

Integrated Regional Resource Plans

Background

These seven Integrated Regional Resource Plans are part of the first group of regions in the province that have been studied under the new regional planning process introduced by the Ontario Energy Board in 2013. Ontario has been divided into 21 regional planning areas, with each region to be examined for sufficient electricity supply and reliability at least once every five years. In addition, some areas have been divided into sub-regions where needs have been identified.

Below is a summary for each of the seven Integrated Regional Resource Plans. All of the needs identified are after accounting for expected conservation results. In all regions, conservation will contribute significantly to meeting the needs over the long term, reducing electricity demand growth and avoiding or deferring the need for additional infrastructure in many cases.

Brant – this area is a sub-region within the Burlington/Nanticoke region. In the near-term, two transmission projects are recommended in the Brant-Powerline 115kV sub-system because its capacity is inadequate for meeting the demand growth forecasted for the area over the next few years. One is currently underway by the local distribution companies and will be in-service by summer 2015, and the other transmission upgrade, to be carried out by Hydro One, is planned to be in service by 2017. In addition, a pilot demand response program will be considered for the area. It is not expected that further action will be required until after 2025, but the growth will be monitored closely as demand can materialize quickly in this area.

Central Toronto – this area is a sub-region of the Metro Toronto region and extends north from Lake Ontario almost to Highway 401, west to the Humber River and east to Victoria Park Avenue. The near-term plan includes a number of measures to meet reliability standards, enhance supply security and ensure infrastructure options are available to connect new customers and meet demand growth requirements. This includes the incorporation of new step-down transformer facilities in the western and central portions of the study area. In the long term, Central Toronto's electricity system is expected to reach its capacity to supply growth at the two major autotransformer stations and at key transmission facilities supplying the area in 2026 or later. Actions that are recommended now to prepare for the long term include establishing a Local Advisory Committee and continuing community engagement, as well as monitoring demand growth, conservation achievement and the uptake of distributed generation.

Kitchener-Waterloo-Cambridge-Guelph – this area includes the Region of Waterloo, the City of Guelph, Wellington County and the Township of Blandford-Blenheim in Oxford County. Two transmission projects were identified by the Working Group to address near-term electricity needs in the area. The Guelph Area Transmission Refurbishment Project is underway with an in-service date of 2016. The development work for the switching facilities in Cambridge to improve reliability in the Cambridge and Kitchener areas is also underway. These near-term actions will substantially address electricity needs in the area over the next 20 years. No longer-term needs were identified at this time.

Northwest GTA – this area includes the municipalities of Brampton, Milton, Halton Hills and the southern portion of Caledon. Two new step-down transmission facilities are recommended in the near term to ensure new customer connections can be accommodated in the Halton Hills and Milton service territories. Over the medium term, a transmission line upgrade is recommended to address emerging capacity needs in the central Brampton area. The plan also identifies several pockets in the study area at risk of not meeting targeted restoration levels during a system event. Restoration solutions will be investigated as part of a bulk system study, which is expected to be completed this summer. In the long term, a need was identified to provide additional transformer and transmission line capacity in Northern Brampton/Southern Caledon and Halton Hills to meet forecast demand growth. An opportunity exists to cost effectively supply this long-term growth by initiating approvals for the required transmission right of way in the vicinity of the planned GTA West Transportation Corridor.

Ottawa - This region encompasses the City of Ottawa, including the Greenbelt, Kanata, Nepean and Orléans. In the near term, four transmission and distribution reinforcement projects are recommended to address demand growth and reliability needs; work on these projects is underway by Hydro One. The working group will seek community input on addressing the medium- and longer-term capacity needs to meet electricity demand growth in the South Nepean area, which is expected to be required around 2020. No specific long-term needs for the region have been identified at this time beyond the possible end of life of a station in east Ottawa before 2025, which will be addressed in the next planning cycle.

Windsor-Essex – this area includes the City of Windsor, the towns of Amherstburg, Essex, Kingsville, Lakeshore, LaSalle, Tecumseh, Leamington, the western portion of Chatham-Kent and the Township of Pelee Island. In the near and medium term, demand in the Kingsville-Leamington area has exceeded supply capacity and a large portion of the study area does not currently comply with the restoration criteria. A recommended plan to build a short transmission line and a new transformer station near Leamington in combination with refurbishment work at the Kingsville station will address the needs identified for the area. No long-term needs were identified at this time.

York Region – this area includes the municipalities of Vaughan, Markham, Richmond Hill, Aurora, Newmarket, King, East Gwillimbury, Whitchurch-Stouffville and Georgina, and is a

sub-region of the GTA North planning region. In the near-term, three transmission projects are recommended to address capacity and reliability needs; these projects are already under development by Hydro One and PowerStream. In the medium to long term, York Region's electricity system is expected to reach its capacity to supply growth in the early to mid-2020s based on current projections. If the growth materializes, there will be a need for additional new supply in the region. The working group will seek community input on possible solutions.

-30-