

# LRS Non-Firm Load Forecasts

- **WECC Balancing Authorities (BAs) submitted non-firm load forecasts for 2021 by program type**
  - **Interruptible load** (demand made available by contract or agreement for curtailment)
  - **Direct load control** (demand under control of system operator)
  - **Critical peak pricing with control** (direct remote control with pre-specified critical peak price)
  - **Load as a capacity resource** (can be committed for pre-specified load reductions under certain system conditions)
- **Program specific information**
  - **Voluntary reporting of non-firm load by program**
  - **Nine BAs reported program specific non-firm load**
  - **Will be used to verify and adjust non-firm load in Common Case**



# 2021 Non-Firm Load by Program Type

DR Program Type	2021 Forecast (MW; NCP)
Interruptible	2,600
DLC	2,109
Capacity	1,309
CPP	26
<b>TOTAL</b>	<b>6,044</b>

- **Forecasted LRS data indicates 6,044 MW of DR resources in 2021 (non-coincident annual peak)**
  - LRS data used for last year's study indicated 7,316 MW of DR resources in 2020 (non-coincident annual peak)
  - This is a ~21% reduction
- **Program level information will be used to derive modeling assumptions**

# Validation of Non-Firm Load Forecasts

## Common Case

- LRS data indicates total non-firm resource of 6,044 MW in 2021 (non-coincident annual peak)
- Each BA's forecast of non-firm load was compared to utility IRPs, 2010 FERC Demand Response (DR) Survey Results, and state regulatory filings
- We contacted BA and utility staff responsible for non-firm load forecasts to understand inconsistencies between non-firm load forecast provided to WECC and what was included in public validation sources
- We plan to make several adjustments to the WECC non-firm load forecasts
  - Detailed on the following slides
  - COLOR KEY: RED indicates adjustment, GREEN indicates non-firm load forecast accepted, ORANGE indicates further information pending



# Northwest Balancing Authorities

## Common Case

Reported Information		Verification Sources (Year of Value)			Adjustment	
BA	2021 Forecasted Non-Firm Load (NCP)	IRP	2010 FERC DR Survey	Regulatory Filings	Recommended Common Case	Notes
AVA	0	0	0 (2009)		0	Has very small Res. DLC program (100 customers). Demand response pilot showed programs not cost-effective. Used 2009 IRP, 2011 IRP not public until August 31.
BPA	0		0		0	Regional BAs do not consider individual utility demand response programs as "firm". Council plan stated no cost-effective DR through 2020.
CHPD	40	0			40	Used 2010 IRP.
DOPD	0	0			0	Used 2007 IRP.
GCPD	0	0			0	Used 2010 IRP.
NWMT	0	0			0	Used 2009 IRP. Participating in Pac NW Smart Grid Demonstration Project.
PACW	45	72 (2020)			45	Used 2011 IRP, Table 8.17.
PGE	0	102 (2020)	80 (2015)			Used 2010 update to 2009 IRP. FERC DR Survey forecast composed of 60 DLC and 20 CPP.
PSE	0		5 (2009)			Used 2011 IRP.
SCL	0	0 (2011 IRP)			0	Used 2011 IRP and it indicates they are undertaking DR pilots but not cost-effective until 2020. Accept non-firm load forecast, validated by one source.
WAUW	0				0	Submitted DR program information stating it believes co-op DSM programs are "soft" and unreliable.

# Southwest Balancing Authorities

## Common Case

Reported Information		Verification Sources (Year of Value)			Adjustment	
BA	2021 Forecasted Non-Firm Load (NCP)	IRP	2010 FERC DR Survey	Regulatory Filings	Recommended Common Case	Notes
APS	0	105 (2021)	0 (2009), 92 (2015)		105	Used 2009 IRP. We made 105 MW adjustment (addition) in 2010 Study; forecasting 65 DLC, 2 Int., and 25 Non-spin reserves in FERC DR Survey
EPE	58	61 (2020)	54 (2009)			Used 2011 IRP. Interruptible programs ends in March 2021. FERC DR Survey is Int., although there are TOU and CPP programs of insignificant size. 61 MW of interruptible in Resource Planning presentation ( <a href="http://www.epelectric.com/files/html/IRP_2011/Resource_Planning_Presentation_6-15-11.pdf">http://www.epelectric.com/files/html/IRP_2011/Resource_Planning_Presentation_6-15-11.pdf</a> ). Need to confirm no load management or capacity programs.
IID	0					Did not submit non-firm load forecast, but did submit DR program information.
NEVP	411	285 (2020)			411	Used 2009 IRP. Significant ramp-up in non-firm forecast.
PNM	45	65 (2021)	58 (2009)	67 (2010)	45	Used 2008 IRP and 2010 DSM program report
SPP	113	9 (2021)	40 (2009), 43 (2015)		113	Used 2010 IRP.
SRP	104		144 (2009), 263 (2015)			Interruptible programs ends in April 2021. Large CPP and TOU programs. Significant decrease from 2020.
TEP	77		90 (2015)	70 (EE Plan)		Three interruptible programs end in March 2021. FERC DR Survey forecasted is DLC. Need to confirm if they are offering DLC program. EE Plan accounts for 70 MW of DLC ( <a href="http://www.tucsonelectric.com/Green/Reports/EEPlan/EEPlanTEP.pdf">http://www.tucsonelectric.com/Green/Reports/EEPlan/EEPlanTEP.pdf</a> )
WALC	0				0	Regional BAs do not consider individual utility demand response programs as "firm".

# California Balancing Authorities

## Common Case

Reported Information		Verification Sources (Year of Value)			Adjustment	
BA	2021 Forecasted Non-Firm Load (NCP)	IRP	2010 FERC DR Survey	Regulatory Filings	Recommended Common Case	Notes
NISO	783	1788 (2020)	311 (2009), 397 (2015; CPP only)	1045 (2014)		FERC DR Survey numbers for 2009 do not include pricing. 2014 request number is event based only ( <a href="https://www.pge.com/regulation/DemandResponse2012-2014-Projects/Pleadings/PGE/2011/DemandResponse2012-2014-Projects_Plea_PGE_20110301_207079.pdf">https://www.pge.com/regulation/DemandResponse2012-2014-Projects/Pleadings/PGE/2011/DemandResponse2012-2014-Projects_Plea_PGE_20110301_207079.pdf</a> )
SISO	2204	2839 (2020)	1341 (2009; no pricing), 380 (2015, no pricing)	2044 (2014; pricing)		Combined SDG&E and SCE. There is no pricing in SDG&E LTPP.
LDWP	400	200 (2021)	203 (2009), 120 (2015)		<b>400</b>	Used 2010 IRP. IRP plans 200 MW of interruptible by 2014 and 300 MW of additional interruptible by 2030. There is a large C&I TOU program in the FERC Survey Data (200MW) and we are not including TOU in Common Case.
SMUD	201		205 (2009), 456 (2015)			Includes 32 MW of MID non-firm load. FERC DR Survey forecasted values include CPP with controls
TIDC	0				<b>0</b>	Unable to find verification sources.

# Rocky Mountain Balancing Authorities

## Common Case

Reported Information		Verification Sources (Year of Value)			Adjustment	
BA	2021 Forecasted Non-Firm Load (NCP)	IRP	2010 FERC DR Survey	Regulatory Filings	Recommended Common Case	Notes
IPC	351	351 (2030)	397 (2009)			Used 2011 IRP. Load as a capacity resource in DR program information submittal but excluded from non-firm forecast.
PACE	773	786 (2020)	441 (2009), 559 (2015)		<b>773</b>	Used 2011 IRP. Forecasted DR survey numbers are DLC only.
PSC	341		304 (2009)		<b>341</b>	Interruptible programs ends in March 2021.
TPWR	0				<b>0</b>	Submitted DR program information stating it has no DR programs.
WACM	1				<b>1</b>	Regional BAs do not consider individual utility demand response programs as "firm".