

# BD3 Status Update: Q1 2023

April 20, 2023

<https://www.saskpower.com/about-us/our-company/blog/2023/bd3-status-update-q1-2023>



During the first quarter of 2023 (Jan. 1 to Mar. 31), SaskPower's carbon capture and storage (CCS) facility was available 93% of the time, capturing 226,184 tonnes of carbon dioxide (CO<sub>2</sub>).

While online, the facility had a daily average capture rate of 2,688 tonnes, with a peak one-day capture of 2,873.8 tonnes. This resulted in an emissions intensity of 354 tonnes of CO<sub>2</sub> per gigawatt hour, which is within the current federal carbon tax threshold of 549 tonnes CO<sub>2</sub>/MWh.

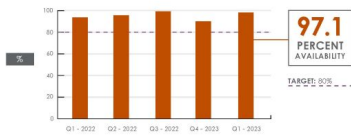
Mar. 31 also marks the end of the 2022-23 fiscal year. The total capture of 857,178 tonnes of CO<sub>2</sub> between Apr. 1, 2022, and Mar. 31, 2023, represents the strongest-ever fiscal year since operations began in 2014.

SaskPower's acid plant also had an extremely strong fiscal year. A total of 5,200 tonnes of sulfuric acid was produced, which is more than double any previous year.

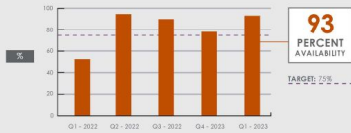
For previous BD3 updates or more information on SaskPower's future, visit [saskpower.com/blog](https://www.saskpower.com/blog).

## BOUNDARY DAM UNIT #3 Q1 - 2023

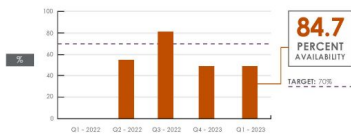
### BD3 UNIT AVAILABILITY



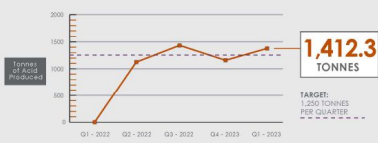
### CCS FACILITY AVAILABILITY



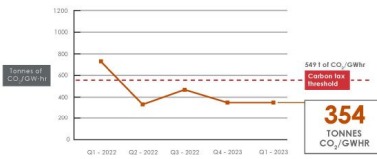
### ACID PLANT AVAILABILITY



### SULPHURIC ACID PRODUCED

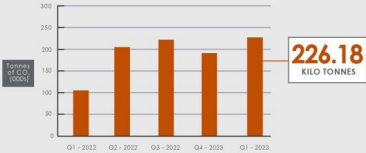


### EMISSIONS INTENSITY\*



\*Volume of CO<sub>2</sub> emitted from BD3 for every Giga-watt of electricity generated each hour.

### CO<sub>2</sub> VOLUME CAPTURED



**5,227,891 TONNES**  
captured since operational start-up in 2014

2021: 442,126 t      2022: 749,005 t      2023 YTD: 226,184 t

# BD3 Status Update: Q4 2022

<https://www.saskpower.com/about-us/our-company/blog/2023/bd3-status-update-q4-2022>

January 23, 2023



SaskPower's carbon capture and storage (CCS) facility at Boundary Dam Unit 3 capped off a strong 2022 by achieving a milestone of five million tonnes captured since start-up. As of the end of 2022, 5,001,707 tonnes of CO<sub>2</sub> have been captured and prevented from entering the atmosphere. Total capture for the 2022 calendar year was 749,035 tonnes, and CCS is on track to achieve an 800,000-tonne target for fiscal 2022-23.

During the fourth quarter of 2022 (October 1 – December 31), the CCS facility was available 78.9% of the time, capturing 192,703 tonnes of CO<sub>2</sub>. A two-week planned maintenance outage in Q4 allowed SaskPower to undertake scheduled work to enable the facility to run smoothly until the next planned outage in May 2023.

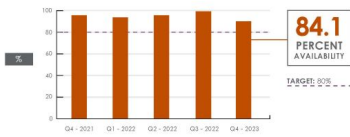
While online, the facility had a daily average capture rate of 2,631 tonnes in Q4, with a peak one-day capture of 2,874 tonnes. This resulted in an emissions intensity of 383.2 tonnes of carbon dioxide per gigawatt hour, which is within the current federal carbon tax threshold of 549 tonnes CO<sub>2</sub>/MWh.

The acid plant at CCS had an extremely strong year: 2022 saw numerous records broken including highest daily acid produced at 52.2 tonnes produced (Nov 12, 2022), the highest monthly acid produced at 702 tonnes (November 2022), the highest quarterly acid produced at 1,470 tonnes in Q3 2022, the highest yearly acid produced at 3,788 tonnes for 2022 and the highest quarterly and yearly availability since start-up at 80.4% and 46.2% respectively.

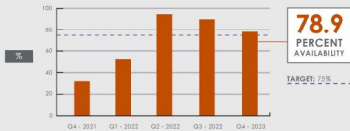
For previous BD3 updates or more information on SaskPower's future, visit

## BOUNDARY DAM UNIT #3 Q4 - 2023

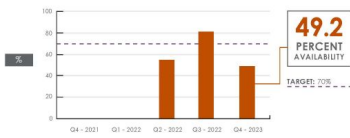
### BD3 UNIT AVAILABILITY



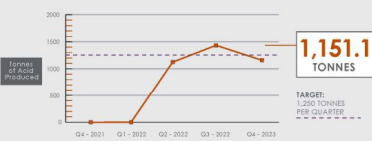
### CCS FACILITY AVAILABILITY



### ACID PLANT AVAILABILITY



### SULPHURIC ACID PRODUCED

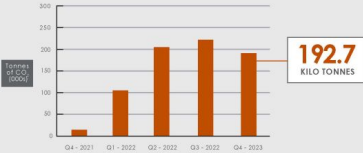


### EMISSIONS INTENSITY\*



\*Volume of CO<sub>2</sub> emitted from BD3 for every Giga-watt of electricity generated each hour.

### CO<sub>2</sub> VOLUME CAPTURED



**5,001,707 TONNES**  
captured since operational start-up in 2014

2020: 729,092 t      2021: 442,126 t      2022: 749,035 t

<https://www.saskpower.com/about-us/our-company/blog/2022/bd3-status-update-q3-2022>



## BD3 Status Update: Q3 2022

October 18, 2022

During the third quarter of 2022 (July 1 – September 30), SaskPower's CCS facility was available 94.5 per cent of the time, capturing 219,750 tonnes of CO<sub>2</sub>. While online, the facility had a daily average capture rate of 2,500 tonnes, with a peak one-day capture of 2,742 tonnes.

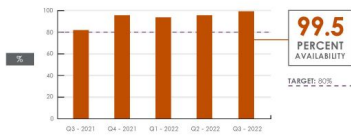
This strong performance resulted in an emissions intensity of 436 tonnes of carbon dioxide per megawatt hour, well within the federal carbon tax threshold of 549 tonnes CO<sub>2</sub>/MWh.

The acid plant was available 80.4 per cent of the time during the last quarter, resulting in 1,469.7 tonnes of sulfuric acid produced, significantly exceeding targets and setting a new quarterly record. Sulfuric acid has numerous potential industrial uses for SaskPower and can be sold as a revenue source for the company.

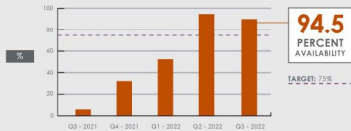
The CCS facility will be down for a two-week planned maintenance outage in mid-October. For previous BD3 updates or more information on SaskPower's future, visit [saskpower.com/blog](https://www.saskpower.com/blog).

## BOUNDARY DAM UNIT #3 Q3 - 2022

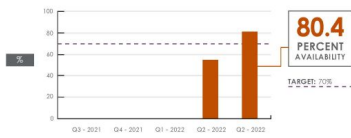
### BD3 UNIT AVAILABILITY



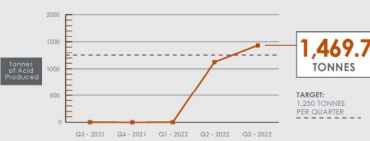
### CCS FACILITY AVAILABILITY



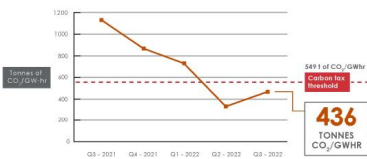
### ACID PLANT AVAILABILITY



### SULPHURIC ACID PRODUCED

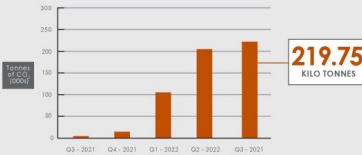


### EMISSIONS INTENSITY\*



\*Volume of CO<sub>2</sub> emitted from BD3 for every Giga-watt of electricity generated each hour.

### CO<sub>2</sub> VOLUME CAPTURED



**4,809,002 TONNES**  
captured since operational start-up in 2014

2020: 729,092 t      2021: 442,126 t      2022 YTD: 556,302 t



# BD3 Status Update: Q2 2022

July 22, 2022

<https://www.saskpower.com/about-us/our-company/blog/2022/bd3-status-update-q2-2022>

SaskPower's carbon capture and storage (CCS) facility at Boundary Dam Power Station Unit 3 (BD3) has captured and sequestered more than 4.5 million tonnes of carbon dioxide (CO<sub>2</sub>) since operations began in fall 2014. Throughout the facility's existence SaskPower has maintained its commitment to transparent and timely public communications regarding its operation via the monthly BD3 blog. We will continue to provide these regular updates; however they will now be provided on a quarterly basis.

Following two unplanned outages in 2021 that extended into early 2022, the CCS facility has resumed stable operations. Results from the second quarter of 2022 (April 1 to June 30), showed CCS was available 96% of the time, capturing 218,537 tonnes of CO<sub>2</sub> — well within SaskPower's target range.

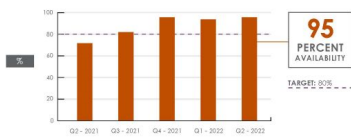
Readers will also notice some changes to the data provided in the graphic on this page. SaskPower will now provide statistics about the availability and output of the acid plant at CCS. The acid plant converts sulfur dioxide (SO<sub>2</sub>) captured during the CCS process into sulphuric acid via a catalyst process. When operational, the acid plant can produce up to 60 tonnes per day of sulphuric acid. SaskPower uses this acid for its own industrial purposes as well as selling it to private companies. Sulphuric acid is used in many applications ranging from water treatment to the production of fertilizers.

The blog will now also report the emissions intensity of BD3/CCS. Emissions intensity is the volume of CO<sub>2</sub> emitted from BD3 for every gigawatt of electricity generated each hour (t CO<sub>2</sub>/GWh). This metric is significant for our operations because the federal 'Carbon Tax Threshold' is currently set at 594 t CO<sub>2</sub>/GWh, meaning any emissions above that mark are subject to the carbon tax. Emissions below this threshold reduce the overall carbon tax for the Boundary Dam Power Station. For reference, during Q2 2022, BD3/CCS had an emissions intensity of 382 t CO<sub>2</sub>/GWh, and the approximate emissions intensity of a conventional coal unit is 1,100 t CO<sub>2</sub>/GWh.

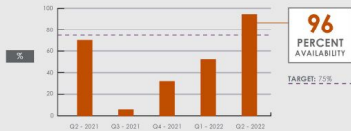
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## BOUNDARY DAM UNIT #3 Q2 - 2022

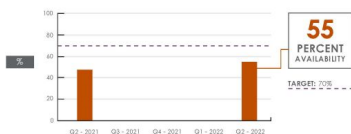
### BD3 UNIT AVAILABILITY



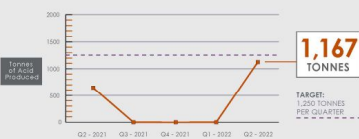
### CCS FACILITY AVAILABILITY



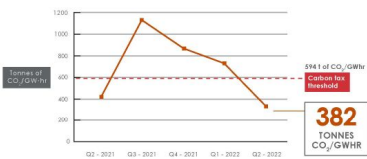
### ACID PLANT AVAILABILITY



### SULPHURIC ACID PRODUCED

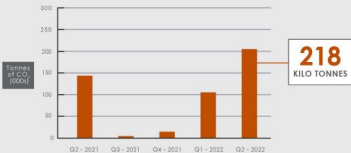


### EMISSIONS INTENSITY\*



\*Volume of CO<sub>2</sub> emitted from BD3 for every Giga-watt of electricity generated each hour.

### CO<sub>2</sub> VOLUME CAPTURED



**4,589,251 TONNES**  
captured since operational start-up in 2014

2020: 729,092 t      2021: 442,126 t      2022 YTD: 336,358 t





# BD3 Status Update: April 2022

May 12, 2022

<https://www.saskpower.com/about-us/our-company/blog/2022/bd3-status-update-april-2022>

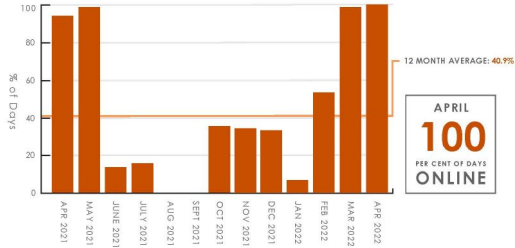
During the month of April 2022, the carbon capture and storage (CCS) facility at Boundary Dam Power Station captured 79,312 tonnes of carbon dioxide. The average daily capture when CCS was online was 2,651 tonnes per day, with a peak one-day capture of 2,899 tonnes. CCS stayed online with a strong showing this month, despite the weather challenges that hit the southeast.

For previous BD3 updates or more information on SaskPower's future, visit [saskpower.com/blog](https://www.saskpower.com/blog).

# BOUNDARY DAM UNIT #3

## APRIL 2022

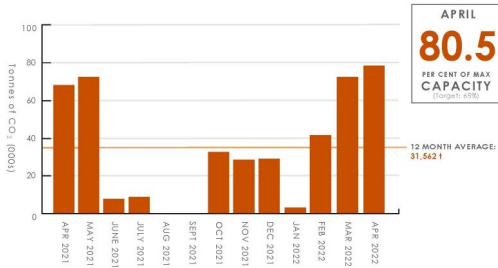
### TIME ONLINE



### POWER PRODUCED



### VOLUME CAPTURED



In April, the daily average of CO<sub>2</sub> captured by Unit #3 PEAKED AT 2,899 TONNES



**4,450,027 TONNES**  
captured since operational start-up

2020: 729,092 t      2021: 442,126 t      2022: 197,354 t