

December 12, 2023

Western Energy Imbalance Market Governing Body
250 Outcropping Way
Folsom, CA 95630

Dear Chair Campbell and Governing Body Members:

As you are likely aware, Powerex has been an active participant in the Western EIM for nearly six years. Over this past year, Powerex has significantly increased its EIM activity, which has resulted in an increase in the CAISO's calculation of EIM gross benefits for Powerex. At the most recent Joint ISO Board of Governors and WEIM Governing Body Meeting on November 8, 2023, CAISO management repeatedly highlighted the magnitude of Powerex's calculated EIM benefits in Q3 2023 in its presentation. We are writing to provide additional context and background on Powerex's increased EIM activity in 2023, which has been substantially different than in past years. Powerex hopes that this information will provide valuable insights for the EIM Governing Body, the CAISO, and all interested stakeholders, while reducing the potential for any misinterpretation or misunderstanding of Powerex's EIM activity in 2023.

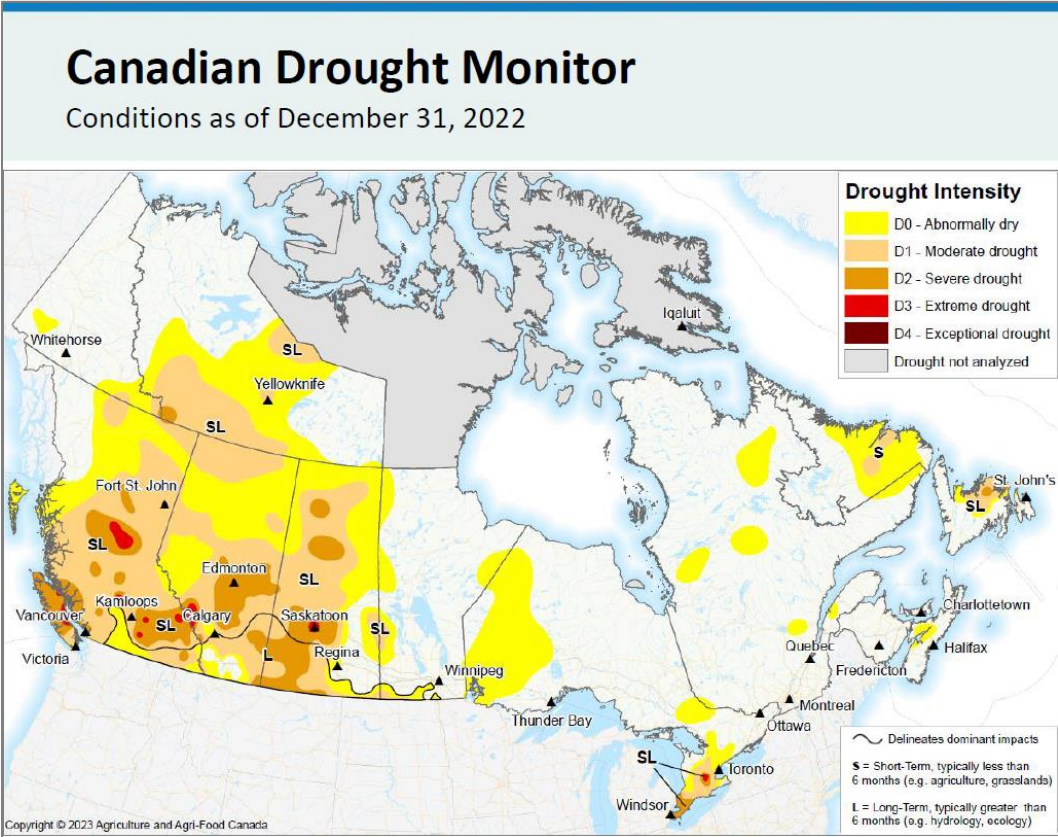
British Columbia Is Experiencing Prolonged Drought Conditions

The BC Hydro system is comprised predominantly of hydroelectric generation facilities, which produce over 90% of the electricity supply in a typical year. In most years, the BC Hydro system has an annual surplus of electricity, which is exported and sold in western wholesale electricity markets by Powerex.^{1 2} For approximately the last year and a half, however, British Columbia has experienced a prolonged, widespread, and severe drought.

¹ Prior to the current fiscal year, BC Hydro reported an annual energy surplus in 8 of the last 12 fiscal years; and the energy deficits in the other four fiscal years were limited in magnitude. BC Hydro's projected energy deficit for their current fiscal year is expected to be an all-time record.

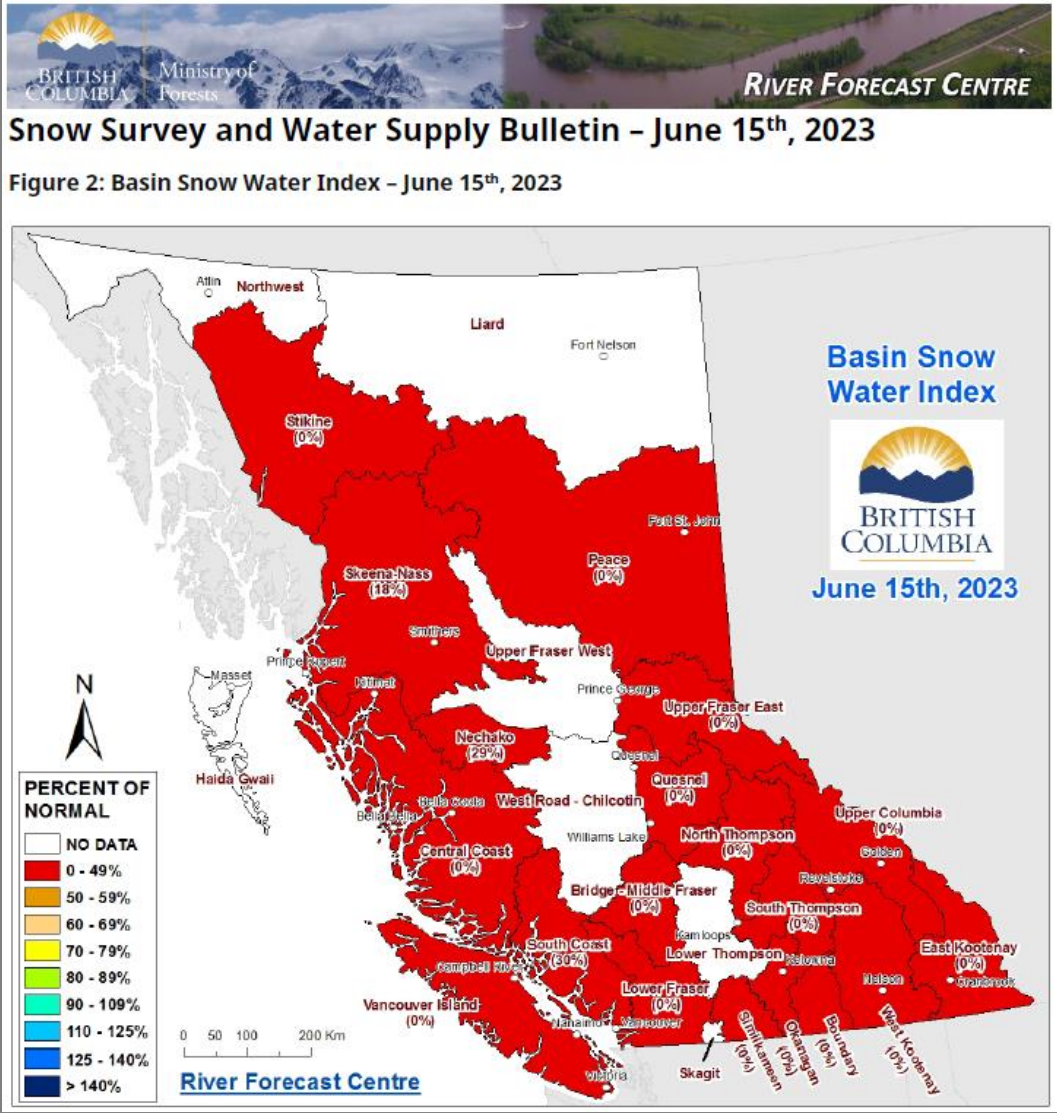
² Powerex Corp. is a wholly owned subsidiary of BC Hydro. BC Hydro and Powerex are parties to an Agreement that is supported by the Province of British Columbia and filed with the British Columbia Utilities Commission, under which (i) BC Hydro provides its surplus supply and residual system capabilities to Powerex, enabling Powerex to make exports and sales to entities across the west and (ii) Powerex has an obligation to deliver supply to BC Hydro, as required and/or requested, in support of BC Hydro's electricity import needs. These import and export activities provide economic, environmental and reliability benefits to the broader western region.

These conditions began in the late summer of 2022, and were clearly evident by the end of that year:



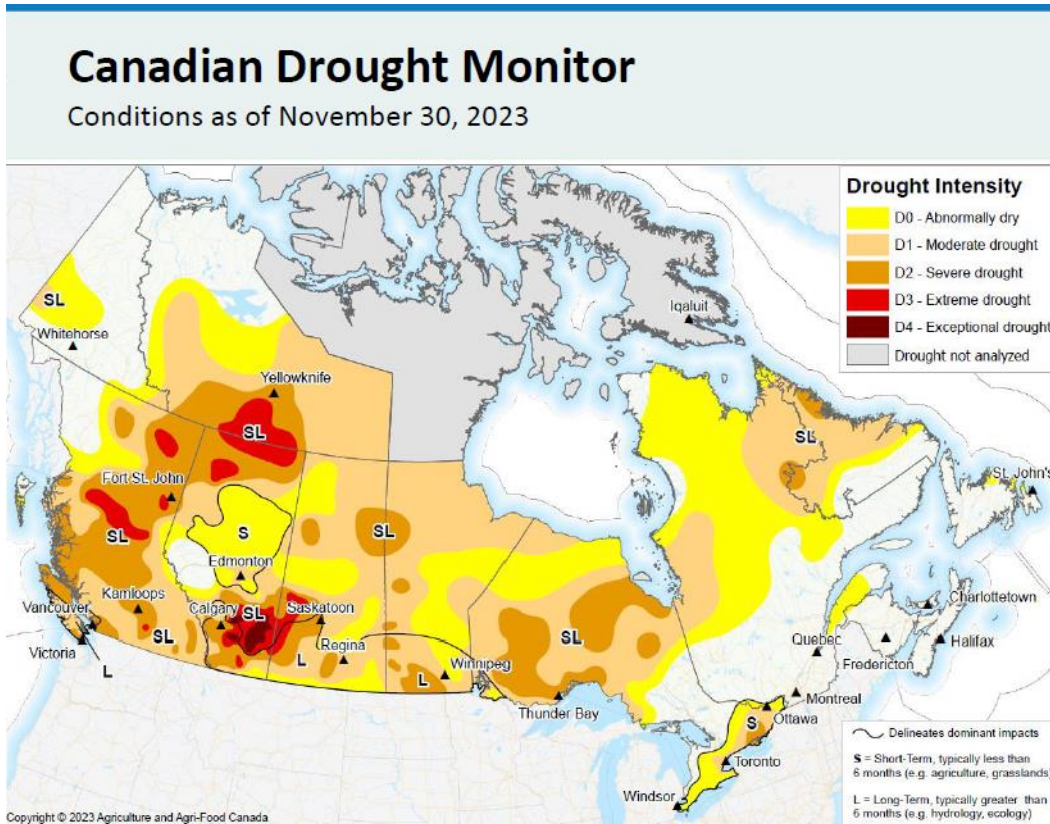
Source: Canadian Drought Monitor, [Monthly Assessment for December 2022](#).

Drought conditions continued in Q1 and Q2 of 2023 and, combined with early snowmelt, resulted in very low snowpack heading into the summer season:



Source: British Columbia, [Snow Survey and Water Supply Bulletin](#), June 15, 2023.

Drought conditions have continued into the fall and early winter seasons, with a large portion of the province now in severe drought conditions, and with multiple areas of the province experiencing extreme drought conditions:



Source: Canadian Drought Monitor, [Monthly Assessment for November 2023](#).

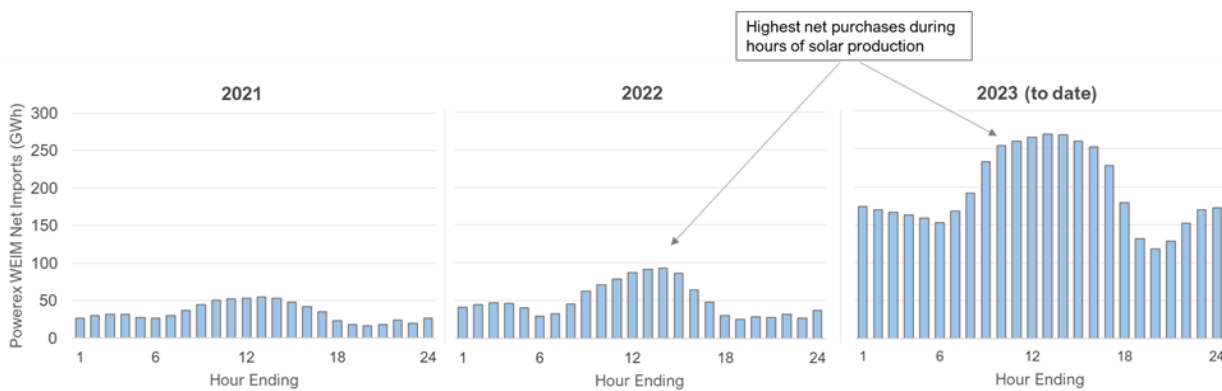
Powerex Has Significantly Increased Imports into the BC Hydro System

The extensive drought across B.C. has resulted in an ongoing energy shortfall in the BC Hydro system, necessitating BC Hydro to request large volumes of ongoing net imports into B.C. from Powerex. So far in 2023, Powerex has been a net importer of energy into the BC Hydro system for approximately 10,000 GWh, greatly exceeding the previous annual net import record.

Imports into the BC Hydro system are procured in western wholesale markets by Powerex, in both the forward and spot market timeframes, from a broad range of suppliers and geographic locations across the western US, as well as from the Alberta organized market. Powerex’s purchases and corresponding imports into the BC Hydro system are often greatest during periods of high solar and/or wind production in other jurisdictions, when the available surplus supply tends to be greatest. These imports into the BC Hydro system are used by BC Hydro to serve its load, enabling BC Hydro to conserve limited water at its hydroelectric storage reservoirs. Conserving water directly supports BC Hydro’s ability to reliably serve its customers in both current and future periods, even if drought conditions persist or become even more severe. BC Hydro’s ability to conserve water in its

reservoirs also supports Powerex’s ability to meet its forward commitments to deliver electricity during peak periods in the summer months to load serving entities across the west.

Powerex’s efforts to procure a large volume of net imports into the BC Hydro system across this past year have been reflected in its Western EIM activity. As background, Powerex began participating in the Western EIM in 2018, initially with bi-directional connectivity to support a modest volume of intra-hour imbalance transactions. Over time, Powerex’s export activity from the Western EIM into the BC Hydro system increased in certain hours, as it sought to purchase limited quantities of energy from other Western EIM participants when surplus generation was available at attractive prices—primarily during the hours of substantial solar production. As the historic drought in B.C. has worsened, Powerex has increased the hourly magnitude of its purchases in the Western EIM, and has done so across most of the day.



Powerex’s increase in its purchasing activity in the Western EIM illustrates the effectiveness of organized electricity markets in enabling entities to make surplus supply available on a real-time, sub-hourly basis, increasing the overall volume of beneficial transactions that are possible. This benefits both the entities with available surplus supply, who earn revenue from market sales, as well as entities such as Powerex that seek additional supply, who can purchase it from the market at a price that may often be more economic than other sources.

As presented at the November 8, 2023 Joint ISO Board of Governors and EIM Governing Body Meeting, the CAISO estimates that Powerex realized \$83.72 million of “gross benefits” in the Western EIM in Q3 2023. Powerex notes that the CAISO’s calculation is not an estimate of “profit” or “trading margins”; instead, it largely reflects a comparison of the price of Powerex’s electricity purchases in the Western EIM relative to the maximum price Powerex was willing to pay for those purchases. An increase in gross benefits estimated in this fashion is to be expected given the substantial increase in the volume of Powerex’s purchases in the Western EIM in Q3 2023. In Powerex’s view, the most relevant statistic from its Q3 2023 activity in the Western EIM is that it purchased and imported approximately 1,817 GWh into the BC Hydro system, at an estimated net cost to Powerex of about \$85 million.³

³ Powerex’s estimated net cost is based on the volume of net EIM transfers by Powerex and the locational marginal price in each applicable interval, adjusted for estimated congestion revenues and losses. In addition to this net cost, Powerex substantially increased its procurement of third-party transmission service on the Bonneville system, increasing its connectivity from the EIM area to the BC Hydro system.



We hope that you find the above information helpful. If the EIM Governing Body has any follow-up questions, please contact Amy Sopinka, Director, Market Policy at amy.sopinka@powerex.com.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Bechard".

Tom Bechard
President and CEO
Powerex Corp

cc: Elliot Mainzer, President and CEO, CAISO