# Alberta Energy Storage Outlook

April 16, 2026

Similan Consulting

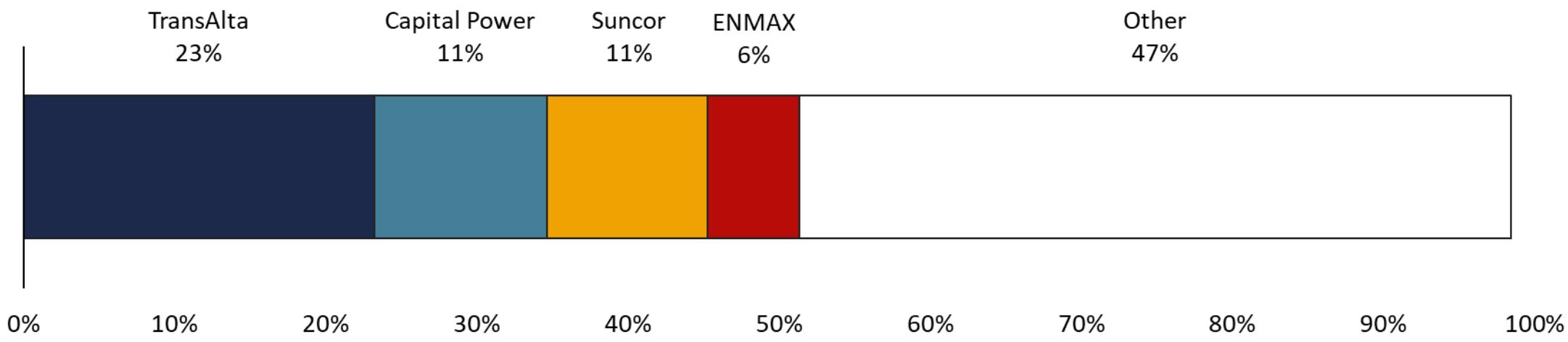
# Alberta Power Market - In Numbers

12.8 GW peak load market with high concentration (large incumbents hold significant market power)

| Load (2025) | |
|---|---|
| Alberta Internal Load - Average | 10.3 GW |
| Alberta Internal Load - Peak | 12.8 GW |
| BTF load - Average | 2.8 GW |
| System Load – Average | 7.5 GW |
| System Load - Peak | 9.6 GW |

| Supply (2025YE) | |
|---|---|
| Cogeneration | 6.1 GW |
| Wind | 5.7 GW |
| Combined Cycle | 4.0 GW |
| Coal-to-Gas (including mothball) | 3.1 GW |
| Solar | 1.9 GW |

**Market Share Offer Control** *(percent)*



# Where we are today

REM design defined. Rules approved. Implementation underway. Details emerging.

**What This Means for Storage**

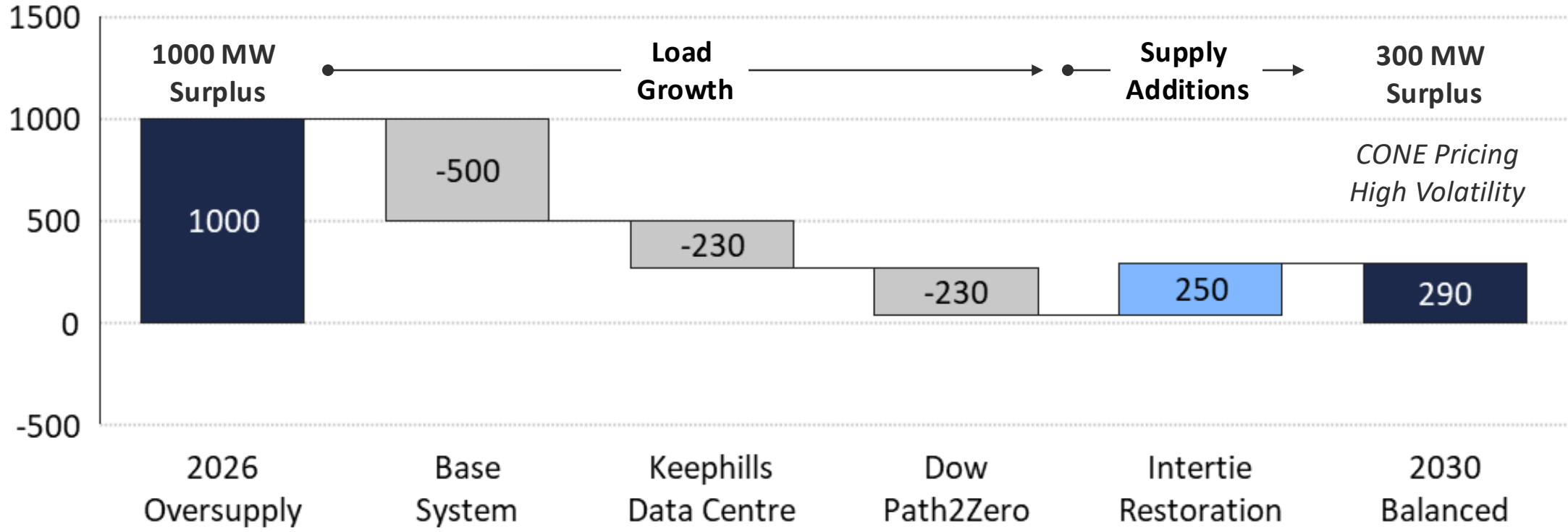
- Volatility is a feature not a bug *(higher offer, introduction of negative pricing)*
- Scarcity pricing amplifies volatility *(during low supply cushion events)*
- Locational Marginal Pricing reduces structural market clearing distortions *(replaces unconstrained system marginal pricing under TCR)*
- R30 / RUC improve price formation under tight conditions *(addresses distortions from Supply Cushion Regulation)*

Market design supports full cycle CONE returns through price volatility

# Alberta Market Tightening: Path to Balance

*Illustrative path from ~1,000 MW oversupply to balanced market (CONE Market)*

**Supply Demand Balance** *(MW)*




As the market tightens under the new design, a **small number of hours will drive most of the value** (this is where storage will make its money)

# Storage Is Already Competitive with CCGT

Storage revenue targets declining

## **CCGT** *(new build)*

- Capex: $3,000/kW
- Life: 30 years
- Target Return: 10%
- FOM: $80/kW

**CONE: $490/kW-yr**

## **Current Storage** *(4-hr)*

- Capex: $2,500/kW
- Life: 20 years
- Target Return: 15%
- FOM: $100/kW

**CONE: $410/kW-yr**
*(85% of CCGT)*

## **Future Storage** *(4-hr)*

- Capex: $2,000/kW
- Life: 20 years
- Target Return: 15%
- FOM: $80/kW

**CONE: $320/kW-yr**
*(65% of CCGT)*

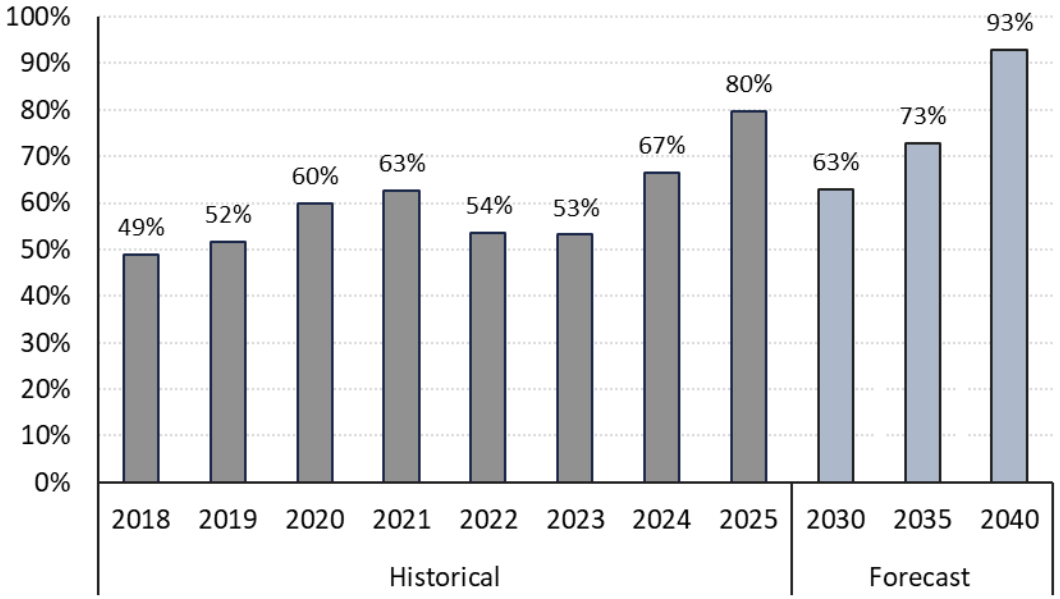
BESS is cost competitive relative to combined cycle

# BESS Competes in a Scarcity-Driven Market

## Revenue Concentration

**Revenue Concentration in Top 10% Price Hours** *(percent)*

*Percent of total annual net revenue captured during highest-priced 10% of hours*

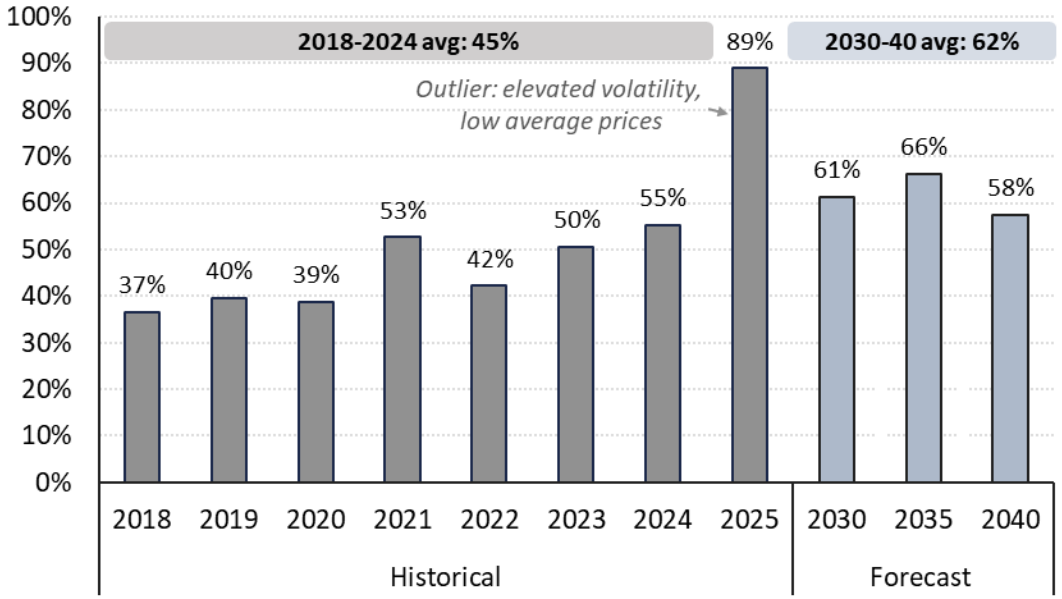



***Source:*** *AESO; Similan Analysis*

## Capture Ability

**4-hour BESS Revenue vs. CCGT Revenue** *(percent)*

*Percent of CCGT annual net revenue captured by a 4-hour battery*




***Source:*** *AESO; Similan Analysis*

High revenue concentration allows BESS to capture high share of market value

# Alberta Storage: three ways to play

Same asset — three fundamentally different business models

## Contracted

- Long-Term Contract: FFR+
- Duration: 2-hours
- Opportunity: 500 MW
- Upside: overbuild merchant exposure

## Merchant

- Market AS + Energy Arbitrage
- Duration: 2 to 4 hours
- Scaling to 600MW
- Upside: timing in-service date

## Trading

- Structured Products (TB2-TB8)
- Duration: 4 hours+
- Emerging to 800 MW
- Upside: portfolio effects (pair with renewables)

**Cost of capital** → **Volatility** → **Capability**

Initial FFR+ build out enables the merchant build out

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