

Some electric myths

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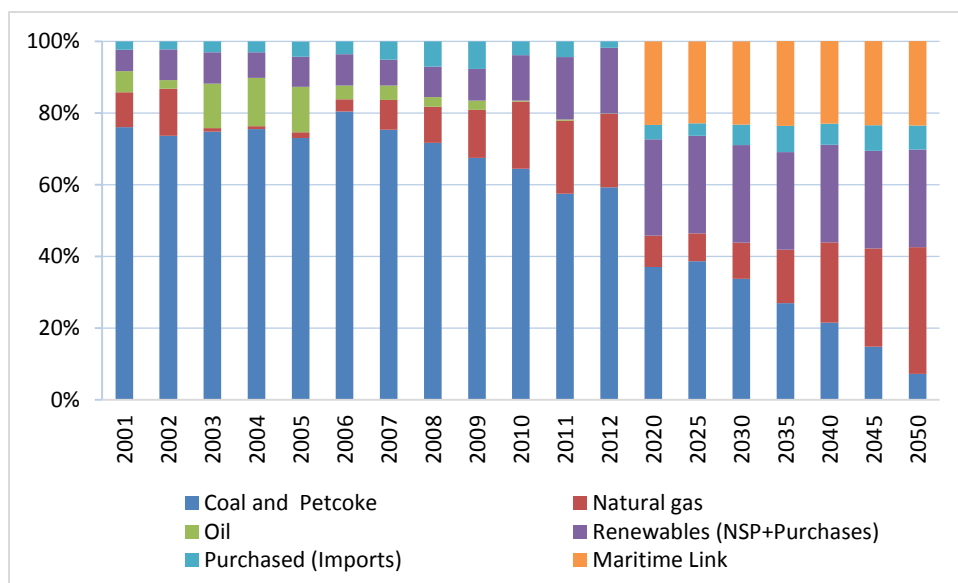
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The Liberal government's planned changes to Nova Scotia's electricity market and their objection to the rate increase proposed by Efficiency Nova Scotia have resulted in a number of claims about Efficiency Nova Scotia's impact on Nova Scotia Power. Two of these illustrate some of the common misconceptions regarding Nova Scotia Power's use of coal and Nova Scotia's demand for electricity, both of which are based, in part, upon the arguments made when Efficiency Nova Scotia was being established.

The first, that Efficiency Nova Scotia is responsible for Nova Scotia Power's decline in coal consumption.

Nova Scotia Power's demand for coal started to decline long before Efficiency Nova Scotia (or its predecessor, Conserve Nova Scotia) came into existence. Since the start of this century, government regulations to reduce various coal-related emissions and increase the use of renewables, plus the availability of natural gas, have all contributed to Nova Scotia Power's declining demand for coal. For example, in 2007, Nova Scotia Power produced 9,561 GWh (gigawatt-hours) from coal, whereas in 2012, this had declined to 6,223 GWh.

According to the Dalton Report, coal's contribution will decline even further in the future as additional government regulations take hold, first with Muskrat Falls supporting more renewables coupled with the continued growth in natural gas. The following graph shows Nova Scotia Power's percentage production volumes (2001-2012 – Actual, from Emera; 2020 through 2050 – Dalton projections):

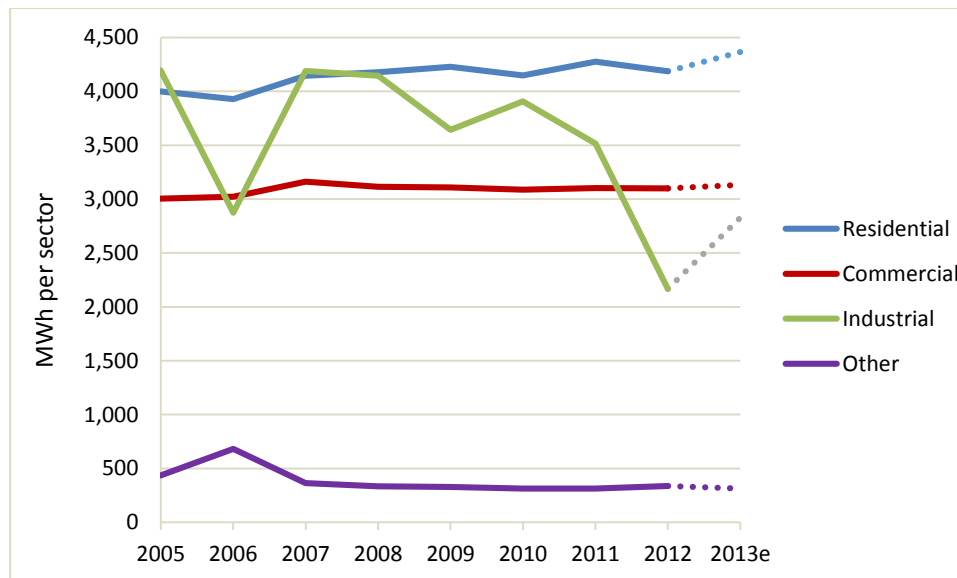


Despite claims to the contrary, the major cause of Nova Scotia Power's declining use of coal has been government regulations as opposed to Efficiency Nova Scotia's programs.

Second, Nova Scotia's declining demand for electricity can be attributed to Efficiency Nova Scotia.

Nova Scotia's demand for electricity peaked in 2007 at 12,698 GWh. By 2012, demand had fallen by over 2,100 GWh to 10,509 GWh. The rapid nature of this decline was due almost entirely to the closure of paper mills throughout the province. The impact of these closures should not have come as a surprise, given the very high energy-intensity of paper-making and the fact that a similar decline had happened in 2006 when the then Stora mill in Port Hawkesbury was closed because of industrial action.

However, there has been an unexpected development in Nova Scotia's demand for electricity in 2013 – it has been increasing. According to data from Nova Scotia Power, demand for electricity in Nova Scotia in the first three-quarters of 2013 exceeded that of the first three-quarters of 2012 by 600 GWh. While most of this has been the result of increasing industrial demand (460 GWh), there has also been a significant increase in residential electricity demand (133 GWh). If these trends continue into the fourth quarter, Nova Scotia Power will see its first increase in electricity demand since 2010; the following graph shows changes in electricity demand by sector since 2005 (2013 includes a projection for Q4, based on this year's trends):



Most of the rise in residential electricity demand is the result of the increased use of electricity for space heating since it can cost less than using furnace oil. Both Efficiency Nova Scotia and Nova Scotia Power are encouraging the use of electricity for heating, albeit for different reasons.

A number of Efficiency Nova Scotia's programs target owner-occupied houses that currently use electricity for space heating (such as base-board heaters). In these cases, Efficiency Nova

Scotia will defray the cost of replacing the household's existing heating system with one that will reduce electricity demand and hence its electricity costs, including electric heat-pumps. When Efficiency Nova Scotia was first being proposed, some proponents argued that it would be responsible for a marked decline in Nova Scotia's demand for electricity; however, as the data shows, this clearly has not been the case.

Much of the reason for the increase in residential electricity demand can be attributed to Nova Scotia Power (like Efficiency Nova Scotia) promoting the use of electricity for space heating. However, unlike Efficiency Nova Scotia, Nova Scotia Power's aim is to increase electricity consumption by targeting new residential construction and existing households not using electricity for heating purposes; to do this, Nova Scotia Power is offering low-cost financing to assist in the purchase of electric water-heaters, heat-pumps, and electric thermal storage.