



20/20

BUSINESS PROGRESS REPORT

SEPTEMBER



Northern California Power Agency
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Generation Costs & Reliability

Combustion Turbine Project

Unit Operation for August 2020

Unit	Availability		Production		Reason for Run
CT1 Alameda	Unit 1	Unit 2	Unit 1	1,147.8 MWh	CAISO / CAISO
	98.3%	100.0%	Unit 2	1,104.4 MWh	
Curtailments, Outages, and Comments:					
Unit 1:	8/17 @ 19:18 - 8/18 @ 07:39: Alameda CT1 trip vibration probe; OMS 9014413				
Unit 2:	Normal operation.				
Unit	Availability		Production		Reason for Run
CT1 Lodi	91.1%		1,082.2 MWh		CAISO
Curtailments, Outages, and Comments:					
8/03 @ 15:52 - 18:50: Gas compressor trouble, OMS 8952097					
8/13 @ 20:45 - 21:14: Control system trouble, OMS 8996676					
8/19 @ 18:45 - 19:30: Peak mode operation, OMS 9026159					
8/24 @ 03:03 - 8/26 @ 16:59: Failed controller card, OMS 9043186					
Unit	Availability		Production		Reason for Run
CT2 STIG	98.2%		10,058.2 MWh		CAISO
Curtailments, Outages, and Comments:					
8/21 @ 13:53 - 15:51: Steam valve position error, OMS 9035212					
8/21 @ 17:08 - 18:05: Startup trouble, OMS 9036109					
8/26 @ 08:00 - 18:18: Steam leak, OMS 9056507					
Unit	Availability		Production		Reason for Run
LEC	98.6%		145,060 MWh		CAISO
Curtailments, Outages, and Comments:					
8/13 @ 04:52 - 11:33: Vibration trip on startup, OMS 8992577					
8/17 @ 02:15 - 03:58: Vibration probe issue, OMS 9008785					
8/21 @ 12:08 - 13:58: Steam pressure regulating valve trouble, OMS 9034757					

Maintenance Summary – Specific per asset above.

Geothermal Facilities

Availability/Production for August 2020

Unit	Availability	Net Electricity Generated/Water Delivered	Out-of-Service/Descriptors
Unit 1	100 %	18,114 MWh	U1 had no outages for the month
Unit 2	100 %	*19,738 MWh	U2 had no outages for the month
Unit 3	N/A %	N/A	Unit 3 remains out of service.
Unit 4	98.79 %	29,004 MWh	U4 was offline 8/16 from 0515 - 1400 due to lightning strike/line outage
Southeast Geysers Effluent Pipeline	59.0 %	188.3 mgallons	Average flow rate: 4,254 gpm
Southeast Solar Plant	N/A	74,608 KWh	Year-to-date KWh: 3,018,679
Bear Canyon Pump Station Zero Solar	N/A	101,677 KWh	Year-to-date KWh: 4,425,621

* Accounts for an additional 1,778 MWh of house load for the 21KV power supply to the effluent pipeline supplied from Unit #2.

Hydroelectric Project

Availability/Production for August 2020

Units	Availability	Net Electricity Generated	Out-of-Service
Collierville Unit 1	99.38%	11245 MWh	CV Unit 1 was out of service on 8/27/20 from 0705 to 1140 for 230kV line damper installation.
Collierville Unit 2	99.56%	18390 MWh	CV Unit 2 was out of service on 8/27/20 from 1146 to 1503 for 230kV line damper installation.
Spicer Unit 1	94.81 %	905 MWh	NSM1 was out of service on 8/11/20 to 8/12/20 from 1629 to 1508 for DTT comm trouble and on 8/31/20 from 0800 to 2359 for PG&E line outage.
Spicer Unit 2	94.80 %	1430 MWh	NSM2 was out of service on 8/11/20 to 8/12/20 from 1632 to 1503 for DTT comm trouble and on 8/31/20 from 0756 to 2359 for PG&E line outage.
Spicer Unit 3	92.47 %	242 MWh	NSM3 was out of service on 8/11/20 to 8/13/20 from 1641 to 0843 for DTT comm trouble and on 8/31/20 from 0800 to 2359 for PG&E line outage.

Operations & Maintenance Activities:

- CMMS work orders
- 230 KV Line 1 Insulator replacement project continuation
- 230 KV Line 1 and 2 vibration damper installation between CV Switchyard and CV Transformer Yard
- Utica Dam Spillway repair work
- Lake Alpine Low Level Outlet Trash Rack and Debris Exclusion Modification Project

Environmental, Health & Safety (EH&S) Projects Incident Reports

- There were no Cal OSHA Recordable or Lost Time accidents in the month of August. There was one (1) vehicle accident. On 8/27/2020, a Hydro employee driving an NCPA vehicle was coming out of NSM road at the end of the day and had to swerve to avoid a truck that was cutting a corner and entering into the employee's lane. The vehicle driven by the employee made contact with trees and rocks on the shoulder. There was minor damage to the wheel, hubcap, and bumper of the NCPA vehicle, but no other damage or injuries. Total cost of repair was several hundred dollars. An incident report was prepared and filed.
- Find below a Safety Report that highlights the following areas: recordable incidents and lost time accidents (LTAs) reported this period and this calendar year; the number of days since last recordable or LTA; the number of work hours since last recordable or LTA; and vehicle accidents reported this month and this calendar year. In September of 2012, Generation Services completed an internal audit of its records with the results reflected in this report and was updated through the payroll period ended August 29, 2020.
- The "CT Group" column reflects the combined safety numbers of all CT employees. Beginning with the November 2009 report, the CT Group Column also includes Lodi Energy Center staff.

August 2020 Generation Services Safety Report

	Hydro	GEO	CT Group *	NCPA HQ **
Cal OSHA Recordable (this month)	0	0	0	0
Cal OSHA Recordable (calendar year)	0	0	0	0
Days since Recordable	437	767	1,972	6,956
Work Hours Since Last Recordable	38,803	160,528	295,562	2,575,621
LTA's (this month)	0	0	0	0
LTA's (calendar year)	0	0	0	0
Days without LTA	4,706	1,835	9,876	5,969
Work Hours without LTA	428,700	377,503	706,106	2,197,639
Vehicle Incident (month)	1	0	0	0
Vehicle Incident (calendar year)	1	0	1	0

* CT Group: Combines CT-1, CT-2 and LEC Operations

** NCPA HQ: Roseville employees at the Main Office

Data originates from OSHA logs, HR records and payroll information.
Days and Hours are calculated through pay period ended August 29, 2020.

Power Management/NCPA Market Results

Dispatch and Schedule Coordination

- NCPA Dispatch and Schedule Coordination Center safely, reliably, and economically schedules, monitors, and manages NCPA and NCPA member power resources and loads 24 hours per day, 7 days per week on a continuous basis. This process includes balancing MSSA loads and resources on a 5-minute basis, optimizing NCPA resources and minimizing ISO costs.
- NCPA MSSA Load Data:

Current Year 2020 Data

	August 2020		Calendar Year 2020	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	467.45 8/14 @ 1700	217,000	467.45 8/14 @ 1700	1,512,884
SVP	586.3 8/14 @ 1700	346,423	586.3 8/14 @ 1700	2,531,984
MSSA	1053.75 8/14 @ 1700	563,423	1053.75 8/14 @ 1700	4,044,868

Last Year 2019 Data*

	August 2019		Calendar Year 2019	
	Peak MW	MWh	Peak MW	MWh
NCPA Pool	478.77 8/15 @ 1700	224,327	478.77 8/15 @ 1700	1,563,712
SVP	579.27 on 8/14 @ 1700	337,063	587.78 6/11 @ 1600	2,472,543
MSSA	1057.99 on 8/15 @ 1700	561,390	1057.99 8/15 @ 1700	4,036,255

*Last year's data added for comparison purposes only

System Peak Data

	All Time Peak Demand	2020 Peak Demand
NCPA Pool	517.83 MW on 7/24/06 @ 1500	467.45 8/14 @ 1700
SVP	587.78 MW on 6/11/19 @ 1600	586.3 8/14 @ 1700
MSSA	1070.79 MW on 9/1/17 @ 1700	1053.75 8/14 @ 1700

- NCPA MSSA has a Deviation Band with the CAISO, which is used as a performance measure by the CAISO. The ability to stay within this Deviation Band is a measure of NCPA Dispatch's ability to balance the MSSA Loads and Resources on a 5-minute basis. The following NCPA Deviation Band Performance table includes all deviations, including deviations from unit forced outages, metering and load outages, COTP, Western, and WECC curtailments.

NCPA Deviation Band Performance		
	August 2020	Calendar Year 2020
MSSA % Within the Band	91.60%	95.96%

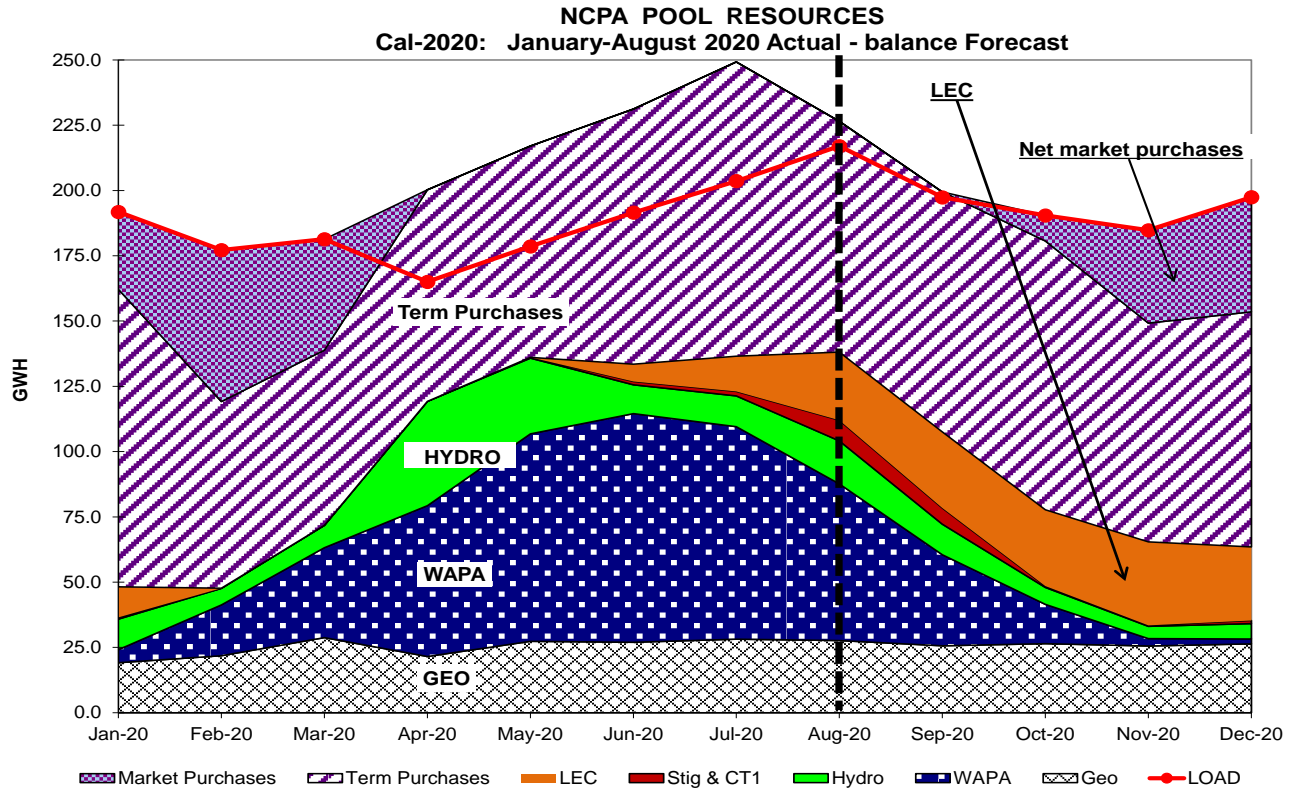
- Dispatch and SC groups continue operating in split mode occupying both Roseville HQ and DRC due to COVID-19.
- Dispatch and SC groups training with SVP via GoToMeeting for eventual NCPA assumption of SVP weekend/holiday night scheduling duties by the end of the year.
- Market Instruction Dispatch System (MIDS) user testing started 8/12/2020. This will replace the legacy NADS application used by NCPA system dispatchers to manage generation unit instructions from CAISO.
- Due to a Stage 3 Emergency notification from CAISO, approximately 27 MW of member load was shed on HE20 8/14/2020.

Pooling, Portfolio Planning & Forecasting

- NCPA Pool load during August 2020 was 216,986 MWh, or 101.6% of forecast as well above normal heat mid-month added cooling demand amid loosening of restrictions connected to the Covid-19 pandemic. Pool load through September is expected to continue above normal compared to the same period a year ago, as weather-related demand increased again early in the month.
- Lodi Energy Center (LEC) produced 26,086 MWh for the Pool during August. Despite the current volatile market pricing structure and in-state pipeline limitations, LEC was projected to generate 29,118 MWh for the Pool in September, but a brief maintenance outage mid-month will likely cut that back.
- During August 2020, 0.00" of rain was recorded at the Big Trees gauge. Average July Big Trees precipitation is 0.09".
- The Value of Storage (VOS) of New Spicer Meadow Reservoir (NSMR) has been increased to \$85/MWh.
- NSMR storage as of August 31, 2020 was at 106,631 acre feet. The historical average NSMR storage at the end of July is 118,695 acre feet. As of September 16, 2020 NSMR storage is 99,741 acre feet. The current NCPA Pool share of NSMR storage is 51,085 acre feet.
- Combined Calaveras Project generation for the Pool in August 2020 totaled 16.3 GWh, up from 11.5 GWh in July 2020. The Pool's 16.3 GWh in August 2020 was greater than the pre-month forecast of 14.7 GWh.
- Western Base Resource (BR) deliveries for the Pool during August 2020 were 59,998 MWh, including Displacement energy totaling 22,681 MWh. Energy received was 97.8% of the pre-month forecast. Western's forecast for the Pool's share of September generation is 34,237 MWh.
- The PG&E Citygate gas index averaged \$3.545/MMBtu for delivery on September 10, 2020, well above the average PG&E gas price during August of \$3.071/MMBtu. Gas prices have continued to rise as production curtailments cut into storage additions, power burns increased, and Europe decided to start buying winter LNG.

The September 2020 PG&E Citygate Bidweek price is \$3.465/MMBtu, up 93.5 cents from the August Bidweek price.

- Day-Ahead NP15 electricity prices averaged \$62.37/MWh (HLH) and \$33.54 (LLH) during August 2020, with evening ramp hour prices reaching as high as \$958 at TH_NP15 during the mid-August heat wave as increased demand and somewhat limited renewables generation due to cloud and smoke cover from wildfires brought prices to the highest levels of the year.



NCPA Pool Loads & Resources Value Summary									
	Peak and Energy Summary Aug-20				Estimated Production Costs			Cost of Serving Demand	
	Coincident Peak (MW) Aug-14-20 Hour 17	Total MWh	Pre-Month Forecast Values		NCPA Pool			Totals	Avg (\$/MWh)
			Aug-14-20	Aug-15-20	Avg. MW	Cost/Revenue (Estimate)	Variable Cost (\$/MWh)		
Demand	467.5	216,986	213,537	291.6	N/A	N/A	N/A	N/A	N/A
WAPA	-	59,998	61,359	80.6	\$ 1,826,020	\$ 30.43	N/A	\$ 12,962,158	\$ 59.74
Geothermal	-	27,675	26,519	37.2	525,822	19.00	N/A	N/A	N/A
Hydro	-	16,421	15,523	22.1	98,528	6.00	N/A	N/A	N/A
Stig & CTs	-	7,947	4,684	10.7	439,295	55.28	N/A	N/A	N/A
LEC	-	26,086	33,761	35.1	844,664	32.38	N/A	N/A	N/A
Contracts	-	88,400	106,923	118.8	5,569,675	63.01	N/A	\$ 8,912,117	\$ 41.07
Market - Net <small>(Net Sales = Negative)</small>	467.5	(9,541)	(35,232)	(12.8)	(496,407)	52.03	N/A	N/A	N/A
Net Total	467.5	216,986	213,537	291.6	\$ 8,807,597	\$ 41.07	N/A	N/A	N/A

Monthly Market Summary									
	Pool Energy (MWh)	HLH Avg MCP (\$/MWh)	Avg Variable Cost of Pool Generation (\$/MWh)		Forward Prices (EOX NP15 HLH Ask Prices)				
			Aug-20	Sep-20	NP15 8/3/2020 (\$/MWh)		9/10/2020 (\$/MWh)		
Jan-20	191,771	\$ 32.76	\$ 39.71	\$ 39.86	\$ 42.37	\$ 42.01	\$ 40.32	\$ 41.81	\$ 41.81
Feb-20	177,169	\$ 27.58	\$ 46.65	\$ 42.01	\$ 42.01	\$ 42.01	\$ 40.32	\$ 41.81	\$ 41.81
Mar-20	181,339	\$ 27.90	\$ 40.59	\$ 42.01	\$ 42.01	\$ 42.01	\$ 40.32	\$ 41.81	\$ 41.81
Apr-20	165,033	\$ 22.78	\$ 35.05	\$ 42.01	\$ 42.01	\$ 42.01	\$ 40.32	\$ 41.81	\$ 41.81
May-20	178,601	\$ 20.85	\$ 37.53	\$ 42.01	\$ 42.01	\$ 42.01	\$ 40.32	\$ 41.81	\$ 41.81
Jun-20	191,530	\$ 26.29	\$ 36.98	\$ 42.01	\$ 42.01	\$ 42.01	\$ 40.32	\$ 41.81	\$ 41.81
Jul-20	203,610	\$ 27.80	\$ 37.25	\$ 42.01	\$ 42.01	\$ 42.01	\$ 40.32	\$ 41.81	\$ 41.81
Aug-20	216,986	\$ 59.74	\$ 41.07	\$ 42.01	\$ 42.01	\$ 42.01	\$ 40.32	\$ 41.81	\$ 41.81
Sep-20				\$ 37.34	\$ 40.31	\$ 39.13	\$ 38.26	\$ 38.00	\$ 38.00
Oct-20				\$ 35.66	\$ 34.74	\$ 34.74	\$ 34.74	\$ 34.74	\$ 34.74
Nov-20				\$ 34.97	\$ 34.74	\$ 34.74	\$ 34.74	\$ 34.74	\$ 34.74
Dec-20				\$ 34.61	\$ 34.61	\$ 34.61	\$ 34.61	\$ 34.61	\$ 34.61

NOTES TO SUMMARY TABLE:

Peak and Energy Summary:

* Monthly generation summary of Coincidental Peak (hour in which pool demand peaked), total MWh for the month, and pre-month forecasted values for report period.

* Generation totals are for POOL SHARE of the projects.

* Hydro totals include Collierville and Spicer generation.

Estimated Production Costs:

* Fixed project costs not included except for WAPA, where total month's project costs are used to calculate the average unit cost.

* STIG and CT costs include forward natural gas and basis hedge transactions.

* STIG & CT costs reflect \$2.60 and \$1.62/MWh variable O&M costs per 6-12-06 GSCA.

Cost of Serving Demand:

* Compares price of meeting total monthly demand with (1) Hourly pool market clearing price;

(2) Variable cost of pool gen. Pool Gen is sum of estimated costs divided by sum of generation.

Industry Restructuring, Contracts and Interconnection Affairs

Resource Adequacy Compliance Filings

- NCPA made the following Resource Adequacy compliance filings with the CAISO for the compliance period November 2020:
 - Monthly System Resource Adequacy Demonstration (filed September 17, 2020)
 - Monthly Supply Plan (September 17, 2020)

Industry Restructuring

NCPA is actively participating in a number of CAISO stakeholder initiatives on behalf of the members. The following is a brief description of key active initiatives:

Extended Day-Ahead Market (EDAM)

- Straw proposal comments due October 8, 2020. NCPA will focus on transmission cost allocation equity.
- CAISO published Bundle 1 Straw Proposal and held stakeholder meeting. Bundle consists of Resource Sufficiency Evaluations (RSE), Congestion and Transfer revenue allocation, and Transmission cost allocation.
- RSE is relatively uncontroversial and is similar in concept to ISO/CPUC RA program in that it is intended to ensure that EDAM participants have sufficient capacity, transmission, flexibility, and reserves to serve their own loads and prevent leaning on other participants. RSE is currently active in EIM. Congestion and Transfer revenue allocations relatively uncontroversial as well. Congestion is intra-BAA and allocated to load that pays for transmission. Transfers occur inter-BAA and will be allocated to transmission owners. The controversial topic is transmission cost allocation. CAISO proposes to declare most transmission costs as sunk and only apply usage fee to incremental exports and EIM wheeling transfers. NCPA and others are concerned that those paying for transmission will not be fairly compensated.
- This initiative will develop an approach to extend participation in the Day-Ahead market to the Western Energy Imbalance Market (EIM) entities in a framework similar to the existing EIM approach for the real-time market, rather than requiring full integration into the California ISO balancing area. The extended Day-Ahead market will improve market efficiency by integrating renewable resources using Day-Ahead unit commitment and scheduling across a larger area.
- CAISO responded to stakeholder concerns and is extending the process to include more workshops to deal with issues such as transmission cost allocation.
- February workshops focused on transmission provisions, resource sufficiency evaluations, and congestion revenue rights. The package of topic was described as bucket 1. With two more contentious buckets to follow, a fall 2022 go live is unlikely.
- CAISO and EIM participants continue to discuss terms and products conceptually without offering much detail and discussion of implementation costs is non-existent.

Resource Adequacy Enhancements

- Two day workshop scheduled for week of September 14, 2020. Updates to follow.
- July 14th meeting for 5th Revised Straw Proposal covered:
 - Portfolio analysis and UCAP needs assessment methodology
 - Transition to UCAP paradigm effective 2023 RA year

- Aligning CAISO BA outage tracking with existing RC outage definitions
- “Forced” and “Urgent” outages during top 20% tightest supply cushion hours will count against UCAP with minimal forced majeure exemptions such as wildfire.
- UCAP calculations for existing and new resources
- CAISO’s determination to establish Planned Outage Reserve Margin for off-peak months (Nov – May), restrict Planned Outages from occurring in peak months or else maintain status quo outage planning process.
- NCPA submitted the following comments:
 - Argued against CAISO’s removal of wildfire, PSPS, and other outages outside a generator’s control.
 - Expressed tentative support of only allowing Planned RA outages in off-peak month from November through May provided that October is reclassified as off-peak month and May is reclassified as peak month. This will allow generators to take planned maintenance without substitution requirements. NCPA also expressed support for alignment of outage types with RC categories.
 - NCPA presented new concept of holding Participating Transmission Owners (PTOs) to same outage reporting standards as Generator Owners and Operators (GO/GOP) and commit to enhanced outage coordination among PTOs and GO/GOPs to mitigate unnecessary downtime.
- Due to the rapid transformation of the resource mix in California, the CAISO is currently re-examining the CAISO Resource Adequacy requirements and rules. This initiative will explore changes to the CAISO’s Resource Adequacy requirements and rules to ensure the resources providing reserve services are effectively supporting reliable operations of the grid.
- CAISO is proposing massive overhauls to its RA program in conjunction with CPUC changes. Specific areas the CAISO is looking at are termination of the Resource Adequacy Availability Mechanism for System capacity and replacing it with “less complicated” counting rules similar to eastern RTOs, import eligibility, exemptions, and redefining Planned and Forced outages.
- NCPA will continue to advocate for must offer obligation exemption due to existing LF-MSS balancing requirements.

Day-Ahead Market Enhancements

- NCPA met with CAISO staff in order to share concerns with Metered Subsystem Provisions. CAISO requested that NCPA provide proposed revisions recognizing benefits of Load Following Metered Subsystems that justify reduced cost allocation or outright exemption of DAME products.
- In latest proposal, CAISO is dropping new Reliability Energy product due to cost formation issues with bid in energy while retaining Reliability Up and Down Capacity. This is an improvement over current Residual Unit Capacity process in that it allows for procurement of downward capacity. Latest proposal does not address Load Following Metered Subsystem specific issues such as Reliability Capacity exemption and Imbalance Reserve Product settlements netting. We will continue to press on those issues.
- This initiative will explore new Day-Ahead products that will address ramping needs between intervals and uncertainty that can occur between the Day-Ahead and real-time markets.
- CASIO reviewed the need for new products along with data supporting uncertainty concerns:

- Uncertainty between Day-Ahead and real-time market has increased from 2017 to 2019 and CAISO operators are addressing this development with out of market actions which disrupts market efficiency.
- Historically, generators had higher certainty to know if they would be scheduled in real-time.
- Due to uncertainty and changing resource fleet, commitment decisions are no longer necessarily known.
- Gas, hydro, storage, and imports need to cover costs to be available for dispatch in real-time – this will be accomplished with imbalance reserves.
- Two new products:
 - Imbalance Reserve Product (IRP) will be designed to address granularity and uncertainty between Day-Ahead and real-time markets:
 - Hourly product; 15-minute dispatchable; Biddable; Covers granularity difference and uncertainty between DAM and FMM; All awards are co-optimized and settled simultaneously; DAM has no energy price formation issue because the market solves all hours in a single optimization; Stepped relaxation parameters (proposed).
 - Reliability Capacity: replaces RUC process used to address gaps between bid in demand and forecast demand.
- Implementation is set to To Be Determined.

Transmission Access Charge Structure Enhancements

- Initiative is currently on hold pending developments from EDAM initiative.
- This initiative considers changes to the CAISO's current volumetric Transmission Access Charge (TAC) structure for recovering participating transmission owners' costs of owning, operating and maintaining transmission facilities under CAISO operational control. The CAISO will consider stakeholder input on the initiative scope, which will include possible changes to reflect the benefits of distributed resources in reducing future transmission needs.
- CAISO's draft final proposal includes a hybrid billing determinant consisting of volumetric and peak demand functions at an approximately 50/50 split in order to address cost shifts as well as the full impact of high coincident peak demand, low load factor UCD areas that have relatively lower volumetric use compared to high load factor areas. It received general support from the market and will be presented to the CAISO Board in 2021 and will be implemented at a to-be-determined point thereafter. The CAISO is working to align the TAC Board consideration with the Extended Day-Ahead Market (EDAM) process so they are aligned to the extent possible. The TAC proposal may possibly need to be updated if the EDAM proposal aspects related to transmission issues drive changes to the TAC initiative.
- NCPA performed an impact analysis and determined that NCPA members would mostly benefit or be indifferent to the new billing determinant so long as certain LFMSS benefits remain in place.

Western

Western Base Resource Tracking (NCPA Pool)

Western Base Resource Tracking - NCPA Pool							
	Actual			Costs & Rates			
	BR Forecast ¹ (MWh)	BR Delivered (MWh)	Difference (MWh)	Base Resource & Restoration Fund (\$)	Monthly Cost of BR ² (\$/MWh)	CAISO LMP Differential ³ (\$/MWh)	12-Mo Rolling Avg. Cost of BR ⁴ (\$/MWh)
Jul-20	83,801	81,392	(2,409)	\$1,825,459	\$ 22.43	\$ 0.13	\$ 27.37
Aug-20	61,985	59,998	(1,987)	\$1,826,020	\$ 30.43	\$ (0.23)	\$ 27.68
Sep-20	41,023	-	(41,023)	\$1,792,187	\$ 43.69	\$ -	\$ 27.63
Oct-20	30,317	-	(30,317)	\$889,070	\$ 29.33	\$ -	\$ 28.75
Nov-20	14,598	-	(14,598)	\$889,070	\$ 60.91	\$ -	\$ 29.45
Dec-20	13,128	-	(13,128)	\$889,070	\$ 67.72	\$ -	\$ 30.48
Jan-21	6,278	-	(6,278)	\$889,070	\$ 141.63	\$ -	\$ 31.16
Feb-21	16,372	-	(16,372)	\$889,070	\$ 54.30	\$ -	\$ 31.60
Mar-21	26,497	-	(26,497)	\$889,070	\$ 33.55	\$ -	\$ 31.99
Apr-21	41,629	-	(41,629)	\$1,974,958	\$ 47.44	\$ -	\$ 33.40
May-21	74,036	-	(74,036)	\$1,974,958	\$ 26.68	\$ -	\$ 34.14
Jun-21	93,177	-	(93,177)	\$1,974,958	\$ 21.20	\$ -	\$ 34.22

1/ As forecasted in NCPA 20/21 Budget
2/ = (Western Cost + Restoration Fund)/BR Delivered, for Pool Participants only.
3/ = (MEEA LMP - PG&E LAP LMP) using public market information (i.e. not settlement quality).
4/ Based on BR Delivered (Actual) when available and BR Forecast in all other cases. Includes CAISO LMP impact.

- NCPA Pool received 59,998 MWh Base Resource (BR) energy in August 2020. This includes 22,681 MWh of Displacement Energy for an estimated savings of \$172,240 or about \$7.60/MWh.
- Pool Members' total savings under Market Efficiency Enhancement Agreement (MEEA) for Pool Members was approximately \$(8,747) in August 2020. The net negative savings was mainly due to lower congestion prices for import at COTP. FY 2021 had a net MEEA savings of \$(1,677).

2025 Base Resource Contract

- The contract service period begins January 1, 2025 and shall remain in effect through December 31, 2054, subject to prior termination. The contract permits termination or reduction of Base Resource share for any reason through June 30, 2024.
- WAPA will publish the contract in mid-September 2020 and send to the Utility Directors via email. Each entity will have six months to execute the contract (March 2021 timeframe).
- NCPA will continue to work with WAPA to develop a 10-year forecast (FY 2021 – FY 2030) to aid the membership's BR Contract signing efforts. WAPA's latest update indicates the forecast will be shared by the end of September 2020.

Energy Imbalance Market (EIM)

- WAPA will begin to participate in the CAISO Energy Imbalance Market (EIM) on March 25, 2021. WAPA is in the process of filing the new formula rate schedule to capture the costs and benefits associated with EIM. The effective date of the new rate schedules is March 25, 2021. WAPA held its Public Information Forum & Verbal Comment Forum on August 17, 2020. The deadline to submit comments is October 29, 2020. WAPA expects to publish the Final Federal Register Notice (FRN) in February 2021.

Interconnection Affairs

PG&E Update

Permanent Inter-Tie switch Between Geo Plants 1 and 2

- The permanent no load intertie switch has been approved by the CAISO. The switch can be used when either the Fulton or Lakeville line is out of service to combine the outputs of Geo Plant 1 and Plant 2.
- Next step is to seek buy in from PG&E, propose and finalize an operating procedure, and amend the GIA's if necessary.

TO-20 Rate Case

- Partial settlement was filed at FERC towards the end of March, 2020. Key items not settled are ROE, Capital Structure, and Depreciation.
- Joint Interveners and FERC Trial Staff are exploring ways to settle the outstanding monetary issues and have sent a settlement offer to PG&E.

Cotenancy Agreement

- PG&E with support from NCPA and SVP filed an amendment that acknowledged CDWR's request for termination. The amendment rejected CDWR's request, pending resolution of the Cost of Removal dispute. All other matters have been delayed until this issue is resolved.
- On September 27, 2019 FERC rejected PG&E's amendment stating PG&E cannot unilaterally extend the term of the Agreement. FERC did not address the cost of removal aspect and the calculation methodology. NCPA has initiated discussions with members as to how much capacity from CDWR's share NCPA should take. Pending the outcome of the capacity discussion, NCPA and SVP will look at next steps. More updates will be provided to members as they become available.

Transmission Planning BPM Updated Modeling Data Submittal

- CAISO is requiring Generators to submit updated modeling data to ensure CAISO has current and accurate system information.
- NCPA has submitted updated data and power flow models for all Hydro, Geo, and CT units. The Alameda CTs have been deemed compliant by the ISO, however

CAISO pointed out a few quality issues which NCPA is working to address. Hydro units have been deemed compliant and complete. ISO identified new deficiencies with the Geo Units which we are working to resolve.

Public Safety Power Shutoff (PSPS)

- On June 3, CAISO held an out of cycle TPP meeting to inform stakeholders CAISO will be performing a Wildfire Mitigation Assessment in the 2020-2021 Planning Cycle. The ISO plans to look at facilities de-energized in 2019, evaluate current hardening PG&E is performing, and see if there is any other mitigation which may be performed. Different scenarios will be evaluated by taking out/turning off a combination of various facilities within fire zones. Additional scenarios may be created based on 2019 PSPS events. CAISO plans to identify new upgrades and critical facilities within local areas (ISO Study Pockets) which can potentially reduce risk of fire impact. Assessment of impacts and potential mitigations will be presented in the September 2020 stakeholder meeting.
- The CAISO faces a few challenges – 1) There currently are no Planning or NERC standards which guide ISO on how to evaluate contingency events related to PSPS; and 2) Due to the urgency to perform studies prior to the wildfire season, ISO has no time to have a separate stakeholder call to develop a study of methodology.
- NCPA filed comments in support and encouraged CAISO to perform this assessment in every planning cycle. Stakeholder meeting in September will discuss preliminary findings.

Stakeholder Transmission Asset Review (STAR) Process

- NCPA's objective in PG&E's Stakeholder Transmission Asset Review process is to participate and influence lower cost alternatives where possible, identify projects which may benefit members, and introduce Member Specific Projects.
- On June 1, PG&E submitted a 10-year capital plan to all stakeholders. The list included 1,209 total projects (equal to or greater than \$1M), 989 total Non-ISO Approved/Self Approved Projects, 120 total Self Approved Projects that have not started construction, and over 600 supporting documents (Project Authorizations/Business Cases).
- NCPA filtered self-approved member specific projects and sent to all UD's for review and feedback, drafted stakeholder comments with more emphasis on projects which are in planning (i.e. not in construction phase), projects which fall under the "work requested by others" category, and projects which might be related to non-CAISO controlled facilities.
- PG&E held a stakeholder meeting on August 4th to present their asset management process and risk metrics. PG&E did not directly address rate base questions, but did encourage stakeholders to submit questions in writing; due Sept 15, 2020.

PG&E Annual Formula Rate Update

- The following is a comparison of 2020 and the new proposed rates for 2021:

	Calculation of PG&E Wholesale Rates	Rate Year 2021	Rate Year 2020
<u>Line</u>	<u>Description</u>	<u>Values</u>	<u>Values</u>
	Calculation of High Voltage Access Charge		
100	High Voltage TRR	\$1,020,007,111	\$788,444,596
101	Gross Load (MWh)	83,846,544	85,012,937
102	High Voltage Access Charge (\$/MWh)	\$12.17	\$9.27
	Calculation of Low Voltage Access Charge		
200	Low Voltage TRR	\$1,527,679,602	\$1,199,254,803
201	Gross Load (MWh)	83,846,544	85,012,937
202	Low Voltage Access Charge (\$/MWh)	\$18.22	\$14.11

- 2021 increase is mostly due to forecasted capital additions, O&M expenses, ROE, and Depreciation.
- We expect the 2021 rates to be lower by January 1 as a result of TO-20 settlement (especially on ROE) and negotiations between PG&E and the Joint Intervenors from now until November 1, 2020 on amounts that are excessive or unsupported. NCPA will monitor this and present final rates for 2021 to Members.

Debt and Financial Management

- At the Federal Reserve's September meeting, the Fed once again kept rates steady at near-zero suggesting that interest rates will likely stay there through the end of 2023.
- Policymakers also upgraded their outlook on the U.S. economy's emergence from the depths of the COVID-19 pandemic, offering more optimistic projections on where unemployment and economic growth will end the year 2020. In June, the Fed forecast a 6.5% contraction in real GDP and an unemployment rate of 9.3% by the end of 2020. But an August jobs report showing a better-than-expected 8.4% unemployment rate suggesting that the economic recovery is proceeding faster than originally expected.
- Treasury yields fell during the month of July, with longer-term yields leading the retreat, resulting in a flatter yield curve. The yield on maturities between two and 10 years settled at new lows as bond market volatility waned.
- The Finance Committee met on September 2nd to discuss draft Strategic Plan goals focused on controlling costs, minimizing risks, and maintaining NCPA's financial strength. The presentation and notes from that meeting (including notes from other committee meetings) can be found of NCPA Connect > Collaboration > NCPA Strategic Plan.

Schedule Coordination Goals

Software Development

- Technology upgrade and business rule integration for a new Market Instruction Dispatch System (MIDS) application is in progress that will replace NCPA's legacy NADS application. MIDS is a software program that interfaces with the CAISO's Automated Dispatch System (ADS) for the purpose of receiving and allocating dispatch awards and instructions for real-time operations. MIDS provides for upgraded technology as well as the ability to manage future new functionality related to CAISO contingency dispatch events, ancillary services tests, exceptional dispatch instructions, operational curtailments, multi-stage generation logic and forced outages. Go-live scheduled for 09/21/2020
- New applications under development
 - ABISS (Accounting, Budget, Information and Settlements System) is under development. It is a new Business Intelligence Reporting to provide financial information to both NCPA and members.
 - Renewable Portfolio Standard Reporting app to be added as an enhancement to the Risk Management app. The report will provide members an automated RPS Balance Sheet of their RECs in a Compliance Period.
- New Integrations into the Scheduling Suite
 - Wind Resource for East Bay Community Energy
 - Santa Clara's Central 40 Solar Resource
 - Sonoma Clean Power with its Wind and Solar Resources
- IS is facilitating PCWA's transitioning into NCPA Deal Manager and Risk Manager System scheduled to rollout in January 2021

Network

- Progress continues to be made upgrading staff to Windows 10 with over 93% of the Agency on the new Operating System. IS staff are working with individual departments to upgrade the few remaining Windows 7 machines and anticipate to be completed in the coming weeks.
- IS and Dispatch met with NID staff to review the remote shutdown procedures for South Combie Powerhouse. The procedures were then updated and sent to NID staff for further review and plans to walk through them in the coming weeks.
- IS continues working with EBCE and technical contractors to begin discussions on the upcoming Altamont Wind integration project, which is expected to Go Live by end of 2020.
- With the anticipation of the CAISO's new launch of ADS October 1st, both SCADA and System Administration staff have been working with Software Development and Dispatch to prepare the environment for NCPA's new MIDS software application.
- Network upgrades for the business infrastructure has been completed at Hydro. This was an effort to replace aging equipment that was no longer supported.
- A candidate to fill the vacant Help Desk Analyst I position has accepted the offer and is planning to start in October once COVID-19 restrictions have been lifted. .

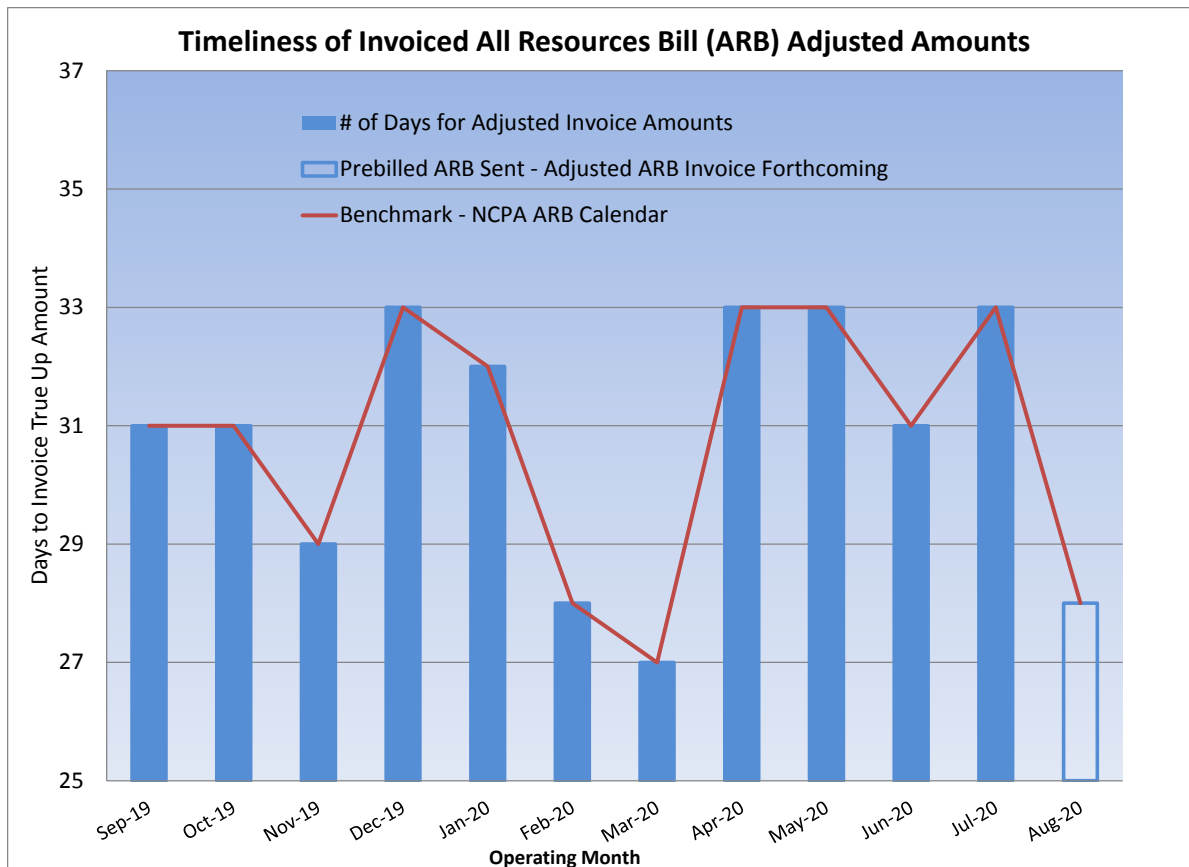
NCPA Bills & Settlements

Progress Against the Strategic Plan

Adjusted Power bills, which include CAISO transactions, invoiced to members the following month subsequent to the monthly pre-billed ARB month. Timely ARB settlements adjustments help improve members' cash flow and reconciliation of their budget performance.

The August 2020 NCPA All Resources Bill (ARB) monthly invoice sent to members on July 26, 2020 contains:

- July 2020 monthly pre-billed budget/forecast amounts;
- June 2020 (1st Adjustment) NCPA Project and CAISO Initial settlement true-ups;
- May 2020 (2nd Adjustment) NCPA Project settlement true-up and T+12 business day recalculated CAISO settlement true-up allocations;
- March 2020 (3rd Adjustment) T+55 business day recalculated CAISO settlement true-up allocations and NCPA Projects true-up;
- September 2019 (4th Adjustment) T+9 month recalculated CAISO settlement true-up allocations;
- November 2018 (5th Adjustment) T+18 month recalculated CAISO settlement true-up allocations;
- August 2017 (6th Adjustment) T+33 month recalculated CAISO settlement true-up;
- May 2017 (7th Adjustment) T+36 month CAISO settlement true-up;



Legislative & Regulatory

Political Arena State/Federal/Western Programs

Regulatory Update

- NCPA successfully deployed a legislative and regulatory strategy that stopped the California Energy Commission from unlawfully expanding its authority in determining whether a Renewables Portfolio Standard (RPS) contract should be considered long-term in the RPS program. In response to pressure from the State Legislature as well as strong concerns expressed by NCPA, individual NCPA members, and other public power systems across the state, the Commission delayed consideration of the beleaguered RPS enforcement rule package and agreed to further deliberations on the issue over the next couple of months.
- NCPA submitted an application to APPA's Demonstration of Energy & Efficiency Developments (DEED) program to partially fund a feasibility study exploring the potential for the development of a hydrogen generating facility adjacent to the Lodi Energy Center (LEC). The study is the first part of a broader, multi-year effort to demonstrate that hydrogen can serve as a cost-effective and environmentally-clean resource to meet the needs of power generation and transportation, as is the case at the LEC. A funding decision from APPA is expected in early October.

Customer Programs Update

- NCPA Customer Programs released an RFP this week to solicit proposals for transportation electrification and building electrification education and outreach services to support Member efforts to enhance or develop electrification programs for customers. In addition to soliciting proposals for typical educational and outreach events, the RFP requests online and virtual offerings, to bolster Members' ability to reach their customers while unable to provide in-person events. Responses are due on September 10, and we expect contracts to be in place by October.

State Legislative Update

- The State Legislature resumed its session and continues to work toward the August 31 end-of-session deadline, with policy committee hearings occurring through mid-August. NCPA continues to monitor legislation of interest related to employer requirements linked to COVID-19, pumped hydroelectric storage procurement, and transportation electrification. Legislative leaders and the Governor continue negotiations on policy proposals to address the Legislature's proposed \$100 billion economic recovery plan. Key topics covered in the plan include workforce and employee protections and advancing the green economy, among other issues.

Federal Legislative Update

- Last month, NCPA wrote a letter of support for Senator Feinstein's (D-CA) wildfire mitigation bill, the "Emergency Wildfire and Public Safety Act of 2020 which is now pending in the Senate Energy and Natural Resources Committee. The bill would provide additional tools and programs for the federal government to improve wildfire mitigation efforts on federal forested land. As well, NCPA has been keeping its congressional delegation closely apprised of recent grid reliability issues related to high temperature events, and continues to be a resource to policymakers on events and issues impacting the utility industry in Northern California.

Human Resources

Hires:

None.

Intern Hires:

None.

Promotions/Position Changes:

None.

Separations:

None.