Provider of Choice Workshop

May 21, 2025

PROVIDER OF CHOICE POST 2028

Notice of Ex Parte Communications

The Public Rate Design Methodology proceeding (PRDM-26) is occurring concurrent with this public meeting. The PRDM-26 proceeding is being conducted under section 7(i) of the Northwest Power Act and is subject to BPA's rules of procedure, including *ex parte*. The *ex parte* rule prohibits BPA from discussing matters within the scope of a section 7(i) proceeding, unless proper notice is given. For that reason, issues and arguments concerning the PRDM and tiered rates for the post-2028 period should not be made in this meeting. Please direct any such comments to PRDM-26, as described in the PRDM-26 Federal Register Notice.

Thank you.

Agenda: Wed, May 21, 9am - 3pm

Topic	Purpose	Presenter(s)	Est'd Time
Welcome & Agenda Review	Inform	Michelle Lichtenfels	9am – 9:05am
Master Contract Template Changes • Updates based on comment period	Inform	Kelly Olive	9:05am – 10:30am
Path to Contract Signing	Discussion	Kelly Olive	10:45am – 11:20am
FY 2026 CHWM Calculation: Weather Normalization Update	Inform	Adela Arguello	11:30am – 12pm
Standards for Resource Declarations	Inform	Sarah Burczak	
LUNCH 12pm – 1pm			
JOE Planned Product Contract Language • Contract language discussion	Discussion	Kate Patton Rob Burr Jason Weinstein	1pm – 2:50pm
Closing	Discussion	Kim Thompson; All	2:50pm – 3pm

Note: There will be short morning and afternoon breaks. Times are approximate.

Workshop Norms & Expectations

- **Bonneville**: Provide open and inclusive opportunities for discussion and feedback.
- **Participants**: Provide feedback and share perspectives during workshops.
- **All**: Respect one another and assume good intentions. Bring a constructive mentality. Be solution-oriented. Identify “parking lot” items for distracting or off-topic issues.

Draft Master Contract Template

See separate Word version Draft Master Template for updates.

Path to Contract Signing

Key Dates & Anticipated Deadlines

Action	Dates
New: Formal comment period on JOE planned product language	May 22 – June 5
Prov. of Choice contract requests and product choices due	June 18, 2025
Publish final contract templates	June 18, 2025
Publish Contract ROD; Contract High Water Mark (CHWM) Implementation Policy; New Resource (NR) Rate Block Policy	August 28, 2025
Rolling Prov. Of Choice contract offers to customers	August 28 – September 30, 2025
Deadline for customers to submit signed return Prov. of Choice contracts	December 5, 2025

June 18 Final Template Release

BPA will publish Load Following, Block and Slice/Block templates on June 18th.

- Will include ‘pink text’ options.
- Will not include signature blocks.

BPA will strive to include JOE option language in June 18th Block and Slice/Block templates, but will depend on comments received. If not, will include as soon as possible after June 18th.

June 18 Deadline for Requests

- June 18th Deadlines (see Feb 10 letter and March 17 letter on contract requests and offer deadlines)
  - Customer requests for offer
  - Product choice
- To-date, JOE member Preservation Agreements: **17**
- To-date, total product requests: **55**
- BPA has received a few requests for extensions on product choice.

Policies and RODs

On August 28, 2025, BPA will publish:

- Contract ROD
- Final NR Block Policy and ROD
- Final CHWM Implementation Policy and ROD
  - Updated CHWM model with final Attachment A amounts and final weather normalization numbers (if available).

Note: Staff evaluating whether to consolidate some (or all) of the RODs.

Contract Offers (Aug 28 – Sept 30)

- Rolling contract offers starting after Contract ROD is published
- Will be offered on a rolling basis through offer window.
- One contract offer/one product per customer.
- Fully customized with customer-specific options, unique and special provisions.
- Exhibit A (resource data), Exhibit D (CF/CTs and NLSLs), Exhibit J (Energy Storage Devices)
- Other tables and elections will be populated (and offered, if applicable) in accordance with contractual deadlines between contract execution and October 1, 2028.
- Work with Power AE to coordinate any necessary details or concerns with contract offer timing, customer governance needs/board meetings.

Other Contract Offer Notables

Regional Dialogue routine revisions will occur as scheduled. (Slice/Block Net Requirements transparency process, RSS, RIMs, Exhibit F TSS revision, NR ESS)

Other questions about the offer process?

December 2025

- All Provider of Choice Contract High Water Mark contracts are due to Bonneville by December 5, 2025.
- Contract offers are valid through December 5.
- Bonneville intends to countersign all contracts by end of December; will provide fully executed contracts to customers shortly after.

BONNEVILLE POWER ADMINISTRATION

Timeline

Last Updated Feb. 2025

2024 2025

Sep | Nov | Jan | Mar | May | Jul | Sep | Nov

Develop DRAFT Contract Templates

- Sep 9 - Nov 14: Workshops: Individual draft contract sections
- Oct. 31: Draft templates, version release
- Oct 29 - Nov 13: **Public comment period on draft CHWM Implementation Policy**
- Nov 20 - Dec 17: Workshops: Draft contract sections; Full draft templates
- Dec. 19: Draft templates, version release

Finalize DRAFT Contract Templates

- January: Draft master template, version releases
- Jan 21, 22, 23: Intensive workshop series #1
- Mid-Feb: Draft master template, version release
- Feb 18, 19, 20: Intensive workshop series #2
- Mar 12 - Apr 9: **Public comment period on Provider of Choice draft contract templates (4 weeks)**
- Mar 12 - Apr 9: **Public comment period on draft NR Block Policy (4 weeks)**

Finalize Contract Templates

- Workshop to share draft template changes based on formal comments; next steps: May 21
- **Publish final contract templates**: Jun 18

Contract Offer, ROD, Execution

- Request for contract and product choice: Apr 1 - Jun 18
- **Publish Contract Record of Decision (ROD); CHWM Implementation Policy; NR Block Policy**: Aug 28
- **Contract offers sent to customers**: Aug 29 - Sep 30
- **Customers sign contracts and send to BPA no later than Dec. 5**
- **All contracts executed (Dec. 31, 2025)**

CHWM Weather Normalization

See presentation slides provided separately.

Weather Normalization Deadlines

Dates	Action
By June 15, 2025	Power Account Executives will send customers their weather normalized data to review.
By June 30, 2025	Customers review data. If a customer identifies any changes it would like to its data, the customer will need to submit: (1) change requested and (2) rationale for the change. Changes to methodology will only be considered if receive many requests.
July 2025	If significant feedback in June 2025, Bonneville may consider an additional step such as a workshop or work with AEs to solicit feedback on any major changes it proposes to methodology.
By August 29, 2025 (targeting end of July)	Provide final weather normalization numbers to customers.

What will be included in the June review?

All data and results are stored in a large Excel file:

- Worksheet contains 7 new tabs that were not included in the file shared by Power AEs
- Tabs will contain the input data used in the analysis, as well as preliminary results
- File makes calculations available to all stakeholders so results can be reproduced and referenced in the future.

1. Preliminary Results in Calcs (Calculations) tab

FY2023 Adjusted Load =

FY2023 Non-Irrigation Load

+ Non-irrigation Weather Adjustment

- FY2023 Unadjusted Irrigation Load

+ FY2023 Adjusted Irrigation Load

- NLSL

	Fiscal year	Average Load (aMW)	Average Weather Adjustment (aMW)	Weather Adjusted (aMW)	Remove Irrigation (aMW)	Irrigation Adjusted (aMW)	HWM Normalized Load (aMW)	NLSL (aMW)	NLSL Adjusted (aMW)
	2023	90.664	-13.413	77.251	0.000	0.000	77.251		77.251
FY2023 Adjusted Load (aMW)			77.251						

	Annual Weather			
	Actual	Normal	Actual	Normal
	2338	0	718	0

	HDD Coeff.	HDD55	CDD Coeff.	CDD63
Insert Here	1669.2126	40.061	Insert Here	1383.0803	33.194

Yrmo	Fiscal year	Month	Average Monthly Load (MWh)	Average Weather Adjustment (MWh)	Actual	Normal	Actual	Normal
202210	2023	10	53,883	-1,469	35		2	
202211	2023	11	74,852	-16,986	424		0	
202212	2023	12	82,170	-17,867	446		0	
202301	2023	1	79,869	-16,705	417		0	
202302	2023	2	75,034	-17,306	432		0	
202303	2023	3	77,748	-15,464	386		0	
202304	2023	4	64,477	-7,577	185		5	
202305	2023	5	55,858	-2,346	13		55	
202306	2023	6	54,140	-2,722	0		82	
202307	2023	7	60,957	-8,099	0		244	
202308	2023	8	62,795	-9,328	0		281	
202309	2023	9	52,435	-1,627	0		49	

Regression Inputs | Monthly Irrigation | Monthly Load | metered data | Non-Irr load | Irrigation adj | Temperature | Calcs

Ready Accessibility: Investigate

2. Preliminary FY2023 Non-irrigation Weather Adjustment

Average Weather Adjustment =

Heating adjustment + Cooling adjustment

$$=(\text{Normal HDD} - \text{Actual HDD}) * \hat{\beta}^{HDD} + (\text{Normal CDD} - \text{Actual CDD}) * \hat{\beta}^{CDD}$$

$\hat{\beta}^{HDD}$ and $\hat{\beta}^{CDD}$ are the estimated coefficients of load responsiveness to temperature, and they can be found in the Regression Results tab

	A	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	BESID	Var	Estimate	StdErro	TStat	PValue	hdd_base1	hdd_base2	cdd_base1	cdd_base2	rmse	R_sq	adj_R_sq	deg_free	
2	10363	(Intercept)	79896.2	368.1	217.1	0	55		63		3313.716178	0.953001951	0.952322713	1799	
3	10363	hddVar1	1669.21	19.87	84	0									
4	10363	cddVar1	1383.08	32.99	41.92	1.5251E-268									
5	10363	mth_1	1193.51	338.9	3.522	0.000438883									

Monthly Irrigation | Monthly Load | metered data | Non-Irr load | Irrigation adj | Temperature | Calcs | Regression Results | R Backup

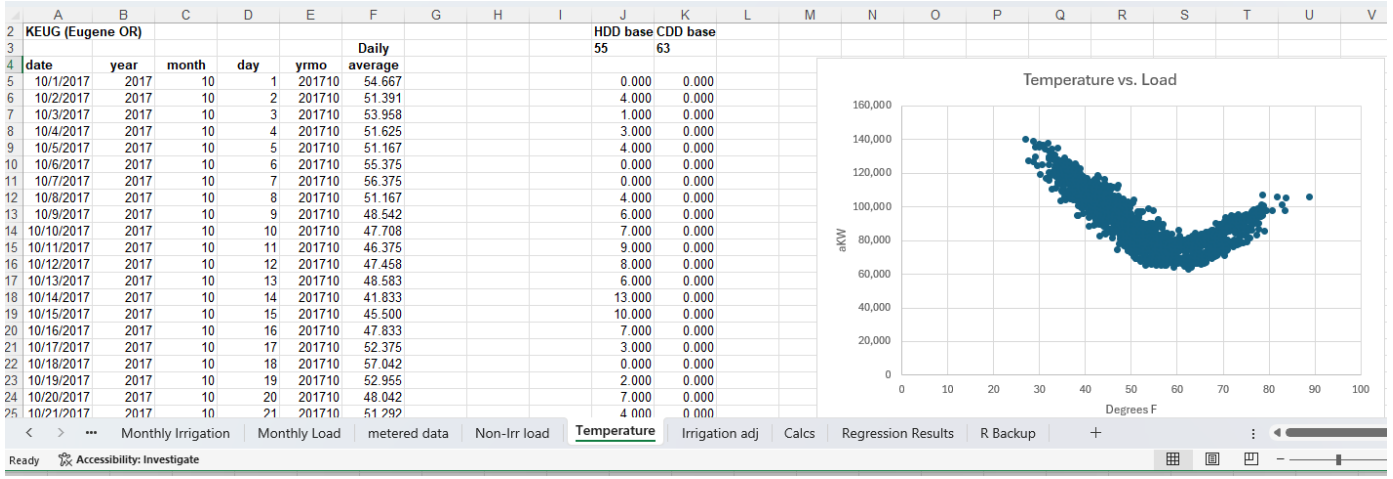
2. Preliminary FY2023 Non-irrigation Weather Adjustment

Heating adjustment =(Normal HDD - Actual HDD) * $\hat{\beta}^{HDD}$

Cooling adjustment =(Normal CDD − Actual CDD) ∗ $\hat{\beta}^{CDD}$

- ✓ Normal HDD and CDD are based on temperatures considered typical during the period of 2010 through 2024 –updated for PoC WN to include more recent weather patterns
- ✓ Normal and Actual HDD and CDD values use average daily temperatures by averaging hourly records from NOOA's Global Historical Climatology Network-hourly (GHCNh) database.
- ✓ HDD bases considered ranged from 30° to 65 °, and
  CDD bases considered ranged from 60° to 80°.

Temperature records can be found in the **Temperature** tab



2.1 Average Weather Adjustment

a) The process to estimate the load-temperature relationship was explained during the Oct 23rd, 2024 workshop (link here)

b) To quantify the effect that temperatures had on the FY2023 load, forecasters ran an initial baseline model that was common to all customers

$$Load = \alpha + \beta^{HDD}\ HDD + \beta^{CDD}\ CDD + \boldsymbol{X}'\ \beta + \varepsilon,$$

where

$\boldsymbol{X}'$ is a vector of calendar effects that includes: (1) day, (2) month, (3) year, (4) holidays, and (5) a covariate to control for the pandemic effects on load.

By performing successive iterations for each customer, forecasters identified the HDD and CDD bases, and the set of explanatory variables (adding new ones, if necessary) that yielded the best model results and minimized the average distance between the predicted and observed values in the regression model.

2.1 Average Weather Adjustment (Cont'd)

c) The input data and the final regression specification that resulted in the lowest model Root Mean Squared Error and highest explanatory power can be found in the R Backup tab:

These data come from the Regression Inputs tab, contained in file shared by Power AEs and verified by customers:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1		dt	fy	mth	dow	day_type	nerc_holic	covid	dlyavgtmp	tot_load_a	nonirr_loa	irr_load_a	missing_fl	dow_1	dow_2	dow_3	dow_4	dow_5	dow_6	dow_7	mth_1	mth_2	mth_3
2	1	10/1/2017	2018	10	1	Weekend/	Non-Holic	0	54.66667	69010.13	69010.13	0	0	1	0	0	0	0	0	0	0	0	
3	2	10/2/2017	2018	10	2	Weekday	Non-Holic	0	51.3913	80182.67	80182.67	0	0	0	1	0	0	0	0	0	0	0	
4	3	10/3/2017	2018	10	3	Weekday	Non-Holic	0	53.95833	83779.13	83779.13	0	0	0	0	1	0	0	0	0	0	0	
5	4	10/4/2017	2018	10	4	Weekday	Non-Holic	0	51.625	83071.75	83071.75	0	0	0	0	0	1	0	0	0	0	0	
6	5	10/5/2017	2018	10	5	Weekday	Non-Holic	0	51.16667	82455.71	82455.71	0	0	0	0	0	0	1	0	0	0	0	
7	6	10/6/2017	2018	10	6	Weekday	Non-Holic	0	55.375	80340.67	80340.67	0	0	0	0	0	0	0	1	0	0	0	
8	7	10/7/2017	2018	10	7	Weekend/	Non-Holic	0	56.375	69690.63	69690.63	0	0	0	0	0	0	0	0	1	0	0	
9	8	10/8/2017	2018	10	1	Weekend/	Non-Holic	0	51.16667	72769.79	72769.79	0	0	1	0	0	0	0	0	0	0	0	
10	9	10/9/2017	2018	10	2	Weekday	Non-Holic	0	48.54167	85653.04	85653.04	0	0	0	1	0	0	0	0	0	0	0	
11	10	########	2018	10	3	Weekday	Non-Holic	0	47.70833	88187.46	88187.46	0	0	0	0	1	0	0	0	0	0	0	
12	11	########	2018	10	4	Weekday	Non-Holic	0	46.375	90342.67	90342.67	0	0	0	0	0	1	0	0	0	0	0	
13	12	########	2018	10	5	Weekday	Non-Holic	0	47.45833	95862.63	95862.63	0	0	0	0	0	0	1	0	0	0	0	
14	13	########	2018	10	6	Weekday	Non-Holic	0	48.58333	90339.96	90339.96	0	0	0	0	0	0	0	1	0	0	0	

Monthly Irrigation | Monthly Load | metered data | Non-Irr load | Irrigation adj | Temperature | Calcs | Regression Results | R Backup

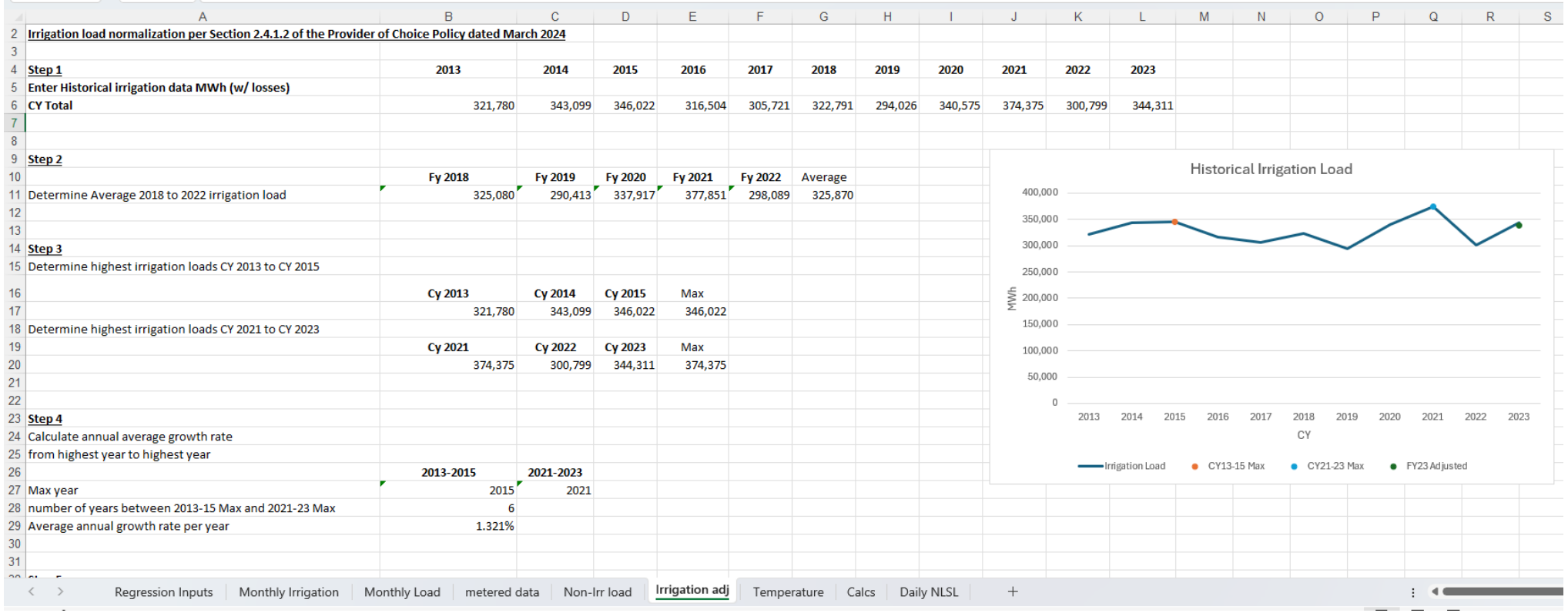
Ready | Accessibility: Investigate | 100%

3. Preliminary FY2023 Adjusted-irrigation Load

The process for normalizing irrigation load was explained during the Oct 23rd, 2024 workshop (link here)

The monthly irrigation input data and the calculations can be found in the Irrigation adj. tab :

These data come from the Monthly Irrigation tab, contained in file shared by Power AEs and verified by customers.



	A	B	C	D	E	F	G
2	Irrigation load normalization per Section 2.4.1.2 of the Provider of Choice Policy dated March 2024						
3							
4	Step 1	2013	2014	2015	2016	2017	2018
5	Enter Historical irrigation data MWh (w/ losses)						
6	CY Total	321,780	343,099	346,022	316,504	305,721	322,791
7							
8							
9	Step 2						
10		Fy 2018	Fy 2019	Fy 2020	Fy 2021	Fy 2022	Average
11	Determine Average 2018 to 2022 irrigation load	325,080	290,413	337,917	377,851	298,089	325,870
12							
13							
14	Step 3						
15	Determine highest irrigation loads CY 2013 to CY 2015						
16		Cy 2013	Cy 2014	Cy 2015	Max		
17		321,780	343,099	346,022	346,022		
18	Determine highest irrigation loads CY 2021 to CY 2023						
19		Cy 2021	Cy 2022	Cy 2023	Max		
20		374,375	300,799	344,311	374,375		
21							
22							
23	Step 4						
24	Calculate annual average growth rate						
25	from highest year to highest year						
26		2013-2015	2021-2023				
27	Max year	2015	2021				
28	number of years between 2013-15 Max and 2021-23 Max	6					
29	Average annual growth rate per year	1.321%					
30							
31							

	H	I	J	K	L
4	2019	2020	2021	2022	2023
6	294,026	340,575	374,375	300,799	344,311

Standards for Resource Declarations

Provider of Choice Standards

- Bonneville published the Provider of Choice Standards for Resource Declarations on April 15.
  - Bonneville received four comments through the informal comment window, which closed April 29.
- Bonneville has evaluated comments and will update language in response.
  - Plan to publish the final standards the first week in June.

JOE Planned Product POC Language

Draft & Comment Period

See draft master template language provided separately.

Comment period for JOE Planned Product language:

- **May 22** through **Thursday June 5 at 5pm.**

Thank you.