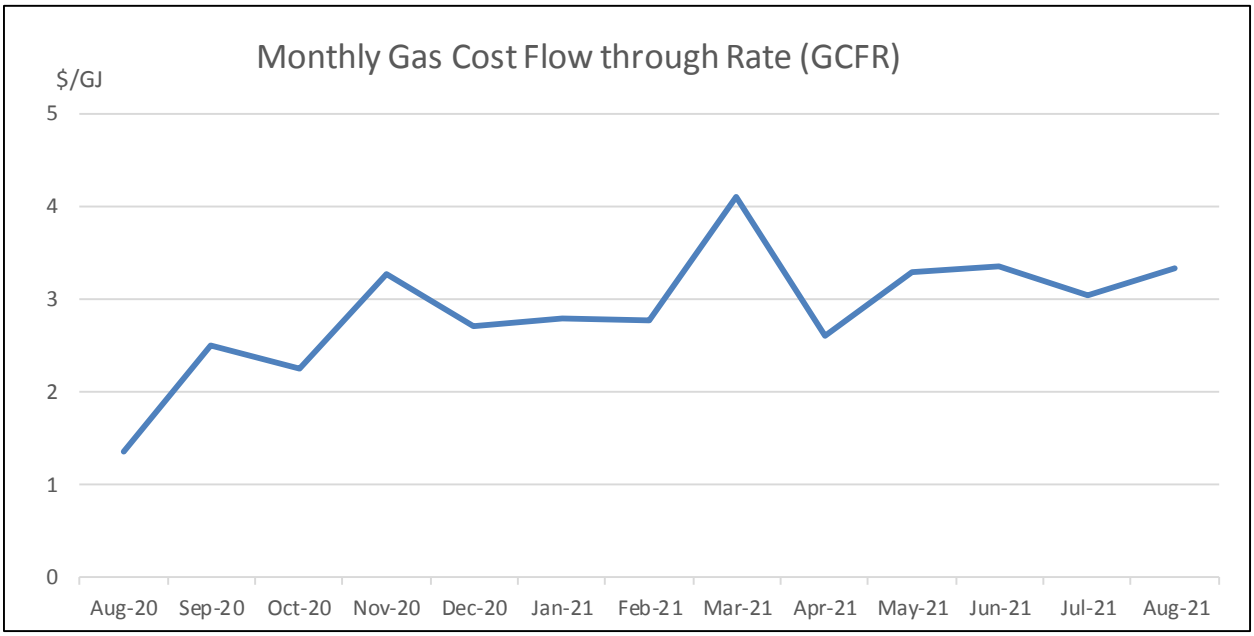
ENERGY PRICES AND MARKETS

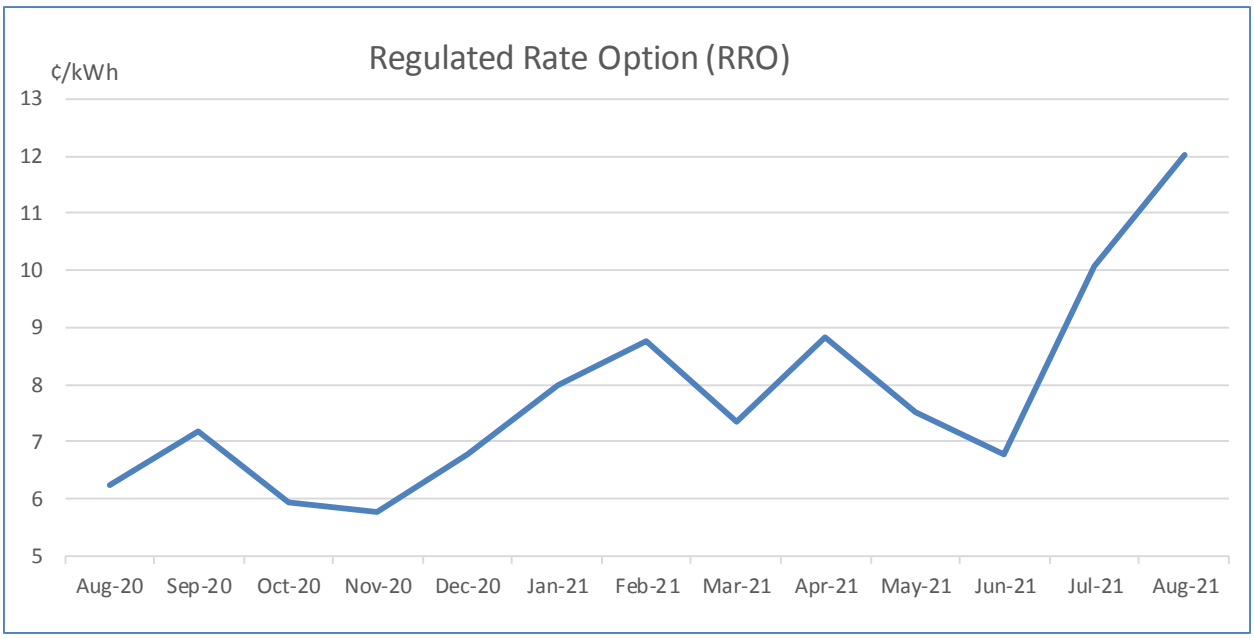
Natural Gas

The 2021 August gas cost flow-through rate was $3.33 per gigajoule. The generally accepted natural gas industry price forecast is for relatively stable prices through 2021, although some upside potential is possible, with North American natural gas storage levels recently falling below the 5-year average.



Electricity

The ENMAX regulated rate option price for 2021 August was 12.02 cents per kilowatt-hour.



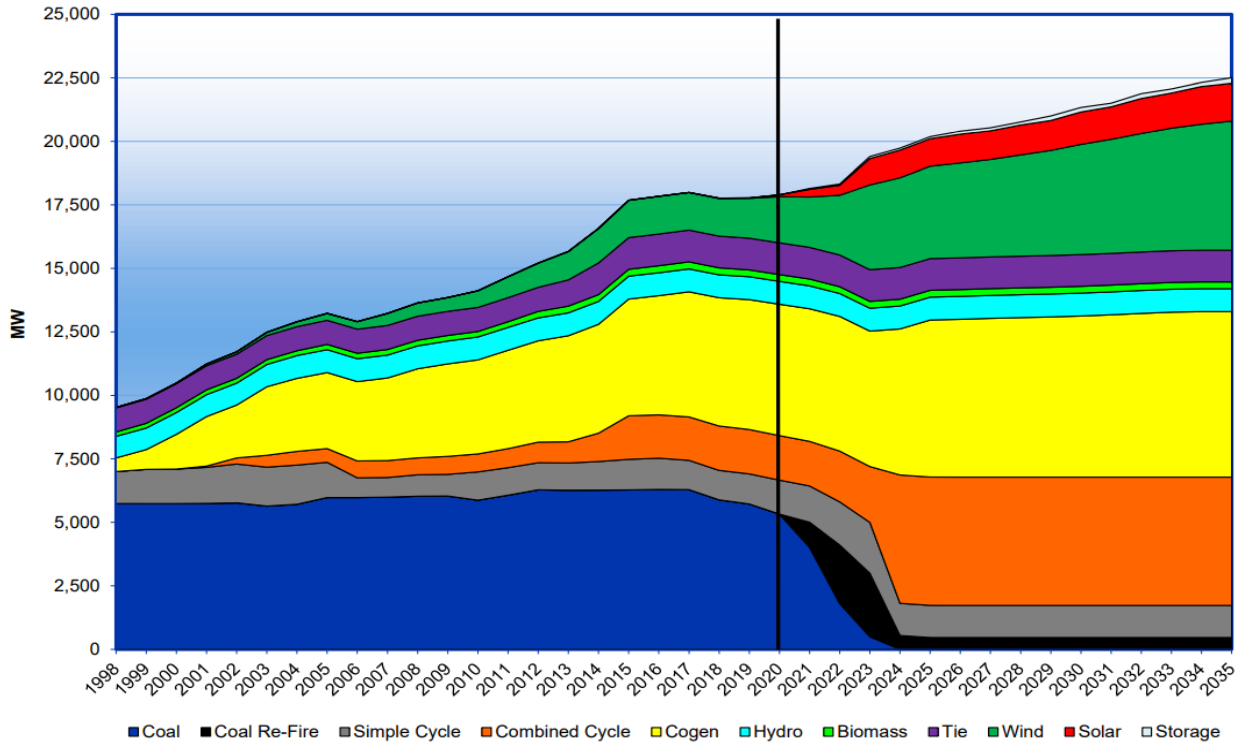
At 12.02 cents per kilowatt-hour, the 2021 August ENMAX residential regulated rate option price is the highest since 2012 February. Regulated rate option prices have soared in recent months due to higher than expected load (demand) causing wholesale power prices in Alberta to hit their highest summer averages since 2013.

The month to date all-hours average wholesale power pool price (as of 2021 August 16) was 10.94 cents per kilowatt-hour. For reference, the all-hours average wholesale price for last month (2021 July) and a year ago (2020 August) and were 12.41 and 4.11 cents per kilowatt-hour, respectively. The generally accepted power industry price forecast has prices averaging at 9.11 cents per kilowatt-hour for the remainder of 2021. For reference, 2020 September to December prices averaged 4.35 cents per kilowatt-hour.

UTILITIES AND INDUSTRY DEVELOPMENTS

The Changing Face of Alberta's Electricity Generation – Past, Present and Future

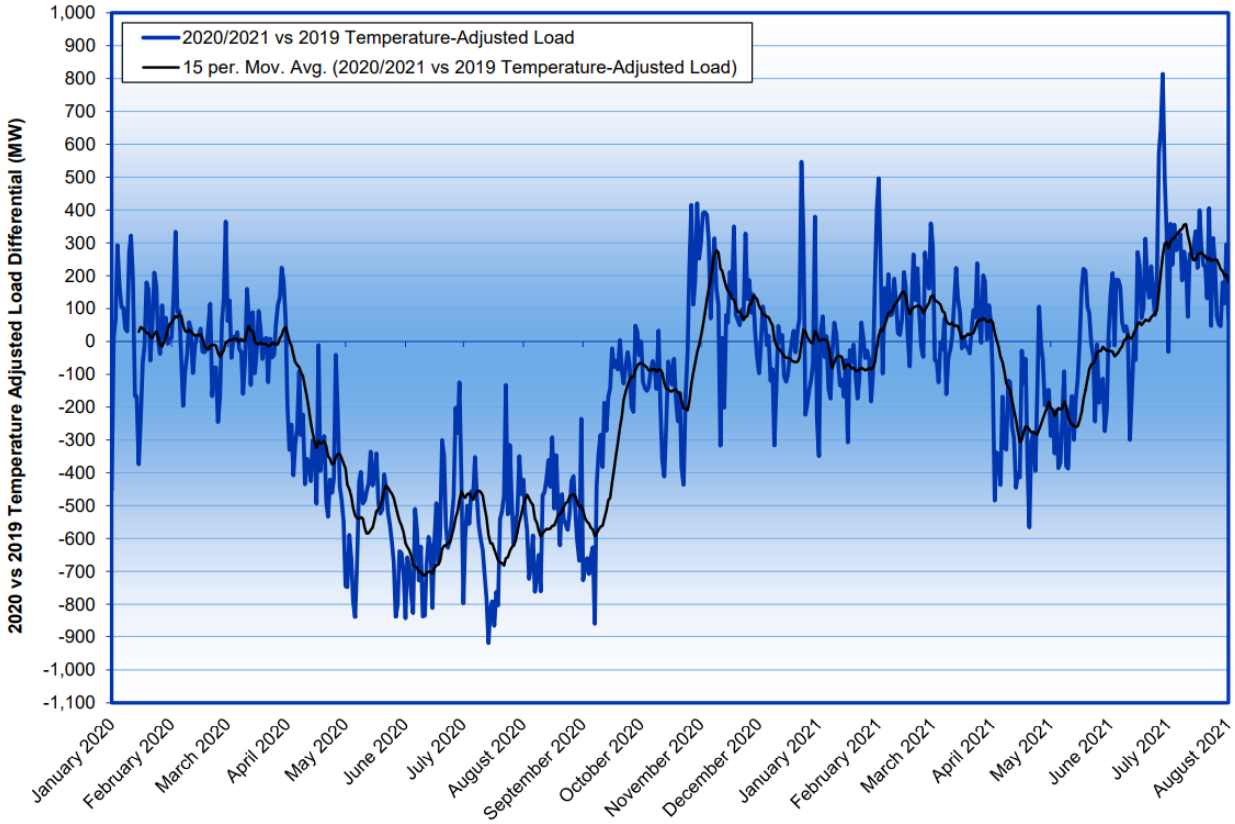
The graph below shows how Alberta's installed electricity generation capacity (by fuel source) has evolved from 1998 to the present, along with a forecast out to 2035. Multiple trends are noticeable. Baseload generation (i.e. generation that is considered more predictable/reliable and typically runs around the clock) has evolved from coal (dark blue area) to combined cycle (orange), largely as a result of increasing environmental legislation making coal fired power more expensive and decreasing natural gas prices since the mid 2000s as a result of shale gas plays. Coal fired generation is expected to be fully retired and/or converted to natural gas sources by the end of 2023. The environmental legislation coupled with technological improvements have also led to strong forecasts for further proliferation of renewable energy sources (wind and solar) in Alberta. For reference, Alberta has about 30 billion tonnes of coal reserves. An average of 25 to 30 million tonnes of coal is produced each year in Alberta.



Source: EDC Associates

Impact of Covid-19 on Alberta electricity demand

The graph below illustrates Alberta's daily temperature-adjusted load differential compared to 2019 (pre-COVID conditions) which shows that the electricity demand destruction peaked at 900 MW in the spring/summer of 2020. Electricity demand in Alberta began staging a robust rebound in early 2021 as crude oil production ramped back up and many businesses started reopening. However, subsequent "waves" of COVID-19 in Alberta resulted in increased restrictions in the spring of 2021 and additional demand destruction. Thanks to a near full reopening of the economy in late June/early July, electricity demand growth is now back into positive territory relative to pre-pandemic (2019) levels.



Source: EDC Associates

Forecasting Electric Vehicles and their Demand for Power in Alberta

Electric vehicles are an emerging option for motorists as an alternative to conventional fossil-fueled (i.e. internal-combustion engine) transportation. Although changing legislation, consumer preferences and affordability may still be challenging to predict for electric vehicle usage, the Alberta Electric System Operator has made forecasts for the usage of electric vehicles in Alberta under two scenarios ("Figure 4") and the subsequent impact on electric demand in Alberta ("Figure 5").

FIGURE 4: Assumed Number of Electric Vehicles in Alberta

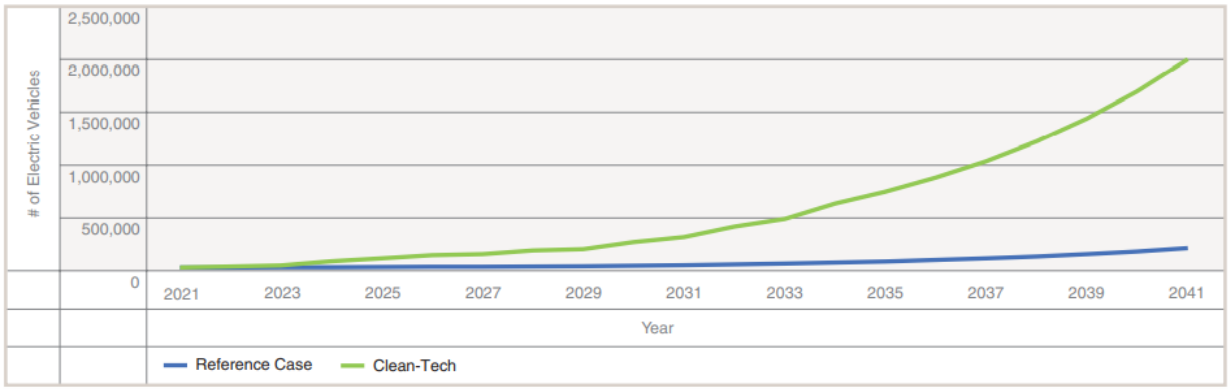
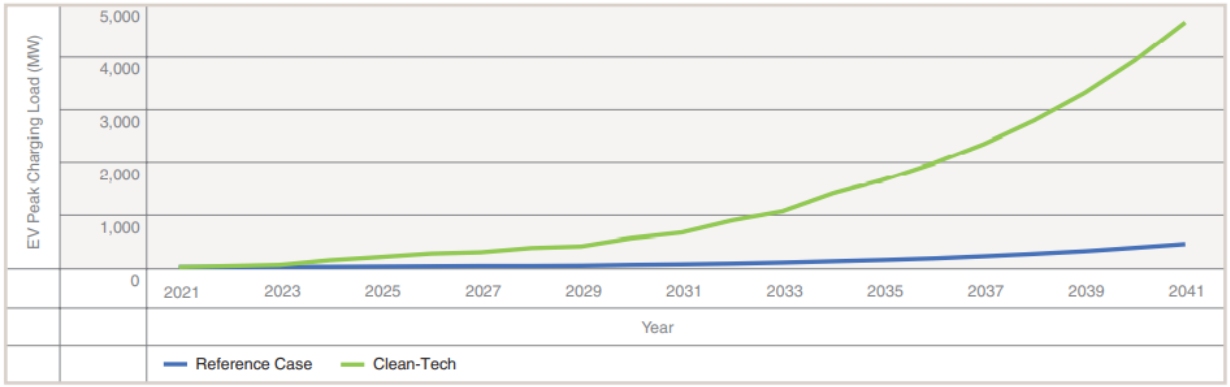


FIGURE 5: Incremental Peak Load Attributed to Electric Vehicles



Source: Alberta Electric System Operator, 2021 Long-term Outlook

The reference case (blue lines) assumes that growth in electric vehicle sales result in about 195,000 electric vehicles on Alberta roads and will translate to 120 MW of average demand growth and nearly 400 MW of peak demand growth by 2040. The “clean-tech” scenario (green lines) assumes a global trend towards decarbonization and domestic policies encouraging renewable energy investments. This scenario also assumes a more aggressive electric vehicle adoption rate, with electric vehicles representing about 30 per cent of Alberta vehicles by 2040 (just under two million electric vehicles on Alberta roads). This will result in 1,185 MW of average demand growth and 3,900 MW of peak demand growth. For reference, in 2021, 14,000 electric vehicles are estimated to be on Alberta roads.

TELECOMMUNICATIONS DEVELOPMENTS

Canadian Telecomm regulator ruling in favor of “Big-Three”

On 2021 May 27 the Canadian Radio-television and Telecommunications Commission (CRTC) ruled that it would not significantly lower the rates that small companies must pay to access the high-speed broadband networks of larger rivals, including Bell Communications, Telus Corporation and Rogers Communications, known as the “Big Three.”

That followed a CRTC ruling in 2021 April when it asked large telecom firms to offer wholesale wireless access to so-called smaller companies known in the industry as Mobile Virtual Network

Operators (MVNOs). These smaller competitors could then resell the capacity at reduced retail prices and pass on the savings to consumers.

This ruling will allow the big carriers to charge rates like those that were originally set in 2016 for wholesale access to their broadband networks.

On 2021 June 28, independent telecom TekSavvy Solutions filed a leave to appeal the 2021 May 21 CRTC ruling, requesting that the 2019 Final Rates Order be restored and that CRTC chair Ian Scott be removed for bias.

According to Reuters, as of 31 May 2021, the Big Three operators controlled 89.2 per cent of subscribers and 90.7 per cent of revenue in Canada's telecom industry. Analysts have warned the market concentration will only intensify if Rogers' planned $26 billion acquisition of Shaw Communications is allowed to proceed. Regulatory will continue to monitor and report on the progress of the proposed transaction of Rogers acquiring Shaw.

Telus appealing Canadian Telecomm Regulator Decision

In 2019 January, the CRTC launched a national review of wireless services (Telecom Notice 2019-57). The consultations had three focus areas:

1. Competition in the retail wireless market;
2. The wholesale regulatory framework, including access by competitors to existing wireless networks; and
3. **The future of mobile wireless services in Canada, with a focus on reducing barriers to infrastructure deployment (related to 5G deployment)** ***[emphasis added]***

As the consultations unfolded, several carriers argued that municipalities constituted a barrier to the future deployment of 5G technology.

The Federation of Canadian Municipalities (FCM) organized a strong response to these attempts at sidelining the municipal role in rights-of-way management and municipal control over other taxpayer assets.

On 2021 April 15, the CRTC published its decision: **Telecom Regulatory Policy 2021-130** which supported the role of municipalities.

On May 14, 2021 TELUS filed a leave to appeal the recent CRTC decision to the Federal Courts. TELUS was opposed to the CRTC’s assertion that they did not have the authority to allow carriers to “break-up” the roads and other municipal assets (Street Light Poles) to install wireless (5G) equipment. TELUS also asserted their carriers should have access rights to all public assets.

Despite a strong submission filed by FCM, the Federal Court of Appeal, in August, granted TELUS leave to appeal. The next step is for TELUS to file a Notice of Appeal. This document indicates that they actually want to proceed (FCM fully expects they will go ahead) and will mark the start of the deadlines for the appeal process itself. TELUS has 60 days to file the Notice so it is very hard to predict when the clock will start ticking for FCM to prepare its submissions as they are the Respondent in this case.

Given the work the Calgary has done over the last several years to reduce or eliminate any barriers to the deployment of wireless infrastructure on City assets, we believe it would be prudent for Calgary to intervene in this matter to ensure the Court is aware. This work would be coordinated with FCM and handled by City resources.