

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of Evergy Metro, Inc. d/b/a Evergy)
Missouri Metro’s 2021 Triennial Compliance Filing) File No. EO-2021-0035
Pursuant to 20 CSR 4240-22)

In the Matter of Evergy Missouri West, Inc. d/b/a)
Evergy Missouri West’s 2021 Triennial Compliance) File No. EO-2021-0036
Filing Pursuant to 20 CSR 4240-22)

**EVERGY MISSOURI METRO AND EVERGY MISSOURI WEST
NOTICE OF STAKEHOLDER UPDATE**

COME NOW Evergy Metro, Inc. d/b/a Evergy Missouri Metro (“Evergy Missouri Metro”) and Evergy Missouri West, Inc. d/b/a Evergy Missouri West (“Evergy Missouri West”)(collectively the “Company” or “Evergy”), and for their *Notice of Stakeholder Update* (“Notice”) state as follows:

1. On December 16, 2020, Evergy held an IRP stakeholder meeting with various stakeholders wherein the presentation attached hereto as **Exhibit A** was presented.

WHEREFORE, the Company files this Notice for the Commission’s information.

Respectfully submitted,

/s/ Robert J. Hack

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**Attorney for Evergy Missouri Metro and Evergy
Missouri West**

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the above and foregoing document was served upon all counsel of record on this 17th day of December 2020, via e-mail.

/s/ Robert J. Hack

Robert J. Hack



IRP Stakeholder Meeting

December 16th, 2020



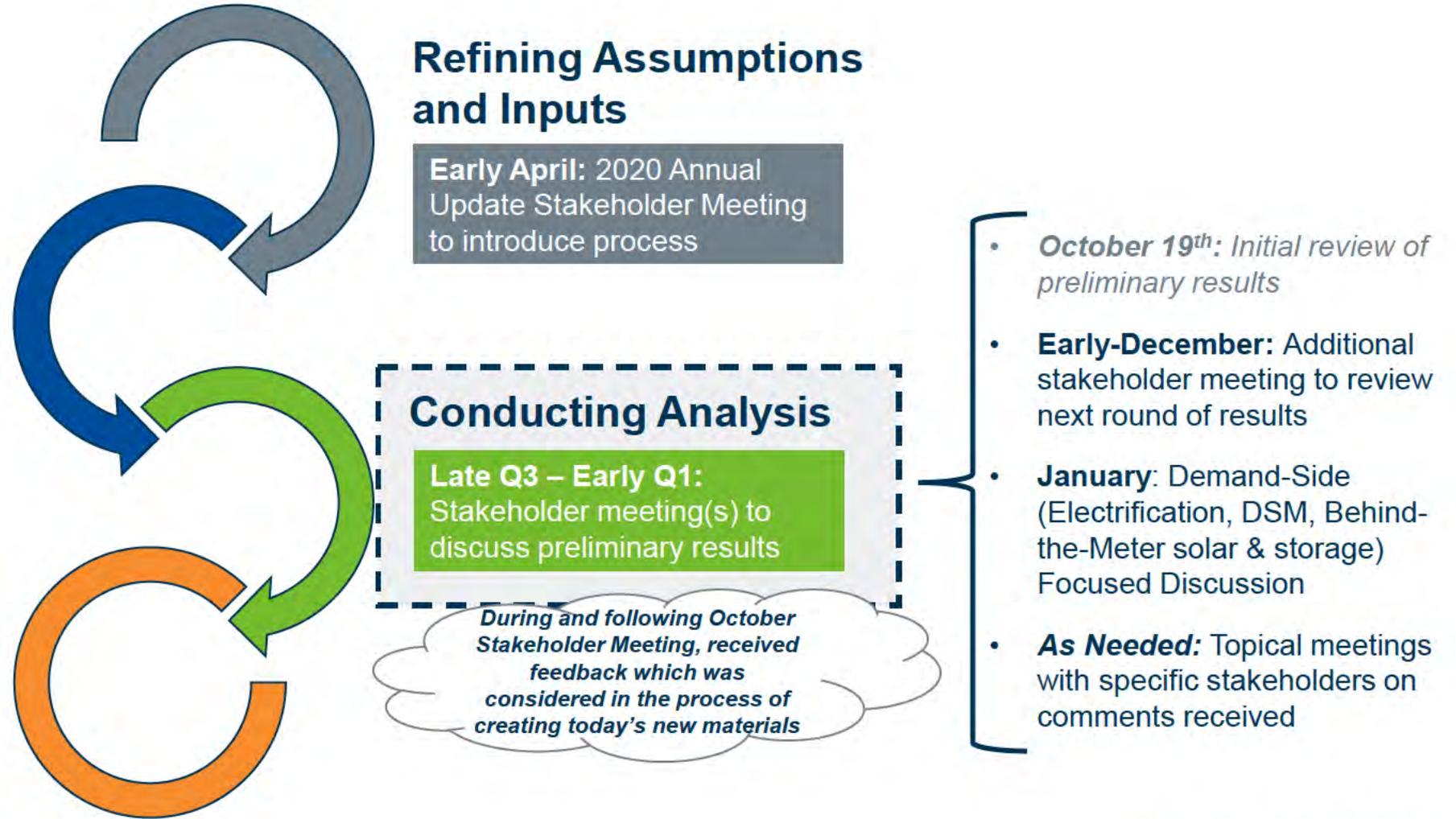


Agenda

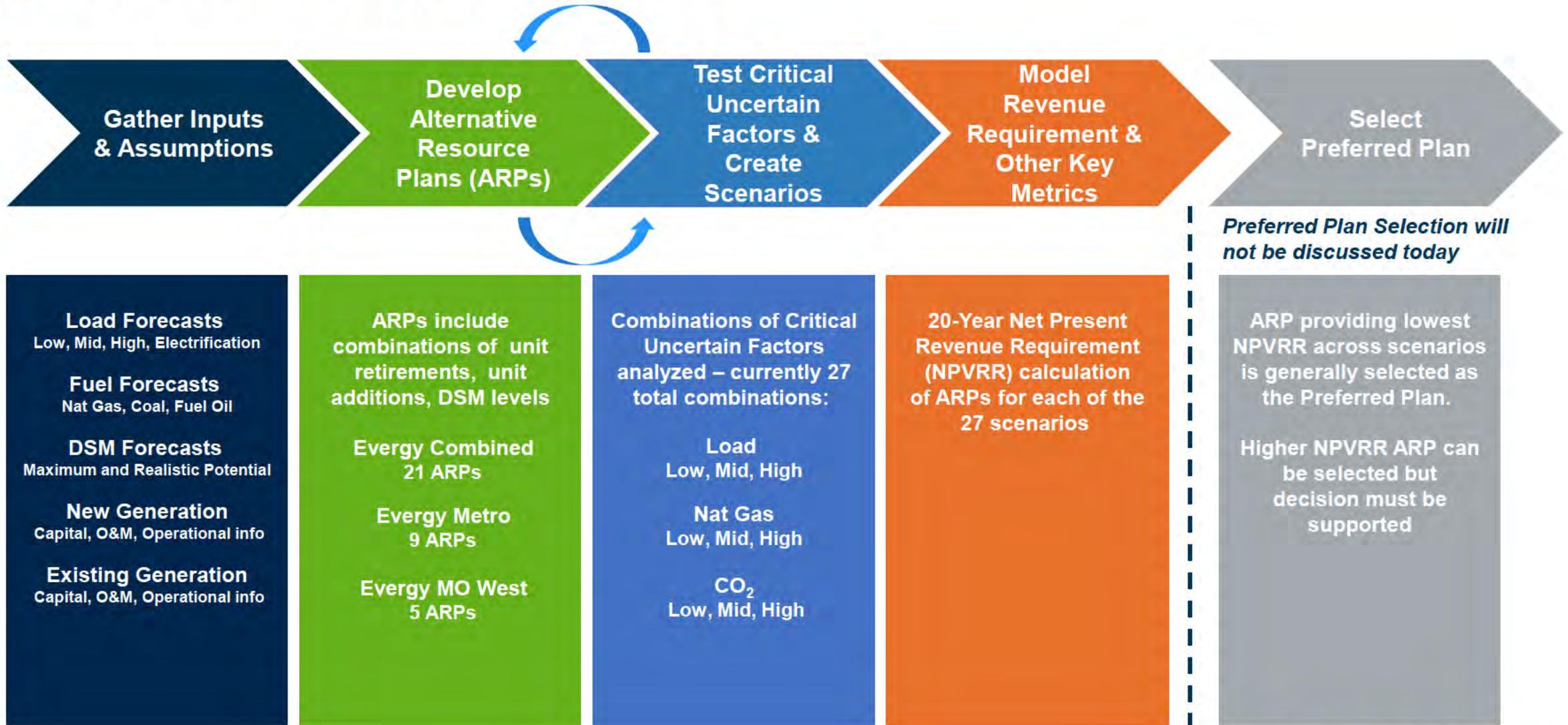
- Update on IRP Development Progress
- Inputs & Assumptions Update
- Alternative Resource Plans Modeled To-Date
- Uncertain Factors & Scenarios Update
- Preliminary Revenue Requirement Results
- Preferred Plan Selection Methodology
- Next Steps



Triennial IRP Development Timeline



Overall Analytical Process

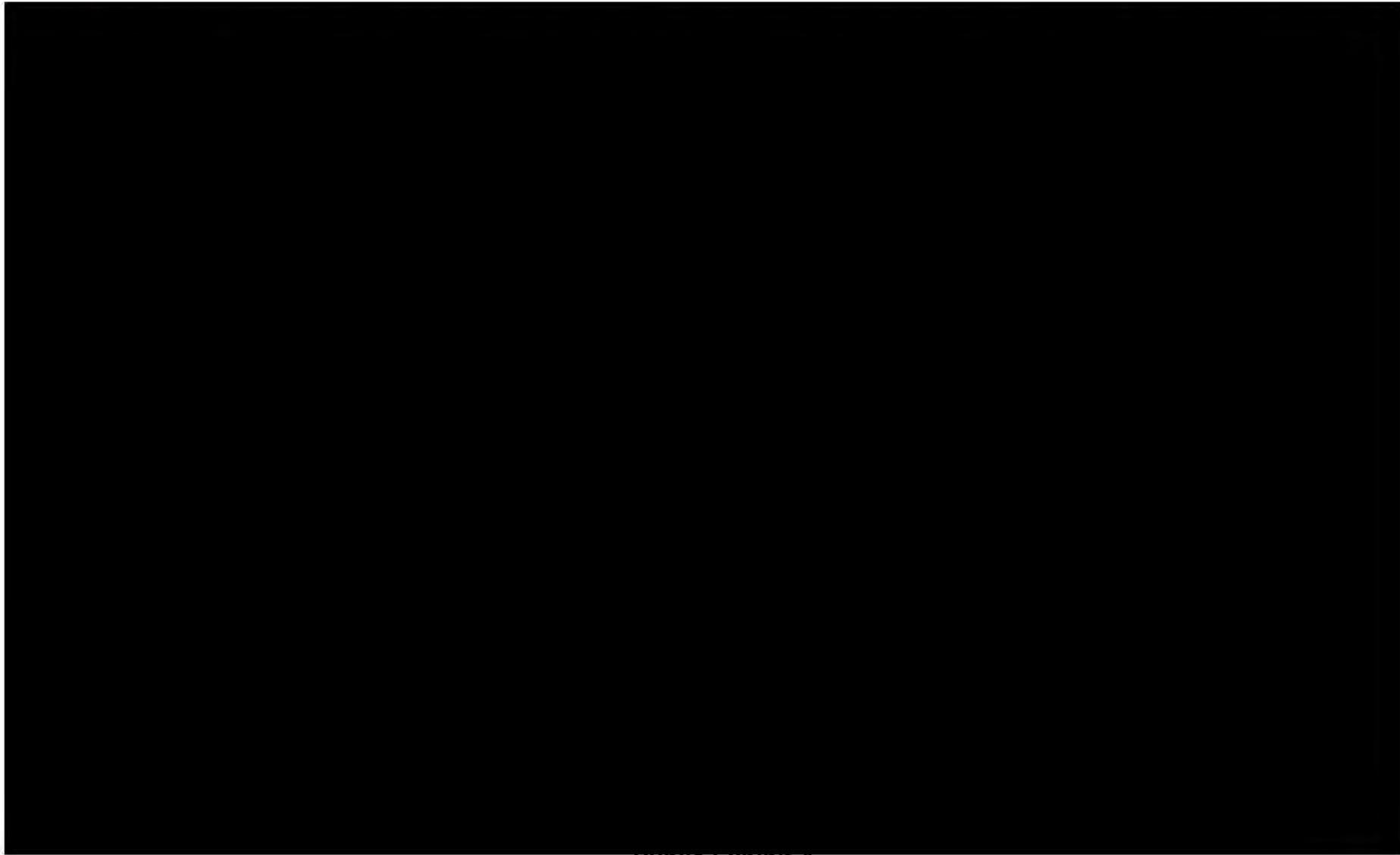


Gather Inputs & Assumptions

Laura Becker



Evergy Metro - Peak Load Forecasts Less DSM



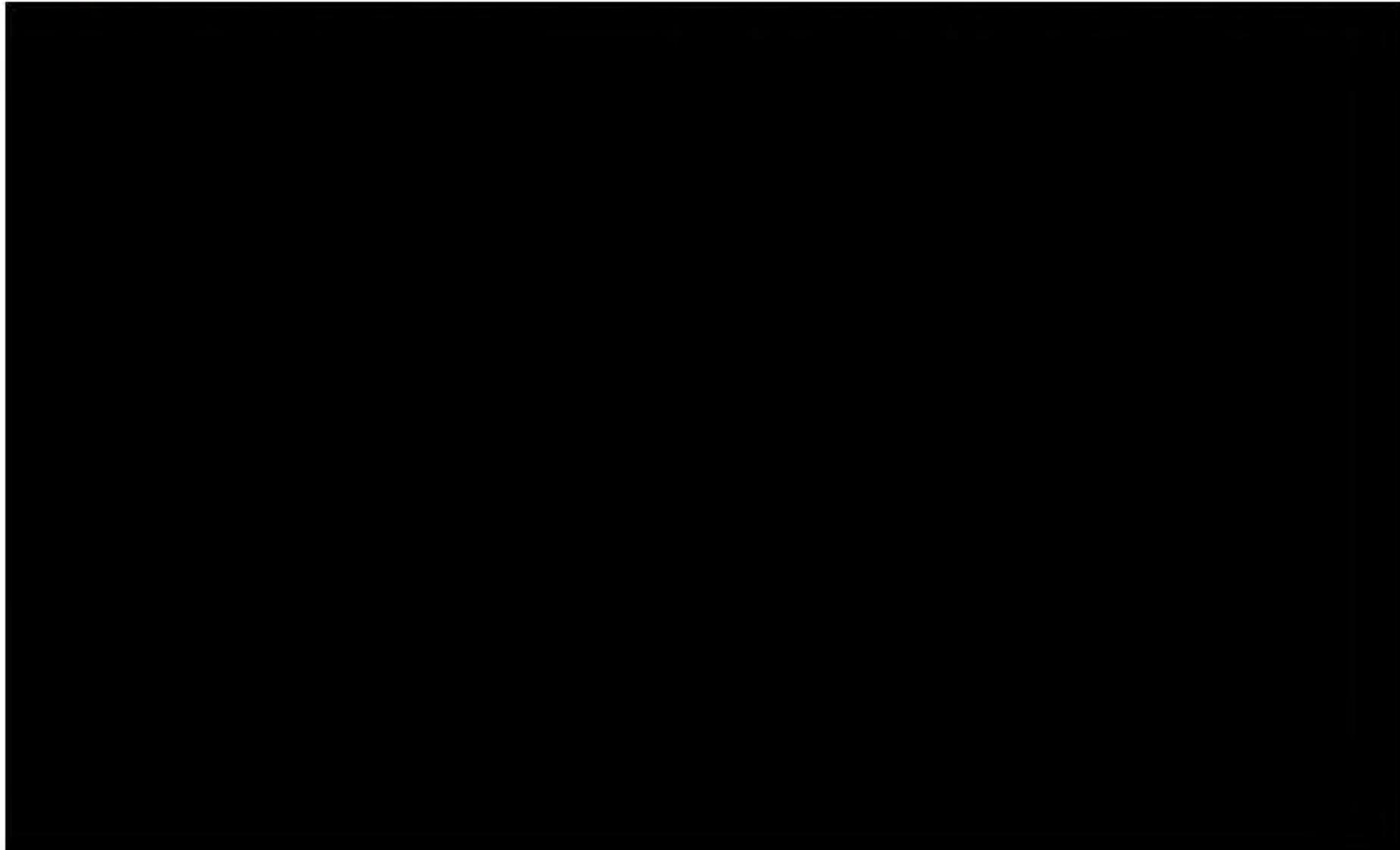


Evergy Metro - Energy Forecasts Less DSM



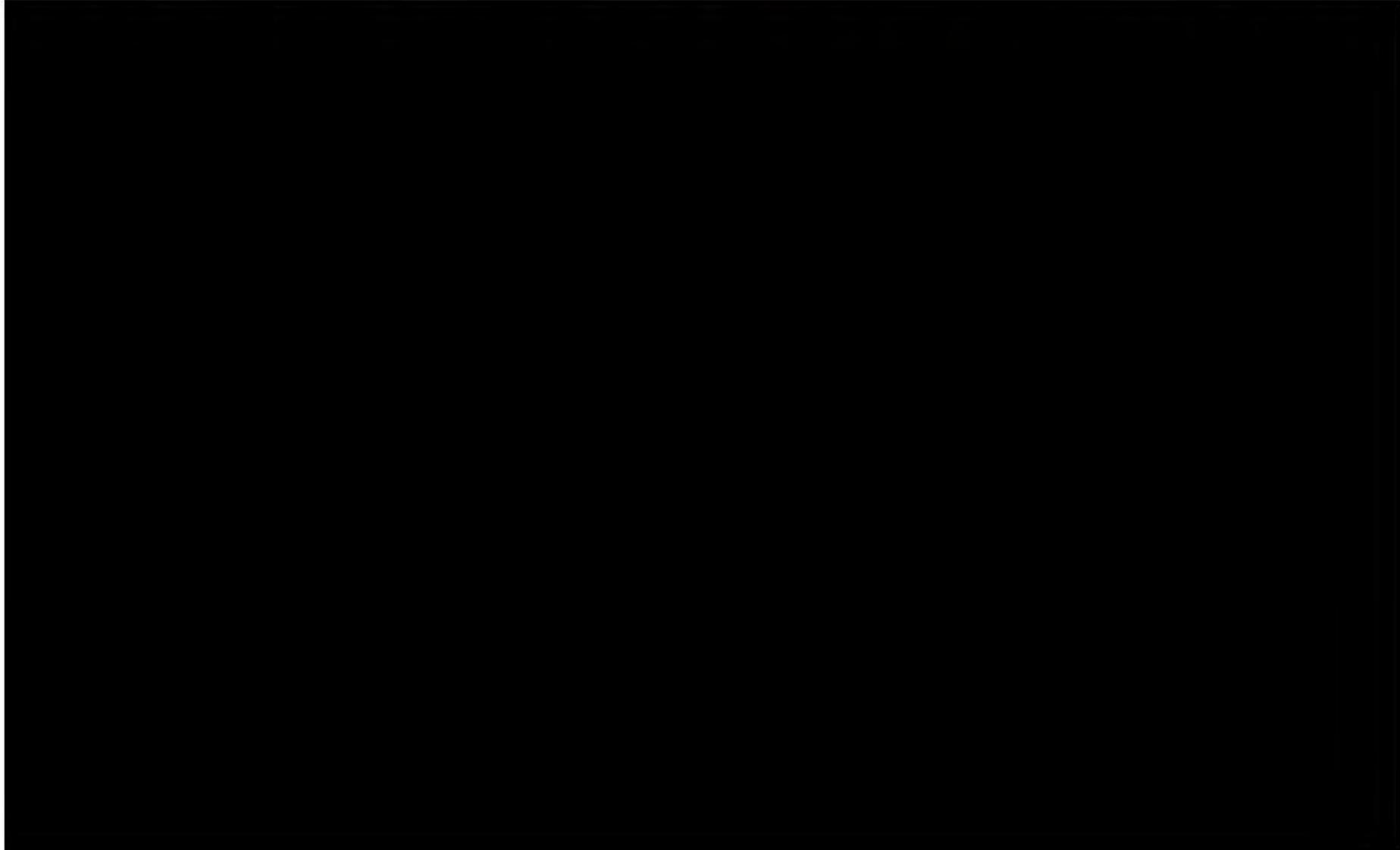


Evergy Missouri West - Peak Load Forecasts Less DSM





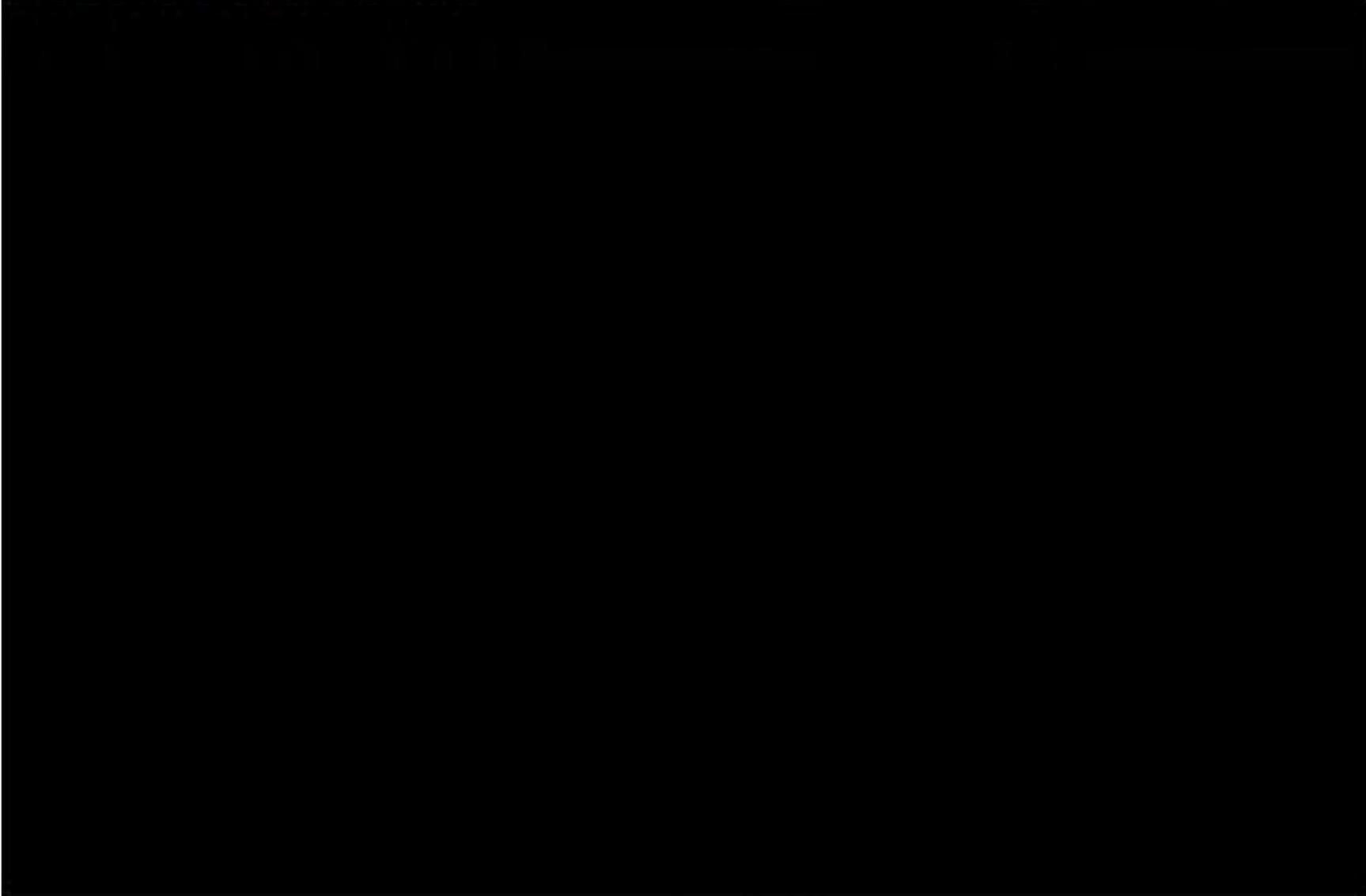
Evergy Missouri West - Energy Forecasts Less DSM





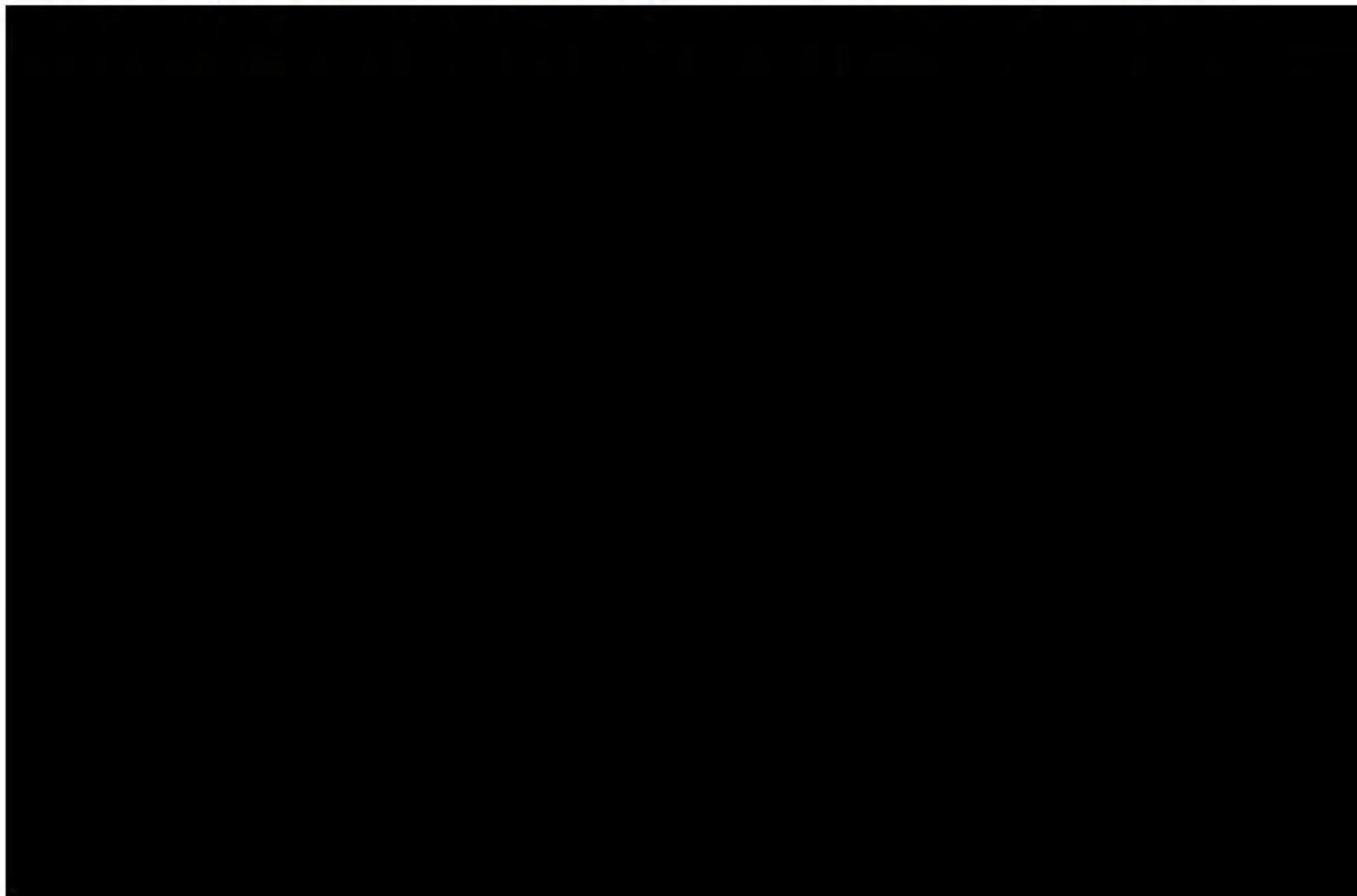
Annual Average SPP Energy Market Prices

Gas and CO Scenarios



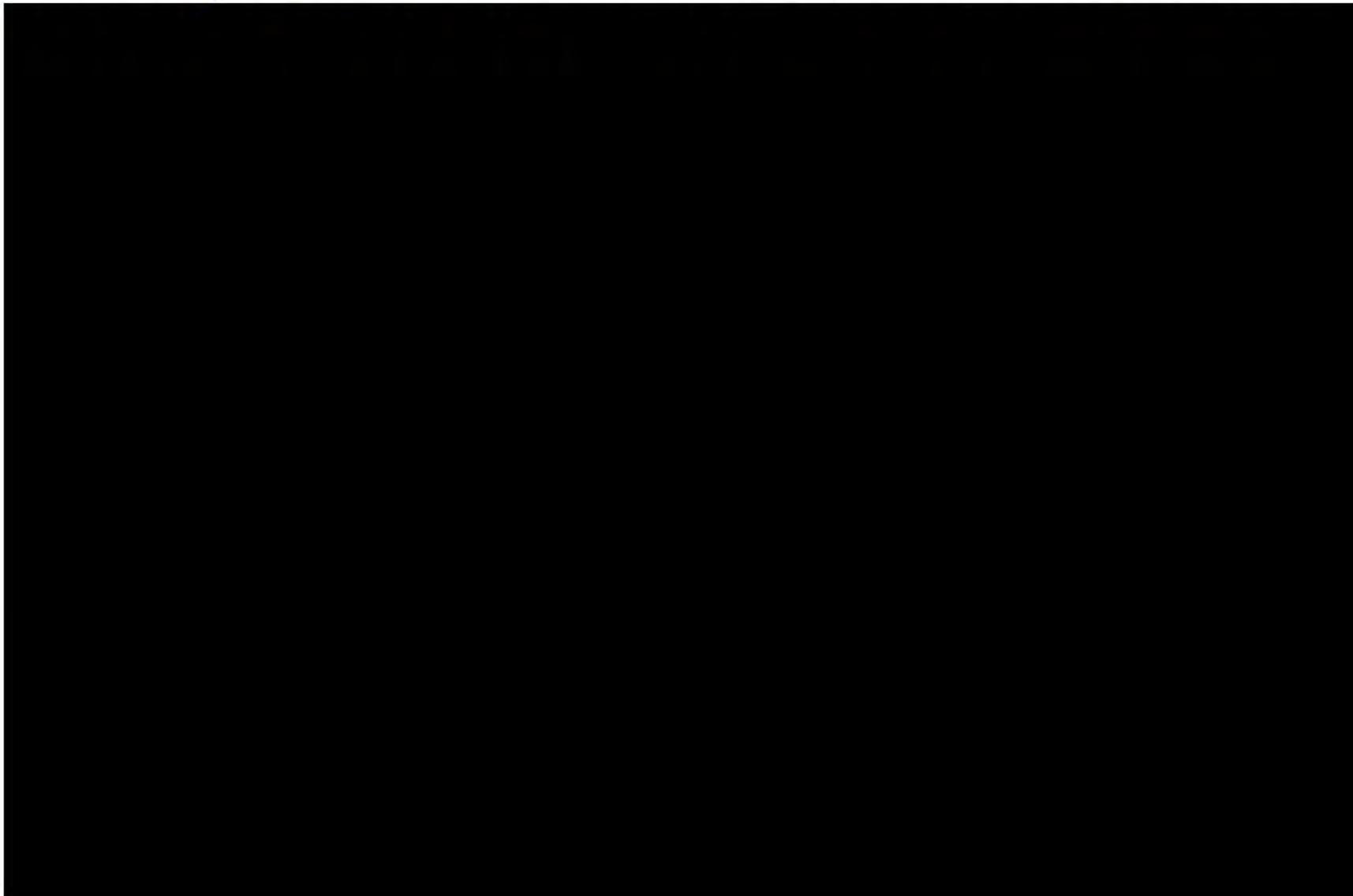


Annual Average SPP Energy Market Prices – Gas and CO₂ Scenarios with High Renewable Penetration





Annual Average SPP Energy Market Prices – Gas and CO₂ Scenarios with 50-Year Coal Plant Retirements



Develop Alternative Resource Plans

Laura Becker



Alternative Resource Plan Capacity Balance Example

Energy-Level, Assumes Retirement Dates Currently in Rates, MW





Alternative Resource Plan Selection Methodology



- Additional Alternative Resource Plans developed since the October Stakeholder Meeting
 - 9 additional Evergy level plans
 - DSM – Realistic Achievable Potential (RAP) level

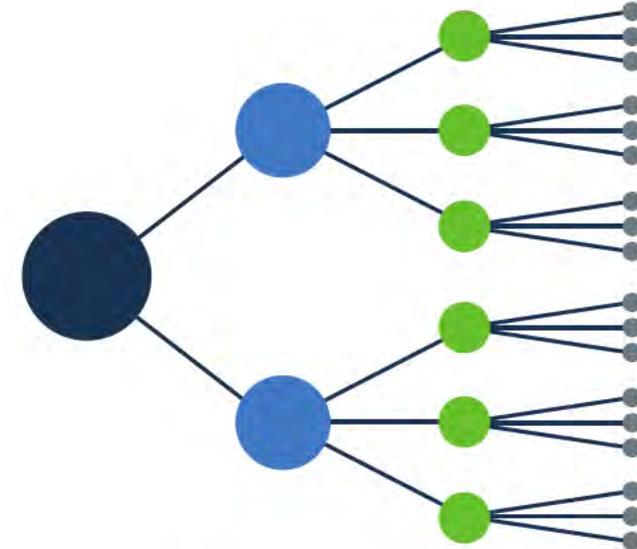
 - Future combined cycle addition
 - Future battery storage addition
 - Additional solar 2031 and 2035
 - 27 Stand-Alone Utility plans (Evergy Metro, Mo West and Ks Central)
 - “Book Life” plans with and without early period retirement of various coal plants
 - DSM – Realistic Achievable Potential (RAP) and RAP- level
 - With and without 2022-23 solar additions

Test Critical Uncertain Factors & Create Scenarios

Laura Becker



Critical Uncertain Factor Approach



Uncertain Factors

Analyzed individually to determine criticality (i.e., impact on Alternative Resource Plan ranking)

Scenarios

Constructed based on combinations of Critical Uncertain Factors (gas price, CO₂ pricing, load forecast, etc.)



Preliminary Uncertain Factors Evaluation

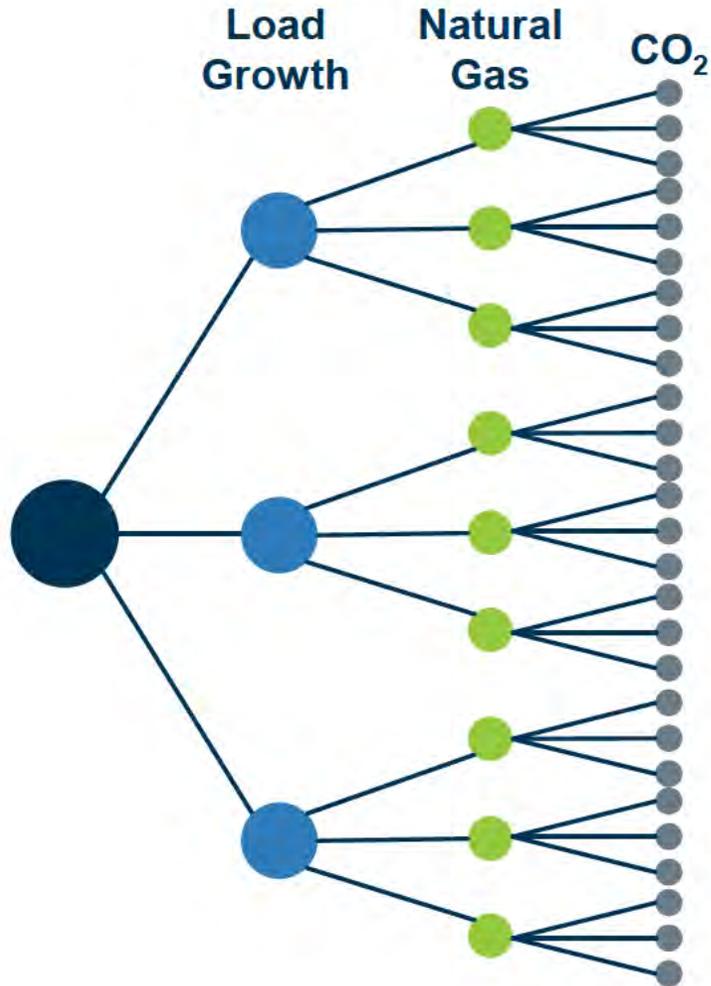


Uncertain Factor	Evaluated?	Critical?	Comments
Load Growth	✓	✓	Updated to model "Electrification" as high scenario
Interest Rate	✓	✗	
Legal Mandates	✓	✗	
Fuel Prices	✓	✓	Only Nat. Gas prices critical
New Gen Construction / Permitting	✓	✗	
Purchase Power	✓	✗	
Emission Allowance Pricing	✓	✓	Only CO ₂ Prices Critical
Gen O&M costs	✓	✗	
Force Outage Rates	✓	✗	
DSM / DSR Load Impacts	✓	✗	
DSM / DSR Costs	✓	✗	
SPP Renewable Penetration	✓	✗	
SPP Coal Retirements	✓	✗	
BtM Solar / Storage Adoption	○	TBD	
Other potential uncertain factors	TBD	TBD	

 Evaluation complete
 Evaluation planned, but not yet complete

 Currently considered "Critical"
 Not currently considered "Critical"

Scenarios & Probabilities Modeled To-Date



Endpoint	Load Growth	Natural Gas	CO ₂	Endpoint Probability
1	High	High	High	1.6%
2	High	High	Mid	3.1%
3	High	High	Low	1.6%
4	High	Mid	High	3.1%
5	High	Mid	Mid	6.3%
6	High	Mid	Low	3.1%
7	High	Low	High	1.6%
8	High	Low	Mid	3.1%
9	High	Low	Low	1.6%
10	Mid	High	High	3.1%
11	Mid	High	Mid	6.3%
12	Mid	High	Low	3.1%
13	Mid	Mid	High	6.3%
14	Mid	Mid	Mid	12.5%
15	Mid	Mid	Low	6.3%
16	Mid	Low	High	3.1%
17	Mid	Low	Mid	6.3%
18	Mid	Low	Low	3.1%
19	Low	High	High	1.6%
20	Low	High	Mid	3.1%
21	Low	High	Low	1.6%
22	Low	Mid	High	3.1%
23	Low	Mid	Mid	6.3%
24	Low	Mid	Low	3.1%
25	Low	Low	High	1.6%
26	Low	Low	Mid	3.1%
27	Low	Low	Low	1.6%

For each factor:
 High – 25%
 Mid – 50%
 Low – 25%

Model Revenue Requirement & Other Key Metrics

Laura Becker



Revenue Requirement Calculations



ARP #1

ARP #2

ARP #3

ARP #4

...

ARP #n

Combinations of Resource Retirements / New Generation / DSM over 20 years

Scenario #1

Scenario #2

Scenario #3

...

Scenario #n

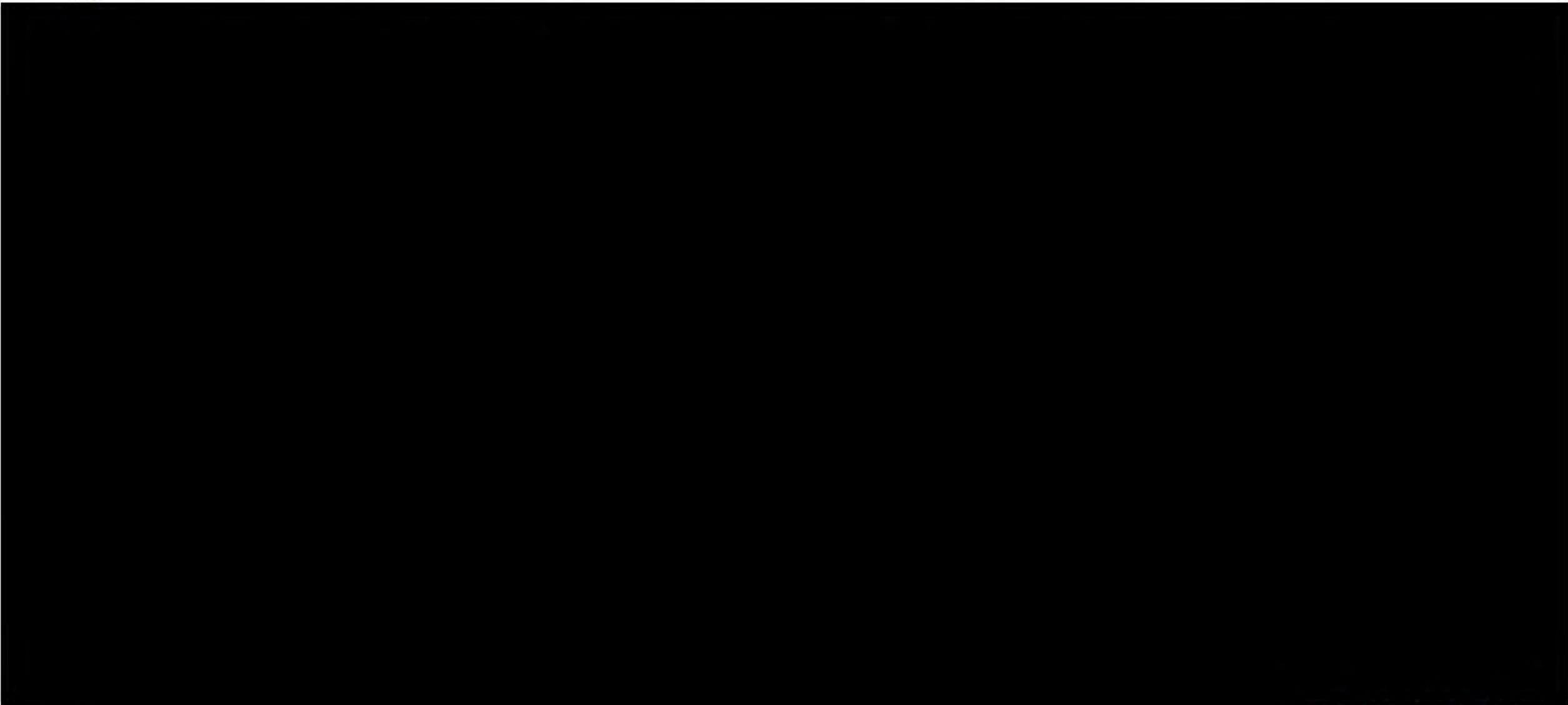
Made up of Critical Uncertain Factors (e.g., may consist of different wholesale market prices)

Net Present Value of Revenue Requirement (NPVRR) results for Individual Scenarios

Expected Value of NPVRR across all Scenarios

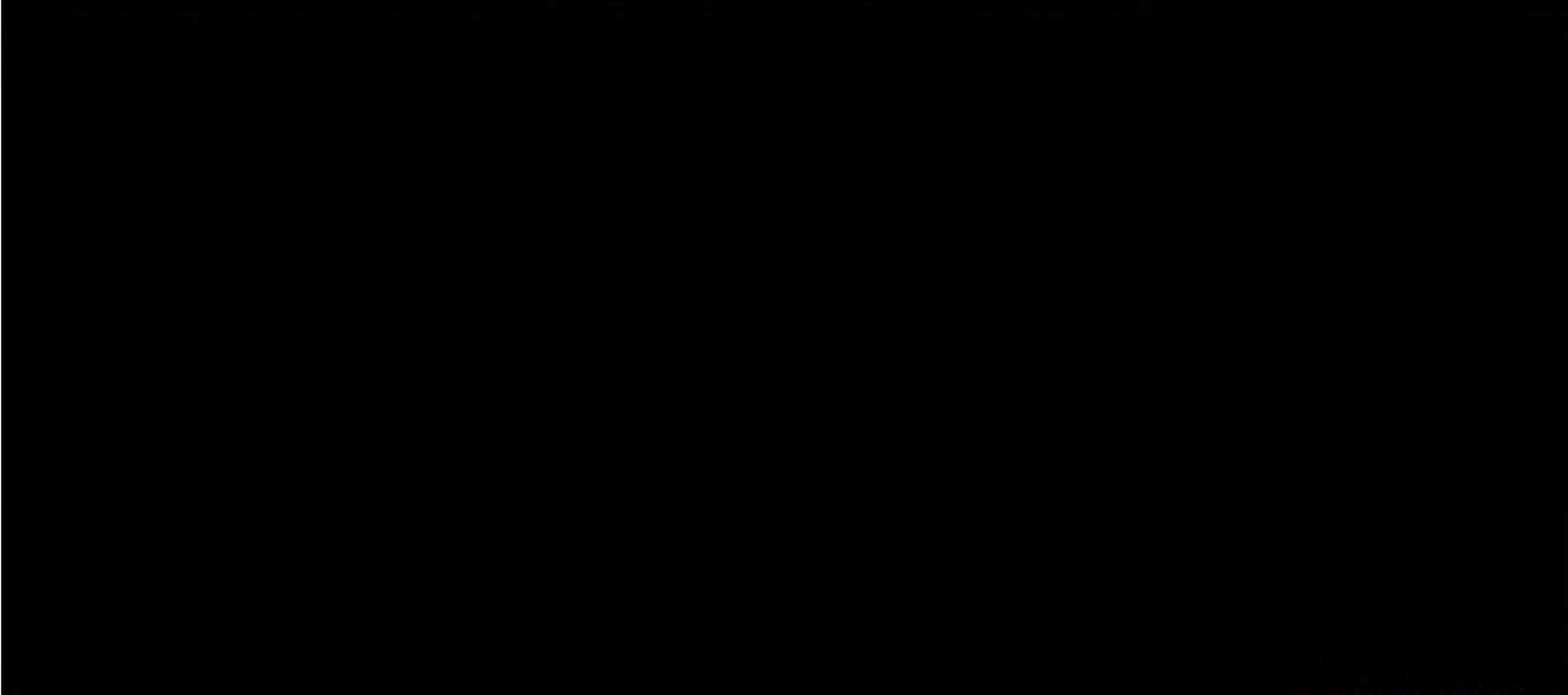


Preliminary Evergy Results – No CO₂ Restrictions





Preliminary Evergy Results – Mid-CO₂ Costs



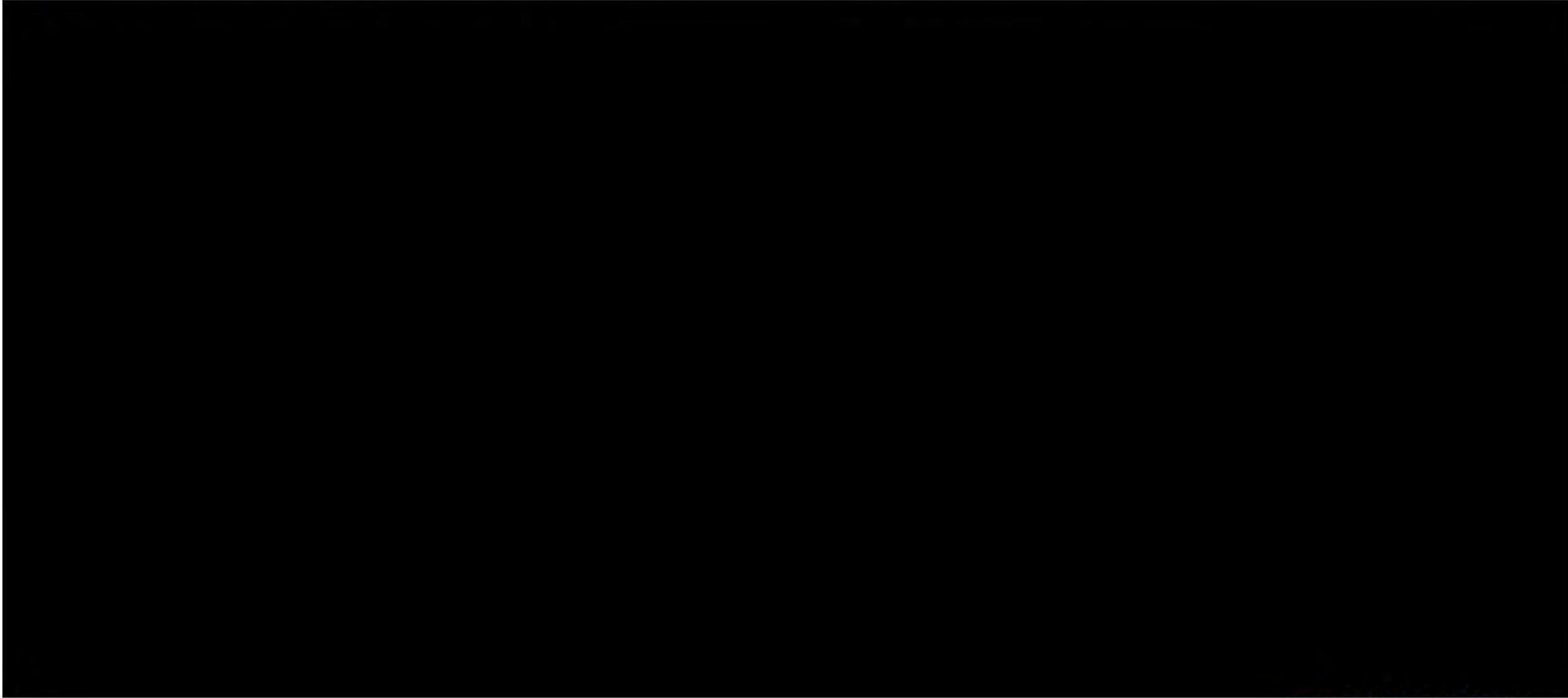


Preliminary Evergy Results - High CO₂ Costs



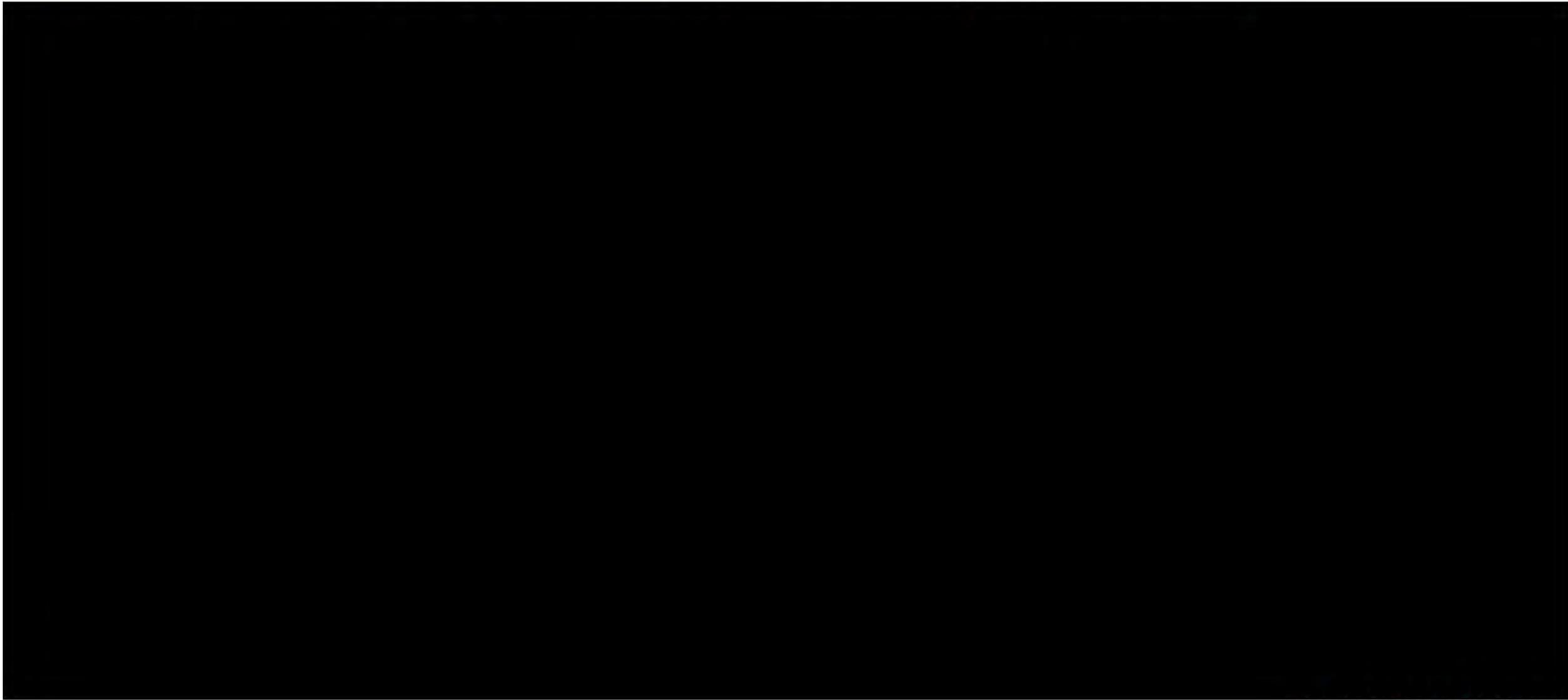


Preliminary Evergy Results – Expected Value



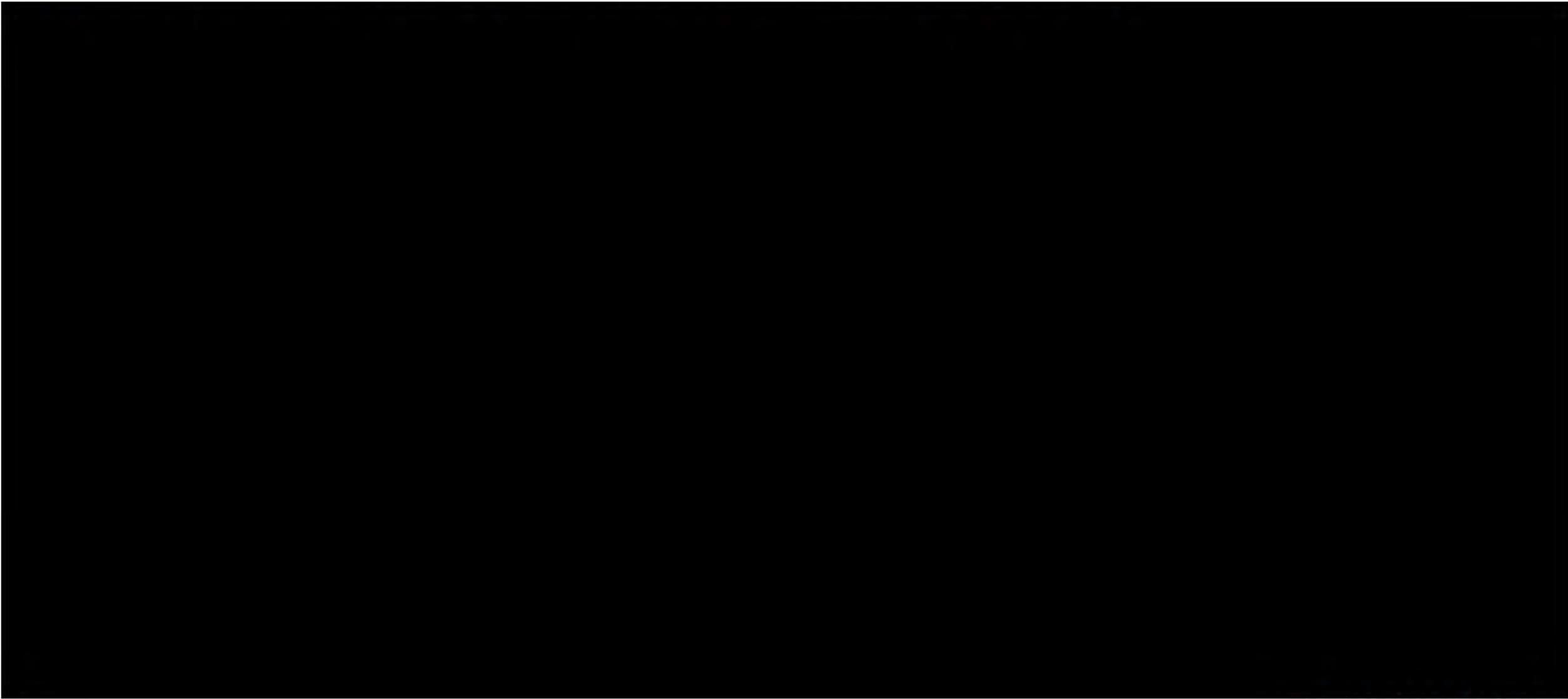


Preliminary Metro Results – No CO₂ Restrictions



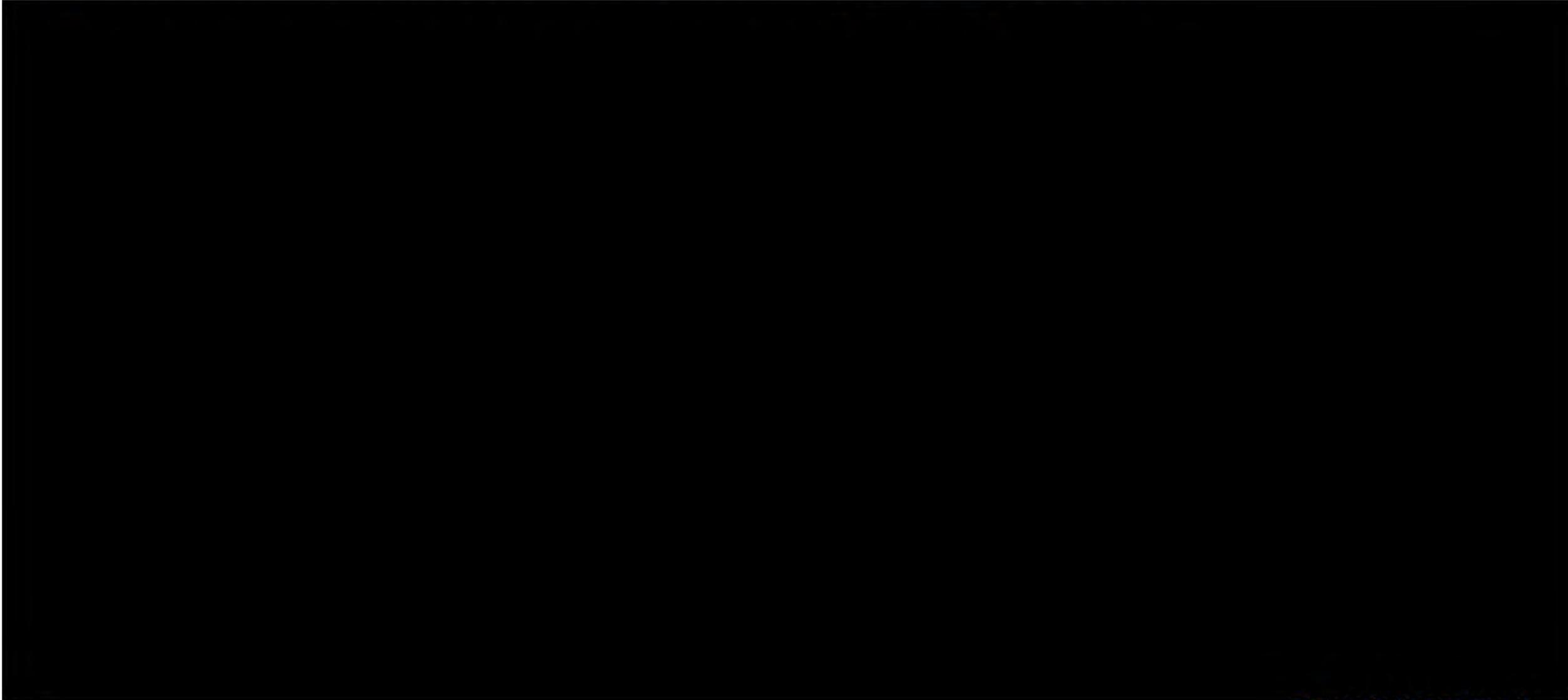


Preliminary Metro Results – Mid-CO₂ Costs





Preliminary Metro Results - High CO₂ Costs



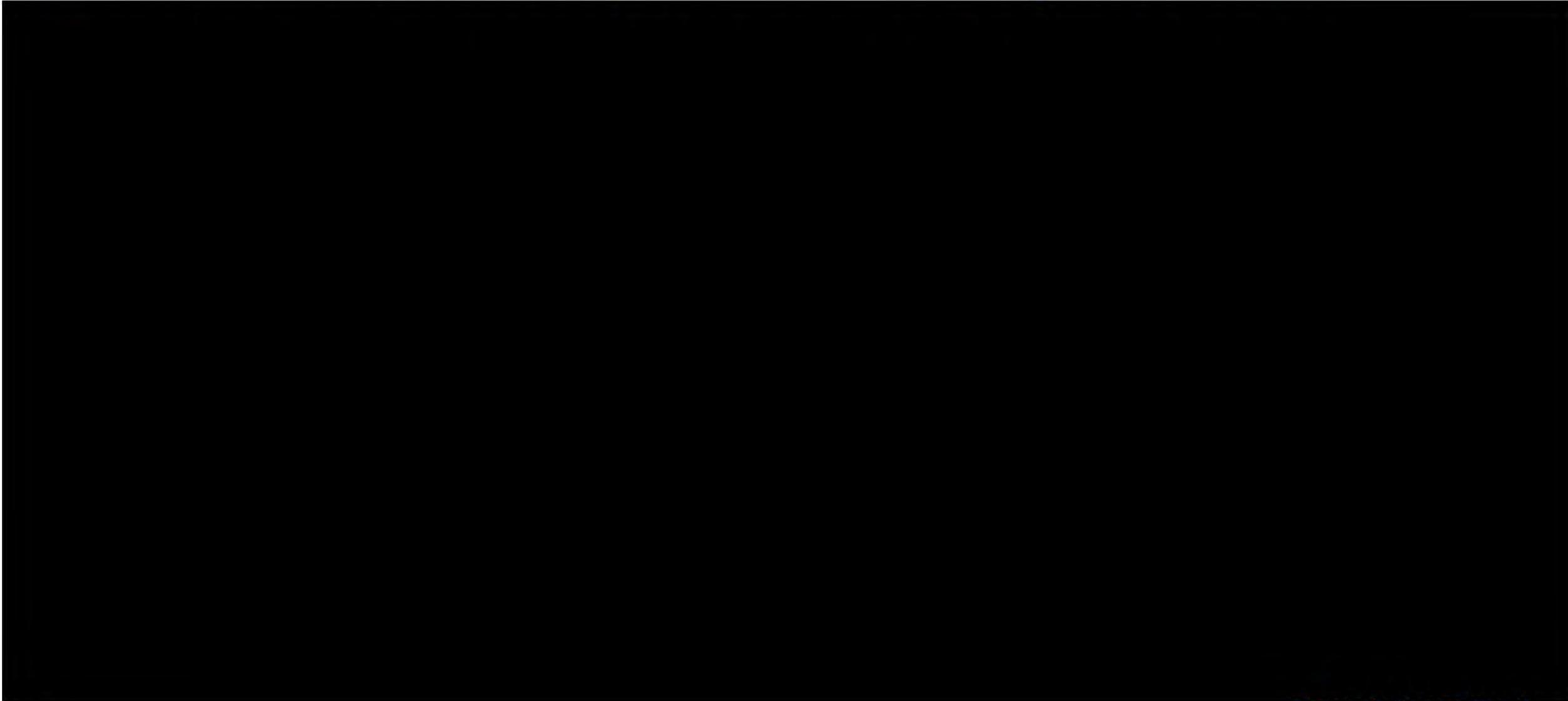


Preliminary Metro Results – Expected Value



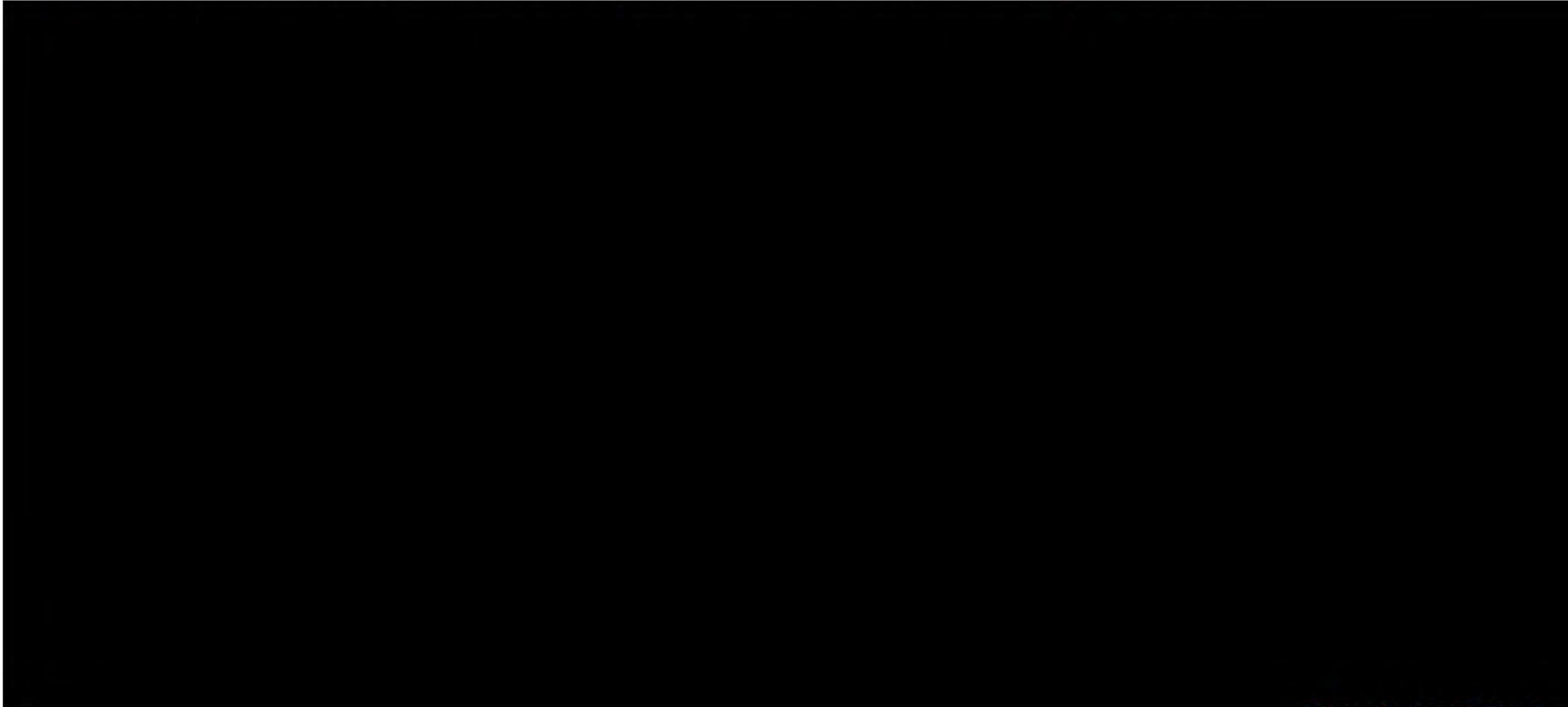


Preliminary Mo West Results – No CO₂ Restrictions



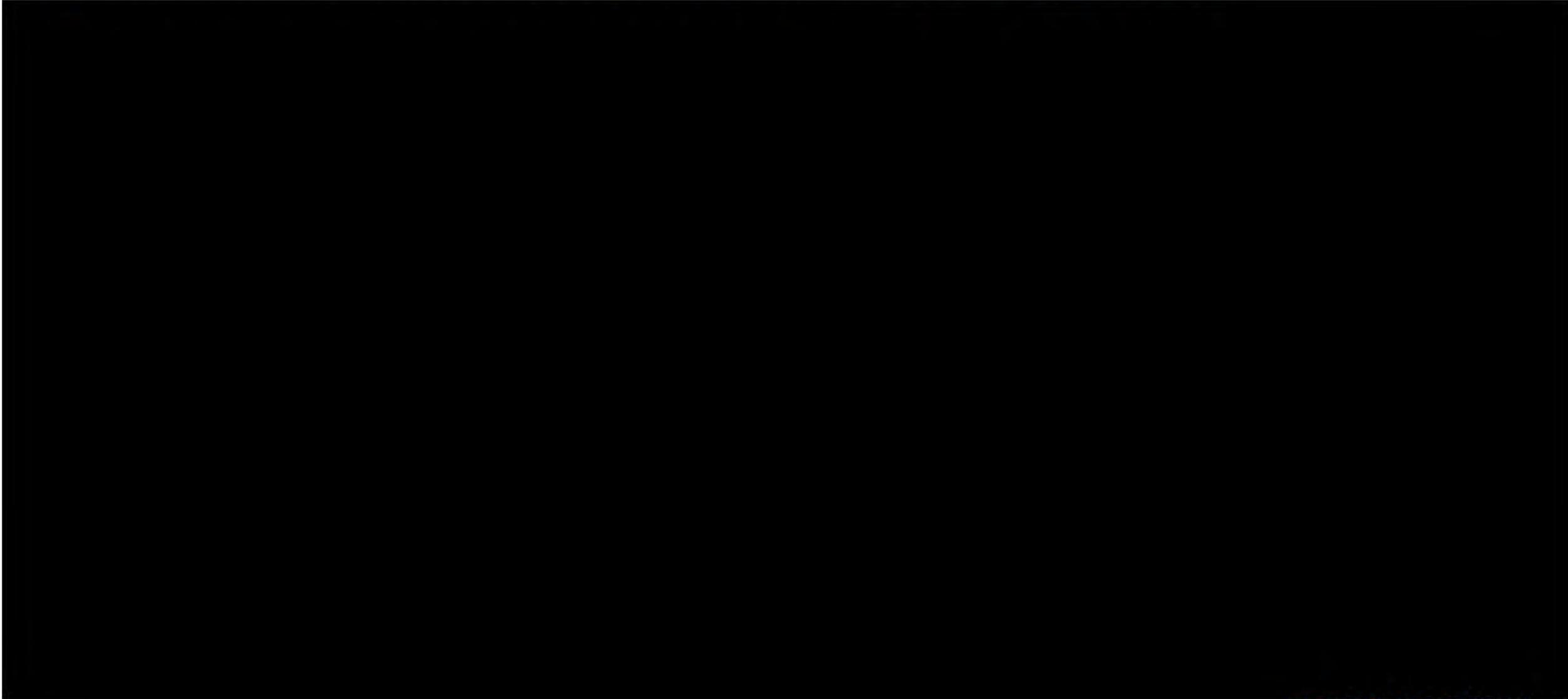


Preliminary Mo West Results – Mid-CO₂ Costs





Preliminary Mo West Results - High CO₂ Costs



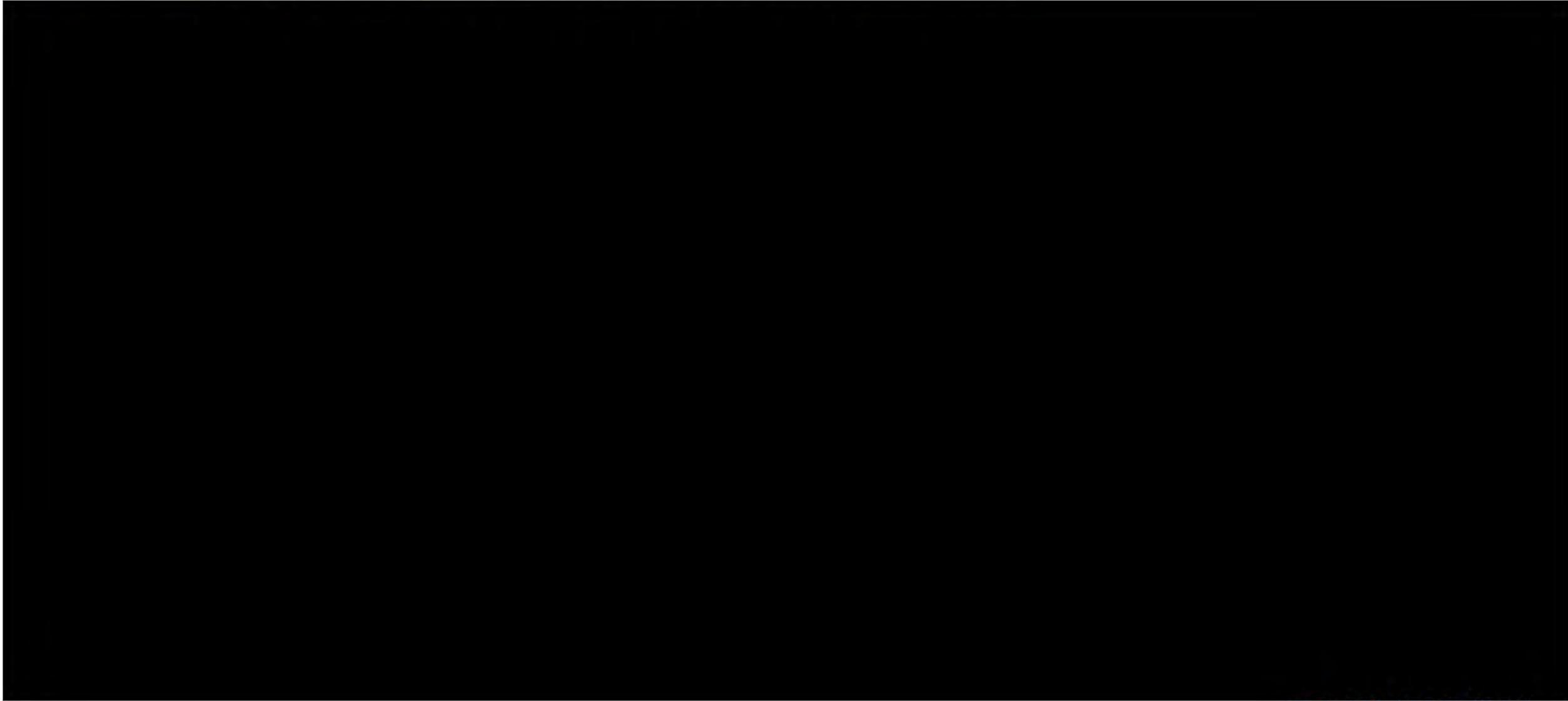


Preliminary Mo West Results – Expected Value





Findings from NPVRR Results to Date



Next Steps

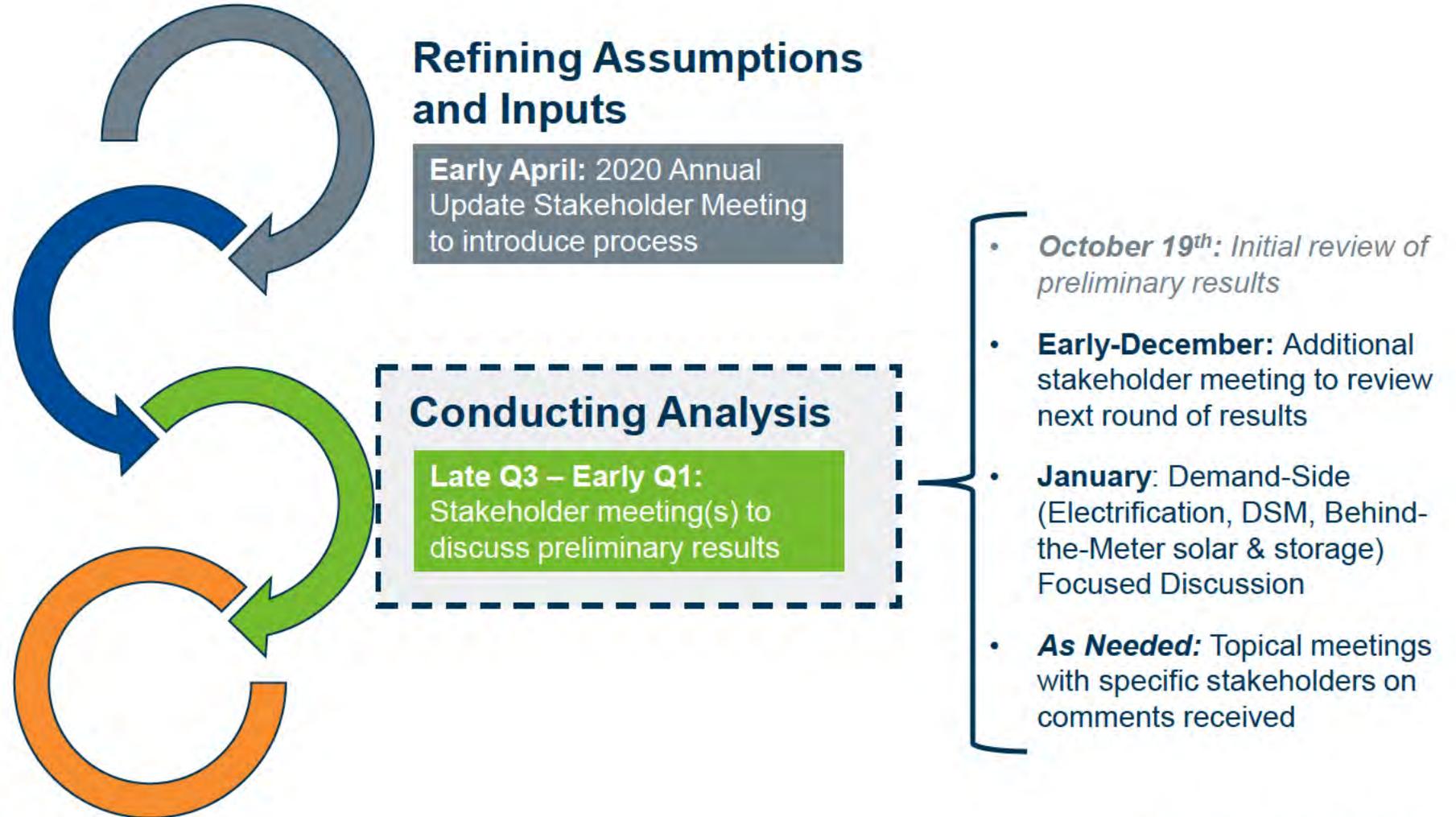


Analytical Next Steps

- Additional Alternative Resource Plans
 - Additional future renewable resources, including wind
 - Energy storage resource additions
 - Additional coal plant retirement timing
 - DSM Maximum Achievable Potential (MAP) plans
 - Grain Belt Express plans
- Other
 - Behind-the-meter solar and energy storage sensitivity testing
 - Re-evaluate SPP renewable penetration scenario impacts



Triennial IRP Development Timeline





Next Steps

Follow up via email with any specific comments to

 Sarah.Gott@evergy.com

before December 31st