

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.

Summary of Changes since Previous Report

New Generation and Retirements Metric

Projects completed and removed from list:

- Greengate Power Wheatland WAGF
- Suncor Forty Mile Granlea WAGF
- Fortis 255S Vulcan Faribault Farms DG P/V
- Pembina Empress Cogen
- ATCO Sarah Lake 743S DER Geothermal
- BER Hand Hills MPC Wind
- Fortis Enchant 447S DER Solar
- Fortis Enchant 447S DER Solar 2
- Fortis Enchant 447S DER Solar 3
- Fortis Enchant 447S DER Solar 4
- ATCO Mercer Hill 728S DER Battery
- EDF Cypress 2 Wind
- Capital Power Genesee GN2 Modification

Generation Projects moved to “Active Construction”:

- EDPR Sharp Hills Wind Farm
- Wild Run Grizzly Bear Wind Phase 2
- Fortis Buffalo Atlee Cluster 4 DER Wind
- ATCO Oyen 767S DER Solar
- ENMAX Barlow Park DER Solar
- EPC SS-24 DER Solar

Generation projects moved to “Regulatory Approval”:

- Teric Power Ltd. eReserve4 20 MW BESS
- Kiwetinohk Energy Corp. Homestead Solar Energy Project
- Newbit Technology Inc. Natural Gas-Fired Power Plant in Newell County
- SR Scotford Inc Scotford Solar Power Project
- Wilson Creek Energy Corp Wilson Creek Power Plant
- Fire Technology Corp 9.975-Megawatt Natural Gas Engine Generators

- Kiwetinohk Energy Corp. Opal Power Plant Project
- Enfinite Corporation eReserve9 Battery Energy Storage Power Plant Project
- Suncor Energy Inc. Forty Mile Solar Power Project
- Enfinite Corporation eReserve7/8 Battery Energy Storage Power Plant Project
- Acestes Power ULC Tilley Solar Project
- Acestes Power ULC Tilley Solar Project
- Saturn Power Inc. Springbrook Solar Project

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

- EDF Red Rock Wind
- Fortis Aura Provost DER Solar
- Enbridge Metiskow Pump Station Gas
- Kalina KALINA Energy Centre Bluesky MPC Gas
- MIL MIL Generation MPC Gas
- Kalina KALINA Energy Centre Mitsue Gas
- TA Sunhills Solar
- 2444612 Alberta Ltd. East Camrose MPC Solar
- Aura Sunland MPC Solar Battery
- Aura Sunland MPC Solar Battery
- FortisAlberta Carseland 525S DER Solar
- Enerfin Big Rock Solar Battery
- Enerfin Big Rock Solar Battery
- RESC Forty Mile Wind Phase 2
- SSGE CastorWest Solar
- LSSI Legal MPC Solar
- SGSS Spruce Grove North MPC Solar
- NextEra Heritage MPC Wind
- Kiwetinohk Little Flipi MPC Gas

Generation projects that have been added to on hold status:

- Greengate Midnight MPC Solar Battery
- Federation Marguerite Lake CAE Storage
- Fortis West Brooks 28S DER Solar

Generation projects that have been removed:

- Naturener Wild Rose 1 Wind Farm
- Suncor Forty Mile Maleb WAGF
- ATCO Sturgeon 734S DER Battery
- Frontline Red Deer MPC Solar

Other changes to generation projects:

Project	Change
Wild Run – Grizzly Bear Wind	New ISD of Nov-2022 from Oct-2022
RESL – Renewable Energy Service WAGF	New ISD of Sep-2023 from Nov-2022
HEP Energy – Alderson Solar	New ISD of Oct-2023 from Dec-2022
Fortis – Spring Coulee 385S Solar DG	New ISD of Sep-2023 from Aug-2023
Fortis – Stavely 349S DER Solar	New ISD of Mar-2023 from Oct-2022
TransAlta – Garden Plain Wind	New ISD of Nov-2022 from Aug-2022
Solar Krafte – Vauxhall	New ISD of Aug-2023 from Feb-2023
Solar Krafte – Brooks	New ISD of Dec-2023 from Feb-2023
Fortis – Gleichen DG Solar	New ISD of May-2023 from Jul-2022
ATCO – Three Hills 770S DER Solar 1	New ISD of Nov-2022 from Sep-2022
ATCO – Michichi Creek 802S DER Solar	New ISD of Nov-2022 from Sep-2022
Wild Run – Grizzly Bear Wind Phase 2	New ISD of Nov-2022 from Oct-2022
ENGIE – Buffalo Trail North Wind	New ISD of Aug-2024 from Dec-2022
Joss Wind – Jenner Wind Phase 3	New ISD of Oct-2022 from Dec-2022
Fortis – Metiskow 648S DER Solar	New ISD of Nov-2023 from Dec-2022
Fortis – Killarney Lake 267S DER Solar/Battery Storage	New ISD of Nov-2023 from Dec-2022
Fortis – Joffre 535S DER Solar	New ISD of Apr-2023 from Mar-2023
Fortis – Joffre 535S DER Solar 2	New ISD of Apr-2023 from Mar-2023
Pembina – Duvernay Cogen	New ISD of TBD from Jun-2023
EDF – North Slope Solar	New ISD of Aug-2023 from Sep-2023
Fortis – Castle Meridian DER Wind	New ISD of Dec-2022 from Nov-2022
ENMAX – FMC DER Cogen	New ISD of Feb-2023 from Dec-2022

ATCO – Youngstown 772S DER Solar	New ISD of Apr-2023 from Oct-2022
Greencells – Estuary Solar	New ISD of Sep-2024 from Feb-2024
ATCO – Oyen 767S DER Solar	New ISD of Apr-2023 from Dec-2022
Greengate – Midnight MPC Solar Battery	New ISD of TBD from Dec-2023
Federation – Marguerite Lake CAE Storage	New ISD of TBD from Sep-2025
Capital Power – Halkirk 2 MPC Wind	New ISD of Jul-2024 from Jul-2023
Kiwetinohk – Homestead MPC Solar	New ISD of May-2024 from Mar-2024
Fortis – Tilley 498S DER Solar	New ISD of Feb-2024 from Sep-2023
ATCO – Poplar Hill 790S DER Gas	New ISD of Aug-2023 from Feb-2023
EDTI – Edmonton 3 H2 Plant Cogen	New ISD of Nov-2023 from Sep-2023
PR – Prominence MPC Solar	New ISD of Apr-2024 from Jul-2023
Pteragen – Peace Butte MPC Wind	New ISD of Aug-2025 from Sep-2023
Fortis – West Brooks 28S DER Solar	New ISD of TBD from Sep-2023
EPC – SS-24 DER Solar	New ISD of Mar-2023 from Dec-2022
ATCO – Thornton 2091S DER Gas	New ISD of Sep-2023 from Dec-2022
NGCI – Ermineskin Cree Nation Solar	New ISD of TBD from Aug-2024
Fortis – Hughenden 213S DER Battery	New ISD of Dec-2022 from Sep-2022
Greengate – Luna 2 MPC Solar Battery	New ISD of Aug-2024 from May-2024
Kiwetinohk – Granum MPC Solar	New ISD of Jun-2024 from May-2024
Fortis – Rimbey 297S DER Gas	New ISD of Dec-2022 from Sep-2022
CP – Genesee MPC Battery	New ISD of Jan-2024 from Sep-2023
Frontline – Kneehill MPC Solar	New ISD of Jul-2025 from Sep-2025
Dolcy – Dolcy Solar Battery	New ISD of Feb-2025 from Aug-2024
Fortis – High River 65S DER Solar	New ISD of Nov-2023 from Aug-2023

EDF – Pe Na Koyim Wind	New ISD of Sep-2025 from Sep-2024
Suncor – Forty Mile Granlea Modification	New ISD of Nov-2023 from Oct-2023
Greengate – Lacuna MPC Battery	New ISD of Dec-2024 from Oct-2024
TransAlta – Red Rock MPC Wind	New ISD of Jul-2025 from Oct-2024

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 11 MWh. This value is below the 1,991 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
Joss Wind	Jenner Wind Phase 2	Wind	71.4	Nov-22
Joss Wind	Jenner Wind Phase 3	Wind	109	Nov-22
Pattern	Lanfine North Wind	Wind	150.5	Nov-22
ATCO	Three Hills 770S DER Solar 1	Solar	25	Nov-22
ATCO	Michichi Creek 802S DER Solar	Solar	25	Nov-22
RESC	Hilda MPC Wind	Wind	100	Nov-22
Fortis	High River 65S DER Gas	Gas	13	Nov-22
Capital Power	Genesee 3 Change	Gas	6	Nov-22
EDF	Cypress Wind Project Connection	Wind	196	Nov-22
TransAlta	Garden Plain Wind	Wind	131	Nov-22
Wild Run	Grizzly Bear Wind	Wind	120	Dec-22
Wild Run	Grizzly Bear Wind Phase 2	Wind	32	Dec-22
Joss Wind	Jenner MPC WAGF	Wind	122	Dec-22
Fortis	Chappice Lake 649S DER Solar	Solar	13.9	Dec-22
Fortis	Chappice Lake 649S DER Solar	Storage	2.9	Dec-22

EDPR	Sharp Hills Wind Farm	Wind	297.1	Dec-22
ENMAX	Barlow Park DER Solar	Solar	27	Dec-22
Fortis	Bassano 435S DER Solar	Solar	10	Feb-23
Fortis	Stavely 349S DER Solar	Solar	16.5	Mar-23
EPC	SS-24 DER Solar	Solar	37	Mar-23
Dunmore Solar Inc.	Dunmore Solar	Solar	216	Apr-23
ATCO	Oyen 767S DER Solar	Solar	15	Apr-23
Fortis	Buffalo Atlee Cluster 1 WAGF	Wind	17	Apr-23
Fortis	Buffalo Atlee Cluster 3 WAGF DER	Wind	17	Apr-23
Fortis	Buffalo Atlee Cluster 2	Wind	15	Apr-23
Fortis	Buffalo Atlee Cluster 4 DER Wind	Wind	10	Apr-23
Buffalo Plains wind farm	Buffalo Plains MPC Wind	Wind	466	Apr-23
Fortis	Empress 394S DER Solar 1	Solar	22.5	May-23
Fortis	Empress 394S DER Solar 2	Solar	16	May-23
CEC	Beddington 162S Gas	Gas	33	May-23
Capstone	Wild Rose 2 Wind Farm	Wind	192	Jun-23
Greengate Power	Stirling WAGF	Wind	115	Jun-23
RESC	Enterprise MPC Solar	Solar	65	Jun-23
Fortis	Vulcan 255S DER Solar	Solar	15	Jun-23
Cascade	Combined Cycle Phase 1	Gas	450	Jul-23
Cascade	Combined Cycle Phase 2	Gas	450	Jul-23
Greengate Power	Paintearth Wind Farm	Wind	198	Jul-23
Nutrien	Redwater Cogen	Gas	30	Aug-23
Fortis	Spring Coulee 385S Solar DG	Solar	29	Sep-23

ATCO	Michichi DER Solar	Solar	75	Nov-23
Suncor	Forty Mile Granlea Solar Phase 2	Solar	220	Nov-23
Solar Krafte	Brooks	Solar	360	Dec-23
ENMAX	FMC Change	Gas	18	Dec-23
Capital Power	Genesee 1 Repower GT (unit 6 Gas)	Gas	430	Dec-23
Capital Power	Genesee 2 Repower GT (unit 7 Gas)	Gas	430	Dec-23
Capital Power	Genesee 1 Repower ST	Gas	286	Jan-24
Capital Power	Genesee 2 Repower ST	Gas	286	Jan-24
CNRL	Primrose East 641S Gas	Gas	32	Jun-24
ATCO	Ethel Lake 717S DER Wasteheat	Gas	19	Sep-24
Suncor	Base Plant Cogen	Gas	806	Dec-24
Total (MW)			6,839	

*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
ATCO	Michichi Creek 802S DER Solar	Solar	13.5	Feb-23
ATCO	Michichi Creek 802S DER Solar	Storage	8	Feb-23
Enerfin	Winnifred MPC Wind	Wind	90	Feb-23
ENMAX	FMC DER Cogen	Gas	7	Feb-23
Invenergy	Schuler Wind	Wind	150	Mar-23
BluEarth	Wheatcrest MPC Solar	Solar	50	Mar-23
ATCO	Youngstown 772S DER Solar	Solar	6	Apr-23
Fortis	Joffre 535S DER Solar	Solar	25	Apr-23
Fortis	Joffre 535S DER Solar 2	Solar	22	Apr-23

Fortis	High River 65S DER Gas	Gas	9	May-23
Fortis	Gleichen DG Solar	Solar	13.3	May-23
Enbridge	WhiteTail Peaking Station	Gas	200	May-23
Greengate	Lathom MPC Solar	Solar	120	Jun-23
Potentia	Stirling WAGF Phase 2	Wind	26	Jul-23
Enerfin	Winnifred Wind Modification	Wind	38	Jul-23
TCE	Saddlebrook Solar Storage	Solar	102.5	Aug-23
TCE	Saddlebrook Solar Storage	Storage	6.5	Aug-23
RESL	Renewable Energy Service WAGF	Wind	47	Sep-23
Fortis	255S Vulcan Faribault Farms DG P/V	Storage	16	Sep-23
EDF	Bull Trail Wind	Wind	300	Sep-23
ATCO	Wapiti 823S DER Battery	Storage	40	Sep-23
Fortis	Metiskow 648S DER Solar	Solar	22.5	Nov-23
Fortis	Metiskow 648S DER Solar	Storage	22.5	Nov-23
Fortis	Killarney Lake 267S DER Solar/Battery Storage	Solar	22.5	Nov-23
Fortis	Killarney Lake 267S DER Solar/Battery Storage	Storage	22.5	Nov-23
BowArk	Drywood Battery	Storage	33.9	Dec-23
OEWFL	Old Elm Wind	Wind	60	Dec-23
MECL	Kirkcaldy MPC Solar	Solar	350	Feb-24
Fortis	Tilley 498S DER Solar	Solar	23.6	Feb-24
Fortis	Tilley 498S DER Solar	Storage	8	Feb-24
Kiwetinohk	Homestead MPC Solar	Solar	400	May-24
Prairie Lights Power	Grand Prairie MPC Gas	Gas	400	Jun-24

Turning Point Gen	Canyon Creek PHES Storage	Storage	75	Jul-24
Pteragen	Peace Butte MPC Wind	Wind	122	Aug-25
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
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
Enfinite	eReserve4 Battery Energy Storage Power Plant Project	Storage	20	TBD
Enfinite	eReserve5 Battery Energy Storage Power Plant Project	Storage	20	TBD
Enfinite	eReserve6 Battery Energy Storage Power Plant Project	Storage	20	TBD
Newbit Technology Inc.	Natural Gas-Fired Power Plant in Newell County	Gas	9	TBD
SR Scotford Inc	Scotford Solar Power Project	Solar	58	TBD
Wilson Creek Energy Corp	Wilson Creek Power Plant	Gas	9	TBD
Fire Technology Corp	9.975-Megawatt Natural Gas Engine Generators	Gas	10	TBD
Kiwetinohk Energy Corp.	Opal Power Plant Project	Gas	101	TBD
Enfinite Corporation	eReserve9 Battery Energy Storage Power Plant Project	Storage	20	TBD
Saturn Power Inc.	Springbrook Solar Project	Solar	20	TBD

Total (MW)			4,475	
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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	Hughenden 213S DER Battery	Storage	20	Dec-2022
Fortis	Rimbey 297S DER Gas	Gas	9	Dec-2022
Fortis	Coaldale 254S DER Solar 3	Storage	23	Apr-2023
Kiwetinohk	Opal Gas	Gas	101	May-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
General Land & Power Corp	Sollair Solar	Solar	75	Jun-2023
Fortis	Nilrem 574S DER Battery	Storage	40	Jun-2023
EER	Foothills MPC Solar	Solar	150	Jun-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
Solar Krafte	Vauxhall	Solar	150	Aug-2023
EDF	North Slope Solar	Solar	200	Aug-2023
Georgetown Solar Inc.	Georgetown Solar	Solar	230	Aug-2023
Georgetown	Battery Addition	Storage	100	Aug-2023

ATCO	Bullpound 803S DER Solar	Solar	14.3	Aug-2023
EPCOR	WSI DG Solar	Storage	4	Aug-2023
ATCO	Poplar Hill 790S DER Gas	Gas	16.5	Aug-2023
EER	Foothills Solar II	Solar	100	Aug-2023
ENGIE	Duchess Solar	Solar	90	Sep-2023
RESC	Forty Mile MPC Wind	Wind	266	Sep-2023
ATCO	Thornton 2091S DER Gas	Gas	17.1	Sep-2023
Clem	Geo Castle Meridian MPC Solar	Solar	75	Sep-2023
Pembina	Empress Solar	Solar	5	Sep-2023
DP Energy	Saamis Solar Park	Solar	325	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
HEP Energy	Alderson Solar	Solar	100	Oct-2023
ATCO	Goodfare 815S DER Battery	Storage	20	Oct-2023
Fortis	Bullshead 523S DER Solar	Solar	22.3	Oct-2023
Fortis	High River 65S DER Solar	Solar	18.5	Nov-2023
Suncor	Forty Mile Granlea Modification	Wind	28	Nov-2023
EDTI	Edmonton 3 H2 Plant Cogen	Gas	100	Nov-2023
Claresholm Solar LP	Claresholm Solar	Solar	20	Dec-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
TA	Alberta Hydro WaterCharger Battery	Storage	180	Dec-2023

Fortis	Aura Provost DER Solar	Solar	22.5	Dec-2023
Enfinite	Blackie MPC Battery	Storage	300	Dec-2023
Enfinite	Nilrem MPC Battery	Storage	150	Dec-2023
RESC	Forty Mile Wind Phase 2	Wind	134	Dec-2023
SPWC	Willow Ridge Wind	Wind	250	Dec-2023
SPWC	Willow Ridge Battery	Storage	50	Dec-2023
Greengate	Jurassic MPC Solar Battery	Solar	300	Dec-2023
Greengate	Jurassic MPC Solar Battery	Storage	300	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
CP	Genesee MPC Battery	Storage	0	Jan-2024
FortisAlberta	Carseland 525S DER Solar	Solar	19	Mar-2024
Fortis	Taber 83S DER Solar 1	Solar	19	Mar-2024
Fortis	Taber 83S DER Solar 2	Solar	16	Mar-2024
Fortis	Taber 83S DER Solar 3	Solar	16	Mar-2024
Fortis	Taber 83S DER Solar 4	Solar	14	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
PR	Prominence MPC Solar	Solar	80	Apr-2024
Aira	MPC Solar	Solar	450	Jun-2024
Solar Krafte	Rainier	Solar	450	Jun-2024
Kiwetinohk	Granum MPC Solar	Solar	400	Jun-2024
Fortis	Castle Meridian DER Wind	Wind	22	Jun-2024
RESC	Oyen MPC Wind	Wind	250	Jun-2024
Capital Power	Aldersyde Solar	Solar	200	Jun-2024
Capital Power	Halkirk 2 MPC Wind	Wind	150	Jul-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
Greengate	Luna 2 MPC Solar Battery	Solar	465	Aug-2024
Greengate	Luna 2 MPC Solar Battery	Storage	465	Aug-2024
Northland	Pihew Waciy	Wind	100	Aug-2024
EDF	Cypress 3 Wind	Wind	75	Sep-2024
EDF	Bull Trail 2 Wind	Wind	200	Sep-2024
EDF	Red Rock Wind	Wind	250	Sep-2024
BluEarth	BluEarth Prairie Yarrow MPC Wind	Wind	222	Sep-2024
Greencells	Estuary Solar	Solar	200	Sep-2024

Enfinite	Bowmanton MPC Battery	Storage	500	Sep-2024
Enfinite	Foothills MPC Battery	Storage	400	Sep-2024
TransAlta	Tempest MPC Wind	Wind	100	Sep-2024
Cache	Rising Sun Solar	Solar	125	Sep-2024
Enbridge	Metiskow Pump Station Gas	Gas	16.7	Oct-2024
SSGE	CastorWest Solar	Solar	47	Oct-2024
LSSI	Legal MPC Solar	Solar	125	Oct-2024
SGSS	Spruce Grove North MPC Solar	Solar	80	Oct-2024
TA	Sunhills Solar	Solar	130	Nov-2024
Spirit Pine	Lone Pine WAGF	Wind	173	Dec-2024
Greengate	Lacuna MPC Battery	Battery Storage	465	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
Dolcy	Dolcy Solar Battery	Solar	250	Feb-2025
Dolcy	Dolcy Solar Battery	Storage	100	Feb-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
Aura	Sunland MPC Solar Battery	Solar	230	Apr-2025
Aura	Sunland MPC Solar Battery	Storage	100	Apr-2025

Enerfin	Big Rock Solar Battery	Solar	100	May-2025
Enerfin	Big Rock Solar Battery	Storage	40	May-2025
2444612 Alberta Ltd.	East Camrose MPC Solar	Solar	150	Jun-2025
CP	Rolling Hills MPC Wind	Wind	190	Jun-2025
Frontline	Kneehill MPC Solar	Solar	450	Jul-2025
Kiwetinohk	Maskwa MPC Gas	Gas	450	Jul-2025
TransAlta	Red Rock MPC Wind	Wind	100	Jul-2025
EDP Renewables	Blue Bridge Solar	Solar	150	Aug-2025
Kiwetinohk	Flipi MPC Gas	Gas	444	Aug-2025
EDF	Pe Na Koyim Wind	Wind	200	Sep-2025
Kalina	KALINA Energy Centre Bluesky MPC Gas	Gas	410	Sep-2025
NextEra	Heritage MPC Wind	Wind	300	Sep-2025
Kiwetinohk	Little Flipi MPC Gas	Gas	120	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
MIL	MIL Generation MPC Gas	Gas	465	Jun-2026
Kalina	KALINA Energy Centre Mitsue Gas	Gas	466	Jul-2026
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
Altgas	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
Pembina	Duvernay Cogen	Gas	46	TBD
ATCO	Anderson 801S DER Solar	Solar	13	TBD
ATCO	Updike 886S DER Gas	Gas	33	TBD
Greengate	Midnight MPC Solar Battery	Solar	465	TBD
Greengate	Midnight MPC Solar Battery	Storage	465	TBD
Federation	Marguerite Lake CAE Storage	Storage	320	TBD
Fortis	West Brooks 28S DER Solar	Solar	23	TBD
NGCI	Ermineskin Cree Nation Solar	Solar	80	TBD
Total (MW)			25,372	

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

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

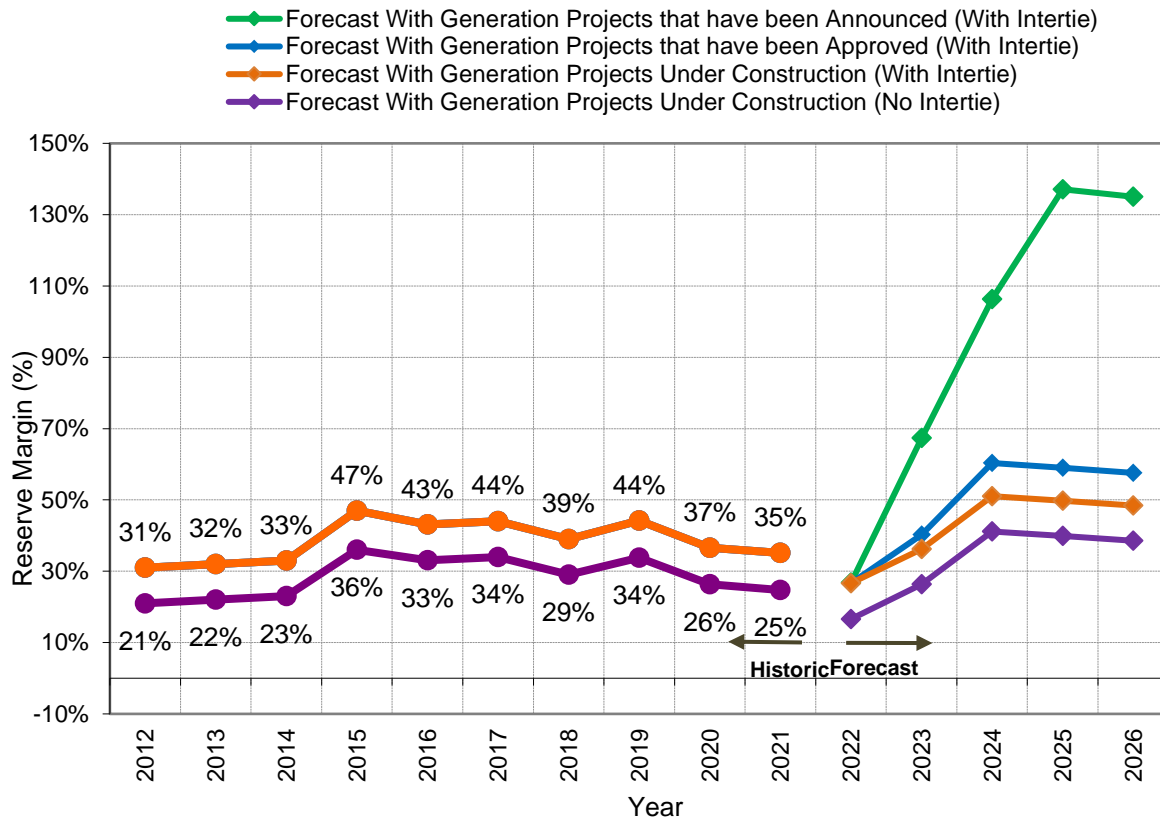
Table 5: Summary of installed capacity of renewable generation and storage projects

Stage	Solar (MW)	Wind (MW)	Storage (MW)
Operational	1,088	2,780	70
Under construction	1,188	2,359	2.9
Received AUC approval	1,309	1,043	312
Announced	10,529	5,462	5,415
Total	14,114	11,644	5,800

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 inertia 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, Nov 1, 2022 to Oct 31, 2024

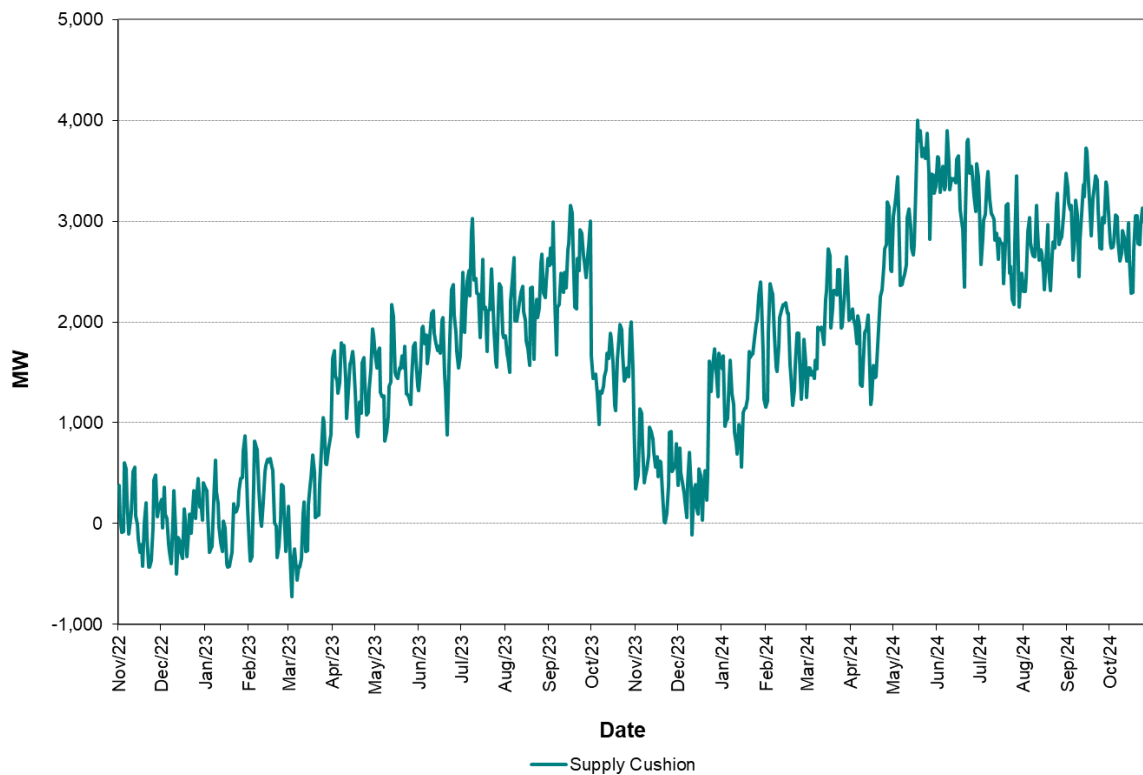
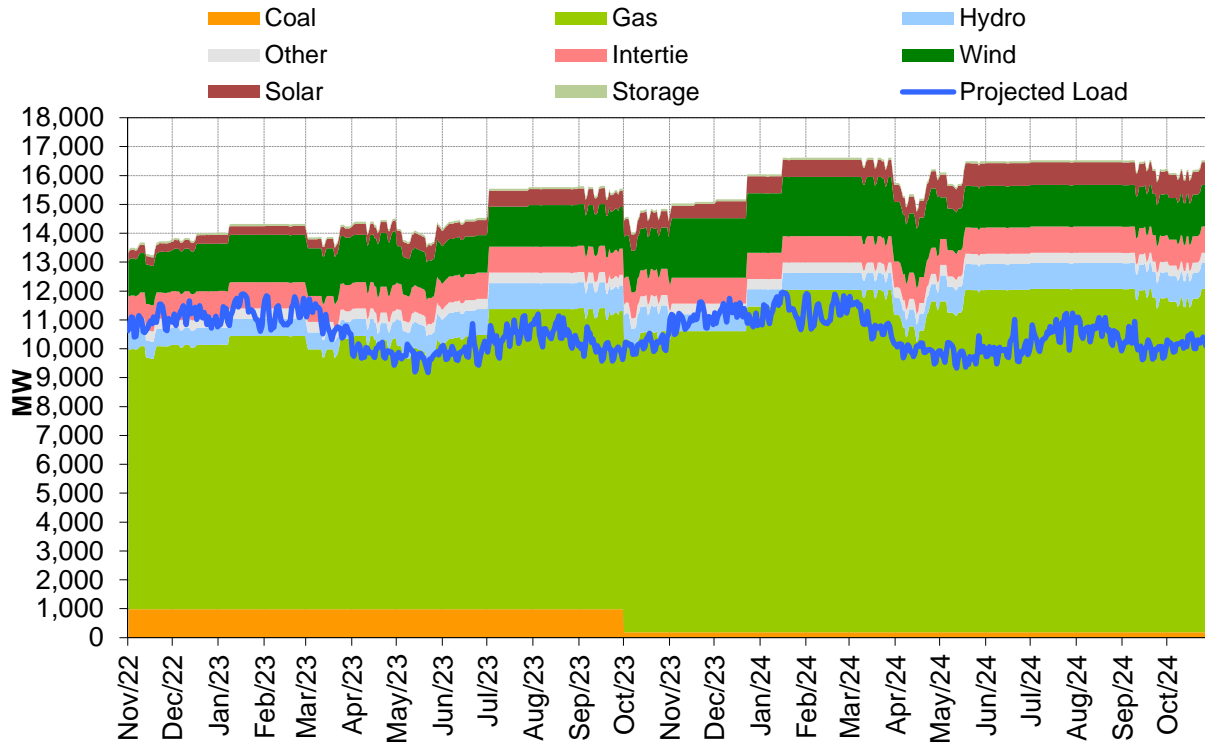


Figure 3: Alberta Internal Load (AIL) Daily Peak Demand and Available Supply, Nov 1, 2022 to Oct 31, 2024



Outage information as of Oct 14th 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, Nov 1, 2022 to Oct 31, 2024

Worst Shortfall Hour (MW)	# of Hours in Shortfall	Total Energy Not Served (MWh)
5.5	0.08	11

Note: Values are rounded and represent average outputs