

Power Management Administrative Cost Allocation Study Review Group Activities

**NCPA Facilities Committee
Special Meeting
February 16, 2016**

Purpose of this presentation

- Request Facilities Committee recommendations on three cost allocation model inputs, effective FY17
 - Exempt HA schedules created by CAISO for Variable Energy Resources (VERs)
 - Adjust IT Unit Complexity Factor for VERs, affecting allocation of Systems Integration charges
 - Refresh labor-based cost allocation factors applied to Prescheduling budget line item (Issue 2)

Background

- Project background, scope, and issues discussed at January 6 FC meeting
- Seven topics addressed by the Review Group
- **One additional topic identified prior to Jan 6 FC meeting**
- Three actionable recommendations presented today
- Analysis and findings for the remaining topics will be provided to the FC in the Review Group's written report

PIRP Program: Exemption of HA Schedules created by CAISO for VERs

- Generation schedules for Variable Energy Resources are revised frequently
- Produces large number of schedule counts
- Schedule counts are a proxy for work effort with scheduling activity
- VERs schedule revisions are created by the CAISO and processed by NCPA in an automated fashion
 - No measurable work
- Recommend exempting HA schedules created by CAISO for VERs from the Nexant cost allocation model, effective FY17.

PIRP Program: Systems Integration Charge

- NCPA software for PIRP
 - automate processing of HA schedules
- Per Facility Committee recommendation, VERs were assigned an IT Unit Complexity Factor of “2” instead of the standard value of “1”
- Each IT Unit Complexity Factor affects approximately \$5,000, in FY17
- The Review Group is **undecided** whether this element of the previous PIRP Program should be restored.

Issue 2: Refresh cost allocation factors applied to Prescheduling

Case	Pool	BART	LEC	RSVL	SVP	TID
Current	59.49%	19.99%	5.44%	7.04%	7.04%	1.00%
Survey Result	42%	24%	19%	7%	7%	1%
Change	-17.49%	4.01	13.56%	-0.04%	-0.04%	0.00%

Description of Changes

- Pool: fundamental changes to workload
- LEC: increased complexity to DA and RT strategies
- BART: specialized bilateral trades
- Roseville: no change (Calaveras layoff expires FY16)
- SVP: no change (additional activity attributed to load-following and subsequently allocated to the Pool)

Impact of Additional Bid Strategies

Difference in Cost Allocation (\$1,000)

Case	Pool	BART	LEC	RSVL	SVP	TID
Current	\$454	\$153	\$42	\$54	\$54	\$8
Survey Result	\$322	\$184	\$146	\$54	\$54	\$8
Change	-\$134	\$31	\$104	\$0	\$0	\$0

- Based on budgeted cost of \$767,809
- Note: Changes to the Pool and LEC are subject to additional allocations. Pool is based on the intra-Pool allocation factor (loads, resources, contracts) and LEC is based on Generation Entitlement Share percentages.

Fully Allocated Impacts

Member/ Participant	Pool	LEC	Member Specific	Net
Alameda	\$ (23,781)	\$ -	\$ -	\$ (23,781)
BART	\$ -	\$ 6,870	\$ 30,849	\$ 37,719
Biggs	\$ (1,819)	\$ 279	\$ -	\$ (1,540)
Gridley	\$ (2,142)	\$ 2,044	\$ -	\$ (98)
Healdsburg	\$ (5,282)	\$ 1,710	\$ -	\$ (3,572)
Lodi	\$ (24,883)	\$ 9,888	\$ -	\$ (14,995)
Lompoc	\$ (7,792)	\$ 2,119	\$ -	\$ (5,673)
Palo Alto	\$ (39,180)	\$ -	\$ -	\$ (39,180)
Plumas Sierra	\$ (10,642)	\$ 818	\$ -	\$ (9,824)
Port of Oakland	\$ (9,666)	\$ -	\$ -	\$ (9,666)
Roseville	\$ -	\$ -	\$ (342)	\$ (342)
Santa Clara	\$ -	\$ 26,802	\$ (342)	\$ 26,461
Ukiah	\$ (9,064)	\$ 1,859	\$ -	\$ (7,205)
Azusa	\$ -	\$ 2,900	\$ -	\$ 2,900
CDWR	\$ -	\$ 34,869	\$ -	\$ 34,869
MID	\$ -	\$ 11,152	\$ -	\$ 11,152
PWRPA	\$ -	\$ 2,777	\$ -	\$ 2,777
TOTAL	\$ (134,250)	\$ 104,086	\$ 30,166	\$ 2

Issue 2 Recommendation

- NCPA staff seeks a recommendation from the FC to update the cost allocation factors applied to the Prescheduling budget line item, as stipulated above, effective FY17 budget.

QUESTIONS?

SUPPLEMENTAL MATERIALS

Issue 1: Current practice for resource additions

- A given budget uses schedule counts from the last full calendar year as a cost allocation factor
 - Examples: CY14 is used for FY16 budget
CY15 is used for FY17 budget
- A new resource is added to the model if it is online as of the effective date of the applicable budget
 - Example: Resources brought online on or around July 1, 2015 would be included in the FY16 budget
 - Would be based on forecasted performance data
- Resources introduced later in the FY are not included in the budget

Issue 1: Current practice for resource additions

- Resources may be captured via a mid-year adjustment if the resource is of material size
 - Single facility of 40 MW or larger, or
 - Multiple facilities with aggregated capacity of 50 MW or more
- Some resources do not satisfy either test
 - → No costs in FY the resource enters the portfolio
- The resources will be added to the next FY budget cycle, using historic CY data

Issue 1: New Resources can avoid certain costs for up to 1.5 fiscal years

- If COD occurs 12/31/2015 and the resource is 30 MW:
 - Resource will not be included in FY16 budget
 - Will not trigger mid-year adjustment
 - Will be added to FY17 budget, using CY15 data
 - CY15 Schedule Counts include 1 day of operations
- Thus, the resource:
 - Pays no costs in FY16, when it is introduced to the portfolio
 - Pays FY17 all capacity-related costs plus scheduling-related costs based on 1 day of operational information (essentially zero)
 - Pays no scheduling-related costs for 1.5 fiscal years

Issue 1: Findings & Recommendations

- Mid-year adjustment criteria (plant capacity) is not correlated with cost allocation factor (schedule counts)
 - Some risk small resources can generate material work, as measured by schedule counts
 - Cost allocation may not capture this work for some time
- The current process
 - Has functioned reasonably well
 - Prevents undue administrative burden on staff
 - Balances equitable cost allocation with cost stability
- Low probability of risk, recommend no change to existing practices

Issue 2: Description of Changes: LEC

- Prescheduling activities related to LEC have evolved since the resources was brought online
 - Initially deployed rudimentary strategies and practices in the Day Ahead market, only
 - Today, prescheduling manages a number of considerations and strategies affecting Day Ahead and Real Time activity
 - RT market strategies are developed by the Prescheduling unit and communicated to real-time operations

Issue 2: Description of Changes: BART

- BART's contractual requirements are unique
 - Structured by contract arrangements with transmission service provider and 3rd party wholesale suppliers, not the CAISO, per se
 - Disjointed activities in Day-Ahead and Two-Day-Ahead scheduling time frames
 - Relies upon various work products from external parties, affecting workflow
 - Specified source contracts

Issue 2: Description of Changes: Roseville & SVP

- Roseville & SVP are Operating Entities of Calaveras Project
- Pre-schedulers stated they spend more time on SVP than Roseville.
- Adjustments made in phase 3 of the surveys, described below.

Issue 2: Adjustment to Survey Results: Roseville

- Recent reduction in Prescheduling efforts related to Roseville Hydro OE driven by short-term layoff agreement.
 - Not indicative of current planning horizon
 - These allocation factors are intended to represent “typical” operating conditions
 - Short term contract set to expire FY16
 - Factors can be updated to reflect future changes in contract arrangements, if necessary
- Result: hold constant at 7%

Issue 2: Adjustment to Survey Results: SVP

- Additional communications and efforts between NCPA and SVP prescheduling units determined to be focused on DVR for load following purposes
- This is not a SVP activity, but is a Pool activity
- No change in Prescheduling time spent on SVP's Hydro OE role
- Recommend holding SVP's percentage constant (7%) and allocating any additional time to the Pool (3%).

Issue 2: Summary of changes

- The make up of Pre-schedulers' workload has changed since the last survey was conducted
- Changes in market rules, contract requirements, and NCPA's deployment of market strategies with greater complexity have altered how Pre-schedulers spend their time
- In other cases, short-term events may affect Pre-schedulers' time (e.g. short-term layoff, drought conditions, wildfires), but these are not appropriate to include in static cost allocators

Issue 3: Schedule/Contract Counts Impact to the Pool

- Issue 3 analyzed the impact of the recent change to the intra-Pool allocation factor
 - From Loads & Resources (weighted 78/22)
 - To Loads, Resources, & Contracts (simple average)
- Goals:
 - Describe the process (user documentation)
 - Identify any inappropriate use of inputs (e.g. duplicate use)
 - Example: A contract count is used to allocate costs to the Pool as a whole, and subsequently to disaggregate Pool costs to Pool members

Issue 3 Findings

- **Schedule Counts & Contract Counts:**
 - Are not used to allocate costs to the Pool as a whole
 - Are not used in duplicate fashion
 - Affect cost allocation to Pool members
 - Influence a substantial proportion of costs (50%)
- Schedule Counts (for resources) do not influence intra-Pool allocations (but resource capacity does)
- Contract Counts do influence intra-Pool allocations
- Conclusion: no structural flaws in the use of loads, resources, and contracts for intra-Pool allocations

Issue 4: Pooling vs. MPP/GPP Functions

- Issue 4 analyzed the PM functions performed under the Pooling Agreement vs. the Market/Gas Purchase Program Agreements
 - Note: MPP and GPP are separate agreements
- Goal:
 - Determine if Nexant's analysis re: Pool and MPP agreements is valid, given the age of the analysis

Issue 4 Findings

- Much of Nexant's original work is accurate.
 - See Nexant Phase I report, Table 3-4
- New areas of work draw on existing PM functions
 - LEC, RPS, GHG
- Conclusions:
 - PM services are largely unaffected by the expansion of MPP, introduction of GPP, and various activities associated with LEC, RPS, and GHG.
 - Nexant's conclusions and recommendations are still applicable today, especially with Members' collective review and approval of Pool, MPP, and GPP costs each budget cycle

Issue 5: Variable Energy Resources

- Issue 5 is a scenario analysis
 - Treats all generation resources in same fashion by adjusting plant capacity rating capacity factor
 - Commission approved this methodology for Variable Energy Resources (VERs), only
- Purpose: This is a test case only. The RG does not recommend applying this method throughout the model

Issue 5 Findings

- Broadly applying adjusted capacity ratings throughout the model produces substantial changes in allocated costs
- Large resources with high capacity factors receive substantial cost increases
- Some resources with low capacity factors receive virtually no cost allocation
- Other resources' capacity factors vary by cyclical conditions (i.e. hydro & precipitation) which introduces potentially large fluctuations in cost allocations