

Major Event Report

Enova Power Corp.

May 18, 2026

Human Element and Equipment Failure

Filed: July 15, 2026

Major Event Description

A downstream feeder fault occurred on the distribution system supplied from Kitchener 3 Transformer Station (3TS). During the fault, the transformer Restricted Earth Fault (REF) protection operated unexpectedly due to an incorrect Current Transformer (CT) polarity connection on the transformer neutral circuit. The protection misoperation resulted in the transformer being removed from service, interrupting supply to approximately 10,244 customers. As the other side of the Dual Ended Spot Network station was out of service for planned upgrades, the misoperation caused a total station outage versus removing only one transformer from service with no impact on customers.

As a result of the transformer outage, station service was also lost. While operating on battery supply, the Remote Terminal Unit (RTU) experienced a premature battery failure, requiring manual intervention to restore station service and extending the overall restoration time.

The post-event investigation identified the incorrect CT polarity connection as the root cause of the protection misoperation. The CT polarity connection has since been corrected, the protection scheme has been retested and verified, and Enova is reviewing its commissioning and protection verification procedures to further strengthen protection verification practices.

Based on the interruption duration and magnitude, this event meets the criteria for classification as a Major Event Day (MED) in accordance with the IEEE Standard 1366 – Guide for Electric Power Distribution Reliability Indices.

Prior to the Major Event

1. Did the distributor have any prior warning that the Major Event would occur?

Yes ☐ No ☒

Additional Comments:

No.

If the distributor did have prior warning, did the distributor arrange to have extra employees on duty or on standby prior to the Major Event beginning?

Yes ☐ No ☒

Additional Comments:

Not Applicable

2. If the distributor did have prior warning, did the distributor issue any alert to the public warning of possible outages resulting from the pending Major Event?

Yes ☐ No ☐

Additional Comments:

Not Applicable

3. Did the distributor train its staff on the response plans for a Major Event?

Yes ☒ No ☐

Additional Comments:

Enova has two System Operators on duty at all times, two Powerline Technician Supervisors are on-call, and four Powerline Technicians are on-call at all times outside of regular operating hours. Additional resources from Forestry, Stations, Metering, Construction, and Warehouse are either on call or standby to support restoration efforts.

During the Major Event

1. Please identify the main contributing cause of the major event as per the table in Section 2.1.4.2.5 of the Electricity Reporting and Record Keeping Requirements.

Human Element-Protection Setting and Equipment Failure-Electrical Failure

Please provide a brief description of the event. If the event was caused by weather conditions, please specify the type of weather involved – such as high winds, freezing rain, tornadoes, ice storms, blizzards, heavy rainfall, flooding, or lightning storms.

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As a result of the transformer outage, station service was also lost. While operating on battery supply, the Remote Terminal Unit (RTU) experienced a premature battery failure, requiring manual intervention to restore station service and extending the overall restoration time.

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- 2. Was the IEEE Standard 1366 used to identify the scope of the Major Event? If not, why not?**

Yes, IEEE Standard 1366 was used.

- 3. When did the Major Event begin:**

Date: May 18, 2026

Time: 2:50 PM – EST

- 4. If the Major Event was not caused by adverse weather, did the distributor issue any information about this major event, such as estimated times of restoration (ETR) to the public during the Major Event?**

Yes ☒ No ☐

If yes, please provide a brief description of the information. If no, please explain.

Additional Information: Enova's customer outage map displayed the number of customers initially out of power, the geographical area of the outages, the cause, and the customers remaining without power. Once available, Enova also included ETRs on the outage map.

Enova issued social media updates across its social media channels including seven (7) messages on X and Facebook and six (6) messages on BlueSky and Instagram.

- 5. How many customers were interrupted during the Major Event? What percentage of the distributor's total customer base did the interrupted customers represent?**

There were 12,937 Customer Interruptions, which represents 7.8% of Enova's total customer base.

- 6. How many hours did it take to restore 90% of the customers who were interrupted?**

Enova restored 90% of interrupted customers within 3 hours and 48 minutes.

- 7. How many customers experienced service interruptions lasting less than 24 hours?**

12,937 customers

- 8. How many customers experienced service interruptions lasting between 24 and 48 hours?**

Zero (0) customers

- 9. How many customers experienced service interruptions lasting between 48 and 96 hours?**

Zero (0) customers

- 10. How many customers experienced service interruptions lasting between 96 and 168 hours?**

Zero (0) customers

- 11. How many customers experienced service interruptions lasting over 168 hours?**

Zero (0) customers

12. Were there any outages associated with loss of supply during the major event? If yes please report on the duration and frequency of the Loss of Supply outages.

Yes ☐ No ☒

13. In responding to the Major Event, did the distributor utilize assistance through a third-party mutual assistance agreement with other utilities?

Yes ☐ No ☒

14. Did the distributor run out of any needed equipment or materials during the Major Event?

Yes ☐ No ☒

15. Provide the following characteristics of the Major Event:

i. **Total number of feeders interrupted during the course of the event**

Thirteen (13) feeders were interrupted during the event.

ii. **The maximum number of customers that were concurrently without power at any point during the event.**

12,937 customers were concurrently without power.

16. What is the total number of damage assessments performed by the distributor during the course of the event?

Two (2) assessments

17. What percentage of damage assessments were completed:

- i. Within 4 hours after the interruption began – 100%.
- ii. Within 8 hours after the interruption began – NA
- iii. Within 12 hours after the interruption began – NA
- iv. Over 12 hours after the interruption began – NA

18. What communication methods were used to inform customers during the Major Event? Select all that apply:

- **Distributor's website:** Yes
- **Social media:** Yes
- **Email:** No
- **Text message:** No
- **Telephone line:** No

- **Radio broadcast:** No
- **Other (please specify):** Enova's outage management portal and corporate website.

19. During the Major Event, did any of the communication methods used become unavailable? If so, identify which one(s).

No

20. Provide SAIDI and SAIFI values for this Major Event.

SAIDI: 0.143

SAIFI: 0.078

After the Major Event

1. What steps, if any, are being taken to be prepared for or mitigate such Major Events in the future (i.e., staff training, process improvements, system upgrades)?

Additional Comments:

Enova's staff are trained to respond to emergencies and major events. Enova has implemented grid modernization technologies and will continue to do so to increase system reliability and operational response through Survalent's Fault Location, Isolation, and Service Restoration (FLISR) software application which combines the Supervisory Control and Data Acquisition and the Outage Management Systems with automated switching devices. This enables power to be efficiently restored to as many customers as possible via an automatic process.

These technologies provide automatic self-healing on the portions of the system unaffected by the fault, improving restoration times. At the time of this event approximately 37% of Enova's customer base has FLISR implemented. Enova continues to invest in smart infrastructure and expanding FLISR coverage.

In addition, process improvements are being implemented to help mitigate outages of this nature including:

- Enhancing protection verification procedures by incorporating post-energization review of in-service current and voltage measurements, together with analytical verification of protection element calculations where practical, to supplement conventional commissioning tests for complex protection schemes.

- Continued replacement of equipment that no longer meets current operational and reliability standards.