



2020 Retail Sales Forecast Update

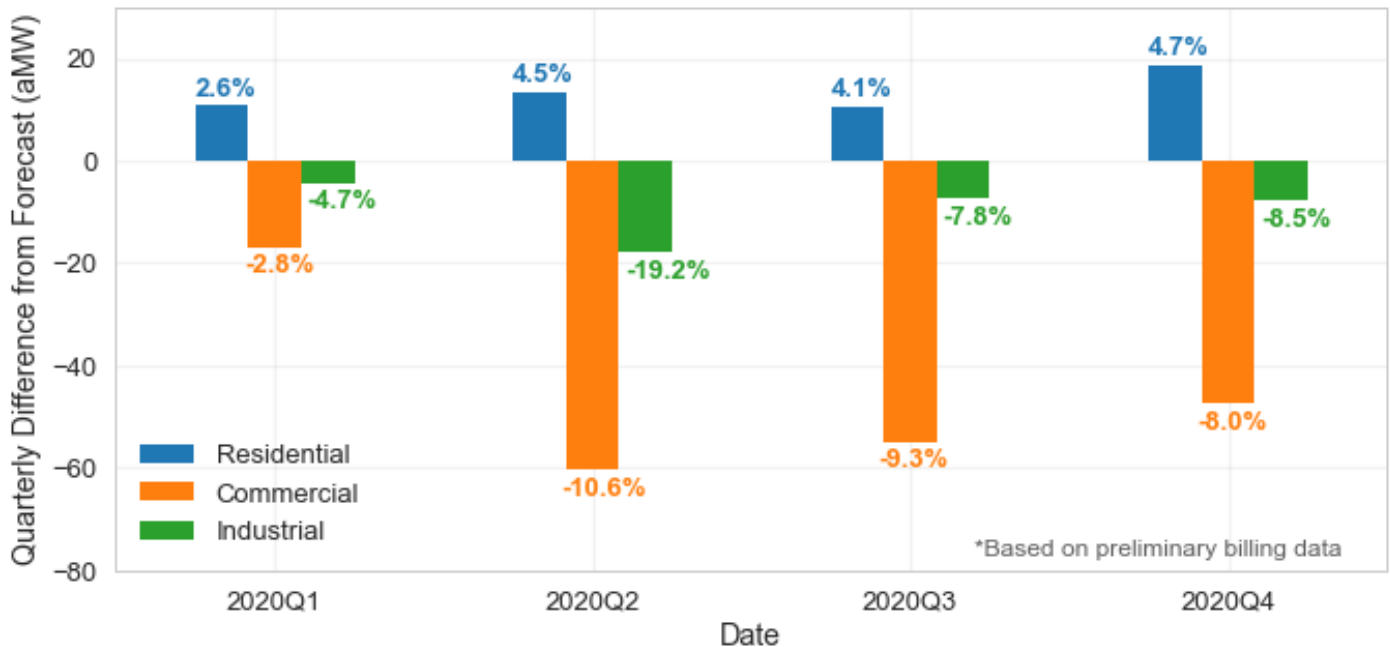
City Light’s Financial Planning Unit (FPU), in collaboration with the Load Forecast Technical Team (LFTT), has created a draft update to the long-term retail sales forecast for the period 2020-2040. This memo outlines key impacts of COVID response on 2020 retail sales and summarizes takeaways from the new load forecast completed in December 2020.

COVID IMPACTS ON 2020 RETAIL SALES

This year has been a challenge because of heightened uncertainty created by the COVID pandemic which has not only triggered an economic recession but has also led to a structural shift in the way people work and use electricity. City Light has seen a more significant reduction in electricity use compared to other Northwest utilities because of our large commercial customer base: Commercial, Residential and Industrial make up 57%, 33% and 10% of total retail sales respectively.

Retail sales are expected to finish the year **4.0%** below our pre-COVID forecast which was developed in 2019. The aMW impacts for each customer class are shown in **FIGURE 1** below, with percentage differences from their respective forecasts also labeled. Since Commercial makes up 57% of total retail sales it has the largest impact in terms of aMW.

FIGURE 1: COVID IMPACTS BY CUSTOMER CLASS



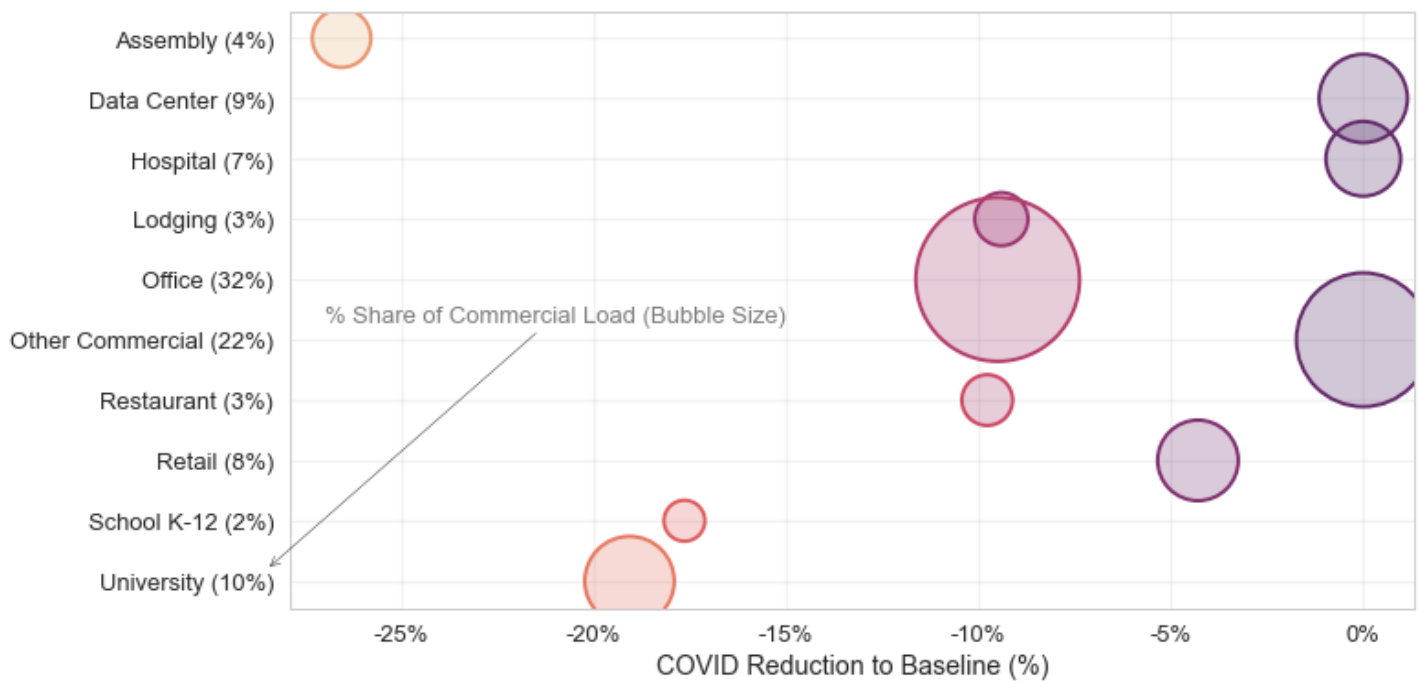
The **Commercial and Industrial** customer classes are expected to finish the year **down 7.6% and 10.1%** below their respective pre-COVID forecasts. The Industrial class was initially hit the hardest as the pandemic unfolded in Q2 2020 but most of these customers have since recovered to their pre-COVID baseline as of the end of Q3. The **Residential** class is expected to finish the year **up 3.9%** relative to its pre-COVID forecast but it only makes up 33% of total retail sales so this gain will not offset the larger reductions in the Commercial and Industrial classes.

COVID IMPACTS ON COMMERCIAL BUILDING SEGMENTS

Economic activity in downtown Seattle and surrounding areas has changed dramatically since stay-at-home measures were first enacted in March 2020. The effective occupancy rates of commercial buildings have dropped significantly with many office workers being able to perform 100% of their jobs remotely. This shift in work patterns has had a significant impact on electricity consumption for certain commercial buildings segments, shown in **FIGURE 2** below¹.

Office space has seen a 10% reduction in electricity use and this segment will play an important role in driving recovery since it represents about 32% of total Commercial sales. **City Light’s load forecast trajectory for the next five years depends on when normal economic activity will return to Seattle. For the longer-term, building stock additions, electrification, energy efficiency and other emerging technologies play a larger cumulative role in driving the forecast.**

FIGURE 2: COVID IMPACTS BY COMMERCIAL BUILDING SEGMENT




¹ The estimates for this chart were created by mapping a legacy CCSS Commercial Buildings database to samples of daily metered load data from MDM. The target sample size for each building segment was 100, though for certain segments this was not possible. Additionally, the legacy Commercial Buildings database has not been updated since 2016 so mapping from CCSS Premises to building segment are imperfect.

THE 2020 RETAIL SALES FORECAST

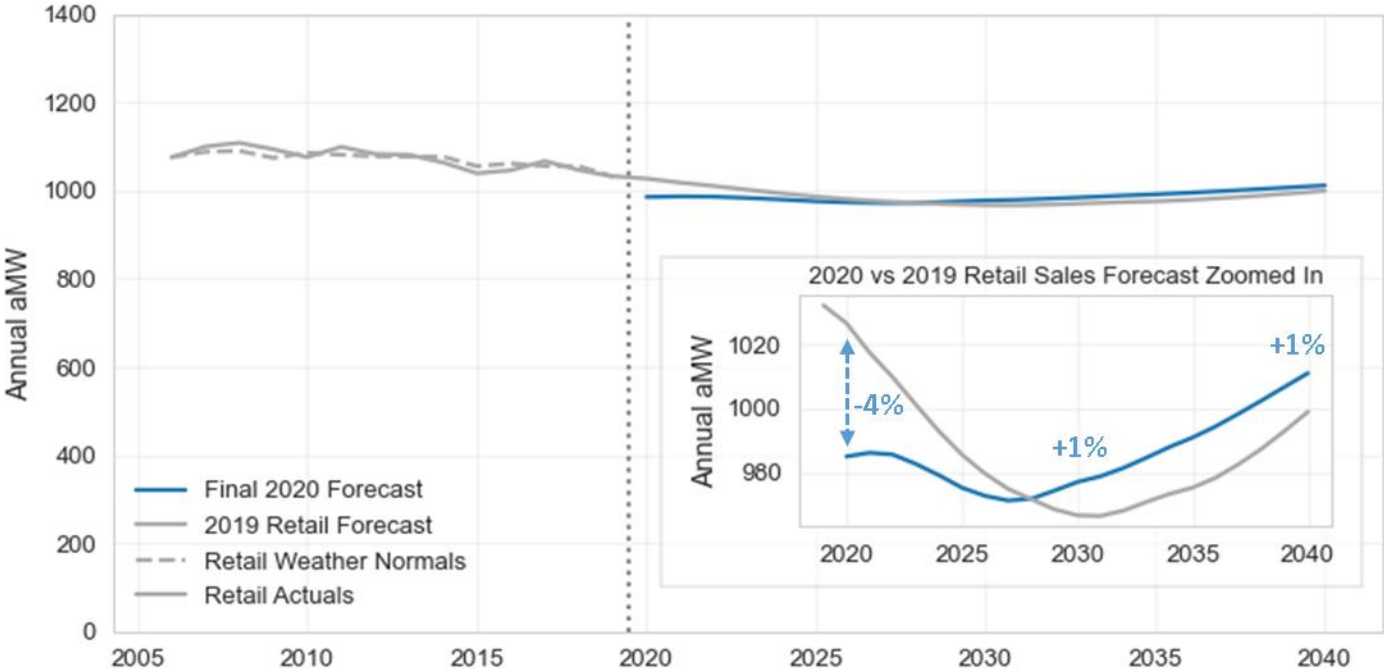
The Retail Sales forecasting process is underpinned by a combination of different models that account for building stock growth, changes in saturations of different end-uses, energy efficiency and emerging trends like transit electrification and adoption of distributed generation. We highlight the important pieces and their impact to the forecast in **FIGURE 3** below:

FIGURE 3: 2020 RETAIL SALES FORECAST STORYLINE

	COVID-19 Recovery	Vaccines become widely available in mid-2021 and allow for non-essential workers to return to work by the end of the year. Electricity consumption in heavily impacted commercial sectors will gradually recover between 2022 and 2024.
	Economic Outlook	New residential and commercial construction is a key driver of electricity sales growth. The residential housing market has remained relatively healthy despite the recession and will continue to grow as the greater Seattle economy recovers. There will be some rebalancing in the commercial real-estate market which will lead to slowdown in new construction over the next 5 years.
	Telework	Permanent increases in widespread teleworking will have lasting effects on the commercial real-estate market in City Light's service territory and will lead to a roughly 25% reduction in future floorspace additions required to accommodate Seattle's growing workforce. Residential consumption will have a modest increase from employees spending more time at home but not enough to offset the decreased commercial use.
	Energy Efficiency	Energy efficiency continues to be a low-cost resource to manage electricity demand. Based on the 2020 CPA the combination of programmatic and customer-driven energy efficiency is expected to outpace growth in new electricity sales over the next 7 years. In the longer run both programmatic and customer-driven energy efficiency are expected to decline compared to today's levels.
	Electrification: Transit	We expect 60,000 new light-duty electric vehicles to charge in City Light's service territory by 2030, growing to 150,000 by 2040. Also included in the forecast are large transit projects for King County Metro, Port of Seattle, Sound Transit and Washington State Ferries.
	Electrification: Buildings	Recent decarbonization policies introduced by the Mayor would update building codes to limit fossil fuel heating in most new construction. We leverage the Office of Sustainability and Environment's 2018 Building Energy Benchmarking database to translate reported values of fossil fuel use in recently constructed buildings to an electricity equivalent which serves as a conservative placeholder in the forecast. More research is planned for this topic in 2021.

The forecast itself is presented in **FIGURE 4** on the following page and is compared to the previously adopted 2019 forecast.

FIGURE 4: 2020 RETAIL SALES FORECAST



IMPACTS OF ELECTRIFICATION ON 2020 RETAIL SALES FORECAST

Electrification plays an important role in the 2020 forecast. Without new electricity sales from electrification City Light would have a declining load outlook. There are 3 major sources of new electrification load in the 2020 forecast: **light duty electric vehicles**, **electrification of new buildings** and **large transit projects**. Their contribution to the forecast is shown in **FIGURE 5** below.

FIGURE 5: ELECTRIFICATION IN THE 2020 RETAIL SALES FORECAST

