



Mt Simon Station & Resource Plan Update

February 18, 2025

Power Supply Resource Plan | Renewable Energy. Reliable Capacity.

Renewable Energy



Wind
350 MW



Solar
50 MW



Hydro
3 MW

Reliable Capacity



Firm
Dispatchable
Generation



Battery
Storage
400 MWh



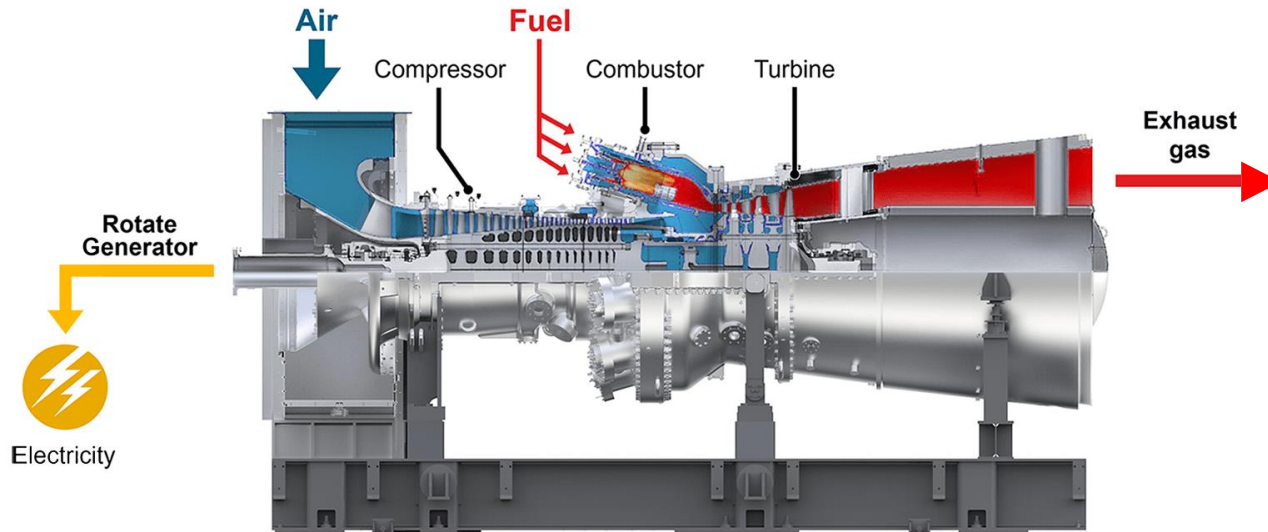
Demand
Response

Continued Conservation

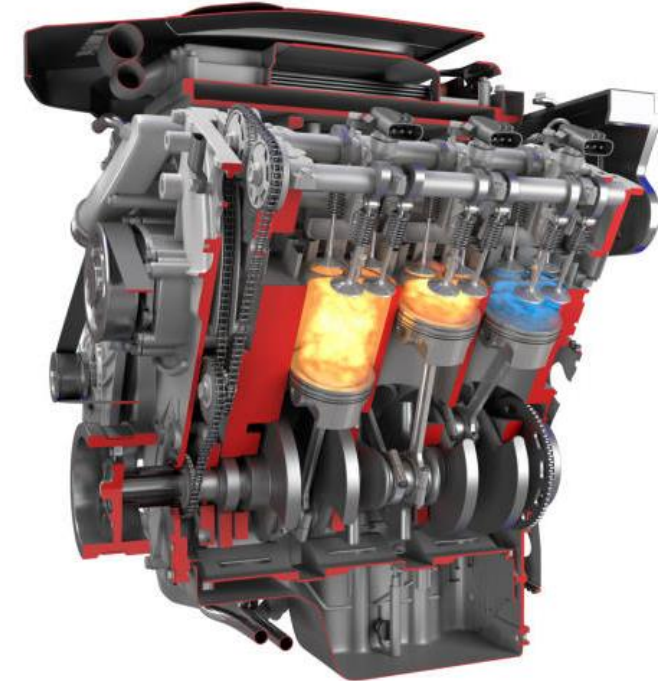


Firm Dispatchable Generation | Prime Mover Technology Options

Gas Turbine



Reciprocating Engine



Dispatchable electric generation refers to power sources that can be turned on or off at the request of grid operators, and their output can be adjusted to match electricity demand. This is crucial for maintaining grid stability and reliability.



Firm Dispatchable Generation | Prime Mover Technology Options

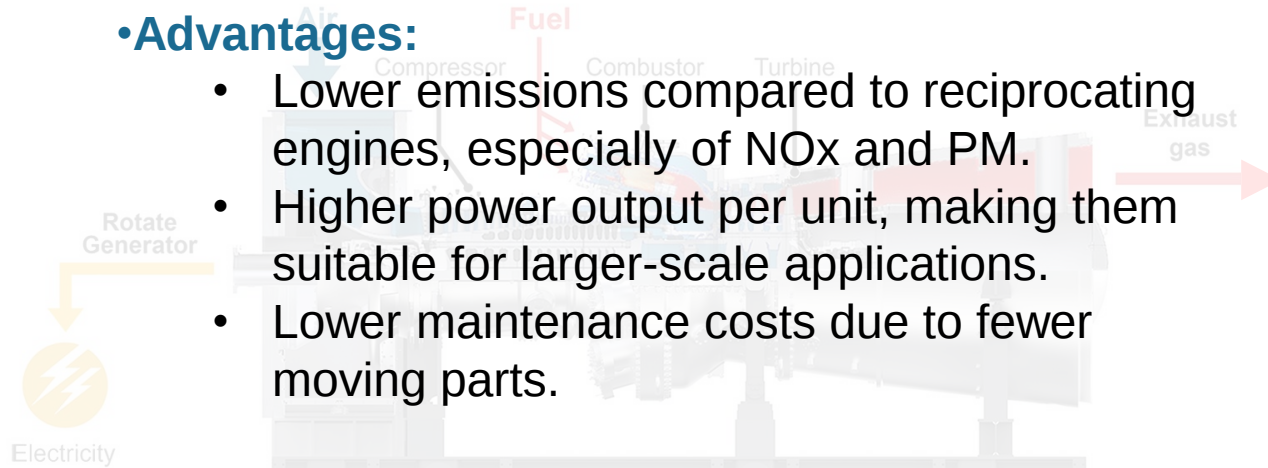
Gas Turbine Generator

•Advantages:

- Lower emissions compared to reciprocating engines, especially of NOx and PM.
- Higher power output per unit, making them suitable for larger-scale applications.
- Lower maintenance costs due to fewer moving parts.

•Disadvantages:

- Lower efficiency at part-load operation.
- Higher capital cost compared to reciprocating engines.
- Slower start-up and loading capabilities compared to reciprocating engines.
- Sensitive to ambient temperature



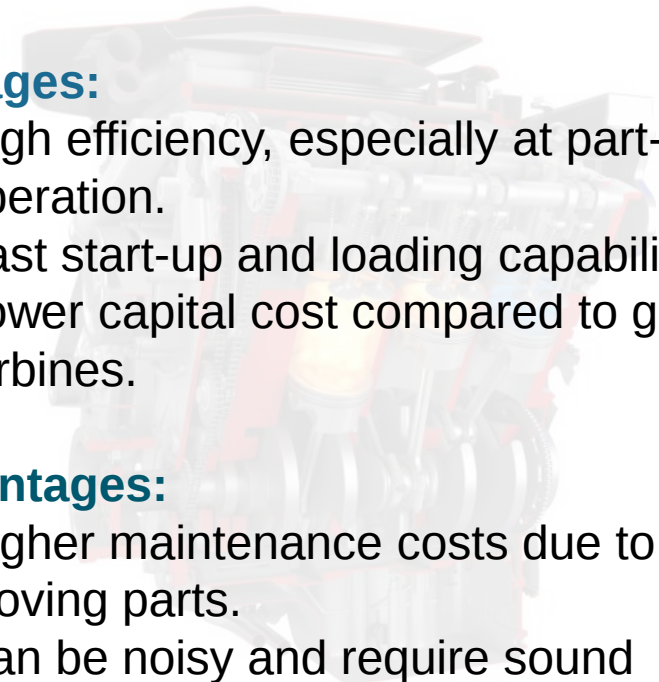
Reciprocating Engine

•Advantages:

- High efficiency, especially at part-load operation.
- Fast start-up and loading capabilities.
- Lower capital cost compared to gas turbines.

•Disadvantages:

- Higher maintenance costs due to more moving parts.
- Can be noisy and require sound attenuation measures.

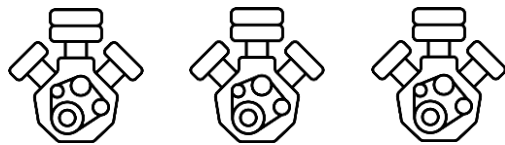


Mt Simon Station | Configuration Options

Reciprocating Engines



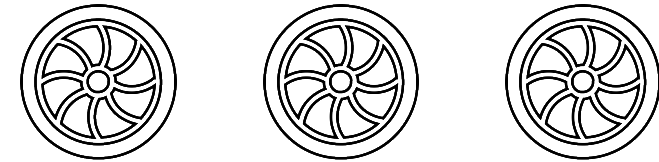
Five (5) 9.4 MW = **47.0 MW**



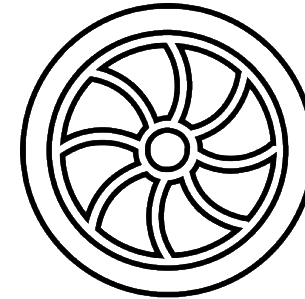
Three (3) 18 MW = **49.9 MW***

*Output limited to 49.9 MW interconnection

Gas Turbine Generators



Three (3) 15.4 MW = **46.4 MW**

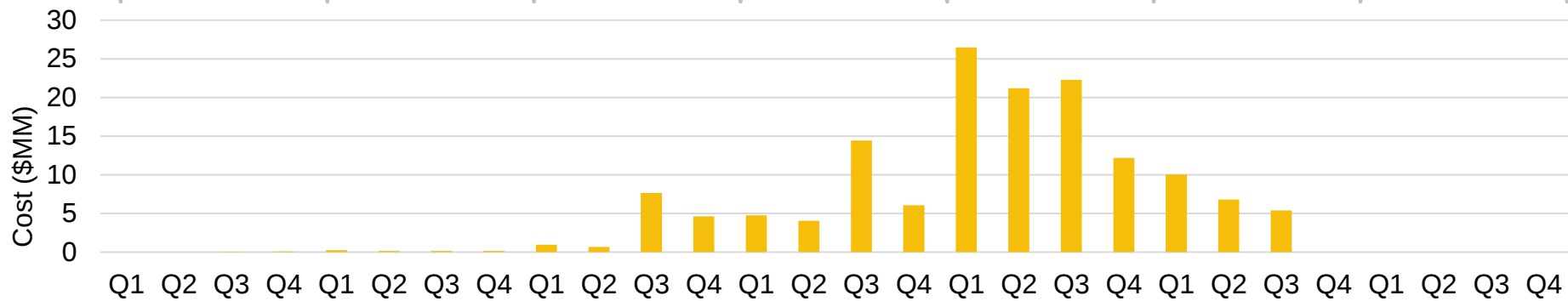
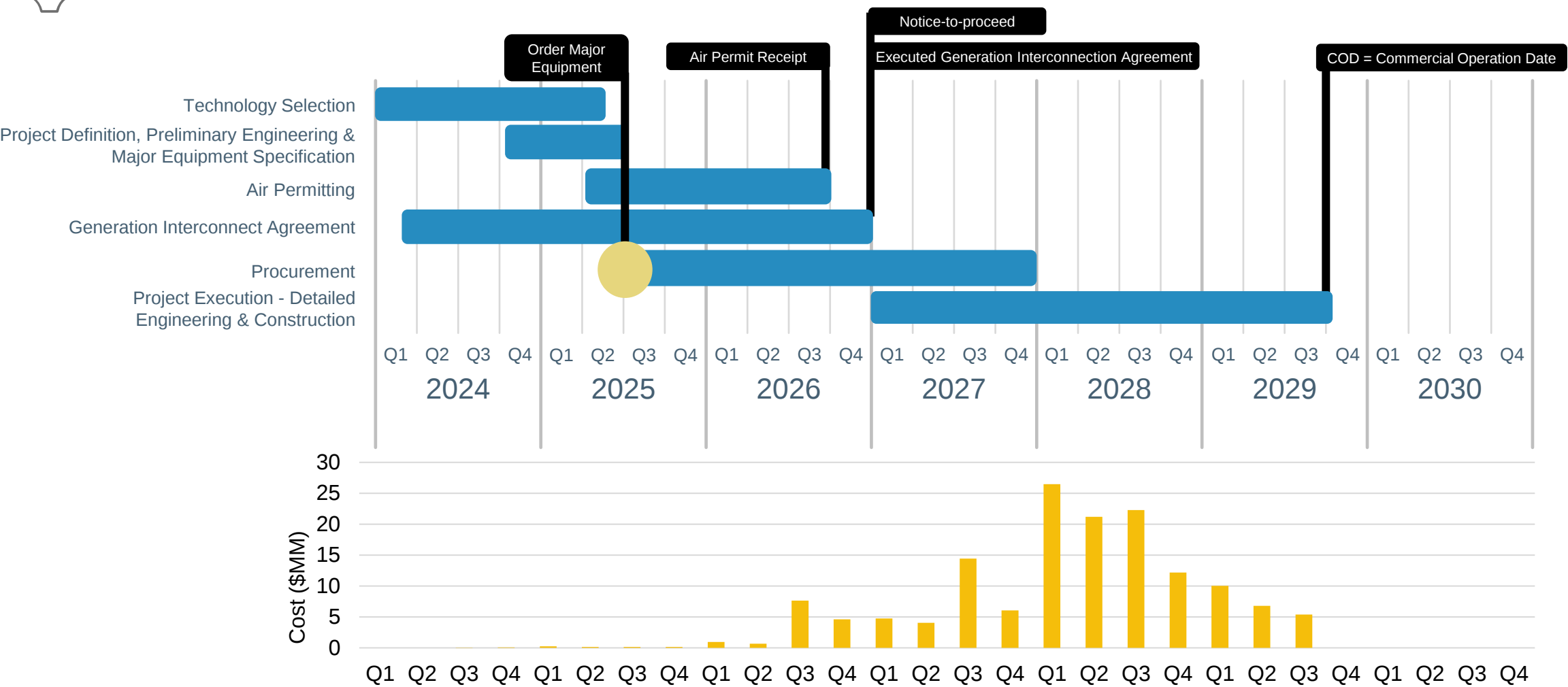


One (1) 49.7 MW = **49.7 MW**





Firm Dispatchable Resource - Mt Simon | Schedule



 - Major Decision Point: Aligns with equipment procurement, transmission results, and preliminary comments on air permit



Resource Plan | Execution

2024 Financial Plan Study

Resource	Capacity (MW)	Self Build Cost (\$MM)	PPA Cost	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Simple Cycle Combustion Turbine	50	\$120		RPU Financed	RPU Financed	RPU Financed	RPU Financed
4 - hr Battery Energy Storage	100	\$200	\$14.50/kW-mo	RPU Financed (w/ 30% ITC)	RPU Financed (w/ 30% ITC)	RPU Financed (w/ 30% ITC)	PPA
Solar 2030	50	\$100	\$75/MWh	RPU Financed (w/30% ITC)	RPU Financed (w/30% ITC)	PPA	PPA
Wind 2030	350	\$600	\$40/MWh	RPU financed w/ PTC	PPA	PPA	PPA
Wind 2033	100	\$187	\$44/MWh	RPU Financed w/ PTC	PPA	PPA	PPA

ITC: INVESTMENT TAX CREDIT

PTC: PRODUCTION TAX CREDIT

PPA: POWER PURCHASE AGREEMENT



Power Supply Resource Plan | External Risk Factors

- **Inflation Reduction Act**
 - Tax credits effectively lower the investment cost by 30-40%
 - Loss of credits will lead to 30-40% higher costs
- **Federal Permitting**

Development of large renewable sites requires federal review in key areas.



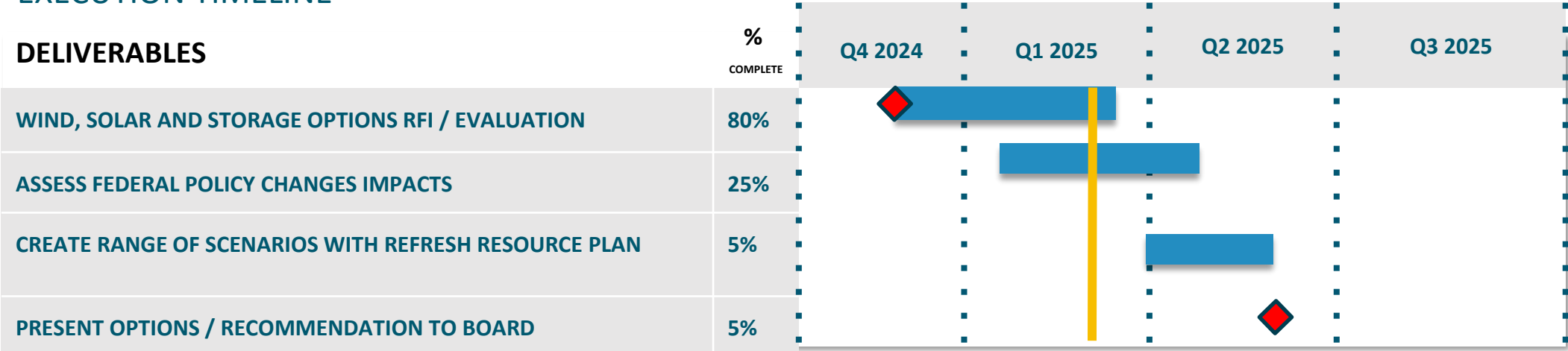
- **Mid-Continent Independent System Operator (MISO) Capacity Accreditation**

MISO is planning changes to capacity accreditation of renewables and storage assets.



Resource Plan | Execution

EXECUTION TIMELINE



Request for Information (RFI)

- > Identify advanced projects
- > Confirm pricing in model
- > Cast a wide net

Evaluation

- > Create Models
- > Rank
- > Federal Impacts

Address Federal Impacts

- > Project changes
- > Identify cost impacts
- > Present range of scenarios





Thank You