



# MISO Cost of New Entry (CONE) Planning Year 2023/2024

Resource Adequacy Subcommittee

October 12, 2022

# Overview

- Purpose

- Present summary of updated efforts on locational Cost of New Entry (“CONE”) values

- Key Takeaways

- FERC filing was made at last month’s end for estimates of MISO’s CONE values for 2023/2024 Planning Year
- MISO’s estimated CONE values for the 2023/2024 Planning Year are higher than estimates for the previous Planning Year mainly due to significant increases in base project capital costs and weighted average cost of capital, both reflecting actual and expected inflation estimates.

# Introduction

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- Cost of New Entry is an industry-wide term, used to indicate the current, annualised, capital cost of constructing a power plant.
  - The plant used to estimate CONE is an advanced combustion turbine.
  - CONE is calculated with varying assumptions and methods, depending upon who is calculating and for what purpose.
- At MISO, CONE is first converted to a daily value and then used primarily as the maximum offer and maximum clearing price in the Planning Resource Auctions.
  - MISO's Tariff prohibits the use of "Net CONE," wherein expected inframarginal rents from energy & ancillary services are subtracted from the CONE value.

# Tariff provisions

## Section 69A.8

MISO and the Independent Market Monitor (“IMM”) determine the CONE value for each LRZ, as follows:

- Consider factors, including, but not limited to: (1) physical factors (such as, the type of Generation Resource that could reasonably be constructed to provide Planning Resources, costs associated with locating the Generation Resource within the Transmission Provider Region, the estimated costs of fuel for the Generation Resource); (2) financial factors (such as, the hypothetical debt/equity ratio for the Generation Resource, the cost of capital, a reasonable return on equity, applicable taxes, interest, insurance); and (3) other costs (such as, costs related to permitting, environmental compliance, operating and maintenance expenses). In calculating the CONE, the Transmission Provider and the IMM shall not consider the anticipated net revenue from the sale of capacity, Energy or Ancillary Services. CONE values will be calculated for each LRZ.

# Inputs

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- Primary Inputs
  - Economic
    - Implicit price deflator
    - O&M escalation factor (2.2%)
  - Financial
    - 55/45 debt/equity ratio
    - 20-year project/finance life
    - 5.16% cost of debt
    - 13.4% after tax return on equity
    - Combined state and federal effective tax rate of 25-31%
  - Capital Costs, by Local Resource Zone (EIA)
    - See filing, Attachment A
  - Operation & Maintenance Costs (EIA)

# Methodology



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- Capital costs annualised using net present value (NPV) method
- O&M costs escalated, then annualised using NPV
- Insurance & property taxes are add-on costs
  - 1.5% of the capital costs
- Results checked against IMM calculations

# Results

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ZONE	PY 2023/24 CONE \$*(MW*yr) <sup>-1</sup>	PY 2022/23 CONE \$*(MW*yr) <sup>-1</sup>	PY 2021/22 CONE \$*(MW*yr) <sup>-1</sup>
LRZ 1	\$ 104,170	\$ 91,270	\$ 92,810
LRZ 2	\$ 102,240	\$ 89,490	\$ 90,940
LRZ 3	\$ 98,590	\$ 86,380	\$ 87,310
LRZ 4	\$ 102,200	\$ 90,300	\$ 90,720
LRZ 5	\$ 109,580	\$ 97,190	\$ 97,340
LRZ 6	\$ 98,590	\$ 89,040	\$ 89,120
LRZ 7	\$ 105,910	\$ 93,770	\$ 94,800
LRZ 8	\$ 94,890	\$ 84,310	\$ 84,290
LRZ 9	\$ 94,080	\$ 83,520	\$ 83,600
LRZ10	\$ 93,820	\$ 83,380	\$ 84,420





# Questions?

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