



Anchor Data Set 2032
ADS
Status of Fixing Identified Issues

June 14, 2022

Jamie Austin, Chair

Overview

- Starting Hour of Energy Profiles
- Wind Profiles with Annual CF Less than 20%
- Thermal Plant Maintenance
- VOM Costs for Renewable

Yi had questioned: The starting hour of NREL profile

- NREL provided dGenBTM PV profiles that were already in Mountain Time. However, it is not clear if the time stamp starts at HE0 or HE1
 - All hourly profiles in ADS PCM start at HE1
- Sited the concern over the impact on net Load profiles - - It is import to use the same time stamps between dGenBTM PV and net load profiles in order to derive the right gross load shapes

NREL Confirmed Time Step

- Anthony Lopez, NREL provided the Wind and PV time steps - - profiles submitted in UTC time
- Katy Waechter, NREL provided BTM time steps - - data provided in MT

	time		
0	2018-01-01 00:00:00+00:00		
1	2018-01-01 00:30:00+00:00		
2	2018-01-01 01:00:00+00:00		
3	2018-01-01 01:30:00+00:00		
4	2018-01-01 02:00:00+00:00		
5	2018-01-01 02:30:00+00:00		
6	2018-01-01 03:00:00+00:00		
7	2018-01-01 03:30:00+00:00		
8	2018-01-01 04:00:00+00:00		
9	2018-01-01 04:30:00+00:00		

mst_time	utc_gmt_t	timestep	
2018-01-01	2018-01-01	0	
2018-01-01	2018-01-01	1	
2018-01-01	2018-01-01	2	
2018-01-01	2018-01-01	3	
2018-01-01	2018-01-01	4	
2018-01-01	2018-01-01	5	
2018-01-01	2018-01-01	6	
2018-01-01	2018-01-01	7	
2018-01-01	2018-01-01	8	
2018-01-01	2018-01-01	9	
2018-01-01	2018-01-01	10	

Excluding \ Replacing NREL Wind Profiles with Annual CF Less Than 20%

Motion

- If both A.1 group and B.1 group profiles annual CF are less than 20%, replace wind profiles with nearby more reflective profiles for the site. The selection of profiles will be determined by WECC staff and reviewed by PCDS
- If A.1 group profile annual CF is less than 20% but B.1 group profile annual CF greater than 20%, can use B.1 group profile for both existing and future wind generators at the site unless other improved profile is available
 - *Note: PCDS has approved to use A.1 group profile for existing wind, and B.1 group profile for future wind in the PCDS meeting on May 31*

Thermal Plant Maintenance

- Tyler reported: Tool-Data are available to WECC staff. Need to wait until all 2022 L&R data is implemented.
- Data to be entered into GridView: 6-17-2022

VOM Costs

- Solar, BTM, wind, geothermal, and storage VOM costs
- Hydro, Wind, Solar, Storage, Pumped dispatch prices (Negative Pricing) – Curtailment Order
- Startup costs and times for geothermal (CEC)

RPS Negative Pricing Impact on Hydro outside of CA

- Initially, Negative Pricing (-\$25) was applied to wind and solar in California that had caused hydro outside of California to cycle.
 - Significant addition of utility scale solar and BTM PV has changed the net load shape. In some areas, the net daily minimum load now occurs mid-day (Load – Solar).
 - Accordingly, Hydro generation is responding to the price signals, had shifting its operation from “Peak” to “Load – Solar”



ADS 2032_Proposed RPS Dispatch Costs (December 14, 2021)

Consistent with ADS 2030

- RPS Dispatch Cost in 2030 ADS
 - Tier 1) -\$25/MWh curtailment (GV uses dispatch cost for curtailment cost) price for grid connected renewable variable resources wind and solar.
 - Tier 2) -\$75/MWh curtailment \ dispatch cost for Core Columbia Projects and -\$50/MWh for other Northwest hydro projects
 - Bio and geothermal modeled as dispatchable generators
- Compare 2030 ADS negative pricing with Actual
 - Changed default setting to NO-Spill on non-California hydro plants.
 - Changed dispatch cost for Core Columbia River/Lower Snake projects to -\$75
 - Added negative \$50 dollars (-\$50) to hydro dispatch cost on hydro outside of California Set Hydro dispatch from load only to Load-Wind-Solar with Wind at 0% and Solar at 50%?"



Modeling Variable O&M and Dispatch Prices in Production Simulations – Hitachi

- Currently, wind and solar are modeled hourly on the supply side, based on historic hourly shapes. The wind/solar hourly generation shapes are included in the thermal dispatch (thermal dispatch is defined as load – hourly – hydro);
 - If curtailment is allowed, the economic decision to curtail is based on the dispatch cost, with a default value of zero.
 - For the purpose of determining generation\system costs, default VOM value is zero.
- We currently model RPS resources (wind and solar) as fixed hourly profiles. Behind-the-meter solar PV is modeled on the supply side as must-run.
- The conversation started with VOM and Curtailment Price but evolved into a discussion of Curtailment Price alone as VOM costs for wind and solar is zero in PCM.



Contact:

Jamie Austin

Jamie.austin@pacificorp.com