BC Hydro
Power smart

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February 16, 2017

Ms. Laurel Ross
Acting Commission Secretary
British Columbia Utilities Commission
Sixth Floor – 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Ms. Ross:

RE: Project No. 3698869
British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
Fiscal 2017 to Fiscal 2019 Revenue Requirements Application

BC Hydro writes to submit three remaining Information Requests, shown in Table 1 below, that were still in progress at the time of BC Hydro's submission of its responses to Round 2 information requests on January 23, 2017. In addition, BC Hydro submits revisions to BC Hydro's responses to Round 2 BCUC and Intervener Information Requests filed on January 23, 2017 shown in Table 2. BC Hydro submits these Information Requests in accordance with Commission Order No. G-144-16 (Exhibit A-7).

Table 1 Remaining Information Requests

Exhibit B-15-2	Response to AMPC IR 2.2.1
	Response to AMPC IR 2.2.2
	Response to AMPC IR 2.3.1

Table 2 Revisions to BC Hydro's responses to Round 2 BCUC and Intervener Information Requests

Exhibit B-14-1-1	Response to BCUC IR 2.197.3 (Confidential Version)	Provides billed sales variance of May 2016 Load Forecast up to and including January 2017 on pages 17 to 24; Revised two incorrect values on page 30
Exhibit B-14-2	Response to BCUC IR 2.197.3 (Public Version)	Provides billed sales variance of May 2016 Load Forecast up to and including January 2017 on pages 16 to 23

Exhibit B-15-3	Response to BCOAPO IR 2.79.2	Revised incorrect IR reference
	Response to CEA IR 2.43.4	Revised active link

For further information, please contact the undersigned.

Yours sincerely,

Fred James
Chief Regulatory Officer

ls/rh

197.0 Reference: CHAPTER 3– LOAD AND REVENUE FORECAST
Exhibit B-9, BCUC IR 2.1 and 177.1; Exhibit B-10, CEC IR 14.2, AMPC IR 9.3 series
Load forecast update
Residential, Light Industrial & Commercial, Large Industrial

BCUC IR 2.1 explains the load forecast methodology for residential, commercial, light industrial, and large industrial customer classes as follows:

> Residential Sales
>
> The total residential sales forecast is the sum of the sales for each of BC Hydro's major service regions (Lower Mainland, Vancouver Island, South and North). In each region, the residential sales forecast is calculated as:
>
> Average use per account x total ending number of accounts + electric vehicle sales + estimates to adjust for overlap in codes and standards
>
> Commercial Sales
>
> The total commercial distribution sales forecast is calculated as:
>
> Total regional sales from the commercial SAE models + electric vehicle load + estimates to adjust for overlap in codes and standards
>
> Light Industrial Sales
>
> The sales for light industrial sector is the sum of sales for coal, wood, oil and gas and other industrial loads connected at the distribution level. For further details regarding light industrial sales are provided in Section 3.2.1.3 of the Application.
>
> Large Industrial Sales
>
> The sales forecast for the large industrial sector is developed on account by account basis with a general forecasting equation for each account which is:
>
> Production X intensity X probability weighting

BC Hydro stated in response to CEC IR 14.2 that "We have not adjusted our May 2016 Load Forecast to reflect policies that have been identified in the City of Vancouver's Renewable City Strategy or the Province's Climate Leadership Plan. The Renewable City Strategy includes policy actions that increase the use and supply of renewable energy. To the extent this renewable supply is delivered in the form of electricity supplied by BC Hydro, we would anticipate an increase in overall electricity demand..."

BC Hydro stated in response to BCUC IR 177.1 that "low-carbon electrification could potentially reduce rates through the collection of increased revenue driven by load growth as customers switch to clean electricity in place of other forms of energy such as gasoline, natural gas, and diesel."

In response to AMPC IR 9.3 series, BC Hydro explains that a number of recent developments are "not expected to have an impact on the load forecast over the test period."

2.197.3 Please update the May 2016 forecast by incorporating information from the 2016 historical data, new government policies,

low-carbon electrification programs, impact of the Nicola Valley mill closure, and any other new information for Residential, Light Industrial & Commercial and Large Industrial customers.

ORIGINAL RESPONSE

This response redacts information on customer specific loads and service requests. This information is commercially sensitive for our customers. In some instances we have been able to obtain customer consent to provide the information publicly.

We are not able to develop a comprehensive update to the May 2016 Load Forecast within the time available in this process, given the considerable time and effort required to do the work. A load forecast update requires a detailed and comprehensive review of all relevant factors and drivers across each of the major customer segments, including a detailed review of market fundamentals for each of the main large industrial sectors. A forecast update should not just focus on a subset of changed circumstances, as such an approach could bias the results.

In order to be responsive to the information request, we have reviewed and compiled current and relevant information as it relates to the May 2016 Load Forecast and have categorized it as follows:

(i) Less than 1 per cent Variance To Date;

(ii) Project Announcements and Market Developments;

(iii) LNG Developments;

(iv) Low-Carbon Electrification; and

(v) Other Known Factors.

Based on this review, BC Hydro believes the May 2016 Load Forecast remains appropriate for use in determining the forecast revenue requirements for the test period. Some of the developments since May 2016 have increased load while others have reduced load and the result is an offsetting effect that has BC Hydro tracking well against the May 2016 Load Forecast. The assessment is similar looking forward.

While there have been some unfavourable changes, there is also positive news on several commodity price fronts that are encouraging for industrial customers and would directionally tend to suggest higher than forecast load.

BC Hydro notes that any variances to the load forecast over the test period will be captured in the Non-Heritage Deferral Account.

Key points are summarized below.

(i) Less than 1 per cent Variance To Date:

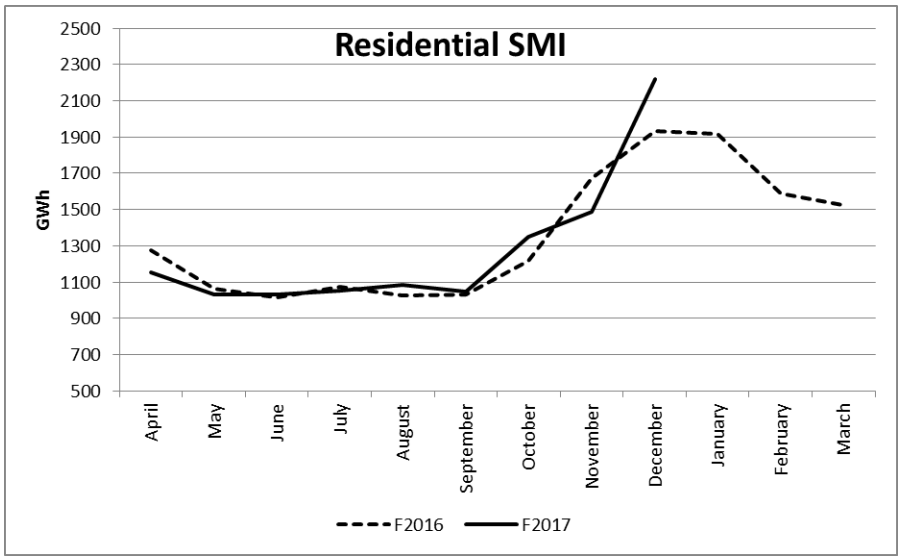
The May 2016 Load Forecast is tracking well on a fiscal year to date basis. The table below shows the fiscal year to date variance (i.e., actual billed sales to date compared to forecast sales from April 2016 to December 2016) for each sector. The total billed sales variance, from April 2016 to December 2016 for all customer classes is less than 1 per cent on a temperature normalized basis. Further, BC Hydro expects that the colder weather in December and January will show higher sales in January and February billings. As an indication of the impact of colder temperatures this December, residential smart meter consumption shows electricity consumption was 287 GWh or 14.8 per cent higher relative to December 2015.

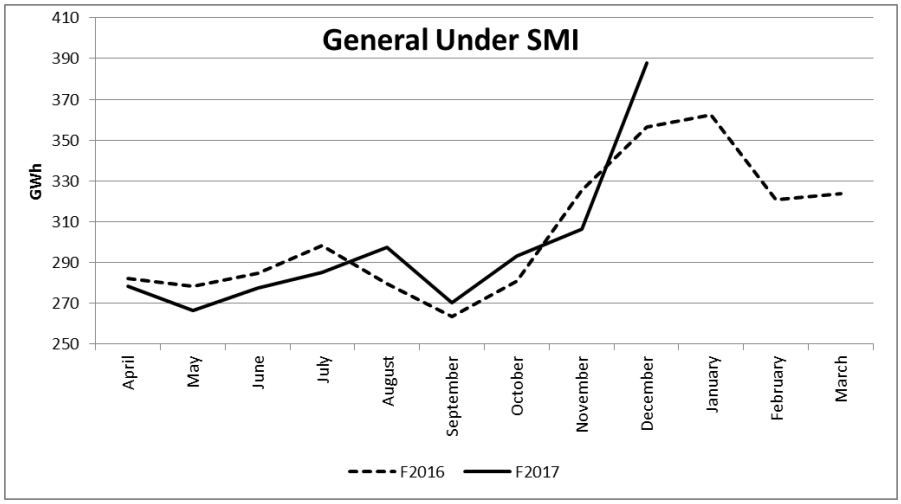
Fiscal Year to Date Variance of May 2016 Load Forecast	Actual	Forecast		
Sector	April to December Year To Date Total GWh	April to December Year To Date Total GWh	Difference GWh	% Difference %
Actual Residential Sales	11,424	12,012	(587)	-4.9%
Temperature Normalized Residential Sales	12,036	12,012	24	0.2%
Commercial General	10,392	10,541	(150)	-1.4%
Light Industrial General	3,073	3,176	(103)	-3.3%
Irrigation and Streetlights	224	216	8	3.5%
Large Industrial[1]	9,894	10,013	(119)	-1.2%
Other Utilities	849	798	50	6.3%
Actual Total Domestic Sales	35,856	36,757	(901)	-2.5%
Temperature Normalized Total Domestic Sales	36,467	36,757	(290)	-0.8%
Note				
1. Large Industrial includes sales to LNG				

Note: The above table shows billings from April to December 2016 and as a result, does not reflect increased residential electricity consumption as a result of colder weather in December and January. This impact will be reflected in January and February billings.

The residential variance on a temperature normalized billed sales basis is small. The actual year to date variance reflects warmer than normal heating degree days during the start of the fiscal year and over the fall. The heating degree days were colder than normal during December 2016, however, this is not yet reflected in billed sales as they are a lagged record of previous months consumption (i.e., billed sales do not represent what was actually consumed over a month). Similarly, for the commercial sector the impact of colder temperatures on consumption in the month of December 2016 is not included due to the lagged nature of the billed sales.

BC Hydro expects the full impact of the colder temperatures in December 2016 will be reflected in the January 2017 billed sales. The following two graphs show F2016 and F2017 year to date available SMI data consumption graphs for Residential and Under 35 kW General Service which show the impact of the cold December weather.





BC Hydro expects that the residential loads will continue to track well against the May 2016 Load Forecast for the test period.

The commercial variance is largely attributed to actual sales less than forecast in the general over 35 kW category. We believe key economic assumptions used to develop the residential and commercial sales projections over the test period

continue to be reasonable for the reasons outlined in BC Hydro's response to BCUC IRs 1.5.1 and 1.5.2.

The table below shows further detail on the variances for each of the major large industrial subsectors. The variances across the sectors are offsetting, resulting in a total variance from April 2016 to December 2016 of negative 1.2 per cent.

Fiscal Year to Date Variance of
May 2016 Load Forecast
Large Industrial

Industrial Sub Sector	Actual April to December Year To Date Total Billed Sales [1]	Forecast April to December Year To Date Total Billed Sales	Difference	% Difference
	GWh	GWh	GWh	%
Metal Mine	2,523	2,432	91	3.8%
Coal Mine	427	393	34	8.7%
Oil & Gas	1,022	1,208	(186)	-15.4%
FortisBC Tilbury LNG	0.12	23	(23)	-99.5%
Pulp and Paper	3,151	3,130	22	0.7%
Chemical	1,072	1,089	(17)	-1.6%
Wood	845	894	(49)	-5.5%
Other	853	844	10	1.1%
TOTAL	9,894	10,013	(119)	-1.2%

Note
1. The actuals have not been adjusted for the curtailments to some customers during the two week cold spell in Decmeber 2016.

Most subsectors are tracking close to forecast or above. The largest positive variances in the large industrial sector are in the metal and coal mining sectors.

- **The positive variance in metal mining is largely attributed to the Mt Polley mine. The project received approval to resume full operation in summer 2016. In the May 2016 Load Forecast a probability weighting was assigned to the Mt Polley mine resuming full load; however, there was uncertainty at that time whether approval to resume full operations would be received. BC Hydro believes that this increase in load relative to May 2016 Load Forecast is likely to be sustained through the test period.**

- **The positive variance in coal mining is attributed to a slight increase in production for existing customers due to current high metallurgical coal prices.**

Further information on the variances summarized above as well as other project announcements and market developments that impact BC Hydro's sales projections over the test period are provided in the following section.

The largest negative variances in the large industrial sectors are in the oil and gas sector, LNG sector, and wood sector.

- **The negative variance in the oil and gas sector is due to the following: (i) deferred in-service dates for projects; and (ii) several existing facilities currently receiving electricity service from BC Hydro are operating at lower production levels than expected. As discussed in the Oil and Gas sector section below, this negative variance is expected to diminish.**

- **The negative variance in the LNG sector is attributed to delayed in-service of the FortisBC Tilbury LNG (phase 1) project.**

- **The negative variance in the wood sector is attributed to the West Fraser Westpine MDF plant which experienced a fire at the beginning of the year and is currently ramping up its operations back to normal levels.**

(ii) Project Announcements and Market Developments:

<u>Industrial Sector</u>

BC Hydro acknowledges there is inherent uncertainty associated with its industrial sector load forecast given the nature of the three major resource-based sub-sectors that make up most of the large industrial load: oil and gas, mining and forestry. Given this uncertainty, BC Hydro develops mid, low and high forecasts for each of these sub-sectors, where the most likely projection of commodity prices informs the mid forecast and the associated probability weightings.

The large industrial forecast is prepared on an account-by-account basis for existing and new facilities. The information provided below reflects project and market developments relative to BC Hydro's May 2016 mid-forecast assumptions. The information provided is either publicly available or BC Hydro has received customer permission to disclose it. Any confidential information has been redacted and an unredacted confidential version provided to the British Columbia Utilities Commission. Any projected loads that are provided are probability weighted.

As a general comment, BC Hydro's major industrial sectors have been experiencing a dropping commodity price environment for the last several years. However, several key commodities (i.e., natural gas, copper, metallurgical coal, thermal mechanical pulp) have recently increased in price. Commodity prices are currently higher relative to May 2016 Load Forecast projections. These increases represent positive signals for the Province's resource sectors, and (other things being equal) have an upward influence on the Load Forecast.

Oil and Gas Sector

While there has been a negative year-to-date variance in the oil and gas sector, several factors lend support for not changing the forecast: (1) with increased

commodity prices, negative variance customers are expected to increase production to forecasted levels; and (2) large new loads are proceeding as forecasted. The following summary points are based on (i) publicly available information, (ii) internal discussions with Key Account Managers, Load Interconnections, and customers, and (iii) a high level review of current market analyses since the completion of the May 2016 Load Forecast. We have provided more detail on specific projects relative to the other sectors, given the particular level of interest in Information Requests with this sector.

Natural gas prices have increased steadily since the early part of 2016. In particular, a return to more typical cold weather patterns has had an impact. The following graph shows recent natural gas prices.

We expect the negative variance (186 GWh) in the year-to-date oil and gas sector forecast will diminish for the following reasons:

- **Two thirds (108 GWh) of the variance is attributable to low production rates from low gas price impacted customers. These include: [redacted] However, with gas prices now increasing these producers have informed us that they expect to increase production.**

- **One third (80 GWh) of the variance is attributed to deferred project in-service dates for four projects.**

    - **Three projects (39 GWh) are existing facilities that are considering taking electricity service from BC Hydro to replace**

existing self-supply and supply future expansion [redacted]. The customer representing these projects has indicated its intention to proceed with the projects but is still considering whether to take electricity service from BC Hydro. [redacted]

- **The fourth project is an existing customer that requested service for a planned expansion ([redacted]). However, in November 2016 the customer informed BC Hydro that it decided not to proceed with its expansion plans at this time due to market conditions and high interconnection costs.**

Regarding large loads proceeding as forecasted, most of the oil and gas sector load growth expected to occur between now and the end of the test period is associated with projects currently under development by Veresen Midstream. Most of these projects are well advanced, have a high probability of proceeding, and are the subject of agreements with BC Hydro.

- **In 2014, Veresen Midstream entered into definitive agreements to acquire certain natural gas gathering and compression assets supporting Montney development in the Dawson area of northeastern British Columbia from Encana Corporation (Encana) and the Cutbank Ridge Partnership (CRP). CRP is a partnership between Encana and Cutbank Dawson Gas Resources Ltd., a subsidiary of Mitsubishi Corporation. Veresen Midstream has also agreed to undertake up to $5 billion of new midstream expansion for Encana and CRP in the Montney region under a 30-year fee-for-service arrangement. Between October 6, 2015 and December 28, 2016, Veresen has announced the sanctioning of four projects in the Montney region totalling $2.7 billion. All of these projects are being developed to take electricity service from BC Hydro. More specific information on each of these projects is provided as follows:**

  - **October 6, 2015 Veresen announced approval of the $860 million Sunrise (4-26) Gas Processing Plant.**

    - **400mmcf/d facility expected to be commercially operating in late 2017.**

    - **This is the largest gas plant to be commissioned in western Canada in the last 30 years.**

- **BC Hydro and Veresen executed an Electric Service Agreement in respect of this facility in January 2017.**

- **December 7, 2015 Veresen announced approval of the $715 million Tower (3-7) Rich Gas Processing Complex.**
  - **200mmcf/d facility and up to 20,000 barrels per day of condensate and Natural Gas Liquids (NGLs) is expected to be commercially operating in late 2017.**
  - **BC Hydro and Veresen executed an Electric Service Agreement in respect of this facility in January 2017.**

- **March 9, 2016 Veresen announced approval the $930 million Saturn Phase 2 Processing facility.**
  - **Additional 200 MMcf/d of compression, 400 MMcf/d of processing and significant inlet liquids and NGL handling facilities expected to be commercially operating in mid-2018 and will be taking service from BC Hydro.**
    - **The existing 200mmcf/d of compression became operational in 2015 and currently receives electricity service from BC Hydro.**

- **December 28, 2016 Veresen announced approval of an additional $195 million investment in capital projects.**
  - **Two new projects have been sanctioned by the CRP to facilitate ongoing development plans while also minimizing total infrastructure costs and surface footprint.**
    - **The South Central Liquids Hub project has been sanctioned to allow the existing gathering system in the area to handle development anticipated over the next several years and is expected to be in service by the end of the second quarter of 2017.** [redacted]
    - **The Tower Liquids Hub has also been sanctioned to provide a lower overall cost and more commercially flexible solution for the handling and storage of NGLs produced at the Sunrise, Tower and Saturn Phase II processing facilities. The Tower Liquids Hub is expected to be in service in the third quarter of 2017. An Electric Service Agreement for this facility was executed on in 2017.**

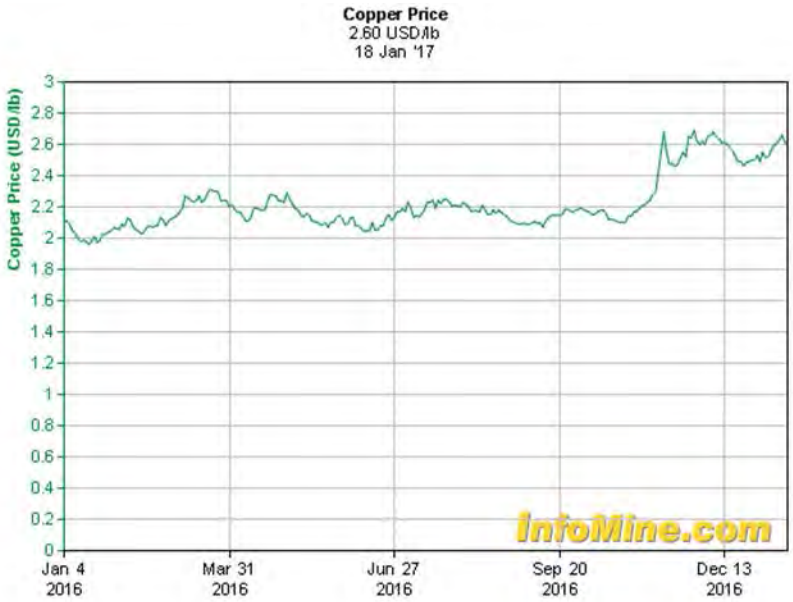
- **Three of the facilities identified (i.e., those with executed Electric Service Agreements) have an aggregate probability weighted adjusted load [redacted]. These facilities make up most of the anticipated oil and gas sector load growth during the test period. All three facilities are currently under construction [redacted]**

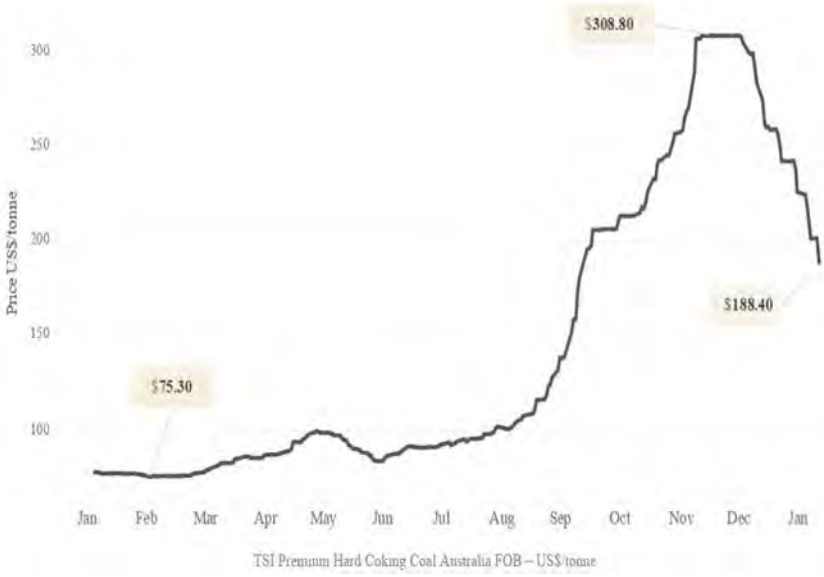
- **BC Hydro will be able to supply the facilities' full load requirements once system reinforcements are completed in spring 2017. These important milestones solidify the relatively high probability weightings that have been assigned to these projects in developing the mid oil and gas sector forecast. In fact, once these facilities are in service, the aggregate load in fiscal 2019 will be approximately [redacted]**

In addition, other oil and gas sector projects that have made electricity service enquiries continue to advance since the May 2016 Load Forecast was completed. For example: [redacted]

Mining Sector

There is a positive variance in the year to date sales for the metal and coal sectors. The market prices for both copper and metallurgical coal have increased in the near term over what is reflected in the mid forecast included in the Application. Metallurgical coal prices have increased in recent months due to newly implemented supply restrictions in China and recent increases in demand. These developments support the May 2016 Load Forecast for the mining and metallurgical coal sectors. The following graphs show those recent prices.





Internal discussions with Key Account Managers, Load Interconnections, and customers, combined with our review of market analysis, have identified the following:

- **In summer 2016, the Mt Polley mine received permission to resume full production and at the time when the forecast was prepared in April 2016 this was still unknown. BC Hydro anticipates this would increase the**

May 2016 aggregate mining forecast by about 100 GWh per year over the test period.

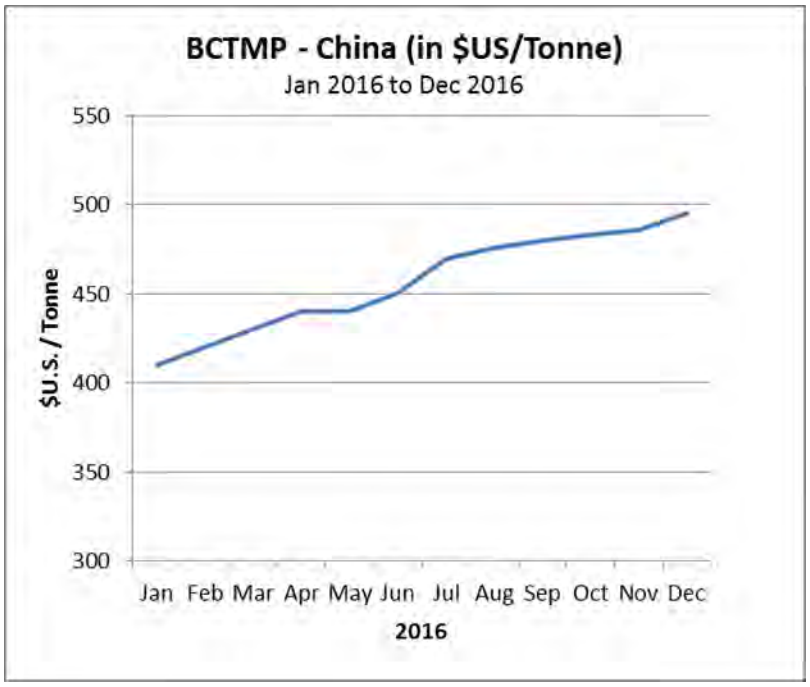
- **While BC Hydro believes that there is currently insufficient evidence to conclude that the current price increase for both copper and metallurgical coal is signaling a permanent shift towards BC Hydro's high commodity price forecast, a continuation of the current higher copper and metallurgical coal price environment could create opportunities for producers over and above what is reflected in the mid-Load Forecast. For instance:**
    - **A continuation of the current higher copper price environment could provide opportunities for project restarts for a large industrial customer (Huckleberry Mine).**
    - **We also believe higher metallurgical coal prices could provide opportunities for the remaining smaller idle distribution coal mining loads to restart over the test period. In fact, one of the three idled Northeast coal mines on distribution voltage was recently restarted and there is some expectation that a second mine will be re-opened.**
- **Current higher copper prices are supporting existing mines, releasing short-term pressure on operating costs, but they do not significantly improve the outlook for new projects. Market analysts believe most new projects in B.C. require a sustained copper price at or over $3/lb to become viable.**

BC Hydro also notes that current higher copper and metallurgical coal prices have resulted in some customers being required to repay some of the amounts temporarily deferred under the Mining Customer Payment Plan earlier than expected. This reflects that current commodity prices are higher than what is reflected in the mid forecast included in the Application.

Forestry Loads:

The forestry sector is tracking well overall being less than 1 per cent below forecast on a consolidated basis. The largest sub-sector in the forestry sector is pulp and paper. As discussed in BC Hydro's response to BCOAPO IR 1.19.2, we considered the impact of reduced paper usage and dropping Thermal Mechanical Pulp (TMP) pulp prices in the preparation of the May 2016 Load Forecast. We feel we have reasonably addressed any weakness in this sector with the probability assessments reflected in the May 2016 Load Forecast. While any individual closures can result in a deviation from forecast load timing, our assessment is that most of the reduction in this sector has taken place and any additional closure risks are already reflected in the May 2016 Load Forecast.

On a positive note, recent TMP prices have increased relative to those assumed in the mid May 2016 Load Forecast and we expect this to have a stabilizing effect on the pulp and paper sector forecast through the test period. Increasing Chinese demand for TMP used in folding box boards is supporting current markets. The following graph shows that prices have been gradually increasing as incremental TMP capacity has been absorbed into the markets and little incremental capacity is expected in the next few years.



Catalyst Paper has announced that they had received a final order from the Supreme Court of B.C. on their Recapitalization and Privatization Transaction which will provide increased stability for the company.

Finally, the impact of the Nicola Valley mill closure on the light industrial sector is provided in BC Hydro's confidential response to AMPC IR 1.9.3.4.

Other Loads

Other Loads include customers such as ports, airports, cement operations, etc. The load in this sector is tracking well against the May 2016 Load Forecast. However, two recent developments will affect the test period:

- **The closure in October 2016 of a cement operation in Kamloops due to low demand from Alberta ([redacted]).**

- **A public announcement in August 2016 that a potential new silica operation will be relocated to United States. However, this project was already highly discounted (i.e., assigned a low probability weighting) in the May 2016 Load Forecast ([redacted]).**

We have no other information regarding recent developments that could affect the projection over the test period, and the small 1.1 per cent variance between actual and forecast sales should remain to the end of fiscal 2017.

(iii) LNG Developments

In the May 2016 Load Forecast, the only LNG related load forecast for the test period was associated with FortisBC's Tilbury Expansion Phase 1. Our variance analysis indicates that the FortisBC Tilbury LNG plant is not on track to meet the projected sales of 57 GWh for fiscal 2017 due to a deferred in-service date.

The table below compares the revised sales projection recently provided by FortisBC Tilbury LNG to BC Hydro against the sales projection assumed in the May 2016 Load Forecast, as provided in BC Hydro's response to BCUC IR 1.7.1.

	F2017	F2018	F2019
FortisBC Tilbury LNG May 2016 Load Forecast)	57	139	139
FortisBC Tilbury LNG (updated to BC Hydro in January 2017)	0	22	64

These projections remain subject to market conditions and demand for LNG from the FortisBC Tilbury LNG facility.

(iv) Low-Carbon Electrification

Government announced in the Province's August 2016 Climate Leadership Plan that it would work with BC Hydro to expand the mandate of BC Hydro's demand-side management programs to include investments that reduce greenhouse gas emissions.

Potential additional load as a result of this expanded mandate was not reflected in the May 2016 Load Forecast.

BC Hydro is working with government, industry and its customers to explore opportunities for electrification that would reduce greenhouse gas emissions. Early efforts have been focused on upstream gas processing operations given the significant potential emission reductions in this sector. BC Hydro continues to assess these opportunities and to-date has not concluded any agreements.

Implementation of any programs could result in increased load over and above the current forecast both in the test period and beyond. BC Hydro is working toward having programs in place during the test period but the timing related to these programs and any resulting low-carbon electrification is still uncertain. As a result, at this point, BC Hydro is not proposing to revise the load forecast upward for the test period as a result of low-carbon electrification.

Any longer term incremental load expectations from low-carbon electrification will be reflected in the 2018 Integrated Resource Plan when more details are known and load impacts have been estimated.

BC Hydro has developed the attached paper, entitled "Low-Carbon Electrification Potential", which provides an overview of the various elements of low-carbon electrification and their potential implications for future BC Hydro load.

(v) Other Known Factors

BC Hydro notes the above assessment does not include the following factors:

- **An updated economic forecast, for the reasons outlined in BC Hydro's response to BCUC IRs 1.5.1 and 1.5.2.**

- **For large industrial transmission customers served under Rate Schedule 1823, BC Hydro intends to file an application to amend Tariff Supplement No. 74 (the CBL Determination Guidelines) with the British Columbia Utilities Commission. To the extent that customers' future energy baseline (Energy CBL) might be impacted by approved amendments to Tariff Supplement No. 74, it can impact BC Hydro's customer-specific forecast of annual energy use and Rate Schedule 1823 Tier 1/Tier 2 energy pricing mix. The prospective impact of possible future amendments to Tariff Supplement No. 74 was not considered in the load forecast review.**

<u>Conclusion</u>

- **The total domestic sales forecast in F2017 is tracking well and is less than 1 per cent below forecast and well within our uncertainty bands.**

- **The residential and commercial sectors are expected to be in line with the May 2016 Load Forecast.**

- **There have been offsetting changes in industrial loads. However, there have been positive developments with commodity price increases across all sectors relative to the mid-forecast assumptions and a number of positive project developments especially in the oil and gas sector. These developments have resulted in increased load through project restarts and solidified load projections associated with anticipated new load over the**

test period. All other things being equal, these developments will have an upward influence on the Load Forecast. In addition, there are no significant issues that BC Hydro is aware of over the test period that would suggest any revisions to the load forecast. In particular, there does not appear to be a likelihood of a further drop in commodity prices that drove much of the load reductions in recent years.

- **For the LNG Plant load volumes reflected in the Application over the test period, BC Hydro is aware of revised load information from FortisBC Tilbury LNG. The revised information could result in lower LNG based sales by about 57 GWh for fiscal 2017, 117 GWh for fiscal 2018 and 75 GWh for fiscal 2019. These volumes are dependent on market conditions and demand for LNG from this specific plant.**

- **BC Hydro has summarized low carbon electrification opportunities (see attachment to this response) that could result in increased load both in the test period and beyond. However, the timing of any programs is uncertain, and to-date no agreements have been concluded.**

- **The May 2016 Load Forecast is an unbiased forecast, and we believe it remains appropriate for setting rates during the test period. Any variances to the load forecast over the test period will be captured in the Non-Heritage Deferral Account.**

REVISED RESPONSE

This response provides a revision to BC Hydro's response to BCUC IR 2.197.3 as filed on January 23, 2017 and included above. The revisions correct two values as shown on page 29 (which are redacted in the public version) and provide the most current billed sales variance between the May 2016 Load Forecast and actual demand data up to the end of January 2017.

As noted on pages 3 and 4 of BC Hydro's original response to BCUC IR 2.197.3, that response reflected billings from April to December 2016. BC Hydro now has available an additional month of consumption history. The update to this response continues to show the impact of the colder weather period on residential demand. For consistency, we have provided the corresponding updates for the light industrial and commercial variance as well as the large industrial variance.

This response redacts information on customer specific loads and service requests. This information is commercially sensitive for our customers. In some instances we have been able to obtain customer consent to provide the information publicly.

We are not able to develop a comprehensive update to the May 2016 Load Forecast within the time available in this process, given the considerable time and effort required to do the work. A load forecast update requires a detailed and comprehensive review of all relevant factors and drivers across each of the major customer segments, including a detailed review of market fundamentals for each of the main large industrial sectors. A forecast update should not just focus on a subset of changed circumstances, as such an approach could bias the results.

In order to be responsive to the information request, we have reviewed and compiled current and relevant information as it relates to the May 2016 Load Forecast and have categorized it as follows:

(i) Less than 1 per cent Variance To Date;

(ii) Project Announcements and Market Developments;

(iii) LNG Developments;

(iv) Low-Carbon Electrification; and

(v) Other Known Factors.

Based on this review, BC Hydro believes the May 2016 Load Forecast remains appropriate for use in determining the forecast revenue requirements for the test period. Some of the developments since May 2016 have increased load while others have reduced load and the result is an offsetting effect that has BC Hydro tracking well against the May 2016 Load Forecast. The assessment is similar looking forward.

While there have been some unfavourable changes, there is also positive news on several commodity price fronts that are encouraging for industrial customers and would directionally tend to suggest higher than forecast load.

BC Hydro notes that any variances to the load forecast over the test period will be captured in the Non-Heritage Deferral Account.

Key points are summarized below.

(i) Less than 1 per cent Variance To Date:

The May 2016 Load Forecast is tracking well on a fiscal year to date basis. The first table below shows the fiscal year to date variance (i.e., ~~actual~~ total billed sales ~~to date compared to forecast sales~~ from April 2016 to ~~December~~ January ~~2016~~2017 compared to the May 2016 Load Forecast) for each major sector.

The total ~~billed~~ sales variance, continues to be ~~from April 2016 to December 2016 for all customer classes is~~ less than 1 per cent on a temperature ~~normalized~~ – adjusted billed sales basis (now -0.3 per cent compared to -0.8 per cent). ~~Further, BC Hydro expects that the colder weather in December and January will show higher sales in January and February billings. As an indication of the impact of colder temperatures this December, residential smart meter consumption shows electricity consumption was 287 GWh or 14.8 per cent higher relative to December 2015.~~ The impact of cold weather in December 2016 and January 2017 led to higher distribution sales. The impact of the colder temperatures on sales is shown in the graphs below labeled "Residential SMI Sales" and General Under 35 kW."

Separate variances are provided for the residential sector on a billed sales basis and a temperature normalized billed sales basis. The residential variance on a temperature normalized billed sales basis continues to be very small. The billed sales year to date variance reflects warmer than normal heating degree days during the start of the fiscal year and over the fall and colder than normal heating degree days over December 2016 and January 2017.

The light industrial and commercial variance is also provided on a separate line below in the first table. Most of the variance in the light industrial sector is due to the wood sector and the oil and gas sector, where the oil and gas variance is about 75 per cent of the total variance. Compared to the original response to this IR filed, the light industrial variance is slightly smaller at -2.8 per cent compared to -3.3 per cent in the original response.

The total large industrial variance is also shown in a second table below for each major industrial sub-sector. Most of the variance is in the oil and gas sector. Further explanation on the oil and gas sector variances is provided below. The variances across the major industrial subsectors are slightly smaller than indicated in the original response to this IR (-1.0 per cent compared to -1.2 per cent).

The following table is included in the original response to BCUC IR 2.197.3.

Original table – data from April 2016 to December 2016:

Fiscal Year to Date Variance of
May 2016 Load Forecast

Sector	Actual April to December Year To Date Total GWh	Forecast April to December Year To Date Total GWh	Difference GWh	% Difference %
Actual Residential Sales	11,424	12,012	(587)	-4.9%
Temperature Normalized Residential Sales	12,036	12,012	24	0.2%
Commercial General	10,392	10,541	(150)	-1.4%
Light Industrial General	3,073	3,176	(103)	-3.3%
Irrigation and Streetlights	224	216	8	3.5%
Large Industrial[1]	9,894	10,013	(119)	-1.2%
Other Utilities	849	798	50	6.3%
Actual Total Domestic Sales	35,856	36,757	(901)	-2.5%
Temperature Normalized Total Domestic Sales	36,467	36,757	(290)	-0.8%

Note
1. Large Industrial includes sales to LNG

Note: The above table shows billings from April to December 2016 and as a result, does not reflect increased residential electricity consumption as a result of colder weather in December and January. This impact will be reflected in January and February billings.

<u>The following table shows the year to date variance up to January 2017.</u>

<u>Revised table – data from April 2016 to January 2017</u>:

Fiscal Year to Date Variance of
May 2016 Load Forecast

Sector	Actual April to January Year To Date Total GWh	Forecast April to January Year To Date Total GWh	Difference GWh	% Difference %
Actual Residential Sales	13,795	14,173	(378)	-2.7%
Temperature Normalized Residential Sales	14,185	14,173	12	0.1%
Commercial General	11,913	11,926	(12)	-0.1%
Light Industrial General	3,486	3,587	(101)	-2.8%
Irrigation and Streetlights	264	251	12	4.9%
Large Industrial[1]	11,054	11,161	(108)	-1.0%
Other Utilities	1,039	981	57	5.9%
Actual Total Domestic Sales	41,551	42,079	(529)	-1.3%
Temperature Normalized Total Domestic Sales	41,941	42,079	(138)	-0.3%

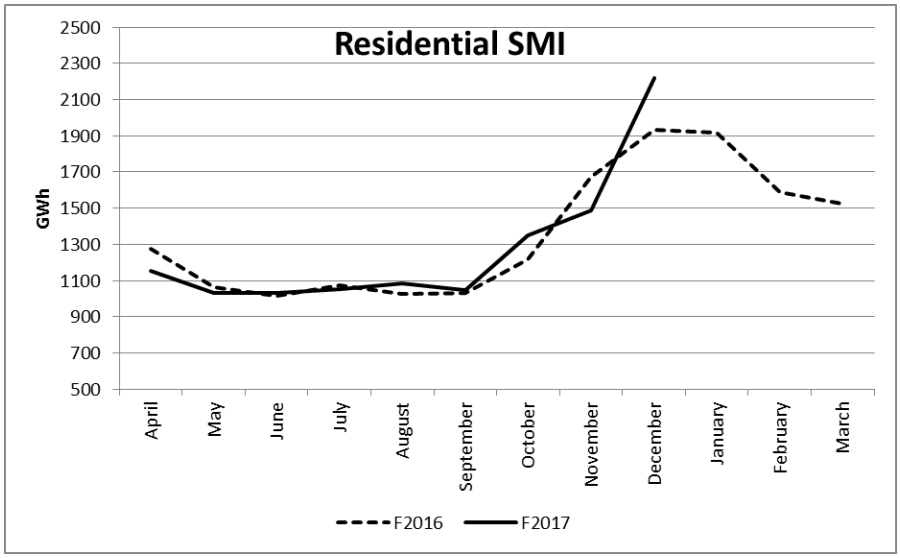
Note
1. Large Industrial includes sales to LNG

~~The residential variance on a temperature normalized billed sales basis is small. The actual year to date variance reflects warmer than normal heating degree days during the start of the fiscal year and over the fall. The heating degree days were colder than normal during December 2016, however, this is not yet reflected in billed sales as they are a lagged record of previous months consumption (i.e., billed sales do not represent what was actually consumed over a month). Similarly, for the commercial sector the impact of colder temperatures on consumption in the month of December 2016 is not included due to the lagged nature of the billed sales.~~

~~**BC Hydro expects the full impact of the colder temperatures in December 2016 will be reflected in the January 2017 billed sales. The following two graphs show F2016 and F2017 year to date available SMI data consumption graphs for Residential and Under 35 kW General Service which show the impact of the cold December weather.**~~

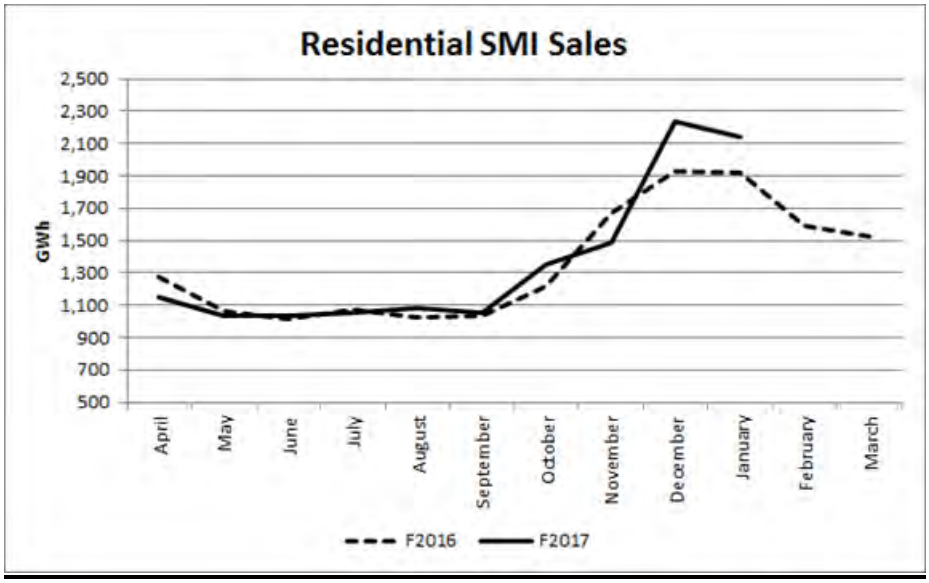
The following chart is included in the original response to BCUC IR 2.197.3.

Original chart – SMI residential sales data from April 2016 to December 2016:



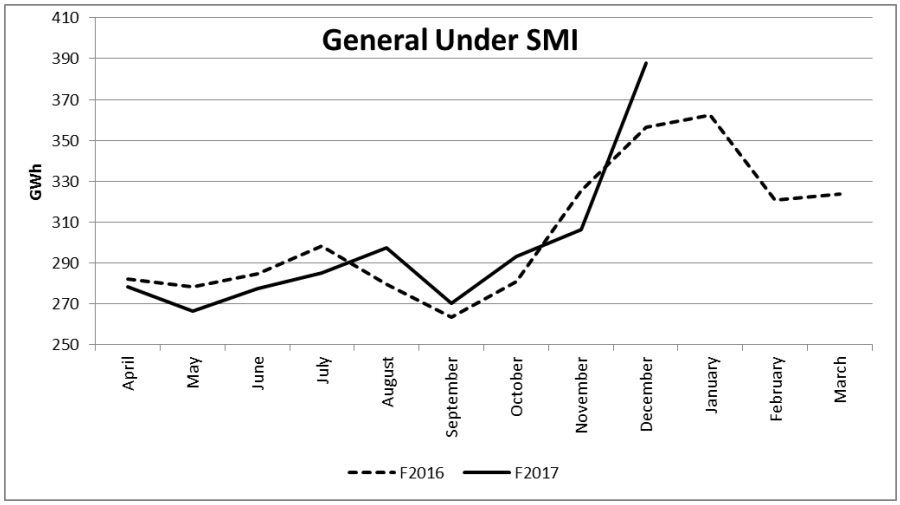
The following chart shows SMI residential sales data up to January 2017.

Revised chart – SMI residential sales data from April 2016 to January 2017.



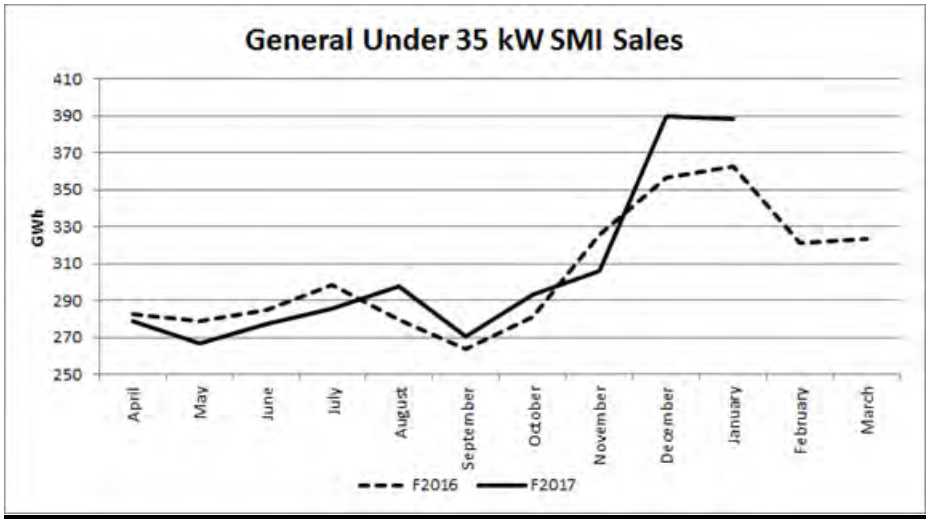
The following chart is included in the original response to BCUC IR 2.197.3.

Original chart – SMI general under 35 kW sales data from April 2016 to December 2016:



The following chart shows SMI general under 35 kW sales data up to January 2017.

Revised chart – SMI general under 35 kW sales data from April 2016 to January 2017:



~~**BC Hydro expects that the residential loads will continue to track well against the May 2016 Load Forecast for the test period.**~~

~~**The commercial variance is largely attributed to actual sales less than forecast in the general over 35 kW category. We believe key economic assumptions used to develop the residential and commercial sales projections over the test period continue to be reasonable for the reasons outlined in BC Hydro's response to BCUC IRs 1.5.1 and 1.5.2.**~~

The table below shows further detail on the variances for each of the major large industrial subsectors. The variances across the sectors are offsetting, resulting in a total variance from April 2016 to ~~December 2016 of negative 1.2 per cent.~~ January 2017 of - 1.0 per cent (compared to -1.2 per cent in the original IR response).

The following table is included in the original response to BCUC IR 2.197.3.

Original table – data from April 2016 to December 2016:

Fiscal Year to Date Variance of
May 2016 Load Forecast
Large Industrial

Industrial Sub Sector	Actual April to December Year To Date Total Billed Sales [1]	Forecast April to December Year To Date Total Billed Sales	Difference	% Difference
	GWh	GWh	GWh	%
Metal Mine	2,523	2,432	91	3.8%
Coal Mine	427	393	34	8.7%
Oil & Gas	1,022	1,208	(186)	-15.4%
FortisBC Tilbury LNG	0.12	23	(23)	-99.5%
Pulp and Paper	3,151	3,130	22	0.7%
Chemical	1,072	1,089	(17)	-1.6%
Wood	845	894	(49)	-5.5%
Other	853	844	10	1.1%
TOTAL	9,894	10,013	(119)	-1.2%

Note
1. The actuals have not been adjusted for the curtailments to some customers during the two week cold spell in Decmeber 2016.

The following table shows the year to date variance up to January 2017.

Revised table – data from April 2016 to January 2017:

Fiscal Year to Date Variance of
May 2016 Load Forecast
Large Industrial

Industrial Sub Sector	Actual April to January Year To Date Total	Forecast April to January Year To Date Total	Difference	% Difference
	GWh	GWh	GWh	%
Metal Mine	2,805	2,709	97	3.6%
Coal Mine	480	438	42	9.6%
Oil & Gas	1,147	1,346	(199)	-14.8%
LNG	0.17	35	(35)	-99.5%
Pulp and Paper	3,530	3,486	44	1.3%
Chemical	1,198	1,213	(14)	-1.2%
Wood	945	996	(51)	-5.1%
Other	948	939	9	0.9%
TOTAL	11,054	11,161	(107)	-1.0%

The actuals have not been adjusted for curtailments of some large industrial customers in December 2016 and January 2017.

Most subsectors are tracking close to forecast or above. The largest positive variances in the large industrial sector are in the metal and coal mining sectors.

- **The positive variance in metal mining is largely attributed to the Mt Polley mine. The project received approval to resume full operation in summer 2016. In the May 2016 Load Forecast a probability weighting was assigned to the Mt Polley mine resuming full load; however, there was uncertainty at that time whether approval to resume full operations would be received. BC Hydro believes that this increase in load relative to May 2016 Load Forecast is likely to be sustained through the test period.**

- **The positive variance in coal mining is attributed to a slight increase in production for existing customers due to current high metallurgical coal prices.**

Further information on the variances summarized above as well as other project announcements and market developments that impact BC Hydro's sales projections over the test period are provided in the following section.

The largest negative variances in the large industrial sectors are in the oil and gas sector, LNG sector, and wood sector.

- **The negative variance in the oil and gas sector is due to the following: (i) deferred in-service dates for projects; and (ii) several existing facilities currently receiving electricity service from BC Hydro are operating at lower production levels than expected. As discussed in the Oil and Gas sector section below, this negative variance is expected to diminish.**

- **The negative variance in the LNG sector is attributed to delayed in-service of the FortisBC Tilbury LNG (phase 1) project.**

- **The negative variance in the wood sector is attributed to the West Fraser Westpine MDF plant which experienced a fire at the beginning of the year and is currently ramping up its operations back to normal levels.**

(ii) Project Announcements and Market Developments:

<u>Industrial Sector</u>

BC Hydro acknowledges there is inherent uncertainty associated with its industrial sector load forecast given the nature of the three major resource-based sub-sectors that make up most of the large industrial load: oil and gas, mining and forestry. Given this uncertainty, BC Hydro develops mid, low and high forecasts for each of these sub-sectors, where the most likely projection of commodity prices informs the mid forecast and the associated probability weightings.

The large industrial forecast is prepared on an account-by-account basis for existing and new facilities. The information provided below reflects project and

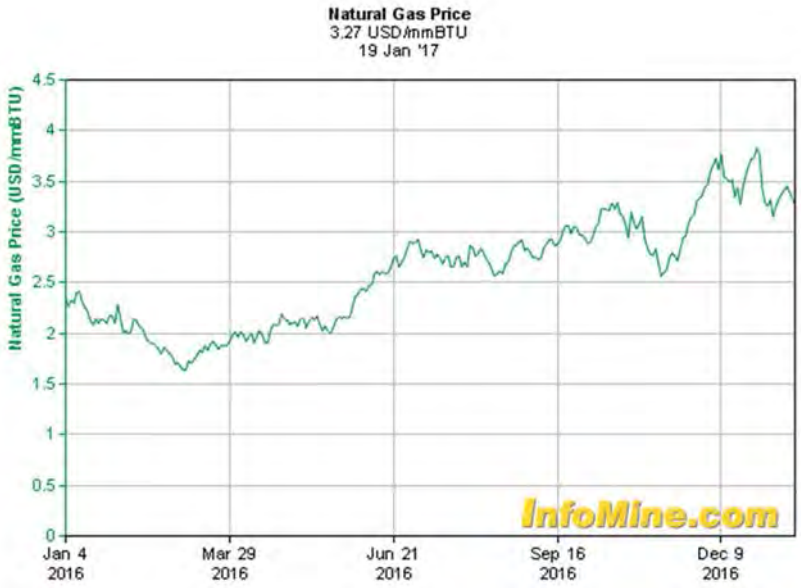
market developments relative to BC Hydro's May 2016 mid-forecast assumptions. The information provided is either publicly available or BC Hydro has received customer permission to disclose it. Any confidential information has been redacted and an unredacted confidential version provided to the British Columbia Utilities Commission. Any projected loads that are provided are probability weighted.

As a general comment, BC Hydro's major industrial sectors have been experiencing a dropping commodity price environment for the last several years. However, several key commodities (i.e., natural gas, copper, metallurgical coal, thermal mechanical pulp) have recently increased in price. Commodity prices are currently higher relative to May 2016 Load Forecast projections. These increases represent positive signals for the Province's resource sectors, and (other things being equal) have an upward influence on the Load Forecast.

Oil and Gas Sector

While there has been a negative year-to-date variance in the oil and gas sector, several factors lend support for not changing the forecast: (1) with increased commodity prices, negative variance customers are expected to increase production to forecasted levels; and (2) large new loads are proceeding as forecasted. The following summary points are based on (i) publicly available information, (ii) internal discussions with Key Account Managers, Load Interconnections, and customers, and (iii) a high level review of current market analyses since the completion of the May 2016 Load Forecast. We have provided more detail on specific projects relative to the other sectors, given the particular level of interest in Information Requests with this sector.

Natural gas prices have increased steadily since the early part of 2016. In particular, a return to more typical cold weather patterns has had an impact. The following graph shows recent natural gas prices.



We expect the negative variance (186 GWh) in the year-to-date oil and gas sector forecast will diminish for the following reasons:

- **Two thirds (108 GWh) of the variance is attributable to low production rates from low gas price impacted customers. These include: [redacted] However, with gas prices now increasing these producers have informed us that they expect to increase production.**

- **One third (80 GWh) of the variance is attributed to deferred project in-service dates for four projects.**

  - **Three projects (39 GWh) are existing facilities that are considering taking electricity service from BC Hydro to replace existing self-supply and supply future expansion [redacted]. The customer representing these projects has indicated its intention to proceed with the projects but is still considering whether to take electricity service from BC Hydro. [redacted]**

- **The fourth project is an existing customer that requested service for a planned expansion ([redacted]). However, in November 2016 the customer informed BC Hydro that it decided not to proceed with its expansion plans at this time due to market conditions and high interconnection costs.**

Regarding large loads proceeding as forecasted, most of the oil and gas sector load growth expected to occur between now and the end of the test period is associated with projects currently under development by Veresen Midstream. Most of these projects are well advanced, have a high probability of proceeding, and are the subject of agreements with BC Hydro.

- **In 2014, Veresen Midstream entered into definitive agreements to acquire certain natural gas gathering and compression assets supporting Montney development in the Dawson area of northeastern British Columbia from Encana Corporation (Encana) and the Cutbank Ridge Partnership (CRP). CRP is a partnership between Encana and Cutbank Dawson Gas Resources Ltd., a subsidiary of Mitsubishi Corporation. Veresen Midstream has also agreed to undertake up to $5 billion of new midstream expansion for Encana and CRP in the Montney region under a 30-year fee-for-service arrangement. Between October 6, 2015 and December 28, 2016, Veresen has announced the sanctioning of four projects in the Montney region totalling $2.7 billion. All of these projects are being developed to take electricity service from BC Hydro. More specific information on each of these projects is provided as follows:**

  - **October 6, 2015 Veresen announced approval of the $860 million Sunrise (4-26) Gas Processing Plant.**

    - **400mmcf/d facility expected to be commercially operating in late 2017.**

    - **This is the largest gas plant to be commissioned in western Canada in the last 30 years.**

    - **BC Hydro and Veresen executed an Electric Service Agreement in respect of this facility in January 2017.**

  - **December 7, 2015 Veresen announced approval of the $715 million Tower (3-7) Rich Gas Processing Complex.**

    - **200mmcf/d facility and up to 20,000 barrels per day of condensate and Natural Gas Liquids (NGLs) is expected to be commercially operating in late 2017.**

- **BC Hydro and Veresen executed an Electric Service Agreement in respect of this facility in January 2017.**

- **March 9, 2016 Veresen announced approval the $930 million Saturn Phase 2 Processing facility.**
  - **Additional 200 MMcf/d of compression, 400 MMcf/d of processing and significant inlet liquids and NGL handling facilities expected to be commercially operating in mid-2018 and will be taking service from BC Hydro.**
    - **The existing 200mmcf/d of compression became operational in 2015 and currently receives electricity service from BC Hydro.**

- **December 28, 2016 Veresen announced approval of an additional $195 million investment in capital projects.**
  - **Two new projects have been sanctioned by the CRP to facilitate ongoing development plans while also minimizing total infrastructure costs and surface footprint.**
    - **The South Central Liquids Hub project has been sanctioned to allow the existing gathering system in the area to handle development anticipated over the next several years and is expected to be in service by the end of the second quarter of 2017.** [redacted]
    - **The Tower Liquids Hub has also been sanctioned to provide a lower overall cost and more commercially flexible solution for the handling and storage of NGLs produced at the Sunrise, Tower and Saturn Phase II processing facilities. The Tower Liquids Hub is expected to be in service in the third quarter of 2017. An Electric Service Agreement for this facility was executed on in 2017.**

- **Three of the facilities identified (i.e., those with executed Electric Service Agreements) have an aggregate probability weighted adjusted load** [redacted]**. These facilities make up most of the anticipated oil and gas sector load growth during the test period. All three facilities are currently under construction** [redacted]

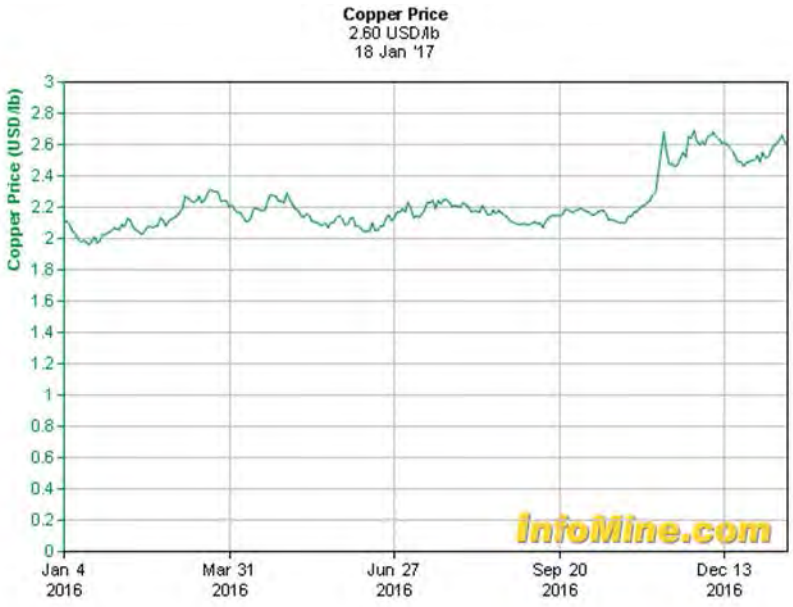
- **BC Hydro will be able to supply the facilities' full load requirements once system reinforcements are completed in spring 2017. These**

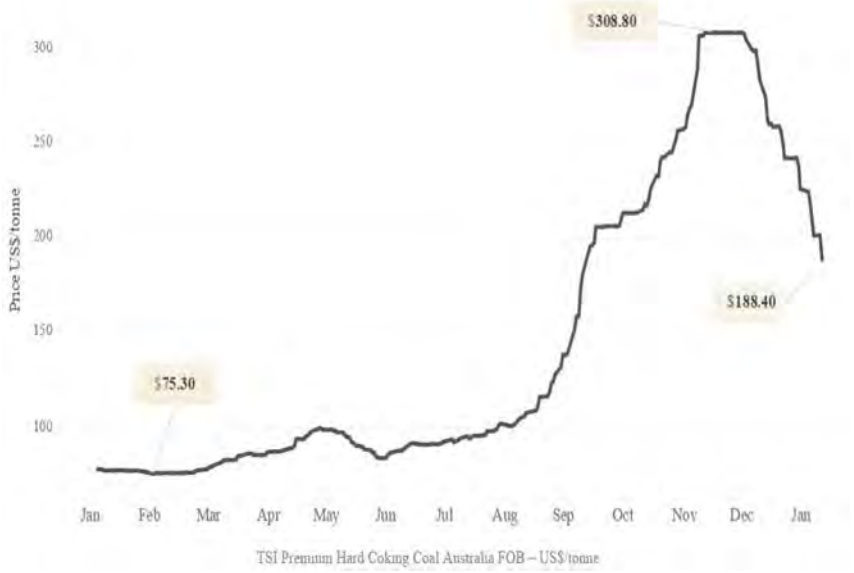
important milestones solidify the relatively high probability weightings that have been assigned to these projects in developing the mid oil and gas sector forecast. In fact, once these facilities are in service, the aggregate load in fiscal 2019 will be approximately- [redacted]

In addition, other oil and gas sector projects that have made electricity service enquiries continue to advance since the May 2016 Load Forecast was completed. For example: [redacted]

Mining Sector

There is a positive variance in the year to date sales for the metal and coal sectors. The market prices for both copper and metallurgical coal have increased in the near term over what is reflected in the mid forecast included in the Application. Metallurgical coal prices have increased in recent months due to newly implemented supply restrictions in China and recent increases in demand. These developments support the May 2016 Load Forecast for the mining and metallurgical coal sectors. The following graphs show those recent prices.





Internal discussions with Key Account Managers, Load Interconnections, and customers, combined with our review of market analysis, have identified the following:

- **In summer 2016, the Mt Polley mine received permission to resume full production and at the time when the forecast was prepared in April 2016 this was still unknown. BC Hydro anticipates this would increase the May 2016 aggregate mining forecast by about 100 GWh per year over the test period.**

- **While BC Hydro believes that there is currently insufficient evidence to conclude that the current price increase for both copper and metallurgical coal is signaling a permanent shift towards BC Hydro's high commodity price forecast, a continuation of the current higher copper and metallurgical coal price environment could create opportunities for producers over and above what is reflected in the mid-Load Forecast. For instance:**

    - **A continuation of the current higher copper price environment could provide opportunities for project restarts for a large industrial customer (Huckleberry Mine).**

    - **We also believe higher metallurgical coal prices could provide opportunities for the remaining smaller idle distribution coal mining loads to restart over the test period. In fact, one of the three idled Northeast coal mines on distribution voltage was recently restarted and there is some expectation that a second mine will be re-opened.**

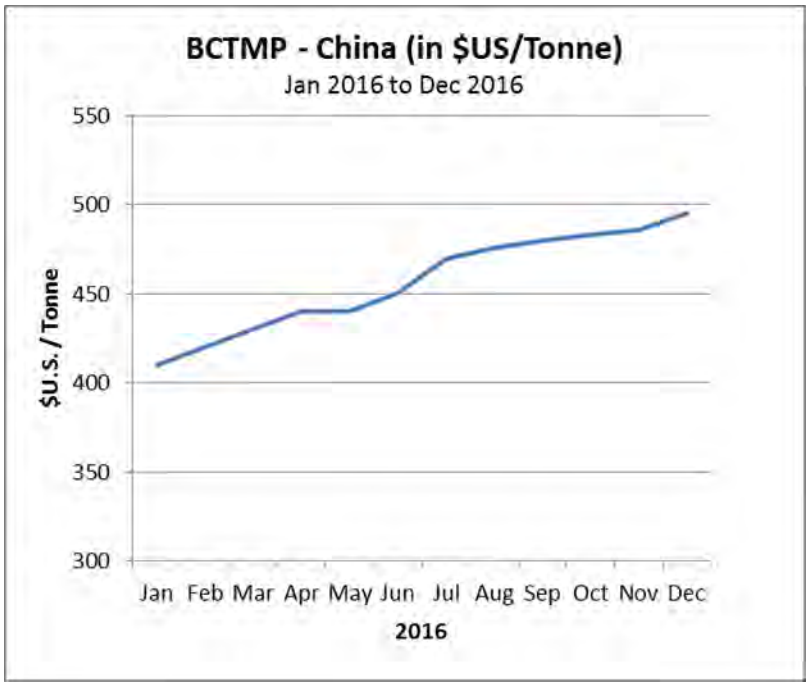
- **Current higher copper prices are supporting existing mines, releasing short-term pressure on operating costs, but they do not significantly improve the outlook for new projects. Market analysts believe most new projects in B.C. require a sustained copper price at or over $3/lb to become viable.**

BC Hydro also notes that current higher copper and metallurgical coal prices have resulted in some customers being required to repay some of the amounts temporarily deferred under the Mining Customer Payment Plan earlier than expected. This reflects that current commodity prices are higher than what is reflected in the mid forecast included in the Application.

Forestry Loads:

The forestry sector is tracking well overall being less than 1 per cent below forecast on a consolidated basis. The largest sub-sector in the forestry sector is pulp and paper. As discussed in BC Hydro's response to BCOAPO IR 1.19.2, we considered the impact of reduced paper usage and dropping Thermal Mechanical Pulp (TMP) pulp prices in the preparation of the May 2016 Load Forecast. We feel we have reasonably addressed any weakness in this sector with the probability assessments reflected in the May 2016 Load Forecast. While any individual closures can result in a deviation from forecast load timing, our assessment is that most of the reduction in this sector has taken place and any additional closure risks are already reflected in the May 2016 Load Forecast.

On a positive note, recent TMP prices have increased relative to those assumed in the mid May 2016 Load Forecast and we expect this to have a stabilizing effect on the pulp and paper sector forecast through the test period. Increasing Chinese demand for TMP used in folding box boards is supporting current markets. The following graph shows that prices have been gradually increasing as incremental TMP capacity has been absorbed into the markets and little incremental capacity is expected in the next few years.



Catalyst Paper has announced that they had received a final order from the Supreme Court of B.C. on their Recapitalization and Privatization Transaction which will provide increased stability for the company.

Finally, the impact of the Nicola Valley mill closure on the light industrial sector is provided in BC Hydro's confidential response to AMPC IR 1.9.3.4.

Other Loads

Other Loads include customers such as ports, airports, cement operations, etc. The load in this sector is tracking well against the May 2016 Load Forecast. However, two recent developments will affect the test period:

- **The closure in October 2016 of a cement operation in Kamloops due to low demand from Alberta ([redacted]).**
- **A public announcement in August 2016 that a potential new silica operation will be relocated to United States. However, this project was already highly discounted (i.e., assigned a low probability weighting) in the May 2016 Load Forecast ([redacted]).**

We have no other information regarding recent developments that could affect the projection over the test period, and the small 1.1 per cent variance between actual and forecast sales should remain to the end of fiscal 2017.

(iii) LNG Developments

In the May 2016 Load Forecast, the only LNG related load forecast for the test period was associated with FortisBC's Tilbury Expansion Phase 1. Our variance analysis indicates that the FortisBC Tilbury LNG plant is not on track to meet the projected sales of 57 GWh for fiscal 2017 due to a deferred in-service date.

The table below compares the revised sales projection recently provided by FortisBC Tilbury LNG to BC Hydro against the sales projection assumed in the May 2016 Load Forecast, as provided in BC Hydro's response to BCUC IR 1.7.1.

	F2017	F2018	F2019
FortisBC Tilbury LNG May 2016 Load Forecast)	57	139	139
FortisBC Tilbury LNG (updated to BC Hydro in January 2017)	0	22	64

These projections remain subject to market conditions and demand for LNG from the FortisBC Tilbury LNG facility.

(iv) Low-Carbon Electrification

Government announced in the Province's August 2016 Climate Leadership Plan that it would work with BC Hydro to expand the mandate of BC Hydro's demand-side management programs to include investments that reduce greenhouse gas emissions.

Potential additional load as a result of this expanded mandate was not reflected in the May 2016 Load Forecast.

BC Hydro is working with government, industry and its customers to explore opportunities for electrification that would reduce greenhouse gas emissions. Early efforts have been focused on upstream gas processing operations given the significant potential emission reductions in this sector. BC Hydro continues to assess these opportunities and to-date has not concluded any agreements.

Implementation of any programs could result in increased load over and above the current forecast both in the test period and beyond. BC Hydro is working toward having programs in place during the test period but the timing related to these programs and any resulting low-carbon electrification is still uncertain. As a result, at this point, BC Hydro is not proposing to revise the load forecast upward for the test period as a result of low-carbon electrification.

Any longer term incremental load expectations from low-carbon electrification will be reflected in the 2018 Integrated Resource Plan when more details are known and load impacts have been estimated.

BC Hydro has developed the attached paper, entitled "Low-Carbon Electrification Potential", which provides an overview of the various elements of low-carbon electrification and their potential implications for future BC Hydro load.

(v) Other Known Factors

BC Hydro notes the above assessment does not include the following factors:

- **An updated economic forecast, for the reasons outlined in BC Hydro's response to BCUC IRs 1.5.1 and 1.5.2.**

- **For large industrial transmission customers served under Rate Schedule 1823, BC Hydro intends to file an application to amend Tariff Supplement No. 74 (the CBL Determination Guidelines) with the British Columbia Utilities Commission. To the extent that customers' future energy baseline (Energy CBL) might be impacted by approved amendments to Tariff Supplement No. 74, it can impact BC Hydro's customer-specific forecast of annual energy use and Rate Schedule 1823 Tier 1/Tier 2 energy pricing mix. The prospective impact of possible future amendments to Tariff Supplement No. 74 was not considered in the load forecast review.**

<u>Conclusion</u>

- **The total domestic sales forecast in F2017 is tracking well and is less than 1 per cent below forecast and well within our uncertainty bands.**

- **The residential and commercial sectors are expected to be in line with the May 2016 Load Forecast.**

- **There have been offsetting changes in industrial loads. However, there have been positive developments with commodity price increases across all sectors relative to the mid-forecast assumptions and a number of positive project developments especially in the oil and gas sector. These developments have resulted in increased load through project restarts and solidified load projections associated with anticipated new load over the test period. All other things being equal, these developments will have an upward influence on the Load Forecast. In addition, there are no significant issues that BC Hydro is aware of over the test period that would suggest any revisions to the load forecast. In particular, there does not appear to be a likelihood of a further drop in commodity prices that drove much of the load reductions in recent years.**

- **For the LNG Plant load volumes reflected in the Application over the test period, BC Hydro is aware of revised load information from FortisBC Tilbury LNG. The revised information could result in lower LNG based sales by about 57 GWh for fiscal 2017, 117 GWh for fiscal 2018 and 75 GWh for**

fiscal 2019. These volumes are dependent on market conditions and demand for LNG from this specific plant.

- **BC Hydro has summarized low carbon electrification opportunities (see attachment to this response) that could result in increased load both in the test period and beyond. However, the timing of any programs is uncertain, and to-date no agreements have been concluded.**

- **The May 2016 Load Forecast is an unbiased forecast, and we believe it remains appropriate for setting rates during the test period. Any variances to the load forecast over the test period will be captured in the Non-Heritage Deferral Account.**