		
None					Repair	Replace
				<i>Transmission</i>		
ACV Community Services LLC / (Good Sam)	Suwannee/ Dowling Park	34 hours	Tree	Structures		
<i>HQM At Live Oak Inc (Surrey place)</i>	<i>Suwannee</i>	12.5 hours	Tree	Substations		
				<b>Total</b>		
				<i>Distribution</i>		
				Poles		
				Substation		
				Feeder OH	6	0
				Feeder UG		
				Feeder Combined		
				Lateral OH		
				Lateral UG		
				Lateral Combined		
				<b>Total</b>		
				<i>Service</i>		
				Service OH		
				Service UG		
				Service Combined		
				<b>Total</b>	2	0

**Underground Facilities**

36. Please provide an assessment of the performance of underground facilities during Hurricanes Matthew, Hermine, Irma, Maria, and Nate. As part of this assessment please summarize the number of underground facilities that required repair or replacement for each event.

**Response:**

SVEC sustained no underground equipment outages.

37. Please provide a discussion what programs/tariffs the utility has in place to promote  
a. Undergrounding of new construction (e.g., subdivisions)

**Response:**

Credit in the amount of overhead construction costs towards underground construction costs.

b. Conversion of overhead to underground

**Response:**

50 percent cost credit to member.



## Appendix A



Example of tree damage that made many roads impassable for power restoration crews.



Example of a broken pole. SVEC's broken pole count from Hermine was 70.



Example of a broken pole. SVEC's broken pole count from Irma was 240.



Example of SVEC's service territory. SVEC averages six (6) meters per mile of line. Many of SVEC's lines run along unpaved rural roads. Suwannee County (one of the four counties served by SVEC) maintains approximately 875 miles of unpaved roads.