

## Introduction

The following report provides information on the long term adequacy of the Alberta electric energy market. The report contains metrics that include tables on generation projects under development and generation retirements, an annual reserve margin with a five year forecast period at the time of system peak, a two year daily supply cushion, and a two year probabilistic assessment of the Alberta Internal Load (AIL). The Long Term Adequacy (LTA) Metrics provide an assessment and information that can be used to facilitate further assessments of long term adequacy. This report is updated quarterly in February, May, August, and November. Inquiries on the report can be made at [forecast@aeso.ca](mailto:forecast@aeso.ca).

## Summary of Changes since Previous Report

### New Generation and Retirements Metric

#### *Projects completed and removed from list:*

- Fortis Conrad DER Solar 1
- Fortis Conrad DER Solar 2
- Fortis Monarch 492S DER Solar
- Fortis Namaka DER Solar

#### *Generation Projects moved to “Active Construction”:*

- Capstone Wild Rose 2 Wind Farm
- Greengate Power Paintearth Wind Farm
- Solar Krafte Brooks
- ATCO Three Hills 770S DER Solar 1
- ATCO Michichi Creek 802S DER Solar
- Pembina Empress Cogen
- RESC Hilda MPC Wind
- Capital Power Genesee 1 Repower GT (unit 6 Gas)
- Capital Power Genesee 1 Repower ST
- Capital Power Genesee 2 Repower GT (unit 7 Gas)
- Capital Power Genesee 2 Repower ST
- EDF Cypress 2 Wind
- CEC Beddington 162S Gas
- Buffalo Plains MPC Wind

#### *Generation projects moved to “Regulatory Approval”:*

- Teric Power Ltd. eReserve4 20 MW BESS
- Teric Power Ltd. eReserve5 20 MW BESS
- Teric Power Ltd. eReserve6 20 MW BESS
- Solar Krafte Utilities Inc. Brooks Solar Farm
- 2079816 Alberta Ltd Hanna Solar Project Power Plant

**Generation projects that have been added to “Announced, Applied for AESO Interconnection, and/or Applied for Regulatory Approval”:**

- Fortis High River 65S DER Solar
- ATCO Wapiti 823S DER Battery
- Potentia Paintearth Wind Phase 2
- EDF Pe Na Koyim Wind
- ATCO Bullpound 803S DER Solar
- ATCO Three Hills 770S DER Solar
- ESI Eastervale Solar Battery
- ESI Eastervale Solar Battery
- Aura Peace Butte Solar Battery
- Aura Peace Butte Solar Battery
- Westbridge Red Willow Solar Battery
- Westbridge Red Willow Solar Battery
- Suncor Forty Mile Granlea Modification
- BluEarth BluEarth Prairie Yarrow MPC Wind
- Greengate Lacuna MPC Battery
- Montem Tent Mountain MPC Pumped Hydro
- Pembina Empress Solar
- TransAlta Red Rock MPC Wind

**Generation projects that have been added to on hold status:**

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**Generation projects that have been removed:**

- FortisAlberta 498S Tilley DG PV
- FortisAlberta Cutting Lake 227S DER Gas
- Pincher Creek CO2 MPC Cogen
- Fortis Duchess 339S DER Solar
- Enterprise Prosperity Wind
- ATCO Coronation 773S Solar DG
- Suncor Meadow Creek Cogen
- ATCO Fieldgate 824S DER Gas

**Other changes to generation projects:**

Project	Change
Naturener – Wild Rose 2 Wind Farm	New ISD of Oct-2022 from Aug-2022
RESL – Renewable Energy Service WAGF	New ISD of Nov-2022 from Jun-2023
EDPR – Sharp Hills Wind Farm	New ISD of Dec-2022 from Oct-2022
Greengate Power – Wheatland WAGF	New ISD of Aug-2022 from Jun-2022

Fortis – Spring Coulee 385S Solar DG	New ISD of Aug-2023 from Aug-2022
BowArk – Drywood Battery	New ISD of Dec-2023 from Jun-2022
TransAlta – Garden Plain Wind	New ISD of Apr-2022 from Aug-2022
Fortis – Namaka DER Solar	New ISD of Oct-2021 from May-2022
EPCOR – WSI DG Solar	New ISD of Aug-2022 from Sep-2022
Solar Krafte – Rainier	New ISD of Jun-2024 from Dec-2023
Greengate – Lathom MPC Solar	New ISD of Jun-2023 from Dec-2022
Cascade – Combined Cycle Phase 1	New ISD of Aug-2023 from Sep-2023
Cascade – Combined Cycle Phase 2	New ISD of Aug-2023 from Sep-2023
ATCO – Three Hills 770S DER Solar 1	New ISD of Sep-2022 from May-2022
ATCO – Michichi Creek 802S DER Solar	New ISD of Sep-2022 from May-2022
EDP Renewables – Blue Bridge Solar	New ISD of Aug-2025 from TBD
Joss Wind – Jenner Wind Phase 3	New ISD of Aug-2022 from Dec-2022
Pembina – Empress Cogen	New ISD of Aug-2022 from Dec-2022
RESC – Forty Mile MPC Wind	New ISD of Sep-2023 from Jun-2023
ATCO – Sarah Lake 743S DER Geothermal	New ISD of Sep-2022 from Jul-2022
Fortis – Empress 394S DER Solar 1	New ISD of May-2023 from Nov-2022
Fortis – Empress 394S DER Solar 2	New ISD of May-2023 from Nov-2022
RESC – Hilda MPC Wind	New ISD of Oct-2022 from Aug-2022
Capital Power – Genesee 3 Change	New ISD of Nov-2022 from May-2022
Fortis – Joffre 535S DER Solar	New ISD of Mar-2023 from Dec-2022
Fortis – Joffre 535S DER Solar 2	New ISD of Mar-2023 from Dec-2022
TCE – Saddlebrook Solar Storage	New ISD of Aug-2023 from Sep-2022
ATCO – Ethel Lake 717S DER Wasteheat	New ISD of Sep-2024 from Aug-2022

Fortis – Castle Meridian DER Wind	New ISD of Nov-2022 from May-2022
Fortis – High River 65S DER Gas	New ISD of May-2023 from Jul-2022
Fortis – High River 65S DER Gas	New ISD of May-2023 from Aug-2022
MECL – Kirkcaldy MPC Solar	New ISD of Feb-2024 from Nov-2022
Capital Power – Genesee 1 Repower GT (unit 6 Gas)	New ISD of Dec-2023 from May-2023
Nutrien – Redwater Cogen	New ISD of Aug-2023 from Mar-2023
Capital Power – Genesee 2 Repower GT (unit 7 Gas)	New ISD of Dec-2023 from Aug-2023
Capital Power – Genesee 2 Repower ST	New ISD of Jan-2024 from Apr-2024
Sol – Aurora Solar Battery	New ISD of Apr-2024 from Sep-2023
Greencells – Estuary Solar	New ISD of Feb-2024 from Dec-2022
ATCO – Poplar Hill 790S DER Gas	New ISD of Feb-2023 from Sep-2022
ENMAX – Barlow Park DER Solar	New ISD of Dec-2022 from Oct-2022
Fortis – Bullshead 523S DER Solar	New ISD of Oct-2023 from Jan-2023
Greengate – Luna 2 MPC Solar Battery	New ISD of May-2024 from Apr-2024
Fortis – Rimbey 297S DER Gas	New ISD of Sep-2022 from Jul-2022
EER – Foothills Solar II	New ISD of Aug-2023 from Jun-2023
EDF – Bull Trail 2 Wind	New ISD of Sep-2024 from Jun-2024
PRD – Halsbury Solar	New ISD of Dec-2023 from Jun-2023
Frontline – Red Deer MPC Solar	New ISD of Dec-2025 from Jun-2024
Frontline – Kneehill MPC Solar	New ISD of Sep-2025 from Jun-2024
Dolcy – Dolcy Solar Battery	New ISD of Aug-2024 from Jun-2024
ATCO – Goodfare 815S DER Battery	New ISD of Oct-2023 from Jun-2023

### **Reserve Margin Metric**

The reserve margin has been updated to reflect changes to the project list and the updated 2021 LTO system load forecast.

### **Supply Cushion Metric**

The forecast supply cushion has been updated to reflect the new time period and updated using the 2021 LTO Alberta Internal Load forecast.

### **Two Year Probability of Supply Adequacy Shortfall Metric**

New values for the metric have been calculated with Total Energy Not Served equaling 6.3 MWh. This value is below the 1,987 MWh threshold. The forecast PSAS has been updated to reflect the new time period and updated using the 2021 LTO Alberta Internal Load forecast.

## New Generation Projects and Retirements Metric

The New Generation Projects and Retirements Metric is a summary of generation at various stages of development in Alberta and is shown in Tables 1 to 5 below. In Alberta's deregulated electricity market competitive forces determine the location, magnitude, and timing of new generation additions. Information on prospective generation additions and retirements provides context for the future market in Alberta. The information is drawn from a variety of public sources and includes new generation, changes to existing generation and the retirement of generating units. Changes in project in-service dates (ISDs) and regulatory stages occur as projects move forward and/or market conditions change. Current information on connection project ISDs can be found in the [AESO Project List](#) and information on power plant applications can be found at the [Alberta Utilities Commission](#) website.

**Table 1: Generation Projects under Construction**

Sponsor(s)	Project Name	Fuel	Unit Capacity	ISD
Pembina	Empress Cogen	Gas	46	Aug-2022
Greengate Power	Wheatland WAGF	Wind	120	Aug-2022
EPCOR	WSI DG Solar	Solar	13.6	Aug-2022
EPCOR	WSI DG Solar	Storage	4	Aug-2022
Suncor	Forty Mile Granlea WAGF	Wind	200	Aug-2022
TransAlta	Garden Plain Wind	Wind	131	Aug-2022
ATCO	Mercer Hill 728S DER Battery	Storage	20	Aug-2022
Fortis	255S Vulcan Faribault Farms DG P/V	Solar	22	Sep-2022
Fortis	255S Vulcan Faribault Farms DG P/V	Storage	22	Sep-2022
ATCO	Three Hills 770S DER Solar 1	Solar	25	Sep-2022
ATCO	Michichi Creek 802S DER Solar	Solar	25	Sep-2022
BER Hand Hills Wind LP	Hand Hills MPC Wind	Wind	145	Sep-2022
ATCO	Sarah Lake 743S DER Geothermal	Gas	21	Sep-2022
Wild Run	Grizzly Bear Wind	Wind	152	Oct-2022
Joss Wind	Jenner MPC WAGF	Wind	122	Oct-2022

Joss Wind	Jenner WAGF - Phase 2	Wind	71.4	Oct-2022
Fortis	Stavely 349S DER Solar	Solar	16.5	Oct-2022
Joss Wind	Jenner Wind Phase 3	Wind	106	Oct-2022
EDF	Cypress 2 Wind	Wind	46.5	Oct-2022
Fortis	Enchant 447S DER Solar	Solar	23	Oct-2022
Fortis	Enchant 447S DER Solar 2	Solar	18	Oct-2022
Fortis	Enchant 447S DER Solar 3	Solar	10	Oct-2022
Fortis	Enchant 447S DER Solar 4	Solar	24	Oct-2022
RESC	Hilda MPC Wind	Wind	100	Oct-2022
Pattern	Lanfine North Wind	Wind	150.5	Nov-2022
EDF	Cypress Wind Project Connection - Oct	Wind	130	Nov-2022
Fortis	High River 65S DER Gas	Gas	13	Nov-2022
Capital Power	Genesee 3 Change	Gas	6	Nov-2022
EDF	Cypress Wind Project Connection - Nov	Wind	71.6	Nov-2022
Solar Krafte	Brooks	Solar	360	Feb-2023
Fortis	Bassano 435S DER Solar	Solar	10	Feb-2023
Dunmore Solar Inc.	Dunmore Solar	Solar	216	Apr-2023
Fortis	Buffalo Atlee Cluster 1 WAGF	Wind	18	Apr-2023
Fortis	Buffalo Atlee Cluster 3 WAGF DER	Wind	17	Apr-2023
Fortis	Buffalo Atlee Cluster 2	Wind	14	Apr-2023
Buffalo Plains wind farm	Buffalo Plains MPC Wind	Wind	466	Apr-2023
Fortis	Empress 394S DER Solar 1	Solar	22.5	May-2023
Fortis	Empress 394S DER Solar 2	Solar	16	May-2023
CEC	Beddington 162S Gas	Gas	33	May-2023

Capstone	Wild Rose 2 Wind Farm	Wind	192	Jun-2023
Greengate Power	Stirling WAGF	Wind	115	Jun-2023
RESC	Enterprise MPC Solar	Solar	65	Jun-2023
Fortis	Vulcan 255S DER Solar	Solar	15	Jun-2023
Greengate Power	Paintearth Wind Farm	Wind	198	Jul-2023
Cascade	Combined Cycle Phase 1	Gas	450	Aug-2023
Cascade	Combined Cycle Phase 2	Gas	450	Aug-2023
Fortis	Spring Coulee 385S Solar DG	Solar	29	Aug-2023
Nutrien	Redwater Cogen	Gas	30	Aug-2023
ATCO	Michichi DER Solar	Solar	75	Nov-2023
Suncor	Forty Mile Granlea Solar Phase 2	Solar	220	Nov-2023
ENMAX	FMC Change	Gas	18	Dec-2023
Capital Power	Genesee 1 Repower GT (unit 6 Gas)	Gas	430	Dec-2023
Capital Power	Genesee 2 Repower GT (unit 7 Gas)	Gas	430	Dec-2023
Capital Power	Genesee 1 Repower ST	Gas	286	Jan-2024
Capital Power	Genesee 2 Repower ST	Gas	286	Jan-2024
CNRL	Primrose East 641S Gas	Gas	32	Jun-2024
ATCO	Ethel Lake 717S DER Wasteheat	Wasteheat	19	Sep-2024
Suncor	Base Plant Cogen	Gas	806	Dec-2024
<b>Total (MW)</b>			<b>7,174</b>	

*\*Unit Capacity – Expected MW capacity; ISD – Estimated in-service date*



**Table 2: Generation Projects with Regulatory Approval**

Sponsor(s)	Project Name	Fuel	Unit Capacity	ISD
Fortis	Gleichen DG Solar	Solar	13.3	Jul-2022
Naturener	Wild Rose 1 Wind Farm	Wind	192	Aug-2022
Suncor	Forty Mile Maleb WAGF	Wind	200	Sep-2022
ATCO	Youngstown 772S DER Solar	Solar	6	Oct-2022
Fortis	Chappice Lake 649S DER Solar	Solar	13.9	Nov-2022
Fortis	Chappice Lake 649S DER Solar	Storage	2.9	Nov-2022
RESL	Renewable Energy Service WAGF	Wind	47	Nov-2022
Fortis	Metiskow 648S DER Solar	Solar	22.5	Dec-2022
Fortis	Metiskow 648S DER Solar	Storage	22.5	Dec-2022
Fortis	Killarney Lake 267S DER Solar/Battery Storage	Solar	22.5	Dec-2022
Fortis	Killarney Lake 267S DER Solar/Battery Storage	Storage	22.5	Dec-2022
ATCO	Oyen 767S DER Solar	Solar	15	Dec-2022
ENMAX	Barlow Park DER Solar	Solar	27	Dec-2022
EPC	SS-24 DER Solar	Solar	37	Dec-2022
ENMAX	FMC DER Cogen	Gas	7	Dec-2022
EDPR	Sharp Hills Wind Farm	Wind	297.1	Dec-2022
ATCO	Michichi Creek 802S DER Solar	Solar	13.5	Feb-2023
ATCO	Michichi Creek 802S DER Solar	Storage	8	Feb-2023
Enerfin	Winnifred MPC Wind	Wind	90	Feb-2023
Invenergy	Schuler Wind	Wind	150	Mar-2023

BluEarth	Wheatcrest MPC Solar	Solar	60	Mar-2023
Fortis	Joffre 535S DER Solar	Solar	25	Mar-2023
Fortis	Joffre 535S DER Solar 2	Solar	22	Mar-2023
Fortis	Buffalo Atlee Cluster 4 DER Wind	Wind	10	Apr-2023
Fortis	High River 65S DER Gas	Gas	5	May-2023
Fortis	High River 65S DER Gas	Gas	5	May-2023
Enbridge	WhiteTail Peaking Station	Gas	200	May-2023
Greengate	Lathom MPC Solar	Solar	120	Jun-2023
Potentia	Stirling WAGF Phase 2	Wind	26	Jul-2023
Enerfin	Winnifred Wind Modification	Wind	38	Jul-2023
TCE	Saddlebrook Solar Storage	Solar	102.5	Aug-2023
TCE	Saddlebrook Solar Storage	Storage	6.5	Aug-2023
Pteragen	Peace Butte MPC Wind	Wind	122	Sep-2023
EDF	Bull Trail Wind	Wind	300	Sep-2023
BowArk	Drywood Battery	Storage	33.9	Dec-2023
OEWFL	Old Elm Wind	Wind	60	Dec-2023
MECL	Kirkcaldy MPC Solar	Solar	350	Feb-2024
Prairie Lights Power	Grand Prairie MPC Gas	Gas	400	Jun-2024
Turning Point Gen	Canyon Creek PHES Storage	Storage	75	Jul-2024
Sunset Solar Inc.	Sunset Solar	Solar	60	TBD
TransAlta	Sundance Unit 5 Gas	Gas	795	TBD
ATCO	Ksituan River 754S DER Gas	Gas	66	TBD
PetroChina	MacKay-Phase 1	Gas	85	TBD
Syncrude	Mildred Lake (Base Plant)-Phase 1	Gas	85	TBD

Sequoia Energy	Schuler WAGF (MPC)	Wind	100	TBD
Heartland	Rainbow Lake Gas	Gas	45	TBD
Suncor	Hand Hills Wind Energy Project	Wind	80	TBD
Imperial Oil	Kearl - Phase 3	Gas	35	TBD
Pattern Development	Lanfine South Wind	Wind	129.6	TBD
Teric Power	eReserve4 Battery Energy Storage Power Plant Project	Storage	20	TBD
Teric Power	eReserve5 Battery Energy Storage Power Plant Project	Storage	20	TBD
Teric Power	eReserve6 Battery Energy Storage Power Plant Project	Storage	20	TBD
<b>Total (MW)</b>			<b>4,712</b>	

**Table 3: Generation Projects that have been Announced, Applied for AESO Connection, and/or Applied for Regulatory Approval**

Sponsor(s)	Project Name	Fuel	Unit Capacity	ISD
Fortis	Rimbey 297S DER Gas	Gas	7.25	Sep-2022
Fortis	Hughenden 213S DER Battery	Storage	20	Sep-2022
Wild Run	Grizzly Bear Wind Phase 2	Wind	34	Oct-2022
Capital Power	Genesee GN2 Modification	Coal	20	Oct-2022
Fortis	Taber 83S DER Solar 1	Solar	19	Nov-2022
Fortis	Taber 83S DER Solar 2	Solar	16	Nov-2022
Fortis	Taber 83S DER Solar 3	Solar	16	Nov-2022
Fortis	Taber 83S DER Solar 4	Solar	14	Nov-2022
ATCO	Sturgeon 734S DER Battery	Storage	20	Nov-2022
Fortis	Nilrem 574S DER Battery	Storage	40	Nov-2022

Fortis	Castle Meridian DER Wind	Wind	22	Nov-2022
HEP Energy	Alderson Solar	Solar	100	Dec-2022
General Land & Power Corp	Sollair Solar	Solar	90	Dec-2022
Claresholm Solar LP	Claresholm Solar	Solar	20	Dec-2022
ATCO	Thornton 2091S DER Gas	Gas	17.1	Dec-2022
Solar Krafte	Vauxhall	Solar	150	Feb-2023
ATCO	Poplar Hill 790S DER Gas	Gas	16.5	Feb-2023
Fortis	Coaldale 254S DER Solar 3	Storage	23	Apr-2023
Kiwetinohk	Opal Gas	Gas	101	May-2023
Pembina	Duvernay Cogen	Gas	46	Jun-2023
COL	Chinook 181S DER Solar	Solar	8.75	Jun-2023
Fortis	Monarch 492S DER Solar	Storage	21	Jun-2023
Shell	SR Scotford Solar	Solar	58	Jun-2023
EER	Foothills MPC Solar	Solar	150	Jun-2023
Capital Power	Halkirk 2 MPC Wind	Wind	150	Jul-2023
Capital Power	Whitla MPC Solar	Solar	88	Jul-2023
TransAlta	Willow Creek 1 MPC Wind	Wind	70	Jul-2023
TransAlta	Willow Creek 2 MPC Wind	Wind	70	Jul-2023
RESC	Nova MPC Solar	Solar	150	Jul-2023
Potentia	Paintearth Wind Phase 2	Wind	70	Jul-2023
PR	Prominence MPC Solar	Solar	80	Jul-2023
Georgetown Solar	Georgetown Solar	Solar	230	Aug-2023
Georgetown	Battery Addition	Storage	100	Aug-2023

ATCO	Bullpound 803S DER Solar	Solar	14.3	Aug-2023
Fortis	High River 65S DER Solar	Solar	18.5	Aug-2023
EER	Foothills Solar II	Solar	100	Aug-2023
ENGIE	Duchess Solar	Solar	90	Sep-2023
RESC	Forty Mile MPC Wind	Wind	400	Sep-2023
EDF	North Slope Solar	Solar	200	Sep-2023
Fortis	West Brooks 28S DER Solar	Solar	23	Sep-2023
Clem	Geo Castle Meridian MPC Solar	Solar	75	Sep-2023
CP	Genesee MPC Battery	Storage	0	Sep-2023
Pembina	Empress Solar	Solar	5	Sep-2023
DP Energy	Saamis Solar Park	Solar	325	Sep-2023
ATCO	Wapiti 823S DER Battery	Storage	40	Sep-2023
EDTI	Edmonton 3 H2 Plant Cogen	Gas	100	Sep-2023
Fortis	Moon Lake DER Solar	Solar	18.4	Sep-2023
Fortis	Stony Plain 434S DER Solar	Solar	18.4	Sep-2023
Fortis	Buford 538S DER Solar	Solar	18.4	Sep-2023
Fortis	Tilley 498S DER Solar	Solar	23.6	Sep-2023
Fortis	Tilley 498S DER Solar	Storage	8	Sep-2023
ATCO	Goodfare 815S DER Battery	Storage	20	Oct-2023
Suncor	Forty Mile Granlea Modification	Wind	28	Oct-2023
Fortis	Bullshead 523S DER Solar	Solar	22.3	Oct-2023
ABO	Fox Meadows MPC Wind	Wind	200	Dec-2023
Phoenix	MPC Solar	Solar	299	Dec-2023
Enerfin	Sylvan Lake MPC Solar	Solar	120	Dec-2023

Enfinite	Blackie MPC Battery	Storage	300	Dec-2023
Enfinite	Nilrem MPC Battery	Storage	150	Dec-2023
SPWC	Willow Ridge Wind	Wind	250	Dec-2023
SPWC	Willow Ridge Battery	Storage	50	Dec-2023
TA	Alberta Hydro WaterCharger Battery	Storage	180	Dec-2023
Greengate	Jurassic MPC Solar Battery	Solar	300	Dec-2023
Greengate	Jurassic MPC Solar Battery	Storage	300	Dec-2023
Greengate	Midnight MPC Solar Battery	Solar	465	Dec-2023
Greengate	Midnight MPC Solar Battery	Storage	465	Dec-2023
Greengate	Luna MPC Solar Battery	Solar	530	Dec-2023
Greengate	Luna MPC Solar Battery	Storage	530	Dec-2023
PRD	Halsbury Solar	Solar	84	Dec-2023
RESC	Big Sky Solar	Solar	120	Jan-2024
Greencells	Estuary Solar	Solar	200	Feb-2024
Kiwetinohk	Homestead MPC Solar	Solar	400	Mar-2024
Sol	Aurora Solar Battery	Solar	200	Apr-2024
Sol	Aurora Solar Battery	Storage	100	Apr-2024
Fortis	Blackmud DER Solar	Solar	24	Apr-2024
Fortis	Leduc DER Solar	Solar	67.3	Apr-2024
Fortis	Devon DER Solar	Solar	21	Apr-2024
Aura	Peace Butte Solar Battery	Solar	230	Apr-2024
Aura	Peace Butte Solar Battery	Storage	100	Apr-2024
Greengate	Luna 2 MPC Solar Battery	Solar	465	May-2024
Greengate	Luna 2 MPC Solar Battery	Storage	465	May-2024

Kiwetinohk	Granum MPC Solar	Solar	400	May-2024
Aira	MPC Solar	Solar	450	Jun-2024
Solar Krafte	Rainier	Solar	450	Jun-2024
RESC	Oyen MPC Wind	Wind	250	Jun-2024
Capital Power	Aldersyde Solar	Solar	200	Jun-2024
TransAlta	Riplinger MPC Wind	Wind	300	Jul-2024
ATCO	Three Hills 770S DER Solar	Solar	14	Jul-2024
ENGIE	Buffalo Trail North Wind	Wind	200	Aug-2024
Ascent	Sunnynook Solar Battery	Solar	250	Aug-2024
Ascent	Sunnynook Solar Battery	Storage	100	Aug-2024
BluEarth	Bindloss MPC Solar Battery	Solar	100	Aug-2024
BluEarth	Bindloss MPC Solar Battery	Storage	20	Aug-2024
Dolcy	Dolcy Solar Battery	Solar	250	Aug-2024
Dolcy	Dolcy Solar Battery	Storage	100	Aug-2024
Northland	Buffalo Trail WAGF	Wind	100	Aug-2024
NGCI	Ermineskin Cree Nation Solar	Solar	80	Aug-2024
EDF	Cypress 3 Wind	Wind	75	Sep-2024
EDF	Bull Trail 2 Wind	Wind	200	Sep-2024
BluEarth	BluEarth Prairie Yarrow MPC Wind	Wind	222	Sep-2024
Enfinite	Bowmanton MPC Battery	Storage	500	Sep-2024
Enfinite	Foothills MPC Battery	Storage	400	Sep-2024
EDF	Pe Na Koyim Wind	Wind	200	Sep-2024
TransAlta	Tempest MPC Wind	Wind	100	Sep-2024
Cache	Rising Sun Solar	Solar	125	Sep-2024

Greengate	Lacuna MPC Battery	Storage	465	Oct-2024
TransAlta	Red Rock MPC Wind	Wind	100	Oct-2024
Spirit Pine	Lone Pine WAGF	Wind	173	Dec-2024
Fortis	Ponoka 331S DER Solar Battery	Solar	23.2	Dec-2024
Fortis	Ponoka 331S DER Solar Battery	Storage	7.8	Dec-2024
Fortis	Duchess 339S DER Solar Battery	Solar	19.8	Dec-2024
Fortis	Duchess 339S DER Solar Battery	Storage	6.7	Dec-2024
Greenlight	Greenlight MPC Gas	Gas	466	Jan-2025
ESI	Eastervale Solar Battery	Solar	300	Mar-2025
ESI	Eastervale Solar Battery	Storage	200	Mar-2025
Pengrowth	Cold Lake Area Energy Centre	Gas	100	Apr-2025
CP	Rolling Hills MPC Wind	Wind	190	Jun-2025
Kiwetinohk	Maskwa MPC Gas	Gas	450	Jul-2025
EDP Renewables	Blue Bridge Solar	Solar	150	Aug-2025
Kiwetinohk	Flipi MPC Gas	Gas	444	Aug-2025
Frontline	Kneehill MPC Solar	Solar	450	Sep-2025
Federation	Marguerite Lake CAE Storage	Storage	320	Sep-2025
Fortis	Peace Butte 404S DER Wind	Wind	22	Oct-2025
Westbridge	Red Willow Solar Battery	Solar	400	Oct-2025
Westbridge	Red Willow Solar Battery	Storage	200	Oct-2025
Frontline	Red Deer MPC Solar	Solar	450	Dec-2025
Montem	Tent Mountain MPC Pumped Hydro	Hydro	400	Oct-2026
NextEra	Red Deer Battery Energy Storage	Storage	40	TBD
NextEra	Ghost Pine Battery ES System	Storage	30	TBD



Joss Wind	Northern Lights WAGF	Wind	400	TBD
Archer	Piikani Solar	Solar	40	TBD
Altagas	Glenridge Wind	Wind	150	TBD
RealPart	Calgary Area Solar	Solar	150	TBD
Chiniki	Chiniki Solar	Solar	40	TBD
E.ON	Four Rivers Wind	Wind	450	TBD
Northland	Bow City MPC Solar	Solar	400	TBD
Quill	Rocky Mountain Gas	Gas	295	TBD
PBC	Paul Band Solar	Solar	45	TBD
Fortis	Acheson 305S DER Solar	Solar	10	TBD
Fortis	Red Deer 63S DER Solar	Solar	20	TBD
ENGIE	Buffalo Trail South MPC Wind	Wind	400	TBD
ATCO	Bridge Creek 798S DER Gas	Gas	10	TBD
Fortis	Burdett 368S DER Solar Battery	Solar	17.5	TBD
Fortis	Burdett 368S DER Solar Battery	Storage	17.5	TBD
Nose Hill	MPC Wind	Wind	120	TBD
ATCO	Anderson 801S DER Solar	Solar	13	TBD
ATCO	Updike 886S DER Gas	Gas	33	TBD
AHP Development	Amisk Hydroelectric Project	Hydro	330	TBD
<b>Total (MW)</b>			<b>23,635</b>	

**Table 4: Generation Projects that have Announced to be Retired/Derated**

Sponsor(s)	Project Name	Fuel	Unit Capacity*	Date	Status

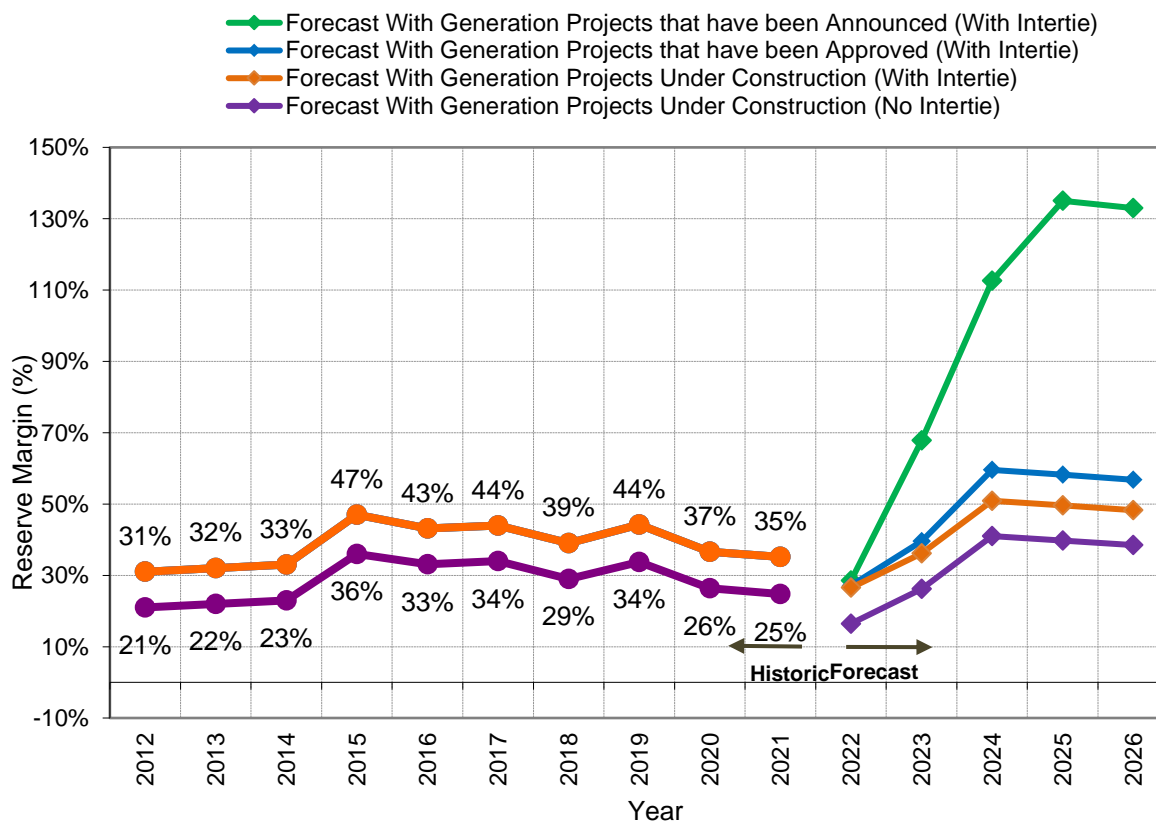
**Table 5: Summary of installed capacity of solar, wind and storage projects**

Stage	Solar (MW)	Wind (MW)	Storage (MW)
Operational	977	2,269	50
Under construction	1,200	2,566	46
Received AUC approval	900	1,534	170
Announced	10,500	5,000	5,340
Total	13,600	11,300	5,600

### Reserve Margin Metric

The Reserve Margin Metric, shown in Figure 1, presents a comparison of generation supply and demand in Alberta. It is a calculation of the firm generation capacity at the time of system peak that is in excess of the system annual peak demand, expressed as a percentage of the system peak. Information on the annual peak demand within the reserve margin can be found on the AESO's [Forecasting](#) web page. Firm generation is defined as installed and future generation capacity, adjusting for seasonal hydro capacity and behind-the-fence demand and generation, and excludes wind and solar capacity. Three forecast reserve margins are presented, each with different future supply additions. The supply additions correspond to the stage of the generation projects in the New Generation Projects and Retirements Metric. The metric is graphed with and without intertie capacity in one reserve margin since full import capability may not always be available at the time of system peak demand.

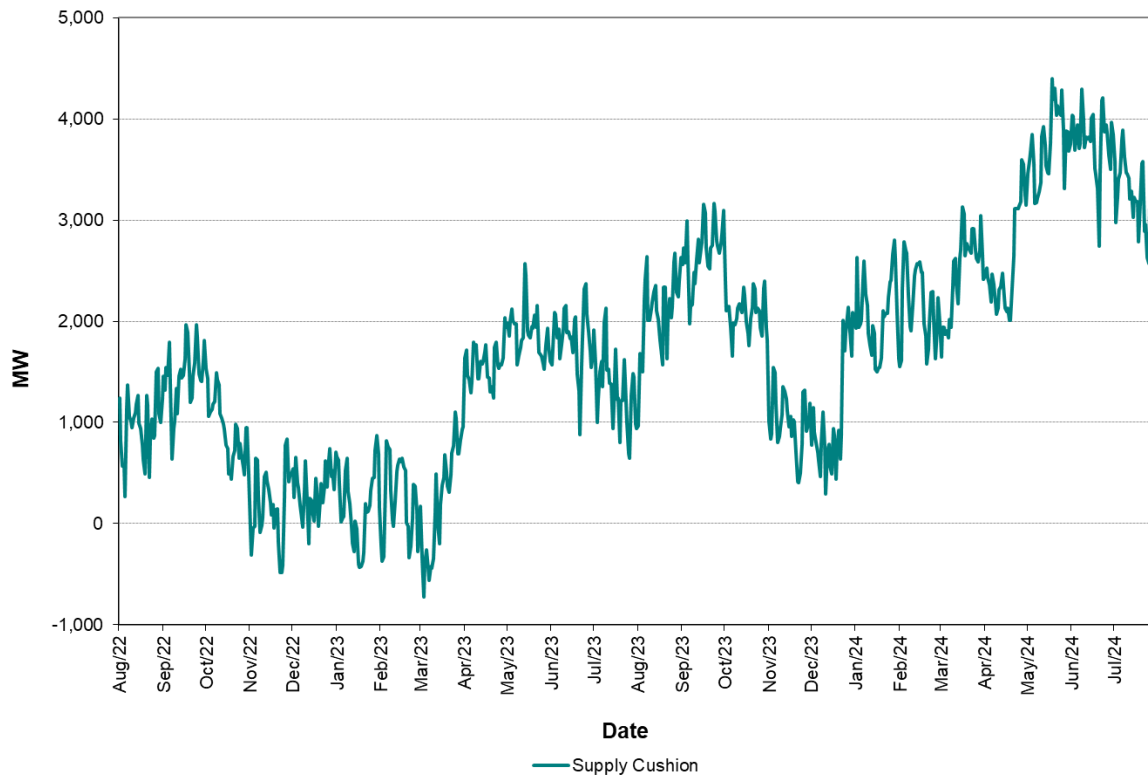
**Figure 1: Alberta Interconnected Electric System (AIES) Reserve Margin, 2012 – 2026**



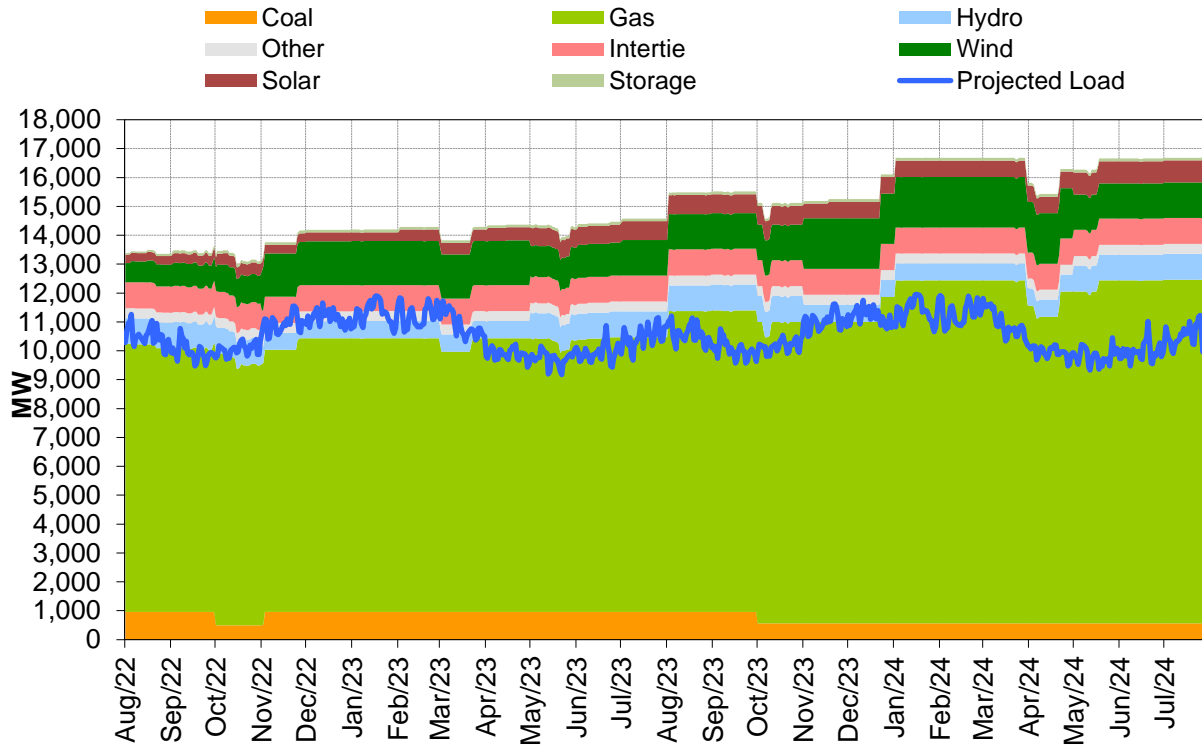
## Supply Cushion Metric

The Supply Cushion Metric provides visibility of the Alberta Internal Load’s ability to meet peak demand daily. The supply cushion is the difference between the daily available firm supply minus daily peak demand. Only existing generation and generation under construction are used within the metric. The supply cushion refines the reserve margin calculation by using daily peak rather than annual and incorporates planned outages. Figure 2 presents the estimated daily supply cushion for the next two years. Figure 3 presents daily peak demand and firm supply by fuel type, as well as interties, wind and solar which are not included in the supply cushion calculation due to the intermittent or uncertain nature of the supply. When the supply cushion is negative in Figure 2, there is an increased level of reliance on interties and wind, as indicated in Figure 3.

**Figure 2: Alberta Internal Load (AIL) Daily Supply Cushion, Aug 1, 2022 to July 31, 2024**



**Figure 3: Alberta Internal Load (AIL) Daily Peak Demand and Available Supply, Aug 1, 2022 to July 31, 2024**



Outage information as of July 13th 2022

## Two Year Probability of Supply Adequacy Shortfall Metric

The Two Year Probability of Supply Adequacy Shortfall Metric is a probabilistic assessment of encountering a supply shortfall over the next two years. It builds on the Supply Cushion Metric by incorporating the probability of wind production, forced generation outages and generation derates into the calculation of hourly firm supply. The calculation estimates, on a probabilistic basis, how much load may go without supply over the next two year period. Based on extensive consultation with stakeholders, when this unserved energy exceeds 1,987 MWh (consistent with ISO rule 202.6, Section 5(1)), the AESO may take certain actions to bridge the temporary supply adequacy gap while maintaining investor confidence in the market. The total energy not served shown in Table 6 does not reach the threshold.

**Table 6: Two Year Probability of Supply Adequacy Shortfall, May 1, 2022 to April 30, 2024**

Worst Shortfall Hour (MW)	# of Hours in Shortfall	Total Energy Not Served (MWh)
3.36	0.06	6.3

*Note: Values are rounded and represent average outputs*