

**Glen Canyon Dam Adaptive Management Work Group**  
**Agenda Item Information**  
**August 8-9, 2013**

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Agenda Item

Who is CRSP?

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Action Requested

Information item only

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Presenter

Lynn C. Jeka, CRSP Manager Colorado River Storage Project (CRSP), Western Area Power Administration (Western)

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Previous Action Taken

N/A

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Relevant Science

N/A

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Background Information

Congress created the Colorado River Storage Project (CRSP) through the CRSP Act of 1956 (Act of April 11, 1956, ch. 203, 70 Stat. 105). The Act authorized the Secretary of the Interior to construct, operate, and maintain the Colorado River storage project and participating projects. In the same Act, Congress authorized a separate fund in the Treasury of the United States to be known as the Upper Colorado River Basin Fund (referred to as the Basin Fund).

57 years later the Western Area Power Administration's CRSP Management Center works collaboratively in partnership with the Bureau of Reclamation to generate and market power from the Colorado River Storage, Collbran and Rio Grande projects (marketed together as Salt Lake City Area Integrated Projects) and deliver it to customers.

With a total investment of \$2.375 billion, 11 power plants, 24 generating units, and 2,325 miles of transmission lines CRSP and the Bureau of Reclamation provide clean, reliable, wholesale electric service to customers in the west including 53 Native American tribes. Our service territory spans Arizona, New Mexico, Nevada, Colorado, Utah, Texas and Wyoming.

This presentation will provide an overview of CRSP. You will have an opportunity to learn about our people, mission, diverse responsibilities, partnership with the Bureau of Reclamation, and the operation of the Basin Fund.

WESTERN AREA POWER ADMINISTRATION

# Who Is CRSP? (Colorado River Storage Project)

Lynn Jeka

CRSP Manager

Western Area Power Administration



# Western's mission

Market and deliver clean,  
renewable, reliable, cost-based  
federal hydroelectric power and  
related services

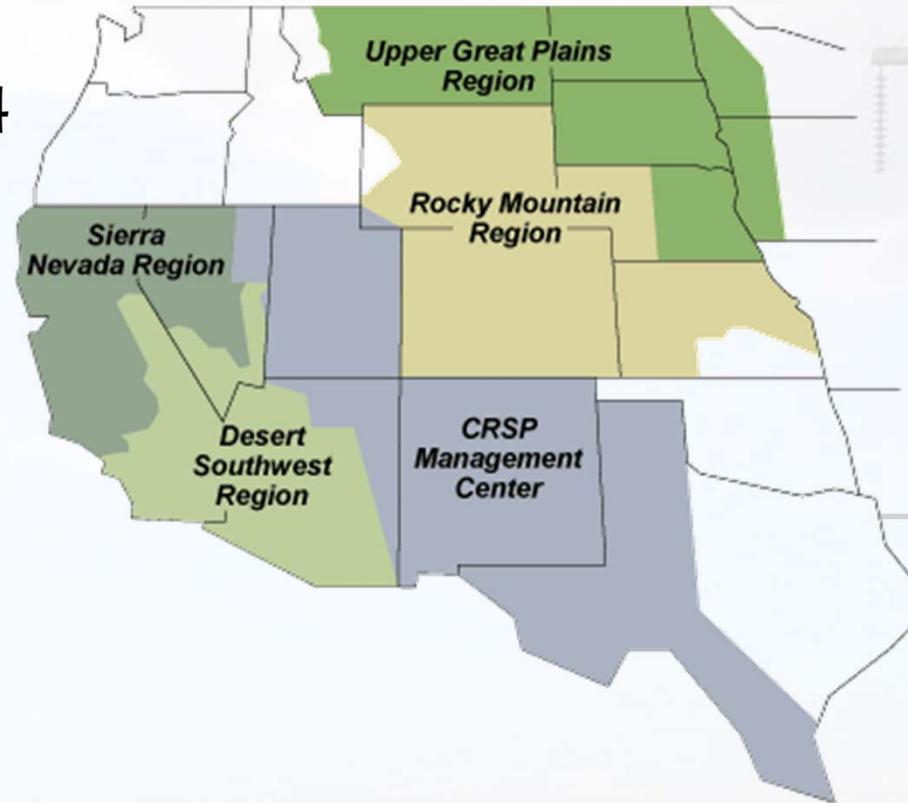
# What is Western?



- Power marketing administration
- Created in 1977 to market and deliver, power generated at federal hydroelectric power plants throughout the western United States
- Responsibility previously held by BOR
- Wholesale electricity supplier

# Western's service territory

- Serving customers from 4 regional offices and the CRSP MC
- 56 hydropower plants
- 10,505 MW of installed capacity



# Western/CRSP responsibilities

- Partner with BOR (Generating Agency)
- Power marketing
- Rate setting
- Basin Fund management
- Support electrical grid reliability
- Environmental and cultural resource compliance
- Electrical system studies, power system economic and financial analysis

# Western and Bureau of Reclamation – who does what

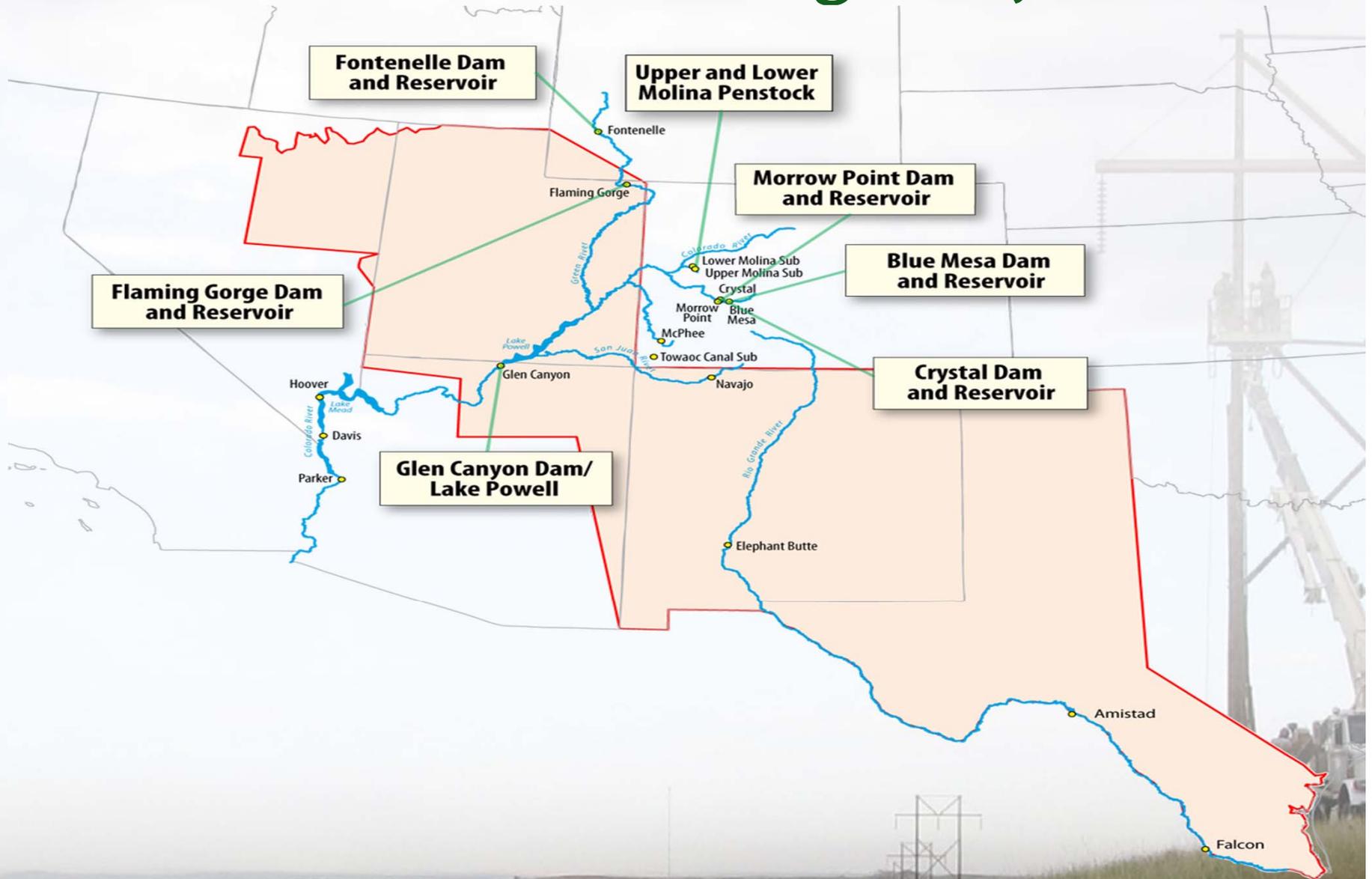
## Bureau of Reclamation

- Owns dams and power plants
- Water release activities include reservoir management, irrigation, flood control, water compact deliveries, environmental activities.
- Responsible for water management from reservoirs
- Generation is handed off to Western at the plant

## Western/CRSP

- Western owns and operates the transmission system infrastructure used to deliver power and energy
- Maintains regulation and reserve capacity
- Western markets available power and energy
- Western schedules and delivers generation to long term firm electric service customers
- Revenue from sale of generation is used to pay project debt to U.S. government, O&M, replacements

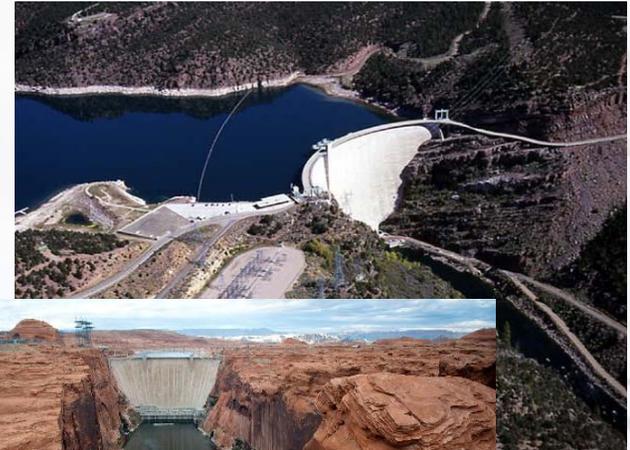
# Colorado River Storage Project



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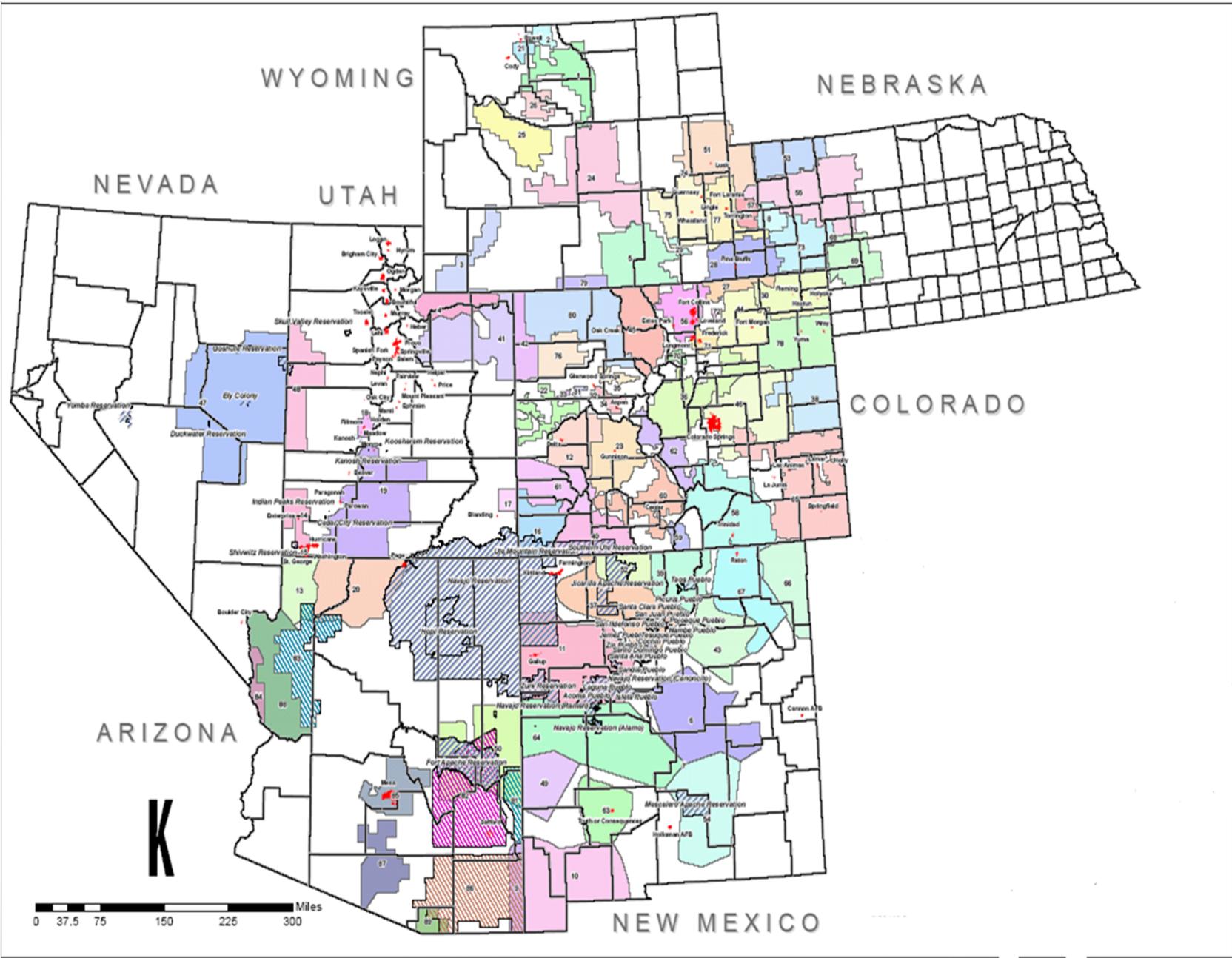
# Salt Lake City Area Integrated Projects

- 11 power plants
- 24 generating units
- 1,816 MW total capacity  
(73% from Glen Canyon)
- 5,642 GWh Net  
Generation  
(76% from Glen Canyon)
- 2,325 circuit miles  
(Arizona, Colorado, New  
Mexico, Utah, Wyoming)



# CRSP profile

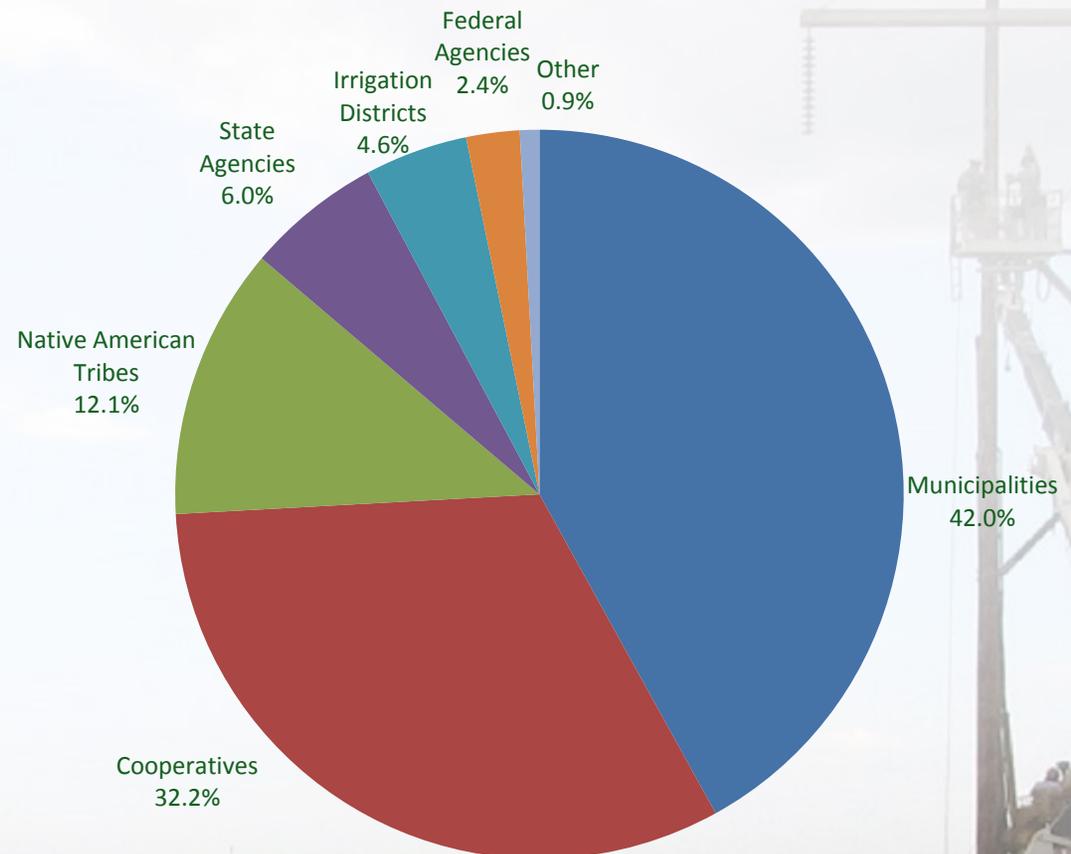
- 130 long-term customers
  - 53 Native American tribes
  - 60 Municipalities, cooperatives, irrigation districts
  - 17 Other
- Top 5 long-term energy sales customers
  - Tri-State Generation & Transmission Association
  - Platte River Power Authority
  - Utah Associated Municipal Power Systems
  - Deseret Generation & Transmission
  - Utah Municipal Power Agency



# CRSP profile for FY2012

- Total investment \$2.375 billion
- Repaid investment \$986.2 million
- Total power revenues of \$196 million
- 7,514,844 MWh Sales

## Where our Energy goes



# Capacity and energy

- **Capacity** – the total power plant generation capability at any point in time in megawatts
- **Energy** –
  - the amount of electricity delivered over time in hours
  - must be produced at the same instant and in the same amount as it is used by customers
- Utilities are required to have enough power-generating capability (capacity) to meet anticipated demand

# Capacity & energy example



10 kW Light bulb burns for 10 hours

- Capacity = 10 kW
- Energy Consumed = Capacity \* Time = 100 kWh



100 kW Light bulb burns for 1 hours

- Capacity = 100 kW
- Energy Consumed = Capacity \* Time = 100 kWh



- Total Capacity Needed = 110 kW
- Total Energy Consumed = 200 kWh

# Energy Management and Marketing Office

- 24/7 operation
- Located in Montrose, Colorado
- Schedule and market power and transmission
- Month ahead or season ahead
  - Forecast energy availability and demand
  - Arrange purchase or sale as necessary depending on forecast

# Energy Management and Marketing Office

- Day ahead
  - Coordinate pre-schedules and schedule deliveries
  - Arrange purchase or sale as necessary depending on forecast
- Real time
  - Balance energy available (resource) and loads (demand)
  - Monitor regulation capacity and reserves
  - Buy and sell resources as necessary

# CRSP Real-time Desk



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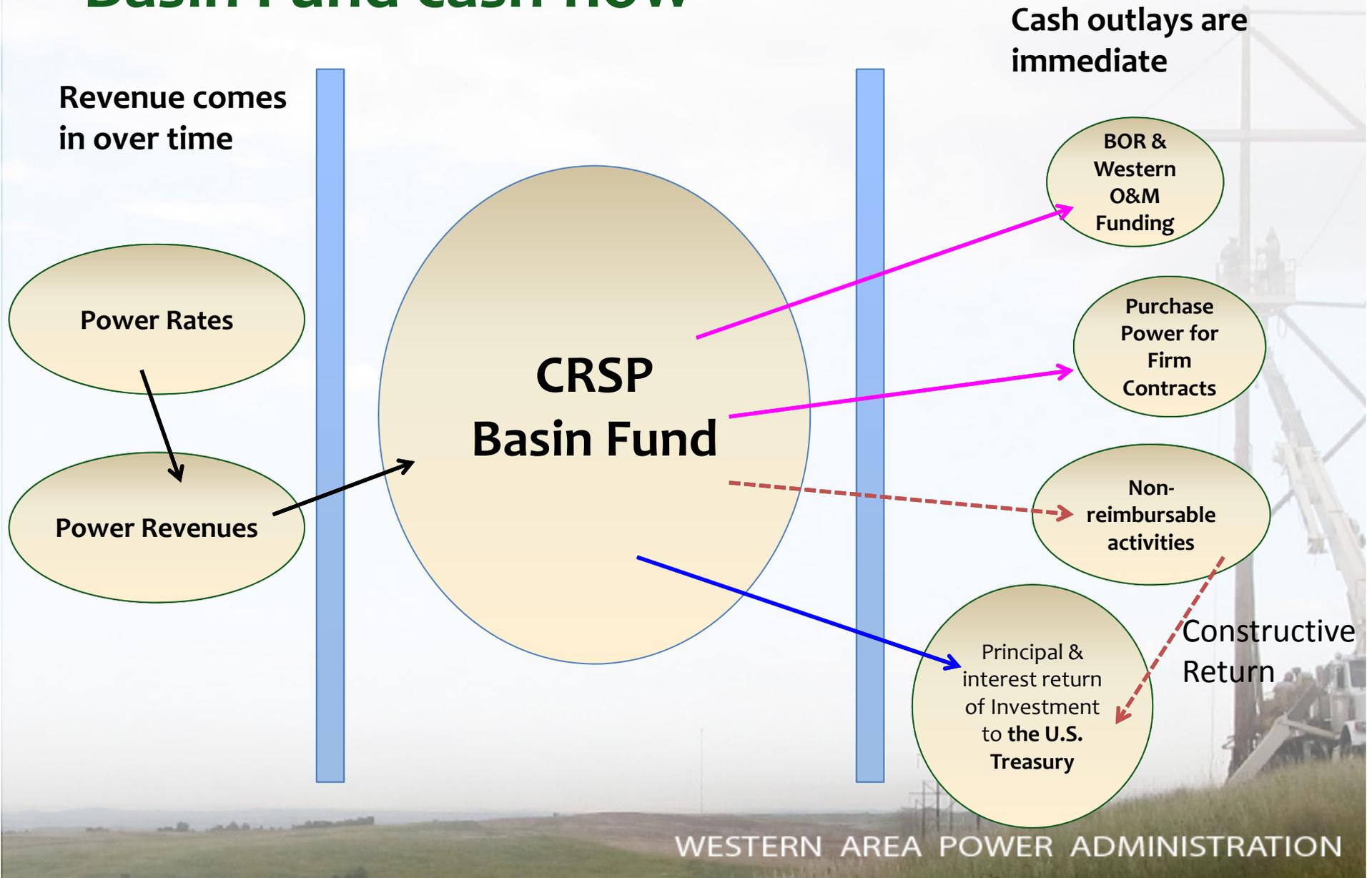
# Rate setting responsibility

- Rates are set using forecasts for a set of future years
- Annual rate calculation
- Reimbursable expenses/costs -- items the power customers are legally required to pay
  - Purchase power to “firm” contractual commitments
  - Operations & maintenance
  - Required principal & interest payments
  - Amortized capital replacements (Western & BOR)
  - Irrigation assistance for participating projects

# Annual rate calculation

- Revenue requirement is the sum of all reimbursable expenses
- Rate = revenue/projected energy sales
- If revenue less reimbursable expenses results in a positive number -- then no rate change
- Basin Fund balance is not a component of the rate
- Example:
  - \$200 required revenue to cover reimbursable costs
  - Contracts = 200 KWh of energy delivery
  - Rate = \$1.00/KWh

# Basin Fund cash flow



# Environmental and cultural resources

- Environmental programs (non-reimbursable expense) paid from the Basin Fund
  - Upper Colorado Recovery Program – endangered fish species program - \$6 million, annually
  - San Juan Recovery Program – endangered fish species program - \$2 million, annually
  - Glen Canyon Dam Adaptive Management Program – environmental program in the Grand Canyon - \$10 million, annually
  - Salinity Control Program – reduce salt in Colorado River water - \$2 million
- Ensure compliance with NHPA Section 106

# Benefits of CRSP

- Delivery of clean, reliable, renewable, cost-based federal hydroelectric power
  - Over the last 10 years, Glen Canyon has offset over 25 million tons of CO<sub>2</sub>, or over 2.5 million tons annually
- O&M for generation & transmission assets
- Repayment of federal investment
- Funding for non-reimbursable activities
  - Adaptive Management & Recovery Programs
  - High-flow experiments



# Questions?

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# Contact information

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