Parker-Davis Project
Transmission System Cost Allocation

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Phoenix, AZ
Cost Allocation & Sub-Allocation

• Cost allocation is the process of assigning the repayment of capital costs to each function in a multiple-purpose project

• Project purposes are derived from Reclamation Law and project-specific authorizing legislation

• Sub-allocations further delineate project costs between sub-purposes, for example between irrigation and municipal water users sharing a common facility
The 1962 P-DP Cost Allocation

• Approved by Commissioner of Reclamation

• Allocated costs to the Mexican Water Treaty and to power using the Separable Costs-Remaining Benefits (SCRB) method

• Sub-allocated capital costs to irrigation pumping and to commercial power using the Use-of-Facilities method
  • Formulas based on project pumping needs relative to total transmission line capacity
  • To be repaid without interest from power and transmission revenues
  • Individual segments of line bear different ratios
    • Costs of Parker-Gila 161-kV lines are currently allocated 23.1% to irrigation pumping
Visual Structure of Cost Allocation

Project Costs

Treaty Deliveries

Power

Preference Power

Irrigation Power

Separable Costs – Remaining Benefits

Use of Facilities

Interest-Bearing Repayment

Non-Interest-Bearing Repayment
Use of Facilities: Capacity Use Formula

• For each line segment:

\[
\frac{\text{Priority Use Power Summer ACROD}}{\text{Total Transfer Capability}} = \text{Capacity Use by Irrigation}
\]

• Capacity Use by Irrigation (%) is multiplied by the cost of a feature, and that product is the cost allocated to irrigation

• Update is a collaborative effort by WAPA and Reclamation
Cost Allocation Updates

• The 1962 capacity use formulas have become outdated because:
  • Transmission system capacity reserved for irrigation use was increased and quantified in 1996 by contracts among Reclamation, WAPA, and project use power beneficiaries
  • Transmission system capacity is continually changing as WAPA upgrades or replaces transmission features

• Updates to sub-allocation formulas are effective in 2019 and as future capital becomes repayable – not retroactively

• Sub-allocation formulas will be reviewed annually or as transmission features are upgraded/replaced
Sub-Allocated Facilities

• Facilities:
  • Davis Dam powerplant and switchyard
  • Transmission lines from Davis Substation to Parker Substation
  • Transmission lines south of Parker Substation to Gila Substation and beyond

• Same facilities as 1962; however, formulas are now in greater detail. For example:
  • Previously, transmission line from Davis Substation to Parker Substation was one formula
  • Now, Davis Substation to Topock Substation and Topock Substation to Parker Substation are separate formulas
Upcoming Facilities Replacements

Planned Transmission Line Replacements - October 2018 10-Year Plan:

• Gila-Dome Tap
• Kofa-Dome Tap
• Parker-Blythe
• Bouse Upgrade Project
Example: Gila-Dome Tap Replacement

• Estimated cost is $7,600,000

• Construction in 2019-2020, financial close-out 2020

• Lines serve Priority Use Power (irrigation) and Firm Electric Service/Transmission (commercial) customers
  • Costs must be allocated between the respective purposes
  • If we make no change, 23.1% of costs will be non-interest-bearing in accordance with 1962 allocation for Parker-Gila
  • Updated non-interest-bearing allocation for Gila-Dome Tap segment is estimated at 24.3%
Firm Electric/Transmission Rate Impact

• Changes in sub-allocations vary based on facility – both increases and decreases

• These changes will result in more or less capital costs becoming interest-bearing

• To be conservative, rate calculations have assumed all future capital costs are interest-bearing

• As such, while changes in the sub-allocation may make more capital costs interest-bearing, it will be less than what is included in rate calculations
Priority Use Power Rate Impact

• Rather than only affecting the amount of capital repaid with interest, the changes will affect the amount of capital included in the Priority Use Power (PUP) rate

• The Aggregate Power Managers pay the Firm Electric Service Rate for PUP

• The PUP rate is used by the Aggregate Power Managers in their arrangements with other PUP customers

• Outdated sub-allocations will affect the Aggregate Power Managers and PUP customers
Draft Cost Allocation Documents

https://www.wapa.gov/regions/DSW/Rates/Pages/rates.aspx
Summary

• The 1962 sub-allocation formulas for irrigation and commercial power/transmission are being updated and will be effective in 2019

• The existing formulas are outdated due to changes in irrigation usage and system capacity

• FES/Transmission Rate:
  • Change the amount of capital costs that are interest-bearing
  • Rates have assumed all future capital costs are interest-bearing

• PUP Rate: Change the amount of capital costs included in the rate – not just the amount that is interest-bearing
Questions or Suggestions

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