



PCDS Meeting

May 22, 2024

WECC Staff

Jon Jensen

Anuj Patil

WECC Path Updates

WECC Paths—Definition Updates

- New path additions:
 - Addition of the P54 Coronado–Silver King 500 kV path

Interface Name	Element Name	From Bus Num	From Bus Num	From Bus Name	To Bus	To Bus Number	To Bus Number	To Bus Name	Br-Normal_Direct
P54 Coronado-Silver King 500 kV	15001_15005_1	15001	15001	CORONADO	15005_1	15005	15005	CORSIL 1	#TRUE#

- Removed paths
 - P37 (TOT 4A) has been removed from the list of Interfaces since it has been replaced by P85 (Aeolus West Path).
 - Removed duplicate entries for P41 (Sylmar to SCE) and P79 (TOT 2B) in the InterfaceLimit table.

WECC Paths—Definition Updates

■ Updates to existing path definitions from PAC

Interface Name	Element Name	From Bus Num	From Bus Num	From Bus Name	To Bus	To Bus Number	To Bus Number	To Bus Name	Br-Normal_Direct
P17 Borah West	60061_60059_1	60061	60190	KINPORT	60059_1	60059	60060	BORAH	#TRUE#
P17 Borah West	67794_60128_1	67794	67794	POPULUS	60128_1	60128	60128	POPCED11	#TRUE#
P19 Bridger West	67794_67811_1	67794	67794	POPULUS	67811_1	67811	67811	ANPOPC&1	#TRUE#

Each of the circuits highlighted in orange above is a new addition to the respective existing path definitions.

- Fixed (60061_60059_1), was incorrectly listed as 60190_60060_1 P17 Borah West
- P17 change: III-6 addition to path Pop-Cedar Hill 500 kV P17 Borah West
- P19 change: III-3 update from Ant-Pop 500 kV line P19 Bridger West

WECC Paths—Definition Updates

- Updates to existing path definitions from CAISO

P15 Midway-LosBanos	300501_30055_1	300501	300501 MN_GT_11	30055_1	30055	30055 GATES	#FALSE#
P15 Midway-LosBanos	30055_30057_1	30055	30055 GATES	30057_1	30057	30057 DIABLOCNYNS	#TRUE#
P15 Midway-LosBanos	300505_30052_1	300505	300505 LB_MN_11	30052_1	30052	30052 MANNING	#FALSE#
P15 Midway-LosBanos	300506_30052_2	300506	300506 LB_MN_21	30052_2	30052	30052 MANNING	#FALSE#
P46 West of Colorado River (WOR)	29249_24900_1	29249	29249 DEL_CLRVR_12	24900_1	24900	24900 COLRIVER	#TRUE#
P46 West of Colorado River (WOR)	21076_24806_2	21076	21076 RAMON230	24806_2	24806	24806 MIRAGE	#TRUE#
P46 West of Colorado River (WOR)	22536_22360_1	22536	22536 N.GILA	22360_1	22360	22360 IMPRLVLY	#TRUE#
P49 East of Colorado River (WOR)	14012_29248_1	14012	14012 DELANY	29248_1	29248	29248 DEL_CLRVR_11	#TRUE#

- Each of the circuits highlighted in red has been removed from the respective path definition; those in orange are new additions to the respective existing path definitions
 - P46 West of Colorado River and P49 East of Colorado River have been updated with the addition of the Delany-Colorado River 500 kV circuit (29249_24900_1 for P46 and 14012_29248_1 for P49)
 - P46 West of Colorado River has been updated with the additions of the 21076_24806_2 (2nd 230 kV line between Ramon and Mirage) circuit and 22536_22360_1 circuit (N. Gila and Imperial Valley 500 kV line). Note that the 2nd line between Ramon and Mirage is not yet present in the 2034 HS 1 base case
 - P15 Midway-Los Banos changes: The 30055_30057_1 line (Gates Diablo 500 kV line) has been removed since it is not a part of this path. The 300501_30055_1 line (between Gates and Manning) has been removed and replaced with the 300505_30052_1 and 300506_30052_1 lines (both between Manning and Los Banos). Note that the 2 updated circuits were not in the Path Rating catalog.

WECC Paths—Definition Updates

■ Updates to the WECC path ratings

Interface Name	Year	Mode	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Old Value
P05 West of Cascades-South	0	MAX	7200	7200	7200	5780	5780	5780	5780	5780	5780	7200	7200	7200	Updated October from Summer to Winter
P05 West of Cascades-South	0	MIN	-7200	-7200	-7200	-5780	-5780	-5780	-5780	-5780	-5780	-7200	-7200	-7200	Updated October from Summer to Winter
P14 Idaho to Northwest	0	MAX	2400	2400	2300	2300	2300	2300	2300	2300	2300	2300	2300	2400	Updated March to spring and October-Noveml
P15 Midway-LosBanos	0	MAX	5400	5400	5400	5400	5400	5400	5400	5400	5400	5400	5400	5400	Using Phase II ratings from the catalog
P15 Midway-LosBanos	0	MIN	-4600	-4600	-4600	-4600	-4600	-4600	-4600	-4600	-4600	-4600	-4600	-4600	Using Phase II ratings from the catalog
P17 Borah West	0	MAX	4450	4450	4450	4450	4450	4450	4450	4450	4450	4450	4450	4450	99999
P17 Borah West	0	MIN	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-4450
P19 Bridger West	0	MAX	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	4100	2400
P19 Bridger West	0	MIN	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-1250
P20 Path C	0	MIN	-2250	-2250	-2250	-2250	-2250	-2250	-2250	-2250	-2250	-2250	-2250	-2250	-1250
P20 Path C	0	MAX	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	1600
P26 Northern-Southern Cali	0	MAX	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	5000
P26 Northern-Southern Cali	0	MIN	-3000	-3000	-3000	-3000	-3000	-3000	-3000	-3000	-3000	-3000	-3000	-3000	-4400
P41 Sylmar to SCE	0	MAX	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1000
P42 IID-SCE	0	MAX	750	750	750	750	750	750	750	750	750	750	750	750	1115
P46 West of Colorado River	0	MAX	11200	11200	11200	11200	11200	11200	11200	11200	11200	11200	11200	11200	13400
P46 West of Colorado River	0	MIN	-11200	-11200	-11200	-11200	-11200	-11200	-11200	-11200	-11200	-11200	-11200	-11200	-13400
P49 East of Colorado River (0	MAX	10200	10200	10200	10200	10200	10200	10200	10200	10200	10200	10200	10200	10100
P61 Lugo-Victorville 500 kV	0	MAX	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2900
P71 South of Allston	0	MIN	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-99999	-1480
P79 TOT 2B2	0	MAX	265	265	265	265	265	265	265	265	265	265	265	265	150
P82 TotBeast	0	MAX	2465	2465	2465	2465	2465	2465	2465	2465	2465	2465	2465	2465	3515
P83 Montana Alberta Tie Li	0	MIN	-300	-300	-300	-300	-300	-300	-300	-300	-300	-300	-300	-300	-325
P83 Montana Alberta Tie Li	0	MAX	325	325	325	325	325	325	325	325	325	325	325	325	300

Each of the cells in orange indicates an update to the respective month for the particular path definition

WECC Path Ratings—CAISO

- P15 Midway-LosBanos 9 (Phase II applied, original Path Rating Catalog limit was 3265 instead of 4600)
 - MAX 5400
 - MIN -4600
- P41 Sylmar to SCE—Duplicate records

WECC Path Ratings—CAISO (After follow-up with SCE)

WECC Path	Path Rating Catalog rating (MW)	Projects affecting the path before 2034	Increments from the respective Phase 2 or Phase 3 projects (MW)	Total expected rating for the 2034 ADS (MW)
Path 42	750	III-23. IID-SCE Expansion (2025)	365. From an older study, it was determined that a rating of 1400 is not possible	1115
Path 46	11200	II-1 Ten West Link project (2024) III-14 LADWP-SCE (2029) III-15 N. Gila-Imp. Valley #2 (2029)	II-1. 1050 III-14. 950 III-15. 1250	14450
Path 49	10100	II-1. Ten West Link project (2024) III-11. Hassayampa-N. Gila #2 project	II-1. 550 III-11. 100	10750
Path 61	2400	III-17. LADWP-SCE (2029)	500	2900

WECC Path Updates—Miscellaneous

- Phase 3 projects that are waiting for clarity on their effects on the existing WECC path definitions and ratings:
 - III-9. Mountain States Intertie project
 - III-10. Southline (Afton-Apache)—No impacts per the latest (5/8) feedback from BlackForest Partners
 - III-12. Southline (Apache-Saguaro/Tortolita)—No impacts per the latest (5/8) feedback from BlackForest Partners
 - III-13. TransWest Express Project (TWE)—No impacts per the latest (5/8) feedback from TransWest
 - III-16. TWE DC Project (alternate to III-13 above)—No impacts per the latest (5/8) feedback from TransWest
 - III-18. TWE-Intermountain to TWE-Crystal AC line—No impacts per the latest (5/8) feedback from TransWest
 - III-19. TWE-Crystal to TWE-Eldorado Valley AC line—No impacts per the latest (5/8) feedback from TransWest
 - III-21. Cascade Renewable Transmission Project- No impacts noted on WECC paths

WECC Path Updates—Miscellaneous

- Phase 3 projects (cont.)
 - III-14. LADWP-SCE Transmission Facilities Upgrade Projects (Refer slide 8, resolved)
 - III-15. N.Gila—Imperial Valley #2 Project (Refer slide 8, resolved)
 - III-17. LADWP-SCE Transmission Facilities Upgrade Project (Refer slide 8, resolved)
 - III-23. IID-SCE Expansion to the existing Path 42 RAS Project (Refer slide 8, resolved)
 - II-1. Ten West Link Project (Refer slide 8, resolved)

Non-WECC Path Updates

Non-WECC Path updates

- PAC—Remove
 - Pth 07 GW Cent Sigurd-Red Butte
 - Pth 08 GW South—Seg #2 Aeolus-Mona
 - Pth 09 GW Seg 1A Windstar-Bridger
 - Pth 10 GW Seg1B Bridger-Populus
 - Pth 11 GW Seg 1C Populus-Borah
 - Pth 12 GW Seg E Midpoint-Hemingway
 - Pth PAC Aeolus West
 - Pth PAC xy WY-UT

Non-WECC Path updates

- PAC Keep
 - Keep. In model and under construction—Project III-2 Pth PAC Aeolus South

Transmission Projects in 2034HS1

- Neither Rio Sol AC nor Southline in any WECC cases—EPE.
- All Greenlink projects should have been included in the 2034HS WECC base case—NV Energy.
 - Greenlink West:
 - Esmeralda—Ft Churchill 500 kV (a.k.a. Walker River),
 - Amargosa—Esmeralda 500 kV,
 - Harry Allen—Amargosa 500 kV,
 - Harry Allen—Northwest 500 kV, and
 - Common ties : Ft. Churchill—Miraloma 345 kV and Ft Churchill—Comstock Meadows 345 kV.
 - Greenlink North:
 - Ft Churchill (a.k.a. Walker River)—Lander 500 kV,
 - Lander—Robinson Summit 500 kV.
 - All Greenlink Projects in Nevada as below will be in service by 2034.

Transmission Projects in 2034HS1

- For the Gateway projects, the WECC 2034HS1 case includes all Gateway South and Gateway West—PAC
- IPC
 - Idaho Power can confirm that B2H is built out completely in the 34HS1 case—IPC
 - It also looks like the Gateway West segments that adjoin our area are there Hemmingway-Midpoint #2, the 500 kV Borah-Midpoint, Populous-Cedarhill-Hemmingway. There is a Cedarhill-Midpoint connection, but it is open by default in the case—IPC

Approval

WECC Path Rating approval—Approved path ratings and definitions as presented based on the WECC 2024 Path Rating Catalog and impacts of the Phase 2 and 3 projects. The updates have been applied in the ADS case if these are present in the base case.

