



**Submission to the
Saskatchewan Rate Review Panel**

**Review of SaskPower's 2016 and 2017 Rate
Application**



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Energy & Regulatory Economics

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the Canadian Association of Petroleum Producers**

**Project No. 161573
September 9, 2016**

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Executive Summary

The Canadian Association of Petroleum Producers (CAPP) represents companies, large and small, that explore for, develop and produce natural gas and crude oil throughout Canada. CAPP's member companies produce about 85 per cent of Canada's natural gas and crude oil. CAPP's associate members provide a wide range of services that support the upstream crude oil and natural gas industry. Together CAPP's members and associate members are an important part of a national industry with revenues from oil and natural gas production of about \$120 billion a year. CAPP's mission, on behalf of the Canadian upstream oil and gas industry, is to advocate for and enable economic competitiveness and safe, environmentally and socially responsible performance.

CAPP appreciates the opportunity to provide input on SaskPower's rate application to the Saskatchewan Rate Review Panel (SRRP). As part of CAPP's review, we retained Drazen Consulting Group Inc. to review the rate application.

The oil and natural gas industry is a key economic driver and job creator in Saskatchewan; however, the current economic and policy climate continues to create a challenging environment for industry. Our sector is losing its competitive edge, for various reasons, one of which includes the cumulative costs borne by industry. Given the current state, operators have successfully managed to reduce operating costs. However, costs outside of our control such as taxes, fees, and costs associated with policy and regulatory decisions can have significant impact on industry's competitiveness. SaskPower's request for two consecutive rate increases is a significant cost burden on the oil and natural gas industry. CAPP and our members are not supportive of the rate increase implemented on July 1, 2016 or the additional increase in 2017. To this end, CAPP has identified recommendations for the SRRP to consider.

CAPP's key recommendations to the SRRP are summarized below and described more fully in this submission.

1. CAPP recommends that for the term of the present application SaskPower restrict rate increases to that required to satisfy the 75% debt limit and forgo the additional return necessary to meet the long term return on equity (ROE) target.
2. The horizon of SaskPower's hedging program raises concerns for CAPP. In light of this, CAPP requests that its concerns with the program be brought to the attention of the SaskPower Board.
3. CAPP requests that SaskPower clarify how the potential benefit of declining wind generation costs will be recognized in evaluating new wind projects. Additionally,

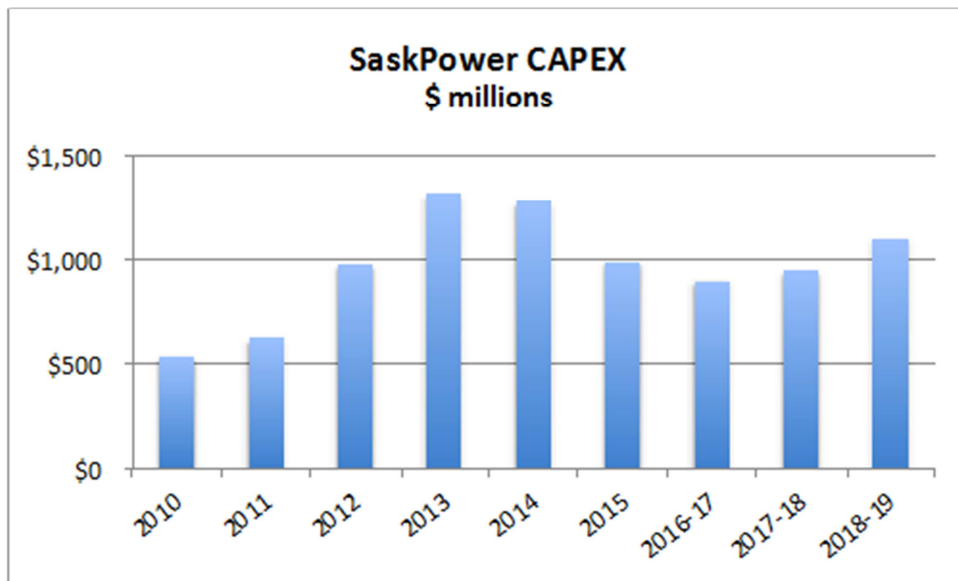
- CAPP requests that SaskPower clarify the commitments required of wind generators under IPP contracts with SaskPower, and specifically clarify the expectations in respect of the Chaplin facility.
4. CAPP requests that SaskPower confirm that in IPP versus build comparisons, SaskPower recognizes the cost of equity that is, or will be, required in its capital structure to support the capital lease.
 5. In future capital expenditures, CAPP encourages SaskPower to examine all possible alternatives to obtain the lowest possible source of supply.
 6. CAPP supports efficient and effective means of providing customers with consumption data that will assist in managing site energy consumption and enable improved forecasts of site consumption.

Although climate policy and related carbon pricing mechanisms are outside of the scope of the review of this rate plan application, CAPP would like SaskPower and the government of Saskatchewan to recognize that any rate increases resulting from measures to mitigate greenhouse gas (GHG) emissions should be considered an implicit form of carbon pricing. GHG mitigation measures such as investments in renewable energy infrastructure and carbon capture and storage infrastructure are being passed along to electricity consumers in Saskatchewan through higher electricity prices, which effectively is a carbon pricing mechanism. In the national dialogue on national carbon pricing, CAPP has weighed in that any GHG emissions reductions should be achieved at the lowest cost possible and that carbon pricing mechanisms are key policy tools available to government to meet this outcome. That being said, CAPP believes that the discussion still remains with government on whether SaskPower's chosen method of implicitly pricing carbon is the most efficient way of driving emissions reductions in Saskatchewan.

Overview

In the current application SaskPower is requesting two 5% rate increases¹, each contributing an additional \$110-\$115 million in revenue². These proposed increases should properly be viewed not as isolated increases but rather as part of a trend of significant increases that began in 2013 and will continue for the foreseeable future.

The annual increases since 2013 have largely been driven by capital expenditures (capex). Beginning in 2012, SaskPower’s capex increased from roughly \$500 million per year to \$1 billion per year. As shown in the chart below, capital expenditures have been at the \$1 billion per year level since 2012. Capital expenditures are forecast to remain at the \$1 billion per year level at least through 2018-19³.



One billion dollars per year in capital additions (offset by depreciation of approximately one-half of this amount), results in a net addition of \$500 million in capital to a \$9 billion rate base. This roughly equates to a five percent increase in capital-related revenue requirement. In addition, operating expenses have increased by more than 7% per year from 2013 to 2016-17.

¹ 5% effective July 1, 2016 and 5% effective January 1, 2017.

² SaskPower 2016 and 2017 Rate Application, SRRP Q17 PDF pages 57 and 58.

³ SaskPower has changed its fiscal year from a calendar year basis to and April 1 start to align with other crown entities.

The increase in revenue requirement has not been matched by increases in sales: sales have been growing at roughly half the rate costs have been increasing, resulting in large annual rate increases. Significant future rate increases also appear likely.

SaskPower is proposing two additional 5% rate increases⁴, each contributing an additional \$110-\$115 million in revenue⁵.

⁴ 5% effective July 1, 2016 and 5% effective January 1, 2017.

⁵ SaskPower 2016 and 2017 Rate Application, SRRP Q17 PDF pages 57 and 58.

CAPP Comments and Recommendations

Return On Equity

SaskPower has a target debt ratio of 60-75% and a long-term ROE target of 8.5%. Over the application period, SaskPower anticipates a debt ratio at the higher end of the 60-75% range. While SaskPower has recently (i.e. since 2013) earned less than its long term target ROE, it proposes to reflect an 8.5% ROE in rates beginning in 2017-18.

With a net addition to rate base of approximately \$500 million per year, SaskPower requires earnings of \$125 million⁶ (an ROE of approximately 5%) to maintain a debt ratio of 75%⁷. In the absence of the requested 2017 increase, SaskPower would achieve earnings sufficient to maintain the target debt ratio at 75%⁸.

Recommendation

Due to the challenging environment oil and gas producers are presently operating in and the Canadian economy at large, CAPP recommends that for the term of the present application SaskPower restrict rate increases required to satisfy the 75% debt limit and forgo the additional return necessary to meet the long term ROE target.

Natural Gas – Cost of Hedging

Natural gas (including transportation and storage) accounts for roughly 45% of fuel and purchased power expense. SaskPower has hedged roughly two-thirds of its roughly \$280 million⁹ annual natural gas price exposure.¹⁰

CAPP understands that the SaskPower hedges a (significant) portion of its future natural gas requirements pursuant to the "Long-Term Natural Gas Exposure Management Policy"¹¹, established in 2008¹². When approved in 2008, the policy directed SaskPower

⁶ \$500 million x 25% equity share

⁷ Assuming no dividend payout. SaskPower is proposing dividends of \$20.7 million in 2017-18 and \$22.2 in 2018-19.

⁸ SaskPower 2016 and 2017 Rate Application Response to SRRP Q4 i).

⁹ Average of 70 million GJ (74.3 in 2016-17, 71.9 in 2017-18 and 67.8 in 2018-19) at \$4.00/GJ (weighted average of \$3.79/GJ in 2016-17 and \$4.25 in 2017-18).

¹⁰ In its application, SaskPower indicates: As at March 31, 2016, SaskPower had hedged 70% of its anticipated natural gas consumption for fiscal 2016-17 and 64% for fiscal 2017-18. (SaskPower 2016 and 2017 Rate Application, page 30)

¹¹ SaskPower 2013 Rate Application, page 24

¹² Hedging of gas price exposure appears to have been in place prior to the present policy.

to hedge exposure five years out¹³. As of 2012, the policy was altered to extend the hedging horizon from 5 to 10 years¹⁴.

In most years, hedged gas purchases have been significantly more costly than unhedged purchases¹⁵. In particular, application of the hedging policy has significantly reduced the benefits customers could have experienced due to the recent decline in natural gas prices. CAPP is concerned that the hedging policy and resulting reliance on weighted average cost of gas may result in parties not fully appreciating how competitive natural gas generation has become with current gas prices.

For example, SaskPower reports average fuel costs for coal generation of \$24.95/MWh and average fuel cost for gas generation of \$31.55 in 2016-17. However, the gas cost appears to reflect the weighted average cost of \$3.79/GJ¹⁶. Recognizing unhedged gas costs¹⁷ of \$2.24/GJ and IPP heat rates of 7,543 MJ/MWh¹⁸, natural gas generation has a variable fuel cost of less than \$17/MWh – significantly less than coal generation.

In prior reviews CAPP indicated that its members would prefer that their rates reflect unhedged natural gas costs. CAPP remains concerned with the hedging policy and its impact on SaskPower's costs. The most concerning aspect of the hedging program is the ten-year horizon. As producers, many CAPP members undertake hedging programs but the term of these hedging programs is much shorter than the ten years adopted by SaskPower. One of the reasons that producers do not hedge production ten years out is that there is no liquidity, and therefore no price transparency, for these long dated hedges. With no price transparency there can be no validation that SaskPower is achieving appropriate pricing for these long dated hedges.

Recommendation

CAPP requests that our concerns regarding the horizon of the hedging program be brought forward to SaskPower's Board.

¹³ SaskPower 2010 Rate Application Round1 – SIECA8 and SIECA9.

¹⁴ Independent Review of the SaskPower 2013 Rate proposals Application Final Report Forkast Consulting November 8, 2012 page 58.

¹⁵ SaskPower 2016 and 2017 Rate Application CAPP Q10 b) and CAPP Q11 g).

¹⁶ SaskPower 2016 and 2017 Rate Application CAPP Q10 a)

¹⁷ SaskPower 2016 and 2017 Rate Application CAPP Q10 b)

¹⁸ SaskPower 2016 and 2017 Rate Application CAPP Q9 c)

Cost of Wind and Wind Additions

SaskPower's application identifies slight increases in the volume of wind generation in 2016-17 and 2017-18, followed by a near doubling in 2018-19.¹⁹

The total cost of the 222 MW of existing wind generation in 2016-17 and 2017-18 is in the order of \$75 million per year.²⁰

Total wind generation costs will escalate sharply with the addition of the 177 MW Chaplin Wind facility (starting in December 2017), and subsequent additions. SaskPower has indicated it expects to add 100 to 200 MW of wind every two years²¹ and up to 1,600 MW between 2019 and 2030.²²

If SaskPower proceeds with this course of action, CAPP recommends that SaskPower do its utmost to ensure that the most cost effective generation is acquired. For example, reports suggest²³ the cost of wind generation is decreasing rapidly. When SaskPower relies on IPPs to acquire wind generation it is not clear how decreasing capital costs can be captured to the benefit of customers.

For example, the contract for the Chaplin facility was awarded in Q1 2012 and anticipated full commercial operation in December 2016. At present, SaskPower appears to anticipate only 35 MW of generation in December 2017. It is not clear when full operation is anticipated. With a declining cost structure it appears that it is the IPP proponent, and not SaskPower, that captures the benefit of cost improvements in the interval between the time when a decision is made to initiate a wind project and construction of the project.

¹⁹ SaskPower 2016 and 2017 Rate Application, page 28. The large increase in wind generation in 2018-19 appears to result from Algonquin's Chaplin Wind Farm coming on-line, beginning with the initial 35 MW in December 2017.

²⁰ The cost of wind power shown under fuel and purchased power does not include the cost of SaskPower owned wind. Assuming SaskPower owned wind generation is roughly the same cost as IPP wind (i.e. roughly \$100/MWh), the total cost of wind generation in 2016-17 is 772 GWh x \$96.55/MWh = \$75 million (approx.).

²¹ SaskPower 2016 and 2017 Rate Application, page 31.

²² <http://www.saskpower.com/about-us/media-information/saskpower-targets-up-to-50-renewable-power-by-2030/>

²³ <http://windfacts.ca/affordable-power> "The cost to build wind energy continues to decline, with dramatic drops over the past three years while significant efficiency gains are being realized in modern technology and siting."

Recommendation

CAPP requests that SaskPower clarify how the potential benefit of declining wind generation costs will be recognized in evaluating new wind projects.

IPP Commitments

In examining SaskPower's forecast of wind generation we examined regulatory filings from the proponent of the Chaplin wind farm. In these filings the proponent indicates that it is only committed to build 35 MW of generation – the remaining 142 MW will only proceed subject to "evaluation of the wind resource at the site"²⁴. SaskPower has not suggested that the IPP is not required to construct the full 177 MW of generation.

Recommendation

CAPP requests that SaskPower clarify the commitments required of wind generators under IPP contracts with SaskPower, and specifically clarify the expectations in respect of the Chaplin facility.

Impact of IPPs on SaskPower Balance Sheet

Recognizing that SaskPower is near its target limit of 75% debt raises another question with respect to IPPs for new wind (and other) generation facilities relative to SaskPower build options. IPPs are recognized as capital leases (a debt equivalent) on SaskPower's balance sheet. As SaskPower adds more IPPs, eventually it must offset some of the IPP liability with equity. The cost of this incremental equity could be quantified in evaluating future IPP proposals against SaskPower-owned facilities or may be recognized in some other fashion²⁵.

Recommendation

CAPP requests that SaskPower confirm that in IPP versus build comparisons, SaskPower quantify the cost of equity required in its capital structure to support the capital lease or that SaskPower recognize this issue in some other fashion.

Capital Cost – Tazi Twé hydro

In the application, SaskPower identifies a number of major future capital expenditures. One of these is the Tazi Twé hydroelectric station. With a capital cost of \$630 million for a 50 MW facility this plant would be more costly, on a per unit basis (\$12,600/kW), than BC Hydro's Site C (\$7,577/kW) and roughly on par with the recently updated cost for

²⁴ <http://investors.algonquinpower.com> Algonquin Power Q2 2016 Report Page 15

²⁵ SaskPower 2016 and 2017 Rate Application, CAPP Q16 b).

NALCOR's Muskrat Falls (\$13,835/kW). Neither of these facilities has been celebrated as a low cost source of supply; however, both of these other projects provide storage, which enables (valuable) dispatchability, something Tazi Twé does not.

The earliest estimate CAPP has seen for this project is a 2002 pre-feasibility study quoting a cost of \$95 million for a 25 MW facility²⁶. By 2005, the facility had increased in size from 25 MW to 42 MW.²⁷ In 2012, the cost of the 42 MW plant was reported as \$250-\$300 million.²⁸ SaskPower is now reporting the cost for this project as \$630 million.²⁹ Even at this initial stage, this is a very costly project.

Recommendation

CAPP encourages SaskPower to examine all possible alternatives to obtain the lowest possible source of supply in this region.

Managing Customer Load

Oilfield loads account for 15 per cent of SaskPower sales and therefore, management of these loads could have a meaningful impact on the SaskPower system. Oilfield customers generally have many individually billed and metered sites, which can be in the range of thousands for some customers. Tools to better manage site loads (for example, timely data on peak load and energy consumption) would assist customers and importantly, could also improve the forecast information on oilfield loads provided to SaskPower, thereby minimizing the potential for overbuilding facilities.

There is a desire by oilfield customers to improve the management of their loads; however, oilfield loads lack the data required to manage effectively. Meters at oilfield sites are not read monthly and billing data on individual sites is not provided to customers in electronic form. Rather, billing data is provided in paper form, with monthly bills reaching hundreds of pages, in some cases.

²⁶ Elizabeth Falls Hydroelectric Development Strategic Planning Study June 2002 Acres International Page 1.

²⁷ Elizabeth Falls Hydroelectric Generating Station Feasibility Study Project Energy Potential Memorandum EF-2 September 20, 2005.

²⁸ Elizabeth Falls Hydroelectric Project Description submitted to Canadian Environmental Assessment Agency December 2012, pages 8 and 9.

²⁹ SaskPower 2016 and 2017 Application, page 37.

Recommendation

CAPP supports efficient and effective means of providing customers with consumption data that will assist in managing site energy consumption and enable improved forecasts of site consumption. The AMI (Advanced Metering Infrastructure) initiative could have achieved these objectives but this project was terminated. CAPP is eager to understand what initiatives SaskPower is proposing to enhance information services to oilfield customers (i.e., useful consumption data).

Cost of Service – Classification of Generation Costs

Although little data underlying the Cost of Service Study was provided by SaskPower, it is apparent that the present study makes significant changes in the classification of generation costs. Specifically, there is a large shift in classification from demand to energy since the last rate application³⁰. The shift from demand to energy weighting appears to result from the application of the equivalent peaker methodology to CCS costs and to the cost of hydro facilities. Application of the equivalent peaker methodology to these two costs appears inconsistent with underlying premise of the equivalent peaker methodology – that all fixed costs above those of an equivalent capacity peaking unit are incurred to obtain lower cost energy.

Recommendation

The application of the equivalent peaker methodology should be examined more closely in the next Cost of Service study.

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³⁰ For example, Power Production (Schedule 2.01) was classified as 47.1% demand in the 2015 COSS and 37.9% in the current COSS.