

Subject: Meridian Community Centre Transformer Failure

Recommendation:

BE IT RESOLVED THAT Council receive Report # 2024-0102 Meridian Community Centre Transformer Failure, for information;

AND THAT Council approve the uninsured portion of the MCC transformer be funded from the Meridian Community Centre Reserve.

Background:

On April 4th the 2000 kVa transformer failed as a result of a fire and the Meridian Community Centre (MCC) lost power to the complete facility. Fire responded to the MCC and contained the fire. There were no injuries or other damage sustained.

A 1 MVA temporary portable generator was installed at the MCC at 1 am on April 5th to supply power to the entire facility. Except for scheduled maintenance shutdowns for the portable generator, the MCC has full operational control of the entire facility.

Following the fire event Town staff notified the Town's insurers of the incident and referred the matter to an insurance investigator. The cause of the transformer fire remains under investigation; however, it has been determined that the transformer was damaged beyond repair and must be replaced.

On the morning of April 5th staff met on-site with Hydro One and Sid Grabell Contracting (Electrical Contractor) to develop a plan to replace the existing 2000 KVa transformer.

This report serves to update Council on the status of the transformer replacement and the plans to restore a permanent power solution to the MCC.

Analysis:

Usage reports show the largest draw for the operation of the MCC has been 680 kVa. This is the largest draw from data reviewed from the facility's operation over almost five years. As a result of this review, the Electrical Contractor and Hydro One recommend that the transformer size be reduced from 2000 kVa to 1000 kVa. This change in equipment will allow the MCC to operate to its full capacity without any service reductions or concerns.

The original 2000 kVa transformer was owned and maintained by the Town. The new 1000 kVA transformer will be purchased through Hydro One and there will be a maintenance and operation agreement with Hydro One for the unit. The estimated cost for the new 1000 kVa transformer is approximately \$60,000. Hydro One has a unit ready to be delivered to the site and is awaiting instruction from the Town that the existing transformer has been removed.

Town staff have been working closely with Hydro One, Sid Grabell Contracting, and the Town's insurers to have the existing transformer removed and the new transformer installed. At the time of writing this report, the insurers that provide equipment breakdown and property coverage for the Town have hired engineers and experts to complete a detailed investigation, which is ongoing. From an operational standpoint, the Town through Sid Grabell Contracting has completed the cleanup of the transformer oil that was contained in the concrete vault and is preparing to remove the existing transformer and store it at a secured facility until the insurance claim is resolved and closed.

Because the Town is reducing the size of the transformer from a 2000 kVa to a 1000 kVa unit the existing support structure is inadequate and needs to be replaced. The cost of replacing the vault lid and support structure is approximately \$5,000. Sid Grabell Contracting has been able to source a new concrete lid and is expected to arrive on-site the week of April 22nd.

In addition, Sid Grabell Contracting is required to replace both the primary and secondary cables to the transformer. The primary cables are the power supply cables that connect Hydro One's switch to the transformer. The secondary cables are the cables that bring the hydro service from the transformer into the building. At the time of writing this report the cost of replacing both the primary and secondary cables is unknown; however, initial estimates suggest that this cost could be \$50,000 to \$100,000.

As stated previously a portable 1 MVA trailer-mounted generator is being used to supply power to the MCC so that there is no service disruption other than the scheduled generator maintenance activities which take approximately 15 minutes per day. The portable generator costs \$12,000 per week plus fuel costs. The generator consumes approximately 1600 litres per day of diesel fuel. As a result, the estimated daily fuel consumption cost is \$2,500. The estimated weekly cost to run the entire facility with the portable generator is approximately \$30,000. At the time of writing this report, the generator has been in use for approximately 2 weeks. It is anticipated that the generator will be required for an additional two weeks barring any delays in the schedule.

In addition to the above costs there will be costs associated with contracting Sid Grabell Contracting to complete the removal and replacement of the transformer,

site cleanup of the transformer vault, removal and replacement of the primary and secondary cables, and administrative and commissioning of the new transformer.

While the total loss of revenue resulting from the transformer failure are unknown due to the ongoing replacement works, the rental revenue lost between April 4th and 8th, including the Kinsmen Home Show, is \$7,674. Further losses of \$1,548 were incurred on April 11th when the power was again disrupted following the mechanical failure of the backup generator. Required daily generator maintenance, and on going electrical testing and repair works have also lead to the canceling of facility rentals and have negatively impacted revenues. Other potential impacts to the facilities revenue streams include loss of server sales, and municipal walk-in programs. Once all losses become apparent, they may be communicated to Council in a future report.

Town staff are tracking all costs and expenses associated with the transformer fire and will ultimately submit an insurance claim to recover those amounts. The Town's insurers are aware of the pending claim and are actively involved in investigating it. To date, no coverage issues have been identified and staff anticipate that the Town will be reimbursed for losses that exceed the property insurance deductible.

Financial Considerations:

The estimated cost to replace the existing 2000 kVA transformer with a new 1000 kVA transformer is as follows:

1) 1000 kVA transformer	\$60,000
2) New primary and secondary cables	\$75,000
3) New Concrete Vault Lid and support	\$5,000
4) Sid Grabell Contracting	\$80,000
5) Rental of Temporary Generator	\$125,000
6) Lost Revenues (MCC)	\$10,000
7) Project Contingency	<u>\$30,000</u>
Total estimated cost	\$385,000

The Town's insurance is expected to cover the bulk of these costs. At time of writing staff estimate that the Town's uninsured costs will be approximately \$100,000, not including the value of staff time. This includes the Town's property deductible and the cost to partially purchase and fully install a new transformer on site. It is anticipated that having a smaller transformer will result in lower future electrical operating costs, but this cannot be quantified at this time. Future electrical savings will be the subject of additional reporting when Town administration has access to reliable data.

The uninsured portion will be funded from the Meridian Community Centre Reserve. The balance in this reserve as at December 31, 2023 is \$393,340. There are sufficient funds to cover the uninsured portion of replacing the transformer.

Alternatives Reviewed:

There were no alternatives reviewed as this report is for information only. Staff took the necessary steps to ensure that the facility was restored to full operational capacity while minimizing reductions in the level of service.

Staff has opted to purchase the 1000 kVA transformer from Hydro One instead of a new private transformer because with this option Hydro One will assume all the maintenance and operational responsibilities. If there is a similar situation that occurs in the future Hydro One should be able to service and or replace the transformer in a matter of days not weeks. Use of a 1000 kVA transformer will bring the current utility fee rate into lower-rated fees from the 2000 kVA.

Strategic Plan Relationship: Infrastructure Investment and Renewal

The Meridian Community Centre serves as a focal point of the community providing services to residents of the Town of Pelham. It is important to maintain the operational capacity of this asset.

Consultation:

Consultation was completed with Hydro One, Sid Grabell Contracting, and the Town of Pelham’s Solicitor, and Recreation Facilities Coordinator to prepare this report.

Other Pertinent Reports/Attachments:

None

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