

Informal Customer Meeting Questions

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Question(s)	Response(s)																																																																	
1.	<p>Is the 29.8% referenced in the presentation WAPA's percentage share for Phase I or Phase II?</p> <p>The 29.8% is applicable to Phase II costs. This reflects WAPA's Net Energy Load (NEL) percent share of the four EIM participants included in Phase II.</p>																																																																	
2.	<p>Do you know what the ratio share would be if all EIM entities were included in Phase I and Phase II implementation? (Slide 10)</p> <p>If all entities were included in Phase I and Phase II, WAPA's share would still be 10.9%. This is WAPA's NEL % share (using 2017 data) when considering the total NEL for all 5 entities participating in EIM.</p> <p>Under Phase I, only SMUD joined EIM and paid for all the costs of joining EIM. If City of Redding, Roseville Electric Utility, Modesto Irrigation District and WAPA had joined EIM during Phase I, WAPA's share of implementation costs would have been 10.9%.</p>																																																																	
3.	<p>It is stated that the ratio was allocated on a load ratio share, what load was included and how was it allocated? (Slide 10)</p> <p>The NEL used to calculate WAPA's ratio share included: Lawrence Livermore National Lab (DOE), Tracy Pump Load (Project Use), Trinity PUD, City of Shasta Lake, SBA Losses and Station Service, East Contra Costa Irrigation District, Contra Costa Water District, Byron Bethany Irrigation District.</p> <p>We have an agreement in principle with the Balancing Authority of Northern California (BANC) and Redding to address the City of Shasta Lake's load that was included in WAPA's NEL. In the future, BANC will most probably use a rolling three-year average to mitigate a wet/dry year issue.</p>																																																																	
4.	<p>Can you tie the on-going and implementation costs to our current PRR costs? How are these related and how do they fit in with what is already in the PRR?</p> <p>Implementation costs are one-time costs to prepare WAPA for participating in the EIM. These costs will be added to annual Operation and Maintenance (O&M) costs and will be allocated over a 3-year period. On-going administrative costs will also be added to annual O&M. For the 3-year period that includes both implementation and on-going costs, annual O&M is expected to increase by approximately 1.08% per year. Once implementation costs are fully paid, on-going administrative costs will continue to be included in annual O&M. The average increase to the annual O&M (post implementation) is expected to be approximately 0.50%.</p> <table border="1" data-bbox="516 1419 1425 1873"> <thead> <tr> <th>Category</th> <th>2019 Actual</th> <th>2020 Estimate</th> <th>2021 Estimate</th> <th>2022 Estimate</th> </tr> </thead> <tbody> <tr> <td>BANC WEIM Implementation Costs (Total)*</td> <td>\$449,292</td> <td>\$742,709</td> <td>\$292,448</td> <td>\$0</td> </tr> <tr> <td>BANC WEIM Ongoing Costs, Annual and WAPA's share (Total)**</td> <td>\$0</td> <td>\$0</td> <td>\$477,315</td> <td>\$477,315</td> </tr> <tr> <td>WAPA Implementation Costs</td> <td>\$545,500</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> </tr> <tr> <td>WAPA Ongoing Costs</td> <td>\$0</td> <td>\$0</td> <td>\$184,400</td> <td>\$184,400</td> </tr> <tr> <td>USBR Implementation costs</td> <td>\$0</td> <td>\$500,000</td> <td>\$500,000</td> <td>\$0</td> </tr> <tr> <td>Totals</td> <td>\$1,043,553</td> <td>\$1,357,511</td> <td>\$1,454,163</td> <td>\$661,715</td> </tr> <tr> <td colspan="5" style="text-align: center;">Implementation and Administrative On-going Costs – Percent Increase to Annual O&M</td> </tr> <tr> <td>O&M – Actual and Forecast</td> <td>\$113,288,000</td> <td>\$116,445,492</td> <td>128,051,523</td> <td>131,329,785</td> </tr> <tr> <td>Percent Increase in Cost</td> <td>+0.92%</td> <td>+ 1.17%</td> <td>+1.14%</td> <td>+0.50%</td> </tr> <tr> <td colspan="5" style="text-align: center;">Implementation and Administrative On-going Costs – Percent Increase to Annual PRR</td> </tr> <tr> <td>PRR - Forecast</td> <td>N/A</td> <td>N/A</td> <td>\$80,993,757</td> <td>\$84,760,808</td> </tr> <tr> <td>Percent Increase</td> <td>N/A</td> <td>N/A</td> <td>+1.80%</td> <td>+0.78%</td> </tr> </tbody> </table>	Category	2019 Actual	2020 Estimate	2021 Estimate	2022 Estimate	BANC WEIM Implementation Costs (Total)*	\$449,292	\$742,709	\$292,448	\$0	BANC WEIM Ongoing Costs, Annual and WAPA's share (Total)**	\$0	\$0	\$477,315	\$477,315	WAPA Implementation Costs	\$545,500	\$0	\$0	\$0	WAPA Ongoing Costs	\$0	\$0	\$184,400	\$184,400	USBR Implementation costs	\$0	\$500,000	\$500,000	\$0	Totals	\$1,043,553	\$1,357,511	\$1,454,163	\$661,715	Implementation and Administrative On-going Costs – Percent Increase to Annual O&M					O&M – Actual and Forecast	\$113,288,000	\$116,445,492	128,051,523	131,329,785	Percent Increase in Cost	+0.92%	+ 1.17%	+1.14%	+0.50%	Implementation and Administrative On-going Costs – Percent Increase to Annual PRR					PRR - Forecast	N/A	N/A	\$80,993,757	\$84,760,808	Percent Increase	N/A	N/A	+1.80%	+0.78%
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5. Can you provide more detail on what is included in the \$477,315 on-going EIM costs and will these costs increase or decrease over time?

The \$477,315 on-going administrative costs allocated to WAPA includes:

- EIM Operation \$381,395,
- Stakeholder Support \$10,900,
- CAISO Fees \$81,750, and
- Legal Support \$3,270.

Some of the administrative costs may increase if CAISO or BANC increase their costs in the future.

More detailed information is provided in the table below.

CATEGORY	COST ESTIMATE
Personnel - EIM Desk (5)	\$ 1,587,138.00
Personnel - Settlements (1.5)	\$ 511,718.00
Personnel - Outage Mgmt (0.4)	\$ 126,971.00
Personnel - Netwk Model (1)	\$ 267,843.00
Personnel - Meter Data Mgmt (0.5)	\$ 39,648.00
Personnel - SME/Oversight (0.4)	\$ 171,179.00
Personnel - IT Support (0.25)	\$ 55,853.00
Personnel Total (9.05)	\$ 2,760,350.00
3% Labor Adjustment	\$ 82,810.50
Updated Personnel Total	\$ 2,843,160.50
EIM Software Support	
- OATI	\$ 90,000.00
- Power Settlements	\$ 442,900.00
- ITOA	\$ 20,000.00
- WebEIM	\$ 40,000.00
EIM Software Support Total	\$ 592,900.00
EMS EIM Module	
- Amortized Capital	\$ 52,978.00
- O&M Support	\$ 10,000.00
EMS EIM Module Total	\$ 62,978.00
SMUD Total	\$ 3,499,038.50
Miscellaneous Support	
- Legal	\$ 30,000.00
- EIM Stakholder Engagement	\$ 100,000.00
Miscellaneous Support Total	\$ 130,000.00
CAISO Charges	
- Fees	\$ 250,000.00
- Uplifts	\$ 500,000.00
CAISO Charges Total	\$ 750,000.00
TOTAL for Phase 2	\$ 4,379,038.50

WAPA's 10.9% share of \$4,379,038.50 = \$477,315

6.	Today there is a \$2.8 million BA charge, can you crosswalk the differences between those charges?	WAPA is paying Balancing Authority (BA) charges to BANC for BA services. For EIM, WAPA is paying a portion of SMUD’s EIM start-up costs for the new responsibilities brought on by EIM.																								
7.	Will EIM costs also be included in transmission and other WAPA rate services?	EIM implementation and on-going administrative costs are included in annual O&M. CVP transmission rates will include a portion of annual O&M. Scheduling Coordinator and Portfolio Management services will not see a rate increase due to WAPA’s participation in EIM.																								
8.	At a future meeting, will WAPA provide an estimate of anticipated EIM benefits?	<p>At an Informal Customer meeting on June 8, 2020, WAPA presented information regarding potential EIM benefits. The PowerPoint presentation from the meeting can be found on WAPA’s website at: https://www.wapa.gov/regions/SN/rates/Documents/rates-informal-meeting-slides-20200608.pdf</p> <p>Additionally, at the Informal Customer meeting on June 8, 2020, WAPA coordinated with the Sacramento Municipal Utility District (SMUD) to present information on the benefits they have realized from participating in EIM over the last year.</p>																								
9.	Will surplus products be available to all customers?	<p>Surplus products are available to all CVP customers. However, based on the product, some of the customers may not be able to utilize all products.</p> <table border="1" data-bbox="516 1031 1433 1465"> <thead> <tr> <th>Products</th> <th>Applicable to these Purchasing Entities</th> <th>Availability</th> <th>Scheduling Period</th> </tr> </thead> <tbody> <tr> <td>Energy</td> <td>WSPP Trading Entities or Markets</td> <td>Daily or Hourly</td> <td>Day Ahead, Real Time, EIM</td> </tr> <tr> <td>Reserves</td> <td>BAAs or Markets</td> <td>Daily</td> <td>Day Ahead</td> </tr> <tr> <td>Regulation</td> <td>Markets</td> <td>Hourly</td> <td>Day Ahead, EIM</td> </tr> <tr> <td>Resource Sufficiency</td> <td>Direct Connect Customers</td> <td>Hourly</td> <td>EIM</td> </tr> <tr> <td>Frequency Response</td> <td>BAAs or Markets</td> <td>Daily</td> <td>Day Ahead</td> </tr> </tbody> </table>	Products	Applicable to these Purchasing Entities	Availability	Scheduling Period	Energy	WSPP Trading Entities or Markets	Daily or Hourly	Day Ahead, Real Time, EIM	Reserves	BAAs or Markets	Daily	Day Ahead	Regulation	Markets	Hourly	Day Ahead, EIM	Resource Sufficiency	Direct Connect Customers	Hourly	EIM	Frequency Response	BAAs or Markets	Daily	Day Ahead
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10.	Will customers receive more information on Sales of Surplus Products after June 1st?	More information on the Sale of Surplus Products will be provided at an Informal Customer meeting scheduled for June 25, 2020.																								

11.	<p>a. What are the protocols WAPA is putting in place for transparency to monitor availability, and whether needs will be met once Sales of Surplus Products is set into place?</p> <p>b. How is there transparency once these are in place – are expectations being met?</p> <p>c. Will you provide monthly reports showing impacts?</p>	<p>a. WAPA continuously reviews the programs and sales of products for cost versus benefits. Settlements performs net calculations and works with Rates and Merchant on the value of sales of products. Thus far, all products have resulted in benefits to the customers which have been presented at customer meetings.</p> <p>b. WAPA carefully evaluates the ability and potential benefit and presents ideas under consideration at Customer Coordination Committee (CCC) meetings for discussion and collaboration with the customers.</p> <p>c. Once we are participating in EIM, we will work with our customers to develop processes to share WAPA’s EIM performance, including sale of surplus products.</p>
12.	When joining EIM, at the BA level, out of the CAISO, what are those benefits? Is there transparency of benefits on the CAISO website?	On a quarterly basis, EIM entities can view their EIM benefits on the California Independent System Operator (CAISO) website; however, CAISO does not provide a benefit breakdown below the EIM entity level. BANC recognizes a benefits allocation methodology is something both BANC and its EIM participating customers will need to develop. This is an action item that is scheduled to be worked on later in the year.
13.	Can WAPA provide more detail about what is included in the CAISO fees during the implementation phase for EIM?	The CAISO Tariff for EIM has a standard fee they charge for their support of implementation for an EIM Entity. It is formulaic and is based upon the EIM Entity’s load as a share of the total load in the Western Interconnection. The purpose of the fee is to cover the CAISO's staff time and software upgrades in support of the implementation.
14.	Will Resource Sufficiency reduce Resource Adequacy?	Resource Sufficiency balances the resource and load, and this product will not affect Resource Adequacy.
15.	Does Resource Sufficiency affect Generator Imbalance and Energy Imbalance?	Resource Sufficiency helps to resolve Generator Imbalance and Energy Imbalance during the market balance test at T-40.
16.	How does Resource Sufficiency relate to other surplus products and what are the benefits customers will see from WAPA offering it?	The primary benefit is eliminating exposure to penalties in the EIM market if collectively the BANC EIM Entity fails the Balancing Test. The product rate will recover costs for providing the service, and the energy bid prices would be at levels that not only cover WAPA’s cost, but also ensure the market award prices are worth dispatching energy in EIM.

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17.	Please explain what benefits, if any, First Preference customers would receive by WAPA participating in the EIM.	<p>First Preference and Base Resource customers will see EIM benefits from WAPA’s participation in the EIM. It is currently proposed that EIM charges and benefits will be allocated to the annual Power Revenue Requirement (PRR). Customers can anticipate seeing monetary benefits, which would provide a reduction to the PRR for any revenue received beyond what offsets EIM expenses.</p> <p>For more information on the potential benefits of WAPA’s participation in EIM, please see our June 8, 2020 Informal Customer Meeting PowerPoint presentation that can be found on our website at: https://www.wapa.gov/regions/SN/rates/Documents/rates-informal-meeting-slides-20200608.pdf</p>
18.	WAPA indicated that they have a statutory obligation to provide generation to project use customers first; therefore, load costs and benefits for project use will go to the Power Revenue Requirement. WAPA also has a statutory obligation to First Preference Customers. Will there be any information presented on First Preference Customers?	Information on the First Preference customer (Trinity PUD) within WAPA’s sub-balancing authority (SBA) was presented at the June 8, 2020 customer meeting. First Preference customers outside of WAPA’s SBA will only pay EIM charges that are allocated to the Power Revenue Requirement, based on their First Preference calculated percentage.
19.	Is the implementation cost part of O&M or a separate line item in the PRR?	Implementation costs will be included in WAPA’s annual O&M, spread over a 3-year period.
20.	Will project use, transmission, or other customers (custom product power, for example) also be assigned a share [of costs] through separate rates or sub-allocation processes?	<p>EIM implementation and on-going administrative costs are included in annual O&M. CVP transmission rates will include a portion of annual O&M. Scheduling Coordinator and Portfolio Management services will not see a rate increase due to WAPA’s participation in EIM.</p> <p>Project Use customers do not pay for load charges; however, they will pay a portion of annual O&M that includes EIM implementation and on-going administrative costs.</p>

21.	<p>Please confirm how WAPA’s share of BANC’s cost—29.8% (Slide 10)—was determined? Previously, WAPA indicated its share of implementation costs was 10.9% and based on the 2017 NEL—See Q&A document filed on your website, July 30, 2019, response to Question No. 51. Can you please clarify?</p>	<p>The NEL used to calculate WAPA’s ratio share of BANC costs included: Lawrence Livermore National Lab (DOE), Tracy Pump Load (Project Use), Trinity PUD, City of Shasta Lake, SBA Losses and Station Service, East Contra Costa Irrigation District, Contra Costa Water District, Byron Bethany Irrigation District.</p> <p>Under Phase I, only SMUD joined EIM and paid for all costs of joining EIM. If City of Redding (COR), Roseville Electric Utility (REU), Modesto Irrigation District (MID) and WAPA had joined EIM during Phase I, WAPA’s share of implementation cost would have been 10.9%.</p> <p>Under Phase II, COR, REU, MID and WAPA are joining EIM and are responsible for Phase II implementation costs. Based on 2017 NEL, WAPA’s share of Phase II implementation costs is 29.8%.</p>
22.	<p>NEL is based on 2017, the wettest year on record. In a previous response (Question No. 62), you indicated that wet year NEL could be 14%-18% more than average NEL. Have you pursued an adjustment to the calculation or in the alternative a potential future credit to offset and represent an average NEL cost-share?</p>	<p>WAPA is currently working with BANC regarding the NEL percentages used to allocate implementation and on-going administrative costs. In the future, BANC will probably use a rolling three-year average to mitigate a wet/dry year issue.</p>
23.	<p>Are there some initial costs that help all members? For example, does upgrading the meters benefit all customers?</p>	<p>WAPA is not upgrading any of its meters to enable EIM participation; however, WAPA is streamlining our existing applications including retiring some legacy applications which will save overall costs on software.</p> <p>For example, we are upgrading meter database which will benefit all customers. The existing meter database is built and maintained in-house; it is large and not scalable. Moving it to a cloud-based solution is beneficial.</p>
24.	<p>For non-direct connect customers that do not have load in BANC (and/or the WAPA sub-control area), are such loads considered to be either conforming or non-conforming loads?</p>	<p>For EIM purposes, the terms “conforming” and “non-conforming” loads only apply to direct connect customers with load within WAPA’s SBA.</p>

25.	If implementation and other costs are assigned to the PRR, how will Western ensure such costs are then properly allocated based on a cost causation basis considering non-direct customers do not have load in BANC or WAPA's sub-control area?	Customers that have load within WAPA's Sub-Balancing Authority (SBA) are very small customers, some with less than 1 megawatt of load. Because of the small loads, the EIM load based charges are not identifiable at a granular enough level to determine which customer's load incurred the charges. Therefore, WAPA proposes that all charges (whether positive or negative) flow through to the annual Power Revenue Requirement, with the understanding that there is the potential for EIM benefits to exceed costs at some point in the future. At WAPA's June 8, 2020 Informal Customer Meeting, SMUD presented on the benefits they have realized from participating in EIM.
26.	Can you please explain how WAPA's share of BANC's cost—10.9%—was allocated? And explain the difference between 29.8% for implementation costs, 10.9% for on-going costs, and existing HBA costs.	<p>The NEL used to calculate WAPA's ratio share of BANC costs included: Lawrence Livermore National Lab (DOE), Tracy Pump Load (Project Use), Trinity PUD, City of Shasta Lake, SBA Losses and Station Service, East Contra Costa Irrigation District, Contra Costa Water District, Byron Bethany Irrigation District.</p> <p>The 29.8% used by BANC to allocate implementation costs is WAPA's NEL percentage as <u>one of four</u> participating entities (Roseville, Redding, MID, and WAPA) for phase II of EIM implementation. The 10.9% used by BANC to allocate on-going administrative costs is based on the WAPA's NEL percentage as <u>one of five</u> participating entities (SMUD, Roseville, Redding, MID, and WAPA).</p> <p>HBA costs are explained in the response to question #6.</p>
27.	What share of the NEL is based on Tracy pump load under both allocations 29.8% and 10.9%? Similarly, as currently proposed other load costs may be assigned to be assigned to the PRR— 2 customers with load > 1 MW, and 3 customers with load < 1 MW, 2 PU customers, and a share of Trinity—collectively what is the share of NEL (29.8% and 10.9%)?	<p>The NEL share based on Tracy pump load is 6.5%, of the 29.8%, and 2.4%, of the 10.9%.</p> <p>For Implementation costs, the collective share is 29.8%.</p> <p>For on-going cost, the collective share is 10.9%. The collective share of on-going cost may be changed as explained in response to question 22.</p>
28.	Will project use, transmission, or other customers (FLS, custom product power, for example) also be assigned a share of on-going and general administrative charges through separate rates or sub-allocation processes?	<p>EIM implementation and on-going administrative costs are included in annual O&M. CVP transmission rates will include a portion of annual O&M. Scheduling Coordinator and Portfolio Management services will not see a rate increase due to WAPA's participation in EIM.</p> <p>Project Use customers do not pay for load charges, they will pay a portion of annual O&M that includes EIM implementation and on-going administrative costs.</p>

29.	Will costs be part of the O&M or reported in a separate line item?	Implementation costs will be included in WAPA’s annual O&M, spread over a 3-year period. On-going administrative costs will also be included in annual O&M. EIM load costs will likely be reported as a separate line item on the annual Power Revenue Requirement.																																																																	
30.	Please provide a detailed breakout for the on-going costs—estimated at \$661,715—between administrative cost and load cost.	<p>The \$661,715 is for on-going administrative costs, not load costs.</p> <ul style="list-style-type: none"> • BANC EIM Operations \$381,395, • BANC Stakeholder Support \$10,900, • BANC pass through of CAISO Fees \$81,750, • BANC Legal Support \$3,270, and • WAPA Vendor Software Solutions, \$184,400 																																																																	
31.	Can you provide a cumulative dollar cost estimate or a cumulative percentage of costs to be allocated to the PRR as represented in the flow chart on slide 34?	<p>WAPA can only provide estimated EIM implementation and on-going costs that are currently proposed to be allocated to the annual Power Revenue Requirement. Until we start participating in EIM, we do not know what EIM load charges or benefits will look like. Implementation costs are one-time costs to prepare WAPA for participating in the EIM. These costs will be added to annual O&M and will be allocated over a 3-year period. On-going administrative costs will also be added to annual O&M. For the 3-year period that includes both implementation and on-going costs, annual O&M is expected to increase by an average of 1.08% per year. Once implementation costs are fully paid, on-going administrative costs will continue to be included in annual O&M. The average increase to the annual O&M (post implementation) is expected to be approximately 0.50%.</p> <table border="1" data-bbox="500 1062 1430 1577"> <thead> <tr> <th>Category</th> <th>2019 Actual</th> <th>2020 Estimate</th> <th>2021 Estimate</th> <th>2022 Estimate</th> </tr> </thead> <tbody> <tr> <td>BANC WEIM Implementation Costs (Total)*</td> <td>\$449,292</td> <td>\$742,709</td> <td>\$292,448</td> <td>\$0</td> </tr> <tr> <td>BANC WEIM Ongoing Costs, Annual and WAPA's share (Total)**</td> <td>\$0</td> <td>\$0</td> <td>\$477,315</td> <td>\$477,315</td> </tr> <tr> <td>WAPA Implementation Costs</td> <td>\$545,500</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> </tr> <tr> <td>WAPA Ongoing Costs</td> <td>\$0</td> <td>\$0</td> <td>\$184,400</td> <td>\$184,400</td> </tr> <tr> <td>USBR Implementation costs</td> <td>\$0</td> <td>\$500,000</td> <td>\$500,000</td> <td>\$0</td> </tr> <tr> <td>Totals</td> <td>\$1,043,553</td> <td>\$1,357,511</td> <td>\$1,454,163</td> <td>\$661,715</td> </tr> <tr> <td colspan="5" style="text-align: center;">Implementation and Administrative On-going Costs – Percent Increase to Annual O&M</td> </tr> <tr> <td>O&M – Actual and Forecast</td> <td>\$113,288,000</td> <td>\$116,445,492</td> <td>128,051,523</td> <td>131,329,785</td> </tr> <tr> <td>Percent Increase in Cost</td> <td>+0.92%</td> <td>+ 1.17%</td> <td>+1.14%</td> <td>+0.50%</td> </tr> <tr> <td colspan="5" style="text-align: center;">Implementation and Administrative On-going Costs – Percent Increase to Annual PRR</td> </tr> <tr> <td>PRR - Forecast</td> <td>N/A</td> <td>N/A</td> <td>\$80,993,757</td> <td>\$84,760,808</td> </tr> <tr> <td>Percent Increase</td> <td>N/A</td> <td>N/A</td> <td>+1.80%</td> <td>+0.78%</td> </tr> </tbody> </table>	Category	2019 Actual	2020 Estimate	2021 Estimate	2022 Estimate	BANC WEIM Implementation Costs (Total)*	\$449,292	\$742,709	\$292,448	\$0	BANC WEIM Ongoing Costs, Annual and WAPA's share (Total)**	\$0	\$0	\$477,315	\$477,315	WAPA Implementation Costs	\$545,500	\$0	\$0	\$0	WAPA Ongoing Costs	\$0	\$0	\$184,400	\$184,400	USBR Implementation costs	\$0	\$500,000	\$500,000	\$0	Totals	\$1,043,553	\$1,357,511	\$1,454,163	\$661,715	Implementation and Administrative On-going Costs – Percent Increase to Annual O&M					O&M – Actual and Forecast	\$113,288,000	\$116,445,492	128,051,523	131,329,785	Percent Increase in Cost	+0.92%	+ 1.17%	+1.14%	+0.50%	Implementation and Administrative On-going Costs – Percent Increase to Annual PRR					PRR - Forecast	N/A	N/A	\$80,993,757	\$84,760,808	Percent Increase	N/A	N/A	+1.80%	+0.78%
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32.	Are on-going administrative costs fixed or subject to future increases?	Some of the administrative costs may increase if CAISO or BANC increases their cost in the future.																																																																	

33.	Please define what TPUD costs are assigned to BANC, Trinity, and PRR. How will this be tracked?	<p>Under the current proposal Trinity PUD will pay their percentage share of the PRR and all other costs are handled through an agreement between Trinity PUD and BANC. The process for tracking the BANC EIM charges are listed below.</p> <ul style="list-style-type: none"> • WAPA will receive TPUD’s load deviation charge (whether positive or negative). Since WAPA forecasts TPUD’s load and is responsible for TPUD’s load deviation, the load deviation charge will be rolled into the annual Power Revenue Requirement. • BANC will take all other EIM charges (whether positive or negative) on behalf of TPUD based on TPUD’s load ratio over WAPA EIM metered load. • BANC will perform daily calculation of TPUD allocations on each BANC Charge assessed to WAPA and calculate TPUD’s portion and assign that piece to BANC; and assign the remaining WAPA’s portion to WAPA. • BANC will send a monthly invoice to WAPA for its portion of the charges. • BANC will invoice BANC for the TPUD portion of charges. <p>The BANC EIM Entity Settlement Allocation Summary table can be found on our website. This table shows the allocation of Trinity PUD charges. https://www.wapa.gov/regions/SN/rates/Documents/BANC EIM Settlement Allocations Summary 20200611.pdf</p>
34.	a. We understand benefits will follow costs. Please estimate and quantify benefits, then PRR costs net of benefits. Do such benefits relate primarily to reductions in load cost for direct connect customers or benefits attributed to increased revenues for CVP generation?	<p>a. The dispatch benefits pertain to increasing the value of the CVP generation through increased revenues and cost savings. The dispatch benefits will reduce the PRR; hence the benefits apply to both direct connect and non-direct connect customers. The dispatch benefits also offset against the EIM implementation cost and on-going costs that WAPA incurs.</p> <p><u>The following is from a scenario shared at the June 8th Informal Customer Meeting:</u> WAPA and Reclamation conducted a simulation using the historical Spin capacity as proxy resource for EIM. In the simulation, a 50 MW limit on the resource capacity, as well as daily and weekly energy constraints were used to achieve water-neutral operations for Reclamation with the EIM dispatches of the resource. The incremental and decremental dispatches of the EIM resource translate to more revenue and cost savings, respectively, for the resource, inasmuch as the EIM dispatches are economic signals from the market. Under Case 1 of the simulation, the EIM resource is bid at cost in all hours; thus, the resulting incremental dispatch revenues accrue from energy sales into the market when the LMP is higher than the cost of the resource and the resulting decremental dispatch savings accrue from purchase of cheaper energy from the market. Under the Case 1 scenario of the simulation, the average yearly EIM dispatch benefit is about \$2.11 million (net of Spinning Reserve revenues). This amount is a result of the interplay of the historical Spin capacity available, the bid price, historical LMPs, as well as the EIM dispatch caps that were used. In this regard, this level of EIM dispatch benefit may not be representative of the future EIM dispatch benefits and WAPA cannot determine with certainty the quantitative EIM dispatch benefits until we are participating in the market.</p>

	<p>b. Is it possible the monetary benefits from the EIM reduce the on-going cost in the next year before lowering the current year PRR?</p>	<p>b. Until WAPA starts participating in the market, load charges and benefits are difficult to forecast. The earliest WAPA would have historical data to use in the forecast would be after FY 2021. At that time, WAPA will determine if EIM charges and benefits could be forecasted for future years.</p>
<p>35.</p>	<p>What is the basis for applying separate cost allocation methodologies for implementation cost v. on-going costs?</p>	<p>The cost allocation methodologies are the same for allocating both implementation costs and on-going charges. Both are based on the NEL percentages of the participating entities. For the implementation costs for Phase II, the costs are allocated based on NEL percentages of <u>4 entities</u> (Roseville, Redding, MID, and WAPA), since SMUD participated in Phase I implementation. For on-going charges, they are allocated based on the NEL percentages of <u>5 entities</u> (SMUD, Roseville, Redding, MID, and WAPA).</p>
<p>36.</p>	<p>Today project use pays its share of ISO related costs. Why are project use load charges paid by the preference power customers? The recently approved CVP long-term operations plan has significant real time monitoring which may dictate changes to pumping requirements. Will those requirements negatively impact Tracy (PU) load calculations under RT EIM?</p>	<p>WAPA has a statutory obligation to provide CVP generation to Project Use (PU). The PU load in the WAPA SBA is balanced by CVP generation; and therefore, has never been subject to CAISO market charges. On the other hand, the PU loads in the CAISO are subject to CAISO market charges because they are in the CAISO BA and balanced by the CAISO market.</p> <p>After WAPA joins EIM, the PU load positive deviation may be met by CVP generation or other generation resources. If such positive deviation is met by CVP generation, the PU load will be charged and the CVP generation will be paid. Both the charges and payments should net each other in the PRR. If such positive deviation is met by other more economic generation resources as determined by the EIM, the generation that CVP would have provided will be saved for future use when the price is higher; again the charge to PU load should be passed to PRR to net against savings (or future payment) to CVP generation. If the PU load deviation is negative, the PU load will receive a payment. For the same reason, the payment should go to PRR to net against the charges to CVP generation. The PU load and CVP generation in the SBA cannot be subject to different EIM allocations.</p>
<p>37.</p>	<p>What processes and procedures are in place to track and validate EIM load-based charges (and benefits) to BANC obligations, PRR obligations, and directly assigned allocations? How will WAPA and/or BANC share information with customers, in what forums and, and how frequently?</p>	<p>WAPA is working through all the mechanics for tracing EIM charges and benefits, including determining how benefits are defined, for example, is a negative charge from a CAISO benefit? WAPA respects the importance of transparency with our customers, just as we have provided benefit reporting at the customer meetings, we intend to incorporate reporting on EIM as well.</p>

38.	What other products are sold in real-time today, and how will WAPA determine which product is most valuable in RT and how will information be shared with customers? Also, will sales in RT effect or change the amounts or resources sold in day ahead?	At this time, WAPA’s Real Time Merchant provides balancing purchases and sales of energy as requested by the Operations Automatic Generation Control (AGC) desk for SBA balancing and reliability. Infrequently, Real Time Merchant may have a direct request from Reclamation to sell energy for water management, this is considered a Real Time sale of surplus power. WAPA does not expect EIM activities to have an impact on the day ahead surplus products and programs such as Max Peaking, with one exception. Regulation is the only surplus product WAPA is considering moving from day ahead to EIM real time. See June 25 th presentation for more information.
39.	As EIM evolves, will WAPA’s regulation, energy imbalance, or generation imbalance requirements change?	As WAPA gains experience in EIM, we will evaluate and share the information with our customers. If requirements for regulation, Energy Imbalance and Generator Imbalance change, we will discuss it with customers at future Operations and Marketing meetings as well as the Customer Coordination Committee meetings that are held on a quarterly basis.
40.	WAPA stated in an earlier proceeding that Interconnection Operation Agreements would be modified. Will information on IOAs be shared with customers?	WAPA is currently working on revisions to the deviation sections of the Interconnection Operation Agreements (IOA) that we believe are necessary under EIM. The negotiations are planned to be completed and the contracts executed in the February 2021 timeframe. We would be happy to share an amendment to the IOA once it is complete.
41.	WAPA’s current process defines EIM participation in the real-time energy market. CAISO has been evaluating extending the day-ahead market to EIM (EDAM) to operate as early as 2021. At the same time, day-ahead market enhancements (DAME) is underway at the ISO. What assurances exist that decisions from this process apply only to EIM in the real-time market?	WAPA has not made any decision to join CAISO EDAM. However, WAPA is participating in BANC’s evaluation of EDAM. WAPA’s estimated share of cost to evaluate EDAM participation is \$38,913.00, which is based on 10.9%. WAPA will work with its customers as we continue to explore EDAM participation.
42.	How does WAPA define “surplus” products? Does it include or exclude operational and BA requirements?	Surplus Products occur after the power marketing requirements and allocation processes. The requirements include Power Operations, Project Use Power, and First Preference Power, all of which occur ahead of base resource allocations today.

43.	How does this product correlate to the existing regulation, spinning, and supplemental reserve rate schedules?	Surplus Products is a grouping of existing regulation, spinning and supplemental reserve rate products consistent with the same grouping approach in use across WAPA regions in their rate schedules.																								
44.	How and to whom will products be offered for sale?	<p>There are five surplus products, Energy, Frequency Response, Regulation, Reserves, and Resource Sufficiency, which will be offered in either the Day Ahead, Real Time, or EIM time frames to various entities. More details may be found in the June 25th presentation.</p> <table border="1" data-bbox="496 527 1414 957"> <thead> <tr> <th>Products</th> <th>Applicable to these Purchasing Entities</th> <th>Availability</th> <th>Scheduling Period</th> </tr> </thead> <tbody> <tr> <td>Energy</td> <td>WSPP Trading Entities or Markets</td> <td>Daily or Hourly</td> <td>Day Ahead, Real Time, EIM</td> </tr> <tr> <td>Reserves</td> <td>BAAs or Markets</td> <td>Daily</td> <td>Day Ahead</td> </tr> <tr> <td>Regulation</td> <td>Markets</td> <td>Hourly</td> <td>Day Ahead, EIM</td> </tr> <tr> <td>Resource Sufficiency</td> <td>Direct Connect Customers</td> <td>Hourly</td> <td>EIM</td> </tr> <tr> <td>Frequency Response</td> <td>BAAs or Markets</td> <td>Daily</td> <td>Day Ahead</td> </tr> </tbody> </table>	Products	Applicable to these Purchasing Entities	Availability	Scheduling Period	Energy	WSPP Trading Entities or Markets	Daily or Hourly	Day Ahead, Real Time, EIM	Reserves	BAAs or Markets	Daily	Day Ahead	Regulation	Markets	Hourly	Day Ahead, EIM	Resource Sufficiency	Direct Connect Customers	Hourly	EIM	Frequency Response	BAAs or Markets	Daily	Day Ahead
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45.	The formula rate references a market-based rate, is there also a cost-based rate?	Component 1 of the formula rate states: “WAPA-SN would determine the charge for each product at the time of sale to be the greater of <u>WAPA-SN’s cost</u> or market rates, to include transmission charges.”, which includes a cost-based rate.																								
46.	How will the revenue from the sale of surplus products be distributed?	Revenues from the sale of surplus products will be applied to the annual Power Revenue Requirement.																								
47.	The most severe single contingency (MSSC) is listed at 100 MW. What are the conditions that produce that MSSC MW event?	The 100 MW was chosen arbitrarily for the May 11, 2020 Informal Customer Meeting presentation. Most Severe Single Contingency (MSSC) refers to the largest amount of energy an entity can lose due to the loss of a generator or a transmission line. SMUD provides WAPA with an MSSC forecast in the prescheduling timeframe that Reclamation uses to set aside CVP capacity for Contingency Reserves, which WAPA uses to cover the SBA’s share of the MSSC requirement. In real time, the Northwest Power Pool Reserve Sharing Group (NWPP RSG) calculates the real time requirement based on the RSG’s MSSC. The RSG sends SMUD the BA’s obligation and SMUD in turn sends WAPA our share of the obligation. When BANC can’t participate in the RSG, the BA must hold reserves for the BANC MSSC, which is typically around 290 MW. WAPA’s share of the RSG MSSC requirement varies, but it is usually much lower.																								

<p>48.</p>	<p>Current conditions require 50 MW of spinning and 50 MW of non-spin. Going forward, BA requires 11 MW for Frequency Response and 89 MW of contingency reserves.</p> <p>a. Please define contingency reserves, is it spin and non-spin in equal shares?</p> <p>b. Which CVP units provide frequency response reserves?</p> <p>c. Are other BA units also providing frequency response?</p> <p>d. Is there a market to buy or sell frequency response reserves?</p> <p>e. Are there penalties for non-performance?</p>	<p>This information is based on the 100 MW MSSC used for the May 11, 2020 Informal Customer Meeting.</p> <p>a. Spinning and Non-Spinning Reserves are Contingency Reserves. The current requirement states that at least 50% of contingency reserves be held as spinning reserves. Once the 50% requirement is retired, FRR is the only spinning reserves that a BA will be required to hold. The remainder of their MSSC requirement may be held in non-spinning reserves.</p> <p>b. All CVP units can provide frequency response reserves.</p> <p>c. SMUD’s generators can provide frequency response reserves.</p> <p>d. WAPA is exploring the selling of any surplus FRR to neighboring BAs including SMUD’s SBA and the CAISO. The CAISO purchases frequency response reserves from various marketers.</p> <p>e. Failure to meet NERC frequency response requirements would result in the BA being penalized.</p>
<p>49.</p>	<p>Resource Sufficiency was introduced as a new product available to BANC EIM members. Does WAPA merchant have a role in that product? Is the product contemplated as a pass-through cost, or will it generate revenue? Please describe how Resource Sufficiency could be a sale of surplus products?</p>	<p>BANC members pass or fail Resource Sufficiency tests as a single, collective BAA. Working together is mutually beneficial to avoid penalties or lost opportunities to participate in EIM depending on the test. WAPA’s Merchant will be responsible for selling and scheduling the Resource Sufficiency Balancing Product. The proposal for offering Resource Sufficiency through the Merchant is designed to cover any costs that might be incurred by WAPA for supplying the product, making it cost neutral, and the benefit comes from penalty cost avoidance. WAPA will address the energy behind the capacity in a similar fashion to energy behind spin, which may produce additional benefits if the market call is equal to or greater than WAPA’s bid price.</p>

50.	WAPA noted that the supply of the product requires adjustments to the base schedule market submission. Please provide additional detail – which base schedule is adjusted and what are the consequences if adjustments are not made.	Under the mechanisms of the EIM market, participants submit a base schedule for the hourly generation resource to match the CAISO load forecast. The Resource Sufficiency balancing product could move the generation resource up or down a few MWs from the original base schedule creating a deviation in the opposite direction to offset the out-of-balance from the first test and assist the BA in passing the next two tests. BANC members are still discussing elements of passing Resource Sufficiency tests, including responsibilities and consequences.
51.	Will WAPA respect the non-direct connect customers’ rights to the share of CVP generating capacity into and through real-time operations; as such, what surplus capacity will be available for the sale as Resource Sufficiency?	WAPA demonstrates respect for all customer rights to their entitlement of CVP generation, including the capacity required to deliver their power through real-time operations with one notable exception – the Carr Fire in 2018. This will continue under EIM. Reclamation determines the available amount of generation in the 2-day ahead process; surplus products are not considered or included in any part of the 2-day process, thus ensuring maximum generation is provided to the base resource customers. In addition, Reclamation and WAPA will continue to coordinate hourly under EIM to ensure the impact of any surplus products return the water levels to neutral at end the day, if there was energy generated. See June 25 th presentation on Effective p-min and p-max range in EIM.
52.	What are the definitions of the terms “conforming load” and “non-conforming load”? Where are these terms defined in the CAISO EIM Tariff, CAISO Tariff, the CAISO Business Practices Manuals, and other CAISO governing documents?	<p>According to the CAISO, the terms “conforming load” and “non-conforming load” are not included in the master definitions appendix of the CAISO Tariff or the Business Practice Manual(s) (BPM). However, they plan to include them in the list of items to be addressed in future versions of the BPM(s). The following definitions and descriptions of the terms are shown below, which are reasonably aligned with the CAISO’s use of the terms in defining load forecasting requirements under EIM.</p> <p><u>Conforming Load</u> - Load that changes in a reasonably predictable, uniform ratio that is environmentally driven. A conforming load has a load profile that is similar to the aggregated load profile. {Due to their conventional weather- and temperature-based patterns, conforming loads can be forecast with a high level of accuracy using historical and meteorological data. }</p> <p><u>Non-conforming Load</u> - Load with unpredictable load pattern, e.g., pumps, industrial plants, etc., that makes it difficult for the CAISO model to accurately forecast. {CAISO’s load forecasting model uses historical actual conforming load data and meteorological data determined necessary to accurately forecast the conforming load.} When non-conforming load causes more than 5% deviation (hourly) from the total actual load, they should be modeled separately from the load that CAISO will forecast for the EIM Entity (the conforming load). This requirement is part of the EIM Readiness Criteria in accordance with CAISO Tariff section 29.2(b)(7)(A)(iv).</p>

<p>53.</p>	<p>Assuming that the high-performance computing (HPC) load is non-conforming load, Lawrence Livermore National Lab (LLNL) has both conforming load and non-conforming load.</p> <p>a. Does WAPA consider, and plan to designate, the entire LLNL load as non-conforming load? If so, what are the criteria WAPA relies on to designate the LLNL load, as a whole, as non-conforming load?</p> <p>b. Or does WAPA consider, and plan to designate, only the HPC load as non-conforming load?</p> <p>c. Does the current metering arrangement allow WAPA to pursue (b) above?</p> <p>d. Can WAPA pursue (b) above with a revised metering/submetering configuration?</p>	<p>a. Yes. To ensure a higher level of accuracy for the CAISO’s load forecast of WAPA’s load under EIM, it is preferable to designate all Lawrence Livermore National Lab (LLNL) load as non-conforming. LLNL has substantial High-Performance Computing load that has a profile that is different from the conventional diurnal load pattern. The CAISO requires non-conforming load to be separate from the EIM load boundary; and thus, must be metered separately. There are only two high accuracy meters for LLNL (one at the Tracy feed and the other at the Tesla feed); hence, designating the whole LLNL load as non-conforming makes more sense. WAPA was required to submit its 5-year historical load data, used in the CAISO load forecast model for EIM. WAPA used of the existing metering infrastructure and data facilitates for this requirement. Moreover, in order to treat LLNL load similar to the DOE loads in CAISO BAA, the modeling of the LLNL load as an NGR would allow tracking of the portfolio and settlements separately from other customers under EIM.</p> <p>b. No. Due to lack of metering infrastructure to delineate the load of the HPC from the other loads at LLNL, all LLNL load will be designated non-conforming.</p> <p>c. No.</p> <p>d. Yes</p>
<p>54.</p>	<p>How are non-conforming loads treated with respect to:</p> <p>a. EIM “Readiness” evaluations</p> <p>b. EIM load forecasting and schedules (e.g. are non-conforming loads added back into the total WAPA load forecast for EIM?)</p>	<p>a. Non-conforming loads are excluded from the EIM Entity’s load forecast boundary that the CAISO will perform under EIM.</p> <p>b. No, they are scheduled as Non-Generator Resources (NGR), i.e., as negative generation. Hence, they are settled at the generator resource level.</p>

	<p>c. EIM Settlements</p> <p>d. Calculation of imbalance/deviation penalties</p>	<p>c. They will be settled as NGR with its own pricing location for use in deviation settlement. DOE's NGR will be scheduled as a separate resource ID under WAPA's "WEIM" Scheduling Coordinator ID and costs will be settled and allocated based on the resource ID. For its conforming loads, WAPA will receive costs from BANC. Those costs will then be allocated to all customers within WAPA's footprint.</p> <p>d. They will be settled as an NGR with its own pricing location for use in deviation settlement.</p>
55.	What is WAPA's process/timeline for forecasting and submitting schedules for <u>conforming</u> loads?	WAPA will continue to forecast customer loads under its 2-Day Ahead scheduling timeline. These load forecasts will constitute the load bids in the CAISO Day-Ahead Market (for loads situated in the CAISO BAA) and will constitute the load for which WAPA will balance to with supply resources (for loads situated in the SBA). For <u>conforming</u> loads in the SBA, given that they are part of WAPA's EIM load boundary, the CAISO will forecast their load and WAPA will receive the forecasts at T-80 minutes and T-60 minutes for use in determination of supply base schedules at T-75 minutes and T-55 minutes, respectively.
56.	What is WAPA's process/timeline for forecasting and submitting schedules for <u>non-conforming</u> loads?	WAPA will continue to forecast customer loads under its 2-Day Ahead scheduling timeline. These load forecasts will constitute the load bids in the CAISO Day-Ahead Market (for loads situated in the CAISO BAA) and will constitute the load for which WAPA will balance to with supply resources (for loads situated in the SBA). For <u>non-conforming</u> loads in the SBA, WAPA will update the load forecasts as appropriate to minimize deviation in real-time, and non-conforming loads are submitted as NGR base schedules consistent with the DA timeline, and with adjustments in RT by T-75 minutes and T-55 minutes.
57.	What is the total quantity (MW) of non-conforming load within BANC?	We do not have the information for total non-conforming load in BANC.
58.	What is the total quantity (MW) of non-conforming load within WAPA's sub-control area in BANC?	WAPA has two non-conforming loads: LLNL and Tracy pumps for a maximum combined total of 166 MW.
59.	What is the EIM scheduling timeline? Is it the same as, or different from, the Day-Ahead energy market timeline? Are there intraday or hour-ahead adjustments for conforming loads and/or for non-conforming loads?	EIM is a real-time market. WAPA will receive load forecasts from the CAISO on a rolling 7 days in advance, the balancing tests are at T-80 and T-60. WAPA will use these forecasts to re-balance with its generator, intra-change and interchange schedules. Re-balancing will be done on an hourly basis under EIM, at T-75 and T-55, by the Merchant and possibly by Operations or BANC at T-40.
60.	Are there load designations that may be applicable other than conforming load and non-conforming load?	For the purpose of EIM load forecasting boundary, the CAISO only uses designations of conforming and non-conforming loads.

61.	According to CAISO’s Business Practice Manual for Market Operations, an “NGR is a resource that has a continuous operating range from a negative to a positive power injection; i.e., it can operate continuously by either consuming energy or providing energy, and it can seamlessly switch between generating and consuming electrical energy.” Does the LLNL load meet these criteria? If so, how?	As an NGR type of Direct Demand Resource, (NGR-DDR) LLNL is only modeled as a resource that is consuming energy, i.e., negative generation. Batteries, which can be modeled as NGRs, can operate continuously between consuming and providing energy; however, NGR-DDR is not expected to have this characteristic. Regarding concerns of being dispatched by the CAISO, the NGR resource model for LLNL will be limited to submit a base-schedule which will be deemed as a self-schedule by the CAISO. It has been confirmed by the CAISO that no energy bids should be submitted for LLNL and it will not be dispatched.
62.	<p>If LLNL is designated as a Non-Generation Resource (NGR), which of the following, if any, does LLNL become under the CAISO Tariff?</p> <p>a. Non-participating Load</p> <p>b. Non-participating Resource</p> <p>c. Participating Resource</p>	<p>a. No</p> <p>b. No</p> <p>c. Yes, it will be an EIM participating resource, but submitted as a self-schedule.</p>
63.	To be designated as an NGR, does LLNL need to execute the Energy Imbalance Market Scheduling Coordinator Agreement with the CAISO?	There is an agreement that has to be signed, but it is not the scheduling coordinator agreement. Instead, the CAISO requires Appendix B.19 EIM Participating Resource Agreement (EIMPRA) to be executed in order to designate LLNL as an NGR-DDR. WAPA and DOE are in discussions regarding executing the EIMPRA.
64.	Is it possible to be a non-conforming load and not be designated as an NGR?	Alternatively, the load can be modeled as a participating load.
65.	Does LLNL currently meet the metering and telemetry requirements stipulated in the CAISO Tariff for being an NGR?	Yes; the high accuracy metering infrastructure at the Tracy feed and Tesla feed meets the metering and telemetry requirements under EIM.

66.	If LLNL is designated as an NGR, will LLNL need to submit bids/offers into the EIM? If so, will LLNL incur any CAISO administrative charges for the bids/offers it submits?	WAPA will not submit any energy bid for NGR-DDR. WAPA will only submit base schedules which will be interpreted by the CAISO as self-schedules. Under the execution of the EIMPRA, WAPA is confirming the need to add provisions to the agreement to effect operating limitations as well as limitations on CAISO operating orders.
67.	<p>Are there other load center facilities similar to LLNL (i.e. with a large conforming load alongside conforming load behind the same meter, and not willing to provide demand response services) designated as NGR in:</p> <p>a. WAPA sub-control area</p> <p>b. BANC</p> <p>c. Other EIM Entity footprints</p>	<p>a. No. The other NGR resource is for the Tracy pumps, which is also non-conforming.</p> <p>b. We do not have the information for this.</p> <p>c. We do not have the information for this.</p>
68.	<p>What is the settlement structure for WAPA within EIM? WAPA only? BANC?</p> <p>a. If LLNL is designated as a conforming load and not as an NGR, what will the Load Aggregation Point (LAP) price applicable to its usage and its deviations?</p> <p>b. If LLNL is designated as a non-conforming load but not as an NGR, what will be the Load Aggregation Point (LAP) price applicable to its usage and its deviations?</p>	<p>WAPA is an EIM Participant within BANC, which is the EIM Entity. Other EIM Participants are SMUD, City of Roseville, City of Redding, and Modesto Irrigation District.</p> <p>a. LLNL would be settled with other loads at the WAPA Custom Load Aggregation Point (LAP).</p> <p>b. If designated as participating load, at its own Custom LAP (if the CAISO allows); otherwise, it will be settled with other loads at the WAPA Custom Load Aggregation Point.</p>

	c. If LLNL is designated as an NGR, what will be the Load Aggregation Point (LAP) price applicable to its usage and its deviations?	c. It will be settled at its own pricing point, designated for the NGR-DDR resource.
69.	What is WAPA’s objective with designation of the entities listed as NGRs in the April 9, 2020 presentation? (e.g., risk mitigation, compliance with CAISO, ease of settlements, etc.)	To ensure a higher level of accuracy for the CAISO’s load forecast of WAPA’s load under EIM. If BANC is not within 1 percent of the CAISO’s load forecast, there is risk of overscheduling and under-scheduling penalties being assessed if the deviation is greater than 5 percent. Moreover, in order to treat LLNL load similar to DOE loads in CAISO BAA, the modeling of LLNL load as an NGR -DDR would allow the tracking of the portfolio and settlements separately from other customers under BANC EIM Entity. The existing metering infrastructure is adequate under EIM.
70.	Has WAPA been able to access the PI data, which Include sub-metered HPC load information in real time?	WAPA will be utilizing Process Information (PI) data as one of the sources to capture the most accurate meter data used in settlement processing. However, we are still in the process of determining the best data source representing the customer’s participation.
71.	How does WAPA envision making use of PI data in forecasting or EIM settlements processes?	Since EIM is in real-time, PI data can be useful in refining the load forecast for LLNL for the submission of base schedules by the T-75 and T-55 timeframe.

Informal Customer Meeting, Questions - from June 8, 2020

72.	With all the balancing authorities, are there any transmission charges?	From an EIM standpoint, there are no incremental EIM transmission charges.
73.	Regarding net EIM benefits, is this the net of implementation and on-going costs?	For the potential benefits calculation, this was purely a simulation involving calculated net EIM dispatch. We used historical spinning reserve for the examples to present how costs could potentially change.
74.	Average spinning sales of \$775K will no longer be realized, is that correct?	WAPA is not moving spin sales to EIM. WAPA showed a spin simulation in the June 8 th Informal Customer Meeting.

75.	In order to understand underlying assumptions, for capacity for EIM dispatch vs Spin, were there any water or environmental concerns?	No, WAPA and Reclamation did not assume water or environmental concerns in the simulation.
76.	Does the \$30.92 CVP breakeven cost include PRR costs and Restoration Fund costs?	This number was pulled as an example baseline in order to allow the simulation to work. There is no real financial basis.
77.	What is the percentage of WAPA merchant as a transmission customer?	It will depend on what the charge is. Some charges are split based on load ratio share and at other times it might be a direct assigned cost.
78.	Can you break out the Load Ratio Share between Merchant?	WAPA Merchant is the only load serving Transmission customer subject to the WAPA tariff for EIM, so the WAPA Merchant load ratio share is 100%.
79.	Can you share a breakout of Load Ratio Share? How is load ratio share measured (annual, monthly rolling?)	Load ratio share will be calculated monthly, weekly and daily depending on the charge code. Different charge codes are settled on a different basis. The different charge codes and how they are measured can be found on our website at: https://www.wapa.gov/regions/SN/rates/Documents/BANC_EIM_Settlement_Allocations_Summary_20200611.pdf
80.	<p>All cost ends up in the PRR.</p> <p>a. Are the cost-causative drivers carried into the Power Revenue Requirement or regardless of level of care?</p> <p>b. The example of GMC is fairly known and understood. Those particular customers with no load in BANC or on the WAPA system, can we have a better understanding of what the itemized costs/benefits would be?</p>	<p>a. WAPA considered cost-causative drivers when addressing Tier 2 costs going to the PRR. WAPA also examined the load volumes, complexity and effort of calculations, along with the type of billing determinant data provided by BANC for Tier 1 sub-allocations to WAPA. Not only is the amount of load remaining in the WAPA SBA under EIM (6 customers plus SBA load and CVP losses), but the expected charges should be relatively low. Two of the loads are so low that they cannot be tagged because they are under 1 MW per day. Three of the loads are less than 1 MW per hour. WAPA feels the effort and cost to allocate outweighs the expected charges.</p> <p>b. WAPA and the BANC members have just completed their proposal for cost allocations. Since WAPA has a small load, we expect the costs to be equally as low. In parallel with the cost allocations, WAPA and Reclamation have been exploring opportunities in EIM to move water throughout one trading day, such that at the end of day we are water neutral and have bought and sold energy for benefit. This activity is WAPA interacting directly with CAISO for representing CVP generation and receiving 100% of the benefit directly through CAISO settlements to WAPA. The Sale of Surplus products and program will remain as-is in the Day Ahead market or may be moved to the EIM market where benefits are expected to be higher. WAPA will be in a better position to evaluate opportunities once we are in market simulation testing and parallel operations.</p>

81.	Do you have a sense of the breakout of percentages between WAPA Merchant and other Transmission customers?	WAPA Merchant is currently the only load serving Transmission customer subject to the WAPA tariff for EIM. Until such time, WAPA expects nearly all costs to be incurred by WAPA Merchant, with exception of any direct assigned costs that are appropriate to be passed to other non-load serving Transmission customers. Until such time, WAPA expects nearly all costs to be incurred by WAPA Merchant, with exception of any direct assigned costs that are appropriate to be passed to other non-load serving Transmission customers.
82.	How is load ratio share calculated for transmission customers that do not serve "load?" What is the metric?	If a Transmission customer does not have load, they will not receive an allocation of EIM charges (whether positive or negative.)
83.	This rate process is for EIM real time, not the extended day ahead market (EDAM). All the rate schedules therefore relate to EIM real time only. Will that be reflected in the rate schedule terms?	This rate process is for EIM Real-Time. WAPA has not made any decision to join CAISO EDAM. However, WAPA is participating in BANC's evaluation of EDAM. If the decision is made to join, new Rate Schedules for EDAM will be developed at that time if they are needed.
84.	Will WAPA be offering any Resource Sufficiency products? Will there be a rate schedule?	We are looking at a Resource Sufficiency product and more information will be shared at the next Informal Customer meeting scheduled for June 25, 2020. This product will be presented under the Sales of Surplus Products rate schedule.
85.	What defines merchant transmission? Is it all CVP generation customers? Any other customers?	This includes deliveries for First Preference, Base Resource and Project Use. There are some various 3 rd party purchases which occur sporadically and are posted on OASIS.
86.	Is CVP BR also included as Transmission Provider?	WAPA's current Transmission customers include Roseville, Redding, and SMUD; however, these customers are not subject to WAPA's tariff for EIM. Alternatively, because these customers are BANC EIM Participants and operate within the WAPA SBA under Interconnected Operating Agreements (IOAs), these customers will be directly allocated EIM charges by BANC. However, as a Base Resource customer, they will pay for a portion of EIM charges that are sub-allocated from WAPA Merchant to the Power Revenue Requirement.
87.	How are load charges and benefits forecasted and assessed to the PRR?	WAPA is uncertain at what granular of a level charges and benefits will flow through to us. For purposes of billing, the charges and benefits may offset each other and appear as one line-item, or they could each be shown as separate line items. Until we participate in the EIM, we don't know what the load charges and benefits will be. For the small customers with load in WAPA's footprint, it is difficult to load forecast.

88.	For load Ratio Share, while in theory it is for future transmission customers, is WAPA Merchant currently the only transmission customer?	WAPA Merchant is currently the only Transmission customer subject to WAPA’s Tariff for EIM participation. Other direct-connect loads within the WAPA SBA will be settled directly with BANC for their EIM participation.
89.	<p>a. Regarding the allocation of GI charges and credits, as a CVP generator, is this direct or sub-allocated?</p> <p>b. As for the customers not located in BANC nor WAPA, we want to understand the proposed process for how costs are direct or sub-allocated back to Merchant and then to the PRR.</p> <p>c. Could there be a different allocation for generation benefits?</p>	<p>a. GI could be direct or sub-allocated depending on the generator type. CVP is our generation, so any charges and/or credits would be direct charged. Sub-allocated charges would go to non-participating generators. WAPA doesn’t have any non-participating resources in our SBA footprint, and such resources are not expected due to BANC requirements that all generating resources within BANC register as EIM Participating Resources. Operational adjustments to intertie schedules could also result in GI settlements. Those costs are expected to be direct assigned to the Transmission customer for which the settlement was incurred.</p> <p>b. WAPA is a Participating Resource Scheduling Coordinator (PRSC) for our generation where we submit directly to CAISO our schedules for our generation. The settlement for being a PRSC comes directly to WAPA unlike load and intertie costs which go to BANC and are allocated to WAPA.</p> <p>c. WAPA will receive costs for the generation resource which delivers base resource to all customers; therefore, the benefits should be placed in the same location as the costs.</p>
90.	In reference to the previous question, will the settlement be from the existing rate schedule, or will it be from a schedule coordinator settlement?	As stated above, the PRSC settlements come directly to WAPA from CAISO and align with the CV-EIM9S Rate Schedule.
91.	Regarding Transmission rights, are they limited to long term or daily/other service? Is that solely long term or may a customer purchase on the day to day basis?	This is for all lengths of Transmission service WAPA sells. Both short term and long term.

Informal Customer Meeting, Questions - from June 25, 2020

	Question(s)	Response(s)
92.	Which Rate Schedules apply to the BANC EIM Entity Settlement charge codes?	All of the new proposed EIM Rate Schedules (CV-EIM1S, CV-EIM4S and CV-EIM9S) apply to the BANC EIM Entity Settlement charge codes. The BANC EIM Entity Settlement Allocation Summary Table specifically identifies which Rate Schedule applies to which specific charge codes. The table can be found on WAPA-SN's website: https://www.wapa.gov/regions/SN/rates/Documents/BANC-EIM-Settlement-Allocations-Summary-20200702.pdf
93.	I assume that for a pseudo-tie out of WAPA/BANC, that none of these charges will apply. Please confirm.	That is correct. BANC EIM charges will not be allocated to WAPA for any pseudo-tie out of WAPA/BANC. CAISO and BANC will allocate the charges directly to entity with the pseudo-tie leaving the BAA. While not expected, should any charges be allocated to WAPA by BANC related to pseudo-ties, such charges would be passed through to Transmission Customer through EIM Rate Schedule CV-EIM9S.
94.	<p>a. In regard to the Sale of Surplus Products in Rate Schedule, when defining "Applicable to these Purchasing Entities," are those external BAA's?</p> <p>b. Is Resource Sufficiency a regulation type product?</p> <p>c. The capacity reserve today is 60 Mwh regulation, is there a reservation for Spin?</p> <p>d. Do you see any changes for the CVP resources?</p>	<p>a. As Sub-BA's of BANC SMUD and WAPA can both be considered a BAA. SMUD is eligible for purchases as an SBA of BANC and the rest would be external adjacent BAA's.</p> <p>b. No, it is a product where we use surplus regulation or spin and convert just the capacity into a market product for addressing BANC BAA Resource Sufficiency in EIM in advance of real-time operation.</p> <p>c. 60MW is the maximum amount of regulation we hold on an hourly basis, but it can vary from 37-60MW. The Spinning requirement for Contingency Reserves varies hourly This is currently being used by Operations for their requirements and any excess is under the Sale of Surplus Product.</p> <p>d. First, implementation of the Frequency Response Reserve (FRR) is expected to reduce Spin requirements for WASN SBA. Next, WAPA is evaluating the current CVP programs to determine if we need to make any adjustments that could result in increased benefits to CVP customers. These will be discussed with customers at an upcoming CCC meeting.</p>
95.	a. What amount of spinning reserves is currently needed for operating WAPA's BAA and Sub-BA and how will that change with EIM?	a. Spinning Reserves requirements which varies hourly depending on the upper regulation and contingency reserves requirement, will not be impacted by EIM. As mentioned in response to Q 3d above, FRR is expected to decrease the Spinning Reserve requirement.

	<p>b. Is WAPA trying to be conservative? Will WAPA keep less of all these products and are you taking that into consideration?</p> <p>c. Do you believe that SMUD showed less?</p> <p>d. Do you know how much WAPA will keep?</p>	<p>b. WAPA holds enough reserves to cover the most extreme contingency and this will not change. WAPA will go into EIM conservatively and may adjust regulation requirements as we gain experience in EIM. BANC will continue to determine contingency reserve requirements for WAPA, and EIM does not change that.</p> <p>c. SMUD has not decreased their contingency reserve requirement. WECC and NERC Standards mandate the amount of contingency reserves an entity must hold. SMUD has adjusted the amount of regulation they hold, but they still hold a significant amount.</p> <p>d. WAPA’s Contingency Reserve requirement will not change. We will evaluate our regulation needs after we have sufficient experience in EIM. As stated earlier, even after over a year of EIM participation, SMUD still carries a significant amount of regulation.</p>
96.	<p>a. Will WAPA send out a notification on when the Business Practice Guidelines are posted on OASIS? Can there be an email notification to customers?</p> <p>b. Do the Business Practice Guidelines have the detail of the BANC EIM Entity Settlement charge codes?</p>	<p>a. An e-mail notification was sent, with the Business Practices attached, to customers on July 1, 2020, notifying them of posting of the Business Practices on June 30th to WASN’s Open Access Same-time Information System (OASIS) http://www.oasis.oati.com/wasn/index.html. The BP can be found under the “Business Practices” folder, “Draft BPs – 10 Day Comment” sub-folder of the Business Practices section. WASN is providing 30 days for initial review and comment period on the BP.</p> <p>b. WAPA has ensured that the Business Practices tie to the BANC EIM Entity Settlement charge codes and there are tables provided throughout the document that reflects this information.</p>
97.	<p>a. Will BANC’s future 3-year rolling average to determine the NEL be referenced in any of the guidelines or procedures?</p> <p>b. On the detail for the \$477,315 on-going EIM costs, under ‘CAISO Charges’ are the uplifts fixed charges or load based charges?</p>	<p>a. WAPA and BANC are currently still in discussion on this process. Once this information is finalized with BANC, that information will be shared with customers at that time.</p> <p>b. The fees in ‘CAISO Charges’ are a very rough estimate that was provided at the time this estimate was created. The uplifts are not fixed and could change based on WAPA’s participation in the market.</p>

98.	I would like to confirm where the EIM operating procedure will be posted on SN OASIS. Do you plan to post under the Tariff section or the Business Practices section or some other tab?	An e-mail notification was sent, with the Business Practices attached, to customers on July 1, 2020, notifying them of posting of the Business Practices on June 30 th to WASN's Open Access Same-time Information System (OASIS) http://www.oasis.oati.com/wasn/index.html . The BP can be found under the "Business Practices" folder, "Draft BPs – 10 Day Comment" sub-folder of the Business Practices section. WASN is providing 30 days for initial review and comment period on the BP.
99.	Will the CVP transmission rate decrease when Sutter comes back online?	The CVP Transmission rate will decrease since more CVP transmission capacity is being used.

Informal Customer Meeting, Questions - from July 10, 2020

	Question(s)	Response(s)
100.	Rate Schedule SSP1 (Schedule of Rate for Sale of Surplus Products) does not include where the revenue from sales of surplus product will be allocated. We understand it will be allocated through the PRR. Is this defined somewhere?	The allocation of revenues from the Sale of Surplus Products to the PRR will be documented in both WAPA's Rate Brochure and the final Federal Register Notice (FRN) for Rate Case 194. The Rate Brochure is anticipated to be posted to the WAPA Rate Case website by the end of July 2020. The final FRN is anticipated to be posted in February 2021.
101.	Regarding Resource Sufficiency availability a. How frequently will the impacted hours and months be revisited? Or will they ever? b. What would the process be if there were even fewer hours of availability?	 a. SN Customers maximize shaping of Base Resource and the June-September months (HE20-23) are fully utilized. Any surplus products represent availability after the Base Resource shaping. The only way for capacity to be available would be when the customers determine a different shape. b. If Base Resource is taking all the generation WAPA will have less surplus products and may need to look at flex ramp for themselves.
102.	In previous presentations it was mentioned that estimated ongoing BANC costs were going to be based on the 2017 NEL data, is BANC still considering using a 3-year average in the future?	No final decisions have been made yet by BANC. BANC continues to meet with customers and the final decision will be shared once it is finalized.
103.	Why was 2017 chosen as the year to use for the basis for the NEL percentages for the initial allocation?	At the time of calculation, 2017 was the latest information available.
104.	Why was Real Time Losses language not included in the Rate Schedules?	Typically, 4S and 9S rate schedules include settlement at the ISO Locational Marginal Price (LMP). Those LMP include a marginal loss component so WAPA did not think that losses needed to be further considered. Additionally, losses are discussed in WAPA's Business Practice 044 under Section 6.1.3.
105.	You mentioned that Resource Sufficiency is an annual product but are there specific hours?	Due to the Base Resource Shaping June-September (HE20-23) there will be no product available. All other hours will be a sale of surplus product.

Informal Customer Meeting, Emailed Questions - from July 10, 2020

106.	<p>Regarding Resource Sufficiency,</p> <ul style="list-style-type: none">a. I believe balancing is an hourly product and flex ramp capacity is a 15-minute product. Hopefully, that won't be an issue since the same capacity will be used for both tests.b. How will the subscription be offered? Annually, monthly, daily, hourly, etc.?c. What would be the capacity rate? Would it likely be the same as deviation band?d. If we utilize all or a portion of that capacity for balancing, I assume there would be no additional cost. (I understand that if it is dispatched, WAPA would receive the revenue and apply it to the PRR).	<ul style="list-style-type: none">a. You are correct balancing is hourly and flex ramp it 15-minute. EIM design does not allow the amount used for balancing to count for flexible ramp.b. This product will be an annual product for the hours available.c. The Rate is in the proposed CV-SSP1 Rate Schedule and is aligned with our current rates for regulation and spin reserves. Resource Sufficiency is not a sub-balancing authority (BA) requirement. Any remaining ancillary services (regulation or spinning reserves) not needed for sub-BA is turned over to Merchant for sales as a surplus product. The capacity for Resource Sufficiency will come from the ancillary services turned over to Merchant for sales as a surplus product; hence, Resource Sufficiency is considered a sale of surplus product. The rate schedule for Sale of Surplus Products is similar to rate schedule for ancillary services.d. There would be no additional cost for utilizing the capacity for balancing. WAPA reserves the right to set the price for the energy based on hydropower conditions, with all energy transactions in EIM benefits going to the PRR.
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107.	<p>WAPA should consider adding language to the rate schedule EIM1S clarifying source/authority whereby charges are “sub-allocated . . . based on load ratio share for the time period in which WAPA-SN incurs EIM administrative charges . . .”[INSERT] as defined by [CAISO and/or BANC] business procedures.</p>	<p>The Load ratio calculation for Rate Schedule EIM1S is based on WAPA’s load ratio share. This is the same as for all other load ratio share calculations for Tier 1 charges for EIM, as described in WAPA’s Business Practices for Energy Imbalance Market Settlements. The load ratio calculation for Rate Schedule EIM1S is specifically found in section 6.2.1 of the BPs. Our existing practice is to not reference BPs in our Rate Schedules; therefore, we did not provide a reference in the new proposed Rate Schedules for EIM.</p>
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108.	<p>The Business Practice for Energy Imbalance Market Settlements (BP-044) states: “This BP does not address EIM settlements between the CAISO and WAPA Merchant for its participation in the EIM with EIM Participating Resources.” Where are EIM settlements between the CAISO and WAPA Merchant defined?</p>	<p>WAPA shared information regarding EIM settlements between the CAISO and WAPA Merchant for its participation in EIM at the July 10, 2020 Informal Customer meeting. A copy of the presentation can be found on WAPA’s website at: https://www.wapa.gov/regions/SN/rates/Documents/rates-informal-meeting-slides-20200710.pdf</p> <p>WAPA will develop a Business Practice documenting Tier 2 and WEIM allocation methodologies.</p> <p>WAPA will discuss the Business Practice at an upcoming Customer Coordination Committee meeting.</p>
109.	<p>Communication from WAPA Merchant to its customers is not well defined. NCPA recommends WAPA develop and share how WAPA Merchant will communicate OATT, WAPA Business Procedures, BANC Business Procedures, change to Participation Agreements, CAISO, or other EIM changes to its customers.</p>	<p>When WAPA Merchant becomes aware of changes proposed by BANC and/or WAPA Operations, then they will use email to notify customers of new postings and provide links to appropriate websites. WAPA will share EIM information, updates, changes, etc. at future Customer Coordination Committee meetings on a quarterly basis.</p>
110.	<p>Could WAPA provide a mock-up Power Revenue Requirement Forecast for a prior and future year assuming Western had joined the EIM? What benefits are there to customers for WAPA joining EIM...it’s understood that the startup and ongoing costs are proposed to go to the PRR, but without the benefit side of the equation it’s hard for customers to say whether or not they support WAPA’s participation in EIM.</p>	<p>WAPA currently has a PRR forecast posted to our website (https://www.wapa.gov/regions/SN/rates/Documents/fy21-24-prr-forecast-may2020.pdf) for the years 2020 through 2024. In the PRR forecast, EIM annual on-going costs of approximately \$661,715 is included in WAPA’s annual O&M estimated forecast; however, estimated EIM load charges and benefits are not included in the forecast.</p> <p>Using \$0.15 per MWh estimate based on other EIM entity participation, WAPA estimates annual total load charges to be less than \$50K.</p> <p>For EIM Benefits, based on certain assumptions from SMUD’s participation in EIM, if we use a portion of our existing surplus reserves in EIM, the overall total estimated EIM benefits are between \$1.2 million and \$1.5 million annually.</p> <p>EIM benefits are proposed to be applied to the PRR to offset EIM participations costs and estimated load charges. Long term net EIM benefits are expected to lower the PRR bottom line reducing costs for First Preference and Base Resource customers.</p>

111.	Is the summary data going to be shared for the five-year meter data WAPA submitted to the CAISO for EIM, in an upcoming EIM meeting?	<p>The following is the 5-Year Historical Load data (2015-2019) for WASN SBA that was shared with CAISO for EIM:</p> <p>WAPA LOAD: 2015: 35.64 MW 2016: 37.40 MW 2017: 39.24 MW 2018: 35.56 MW 2019: 31.95 MW 5-Year Ave: 35.96 MW</p> <p>These yearly averages exclude the City of Roseville, City of Redding, Modesto Irrigation District, Non-Generator Resources (LLNL, Tracy Pumps), and COTP Losses.</p>
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