



WESTERN AREA POWER ADMINISTRATION
An agency of the U.S. Department of Energy

Sierra Nevada Region

Western's Monthly Actual Cost File

Informal Rates Conference Call
Meeting

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Actual Cost File



- The “Actual Cost File” determines Western’s hourly cost of generation from Central Valley Project based on a formula rate, as seen on slide 3.
- The file is updated each month to calculate the total hourly revenue requirement and the final hourly per unit cost of generation (for each hour of each day).
- Western’s hourly cost for generation is compared to the CAISO’s market price, when determining the amount to charge for Energy Imbalance and penalties for (1) not meeting operating reserve obligation for Spinning & Non-Spinning, and (2) Regulation & Frequency Response rates.



Formula

Cost for Hour Ending (HE) “x” is:

$$= \frac{\text{Hourly Rev Req}}{\text{Hourly Total Gen}}$$

$$\left[\frac{\text{Revenue Requirement}^*}{\left[\text{Total CVP Gen} - \text{SL \& O'N Gen} + \text{Purchases made to support SBA} \right]} \right]$$

* Hourly cost assigned to generation less costs from San Luis & O’Neill generation plus any purchases made to support the SBA

Formula Components



Numerator: Hourly Revenue Requirement (\$)

- Total cost that supports the generation capability of the CVP (from the G&T model) is used to derive:
 - Adjusted Hourly Revenue Requirement (HRR)
- Plus any purchases made to support the SBA are added to the Adjusted HRR

Denominator: Generation (MWh)

- Total CVP Gen
- Less total SL & O’N Gen
- Plus purchases made to support the SBA

Generation Hourly Revenue Requirement



Calculation of Generation Hourly Revenue Requirement (HRR)			
Step	Line Description	Value	Reference or Calculation
A.	Total Cost of Generation	\$84,279,562	G&T Model
B.	Monthly Revenue Requirement (25%-75%)	\$3,511,648	$(A * 0.25) / 6$
C.	Daily Revenue Requirement	\$113,278	B/31
D.	Hourly Revenue Requirement	\$4,719	C/24

Note: For illustrative purpose only

Cost Calculation



Calculation of Numerator for HE "x"			
Step	Line Description	Value	Reference or Calculation
A.	Generation Hourly Revenue Requirement (HRR)	\$4,719.00	Slide 5
B.	CVP Gen (MWh)	349	Operations Gen Report
C.	San Luis & O'Neill Gen (MWh)	5	Reclamation's Schedule
D.	Total CVP Gen (MWh)	354	B + C
E.	CVP Per Unit Cost (\$/MWh)	\$13.33	A/D
F.	HRR (HE "x")	\$4,719.00	D * E
G.	Revenue contributed from SL & O'N	\$66.65	C * E
H.	Adjusted Revenue Requirement	\$4,652.35	F - G
I.	Purchases to support SBA (for 15MW)	\$465.00	SBA S&P file
J.	Numerator	\$5,117.35	H + I

Note: For illustrative purpose only

Cost Calculation (Cont.)



Calculation of Denominator Components for HE "x"			
Step	Line Description	Value	Reference or Calculation
A.	Total CVP Gen includes SL & O'N (MWh)	354	Operations Gen. Report
B.	Total San Luis (SL) & O'Neill(O) Gen (MWh)	5	Reclamation's Schedule
C.	Purchases to support SBA (MWh)	15	SBA S&P file
D.	Denominator (MWh)	364	A - B + C

Actual Cost Calculation



- Western's Actual Cost of generation for HE "x" as calculated via formula:

Example:

$$\mathbf{\$14.06/MWh} = \frac{\$5,117}{364 \text{ MWh}}$$

(Adjusted Revenue Requirement from slide 6)
(Adjusted Generation from slide 7)

How is the Actual Cost Used?



Rate Schedule	Charge Determination (greater of)
1) Energy Imbalance	1) Western's Actual Cost
2) Penalty for Non-Performance:	OR
a. Spinning/Non-Spinning Reserve	2) 150% of CAISO Market Price
b. Regulation & Freq. Response Service	

Other Billing Questions

(from October 29, 2009 meeting)



- **Price source display on bills**
 - Please refer to the detailed bill back up sent along with customer monthly bills, for EI charges (if any) and associated price (Western's actual cost or CAISO market price) used to calculate the monthly service charge.
- **Use of CAISO Market Price for EI charge**
 - Western uses the CAISO market price at the NP15 Hub to compare to its actual cost. It is appropriate to include all the three components of this price (namely: energy, losses & congestion), since:
 - Any losses or congestion incurred by Western while the delivering the energy to a load is directly passed through to the respective customer.
 - Western would also incur/receive the entire NP15 Hub price (inclusive of all three components) if it were to buy or sell energy in the market.



Questions?
