

Energy Conservation and Demand Management Plan 2020-2024

Aylmer Area Secondary Water Supply System (AASWSS)

History

In 1998, the Province of Ontario granted equal ownership to the three municipalities and created the AASWSS by a Provincial Transfer Order. The Transfer Order established a Joint Board of Management comprised of one Council Member from each of the area municipalities. The Transfer Order gave the Joint Board “full authority and necessary powers to operate and manage the board on behalf of the municipalities”.

The Aylmer Area Secondary Water Supply System is a water transmission system, approximately 13.8km in length. The line provides water to approximately 8,000 water users. The line itself only has 3 customers. The System has two primary meter chambers (Chamber 13 and 16) and five tertiary chambers within its infrastructure. The Elgin Middlesex Pumping Station (EMPS) pumps water through the transmission main to the Town of Aylmer. The water tower in the Town of Aylmer provides backpressure to the transmission main by way of gravity when pumps are not running at the EMPS.

The majority of electrical consumption is used for the pumping operations at the EMPS. Both pumps were replaced over a 2 year period starting in 2016. OCWA secured the retrofit program customer incentive (IESO P4P Pilot Program) for the pump upgrades on behalf of the Joint Board. The new pumps have greatly improved efficiency of pumping operations.

The EMPS facility houses the distribution pumps for the AASWSS, the City of St. Thomas, and the City of London. The total electrical consumption for the facility represents all pumping operations within the building. Each party involved pays a flow proportional apportioned cost of the overall electrical consumption at the facility. Aylmer’s fixed operating fee is 10.5% of the overall consumption at the facility. The total electrical consumption at the EMPS in 2018 was 93,659 kWh. The AASWSS apportionment of overall consumption at the facility was 9384 kWh in 2018. The approximate combined consumption for Chamber 13 and 16 was 2593 kWh in 2018.

Goals & Objectives

The total annual electrical consumption is very low for this system. The amount of power usage will be monitored on an ongoing basis to maintain these levels going forward.

Recent pump replacements have increased electrical efficiency and reduced electrical demands when compared to the original pumps installed at the EMPS. Additional sub-metering within the EMPS would allow for a more accurate representation of the total electrical demand required to operate the Aylmer pumps. The Board of Management for the System will continue to investigate new technologies and other opportunities that will reduce energy consumption going forward.

Consumption & Targets

Included as Appendix A to this Plan is a statement of energy consumption for the 2018 fiscal year. In 2018, the Aylmer Area Secondary Water Supply System consumed approximately 12,427 kWh of electricity. This represents the combined total for operations at EMPS and both meter chambers. The System anticipates similar levels of consumption for the foreseeable future.

While the System is committed to maintaining or even reducing its consumption, it does not at this time anticipate cost savings due to the projected energy cost increases over the next 5 years.