



Saskatchewan Rate Review Panel

Report to the Minister Responsible for Crown Investments Corporation of Saskatchewan

Regarding the SaskPower 2022 Rate Application
Effective date September 1, 2022 and April 1, 2023

Report submitted July 11, 2022



Executive Summary

SaskPower made an application on February 24, 2022, requesting a 4% rate increase effective September 1, 2022, and a further 4% increase effective April 1, 2023. The main drivers for this application include:

- Increasing fuel and purchased power costs due to rising natural gas prices as well as renewable generation required to meet environmental regulations and greenhouse gas targets. Rising Operations, Maintenance, and Administration (OM&A) mainly attributed to costs related to small modular reactor development costs, increased vegetation management costs to help maintain reliability and cloud computing costs.
- Need for increased operating income as SaskPower's operating income has declined from \$160 million in 2020-21 to a forecast of \$10 million in 2021-22.
- Increased financial pressure from higher inflation and interest rates.

SaskPower is also proposing to rebalance rates that will result in different percentage changes to different customer classes and within customer classes. Within this rate rebalance is a consolidation of the urban and rural residential customers to one rate class. As a result, the basic monthly charge increases for urban residential customers and decreases for rural residential customers.

SaskPower provided a Mid-Application update on April 25, 2022, which included preliminary year-end results for 2021-22. Although there were some changes from the original application, SaskPower did not request any revisions to the proposed rate increases. However, the update was based on data collected from March and early April and natural gas prices have trended upwards since that time.

The Panel has been appointed by the Minister of the Crown Investments Corporation as a Ministerial Advisory Committee to conduct a review and provide an opinion of the fairness and reasonableness of the proposed changes to the Minister. The Terms of Reference for the Panel can be found in Appendix A of the consultant's report, which outlines the parameters of this review.

The Panel contracted an independent technical consultant to review and analyze the application and update. The Panel, with the assistance of the Consultant, made specific information requests to SaskPower, and had discussions with SaskPower staff to clarify the responses. The Panel also requested public and industry feedback on the application and held public meetings in Regina and Saskatoon. In addition to comments from 33 individuals, the Panel received submissions from the Canadian Association of Petroleum Producers (CAPP), Paper Excellence, Canadian Federation of Independent Business (CFIB), Saskatchewan Industrial Energy Consumers Association (SIECA), Renters Association of Saskatoon and Area (ROSA), and the Official Opposition. The business community raised concerns about competitiveness and the public shared their concerns about affordability.

Several issues emerged during this review that impact the recommendation on rates including:

- **Total Revenue Requirement:** There are several significant factors that impact SaskPower's total revenue requirement including fuel and purchased power (F&PP), OM&A, net income, return on equity, and debt ratio. Total F&PP expense is forecast to increase from \$715 million in 2020-21 to \$952 million in 2023-24, an increase of 33 per cent. OM&A represents 24 per cent of SaskPower's total revenue requirement in 2023-24 and the corporation capped its OM&A annual budget increase at 4.2 per cent in 2022-23 and 3.4 per cent in 2023-24. SaskPower is forecasting its rate increases for 2022-23 and 2023-24 will allow an ROE of less than half of the long-term target by 2023-24.

- **Natural Gas Markets:** SaskPower's largest source of electrical generation is natural gas and the price has been on a steady climb upwards, especially in recent months. SaskPower estimates that the impact to F&PP costs of a \$1/GJ change in the price of natural gas is \$48 million in 2022-23 and \$49 million in 2023-24.
- **Operating, maintenance and administration (OM&A):** OM&A is forecast to increase \$30 million in 2022-23 and \$25 million in 2023-24. These include costs that are related to funding the small modular reactor research project (\$7.1 million in 2022-23 and \$12.2 million in 2023-24 for a total of \$19.3 million) as well as additional cost associated with increased vegetation management requirements (a total of \$10 million over the two years) and cloud computing.
- **Carbon Tax:** In 2018 the Government of Canada passed the Greenhouse Gas Pollution Pricing Act, which created a carbon charge starting at \$20 per tonne of CO₂ in 2019 and has been increasing by \$10 per year up to the current rate of \$50 per tonne. From 2023-30, the carbon charge will increase by \$15 per tonne per year. The federal carbon charge will account for 11 per cent of total generation expenses by 2023-24. Although carbon taxes are passed on to customers as a separate rate rider, which do not affect the revenue requirement, they are added to the customer's bill. It should be noted that by the end of fiscal 2023-24, the total carbon tax paid will be approximately \$732 million -- all of which will be paid by ratepayers. The total forecasted carbon tax imposed on SaskPower during the next eight years is expected to be more than \$3 billion.
- **Competitiveness:** SaskPower's rates have generally been competitive with other thermal generation utilities, but various taxes and the municipal surcharge paid by customers in Saskatchewan make SaskPower less competitive with other thermal generation utilities and western Canadian cities. Please note the comparisons on page 32.

In addition, several issues have been identified that will impact SaskPower's future operations and the rates that customers may expect as decarbonization occurs:

- **Integrated Resource Plan:** An integrated resource plan is a roadmap that large utilities use to plan the physical resource requirements to serve their customers over the next couple of decades. Based upon public input, there is a desire that the plan for SaskPower's power future be publicly available with stakeholder feedback so customers can make necessary plans and preparations to meet the net-zero target by 2035.
- **Elimination of Coal Generation:** In 2012 the Government of Canada enacted regulations that effectively phases out coal power plants by 2029. SaskPower has retired Units 1 and 2 at Boundary Dam and added carbon capture and storage to Unit 3. SaskPower must either replace all existing coal power plants or convert them to carbon capture by 2030.
- **Net-Zero Grid:** In 2021 the Government of Canada announced a goal of achieving a net-zero electricity grid by 2035 – fifteen years earlier than the federal government had previously announced (the previous target was 2050). This has led SaskPower to begin a complete refresh of its long-term system plan on the future of electricity generation in Saskatchewan.
- **Zero-Emission Vehicles:** In March 2022 the Government of Canada committed to a mandatory 100 per cent zero-emission vehicles sold by 2035 for all new light-duty vehicles. SaskPower estimates there will be 34,000 electric vehicles in use in the province by 2032, adding more pressure on system demand.
- **Decarbonization Costs:** The issues identified above are leading SaskPower to build a cleaner, more reliable and modernized electricity system. The corporation must replace the capacity it is losing by retiring its fossil

fuel power stations with a suitable generation mix that can meet peak demand. SaskPower has limited options to provide baseload capacity as it decarbonizes the electrical system. It has been replacing coal energy with intermittent energy that is provided by green technologies such as wind and solar that is backed up with natural gas. If SaskPower must move away from natural gas generation sooner than expected, then it will require significant capital expenditures over the short to medium term to meet these changing regulations.

- **Load Forecast:** Although electrical use per customer is expected to decrease over the long term as commercial and residential classes become more energy efficient, the addition of electric vehicles will have a significant impact on SaskPower's future load demand.
- **Rate Rebalancing:** SaskPower is proposing to eliminate the existing differences in the basic monthly, energy and demand charges between urban and rural accounts for residential, general service, and small commercial customers. It is also proposing that the demand-related costs that are currently collected through the energy charge are slowly phased back to the demand charge. This will impact larger customers who are charged separately by demand and energy.

SaskPower requires the financial resources to provide safe and reliable electrical service in light of new environmental policies and regulations enacted by the Government of Canada. Customers have also expressed their concerns about the impact that continued rate increases can have on individuals, families and businesses. Saskatchewan must ensure that the alarming scenarios in Europe of power interruptions and shortages of gas for home heating do not happen here. After reviewing these issues, the Panel must balance the interests of SaskPower, its ratepayers and the public when making its recommendations.

The Panel directed its consultant to review various scenarios that ranged from no rate increases to the corporation achieving its desired ROE. These scenarios can be viewed on page 90 of the Consultant's report. As detailed on page 13 of this report, SaskPower's net income for the last fiscal year 2021-22 is forecasted to be \$11 million (ROE of 0.4%). For the current fiscal year with the applied for 4% rate increase net income is forecasted to be \$6 million (ROE of 0.2%) and for fiscal year 2023-24 the current forecast with the additional 4% rate increase net income is expected to be \$122 million (ROE 4.2%) which is less than half the long-term return on equity target of 8.5%. A 1 per cent decrease in the requested rate increase would reduce SaskPower's net income by \$26 million annually.

There are also a number of risk factors that are outside of SaskPower's control which could negatively impact its revenue requirement. For example, a \$1/GJ increase in natural gas prices would reduce SaskPower's net income by approximately \$48 million; a 2 per cent reduction in domestic sales would reduce SaskPower's net income by approximately \$38 million annually; and a 10 per cent decrease in hydro generation would reduce SaskPower's net income by approximately \$10 million.

The Panel also considered the rate rebalancing aspect of the application, but with changing market forces, cross subsidization issues, and the need to transition from energy to demand, such a transition must be made.

Panel Recommendations

After a careful deliberation of all these issues, the Panel has concluded that the proposed rate increases are fair and reasonable. As a result, the Panel makes the following recommendations to the Minister:

1. **That the proposed 4% rate increase effective September 1, 2022, be approved.**
2. **That the proposed 4% rate increase effective April 1, 2023, be approved pending a financial review submitted to the Panel no later than December 1, 2022.**
3. **That the proposed design for rate rebalancing be approved.**

SaskPower is requested to continue to rebalance RR/R requirement ratios and redesign rates to better reflect the ideal rates calculated by the Cost-of-Service Study, subject to other rate design criteria. The Panel also requests that SaskPower provide the calculation of the ideal rates as part of future cost of service studies.

4. **That the Capacity Reservation Service Rate, which is currently an interim rate, be confirmed and that in future applications the capacity reservation rate be updated as part of the application process.**
5. **That SaskPower prepare public versions of its business plan, integrated resource plan and depreciation study as part of its future rate applications.**

SaskPower is requested to providing the following information in its integrated resource plan:

- SaskPower's long-term load forecast, including different load scenarios as appropriate;
- Capacity and energy gaps between existing generation resources (including planned retirements) and SaskPower's long-term load forecast;
- Options to address the future capacity and energy gaps, including the costs of each option or portfolio of options and the appropriate timing and optimization of options;
- The cost to achieve SaskPower's greenhouse gas emissions targets associated with each option or portfolio of options; and
- Forecast rate increases over the planning horizon associated with each option or portfolio of options.

SaskPower should also consider cost-competitive energy efficiency and alternative rate structures as resource options in the resource plan. It should also clarify the objectives for delivering other energy efficiency programs in future applications.

6. **That SaskPower complete an analysis of the potential impact of eliminating the price hedging element of its natural gas exposure management policy on the corporation's net income requirements at the time of the next application.**
7. **That SaskPower continue to focus on limiting growth in OM&A per customer account to less than inflation and to continue to track and provide OM&A per residential customer for future applications.**
8. **That SaskPower provide a report in its next application that indicates how it achieved the contingency savings that was presented in the OM&A budget.**

The range of the bill impacts will be different for individual customers with most having a material percentage impact on their electricity costs. For a typical urban residential customer (625 kWh), the bill increase from April 1, 2022, to April 1, 2023, will be approximately \$11 per month (10 per cent). However, the bill the customer pays, which includes taxes and subsidies, is expected to increase by \$14 (11 per cent). Other taxes also result in larger increases on bills. For a typical urban residential customer, their bill at April 1, 2023, is expected to include \$24 in taxes (16 per cent of the total bill).

Comparison of Rates at Relevant Times Urban Residential at 625Kwh Monthly Usage*

Date	Monthly Bill Before Taxes	Monthly Bill Including Taxes	Reason for Increase
April 1, 2022	\$112	\$133	
September 1, 2022	\$119	\$140	4% Rate Increase
January 1, 2023	\$119	\$142	Carbon Tax Increase**
April 1, 2023	\$123	\$147	Second 4% Rate Increase

**Note that the increase is greater than 4% due to combining and rebalancing the urban and rural customer basic monthly charge.*

***SaskPower is charged the carbon tax on an output based on the calendar year and not fiscal year.*

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Introduction

SaskPower has been providing power to the province since 1929. For much of that time the province's energy needs have been met with coal power since Saskatchewan has abundant coal resources and it has been an affordable fuel source. Coal-fired plants have been built to last for more than 50 years and to provide a reliable source of energy. This fuel source has been supplemented over the years with various other sources including hydro, natural gas, wind and solar. Within the last decade SaskPower's energy mix has begun to change due to changes in technology, regulations, and sustainability. There are also an increasing number of customers who are turning to wind, solar and flare gas technology to generate their own power, with the ability to sell the surplus power back to the grid.

In response to rising concerns about greenhouse gases (GHG), the Government of Canada, in 2012, enacted legislation to effectively phase out coal power by 2029. This led SaskPower to retire Units #1 and #2 at Boundary Dam near Estevan in 2013 and 2014. SaskPower also initiated carbon capture and storage at its Boundary Dam in 2014 which captures and stores emissions before they reach the atmosphere.

In 2016 the Government of Canada, as part of its commitment to the Paris Climate Accord obligations, introduced a national carbon tax. In December of 2020 Canada passed regulations confirming the carbon tax would increase to \$170/tonne by 2030. In 2021 the carbon tax was \$40/tonne increasing to \$50 this year and \$65 next year. **The cost of the carbon tax imposed on SaskPower ratepayers over the next decade is expected generate more than \$3 billion with no defined external financial support or initiatives to help SaskPower reduce emissions.**

SaskPower has been system planning for a net-zero-GHG electricity system by 2050, which is in line with the Government of Canada's commitment outlined in the Canadian Net-Zero Emissions Accountability Act tabled in November 2020. As one of eleven electric utilities to have achieved Electricity Canada's Sustainable Electricity Company™ Designation, SaskPower has taken its role in the country's climate change response and associated decarbonization efforts very seriously. To that end, SaskPower has invested billions to be positioned to achieve a significant decarbonization of Saskatchewan's electricity system including:

- Retirement of over 1,400 megawatts (MW) of conventional coal-fired generation by 2030 in alignment with federal regulatory requirements
- A 50% reduction in GHG emissions from 2005 levels by 2030
- Up to 50% renewables in the electricity generation mix by 2030
- Transition of all remote Indigenous communities from diesel generation substantially complete, with planning for the sole remaining community underway

With the introduction of the proposed Clean Electricity Standard two years later, a net-zero GHG emissions electricity system for Canada and Saskatchewan has been advanced by 15 years to 2035.

In November 2021 the Government of Canada proposed the federal Clean Electricity Standard (CES) which is currently under development, that will regulate a 2035 net-zero (NZ2035) GHG electricity sector for the country. It represents a level of wholesale change for Saskatchewan's electricity future that is unprecedented in the history of our province. It also has the potential to significantly broaden the existing regional electricity rate disparity between hydro generation-rich and non-hydro generation-rich provinces within the country.

Accelerating Canada's decarbonization of the electricity sector is a major step-change that will significantly compound the financial, logistical and technological challenges of developing a net-zero electricity system in Saskatchewan. SaskPower will need to rebuild approximately 75% of its current generating capacity in 13 years – a system that took 93 years to build. In fact, the proportion of total generation to transition away from carbon is among the highest in

Canada (3,700 MW of 5,000 MW). Due to the Government of Canada's revised policy goal, SaskPower has undertaken a significant review of its strategic direction toward trying to reach this target by 2035.

It is critical to note that the technical solutions for a net-zero GHG electricity reality in Saskatchewan are currently not technically available on a commercial scale. As part of its scenario planning, SaskPower is considering an intensive build-out of more than 3,000 MW of intermittent renewable generation by 2035. At the same time, SaskPower also needs viable non-emitting baseload technologies and commercially available long-duration energy storage to ensure reliability.

Natural gas-fired generation developed in tandem with intermittent renewables is currently the only baseload supply option that can be built at the scale needed to meet Saskatchewan's needs. Current NZ2035 scenario planning still leaves Saskatchewan with four to six million tonnes of annual GHG emissions that would need to be offset. Without natural gas-fired generation, SaskPower will be challenged to meet the electrical demands of the province. In addition to the replacement of the majority of Saskatchewan's generation fleet to meet the requirements of NZ2035, SaskPower must continue to make major investments in new transmission and distribution lines, grid modernization and the sustainment of our province's existing electricity system.

As it plans to meet these new requirements, SaskPower must also consider the economic output of the province, the cost of fuel sources, the development of new technologies, indigenous and stakeholder engagement, construction timelines, environmental responsibility, and the impact of rate changes on customers and the competitive environment of the province relative to other jurisdictions. These issues are further compounded by global events. Other jurisdictions are facing similar challenges. Electrical rates are increasing around the world due to investments in new transmission lines, new battery technologies, wind turbines, solar farms and other measures to reduce GHG emissions. Natural gas prices have significantly increased in the last year and have surged as European countries look for ways to become less reliant on Russian natural gas.

Achieving net-zero emissions by 2035 is extremely challenging for a province like Saskatchewan that experiences extreme temperature variations, with a relatively small population spread over a large geographic area, and with limited connections to other adjacent provincial power systems. Although wind and solar power can reduce emissions, the power produced is intermittent and may not be available when it is most required. To ensure electricity is available when required, firm capacity needs to be online to supply electricity when wind, solar and like green energy are not operating to capacity.

There is also increasing global demand for businesses and consumers to switch to greener technologies, such as heat pumps, which operate on electricity rather than a natural gas furnace; and electric cars which reduce gasoline use. The Government of Canada also made a commitment this year to have 100 per cent zero-emission vehicle (ZEV) sales by 2035 for all new light-duty vehicles. These policy goals and proposed changes are placing greater demands on electrical systems at a time when they are evolving to meet net-zero emissions. This means that new firm generation capacity must be planned strategically and built, and the transmission and distribution system must be upgraded to deliver the increased capacity requirements to meet this new demand. Since a significant portion of the current distribution system is at or near the end of its useful life, this will result in costly replacements and upgrades.

As the energy transition unfolds, ongoing public discussion on the future of electricity in Saskatchewan will become more important than ever. Enhanced public and stakeholder engagement will not only aid in securing an electricity future for our province that ensures reliability, affordability, and clean sources of energy, but will also be critical to meet regulatory requirements and advancing projects that will be key to developing Saskatchewan's low-carbon economy. Without significant financial support in working to achieve NZ2035, Saskatchewan ratepayers will face the potential increased disparity with their electricity rates compared to other Canadian jurisdictions.

This year marks the first time since 2018 that SaskPower has filed an application to the Rate Review Panel for a rate increase. At that time the Panel approved a 3.5% increase to all rate classes. The driving factors for the rate increase at that time was the need to fund ongoing growth and sustainment spending since significant portions of SaskPower's infrastructure are at or near the end of their economic lives. SaskPower indicated at that time that it required a \$1 billion capital spending plan per year over the next decade to maintain and renew its generation, transmission, and distribution facilities.

Although infrastructure renewal remains an important aspect of this application, there is a greater need to increase rates to ensure that SaskPower meets federal government regulations to transition to their net-zero electricity supply plan by 2035. While the cost of adding renewables to the network is modestly declining, the overall cost per unit of energy generated exceeds the corporation's system average. As mentioned, renewables provide intermittent power which must be backed by generation sources that are available when required. Fuel and purchased power sources, most notably natural gas, continue to increase, because of market events, placing additional pressure on rates.

In addition to these issues, the time since the last application has also resulted in the need for SaskPower to become more transparent regarding its rate structure. SaskPower needs to rebalance its rate structure to ensure that each customer class is paying its share of the overall costs.

The Panel has been appointed as a Ministerial Advisory Committee to conduct a review and provide an opinion on the fairness and reasonableness of the proposed changes to the Minister of the Crown Investments Corporation. As part of this review process, the Panel contracted an independent technical consultant to review the application and the mid-application update, and to provide recommendations that would be consistent with the Panel's Terms of Reference. The Panel, with the assistance of the consultant, asked two rounds of information requests and supplementary questions, and had individual discussions with SaskPower staff to clarify specific answers received.

The Panel encouraged public and industry input into the review and held public meetings to facilitate discussion. There was considerable interest in the rate application from the public and submissions were received from the Canadian Association of Petroleum Producers (CAPP), Paper Excellence, Canadian Federation of Independent Business (CFIB), Saskatchewan Industrial Energy Consumers Association (SIECA), Renters Association of Saskatoon and Area (ROSA), and the Official Opposition. The concerns that were voiced during this review included competitiveness from the business community and affordability from the public.

There are a number of issues that the Panel has identified during this application, and they are complex and not easily resolved. The costs of decarbonizing the electricity sector in the province are extremely high. These decarbonization costs are reflected in the elimination of coal generation, the carbon tax, and the Government of Canada's commitment to a net-zero grid and zero emission vehicles by 2035. These changes are required in a short time in relation to the complexity of the electricity sector and will be paid by the ratepayers. Decarbonization is also complicated with the high costs of natural gas, rising inflation, and the impact on the province's competitiveness. It has become clear that the pressures impacting rates today will continue in both the short-term and longer-term future and that SaskPower's ratepayers will likely see increasing rates in the years to come.

SaskPower faces many challenges and issues which seem more daunting than what the corporation has faced in the past. However, the Panel is confident that, with the many dedicated and innovative people at SaskPower, it will rise to these challenges and work to ensure that Saskatchewan continues to enjoy safe, reliable electricity well into the future.

SaskPower's Rationale for the Application

SaskPower made an application on February 24, 2022, for a 4% rate increase effective September 1, 2022, and a further 4% increase effective April 1, 2023. The proposed rate increases vary across the customer classes from 2.5% for streetlights to 4.5% for farm customers. As part of this application, SaskPower is also proposing to change its rate design, which will impact customers within each rate class differently depending upon their consumption levels. Under SaskPower's existing rate design, some demand related costs (fixed costs) are collected through the energy (variable) rate, resulting in lower demand charges and higher energy charges than calculated strictly on SaskPower's cost of service study. This application starts the rebalancing process of moving fixed costs to the demand component away from energy.

This application is based upon the following 2021-22 forecast and actual revenues, and revenue requirements to the 2022-23 and 2023-24 forecasts:

SaskPower Revenue Requirement¹

	2020-21	2021-22				2022-23				2023-24			
		change over 2020-21				change over 2021-22				change over 2022-23			
	Actuals	Forecast	actuals			Business Plan	forecasts			Business Plan	business plan		
	(\$ millions)	(\$ millions)	(\$ millions)	(%)		(\$ millions)	(\$ millions)	(%)		(\$ millions)	(\$ millions)	(%)	
Revenues													
Saskatchewan Electricity Sales	2486	2588	102	4.1%		2639	51	2.0%		2793	154	5.8%	
Federal Carbon Charge Collected	129	150	21	16.3%		148	(2)	(1.3%)		198	50	33.8%	
Exports and Electricity Trading	53	87	34	64.2%		41	(46)	(52.9%)		59	18	43.9%	
Other Revenue	103	94	(9)	(8.7%)		91	(3)	(3.2%)		100	9	9.9%	
Sub-total Revenues	\$ 2,771	\$ 2,919	\$ 148	5.3%		\$ 2,919	\$0	0.0%		\$ 3,150	\$ 231	7.9%	
Expenses													
Fuel and Purchased Power	715	886	171	23.9%		902	16	1.8%		952	50	5.5%	
Federal Carbon Charge	92	176	84	91.3%		154	(22)	(12.5%)		223	69	44.8%	
OM&A	700	710	10	1.4%		740	30	4.2%		765	25	3.4%	
Depreciation	595	614	19	3.2%		604	(10)	(1.6%)		607	3	0.5%	
Finance Charges	426	398	(28)	(6.6%)		370	(28)	(7.0%)		366	(4)	(1.1%)	
Taxes	79	82	3	3.8%		82		0.0%		85	3	3.7%	
Other Expenses	4	43	39	975.0%		34	(9)	(20.9%)		43	9	26.5%	
Sub-total Expenses	\$ 2,611	\$ 2,909	\$ 298	11.4%		\$ 2,886	\$ (23)	(0.8%)		\$ 3,041	\$ 155	5.4%	
Operating Income	\$ 160	\$ 10	\$ (150)	(93.8%)		\$ 33	\$ 23	230.0%		\$ 109	\$ 76	230.3%	
Total Revenue Requirement	\$ 2,771	\$ 2,919	\$ 148	5.3%		\$ 2,919	\$0	0.0%		\$ 3,150	\$ 231	7.9%	

The revenue requirement is based upon the following considerations:

- Forecasted revenues are expected to increase by 5.3% in 2021-22 compared to 2020-21 actuals.
- Expenses are forecast to increase faster than revenues at 11.4% for 2021-22.
- Operating income is expected to decrease to \$10 million from \$160 million in 2021-21.
- The total revenue requirement is forecast to increase by 5.3% for 2021-22.²

The 2022-23 forecast indicates the following compared to 2021-22:

- Forecasted revenue is expected to remain constant including the financial impact of the proposed 4% rate increase effective September 1, 2022, with only slight increases to sales and decreases to carbon charges collected, exports and trading, and other exports.

¹ Page 17, 2022 And 2023 Rate Application, SaskPower.

² InterGroup Consultants Report, P. 5

Expenses are expected to decrease by 0.8%. This decrease is a combination of decreasing federal carbon charge expenses, depreciation, finance charges, and others, relatively stable taxes, and increases to fuel and purchased power as well as Operations, Maintenance and Administration (OM&A).

The 2023-24 forecasted revenue requirement indicates the following:

- Revenue is expected to increase across all sources with \$154 million in additional electricity sales forecasted. The total increase is forecasted to be 7.9% (this includes both 4% increases).
- Expenses are expected to increase by 5.4%. Expenses are forecasted to increase across all categories apart from finance charges, which are expected to decrease by 1.1%. The largest increase, in absolute value and percentage terms, is expected for the federal carbon charge at \$69 million and 44.8% respectively.
- Operating income is expected to increase to \$76 million.
- Total revenue requirement is expected to increase by \$231 million, amounting to 7.9%.³

SaskPower is also proposing to rebalance rates, which is noted on page 6 of the application, that will result in different percentage changes to different customer classes and within customer classes. The proposed rates are designed to limit the increase to any single customer to 15% per rate adjustment.⁴

The proposed rebalancing is intended to:

- Target revenue-to-revenue requirement ratios for all customer classes of between 0.98 and 1.02. This results in some customer classes having higher than average rate increases and other customer classes having lower than average rate increases. SaskPower has historically attempted to set the revenue-to-revenue requirement (R/RR) ratios for residential and farm customers to 0.98, resellers to 1.00 and all other classes to 1.02.⁵
- Move toward consolidating urban and rural customer classes.
- Rebalance rate structures to increase demand charges so that demand charges recover the demand related costs for each class. Currently a portion of demand related costs are recovered through an energy charge.

Mid-Application Update

SaskPower provided a Mid-Application Update on April 25, 2022, which included preliminary year-end results for 2021-22. Although there were changes from the original application, SaskPower indicated that it would continue to recommend the proposed rate increases. The following chart summarizes the changes to forecast 2022-23 and 2023-24 revenues and revenue requirements.

³ *ibid*, P. 11

⁴ 2nd round information request SRRP Q22.

⁵ 2nd round information request SRRP Q22.

Mid-Application Update to Revenues and Revenue Requirement (\$ millions)⁶

	2021/22				2022/23				2023/24			
	Initial	Update	Change		Initial	Update	Change		Initial	Update	Change	
			\$	%			\$	%			\$	%
Revenue												
Residential	589	596	7	1.2%	579	607	28	4.8%	583	618	35	6.0%
Farm	176	178	2	1.1%	182	175	(7)	(3.8%)	182	175	(7)	(3.8%)
Commercial	511	504	(7)	(1.4%)	504	513	9	1.8%	508	516	8	1.6%
Oilfield	423	416	(7)	(1.7%)	416	445	29	7.0%	425	448	23	5.4%
Power	791	777	(14)	(1.8%)	802	797	(5)	(0.6%)	788	804	16	2.0%
Reseller	98	98	0	0.0%	96	98	2	2.1%	96	97	1	1.0%
Revenue lift due to rate increase					60	62	2	3.3%	211	217	6	2.8%
Federal carbon charge collected	150	144	(6)	(4.0%)	148	177	29	19.6%	198	224	26	13.1%
Exports and electricity trading	87	77	(10)	(11.5%)	41	53	12	29.3%	59	48	(11)	(18.6%)
Other revenue	94	95	1	1.1%	91	91	0	0.0%	100	100	0	0.0%
Total Revenue	2,919	2,885	(34)	(1.2%)	2,919	3,018	99	3.4%	3,150	3,247	97	3.1%
Expenses												
Gas	396	397	1	0.3%	311	383	72	23.2%	294	347	53	18.0%
Coal	301	280	(21)	(7.0%)	258	281	23	8.9%	266	272	6	2.3%
Wind	70	63	(7)	(10.0%)	104	103	(1)	(1.0%)	114	114	0	0.0%
Hydro	16	18	2	12.5%	23	22	(1)	(4.3%)	23	23	0	0.0%
Imports	76	81	5	6.6%	147	152	5	3.4%	165	169	4	2.4%
Other	27	18	(9)	(33.3%)	59	41	(18)	(30.5%)	90	50	(40)	(44.4%)
Federal carbon charge	176	176	0	0.0%	154	183	29	18.8%	223	236	13	5.8%
Operating, maintenance & administra	710	711	1	0.1%	740	753	13	1.8%	765	788	23	3.0%
Depreciation	614	612	(2)	(0.3%)	604	605	1	0.2%	607	607	0	0.0%
Finance charges	398	401	3	0.8%	370	372	2	0.5%	366	390	24	6.6%
Taxes	82	81	(1)	(1.2%)	82	83	1	1.2%	85	86	1	1.2%
Other expenses	43	36	(7)	(16.3%)	34	34	0	0.0%	43	43	0	0.0%
Total Expenses	2,909	2,874	(35)	(1.2%)	2,886	3,012	126	4.4%	3,041	3,125	84	2.8%
Operating Income	10	11	1	10.0%	33	6	(27)	(81.8%)	109	122	13	11.9%
Return on Equity	0.4%	0.4%	0.0%		1.1%	0.2%	(0.9%)		3.8%	4.2%	0.4%	

The update indicated that the forecast 2022-23 operating income is lower at \$6 million (a reduction of \$27 million) compared to the original application. This represents a 2022-23 operating return on equity (ROE) of 0.2% compared to the original forecast of 1.1%. Operating income and ROE for 2023-24 are slightly higher than the original application forecast of 3.8%, which is now forecast to be 4.2%.

Revenues in 2022-23 are forecast to be \$99 million higher compared to the initial filing, primarily because of higher residential and oilfields' sales forecasts. Expenses in 2022-23 are forecast to be \$126 million higher, driven largely by higher natural gas prices and higher than forecast inflation.

Revenues in 2023-24 are forecast to be \$97 million higher compared to the initial filing, primarily due to increased residential and oilfields' sales forecasts. Expenses in 2023-24 are forecast to increase by \$84 million reflecting higher natural gas price forecasts, increased inflation and higher interest rates.⁷

Since SaskPower provided the Panel with the Mid Application Financial Update on April 22, 2022, it should be noted that the data to generate the update occurred in March and early April. The natural gas market has been volatile in recent months, and the market prices of natural gas included in the update have further increased. If these prices remain high, it will further negatively impact SaskPower's net income.

⁶ 2022 and 2023 Mid-Application Update.

⁷ InterGroup Consultants Report, P. 87

Role of the Saskatchewan Rate Review Panel

Mandate

Through Order-in-Council dated December 22, 2018, the Minister of Crown Investments Corporation (the Minister) appointed a Ministerial Advisory Committee known as the Saskatchewan Rate Review Panel (the Panel), with the mandate that it shall:

... conduct a review and provide an opinion of the fairness and reasonableness of proposed Crown corporation rate changes, referred to the Panel by the Minister of Crown Investments Corporation; and incorporate as part of its mandate specific terms of reference for particular Crown corporation rate change reviews that may be attached by further Minister's Order.

Whether in the original Order-in-Council establishing the Panel (437/2000 dated July 27, 2000), or in the Terms of Reference for particular reviews, the Panel has always been instructed to consider: “...the interests of the customer, the Crown corporation, and the public.”

The mandate of the Panel extends to three Crown corporations in Saskatchewan – SaskEnergy, SaskPower and SGI's Saskatchewan Auto Fund. Serving as an advisory body to the Minister Responsible for Crown Investments Corporation, the Panel provides independent advice on rate proposals from the above-noted corporations. The final decision about these proposals continues to rest with the Saskatchewan government.

Members of the Panel

The following members have been appointed to serve on the Saskatchewan Rate Review Panel:

Chair	Albert Johnston, Saskatoon
Vice-Chair	Duane Hayunga, Prince Albert
Members	Glenn Dutchak, Canora; Bonnie Guillou, Saskatoon; Kim Hartl, Lake Lenore; Keith Moen, Saskatoon; and Sid Katzman, Saskatoon

Panel's Terms of Reference

The Minister issued an Order on February 24, 2022, establishing the Terms of Reference guiding the Panel's review of SaskPower's 2022 and 2023 Rate Application. The Minister's Order and the Terms of Reference for this application identified several factors that the Panel is to consider in conducting its review, as well as various parameters that are outside the Panel's purview.

The parameters that are outside the Panel's mandate include:

- The budgeted capital allocation, the rate base, and established corporate policies over the period 2022-23 and 2023-24 inclusive.
- The targeted long-term Return on Equity of 8.5%.
- The existing service levels.
- Any existing supply contracts.
- And the revenue-to-revenue requirement ratio target range of 0.95 to 1.05.

The Minister's Order for this review called for the Panel to complete its work no later than July 12, 2022. The Panel will also provide a recommendation to confirm or revise the initial 2023 rate change to the Minister no later than February 1, 2023.

Review Process for the Application

Consultant

InterGroup Consultants Ltd. (the consultant) was engaged by the Panel as an independent technical adviser to review the fairness and reasonableness of SaskPower's proposed rate change, and to provide an independent report including recommendations that would be consistent with the Terms of Reference for the Panel's review of the application.

The consulting team was led by Andrew McLaren, a principal at InterGroup Consultants Ltd. in Winnipeg. He has more than a decade experience in utility regulation and socio-economic effects assessment.

At the direction of the Panel, the consultant conducted a detailed analysis of the application. The Panel, with the assistance of the consultant, asked two rounds of information requests and supplementary questions (all posted on the Panel's website), and had individual discussions with SaskPower staff to clarify specific points. The consultant reviewed public comments and industry submissions to the Panel and participated in several meetings and conference calls with the Panel during the review process, before presenting its final report to the Panel on June 15, 2022.

Public Consultations

In reviewing SaskPower's Application, the Panel invited public comment. The public consultation process included:

- Submissions received by mail;
- Online messages received through the Panel's website;
- Messages received directly through the Panel's email address;
- Messages received through the Panel's toll-free voice mailbox; and
- Messages posted to the Panel's Facebook and Twitter accounts.

All methods for public input were advertised in the two major daily newspapers, and information was disseminated through Facebook and Twitter. SaskPower's application received news coverage immediately after it was announced. Copies of the application were available to the public at its offices and on the Panel's website. Public meetings were held in Saskatoon on April 5 and in Regina on April 6. Members of the public were also invited to view the meeting online and type their questions from their computer, tablet or smartphone during the live broadcast.

Stakeholders were provided the opportunity to ask questions of SaskPower and submit written comments to the Panel. Written submissions were received from Paper Excellence, the Canadian Federation of Independent Business, the Canadian Association of Petroleum Producers, Saskatchewan Industrial Energy Consumer Association (SIECA), the Renters of Saskatoon and Area (ROSA). and SaskPower Opposition Critic Aleana Young. There were 33 comments provided by members of the public. These submissions, public comments and public meetings can be found on the Panel's website at www.saskratereview.ca.

Public Comments and Submissions

The Panel encouraged written and online submissions and hosted two public meetings to encourage feedback. The Panel heard from many individuals who opposed the rate increase and the following themes emerged from these comments:

- Overall affordability of the rate increases
- SaskPower collecting dividends while having ratepayers pay more
- Enhancement of renewable energy initiatives
- Reliability of SaskPower's existing power system and rebuilding/upgrading infrastructure

Here is a sampling of direct quotes from those comments:

I would like to say I disagree with the rate increase, with all the increases on food and gas and other materials it is hard to anyone to make ends meet. Many small businesses are struggling with all the increases on everything plus the carbon tax, this will be another nail in our coffin. (February 21, 2022)

The rate increase SaskPower is proposing is going to make it so much harder for Saskatchewan residents. Everyone is still reeling from all the covid lay offs, time off to quarantine, and days off to take care of their children. This increase is going to put some in a position where they choose power or food and that's not ok. With all the talk of another carbon tax increase causing gas and other costs to skyrocket, plus inflation. How is a Canadian supposed to live? This increase is poorly timed and is going to make it so hard for families to survive in this time. (February 23, 2022)

I would like to take a moment to express my concerns of yet another price increase for Canadians. I am the mother of two children ages 6 and 7. My husband and I work HARD to provide them with everything they need. My husband works out of our hometown to support us and we sacrifice family time and our relationship as a couple. He does this to try and provide a better life for us, but as of late it's mostly just to keep a roof over our head and the lights on with no extras. It may only be \$11-12 but that's extra on top of bills we already struggle to pay. We already pay high distribution fees, taxes, and whatever other fees they deem "necessary." We are scraping to get by and provide our kids with what I consider to be the basics of living in Canada where it can get to minus 40-50 Celsius. The world is getting very unpredictable, and the costs of living are astronomical. (February 23, 2022)

The rate increase of 8% proposed for power rates in the coming year is wholly unreasonable in my view, and likely also the view of many people who are struggling with record-high inflation now. Furthermore, it is actually ABOVE the noted high inflation rate. (May 3, 2022)

I am very opposed to, and daunted by the proposed 4 + 4 % rate hikes for SaskPower consumers. Many of us are struggling to pay our bills as it is with job losses, increased medical issues, the stagnation of wages and intense spikes in basic food costs, not to mention prohibitive fuel costs. We need relief from all of this. I have not been able to use my stove for the past month because of a load-limiter placed on the electricity meter. This is demoralizing and squeezes folks who are sinking further into debt and have nothing more to give. (May 3, 2022)

I am highly opposed to this rate increase (8% within the next year). I would like to know exactly why this increase is happening in such a volatile market where costs could go down in the interim. With everything increasing for consumers as it is, why add higher electricity bills on top of it with no alternative for customers. (May 3, 2022)

Several industry associations and businesses also stated that increased power rates were a disincentive to investing in the province and could place some existing businesses in financial jeopardy. The Canadian Federation of Independent

Business (CFIB) stated that rate increases would be another blow to small businesses in the province that were already struggling to recover from the impact of COVID-19. The rate increase would result in small businesses having less resources to create jobs, invest in their businesses and contribute to the local economy. CFIB recommended that SaskPower should consider ways to minimize its OM&A spending.

The Canadian Association of Petroleum Producers (CAPP) expressed its concern that the cost of electricity makes up a significant portion of the operating costs for oil and natural gas producers in Saskatchewan and these producers provide a significant contribution to the province's GDP. CAPP also indicated that it was concerned by "the very conservative assumptions with respect to load growth upon which SaskPower's applied for rates are based. CAPP requested that SaskPower use the R/RR range of 0.98-1.02 to achieve greater equity. It also requested that the approved rate be less than the proposed 4% rate increases since third parties forecast less economic growth for the province.

Paper Excellence indicated that the proposed rate increases were extremely high for its customer classes compared to others. These high rates place Saskatchewan companies at risk of losing their competitiveness with other provinces. The company also noted that the application proposed a high-rate redesign for customers while the energy rate would decrease by 1.4%. The lack of clarity for carbon tax projects and the high increase of rates makes it challenging for the company to do long-term planning, resulting in a need for clarification on customer policies regarding the carbon tax. The company also expressed concerns that rate rebalancing should not take place at the same time as rate increases. Paper Excellence made several recommendations including recommendations to avoid rate shock, measures to reduce bill volatility, ways to increase interclass inequity, and ways to encourage customer generation and demand response.

Aleana Young, Opposition Critic for SaskPower, shared her concerns that the proposed rates would place an increased strain on households and businesses that were already experiencing record-high inflation. She urged a moratorium on SaskPower dividend payments until the current challenges with the province's power generation, transmission and distributed systems are addressed.

Please note that all public comments and written submissions as well as responses from SaskPower can be found at the Panel's website at www.saskratereview.com.

Issues Identified During the Review

Elimination of Coal Generation

Electrical generation represents Canada's fourth largest source of emissions, which have forced utilities and regulators to focus on ways to reduce their emissions. One of the primary sources of emissions has been from coal power plants, which has been the main source of baseload power for SaskPower. The corporation has three coal power plant facilities: Boundary Dam and Shand Power Stations near Estevan, and the Poplar River Power Station near Coronach. In 2000, coal generation represented 82.5 per cent of Saskatchewan's total electricity generation.⁸

In 2012, the federal government enacted regulations to effectively phase out coal power plants by requiring that they emit less than 420 tonnes of CO₂ emissions for each GWh of electricity produced by 2029, with some needing to meet the requirements earlier. Coal fired plants commissioned on or after July 1, 2015, were required to meet those standards immediately.⁹ These new rules resulted in Units #1 and #2 being retired from service at Boundary Dam during 2013 and 2014. SaskPower also added carbon capture and storage to Unit #3 at Boundary Dam in 2014 with the intention of reducing up to 90 per cent of greenhouse gas emissions.¹⁰

In 2019, the Governments of Canada and Saskatchewan reached an equivalency agreement that replaced these federal government standards with regulations designed by Saskatchewan. The agreement stipulated that the regulations imposed by the Saskatchewan government will have an equivalent effect on greenhouse gas emissions levels to those which were previously imposed by the federal government. SaskPower has indicated that **it must either replace all existing coal power plants or convert them to carbon capture and storage by 2030**.¹¹

Carbon Tax

In 2018 the Government of Canada passed the Greenhouse Gas Pollution Pricing Act, which has become known as the federal carbon charge. The goal, in part, was for Canada to meet its obligation to the Paris Agreement, which called for Canada's carbon emissions to be reduced by 40 per cent below 2005 levels by 2030. The charge started at \$20 per tonne of CO₂ in 2019 and has been increasing by \$10 per tonne per year, up to the current rate of \$50 per tonne in 2022. From 2023 to 2030, the federal carbon charge is set to increase by \$15 per tonne per year.¹² Saskatchewan is a high GHG emitting province and accounts for 10.2 per cent of the country's GHG emissions in 2019 while making up 3.1 per cent of Canada's total population.¹³

Each province and territory has the opportunity to either implement an explicit price-based system with a carbon levy or a cap-and-trade system. Any province that does not implement its own carbon pricing system is subject to a system designed by the federal government known as the federal backstop. SaskPower has been subject to the federal backstop program since January 1, 2019.

⁸ Page 68, Part 3, National Inventory Report, 1990-2019: Greenhouse Gas Sources and Sinks in Canada, Environment and Climate Change Canada. (March 8, 2022)

⁹ Reduction of Carbon Dioxide Emissions from Coal-fired Generation of Electricity Regulations, SOR/2012-167, Government of Canada, s 3(1).

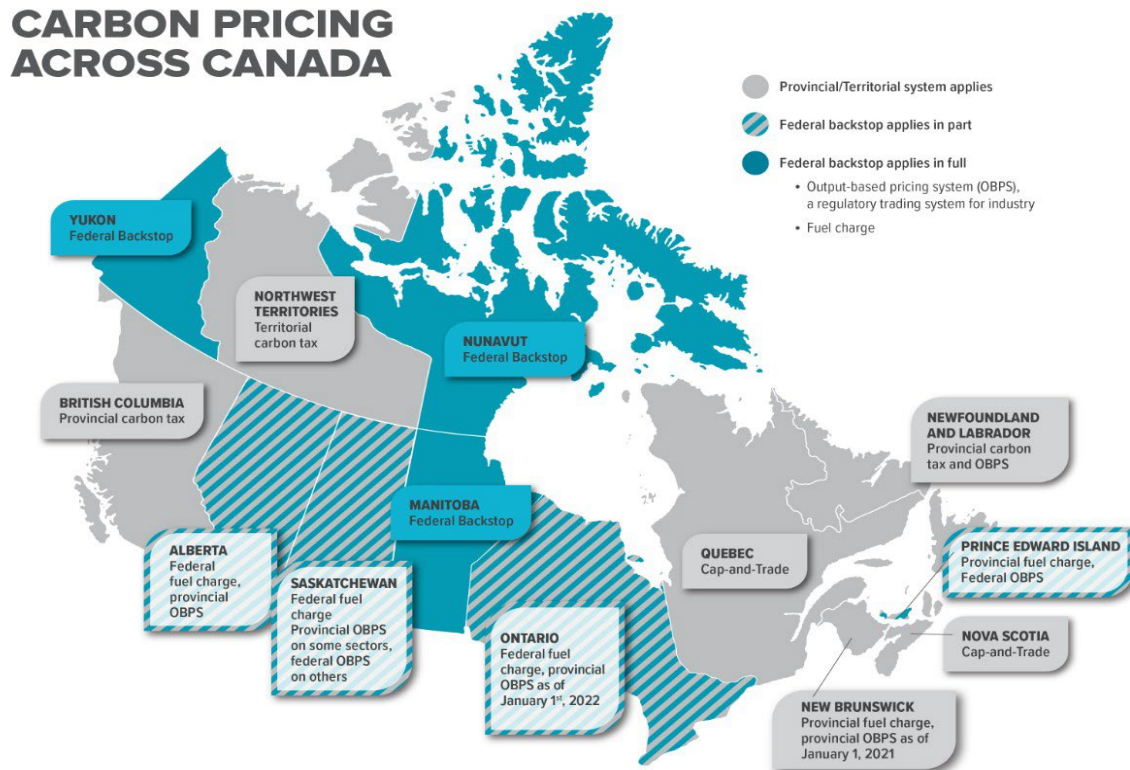
¹⁰ <https://www.saskpower.com/Our-Power-Future/Our-Electricity/Electrical-System/System-Map/Boundary-Dam-Power-Station>

¹¹ Page 4, SaskPower 2022 And 2023 Rate Application.

¹² Page 4, 2022 And 2023 Rate Application, SaskPower

¹³ 2019 greenhouse gas emissions, Greenhouse gas emissions by province and territory, Environmental Indicators, Statistics Canada; and Population estimates on July 1st, by age and sex, Statistics Canada, Table 17-10-0005-01 (September 29, 2021)

Carbon Pricing Across Canada¹⁴



From 2018-19 through 2023-24 SaskPower forecasts it will pay \$732 million in carbon charges that it will collect from ratepayers. The federal carbon charge has increased significantly, in particular, the federal carbon charge paid on coal is forecast to increase 80 per cent between 2020-21 to 2021-22 (\$85 million to \$153 million) while the total federal carbon charge is expected to increase by 91 per cent during that same period (\$92 million to \$176 million). SaskPower forecasts that by fiscal year 2023-24 **the federal carbon charge will account for 11 per cent of total generation expenses** (\$223 million of \$2.024 billion).⁴³

Government of Canada Net-Zero Grid

At the United Nations Climate Change Conference in November of 2021, the Government of Canada announced a goal of achieving a net-zero electricity grid by 2035, **fifteen years earlier than what had originally been outlined** in the federal government's plan in December of 2020.¹⁵ This goal is part of the broader goal of achieving net-zero emissions economy-wide by 2050.¹⁶ A net-zero electricity grid means that the electricity sector will emit no

¹⁴ Carbon pollution pricing systems across Canada, Environment and natural resources, Government of Canada (March 22, 2022). Available at:

<https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work.html>

¹⁵ Clean Electricity Standard – Winter 2022 consultations, Environment and Climate Change Canada, Government of Canada. (March 15, 2022)

¹⁶ Page 5, A Clean Electricity Standard in support of a net-zero electricity sector, Environment and Climate Change Canada, Government of Canada. (March 8, 2022)

greenhouse gas emissions or that all greenhouse gas emissions it does emit will be offset by other actions that remove carbon from the atmosphere.¹⁷ Shortly after the federal government made this announcement, it stated that consultations would begin in March 2022 on the Clean Energy Standards that would be a key part of transitioning to a net-zero electricity system.¹⁸

The Government of Canada states this policy is necessary, beyond the federal carbon charge and its current emissions regulations, to avoid an over-investment in natural gas in the medium term. The federal government states that a shift from coal to natural gas generation, together with an increased demand for electricity, would lead to increased emissions from electricity generation beyond 2030.¹⁹ SaskPower is currently completing a refresh of its long-term system plan on the future of electricity in Saskatchewan and stated a trajectory toward a net-zero GHG emissions electricity system will be a focus of the plan.²⁰

100 Per Cent Zero-Emission Vehicles

In March 2022, the federal government released its *2030 Emissions Reduction Plan: Clean Air, Strong Economy* in which the government committed to a **mandatory 100 per cent zero-emission vehicle (ZEV) sales target by 2035 for all new light-duty vehicles**. The government is developing a light-duty ZEV sales mandate for new vehicle purchases, which will set annually increasing requirements towards achieving 100 per cent ZEV sales by 2035, including interim targets of at least 20 per cent by 2026 and at least 60 per cent by 2030.²¹

One of SaskPower's recent updates to its load forecast methodology is the inclusion of an electric vehicles (EV) forecast.²² SaskPower's 2020-21 Corporate Responsibility & Sustainability Report stated that there were 630 battery EVs and 340 plug-in hybrid EVs registered in Saskatchewan.²³ SaskPower's 2022 Q1 Load Forecast Report forecasts there will be 34,000 EVs in use in Saskatchewan by 2032.²⁴

The High Costs of Decarbonization

SaskPower is striving to build a cleaner, more reliable, and modernized electricity system while maintaining its financial health in a changing regulatory environment. As part of its decarbonizing efforts, SaskPower must replace the capacity it is losing from retiring its fossil fuel power stations with a suitable generation mix that can meet peak loads. At the same time, it must reduce GHG emissions to 50 per cent below 2005 levels by 2030, have at least 40 per cent of the province's electrical generation come from non-emitting sources by 2030, and achieve net-zero GHG emissions by 2035.

¹⁷ Page 3, A Clean Electricity Standard in support of a net-zero electricity sector, Environment and Climate Change Canada, Government of Canada. (March 8, 2022)

¹⁸ Page 5, A Clean Electricity Standard in support of a net-zero electricity sector, Environment and Climate Change Canada, Government of Canada. (March 8, 2022)

¹⁹ Slide 15, A Clean Electricity Standard in Support of a Net-Zero Electricity Sector, Opening the Loop Webinar, Environment and Climate Change Canada, Government of Canada. (March 24, 2022)

²⁰ Q3, SRRP Round 2 Interrogatories, 2022 and 2023 Rate Application, SaskPower.

²¹ <https://pm.gc.ca/en/news/news-releases/2022/03/29/delivering-clean-air-and-strong-economy-canadians>

²² Page 20, SaskPower 2022 And 2023 Rate Application.

²³ Page 33, 2020-21 Corporate Responsibility & Sustainability Report, SaskPower.

²⁴ Q77 (E), SRRP Round 1 Interrogatories, 2022 and 2023 Rate Application, SaskPower.

SaskPower has indicated that it must modernize its systems with cleaner power options due to new GHG regulations, technology and social expectations; it must also make continued investments in its infrastructure to maintain or improve current levels of reliability and to meet future demand for electricity.²⁵ Although wind and solar power are cheap supply options available to SaskPower in the short term,²⁶ they only provide intermittent power, which limits their usefulness in being able to reliably provide the required levels of peak power²⁷ (when it is required to meet demand).

The decarbonization process has led to natural gas becoming the dominant generation source in Saskatchewan. Previously, conventional coal provided the baseline power necessary to meet peak load demands. In 2007, natural gas provided 15 per cent (538 MW) of the total generation capacity for SaskPower.²⁸ This has increased to 43 per cent (2,160 MW) as of 2020-21²⁹ and is forecast to remain relatively constant at 39 per cent (2,384 MW) by 2028-29.³⁰

SaskPower **has limited options to provide dispatchable (firm generation that is available when needed) baseload capacity as it decarbonizes** the electrical system. Natural gas generation and hydro-electric imports are current available options. SaskPower's current projections indicate that by 2028-29, natural gas will provide 62 per cent (2,384 MW) of SaskPower's peak winter capacity. This high number is due to the fact that wind and other renewables, while assuming a larger role in providing energy for SaskPower, are intermittent power sources that are not able to provide as much peak power in winter when it is needed.³¹

If environmental regulations such as the requirement of net-zero GHG emissions by 2035 require SaskPower to move away from natural gas generation as a baseload source sooner than previously anticipated, **significant capital expenditures will be required in the medium to short term**. Developing emissions-free baseload power options for Saskatchewan that are proven reliable, cost effective, and available for its geographic region is a significant challenge for SaskPower.³² As publicly noted, SaskPower and the Government of Saskatchewan are working with Ontario, New Brunswick, and Alberta regarding the feasibility of using small nuclear reactors (SMRs) as a possible source of future generation.

SaskPower has stated that moving the net-zero GHG target for the province's electrical system from 2050 to 2035 will significantly compound the financial, logistical, and technological challenges of developing a net-zero system.³³ Without significant financial support in working to achieve NZ2035, Saskatchewan ratepayers will face the potential for increased electricity disparity with other Canadian jurisdiction since the cost will put **considerable upward pressure on rates** during this period.

Future Integrated Resource Plan

An integrated resource plan is a roadmap that large utilities use to plan their activities over the next five to 20 years or even longer. Utilities in other jurisdictions are already in the process of undertaking comprehensive public reviews of their integrated resource plans. BC Hydro filed its integrated resource plan with the British Columbia Utilities

²⁵ Page 23, 2020-21 Annual Report, SaskPower.

²⁶ Page 23, 2022 and 2023 Rate Application, SaskPower. (2022)

²⁷ Page 25, 2022 and 2023 Rate Application, SaskPower. (2022)

²⁸ Page 4, SaskPower Rate Application December 2008.

²⁹ Page 4, 2020-21 Annual Report, SaskPower.

³⁰ Q8 (B), SRRP Round 2 Interrogatories, 2022 and 2023 Rate Application, SaskPower.

³¹ Q8 (B), SRRP Round 2 Interrogatories, 2022 and 2023 Rate Application, SaskPower.

³² Page 9, 2020-21 Annual Report, SaskPower.

³³ Q2, SRRP Round 2 Interrogatories, 2022 and 2023 Rate Application, SaskPower. (2022)

Commission (BCUC) in 2021 and it is currently undergoing a public review process.³⁴ Manitoba Hydro has recently completed public engagement related to its plan and expects to publish its plan in 2023.³⁵ As the energy transition unfolds, ongoing public discussion on the future of electricity in Saskatchewan will become more important than ever. Enhanced public and stakeholder engagement will not only aid in securing an electricity future for our province that ensures reliability, affordability, and clean sources of energy, but it will also be critical to meeting regulatory requirements and advancing projects that will be key to developing Saskatchewan's low-carbon economy.

The resource plan for Saskatchewan's power future should be publicly available with stakeholder input so ratepayers of both energy utilities (SaskPower and SaskEnergy) are made aware and sensitive to the initiatives undertaken by the corporations and can make individual plans and preparations as the corporations strive to achieve the net-zero target by 2035. Key aspects of this plan should include:

- SaskPower's long-term load forecast, including different load scenarios as appropriate;
- Capacity and energy gaps between existing generation resources (including planned retirements) and SaskPower's long-term load forecast;
- Options to address the future capacity and energy gaps, including the costs of each option or portfolio of options and the appropriate timing and optimization of options;
- The cost to achieve SaskPower's greenhouse gas emissions targets associated with each option or portfolio of options; and
- Forecast rate increases over the planning horizon associated with each option or portfolio of options.

The Panel agrees with the Consultant's statement that this information is vital for customers and stakeholders to understand the future rate and other implications of SaskPower's resource plan.³⁶ The Panel also recognizes that SaskPower maintains on-going engagement with its industrial customers and this engagement can lead to discussions on the integrated resource plan.

Load Forecast

SaskPower prepares its load forecast annually to determine the long-term energy requirements and peak demands it must meet. The forecast includes energy sales compiled for each customer class including residential, commercial, farm, oilfields, power customers, and resellers. The forecast also includes corporate internal use, non-grid customers, peak demand, exports, system losses, and unaccounted energy use. Other factors taken into consideration include SaskPower's economic forecast (including information on population, household growth, potash, and oil production), historical energy consumption and customer forecasts.³⁷ The load forecast methodology is reviewed by outside experts approximately every five years to determine if the methodology continues to be suitable for SaskPower and is consistent with industry practice.³⁸

³⁴See BC Hydro Integrated Resource Plan review schedule. BCUC website. Available at: <https://www.bcuc.com/OurWork/ViewProceeding?applicationid=965> (accessed May 23, 2022).

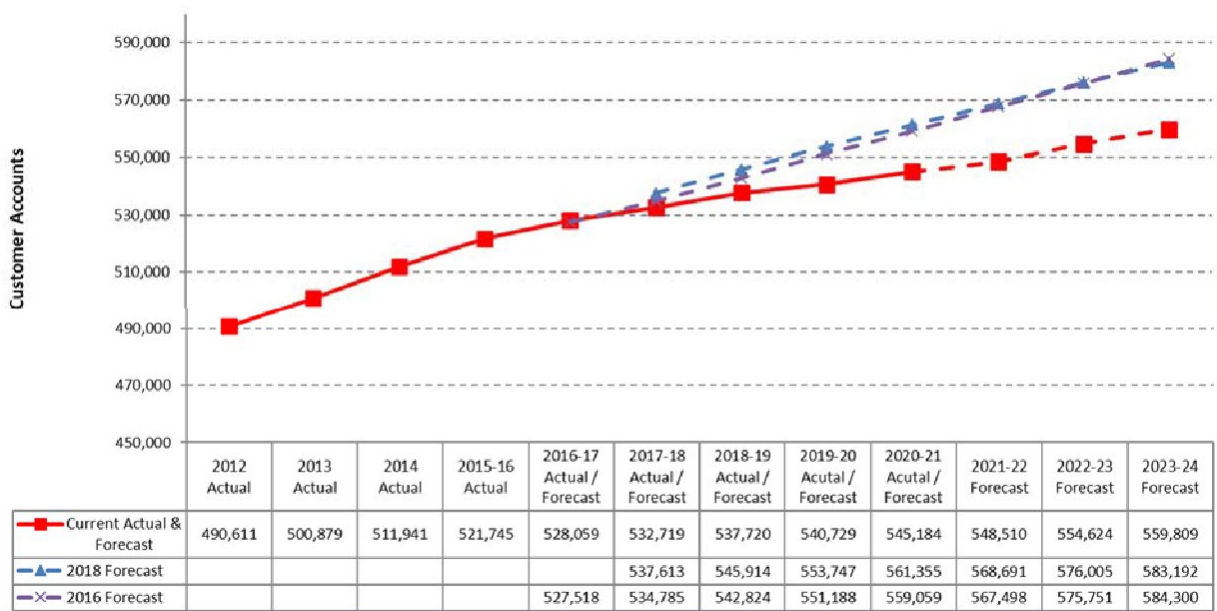
³⁵ Manitoba Hydro Integrated Resource Plan. Available at: https://www.hydro.mb.ca/articles/2022/04/irp_first_round_of_public_engagement_completed/ (accessed May 23, 2022).

³⁶ InterGroup Consultant's Report, P. 146

³⁷ Page 5, 2022 Fiscal Q1 Load Forecast Report, SaskPower.

³⁸ SaskPower 2022 And 2023 Rate Application, page 20.

Actual and Forecast Number of Customer Accounts^{39 40 41 42}



This figure shows actual and forecast use per customer (UPC) values from the current rate application and the previous two rate applications. The previous applications did not forecast the sharp drop off UPC that occurred in 2019-20 and 2020-21 during the COVID-19 pandemic. Although Oilfield, Residential, and Farm account UPC increased during this period, Power Class, Commercial, and Reseller UPC showed decreases.

Oilfield UPC is projected to see steady increases due to the increasing amount of energy needed to service Saskatchewan's aging oilfields.⁴³ Residential UPC numbers increased slightly due to the COVID-19 pandemic and remain higher than the previous forecast due to the expectation that some workers may not return to the office after COVID-19 related restrictions are lifted.⁴⁴ Commercial UPC decreased due to the lower amount of economic activity during the COVID-19 pandemic. Average commercial UPC is forecast to increase with the recovery from COVID-19.⁴⁵ The Reseller Class, which serves the City of Saskatoon and the City of Swift Current,⁴⁶ has been trending downwards since 2014.⁴⁷

Over the long term, UPC is expected to decrease as the Commercial and Residential Classes become more energy efficient.⁴⁸ The UPC from the Streetlight Class has been steadily decreasing since 2017-18 and is expected to reach 0.13 MWh in 2027-28 from over 0.6 MWh due to the replacement of streetlight inventory with more energy efficient LED bulbs.⁴⁹

³⁹ Q68 (A), SRRP Round 1 Interrogatories, 2018 Rate Application, SaskPower.

⁴⁰ Pre-Ask 7 (D), SRRP Round 2 Interrogatories, 2022 and 2023 Rate Application, SaskPower.

⁴¹ Page 116, SaskPower 2020-21 Annual Report.

⁴² Q7 (C), SRRP Round 2 Interrogatories, 2022 and 2023 Rate Application, SaskPower.

⁴³ 2022 Fiscal Q1 Load Forecast Report, SaskPower, page 17.

⁴⁴ 2022 Fiscal Q1 Load Forecast Report, SaskPower, page 25.

⁴⁵ 2022 Fiscal Q1 Load Forecast Report, SaskPower, page 20.

⁴⁶ 2022 Fiscal Q1 Load Forecast Report, SaskPower, page 27.

⁴⁷ 2022 Fiscal Q1 Load Forecast Report, SaskPower, page 28.

⁴⁸ 2022 Fiscal Q1 Load Forecast Report, SaskPower, page 10.

⁴⁹ 2022 Fiscal Q1 Load Forecast Report, SaskPower, page 22.

One of SaskPower's recent updates to its load forecast methodology is the inclusion of an electric vehicles (EV) forecast.⁵⁰ **There were 630 battery EVs and 340 plug-in hybrid EVs registered in Saskatchewan when SaskPower released its 2020-21 Corporate Responsibility & Sustainability Report.**⁵¹ **SaskPower's 2022 Q1 Load Forecast Report forecasts there will be 34,000 EVs in use in Saskatchewan by 2032.**⁵² As part of the Government of Canada's recently released climate plan the government is mandating that 20 per cent of new light-duty vehicles sold be zero-emissions by 2026, at least 60 per cent by 2030, and 100 per cent by 2035.⁵³ As part of SaskPower's sensitivity analysis calculations, they have forecasted scenarios where EV adoption increases substantially in the future.⁵⁴

Natural Gas Market Price

SaskPower's largest source of electricity generation is natural gas. This generation includes 1,554 MW of capacity owned by SaskPower and an additional 606 MW of capacity through long-term power purchase agreements (PPAs). The Great Plains Power Station near Moose Jaw is currently under construction and will add 350 MW of natural gas capacity when completed.⁵⁵ SaskPower forecasts natural gas generation to be the largest generation source in the test years (approximately 40 per cent of total generation).

Natural gas purchases from inside Saskatchewan have been declining over the past several years and the majority of natural gas volumes that SaskPower purchased are from outside the province.⁵⁶ SaskPower contracts with TransGas to transport gas into and within Saskatchewan for storage capacity and withdrawal capability. SaskPower pays the tariff rates published by TransGas.⁵⁷ SaskPower has assumed an 8 per cent increase in TransGas rates for each of 2022-23 and 2023-24 based on information provided by TransGas.⁵⁸ SaskPower removed the natural gas price hedging element of the Long-Term Natural Gas Exposure Management Policy in December 2019 and no price hedge transactions on natural gas have been executed since that time.⁵⁹

SaskPower indicates changes in natural gas prices are one of its largest business and financial risks. Natural gas prices have been low for a number of years but have recently started to increase as illustrated below.

⁵⁰ Page 20, SaskPower 2022 And 2023 Rate Application.

⁵¹ Page 33, 2020-21 Corporate Responsibility & Sustainability Report, SaskPower.

⁵² Q77 (E), SRRP Round 1 Interrogatories, 2022 and 2023 Rate Application, SaskPower.

⁵³ Page 8, 2030 Emissions Reduction Plan, Environment and Climate Change Canada.

⁵⁴ Page 42, 2022 Fiscal Q1 Load Forecast Report, SaskPower.

⁵⁵ 2022 and 2023 Rate Application, page 23.

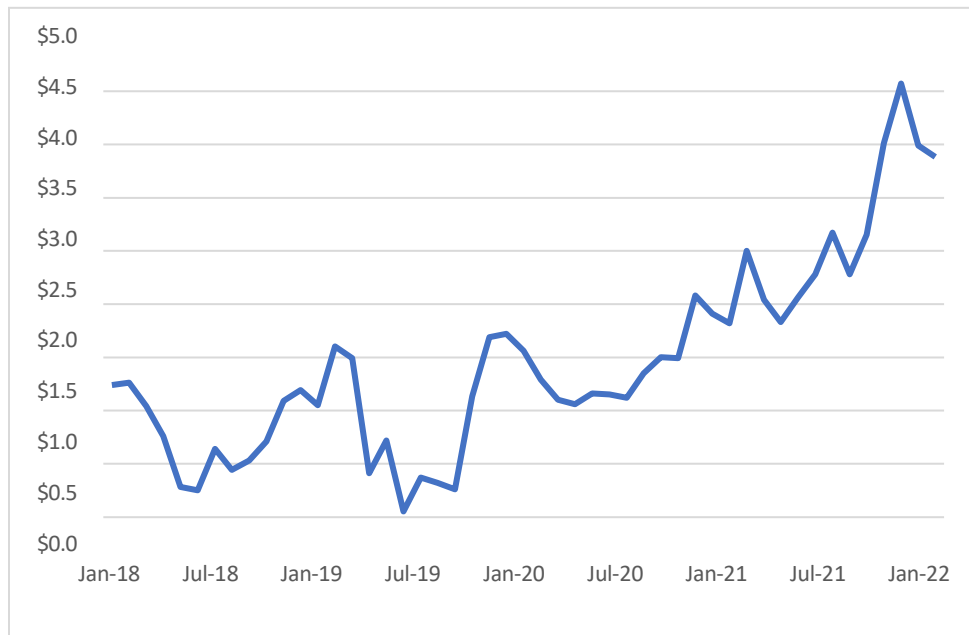
⁵⁶ 1st round information request SRRP Q34.

⁵⁷ 1st round information request SRRP Q37.

⁵⁸ 2nd round information request SRRP Q14.

⁵⁹ 1st round information request SRRP Q33.

Alberta natural gas prices (\$/GJ)⁶⁰



SaskPower's hedged volumes forecasted for 2022-23 (29 million GJ) and 2023-24 (25 million GJ) are lower compared to recent year actuals.⁶¹ The corporation estimates the impact to fuel and purchased power costs of a \$1/GJ change in the price of natural gas is \$48 million in 2022-23 and \$49 million in 2023-24.⁶² **More recently, natural gas prices in June of 2022 have been trending between \$6-\$8/GJ.**⁶³

Removing price hedges will likely introduce more volatility into SaskPower's natural gas costs in the future, although it may not increase overall costs in the long-term. As noted, SaskPower is also facing higher costs for transportation and storage of natural gas. **Since SaskPower does not have a fuel cost variance deferral account to adjust for variances from forecasts, changes in natural gas prices compared to forecasts would be expected to affect SaskPower's net operating income each year and affect the overall need for operating income to address this risk.**

⁶⁰ Chart prepared by InterGroup Consultants Ltd. Based on data from the Government of Alberta's economic dashboard. Available at: <https://economicdashboard.alberta.ca/naturalgasprice> (accessed May 4, 2022).

⁶¹ 1st round information request SRRP Q35.

⁶² 1st round information request SRRP Q7.

⁶³ See for example: <https://www.gasalberta.com/gas-market/market-prices>. Accessed June 10, 2022.

Total Revenue Requirement

Actual and Forecast Revenue Requirement (\$ millions)⁶⁴

	2021-22				2022-23			2023-24		
		Change over 2020-21 Actual				Change over 2021-22 Forecast			Change over 2022-23 Business Plan	
	2020-21 Actual	Forecast	\$	%	Business Plan	\$	%	Business Plan	\$	%
Fuel and purchased power	715	886	171	23.9%	902	16	1.8%	952	50	5.5%
Federal carbon charge	92	176	84	91.3%	154	(22)	(12.5%)	223	69	44.8%
OM&A	700	710	10	1.4%	740	30	4.2%	765	25	3.4%
Depreciation	595	614	19	3.2%	604	(10)	(1.6%)	607	3	0.5%
Finance Charges	426	398	(28)	(6.6%)	370	(28)	(7.0%)	366	(4)	(1.1%)
Taxes	79	82	3	3.8%	82	0	0.0%	85	3	3.7%
Other	4	43	39	975.0%	34	(9)	(20.9%)	43	9	26.5%
Sub-total expenses	2,611	2,909	298	11.4%	2,886	(23)	(0.8%)	3,041	155	5.4%
Operating Income	160	10	(150)	(93.8%)	33	23	230.0%	109	76	230.3%
Total Revenue Requirement	2,771	2,919	148	5.3%	2,919	0	0.0%	3,150	231	7.9%

The above table summarizes SaskPower's actual 2020-21 revenue requirement and forecasts for 2021-22, 2022-23 and 2023-24. Key observations include:

- 2021-22 and 2022-23 revenue requirements are flat (\$2.919 billion each year), increasing to \$3.150 billion in 2023-24.
- Revenue requirement increases over 2020-21 actuals are driven primarily by increases in fuel and purchased power expense and federal carbon charge.
- Forecast operating income in 2021-22, 2022-23 and 2023-24 is substantially lower than 2020-21 actuals, even with the proposed rate increases in the current application.

Fuel and Purchased Power

SaskPower's fuel and purchased power (F&PP) expense includes fuel charges associated with SaskPower owned facilities, energy purchased from PPAs and electricity imported from other jurisdictions. F&PP costs can vary year to year as a result of changes in electricity sales and total generation requirements; the unit prices of different fuel sources and changes in the mix of generation sources. **Total F&PP expense is forecast to increase from \$715 million in 2020-21 to \$952 million in 2023-24, an increase of 33 per cent** exclusive of the financial impact of the carbon tax. Fuel and Power Purchase costs including the carbon tax increased from \$807 million in 2020-21 to a total forecast of \$1.175 billion in 2023-24 – an increase of 45%.

Operations, Maintenance and Administration Expense

Operations, maintenance and administration expense (OM&A) includes SaskPower's salaries and wages expense, materials and supplies, external contractor services and other expenses such as training and travel. OM&A represents approximately 24 per cent of SaskPower's total revenue requirement in 2023-24.

SaskPower is forecasting increases in OM&A in 2022-23 (\$30 million or 4.2 per cent over the previous year) and 2023-24 (\$25 million or 3.4 per cent). The corporation attributes the forecast increases to initiatives including nuclear

⁶⁴ 2022 and 2023 Rate Application, page 17.

small modular reactors (SMR) (\$7.1 million in 2022-23 and \$12.2 million in 2023-24),⁶⁵ additional staff required to advance distribution system reliability improvements (\$1.6 million in each of 2022-23 and 2023-24),⁶⁶ increased spending on vegetation management (approximately \$5 million increase in each of 2022-23 and 2023-24),⁶⁷ and cloud computing and information technology costs (approximately \$6 million increase in each of 2022-23 and 2023-24).⁶⁸ The table below summarizes the actual and forecast OM&A expense by major category from 2020-21 actuals through the 2023-24 forecasts. Salaries and wages form the largest portion of total OM&A in the test years (53 per cent) followed by external services (32 per cent) and other expenses (11 per cent).

Actual and Forecast Operations, Maintenance and Administration Expense (\$ millions)⁶⁹

	2020-21 Actual	2021-22 Change over 2020-21 Actual			2022-23 Change over 2021-22 Forecast			2023-24 Change over 2022-23 Business Plan		
		Forecast	\$	%	Business Plan	\$	%	Business Plan	\$	%
Salaries and Wages										
Salaries and Wages	336	342	6	1.8%	357	15	4.4%	368	11	3.1%
Premium Pay	36	39	3	8.3%	37	(2)	(5.1%)	38	1	2.7%
Benefits	75	73	(2)	(2.7%)	78	5	6.8%	80	2	2.6%
Labour Credits	(74)	(77)	(3)	4.1%	(83)	(6)	7.8%	(83)	0	0.0%
Subtotal Salaries and Wages	373	377	4	1.1%	389	12	3.2%	403	14	3.6%
Materials and Supplies	54	50	(4)	(7.4%)	51	1	2.0%	52	1	2.0%
External Services										
Contract Services	202	229	27	13.4%	227	(2)	(0.9%)	236	9	4.0%
Consulting Services	12	10	(2)	(16.7%)	10	0	0.0%	10	0	0.0%
Advertising	2	2	0	0.0%	2	0	0.0%	2	0	0.0%
Subtotal External Services	216	241	25	11.6%	239	(2)	(0.8%)	248	9	3.8%
Other	75	72	(3)	(4.0%)	78	6	8.3%	80	2	2.6%
Power Grid Renewal Grant		(10)				10				
Corporate Credits, excl. Labour	(18)	(20)	(2)	11.1%	(18)	2	(10.0%)	(18)	0	0.0%
Total OM&A	700	710	22	3.1%	740	29	4.1%	765	26	3.5%

The primary drivers of increases in OM&A in 2022-23 and 2023-24 over prior years include:

- Salaries and wages are forecast to increase by \$12 million (3.2 per cent) in 2022-23 and \$14 million (3.6 per cent) in 2023-24.
- The one-time power grid renewal grant from the provincial government in 2021-22 reduced overall OM&A by \$10 million in that year.
- External services are forecast to increase by \$9 million (3.8 per cent) in 2023-24.

SaskPower used a top-down approach to cap the OM&A annual budget increase at 5 per cent in 2022-23 and 3.5 per cent in 2023-24. SaskPower included savings targets of \$18 million in 2022-23 and \$11 million in 2023-24 to achieve the overall OM&A budget target in each of those years.⁷⁰

⁶⁵ 1st round information request SRRP Q55.

⁶⁶ 1st round information request SRRP Q56.

⁶⁷ 1st round information request SRRP Q57.

⁶⁸ 1st round information request SRRP Q59.

⁶⁹ Corporate credits, including Labour credits, from 2nd round information request SRRP Q28; Remaining from SRRP Pre-asked request No. 7(a).

⁷⁰ 1st round information request SRRP Q64 and 2nd round information request SRRP Q19.

OM&A represents a substantial component of SaskPower's revenue requirement in 2022-23 and 2023-24. In previous reviews the Panel has recommended that SaskPower limit the growth in OM&A per customer account to half the rate of inflation. The Panel has noted that SaskPower has been attentive to this matter and on average has achieved this target in 2017-18, 2018-19, and 2019-20. **The Panel urges SaskPower to continue to demonstrate diligence in constraining growth in its OM&A spending.**

Net Income, Return on Equity, and Debt Ratio

SaskPower's application forecast net income for 2021-22 through 2023-24 (\$10 million to \$109 million) is lower than the actual net income for 2018-19 through 2020-21 (\$160 million to \$205 million). The mid-application update forecast net income over the forecast year period is now \$139 million.

The debt ratio is a measure of total debt to total capital structure expressed as a percentage. SaskPower's debt ratio declined from 2018-19 through 2020-21 but is forecast to increase somewhat in 2021-22 and 2022-23. The 2022-23 forecast assumes the requested rate increase effective September 1, 2022, will be approved. The forecast debt ratio for 2023-24 assumes the rate increase effective April 1, 2023-24 is also approved. SaskPower's forecasts indicate the debt ratio would remain within the long-term target range of 60-75 per cent. SaskPower indicated that it recognizes finance lease obligations related to its natural gas PPAs as part of its debt when calculating its per cent debt ratio, consistent with International Financial Report Standards (IFRS) reporting standards.⁷¹

Return on equity (ROE) is a measurement of how effectively a business uses equity – or the money contributed by its stockholders and cumulative retained profits – to produce income. SaskPower has not earned its full ROE target of 8.5 per cent for many years. Actual ROE for 2018-19 and 2019-20 were close to the target (7.9 per cent and 7.8 per cent respectively) but have since declined. SaskPower stated that it did not pursue rate increases in 2020-21 and 2021- 22 despite forecasting that the ROE target would not be achieved and instead targeted a lower net income to ease the burden of rate increases during the pandemic.⁷² **SaskPower is forecasting its requested rate increases for 2022-23 and 2023-24 will only allow it to achieve less than half of the long-term ROE target by 2023-24.**

⁷¹ 2022 and 2023 Rate Application, page 12.

⁷² 2022 and 2023 Rate Application, page 11.

Rate Rebalancing

Rate design is the process that determines the rates to be charged to each customer class. Cost causation, which can be measured by a cost-of-service study (an analytical tool used by utilities and regulators to determine a fair allocation of the utility's costs to its customer classes) is an important input into the rate design process. Other criteria that can be considered includes revenue stability, economic efficiency and administrative simplicity.

SaskPower has proposed to implement its revenue requirement increases largely through equal percentage increases to all components of the rate structure for all customers. SaskPower is proposing to rebalance rates which results in different percentage changes to different customer classes and within customer classes:

- Target revenue-to-revenue requirement (R/RR) ratios for all customer classes of between 0.98 and 1.02. This results in some customer classes having higher than average rate increases and other customer classes having lower than average rate increases. SaskPower notes that historically it has attempted to set the R/RR ratios for residential and farm customers to 0.98, resellers to 1.00 and all other classes to 1.02.⁷³
- Consolidating urban and rural residential customer classes.
- Rebalancing rate structures to increase demand charges so that demand charges recover the demand related costs for each class. Currently a portion of demand related costs are recovered through an energy charge.

SaskPower also indicated that it designs its rates to limit the increase to any single customer to 15 per cent per rate adjustment.⁷⁴

The table below summarizes the R/RR ratios based on the rate increases requested in the application and using SaskPower's current cost of service study.

⁷³ 2nd round information request SRRP Q22.

⁷⁴ 2nd round information request SRRP Q22.

**Class Revenue to Revenue Requirement Ratios Following Requested Rate Increases on
September 1, 2022 and April 1, 2023⁷⁵**

	2022-23		2023-24	
	Proposed Rate Increase	R-RR Ratio after rate increases (current COS methods)	Proposed Rate Increase	R-RR Ratio after rate increases (current COS methods)
Residential	4.2%	0.97	4.2%	0.96
Farms	4.5%	0.96	4.5%	0.97
Small Commercial	4.4%	1.02	4.4%	1.02
General Service	3.9%	1.03	3.9%	1.02
Total Commercial	4.1%	1.03	4.1%	1.02
Power - published rates	4.1%	1.01	4.1%	1.02
Power - contract rates	3.8%	0.98	3.8%	0.98
Total Power	4.0%	1.00	4.0%	1.01
Oilfields	3.4%	1.04	3.4%	1.03
Streetlights	2.5%	0.93	2.5%	0.97
Reseller	4.3%	0.99	4.3%	1.00

The only major class outside of the 0.95 to 1.05 R/RR range defined in the Minister's Terms of Reference is the Streetlights class in the 2022-23 test year. SaskPower stated that due to their relatively small size, the Streetlights class is very sensitive to fluctuations in their costs.⁷⁶ SaskPower also indicated that it is in the process of converting many of its light standards to more energy efficient LED technologies. The streetlight conversion will affect both costs of streetlights and reduce energy consumption and contribution to system peak (which reduces the costs allocated to the streetlight class in the cost-of-service study). This has led SaskPower to propose modest increases to the Streetlight class until the conversion project is completed.⁷⁷

SaskPower currently has a number of customer classes that include various distinctions between urban and rural customers. The corporation is proposing to eliminate the existing differences in the basic monthly, energy and demand charges between urban accounts and rural accounts for residential, general service and small commercial customers as part of its ongoing rate simplification program. SaskPower is also proposing that the demand-related costs that are currently collected through the energy charge are slowly phased back to the demand charge. This change will affect larger customers who are charged separately for demand and energy. Most customers, including all residential customers and the majority of farm and small commercial customers, will not be affected by this change as they pay a blended rate for demand and energy.⁷⁸

⁷⁵ 2022 and 2023 Rate Application, pages 34 and 35.

⁷⁶ 1st round information request SRRP Q88.

⁷⁷ 1st round information request SRRP Q88.

⁷⁸ Summarized from pages 35 and 36 of the 2022 and 2023 Rate Application.

Under SaskPower's existing rate design, some demand related costs (fixed costs) are collected through the energy (variable) rate, resulting in lower demand charges and higher energy charges than calculated strictly on SaskPower's cost of service study. This application starts the rebalancing process of moving fixed costs away from energy to the demand component.

As the Panel consultants has reported, SaskPower notes customer use of the electricity system is changing. With the advent of distributed generation sources (solar for example), customers with their own self-generation may buy less energy throughout the year, but still buy energy from SaskPower at critical times, such as during equipment failures, maintenance cycles or when intermittent solar or wind sources are not producing electricity. SaskPower's current rate structure recovers a portion of demand costs through an energy charge, which results in lower load factor customers underpaying relative to the costs to serve them. SaskPower has stated it will become increasingly important for market price signals that each component of the rate reflects the actual cost of that component to serve customers, rather than relying on a blended approach.

In this and future applications, SaskPower is proposing that the demand-related costs that are currently collected through the energy charge are slowly being phased back to the demand charge. This change will affect larger customers who are charged separately for demand and energy. Most customers, including all residential customers and the majority of farm and small commercial customers, will not be affected by this change as they pay a blended rate for demand and energy.⁷⁹

SaskPower's energy rates are generally higher than the full-cost or ideal rates, while the demand rates are lower than the ideal rates. To correct this, SaskPower is proposing to increase the demand rates by more than the average rate increase of 4 per cent. Energy rates for 2023-24 are relatively flat or reflect decreases over 2022-23, in order to move the energy rates closer to the full cost of service rates. Due to these changes, lower load factor customers (for whom fixed charges represent a greater portion of the bill) will see higher than average rate increases. Higher load factor customers will see lower than average rate increases, since the energy rates are a greater proportion of their total bill.

For future applications, the Panel directs that SaskPower provide the calculation of the ideal rates as part of the future cost of service study.

⁷⁹ Summarized from pages 35 and 36 of the 2022 and 2023 Rate Application.

The Competitiveness of the Proposed Rates

Rate comparisons across jurisdictions are difficult to evaluate, but they do provide evidence of how SaskPower's proposed rates can be placed in context with other provinces. Comparisons in this review are based on the Hydro Quebec report: *Comparison of Electricity Prices in Major North American Cities at April from 2006 to 2021*.⁸⁰ This report groups utilities into the following categories:

- Thermal Utility average includes Canadian jurisdictions Calgary, Edmonton, Regina, Toronto, Ottawa, Moncton, Halifax, and Charlottetown.
- Hydro Utility average includes Montreal, St. John's, Winnipeg, and Vancouver, jurisdictions with primarily hydro generation.

Please note that all utilities average includes all utilities referenced in the Thermal Utility average and Hydro Utility average. The following chart compares SaskPower's rates effective April 1, 2021, before taxes (and before the requested rate increases) and after taxes. Surcharges and taxes increase as SaskPower's base bill increases.

Rate Comparison to Utility Averages at April 1, 2021 Average Cents/kWh
Before and After Taxes^{81 82}



⁸⁰ Hydro Quebec reports for 2012 to 2021 are available at: <https://www.hydroquebec.com/residential/customer-space/rates/comparison-electricity-prices.html> (accessed April 19, 2022).

⁸¹ Hydro Quebec report for 2021, pages 22 and 28. Hydro Quebec report for 2021 did not include Saskatchewan 10% Economic Recovery Rebate (report page 70) which was in effect from December 1, 2020, to November 30, 2021, as per 1st round information requests SRRP Q94.

⁸² Taxes include federal carbon charges, PST, GST and municipal surcharges. SaskPower Residential customers are exempted from paying PST.

This chart indicates that SaskPower's average residential rates were higher than average for the thermal utilities and all utilities average in the survey. Rates for other customer classes were lower than the thermal average and similar to the average for all utilities. When taxes are included, SaskPower's average rates are higher than average for thermal utilities for all four rate classes. Before taxes, SaskPower's average rates were lower than Calgary and Edmonton but higher than Winnipeg and Vancouver. When taxes are included, SaskPower's average rates were higher than Calgary for all four customer classes.

In reviewing this data, the Panel has noted that SaskPower's rates have generally been competitive with other thermal generation utilities. However, the taxes, which includes the municipal surcharge tax paid by customers in Saskatchewan, have an impact on competitiveness with thermal generation utilities and other western Canadian cities.

The Impacts of SaskPower's Proposed Rates

The Panel appreciates the comments of all submissions that under perfect circumstances that rate increases, for what people now call an essential service, can cause a significant financial hardship. Conversely the Panel appreciates the financial needs of the utility in providing a safe and reliable electricity service especially with new environmental policies and regulations of the Government of Canada.

Based upon its Terms of Reference, the Panel must balance the interests of SaskPower, its customer, and the public. The Panel recognizes the need for SaskPower to increase rates to meet its revenue requirements. At the same time the Panel has heard from customers who have expressed concern that continued rate increases can have a substantial impact on individuals, families and businesses. In making its recommendations, the Panel has considered the current needs of customers and the utility along with possible future outcomes.

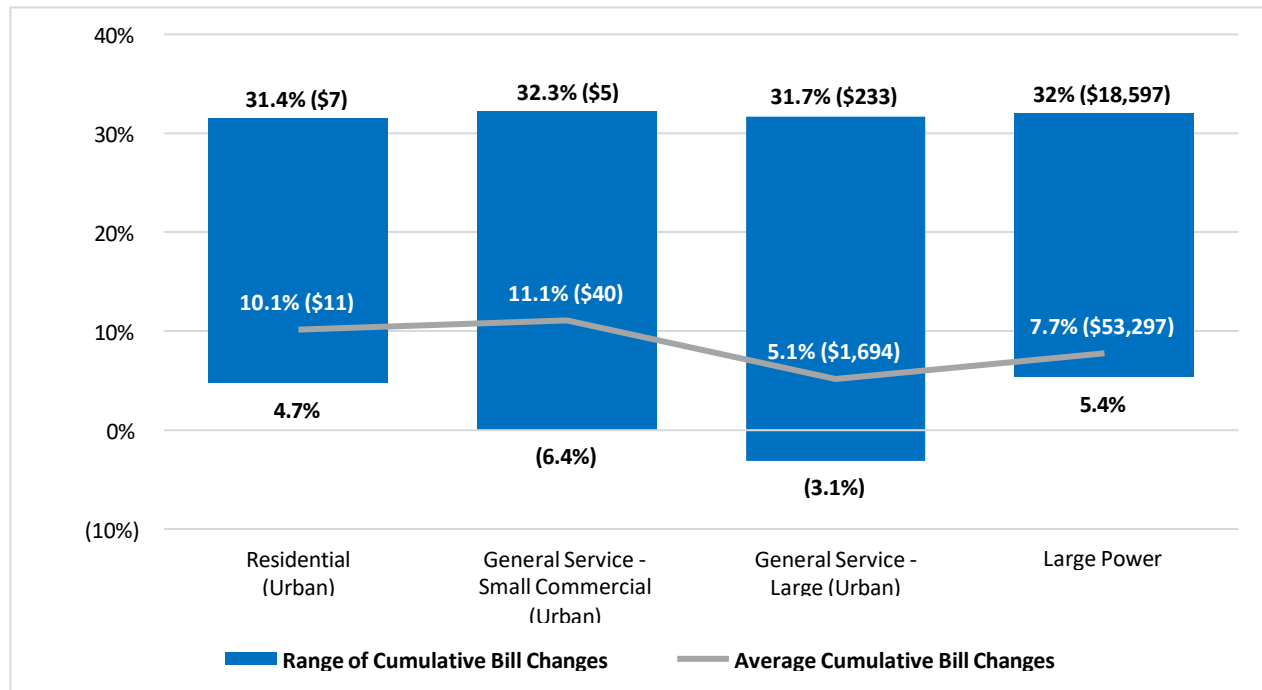
The Panel deliberated on the issue of the percentage cap. The Panel has referenced in previous reports that a 10% cap is preferred and under normal circumstances that preference remains. However, due to the circumstances of this application, the current financial outlook of the corporation, the 2021-22 forecasted financial results being negative, the forecast for 2022-23 being near break-even, and a modest improvement in 2023-24 confirmed the need for the rate increases. In arriving at this recommendation, the Panel examined all the components of the revenue requirement and was satisfied the corporation has been prudent with those expenses under its own control. Market costs of inputs such as natural gas, interest rates, the need to decarbonize its services, and the current inflation rate have all significantly impacted SaskPower's financial requirements.

The Panel also considered the rebalancing aspect of the application to seek modest rate relief. However, with ever-changing market forces, cross subsidization issues, and the need for market transparency delaying the transition or rebalancing from energy to demand, there is no reasonable alternative.

Generally, the proposed rate rebalancing structure changes mean that customers who use lower levels of energy will see a higher percentage change in their total bill because the customer and demand charges represent a higher proportion of their total costs. However, in absolute dollars, the bill increases for these customers will be smaller because their overall electricity bill is small compared to larger customers. The figure below shows the average cumulative bill increases (before taxes) for the proposed 2022 and 2023 rate increases, as well as the range of bill increases for four types of customers: Urban residential (rate code E01); Urban General Service Small Commercial (rate code E75); Urban General Service Large (rate code E05); and Power 100 kV and above (or Industrial) (rate code E24).

These estimates have been calculated by the Panel's consultant and are based on the 2020 bill impact rate class data provided in Appendix C of the application. The averages are somewhat different than those provided in the application because they are based on the 2020 billing data and are for individual sub-classes (e.g. there are additional types of customers included in the residential rate class such as rural residential customers).

Cumulative Bill Changes at Proposed SaskPower 2022 and 2023 Rate Increases Before Taxes⁸³

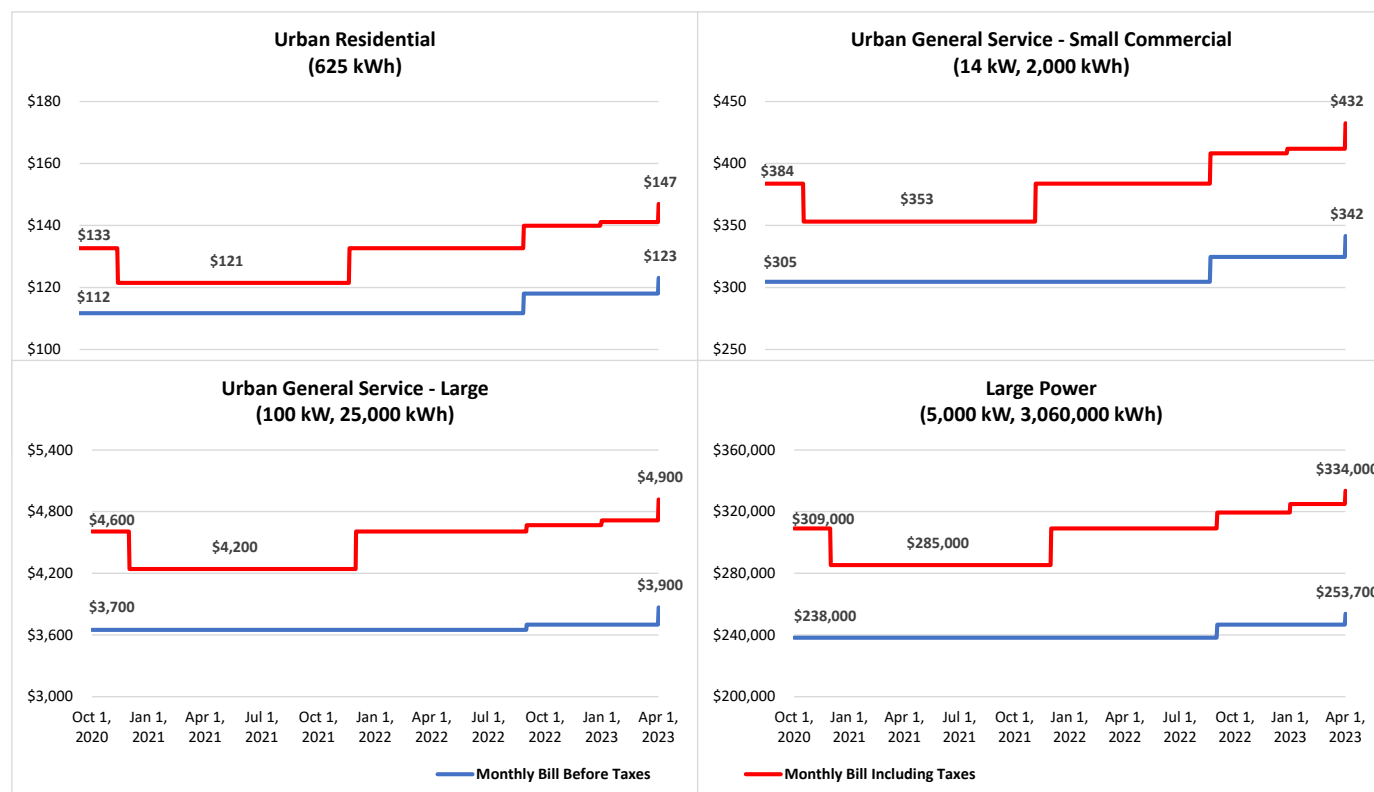


For all customer classes the upper boundary of the cumulative per cent change is approximately 32 per cent, reflecting the 15 per cent rate cap in each year applied by SaskPower. These percentage increases are relatively small dollar values for most rate classes (compared to dollar values for the class average). For example, urban residential customers experiencing a 31.4 per cent increase in bills reflects a \$7 per month increase compared to the \$11 per month bill increase for the average urban residential customer. This occurs because the rate increase primarily affects the customer charge, which is a substantial portion of a customer's bill who consumes very little energy each month, but a smaller portion of the bill for a customer with average energy consumption. Most customers are expected to experience bill increases within a few percentage points of the averages for each class.

In addition to SaskPower's rates, customers are also impacted by taxes including the federal carbon charge, municipal surcharge, PST (residential customers do not pay this tax) and GST as well as by government support programs such as the Economic Recovery Rebate. The figure below demonstrates actual and forecast changes to customer bills without taxes (blue line) and with taxes (red line) from April 1, 2021, through April 1, 2023, for typical customers for a sample of customer classes.

⁸³ Calculated based on Appendix C of 2022 and 2023 Rate Application and 2nd round information request SRRP Q22.

Monthly Bill Changes from October 1, 2020 to April 1, 2023 Before and After Taxes and Subsidies⁸⁴⁸⁵



Note: (i) December 1st of 2020 to November 30th of 2021 period includes 10 per cent Economic Recovery Rebate; (ii) Rate increases for September 1, 2022 and April 1, 2023; (iii) Carbon Rider increase for January 1, 2023.

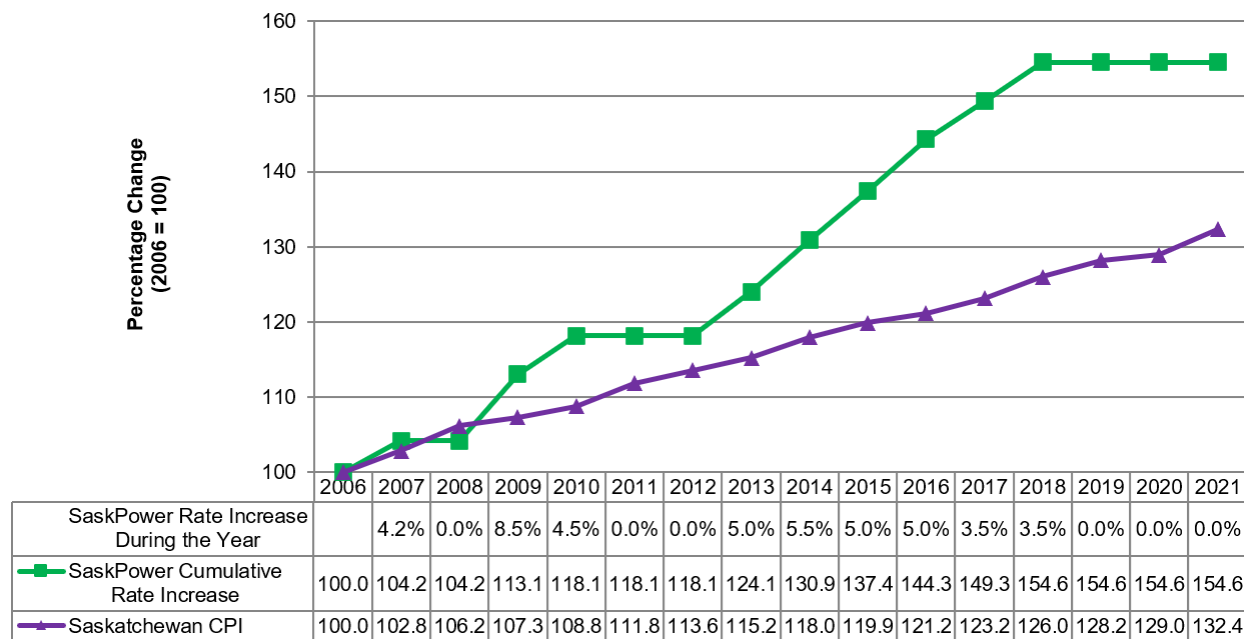
For a typical urban residential customer, the bill increase over this period is approximately \$11 per month (10 per cent). However, the bill the customer pays, which includes taxes and subsidies, is expected to increase by \$14 (11 per cent). Other taxes also result in larger increases on bills. For a typical urban residential customer, their bill on April 1, 2023, is expected to include \$24 in taxes (16 per cent of total bill).

The Panel has noted that SaskPower's average annual rate increases since 2006 have exceeded the increase in the Saskatchewan Consumer Price Index (CPI) (see chart below).

⁸⁴ Estimated by InterGroup Consultants Ltd. based on Appendix C of 2022 and 2023 Rate Application, and 1st round information requests SRRP Q8 and Q93. As per 1st round information request SRRP Q94 Saskatchewan 10 per cent Economic Recovery Rebate was in effect from December 1, 2020, to November 30, 2021.

⁸⁵ Taxes include federal carbon charges, PST, GST and municipal surcharges. Residential customers are exempted from paying PST.

SaskPower Cumulative Rate Increases Since 2006 Compared to Saskatchewan CPI⁸⁶



Impact on SaskPower

The proposed rates are designed to assist SaskPower to continue to provide safe and reliable power to Saskatchewan people. There are a number of factors that are placing pressure on rates that are outside of SaskPower's control. In addition to a changing regulatory environment, high inflation rates are expected to put upward cost pressure on OM&A costs as well as capital spending. Rising interest rates will increase SaskPower's finance charges and have the potential to dampen economic growth. Global supply chains are being disrupted and have the potential to weaken Saskatchewan's economy.

Impact on the Customer

The Panel notes that the bill increases are material for all customer classes and the ability for each type of customer to adapt or respond to these bill increases is different. Some customers will be able to absorb the increases, while others will need to consider options to reduce their consumption to offset the rate increases. As indicated earlier, SaskPower has stated that it expects to continue to see costs exceed the rate of inflation in the future and customers must prepare to pay higher costs for their electricity in the years to come.

Impact on the Public

All citizens of the province are shareholders in SaskPower and have a vested interest in its operations. The public has a right to expect that as a Crown corporation, SaskPower will deliver safe, reliable electricity in a cost-effective and sustainable manner. The public has expressed an interest in wanting to have a greater understanding and participating in discussions on how Saskatchewan's future energy needs will be met in an affordable manner.

⁸⁶ Rate increases: SaskPower 2010 Rate Application, page 6; 2013 Rate Application, page 8; 2018 Rate Application, page 20; and 2022 and 2023 Rate Application, page 13; Saskatchewan CPI: Statistics Canada. Table 18-10-0005-01 Consumer Price Index, annual average, not seasonally adjusted.

Panel's Recommendations to the Minister

Saskatchewan Rate Review Panel, following its review and analysis that included meetings with SaskPower management, information requests, several meetings with its technical consultant culminating with receipt of the consultant's independent report, and taking into account public and industry input regarding the application, makes the following recommendations to the Minister:

- 1. That the proposed 4% rate increase effective September 1, 2022, be approved.**
- 2. That the proposed 4% rate increase effective April 1, 2023, be approved pending a financial review submitted to the Panel no later than December 1, 2022.**
- 3. That the proposed design for rate rebalancing be approved.**
SaskPower is requested to continue to rebalance RR/R requirement ratios and redesign rates to better reflect the ideal rates calculated by the Cost-of-Service Study, subject to other rate design criteria. The Panel also requests that SaskPower provide the calculation of the ideal rates as part of future cost of service studies.
- 4. That the Capacity Reservation Service Rate, which is currently an interim rate, be confirmed and that in future applications the capacity reservation rate be updated as part of the application process.**
- 5. That SaskPower prepare public versions of its business plan, integrated resource plan and depreciation study as part of its future rate applications.**
- 6. SaskPower is requested to providing the following information in its integrated resource plan:**
 - SaskPower's long-term load forecast, including different load scenarios as appropriate;
 - Capacity and energy gaps between existing generation resources (including planned retirements) and SaskPower's long-term load forecast;
 - Options to address the future capacity and energy gaps, including the costs of each option or portfolio of options and the appropriate timing and optimization of options;
 - The cost to achieve SaskPower's greenhouse gas emissions targets associated with each option or portfolio of options; and
 - Forecast rate increases over the planning horizon associated with each option or portfolio of options.

SaskPower should also consider cost-competitive energy efficiency and alternative rate structures as resource options in the resource plan. It should also clarify the objectives for delivering other energy efficiency programs in future applications.

- 7. That SaskPower complete an analysis of the potential impact of eliminating the price hedging element of its natural gas exposure management policy on the corporation's net income requirements at the time of the next application.**
- 8. That SaskPower continue to focus on limiting growth in OM&A per customer account to less than inflation and to continue to track and provide OM&A per residential customer for future applications.**
- 9. That SaskPower provide a report in its next application that indicates how it achieved the contingency savings that was presented in the OM&A budget.**

More details and analysis on these recommendations can be found in the Consultant's Report.

In Appreciation

The Panel thanks SaskPower for the timely and helpful assistance it provided throughout this application.

The Panel thanks Andrew McLaren and InterGroup Consultants Ltd. for their thorough analysis of the application.

The Panel thanks Gerry Forrest, our general consultant, for his ongoing assistance in the work of the Panel.

The Panel thanks technical writer Pat Rediger for his assistance in preparing this report.

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For More Information

For more information on this review, please visit the Saskatchewan Rate Review's website at www.saskratereview.ca. The site contains SaskPower's 2022 and 2023 Rate Application, the Mid-Application Update, SaskPower's public presentation on the application, the Panel's terms of reference, information requests to SaskPower and the responses, video of the public meeting, public submissions and comments, the technical consultant's report, and the Panel's media releases.