

New Transmission - Planning for Renewable Generation Goals

Organization of MISO States November 5, 2019

Missouri Athletic Club 405 Washington Avenue St. Louis, MO

California ISO footprint is about 80% of California



- 72,461 MW of power plant capacity (net dependable capacity)
- 50,270 MW record peak demand (July 24, 2006)
- 31,208 market transactions daily
- ~26,000 circuitmiles of transmission lines
- 30 million people served
- 239 million MWh annually

The ISO's annual transmission planning process provides a foundation a broad range of studies

Reliability needs

Renewable delivery (policy) needs

Economic Opportunities

Provides basis for special studies on emerging issues

ISO Annual Transmission Planning Process Includes interregional transmission planning coordination with neighboring planning regions

CEC
Integrated
Energy
Resource Plan
(Demand Side
Forecasting)



CPUC Integrated Resource Planning Process



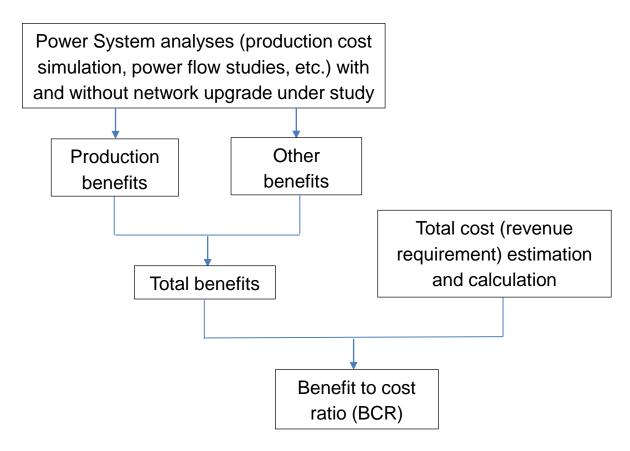
ISO Public Page 3

Cost Allocation

- ISO considers the high voltage (> 200 kV) transmission as "regional transmission" and the costs are allocated across all load according to its high voltage Transmission Access Charge provisions:
 - Provides reliable and economic benefits and enables development of renewable energy across entire region
 - Lower voltage facilities are recovered on a local area basis through a low voltage transmission access charge
- Interregional cost allocation
 - Each region determines (1) if project meets any regional needs and (2) if project is more cost effective or efficient than regional solution(s)
 - Each region assigned a share of project costs in proportion to its share of total benefits (the sum of the regions' benefits)



Transmission Economic Assessment Methodology – assessed from the CAISO "Ratepayer" Perspective



Other Benefits:

- System and local capacity benefits
- Avoided costs of other reliability or policy-driven transmission
- Policy-related benefits
 accessing renewables (if
 not already addressed
 through policy-driven
 considerations
 coordinated with state
 agencies



ISO Public Page 5