

Appendix P

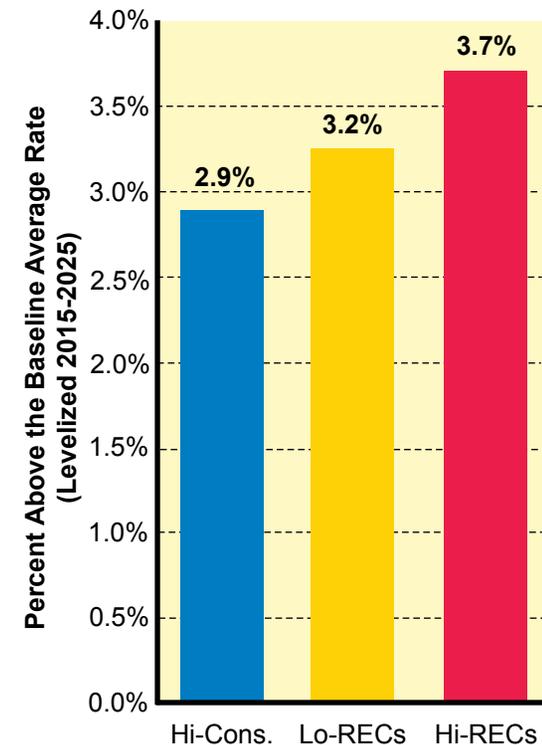
Retail Rate Analysis

The Financial Planning Unit at City Light conducted a rate impact analysis for the three top performing portfolios. The analysis provided the average retail rate¹ for the three portfolios and a baseline for the years 2011-2025. The baseline for this analysis was City Light's financial forecast with baseline conservation and Gorge Tunnel 2.

Like the net present value (NPV) cost analysis done in the Aurora model, Integrated Resource Plan resources are treated as purchased power contracts, where the resources are purchased annually on a dollars per MWh basis. Therefore, IRP resource spending directly affects the revenue requirements in the year the resources are purchased. The exceptions to this are Conservation and Gorge Tunnel 2, which are partially debt financed. The rate analysis used similar market prices to the Aurora model for the sale of surplus energy.

The chosen metric for the rate impact analysis was the percentage above the baseline rates. This metric shows how much higher annual average retail rates are estimated to be under each portfolio compared to the baseline. Figure 1 presents a high level summary of the rate impacts for the three top performing portfolios. The figure shows the levelized average rate impact over the years 2015 to 2025. The assumption was that because no major new power resource investments were made until 2016, a rate increase caused by power resources could be delayed until then. In general, the Higher Conservation portfolio is estimated to have the lowest average rate impact, followed by the Low RECs portfolio and then the High RECs portfolio. The levelized average rate impacts are 2.9%, 3.2% and 3.7%, respectively.

Figure 1. Estimated Impact on Average Retail Rates



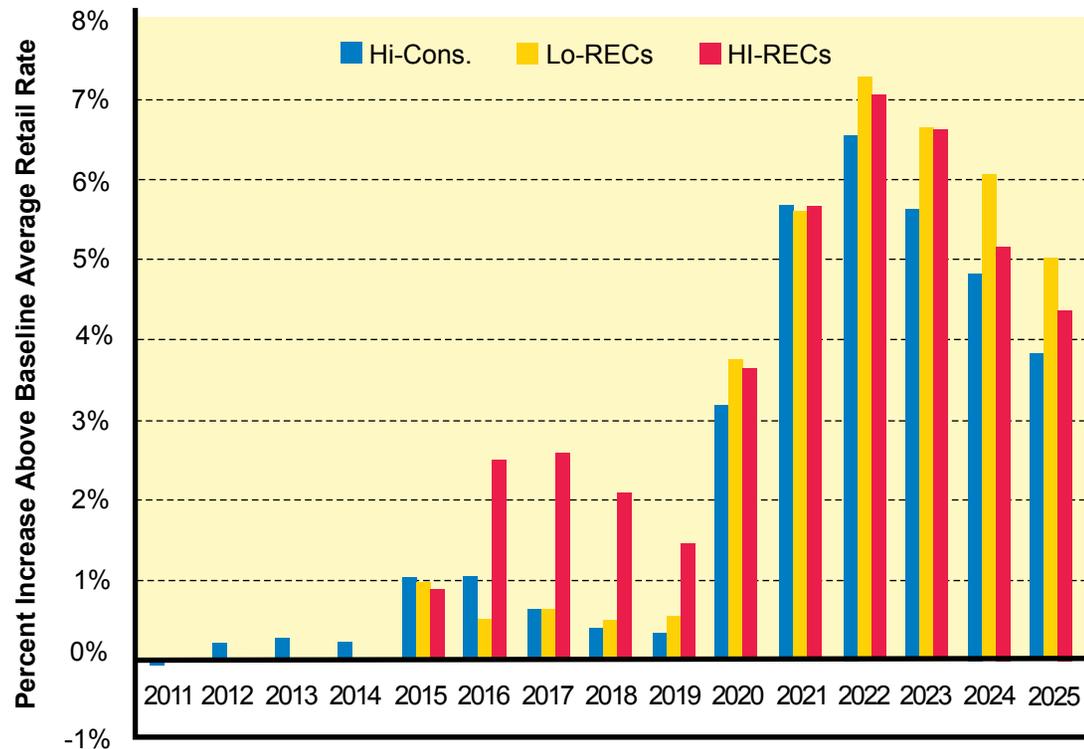
As noted above, IRP resources and RECs affect retail revenue requirements in the years in which they are purchased. Therefore, the different timing and mix of resources and RECs in each portfolio produce different annual average rate impacts. Figure 2 shows the estimated annual average rate impacts from 2015 to 2025 for each of the selected portfolios. The average rate impacts are shown as percentage above the baseline. The primary focus for this analysis is on the relative differences between the portfolios and not on the absolute values of average rate impacts or on the annual change of the average rate impacts. There are a number of factors in the base case that affect annual changes in the average rates that are not specific to the portfolios themselves (e.g., why rates in all portfolios are shown to decrease after 2022). Average rate estimates are highly sensitive to the assumptions used in modeling the IRP portfolios including price assumptions for surplus sales, RECs, and new resources. However, using consistent rate impact assumptions allows for relative comparisons of the portfolios with respect to future costs.

The analysis is broken into the following three periods:

Years 2011-2014

During the periods 2011 through 2014 only the Higher Conservation portfolio adds new resources (the portfolio accelerates the acquisition of conservation). All the other portfolios do not add any new long-term resources or RECs. The estimated average

Figure 2. Estimated Impact on Average System Rate from 2010 IRP Portfolios



rate impacts for the initial years of accelerated conservation are in the 0.2% to 0.3% range.

Years 2015-2019

During the years 2015 through 2019 the High RECs portfolio has the largest rate increase. The major difference between the High RECs portfolio and Low RECs and Higher Conservation portfolios is that during this period the High RECs portfolio purchases almost exclusively RECs while the other two portfolios

purchase relatively low cost resources such as conservation and biomass. Under the current price assumptions, the surplus energy from the biomass resources can be resold on the wholesale market.

Years 2019-2025

In the early 2020s, the selected portfolios acquire a large amount of wind energy. Wind is a relatively high priced resource, and as a result, it has a larger rate impact than other

resources. In 2020 the Low RECs and Higher Conservation portfolios acquire more wind than the High RECs portfolio, which narrows the relative rate impact difference. Starting in 2022 the Low RECs scenario adds more wind than the Higher Conservation Portfolio and has the highest rate impact of the top three portfolios during this period. Also during this period the High RECs portfolio adds biomass resources, which help reduce its rate impact compared to the other two portfolios. At the end of this period, the Higher Conservation portfolio has the lowest rate impact, followed by the High RECs and Low RECs portfolios.

Conclusion

The top three IRP portfolios have a similar structure and as a result, the differences between the portfolios in the estimated rate impacts are relatively small. The portfolio with the lowest estimated rate impact over the long term is the Higher Conservation portfolio, which was also the portfolio with the lowest 20-year NPV of costs in the Aurora modeling. The cost of the Higher Conservation portfolio involves a trade-off. The portfolio exhibits slightly higher short-term costs, but sufficiently lower total costs in the long-term to make it the best performing portfolio.

As noted above, the rate impact results are very sensitive to the price assumptions used in this analysis. City Light will continue to monitor the relative prices of RECs, new resources, and wholesale sales to ensure that City Light manages its resource costs efficiently and in a manner consistent with the energy policies desired by ratepayers, the Mayor, and the City Council.

¹ The average retail rate for a particular year is the revenue requirement divided by total energy sales. This is a summary metric used to represent the weighted average rate of all customer classes. Changes in rates to individual customer classes may differ from changes in the average system rate.