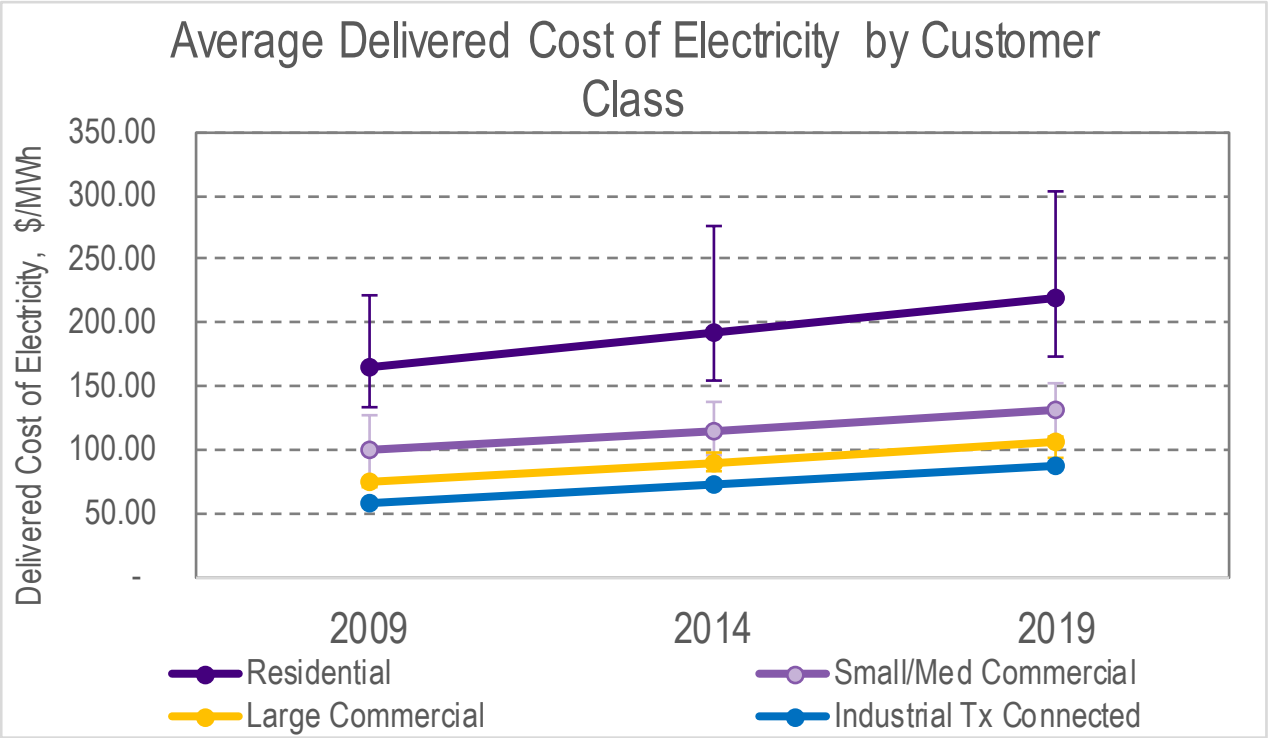
AESO Delivered Cost of Electricity Estimates

March 3, 2020

Introduction

- The AESO prepared a review of the delivered cost of electricity and self-supply options
- Calculations were performed by the AESO's Forecasting & Analytics team, reflecting AESO and Distribution Facility Owner tariff costs and electricity commodity costs at 5-year intervals
  - Time-series provides perspective to the changes in delivered electricity cost over the past decade
  - Reflects comparative costs of grid-connected self-supply options based on a range of rates of return on capital
  - Demonstrates the delivery costs associated with Critical Transmission Infrastructure

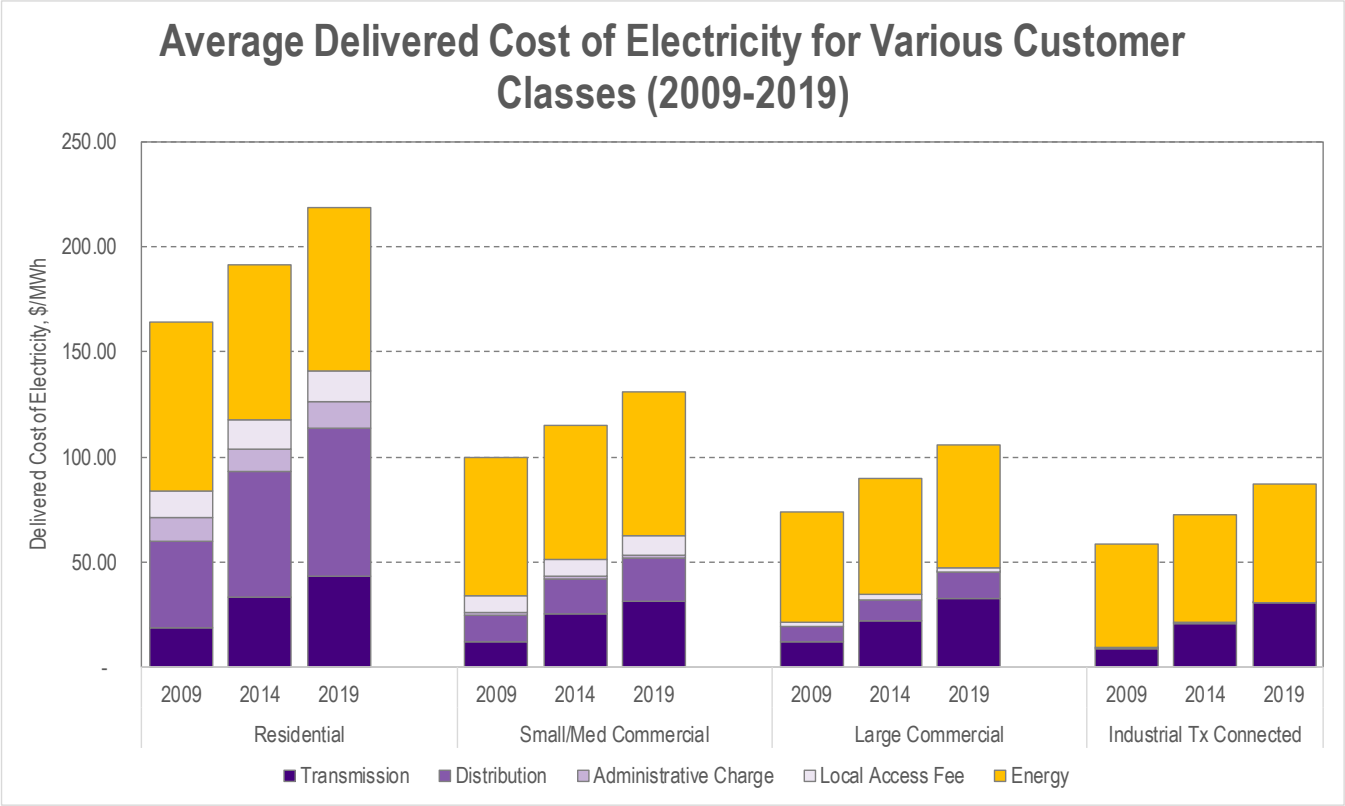
Delivered cost of electricity



- The delivered cost of electricity has a wide range for smaller customers, driven by distribution tariffs in different service territories
- Delivered electricity is cheaper for high-volume consumers
- Costs have trended upward for all customer classes in the past decade

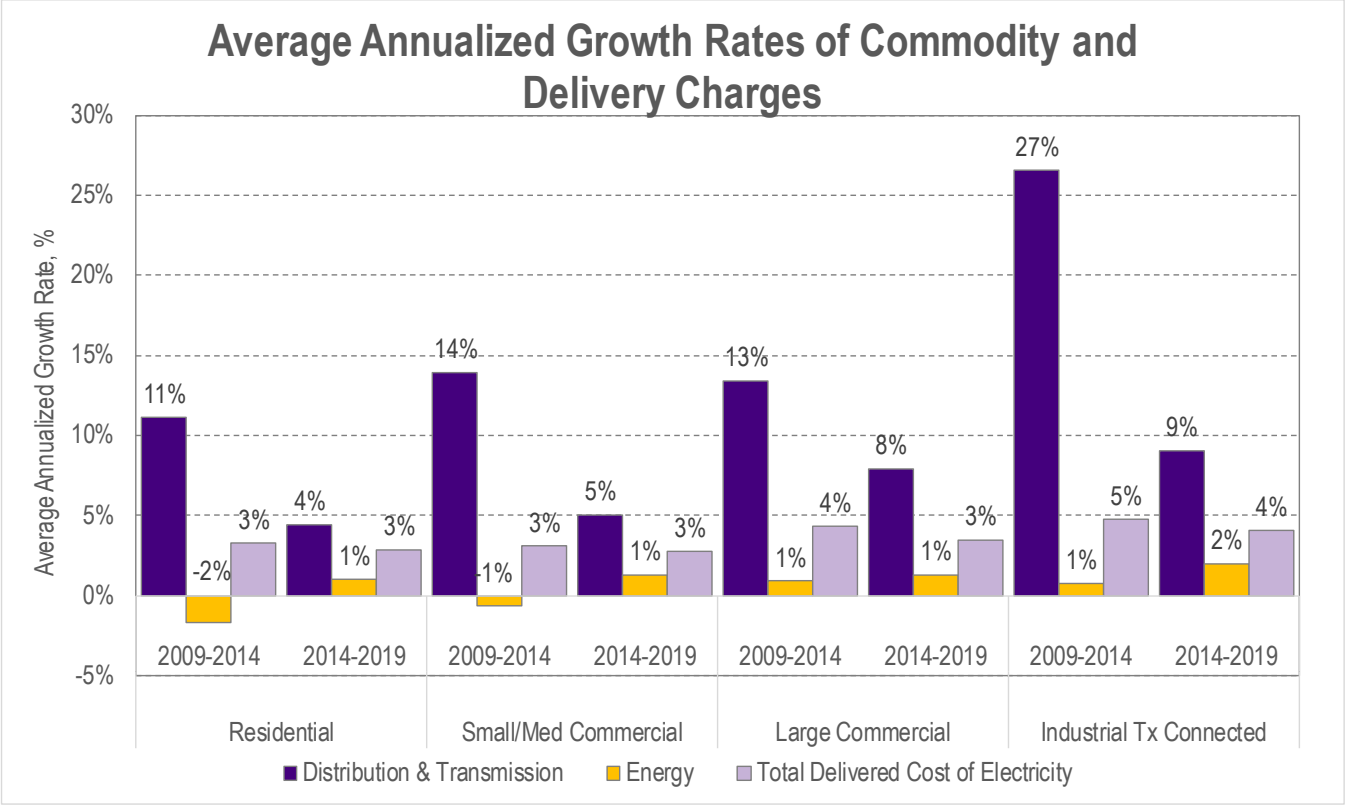
Note: graphic line are based on an average of ENMAX, EPCOR, Fortis, and ATCO customers and the whiskers represent the high/low for each customer class

Delivered cost of electricity



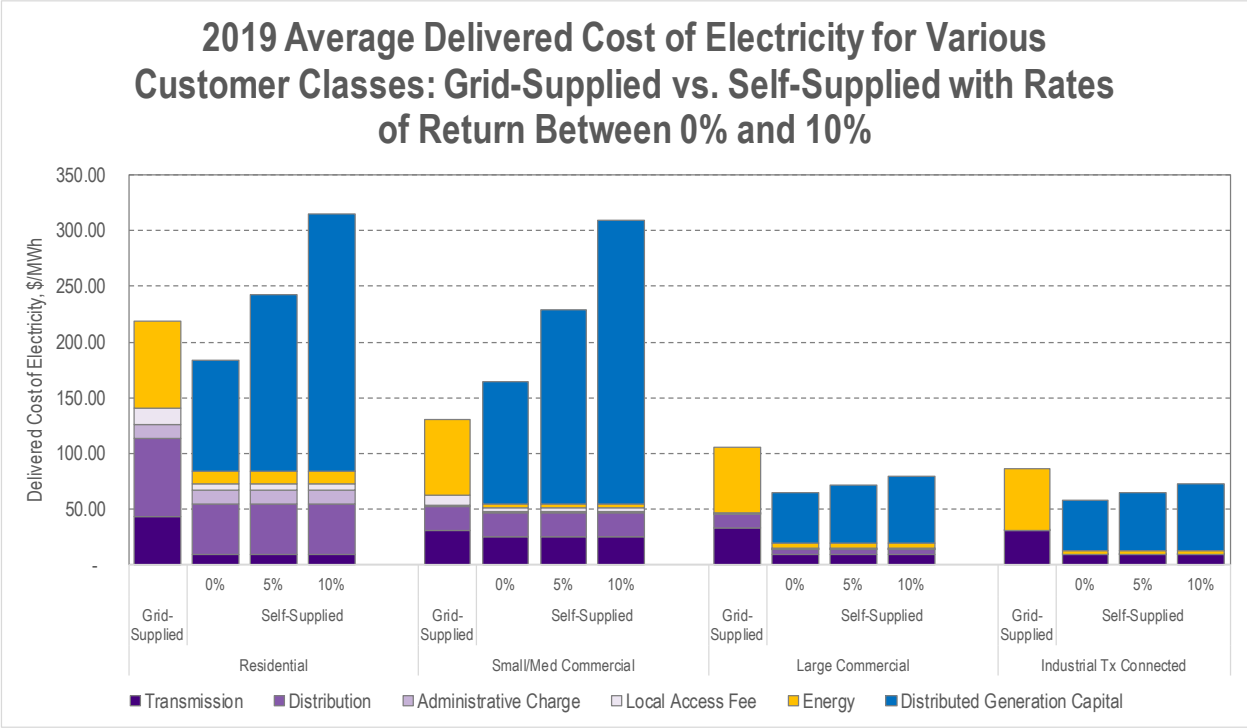
- The fastest growing components of the delivered cost of electricity relate to transmission and distribution
- Low-volume consumers face substantially higher transmission and distribution cost than high-volume consumers

Delivered cost of electricity



- Distribution & transmission costs increased rapidly between 2009 and 2014, as Critical Transmission Infrastructure was commissioned
- From 2014 to 2019, the increases in distribution & transmission costs moderated slightly, but still remained above inflationary levels
- Energy (commodity) costs have increased modestly for most customers during the past decade

Delivered cost of electricity



- Delivered electricity costs have increased, while self-supply costs have declined significantly over the last decade
- Self-supply costs for residential and commercial customers were measured based on solar photovoltaic costs, while large commercial and industrial self-supply costs options were measured based on natural gas generation
- Self-supply options were measured at levels of 0 per cent, 5 per cent, and 10 per cent return-on-capital
  - Some customers may be better off to self-supply their electricity depending on return expectations
- Self-supply represents a grid-connected customer, not an islanded consumer
- From an economic perspective, the assessment doesn't capture qualitative costs of self-supply, like increased operational complexity