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Rhode Island Energy™
a PPL company

January 6, 2023

VIA ELECRONIC MAIL & HAND DELIVERY

Luly E. Massaro, Commission Clerk
Rhode Island Division of Public Utilities and Carriers
89 Jefferson Boulevard
Warwick, RI 02888

RE: Docket No. 22-53-EL – The Narragansett Electric Company
Proposed FY 2024 Electric Infrastructure, Safety, and Reliability Plan
Responses to Division Data Requests - Division Set 4

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy (the "Company"), enclosed please find the Company's responses to the Division of Public Utilities and Carriers' ("Division") Fourth Set of Data Requests issued by the Division during its review of the above-referenced matter. [1]

Please be advised that the Company received an extension from the Division to January 13, 2023 to respond to data request Division 4-7.

Thank you for your attention to this filing. If you have any questions, please contact me at 401-784-4263.

Sincerely,

Andrew S. Marcaccio

Enclosures

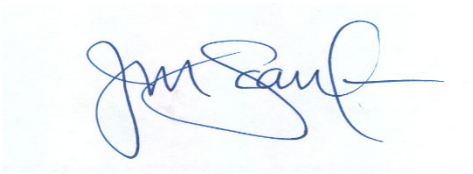
cc: Docket No. 22-53-EL Service List
John Bell, Division
Al Contente, Division
Greg Booth, Division
Linda Kushner, Division

[1] Per communication from Commission counsel on October 4, 2021, the Company is submitting an electronic version of this filing followed by hard copies filed with the Clerk within 24 hours of the electronic filing.

Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

The paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.



Joanne M. Scanlon — January 6, 2023
Date

Docket No. 22-53-EL – RI Energy's Electric ISR Plan FY 2024
Service List as of 1/5/2023

Name/Address	E-mail Distribution	Phone
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Matt Sullivan, Green Development LLC	ms@green-ri.com;	

Division 4-1

Request:

Provide the RIE completed protective coordination study for each substation and distribution feeder impacted by increased fault currents associated with the New England East West Transmission upgrade project in combination with the significant increase of DG fault current contributions.

Response:

Please see the Company's responses to Division 3-1, Division 3-7, and Division 3-9. Any transmission line upgrades/modifications are incorporated into the ASPEN base case by Protection Engineering. The most up-to-date models are provided to ISO-NE on an ISO-NE defined interval basis. Therefore, any transmission system changes are incorporated into all coordination reviews performed on the distribution system. The Company does not produce paper or hard copies of the protection and coordination efforts. Any protection-related work remains in Company models and databases. Once a study is completed and prior to the project going into service, any necessary protective setting changes are issued and performed in the field.

As stated in the Company's response to Division 3-9, any DG interconnection on the Company's system undergoes a protection review to assess the effects on fault current and coordination that the DG interconnection may cause. During this review, the Company proposes mitigation to maintain adequate protective device coordination and fault current levels. Any subsequent system modifications are updated into the Company's GIS system and, if necessary, into the ASPEN base case.

Division 4-2

Request:

Provide the RIE completed protective coordination study for the South Street substation upgrade project and all distribution feeders.

Response:

As stated in the Company's response to Division 4-1, the Company does not produce paper or hard copies of the protection and coordination efforts. Any protection-related work remains in Company models and databases. Once a study is completed and prior to the project going into service, any necessary protective setting changes are issued and performed in the field.

The South Street substation upgrade project was largely an asset condition replacement project. Because South Street has an extremely complex electrical configuration, the project intentionally did not change system impedance values or other values affecting fault current. Therefore, the existing protection settings remained largely unchanged.

Division 4-3

Request:

Provide the RIE completed protective coordination study for the Southeast substation upgrade project and all distribution feeders.

Response:

When the Company establishes a new substation, such as Dunnell Park/Southeast, a protection and coordination review is performed using existing Company databases and models. As noted in the Company's responses to Division 4-1 and Division 4-2, the Company does not produce paper or hard copies of the protection and coordination efforts. Any protection related work remains in Company models and databases. Once a study is completed and prior to the project going into service, any necessary protective setting changes are issued and performed in the field.

Division 4-4

Request:

Provide the RIE completed protective coordination study for the Aquidneck Island substation and all distribution feeders based on the transmission and substation and distribution line upgrades.

Response:

As noted in the Company's response to Division 4-3, when the Company establishes a new substation, a protection and coordination review is performed using existing Company databases and models. As noted in the Company's responses to Division 4-1, Division 4-2, and Division 4-3, the Company does not produce paper or hard copies of the protection and coordination efforts. Any protection related work remains in Company models and databases. Once a study is completed and prior to the project going into service, any necessary protective setting changes are issued and performed in the field.

Division 4-5

Request:

Regarding the Nasonville outage:

a. What was the maximum fault current level on Feeder 41 which apparently initiated the switchgear failure?

b. Provide any event recorder data that would have been recorded by the feeder recloser or substation relaying.

c. Provide a substation one line diagram and feeder one line diagram depicting all the relays and include all relay settings and all feeder reclosers and fuses and settings and time current coordination curves for all the protective equipment.

d. Why was there not a bus breaker or overcurrent relaying on the low side of the transformer which would have detected the bus fault and cleared it in advance of the differential relaying?

e. National Grid had previously completed an extensive study of all substation metal clad switchgear. Explain why this study did not determine the deficiencies in the bus which would result in a bus failure due to a feeder fault.

f. Provide the comparison between the bus fault design capability and the fault current event level.

g. When was the last protective coordination study completed for this substation and its feeders? Provide a copy.

h. Did the Dispatch in Lincoln pick up load using existing ties through system automation or did line crews have to be dispatched?

i. What assistance came directly from PPL?

j. Provide a detailed explanation of how the advanced device sensing capabilities were critical and explain where these were located.

k. What were power supply deficiencies (MW, dates, duration) without solar production?

Division 4-5, page 2

l. The Company states that high solar penetration in the served area complicated the deployment of roll-on generation because of system stability. Did RIE consider curtailing intermittent solar generation and replacing solar contributions through firm resources as opposed to reactive monitoring and control of DER during the term of the emergency? Explain how advanced devices will resolve system stability issues caused by solar intermittency.

m. When was the substation relaying last tested?

n. When was the grounding switch last functionally tested and when was it last inspected? Provide copies of the test and inspection reports.

Response:

a. The maximum fault current level from the fallen tree event that initiated the switchgear failure was 2450-amp A-phase fault current recorded at 2/23/22 18:20:27.415 by pole top recloser 641026 on pole 227 of feeder 127W41.

b. Please refer to Attachment DIV 4-5-1 for recorded DFR data which depicts:
- Figure 1:
  - The start of the fallen tree event showing approximately 2300-amp A-phase and 2150-amp B-phase fault currents, depicted in red and green respectively, recorded at 8/23/22 18:20:27.227 by pole top recloser 641026.
- Figure 2:
  - The end of the fallen tree event recorded at 8/23/22 18:20:28.173 by pole top recloser 641026 showing the fault currents lasted a total duration of 0.9 seconds.
- Figure 3:
  - The 115kV protection operation at the West Farnum substation. Initially, there were approximately 1600-amp fault currents on all three phases, depicted in red, green, and blue respectively, recorded at 8/23/22 18:23:20.378 by the B23 line protection relay at West Farnum substation. These fault currents are suspected to be related to the MOS 271-1 airbreak damage and medium voltage switchgear fire. The exact cause or the contributions for these fault currents cannot be determined. Then, B-phase fault current increased to approximately 8400-amps, which tripped the West Farnum instantaneous overcurrent relay. The exact cause of this increase in B-phase fault current cannot be determined.

Division 4-5, page 3

c. See Attachment DIV 4-5-2 which depicts:
   - Figure 1: Nasonville Relay Diagram
   - Figure 2: 127W41 Feeder One-Line Diagram
   - Figure 3: Relay, Recloser and Fuse Settings Table
   - Figure 4: Phase and Ground Overcurrent Time Current Coordination Curves

d. This station was designed without a transformer low-side breaker. The station includes transformer high-side phase overcurrent and transformer low-side ground overcurrent relaying that covers the transformer and medium voltage switchgear. The station also has a differential relaying scheme with a protection zone that encloses the transformer and medium voltage switchgear. Given the sensitivity and instantaneous response of the differential relaying, the bus fault that was within the differential relaying protection zone caused the differential relaying to trip before the transformer high-side phase overcurrent and transformer low-side ground overcurrent relaying.

   If the station was designed with a low-side bus breaker, the low-side bus breaker would have a differential relaying scheme protecting the medium voltage switchgear in addition to low-side overcurrent relaying. This differential relaying scheme protecting the medium voltage switchgear would pick up in advance of the overcurrent relaying in the event of a bus fault. Generally, differential relaying schemes operate faster than overcurrent relaying schemes.

e. The metalclad study reviewed all relevant substations in Rhode Island. As can be seen from Figure DIV 4-5e-1, Nasonville was included in this review and ranked as one of the least critical stations. As explained within the response to EC-2022-26, the likely failed component was a 41 breaker C phase terminal to the switchgear bus connection. This internal component would not have been identified in a station asset condition review that informed the metalclad substation study.

Division 4-5, page 4

Figure DIV 4-5e-1

Location	Total Health Score	Total Safety Score	Total Performance Score	Total Customer Impact Score	Total Score	Total No. Metalclads	Notes
Vernon 23	1600.4	260.4	206	80	2147	1	Retire
Centre St Unit 106	1200.8	260.4	0.4	120	1582	2	Retire
Southeast Sub 60	1200.8	260.4	0.4	40	1502	1	Retire
Lee Street 30	920.8	260.4	0.4	120	1302	2	Retire
Front St 24	1200.8	0.4	0.4	60.2	1262	1	Retire
Pawtucket 1 107 Sub	532.8	0.8	400	260	1194	2	Replace
Hospital Sub 146	920.8	200.6	6.2	40	1168	1	Replace
Kingston 131	920.8	60.6	20.2	80	1082	1	Replace
Clarke Street 65	640.8	60.6	206	120	1027	2	Replace
Central Falls 104	812.8	0.8	6.2	120	940	1	Replace
Daggett Ave 113	801.2	0.4	6.2	80	888	1	Retire
Hospital Sub 146	560.8	200.6	6.2	40	808	2	Replace
Kingston 131	640.8	60.6	20.2	80	802	1	Replace
South Aquidneck 122	413.2	0.8	206	120	740	1	Replace
Kingston 131	560.8	60.6	20.2	80	722	1	Replace
Riverside 8	401.6	200.6	220	260	683	1	Refurbished
Valley Sub 102	441.2	0.4	120	120	682	2	Replace
East George St 77	532.8	0.8	0.4	80	614	2	Potential Retire
Crossman Street 111	521.2	0.4	0.4	80	602	1	Retire
Cottage Street 109	413.2	0.4	66	120	600	2	Retire
Staples 112	413.2	0.4	26	120	560	1	Refurbished
Dexter 36	413.2	0.4	0.4	120	534	1	Good Condition
Hyde Ave 28	441.2	0.4	6.2	80	528	1	Retire
North Aquidneck 21	241.2	0.4	6.2	66	314	1	Replace
Lippitt Hill 79	121.6	80.4	0.4	80	282	2	Being Done
Harrison 32	121.6	0.4	20.2	120	262	1	Replace
West Howard 154	121.6	1.2	12	120	255	3	Refurbished
~~Washington Sub 126~~	~~13.6~~	0.4	20.2	120	154	2	~~Good Condition~~
Nasonville 127	2	0.4	26	120	148	1	Good Condition
~~West Farnum 17~~	~~121.2~~	0.4	0.4	20.2	142	1	~~Being Rebuilt/GIS~~
Merton 51	2	0.4	6.2	80	89	2	Primary Refurbished
Raytheon - Portsmouth	1.6	0.4	0.4	0.4	3	1	Customer Owned

f. The approximate 2450-amp fault current level was below the station's 13.8kV breaker interrupting capacity of 40kA. The West Farnum 115kV breaker has an interrupting capacity of 63kA.

g. When the Company establishes a new substation, a protection and coordination review is performed using existing Company databases and models. The Company does not produce paper or hard copies of the protection and coordination efforts. Any protection related work remains in Company models and databases. Once a study is completed and prior to the project going into service, any necessary protective setting changes are issued and performed in the field.

h. All line crews needed to be dispatched to close feeder ties that transferred the Nasonville substation load to Woonsocket substation. For a detailed description of the switching steps that made this transfer, please refer to the Company's response to Division 1-31€.

Division 4-5, page 5

i. The PPL distribution protection engineering group assisted in fault event analysis and deriving relay settings for the mobile switchgear. The balance of effort from the Company's standpoint came from local knowledge and personnel.

j. Please refer to the Company's response to Division 1-33 for a description of how the advanced device sensing capabilities were critical during the Nasonville outage. Please refer specifically to the Company's response to Division 1-31(h) for advanced device sensing locations.

k. RTU data was collected and analyzed to find the power supply deficiencies of the 26W1 and 26W5 feeders without solar production. The Nasonville substation load was transferred to these two feeders after the switchgear failure. These feeders' power supplies were considered deficient when any of the feeders' phase currents exceeded overhead line ratings out of the substation. The two feeders were analyzed for power supply deficiency under the following conditions:
   - 26W1 without solar production from 3 large sites (2MW, 6.22MW and 0.84MW)
   - 26W5 without solar and hydro production from 4 large sites (1.6MW. 2.54MW, 3.3MW and 3.9MW)

   The 26W1 and 26W5 power supply deficiency from the switchgear failure event on 8/23/22 18:23 to the mobile switchgear energization on 8/27/22 19:00 is summarized in Table 4-5k-1 below:

Table 4-5k-1
26W1 and 26W5 Power Supply Deficiency Summary

Feeder	Total MVAh Power Supply Deficiency without solar production	Total Hours Power Supply was Deficient without solar production
26W1	16.9	20
26W5	6	12
Total	22.9	32

Prepared by or under the supervision of: Ryan Constable

Division 4-5, page 6

Please refer to Attachment DIV 4-5-3 for 26W1 and 26W5 power supply deficiency plots, which depicts:

- Figure 1:
  - 26W1 power supply deficiency plotted between the switchgear failure event and the mobile switchgear energization.

- Figure 2:
  - 26W5 power supply deficiency plotted between the switchgear failure event and the mobile switchgear energization.

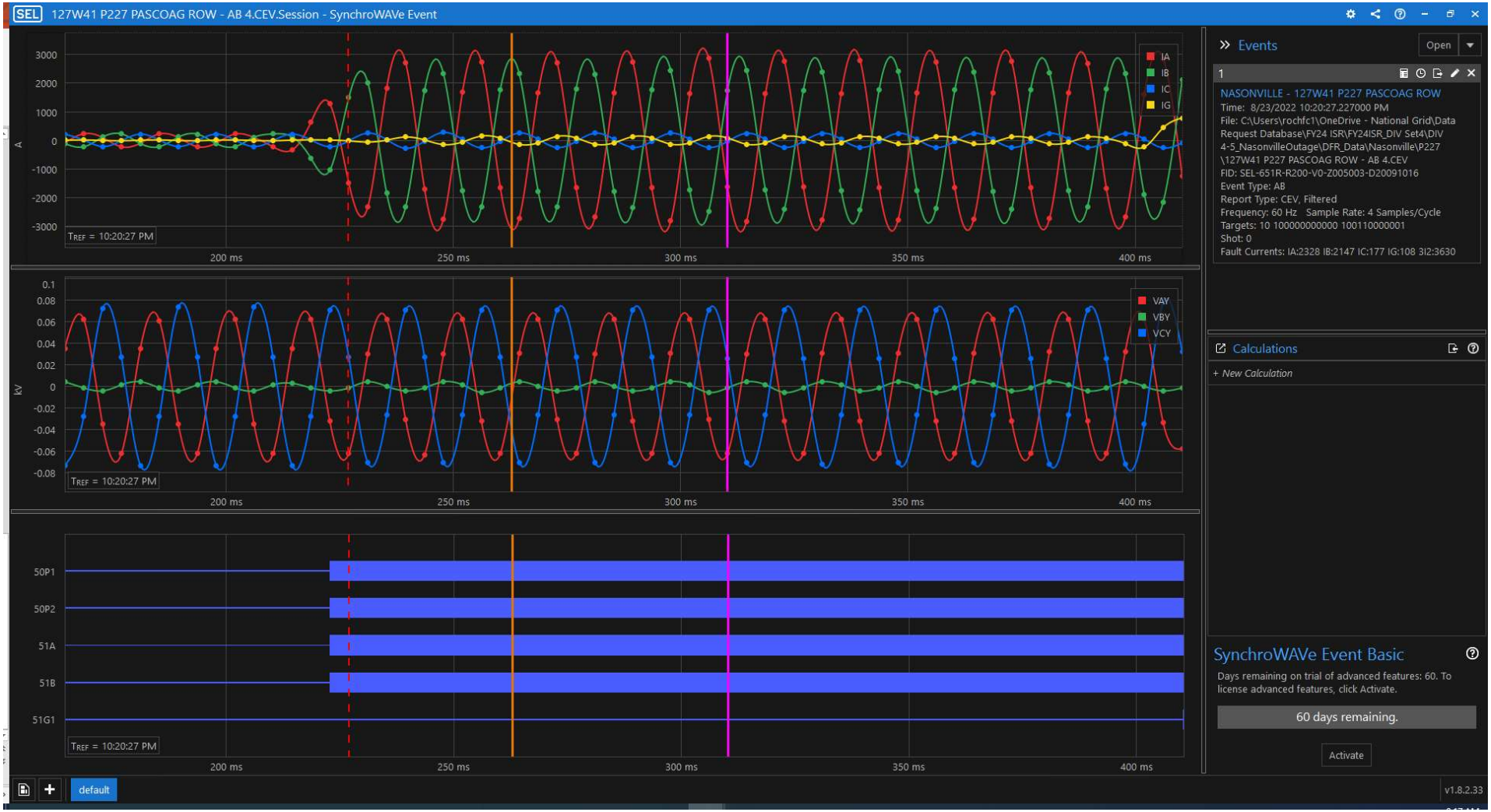
l. The Company assumes the term "firm resources" in the Division's question refers to roll-on generation because Company-owned and dispatchable firm resources are not permanently installed and available on the distribution system. The Company did not consider curtailing intermittent solar generation and replacing solar contributions with roll-on generation. The Company did deploy roll-on generation, but this was necessary in addition to the solar generation. The Company raised the issue of solar generation intermittency to emphasize the need for greater visibility and control of the distribution system. The Company would not replace solar generation with roll-on generation in any circumstance. Instead, it would install technologies to obtain needed sensing data and control to coordinate and optimize the roll-on generation with the existing solar generation.

There is also a mobilization issue associated with roll-on generation. The first 3MW of roll-on generation was on site on 8/25/22 at 15:30 and picked up load at 20:05. The second 3MW of roll-on generation was on site on 8/25/22 at 20:00 and picked up load on 8/26/22 at 14:40. The third 3MW of roll-on generation was on site at 8/26/22 at 12:30 and picked up load at 18:00. While the 9MW of roll-on generation was being transported and setup, all the PV sites, totaling 25MW in nameplate capacity, were supporting the Woonsocket substation picking up the Nasonville load.

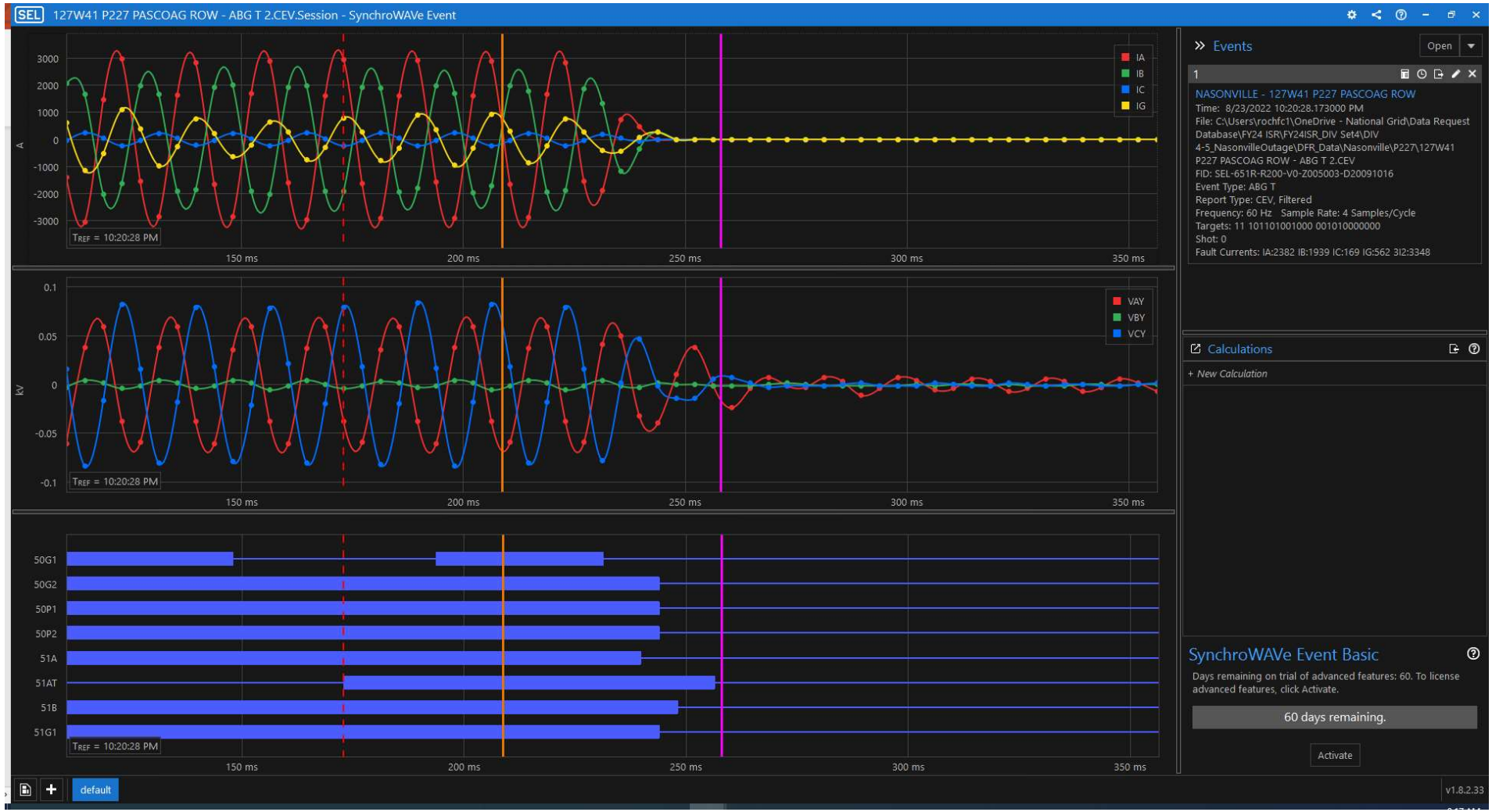
m. The substation relaying was last tested on 1/3/22. Please refer to attachment DIV 4-5-4 for the substation relaying test maintenance report.

n. The grounding switch was last functionally tested and inspected on 3/11/06. Please refer to attachment DIV 4-5-5 for the grounding switch test and inspection report.

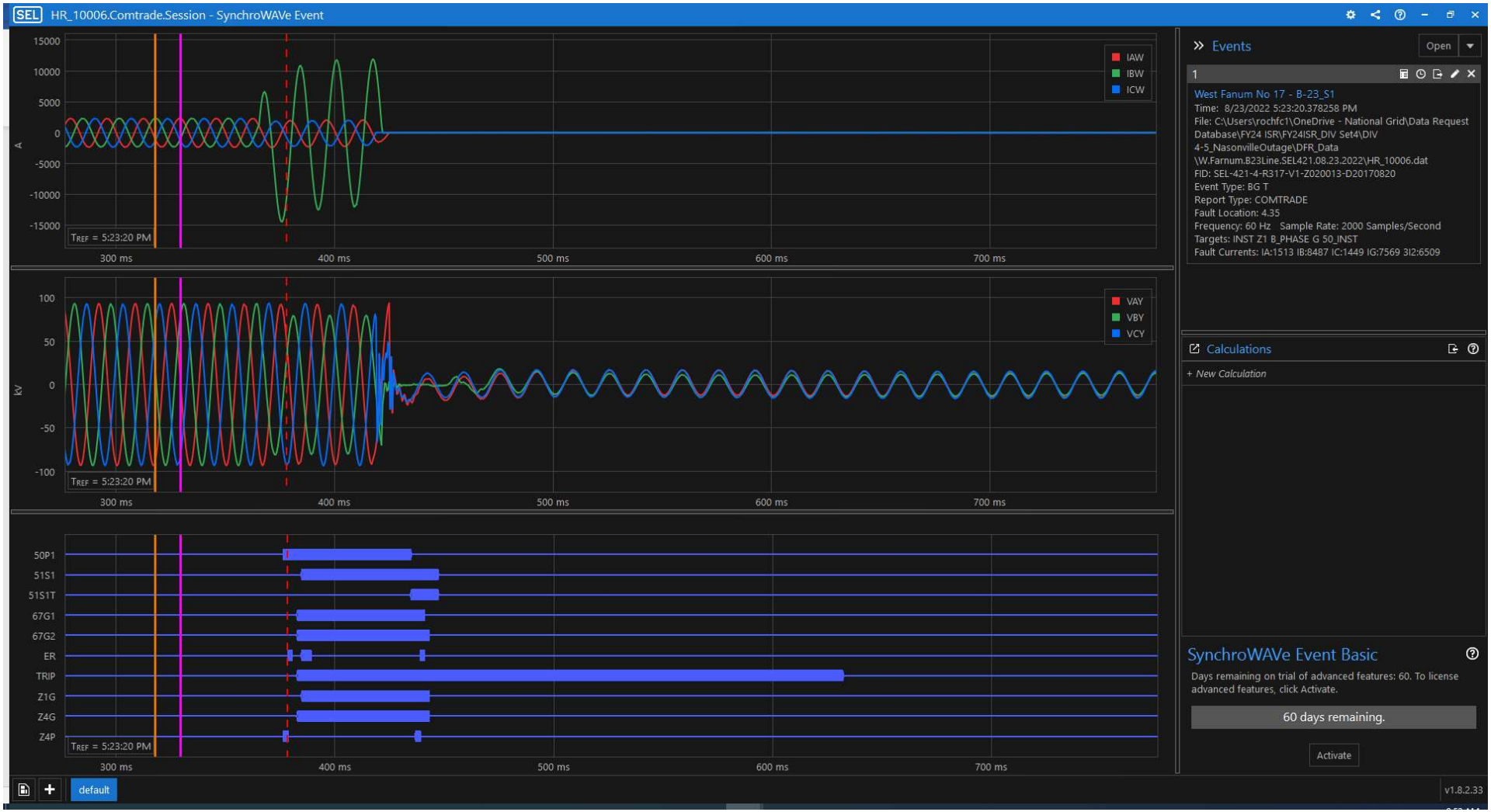
Attachment 4-5-1
Figure 1 – Tree Fault Start



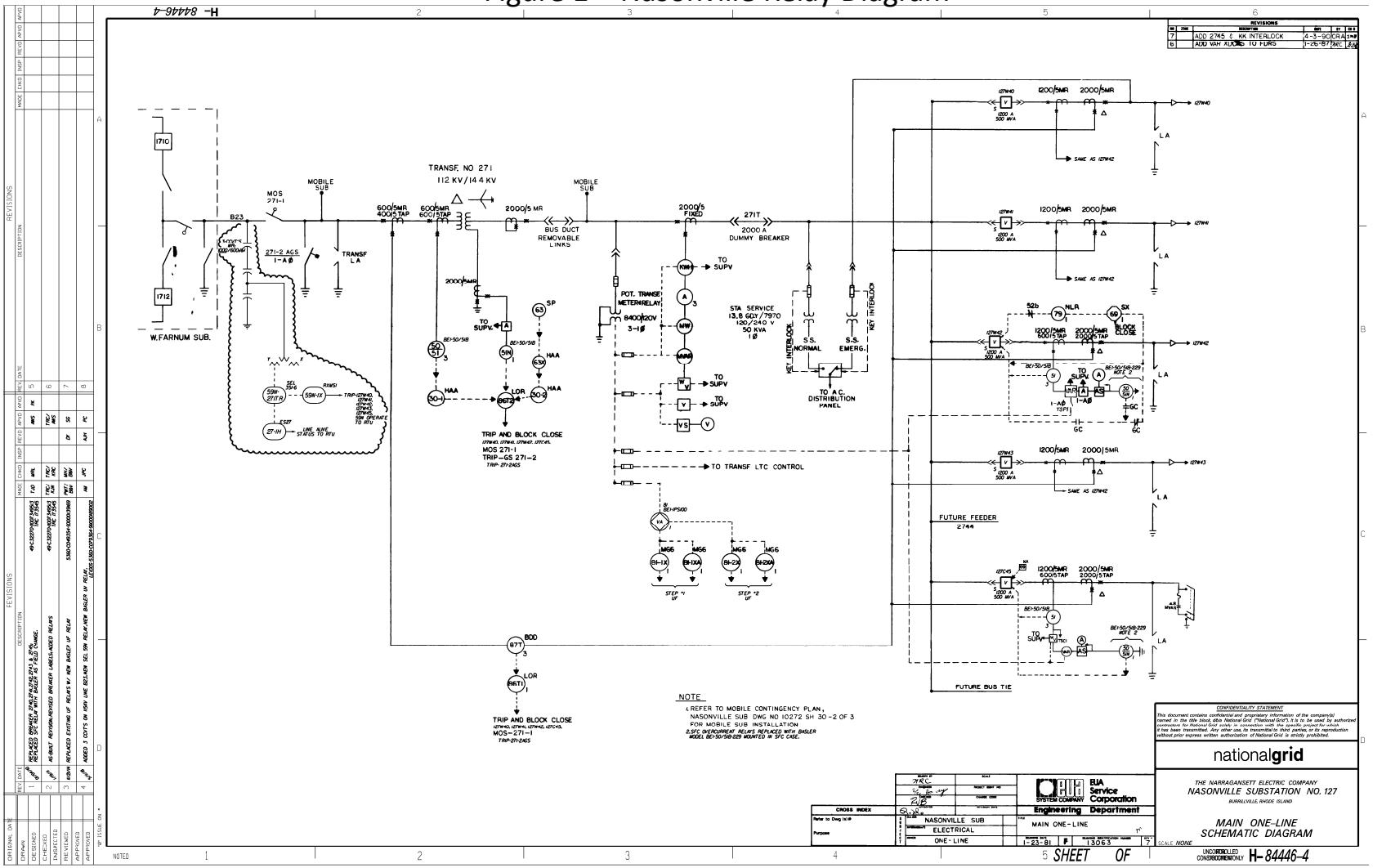
Attachment 4-5-1
Figure 2 – Tree Fault End



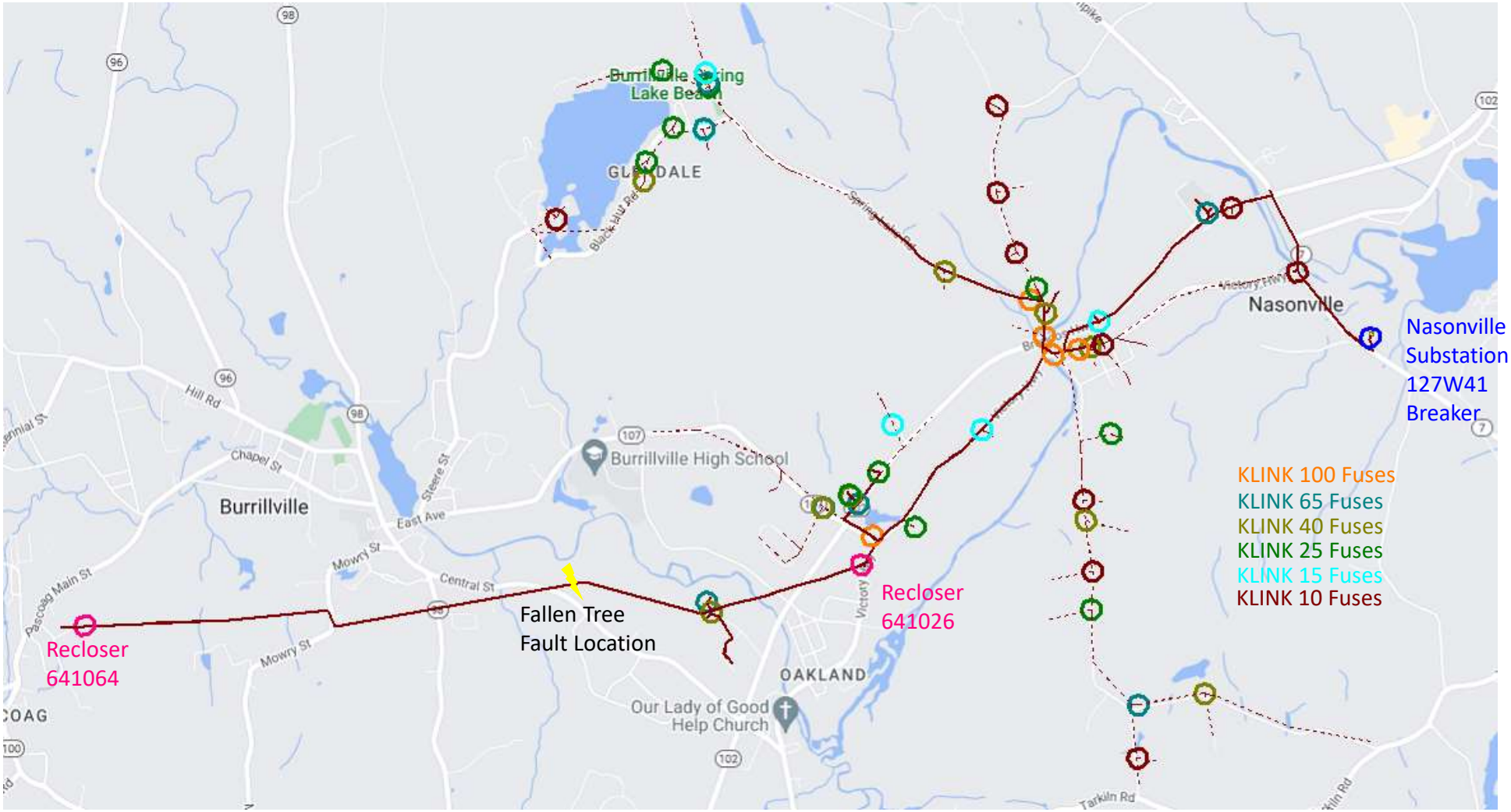
Attachment 4-5-1
Figure 3 – Substation Fault End



Attachment 4-5-2
Figure 1 – Nasonville Relay Diagram



Attachment 4-5-2
Figure 2 – 127W41 Feeder One-Line Diagram

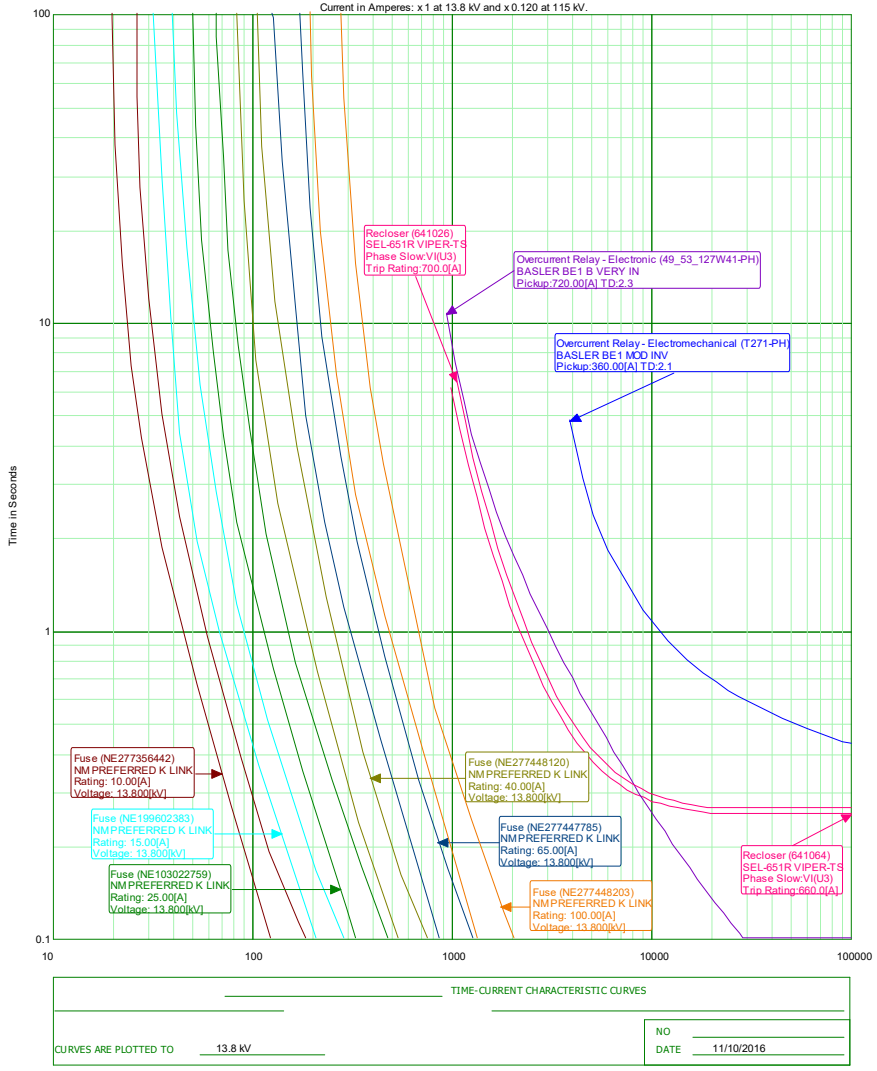


Attachment 4-5-2
Figure 3 – Relay, Recloser and Fuse Settings Table

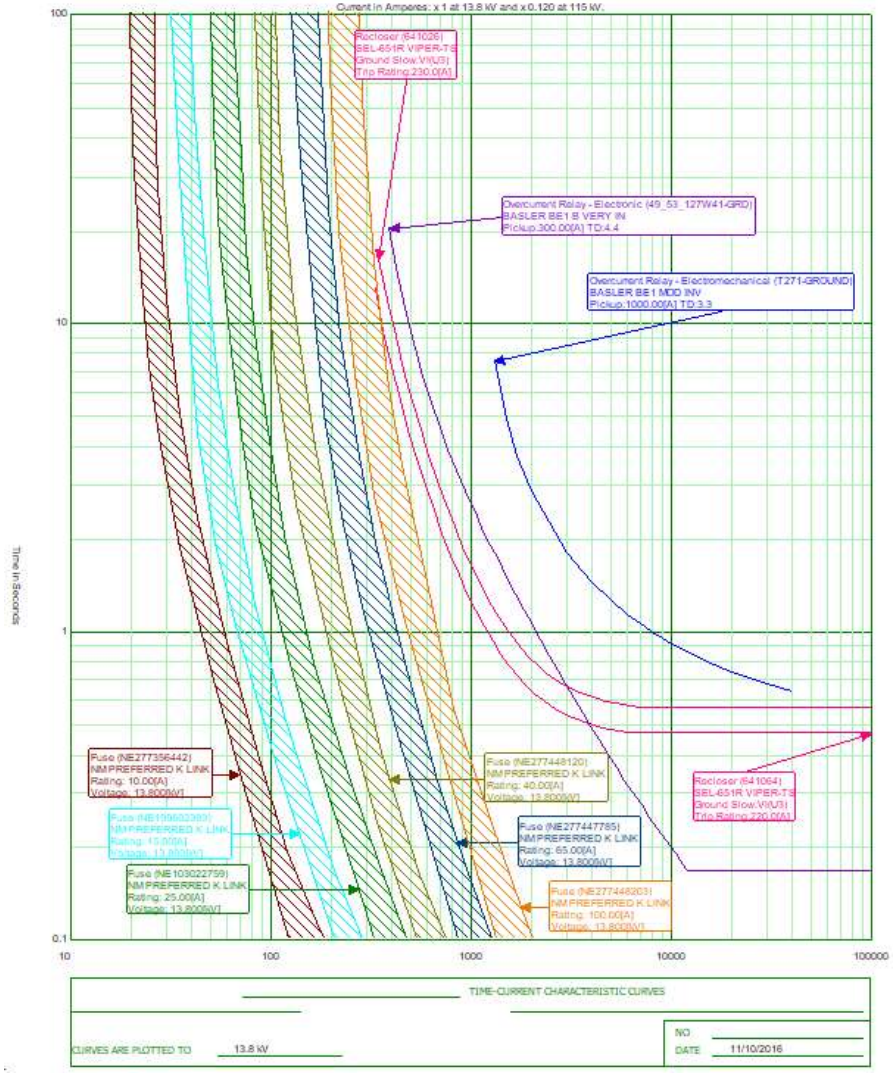
Substation/Feeder?	One Line Symbol Text/ Color	Protection Type	Position	Voltage	Controlled Device Type	Controller/Relay Manufacturer	Controller/Relay Part Number	Turns Ratio	Range	Secondary Pickup	Primary Pickup	Curve Type	Curve Number	Time Dial
Substation	27-IH	Undervoltage	271TR Transformer Primary	115kV	Breaker	Basler	ES-27	1000		92.4 V				
	59N-271TR	3V0 Overvoltage	271TR Transformer Primary	115kV	Breaker	Schweitzer	SEL-351-6	1000	0-300 V	100 V		60 cycles		
										150 V		Instantaneous		
	50/51	Phase Overcurrent	271TR Transformer Primary	115kV	Breaker	Basler	BE1-50/51B229	120	0.5-15.9 A	3 A	360 A	BE1 M Moderately Inverse	99-1372	2.1
									1-99 A	25 A	3000 A	Instantaneous		
	63	Transformer Pressure	271TR Transformer Tank	N/A	Breaker	Qualitrol	909-007-01							
	87T	Transformer Differential	271TR Transformer Primary	115kV	Breaker	GE	BDD15816A	80	2.9-8.7 Tap A	3.2 Tap A				
			271TR Transformer Secondary	13.8kV				400	2.9-8.7 Tap A	8.7 Tap A				
	51N	Transformer Ground Overcurrent	271TR Transformer Secondary	13.8kV	Breaker	Basler	BE1-50/51B229	400	0.5-15.9 A	2.5 A	1000 A	BE1 M Moderately Inverse	99-1372	3.3
	81-1X	Underfrequency	271TR Transformer Secondary	13.8kV	Breaker	Schweitzer	SEL-351	70						
	51	Phase Overcurrent	127W41 Feeder Position	13.8kV	Breaker	Basler	BE1-50/51B229	120	0.5-15.9 A	6 A	720 A	BE1 B BS142 Very Inverse	99-1376	2.3
	50/51N	Ground Overcurrent	127W41 Feeder Position	13.8kV	Breaker	Basler	BE1-50/51B229	120	0.5-15.9 A	2.5 A	300 A	BE1 B BS142 Very Inverse	99-1376	4.4
Feeder	641026	Phase Overcurrent	127W41 P227 off Victory Hwy	13.8kV	Recloser	Schweitzer	SEL-651R				700 A	U3 Very Inverse		2
		Ground Overcurrent									230 A	U3 Very Inverse		5
	641064	Phase Overcurrent	127W41 P309 Pascoag ROW	13.8kV	Recloser	Schweitzer	SEL-651R2				660 A	U3 Very Inverse		1.9
		Ground Overcurrent									220 A	U3 Very Inverse		4
	Orange	Overcurrent	127W41 Downstream of Breaker and Reclosers	13.8kV	Fuse	Various					100 A	Type K (Fast)		
	Dark Teal	Overcurrent	127W41 Downstream of 100 A Fuses	13.8kV	Fuse	Various					65 A	Type K (Fast)		
	Dark Yellow	Overcurrent	127W41 Downstream of 65 A Fuses	13.8kV	Fuse	Various					40 A	Type K (Fast)		
	Green	Overcurrent	127W41 Downstream of 40 A Fuses	13.8kV	Fuse	Various					25 A	Type K (Fast)		
	Light Blue	Overcurrent	127W41 Downstream of 25 A Fuses	13.8kV	Fuse	Various					15 A	Type K (Fast)		
	Dark Red	Overcurrent	127W41 Downstream of 15 A Fuses	13.8kV	Fuse	Various					10 A	Type K (Fast)		

Attachment 4-5-2
Figure 4 – Time Current Curves

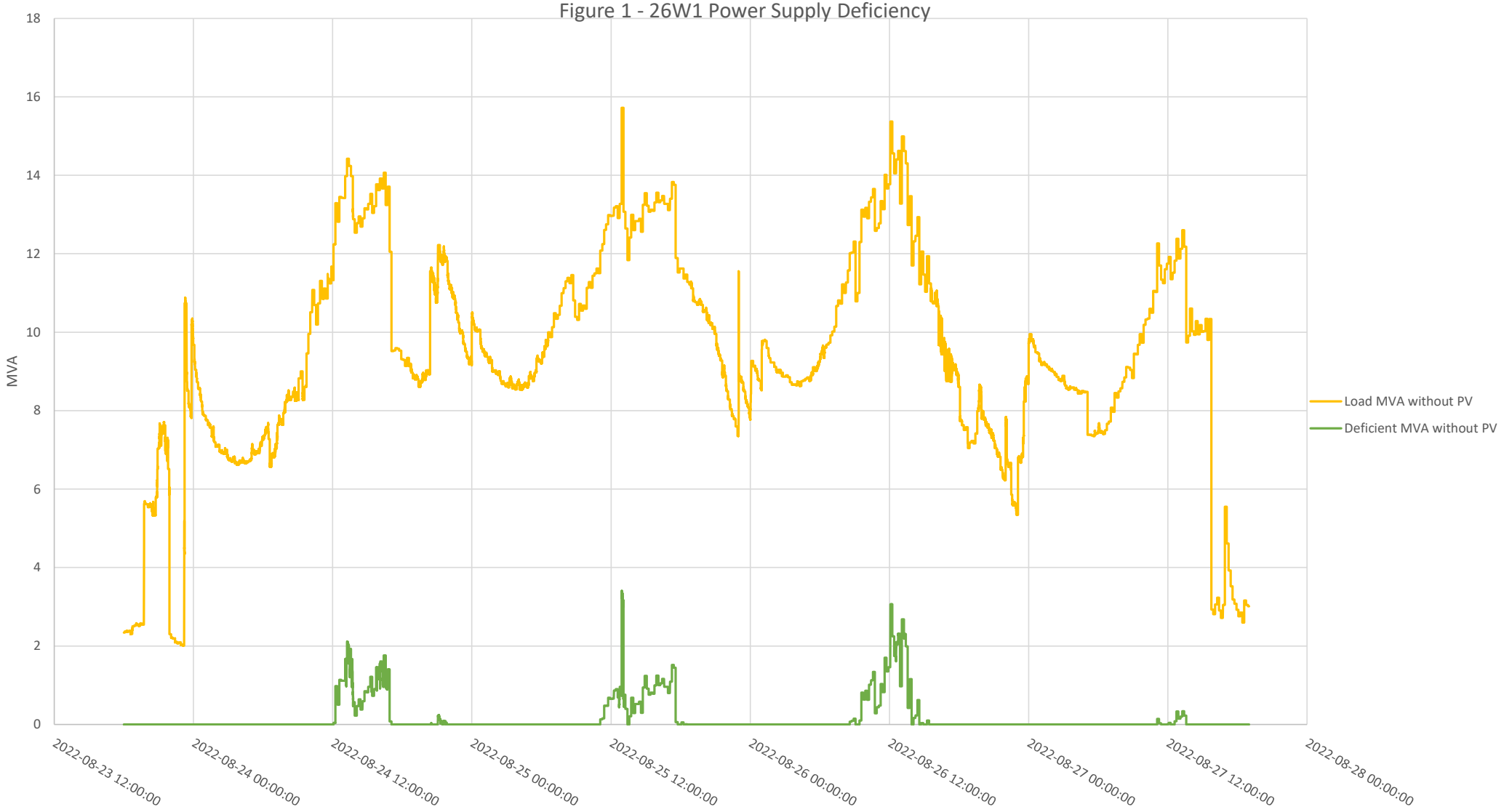
Phase Overcurrent TCC Curves



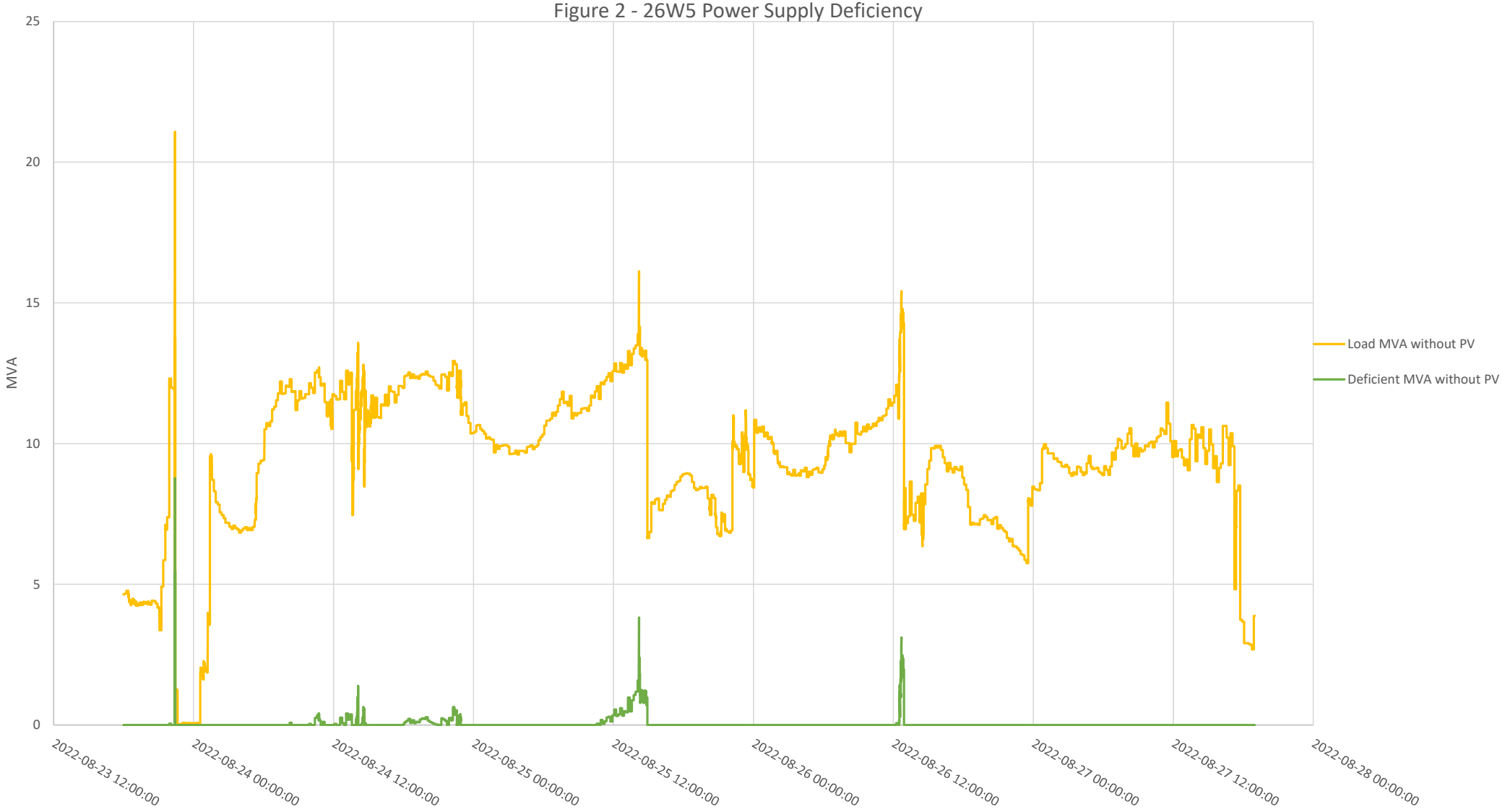
Ground Overcurrent TCC Curves



Attachment 4-5-3
Figure 1 - 26W1 Power Supply Deficiency



Attachment 4-5-3
Figure 2 - 26W5 Power Supply Deficiency



nationalgrid

Relay System Test – Maintenance Report

Station	Nasonville	Type		Start Date	01/03/22

C&I	F-TR	F-BF	Stop Date	01/06/22
X				
Calibration / Inspection	Functional trip	Functional Breaker failure		

General Relay System Calibration / Maintenance Test :

Good	Fair	Poor	Application #	D21-370045
X				

CT circuits	PT circuits	Output Trip circuits
X	X	X

13.8kV Relay Maintenance on all Feeder OC Relays, Transformer Diff and OC, GV3, UF Lock-Out/Aux Relay Verification, and UV Relay.

No Issues seen, no adjustments made to any equipment

1.) Problems – Relay system would have mis-operated.		Yes X No
2.) Problems- Alert other divisions – May be trend.		Yes X No
3.) Problems – Academic inform other divisions.		Yes X No

Data Cards	Relay Setting Sheets	Nameplate Cards
X	X	X

Estimated Man-Days 4__ Actual Man-Days ___6_____.

Technician(s): JT Date:01/06/22 Division Supv. JHB Date: 1/7/2022

EOP 409.03.3 HIGH SPEED GROUNDING SWITCH INSPECTION 11/04/2005

Substation	Circuit Designation	Manufacturer	Breaker Type	Mechanism Type	Reference #	Work Order #	Date
Nasonville	271-2465				09-6399		3/11/06

VISUAL AND OPERATIONAL (V&O) INSPECTION

☐ Check Insulators ☑ Check Blades and Jaws for Damage or Deterioration ☑ Check Spring Mechanism for Damage or Deterioration ☑ Check Wiring and Conduits for Damage or Deterioration ☐ Check Indicating Lights ☐ Record Operations Counter	

DIAGNOSTIC INSPECTION

☐ Perform V&O Inspection ☐ Check and Lubricate Blades, Jaws and Hinges ☐ Check and Lubricate Spring Mechanism. ☑ Test Operation - Relay Department to Test Through Relaying If Possible. ☑ Check Alignment and Penetration. ☐ Perform Contact Resistance Test	micro ohm AS FOUND OK AS Left OK

Counter

As Found	—

ABNORMAL CONDITIONS / REPAIRS MADE

Inspected By DH JA Reviewed By:

Division 4-6

Request:

In executable format, provide the number of Intentional customer interruptions by each of the following categories for 2012-2022: Substation rebuild/upgrade projects and associated distribution feeder transfers; System Load Shedding; Emergency Repair; Voltage Conversion or New Construction; Fire, Police Request or 911, Maintenance; Replace OFC – Employee, or other defined categories.

Response:

The Company tracks the number of customers interrupted by intentional interruptions in the following categories: (i) Emergency Repair, (ii) Voltage Conversion or New Construction, (iii) Fire or Police Request or 911, (iv) Maintenance, (v) Customer Request (vi) System Load Shedding and (vii) Replace OFC- Employee.

The number of customers interrupted for 2012-2022 in each of these categories is set forth in executable format in Attachment DIV 4-6.

Attachment DIV 4-6

The Company is providing the Excel file of Attachment DIV 4-6.

Prepared by or under the supervision of: Ryan Constable

Division 4-8

Request:

Provide the same quarterly J.D. Power Customer Satisfaction Study results for Rhode Island Energy residential customers as submitted in response to DIV 1-12 for 2019 to present. Expand the information to include available results for each class of customers.

Response:

The Company's response to Division 1-12 provided J.D. Power 2023 3rd quarter results for Overall Satisfaction and Power Quality and Reliability results.

Rhode Island Energy/Narragansett Electric brand was part of National Grid Company and ranked with the "Large East" utility peer group from 2019 through the second quarter of 2022. Those results are shown in the Company's response to Division 3-6. Therefore, quarterly data for Narragansett Electric/Rhode Island Energy is not officially available.

In the Company's response to Division 3-6, the Company noted that survey results specific to Power Quality and Reliability ("PQR") were not available. Since that filing, the Company received revised survey data from J.D. Power that separated Narragansett Electric/Rhode Island Energy's Power Quality and Reliability results. Please see Table 1, below. An extra year of data, 2018, is provided because it was available.

Table 1. JD Power East Midsize PQ&R Rankings

Power Quality and Reliability – Residential Customer					
Category	2018	2019	2020	2021	2022*
East Midsize Mean	754	758	767	772	757
Narragansett Electric	746	728	765	781	717
Peer Ranking	8 of 13	11 of 13	7 of 12	5 of 12	TBD
Quartile	3rd	4th	3rd	2nd	TBD

* Partial year results

J.D. Power did note that the results "were not official rankings but simply a view of where National Grid / Rhode Island Energy scores would have fallen when placed among East Midsized utility group."

Prepared by or under the supervision of: Ryan Constable

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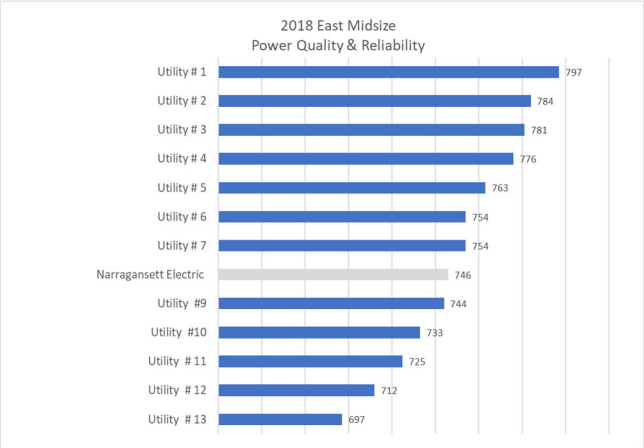
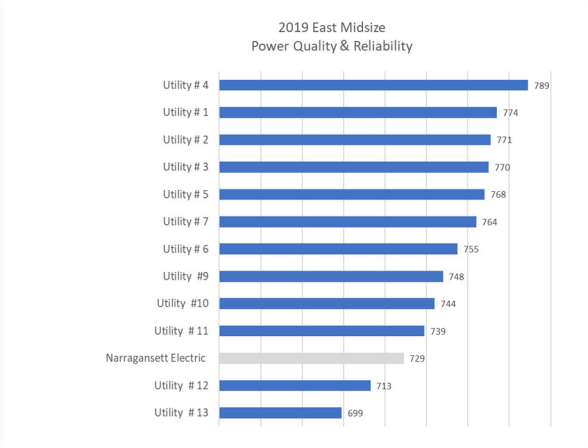
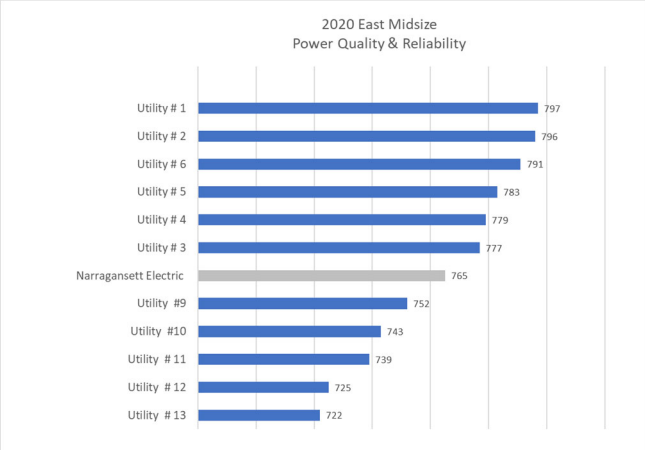
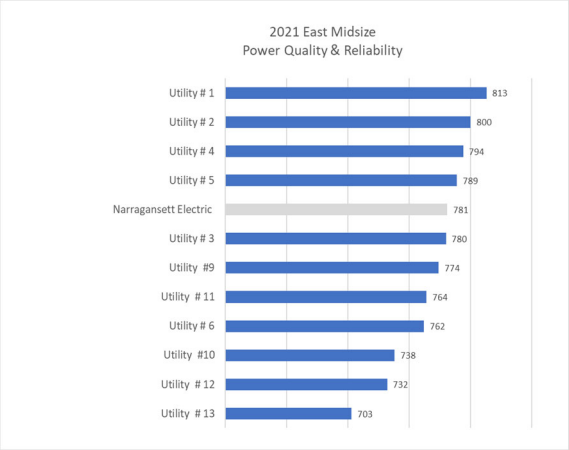
Bar charts illustrating the Company's yearly results from 2018 through 2021 as compared to its peer group are shown below.

Rhode Island Energy did not receive enough business customer data to complete a ranking exercise.









Prepared by or under the supervision of: Ryan Constable

Division 4-9

Request:

Please provide an update to Attachment DIV 1-32 indicating the correct cause of the outage event on 8/23/2022 (Nasonville) consistent with the November 30, 2022 root cause discussion.

Response:

The Company will update the cause code of Event 8545240 on August 23, 2022, with "Device Failed." The Company's control center has updated the cause description accordingly. Please see Attachment DIV 4-9.

EVNT_ID	TIME_OFF	Year	CI	CMI	DURTN_TOTL (min)	Duration (hour)	SAIFI	SAIDI	CAUSE_INTRPTN_DESC	FAILD_CMPNT_DESC
8545240	8/23/2022 06:23:25 PM	2022	10019	1233194	605.38	10.09	0.02	2.46148	Device Failed	Substation device other
7886965	7/7/2014 09:06:16 PM	2014	2511	322743	302.98	5.05	0.005	0.667	Device Failed	Regulator