

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:

- Wild Run Grizzly Bear Wind
- Pattern Lanfine North Wind
- TransAlta Garden Plain Wind
- ATCO Three Hills 770S DER Solar 1
- ATCO Michichi Creek 802S DER Solar
- Wild Run Grizzly Bear Wind Phase 2
- EDF Cypress Wind Project Connection
- Joss Wind Jenner Wind Phase 3
- RESC Hilda MPC Wind
- Fortis High River 65S DER Gas

Generation Projects moved to “Active Construction”:

- Enerfin Winnifred MPC Wind
- RESC Forty Mile MPC Wind
- TCE Saddlebrook Solar Storage
- BluEarth Wheatcrest MPC Solar
- ATCO Youngstown 772S DER Solar
- Enfinite Hughenden 213S DER Battery
- Wilson Creek Energy Rimbey 297S DER Gas

Generation projects moved to “Regulatory Approval”:

- Solar Krafte Utilities Inc. Vauxhall Solar Farm
- Rocktree Solar Inc Rocktree Solar Project
- NU-E Corp Lethbridge 1 Solar Project
- Moon Lake Solar Inc Moon Lake Solar Project
- Jurassic Solar GP Ltd. Jurassic Solar+ Project
- Concord Monarch GP2 Ltd Monarch Solar Project Battery Energy Storage System Addition
- Concord Coaldale GP2 Ltd Coaldale Solar Project Battery Energy Storage System Addition
- TA Alberta Hydro Inc WaterCharger Battery Storage Facility

- Georgetown Solar Inc Georgetown Solar + Energy Storage Project

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

- Universal Kraft UK Solar East MPC
- BluEarth Hand Hills Battery
- Greencells Indygen Border Solar Battery
- Dow Chemicals Dow Fort Sask. Load
- Neoen Renewables Jumbo MPC Solar Battery
- Neoen Renewables Sweetgrass MPC Solar Battery
- Proteus Hays 421S DER Solar
- Indygen Sunshine Solar Battery
- Indygen Murray Lake Solar Battery
- Indygen Nelson Solar Battery
- Proteus Hays Solar 2 Battery
- Enmax Taber Solar
- ABO Smoky River MPC Wind

Generation projects that have been added to on hold status:

- ENGIE Buffalo Trail South MPC Wind
- BluEarth Bindloss MPC Solar Battery

Generation projects that have been removed:

- Enbridge WhiteTail Peaking Station
- Nutrien Redwater Cogen
- Invenergy Schuler Wind
- Enerfin Sylvan Lake MPC Solar
- Pembina Empress Solar

Other changes to generation projects:

Project	Change
RESL – Renewable Energy Service WAGF	New ISD of May-2024 from Sep-2023
EDPR – Sharp Hills Wind Farm	New ISD of Aug-2023 from Dec-2022
Turning Point Gen – Canyon Creek PHES Storage	New ISD of May-2025 from Jul-2024
HEP Energy – Alderson Solar	New ISD of Dec-2024 from Oct-2023
BowArk – Drywood Battery	New ISD of Dec-2024 from Dec-2023
Solar Krafte – Vauxhall	New ISD of Jun-2024 from Aug-2023
Fortis – Gleichen DG Solar	New ISD of Oct-2023 from May-2023

Cascade – Combined Cycle Phase 1	New ISD of Jan-2024 from Jul-2023
Cascade – Combined Cycle Phase 2	New ISD of Jan-2024 from Jul-2023
Enerfin – Winnifred MPC Wind	New ISD of Oct-2024 from Feb-2023
Fortis – Chappice Lake 649S DER Solar	New ISD of Feb-2023 from Dec-2022
RESC – Forty Mile MPC Wind	New ISD of Sep-2023 from Dec-2022
ATCO – Michichi Creek 802S DER Solar	New ISD of Apr-2023 from Feb-2023
Fortis – Joffre 535S DER Solar	New ISD of Jun-2023 from Apr-2023
Fortis – Joffre 535S DER Solar 2	New ISD of Jun-2023 from Apr-2023
Fortis – Taber 83S DER Solar 1	New ISD of Nov-2024 from Mar-2024
Fortis – Taber 83S DER Solar 2	New ISD of Nov-2023 from Mar-2024
Fortis – Taber 83S DER Solar 3	New ISD of Nov-2023 from Mar-2024
Fortis – Taber 83S DER Solar 4	New ISD of Nov-2023 from Mar-2024
Dunmore Solar Inc. – Dunmore Solar	New ISD of Dec-2024 from Apr-2023
Fortis – Castle Meridian DER Wind	New ISD of Sep-2024 from Jun-2024
RESC – Oyen MPC Wind	New ISD of Dec-2024 from Jun-2024
ATCO – Anderson 801S DER Solar	New ISD of Feb-2024 from TBD
Fortis – High River 65S DER Gas	New ISD of Sep-2023 from May-2023
MECL – Kirkcaldy MPC Solar	New ISD of Sep-2024 from Feb-2024
Capital Power – Genesee 1 Repower GT	New ISD of Oct-2023 from Dec-2023
Capital Power – Genesee 1 Repower ST	New ISD of Feb-2024 from Jan-2024
Capital Power – Genesee 2 Repower GT	New ISD of Nov-2023 from Dec-2023
Capital Power – Genesee 2 Repower ST	New ISD of Mar-2024 from Jan-2024
Greengate – Midnight MPC Solar Battery	New ISD of Nov-2024 from TBD
Kiwetinohk – Homestead MPC Solar	New ISD of Jun-2024 from May-2024

Greengate – Luna MPC Solar Battery	New ISD of Dec-2024 from Dec-2023
Claresholm Solar LP – Claresholm Solar	New ISD of Jul-2023 from Dec-2023
Capital Power – Whitla MPC Solar	New ISD of Sep-2024 from Jul-2023
Aira – MPC Solar	New ISD of Dec-2024 from Jun-2024
Greengate – Luna 2 MPC Solar Battery	New ISD of Dec-2024 from Aug-2024
Kiwetinohk – Granum MPC Solar	New ISD of Jan-2025 from Jun-2024
Wilson Creek Energy – Rimbey 297S DER Gas	New ISD of Feb-2023 from Dec-2022
CP – Genesee MPC Battery	New ISD of Mar-2024 from Jan-2024
Fortis – Nilrem 574S DER Battery	New ISD of May-2023 from Jun-2023
Fortis – Duchess 339S DER Solar Battery	New ISD of Sep-2024 from Dec-2024
Fortis – High River 65S DER Solar Battery	New ISD of Jan-2024 from Nov-2023
ATCO – Bullpound 803S DER Solar	New ISD of Oct-2023 from Aug-2023
Suncor – Forty Mile Granlea Modification	New ISD of Dec-2023 from Nov-2023
TA – Sunhills Solar	New ISD of Dec-2024 from Nov-2024
RESC – Forty Mile Wind Phase 2	New ISD of Feb-2024 from Dec-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 457 MWh. This value is below the 1,995 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
Fortis	Bassano 435S DER Solar	Solar	10	Feb-2023
Fortis	Chappice Lake 649S DER Solar	Solar	13.9	Feb-2023
Wilson Creek Energy	Rimbey 297S DER Gas	Gas	9	Feb-2023
Fortis	Stavely 349S DER Solar	Solar	16.5	Mar-2023
ATCO	Youngstown 772S DER Solar	Solar	6	Apr-2023
Fortis	Empress 394S DER Solar 1	Solar	22.5	May-2023
Fortis	Empress 394S DER Solar 2	Solar	16	May-2023
EPC	SS-24 DER Solar	Solar	37	May-2023
CEC	Beddington 162S Gas	Gas	33	May-2023
Capstone	Wild Rose 2 Wind Farm	Wind	197.6	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
Joss Wind	Jenner MPC WAGF	Wind	122	Jul-2023
Greengate Power	Paintearth Wind Farm	Wind	198	Jul-2023

EDPR	Sharp Hills Wind Farm	Wind	289	Aug-2023
TCE	Saddlebrook Solar Storage	Solar	81	Aug-2023
TCE	Saddlebrook Solar Storage	Storage	6.5	Aug-2023
Joss Wind	Jenner WAGF - Phase 2	Wind	71.4	Sep-2023
RESC	Forty Mile MPC Wind	Wind	266	Sep-2023
BluEarth	Wheatcrest MPC Solar	Solar	50	Sep-2023
ATCO	Oyen 767S DER Solar	Solar	15	Sep-2023
Fortis	Buffalo Atlee Cluster 1 WAGF	Wind	17	Sep-2023
Fortis	Buffalo Atlee Cluster 3 WAGF DER	Wind	17	Sep-2023
Fortis	Buffalo Atlee Cluster 2	Wind	15	Sep-2023
Fortis	Buffalo Atlee Cluster 4 DER Wind	Wind	10	Sep-2023
Fortis	Spring Coulee 385S Solar DG	Solar	29	Sep-2023
Capital Power	Genesee 1 Repower GT (unit 6 Gas)	Gas	411	Oct-2023
ATCO	Michichi DER Solar	Solar	75	Nov-2023
Capital Power	Genesee 2 Repower GT (unit 7 Gas)	Gas	411	Nov-2023
Suncor	Forty Mile Granlea Solar Phase 2	Solar	220	Nov-2023
Solar Krafte	Brooks	Solar	360	Dec-2023
ENMAX	FMC Change	Gas	18	Dec-2023
RESC	Big Sky Solar	Solar	120	Jan-2024
Cascade	Combined Cycle Phase 1	Gas	450	Jan-2024
Cascade	Combined Cycle Phase 2	Gas	450	Jan-2024
Fortis	Chappice Lake 649S DER Solar	Storage	2.9	Feb-2024
Capital Power	Genesee 1 Repower ST	Gas	55**	Feb-2024
Capital Power	Genesee 2 Repower ST	Gas	55**	Mar-2024

CNRL	Primrose East 641S Gas	Gas	32	Jun-2024
ATCO	Ethel Lake 717S DER Wasteheat	Gas	19	Sep-2024
Enerfin	Winnifred MPC Wind	Wind	90	Oct-2024
Suncor	Base Plant Cogen	Gas	806	Dec-2024
Dunmore Solar Inc.	Dunmore Solar	Solar	216	Dec-2024
Buffalo Plains wind farm	Buffalo Plains MPC Wind	Wind	466	Dec-2024
Total (MW)			6,016	

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

**Capped at 55MW to comply with MSSC value

Table 2: Generation Projects with Regulatory Approval

Sponsor(s)	Project Name	Fuel	Unit Capacity	ISD
ATCO	Michichi Creek 802S DER Solar	Solar	13.5	Apr-2023
ATCO	Michichi Creek 802S DER Solar	Storage	8	Apr-2023
Greengate	Lathom MPC Solar	Solar	120	Jun-2023
Fortis	Joffre 535S DER Solar	Solar	25	Jun-2023
Fortis	Joffre 535S DER Solar 2	Solar	22	Jun-2023
Potentia	Stirling WAGF Phase 2	Wind	26	Jul-2023
Enerfin	Winnifred Wind Modification	Wind	38	Jul-2023
Georgetown Solar Inc.	Georgetown Solar	Solar	230	Aug-2023
ENMAX	FMC DER Cogen	Gas	7	Aug-2023
Fortis	255S Vulcan Faribault Farms DG P/V	Storage	16	Sep-2023
EDF	Bull Trail Wind	Wind	300	Sep-2023
Fortis	High River 65S DER Gas	Gas	9	Sep-2023
ATCO	Wapiti 823S DER Battery	Storage	40	Sep-2023

Fortis	Moon Lake DER Solar	Solar	18.4	Sep-2023
Fortis	Gleichen DG Solar	Solar	13.3	Oct-2023
Fortis	Metiskow 648S DER Solar	Solar	22.5	Nov-2023
Fortis	Metiskow 648S DER Solar	Storage	22.5	Nov-2023
Fortis	Killarney Lake 267S DER Solar/Battery Storage	Solar	22.5	Nov-2023
Fortis	Killarney Lake 267S DER Solar/Battery Storage	Storage	22.5	Nov-2023
OEWFL	Old Elm Wind	Wind	60	Dec-2023
Greengate	Jurassic MPC Solar Battery	Solar	300	Dec-2023
Greengate	Jurassic MPC Solar Battery	Storage	300	Dec-2023
Fortis	Tilley 498S DER Solar	Solar	23.6	Feb-2024
Fortis	Tilley 498S DER Solar	Storage	8	Feb-2024
RESL	Renewable Energy Service WAGF	Wind	47	May-2024
Solar Krafte	Vauxhall	Solar	60	Jun-2024
Prairie Lights Power	Grand Prairie MPC Gas	Gas	400	Jun-2024
Kiwetinohk	Homestead MPC Solar	Solar	400	Jun-2024
MECL	Kirkcaldy MPC Solar	Solar	350	Sep-2024
BowArk	Drywood Battery	Storage	33.9	Dec-2024
Turning Point Gen	Canyon Creek PHES Storage	Storage	75	May-2025
Pteragen	Peace Butte MPC Wind	Wind	122	Aug-2025
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

Suncor	Hand Hills Wind Energy Project	Wind	80	TBD
Imperial Oil	Kearl - Phase 3	Gas	35	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
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
NU-E	Lethbridge 1 Solar Project	Solar	9	TBD
Voltarix	Rocktree Solar Project	Solar	20	TBD
Concord	Drumheller Solar and Battery Storage Project	Solar	13.5	TBD
Total (MW)			4,549	

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
Kiwetinohk	Opal Gas	Gas	101	May-2023
Fortis	Nilrem 574S DER Battery	Storage	40	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
EER	Foothills MPC Solar	Solar	150	Jun-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
Claresholm Solar LP	Claresholm Solar	Solar	20	Jul-2023
EDF	North Slope Solar	Solar	200	Aug-2023
Georgetown	Battery Addition	Storage	100	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
ATCO	Thornton 2091S DER Gas	Gas	17.1	Sep-2023
Clem	Geo Castle Meridian MPC Solar	Solar	75	Sep-2023
DP Energy	Saamis Solar Park	Solar	325	Sep-2023
Fortis	Stony Plain 434S DER Solar	Solar	18.4	Sep-2023
Fortis	Buford 538S DER Solar	Solar	18.4	Sep-2023
ATCO	Goodfare 815S DER Battery	Storage	20	Oct-2023
ATCO	Bullpound 803S DER Solar	Solar	14.3	Oct-2023
Fortis	Bullshead 523S DER Solar	Solar	22.3	Oct-2023

EDTI	Edmonton 3 H2 Plant Cogen	Gas	100	Nov-2023
Fortis	Taber 83S DER Solar 2	Solar	16	Nov-2023
Fortis	Taber 83S DER Solar 3	Solar	16	Nov-2023
Fortis	Taber 83S DER Solar 4	Solar	14	Nov-2023
ABO	Fox Meadows MPC Wind	Wind	200	Dec-2023
Phoenix	MPC Solar	Solar	299	Dec-2023
TA	Alberta Hydro WaterCharger Battery	Storage	180	Dec-2023
Suncor	Forty Mile Granlea Modification	Wind	28	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
SPWC	Willow Ridge Wind	Wind	250	Dec-2023
SPWC	Willow Ridge Battery	Storage	50	Dec-2023
PRD	Halsbury Solar	Solar	84	Dec-2023
Fortis	High River 65S DER Solar Battery	Solar	18.5	Jan-2024
Fortis	High River 65S DER Solar Battery	Storage	18.5	Jan-2024
RESC	Forty Mile Wind Phase 2	Wind	134	Feb-2024
ATCO	Anderson 801S DER Solar	Solar	13	Feb-2024
FortisAlberta	Carseland 525S DER Solar	Solar	19	Mar-2024
CP	Genesee MPC Battery	Storage	0	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
Proteus	Hays 421S DER Solar	Solar	24	Apr-2024
Proteus	Hays 421S DER Solar	Solar	21	Apr-2024
PR	Prominence MPC Solar	Solar	80	Apr-2024
Fortis	Coaldale 254S DER Solar 3	Storage	23	Apr-2024
Solar Krafte	Rainier	Solar	450	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
Northland	Pihew Waciy	Wind	100	Aug-2024
Capital Power	Whitla MPC Solar	Solar	88	Sep-2024
EDF	Cypress 3 Wind	Wind	75	Sep-2024
EDF	Bull Trail 2 Wind	Wind	200	Sep-2024
Fortis	Duchess 339S DER Solar Battery	Solar	19.8	Sep-2024
Fortis	Duchess 339S DER Solar Battery	Storage	6.7	Sep-2024
EDF	Red Rock Wind	Wind	250	Sep-2024
BluEarth	BluEarth Prairie Yarrow MPC Wind	Wind	222	Sep-2024
Proteus	Hays Solar 2 Battery	Solar	185	Sep-2024

Proteus	Hays Solar 2 Battery	Storage	60	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
Fortis	Castle Meridian DER Wind	Wind	22	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
Enmax	Taber Solar	Solar	45	Oct-2024
Fortis	Taber 83S DER Solar 1	Solar	19	Nov-2024
Greengate	Midnight MPC Solar Battery	Solar	465	Nov-2024
Greengate	Midnight MPC Solar Battery	Storage	465	Nov-2024
Greengate	Luna MPC Solar Battery	Solar	530	Dec-2024
Greengate	Luna MPC Solar Battery	Storage	530	Dec-2024
Greengate	Lacuna MPC Battery	Storage	465	Dec-2024
Greencells Indygen	Border Solar Battery	Solar	250	Dec-2024
Greencells Indygen	Border Solar Battery	Storage	60	Dec-2024
Indygen	Sunshine Solar Battery	Solar	150	Dec-2024
Indygen	Sunshine Solar Battery	Storage	60	Dec-2024
Indygen	Murray Lake Solar Battery	Solar	150	Dec-2024
Indygen	Murray Lake Solar Battery	Storage	60	Dec-2024

Indygen	Nelson Solar Battery	Solar	60	Dec-2024
Indygen	Nelson Solar Battery	Storage	20	Dec-2024
HEP Energy	Alderson Solar	Solar	100	Dec-2024
RESC	Oyen MPC Wind	Wind	250	Dec-2024
Spirit Pine	Lone Pine WAGF	Wind	173	Dec-2024
Greengate	Luna 2 MPC Solar Battery	Solar	465	Dec-2024
Greengate	Luna 2 MPC Solar Battery	Storage	465	Dec-2024
Aira	MPC Solar	Solar	450	Dec-2024
Fortis	Ponoka 331S DER Solar Battery	Solar	23.2	Dec-2024
Fortis	Ponoka 331S DER Solar Battery	Storage	7.8	Dec-2024
TA	Sunhills Solar	Solar	130	Dec-2024
Universal Kraft	UK Solar East MPC	Solar	400	Jan-2025
Greenlight	Greenlight MPC Gas	Gas	466	Jan-2025
Kiwetinohk	Granum MPC Solar	Solar	400	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
BluEarth	Hand Hills Battery	Storage	10	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
2444612 Alberta Ltd.	East Camrose MPC Solar	Solar	150	Jun-2025
Enerfin	Big Rock Solar Battery	Solar	100	Jun-2025

Enerfin	Big Rock Solar Battery	Storage	40	Jun-2025
CP	Rolling Hills MPC Wind	Wind	190	Jun-2025
Kiwetinohk	Maskwa MPC Gas	Gas	450	Jul-2025
Frontline	Kneehill MPC Solar	Solar	450	Jul-2025
Neoen Renewables	Jumbo MPC Solar Battery	Solar	218	Jul-2025
Neoen Renewables	Jumbo MPC Solar Battery	Storage	75	Jul-2025
Neoen Renewables	Sweetgrass MPC Solar Battery	Solar	315	Jul-2025
Neoen Renewables	Sweetgrass MPC Solar Battery	Storage	150	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
ABO	Smoky River MPC Wind	Wind	160	Oct-2025
MIL	MIL Generation MPC Gas	Gas	465	Jun-2026
Kalina	KALINA Energy Centre Mitsue Gas	Gas	466	Jul-2026
Dow Chemicals	Dow Fort Sask. Load	Gas	60	Aug-2026
Montem	Tent Mountain MPC Pumped Hydro	Storage	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
Pembina	Duvernay Cogen	Gas	46	TBD
ATCO	Updike 886S DER Gas	Gas	33	TBD
Federation	Marguerite Lake CAE Storage	Storage	320	TBD
BluEarth	Bindloss MPC Solar Battery	Solar	100	TBD
BluEarth	Bindloss MPC Solar Battery	Storage	20	TBD
Fortis	West Brooks 28S DER Solar	Solar	23	TBD
NGCI	Ermineskin Cree Nation Solar	Solar	80	TBD

Total (MW)			26,385	
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Table 4: Generation Projects that have Announced to be Retired/Derated

Sponsor(s)	Project Name	Fuel	Unit Capacity*	Date	Status
Capital Power	Genesee 1	Coal	400	Nov-2023	Retire
Capital Power	Genesee 2	Coal	420	Dec-2023	Retire

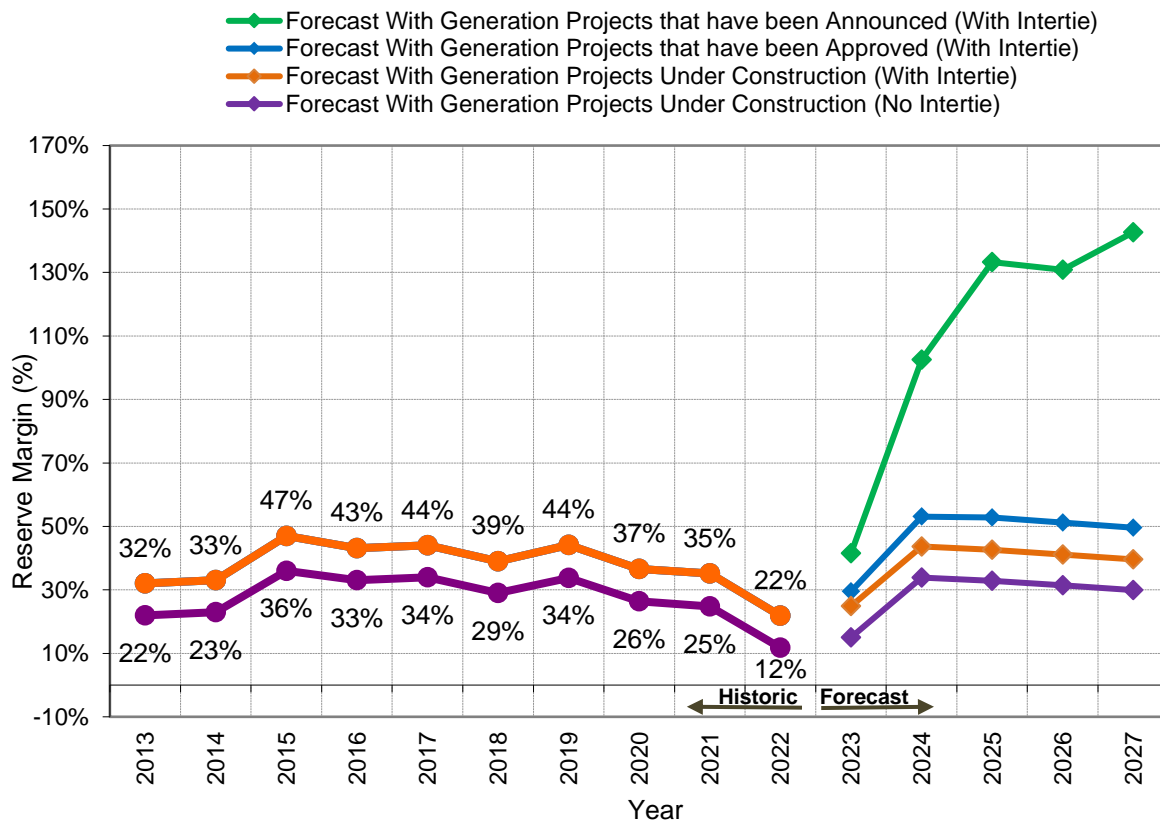
Table 5: Summary of installed capacity of renewable generation and storage projects

Stage	Solar (MW)	Wind (MW)	Storage (MW)
Operational	1,165	3,618	90
Under construction	1,400	1,870	9.4
Received AUC approval	1,750	670	600
Announced	11,400	5,350	6,000
Total	15,700	11,500	6,700

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, 2013 – 2027



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, Feb 1, 2023 to Jan 31, 2025

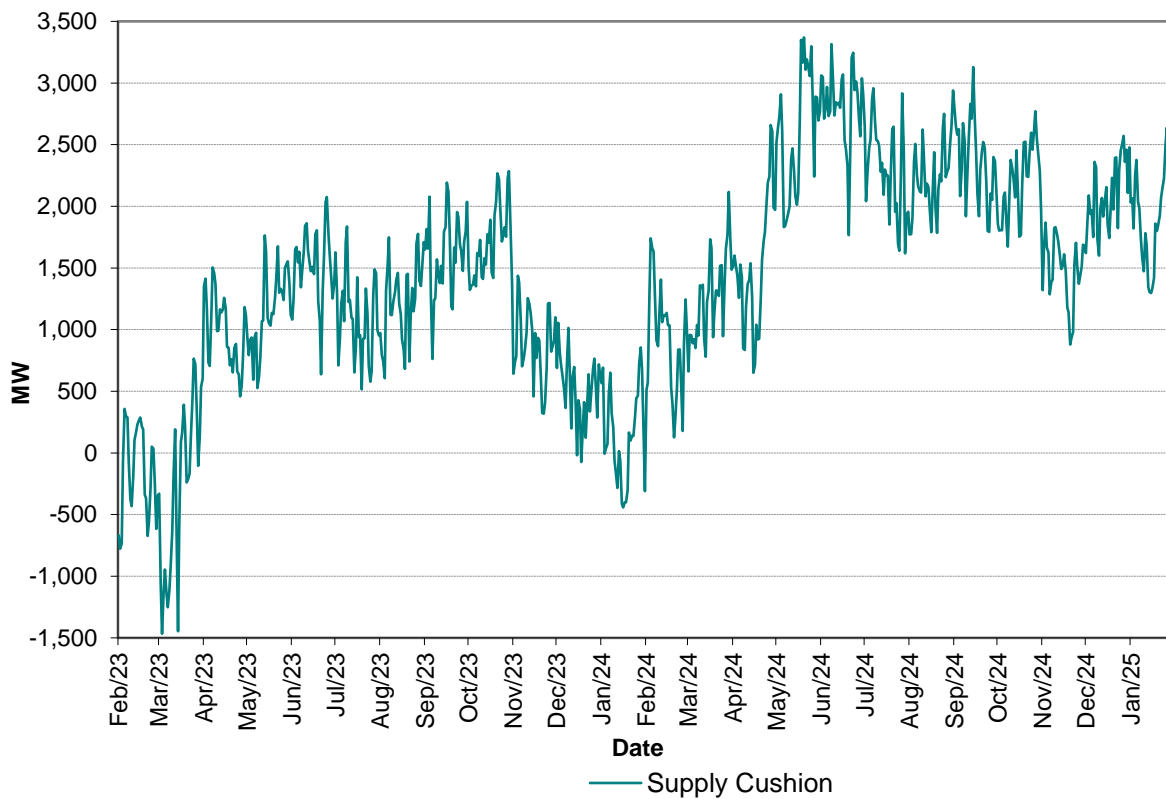
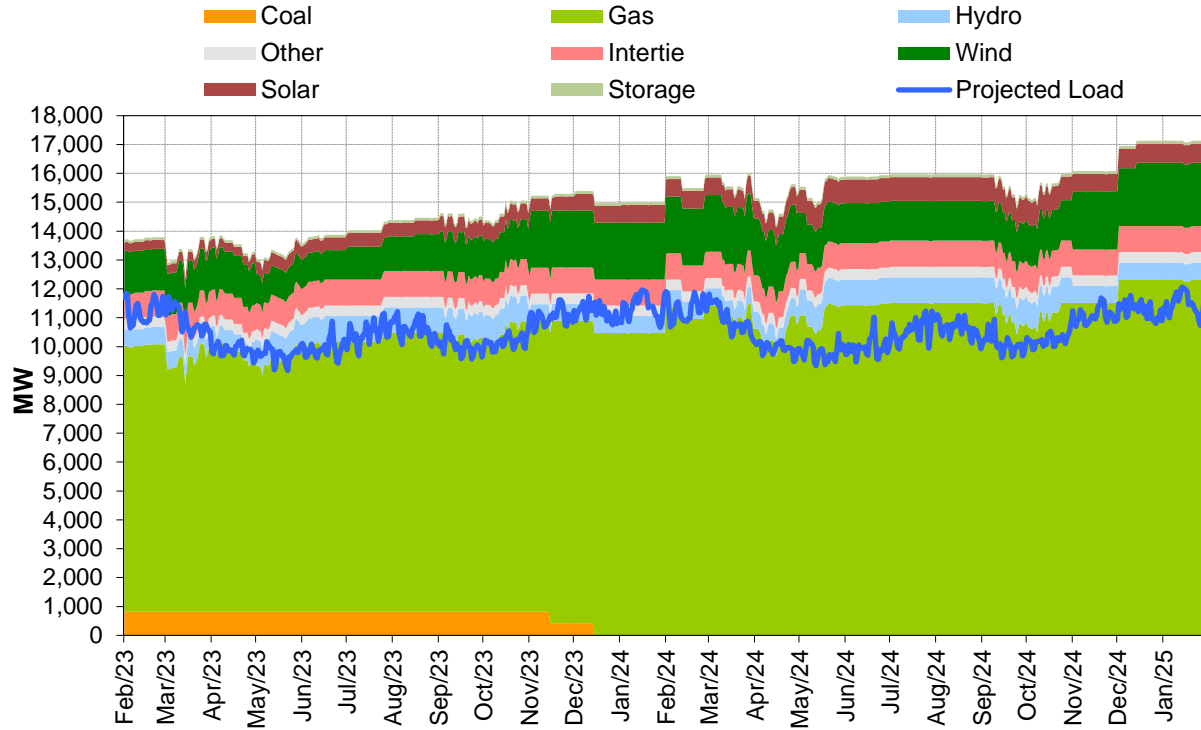


Figure 3: Alberta Internal Load (AIL) Daily Peak Demand and Available Supply, Feb 1, 2023 to Jan 31, 2025



Outage information as of January 13th 2023

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 1,995 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, Feb 1, 2023 to Jan 31, 2025

Worst Shortfall Hour (MW)	# of Hours in Shortfall	Total Energy Not Served (MWh)
133	2.3	457

Note: Values are rounded and represent average outputs