2022 Regional Transmission Plan Assumptions Update

ERCOT Regional Transmission Planning
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DC Tie Dispatch

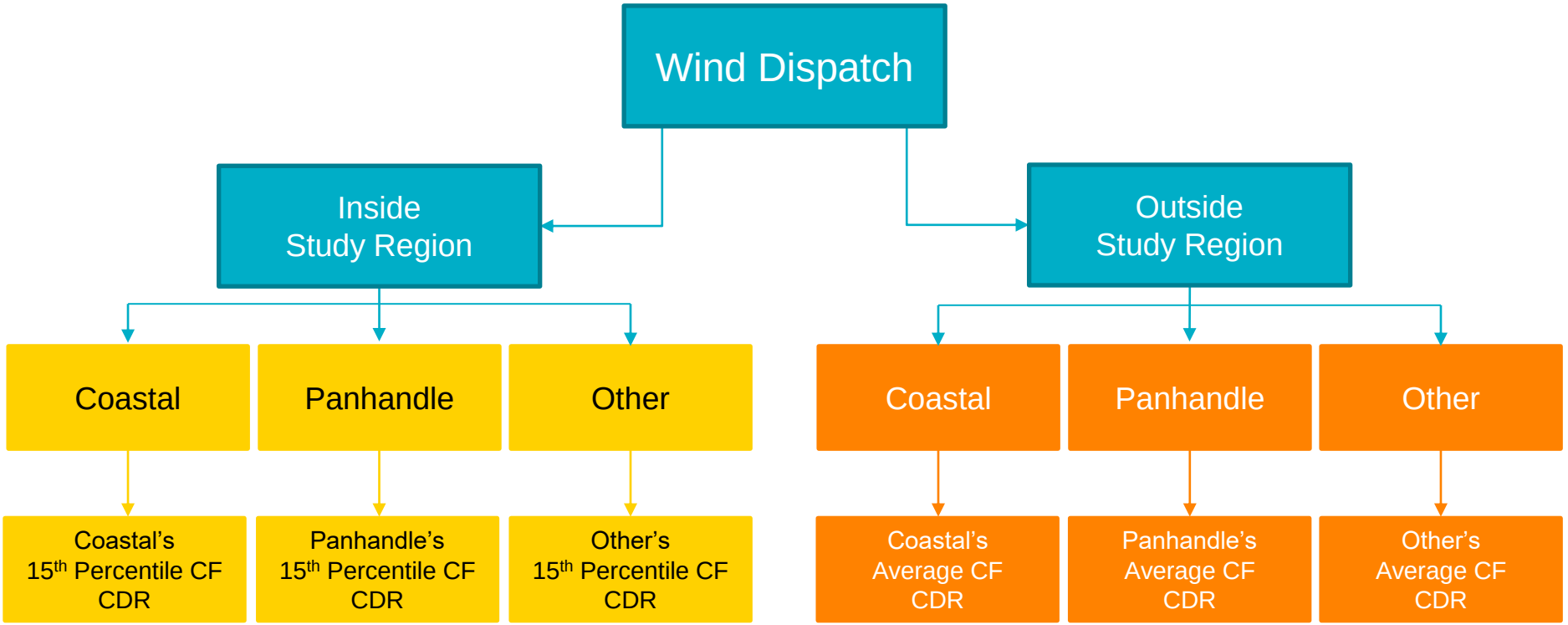
- **Summer Peak Cases:**
  - Analyzed DC tie flows during the top 20 load hours for the past 3 years (60 hours total)
- **Minimum Load Case:**
  - Analyzed DC tie flows during the bottom 20 load hours for the past 3 years (60 hours total)

DC Tie	Summer Peak Case		Minimum Load Case	
	2022 RTP	2021 RTP	2022 RTP	2021 RTP
East	600 MW (IMPORT)	600 MW (IMPORT)	0 MW	0 MW
North	220 MW (IMPORT)	220 MW (IMPORT)	0 MW	0 MW
Laredo	0 MW	0 MW	0 MW	0 MW
Railroad	0 MW	0 MW	0 MW	0 MW

See Appendix for detailed top and bottom 20 load hours data

Wind Dispatch Methodology: Summer Peak

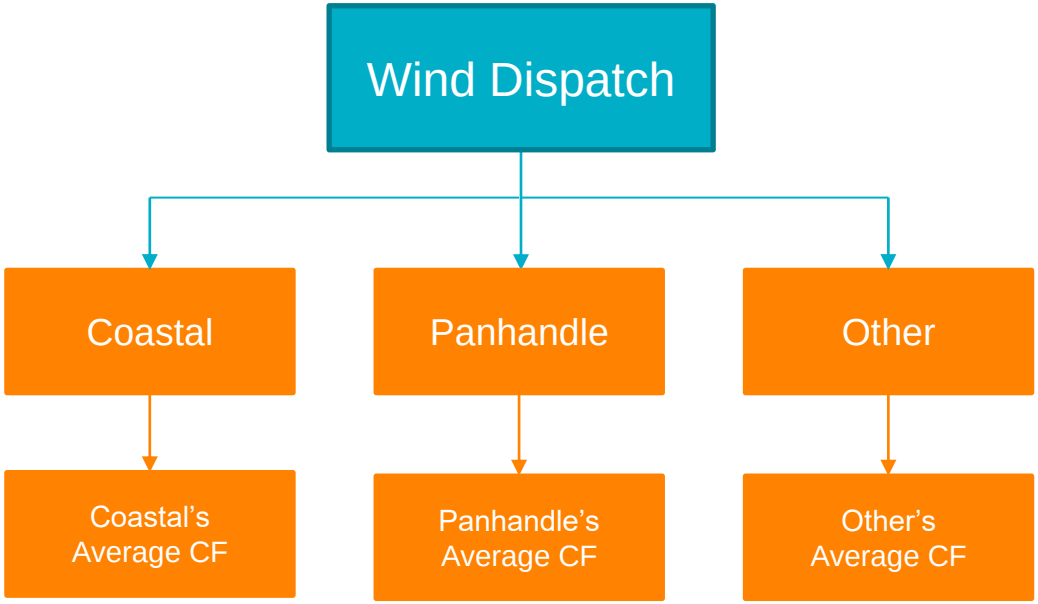
- **Outside Study Region:**
  - CDR weighted average capacity factor (CF) for each wind region (Coastal, Panhandle, Other)
  - Based on top 20 load hours of each year
- **Inside Study Region:**
  - CDR weighted 15th percentile[1] CF for each wind region (Coastal, Panhandle, Other)
  - Based on top 20 load hours of each year



1: The 15th percentile capacity factor (CF) is the value at which 15% of the hours have a lower CF and 85% have a higher CF.

Wind Dispatch Methodology: Minimum Load

- **All Wind:**
  - Weighted average CF for each wind region (Coastal, Panhandle, Other)
  - Based on bottom 20 load hours of each year



Wind Dispatch Capacity Factors

Case		2022 RTP Wind Capacity Factors		
		Coastal	Panhandle	Other
Summer Peak	Inside Study Region	37%	13%	9%
	Outside Study Region	57%	30%	20%
Minimum Load	All Study Regions	27%	54%	45%

Solar Dispatch

- **Summer Peak Cases:**
  - CDR weighted average capacity factor for all of ERCOT
  - Based on top 20 load hours of each year
- **Minimum Load Case:**
  - All solar offline

Case	2022 RTP Solar Capacity Factor
Summer Peak	81%
Minimum Load	Offline

Hydro Dispatch

- **Summer Peak Cases:**
  - CDR weighted average capacity factor for all of ERCOT
  - Based on top 20 load hours of each year
- **Minimum Load Case:**
  - All hydro offline

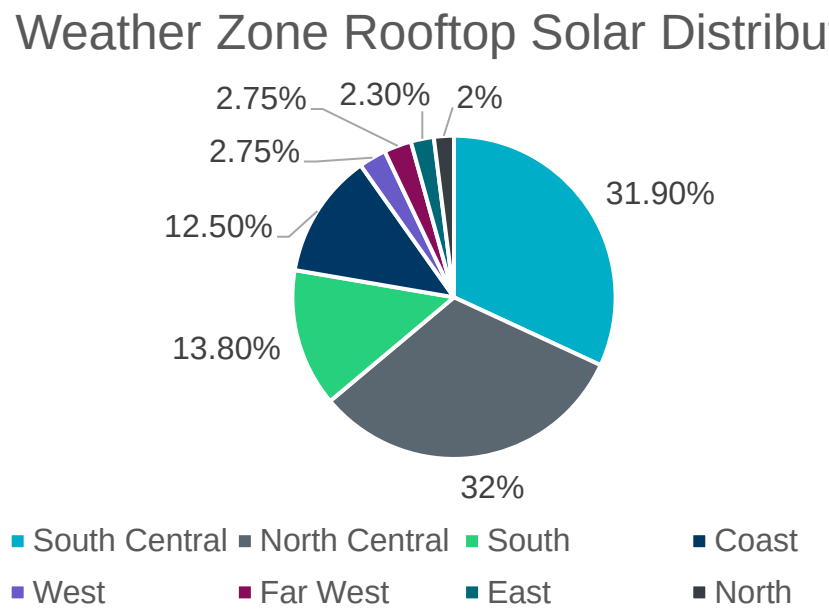
Case	2022 RTP Hydro Capacity Factor
Summer Peak	83%
Minimum Load	Offline

Rooftop Solar Growth Forecast Incorporation

- Rooftop solar growth forecast contribution is consistent with CDR

2024	2025	2026	2027	2028
686 MW	827 MW	968 MW	1,108 MW	1,245 MW

- Rooftop solar growth forecast contribution is distributed at the same weather zone level using the same ratio as the long-term load forecast as follows:



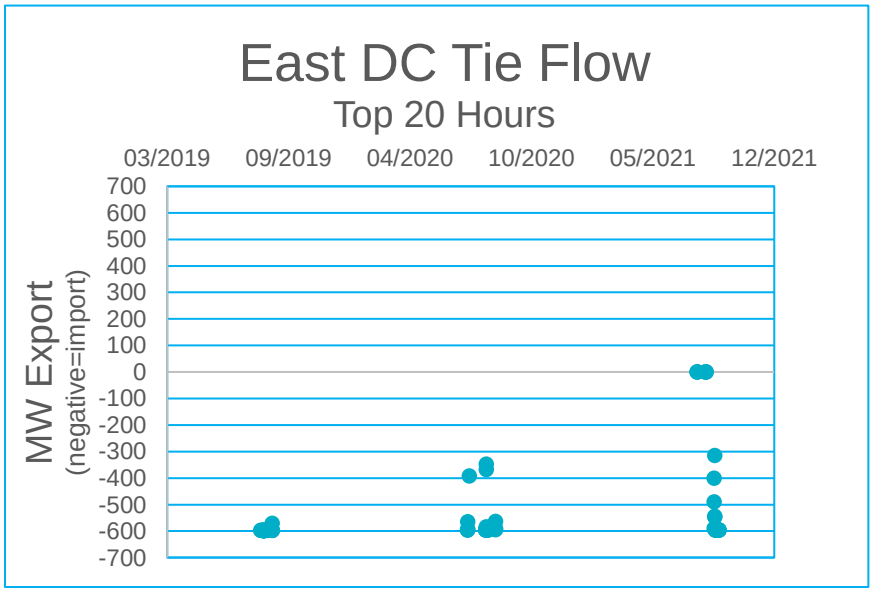
- Weather zone loads will be reduced based on these values

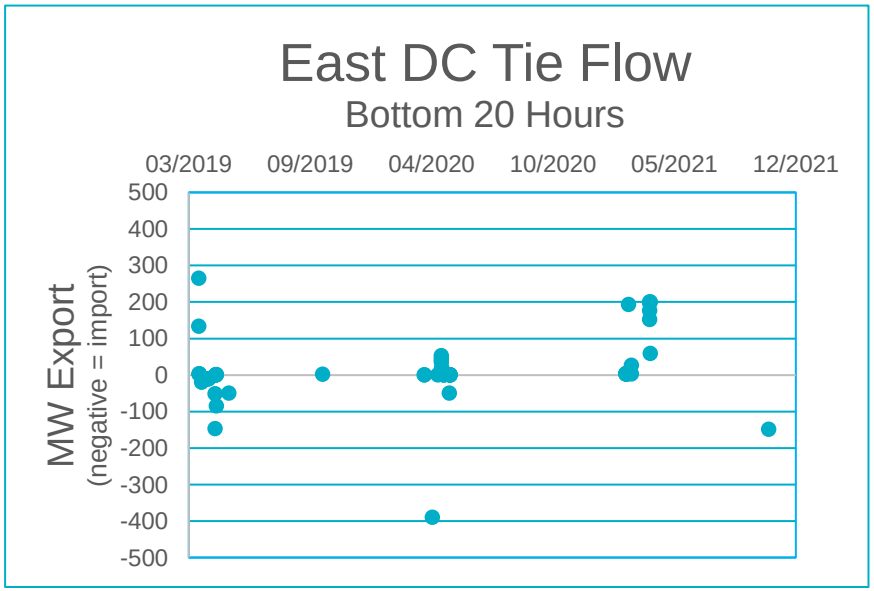
Appendix

2019-2021 Top/Bottom 20 Load Hours - East DC Tie

2019 - 2021 Top 20 Load Hours	
Average Flow	502 MW Import
Median Flow	595.7 MW Import
Flow	**% of hours within range**
Import 550 – 600 MW	75%
Import 500 – 550 MW	3%
Import 200 – 500 MW	10%
Import 0 – 200 MW	0%
No Flow	12%

2019 - 2021 Bottom 20 Load Hours	
Average Flow	14.2 MW Export
Median Flow	2.6 MW Export
Flow	**% of hours within range**
Import 100 – 600 MW	5%
Import 5 – 100 MW	15%
No Flow	55%
Export 5 – 250 MW	23%
Export 250 – 600 MW	2%

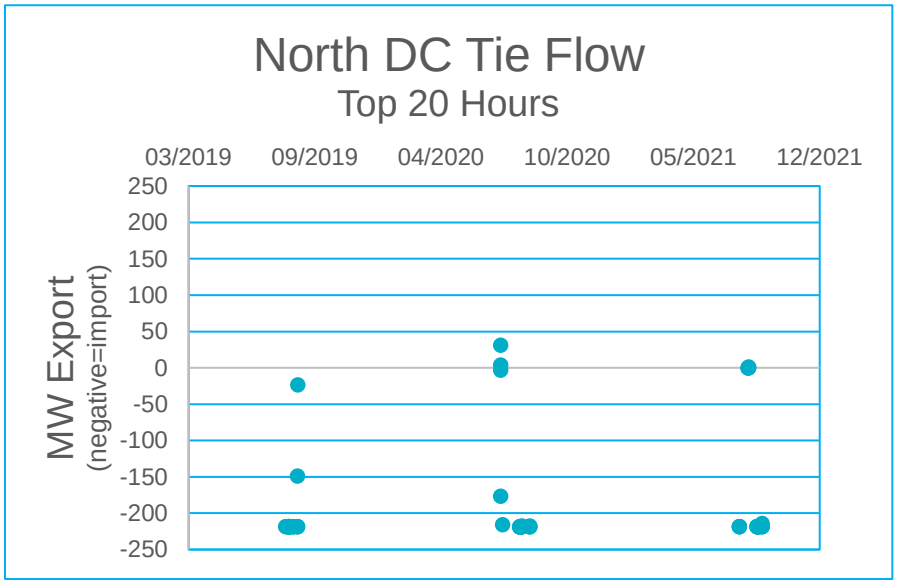


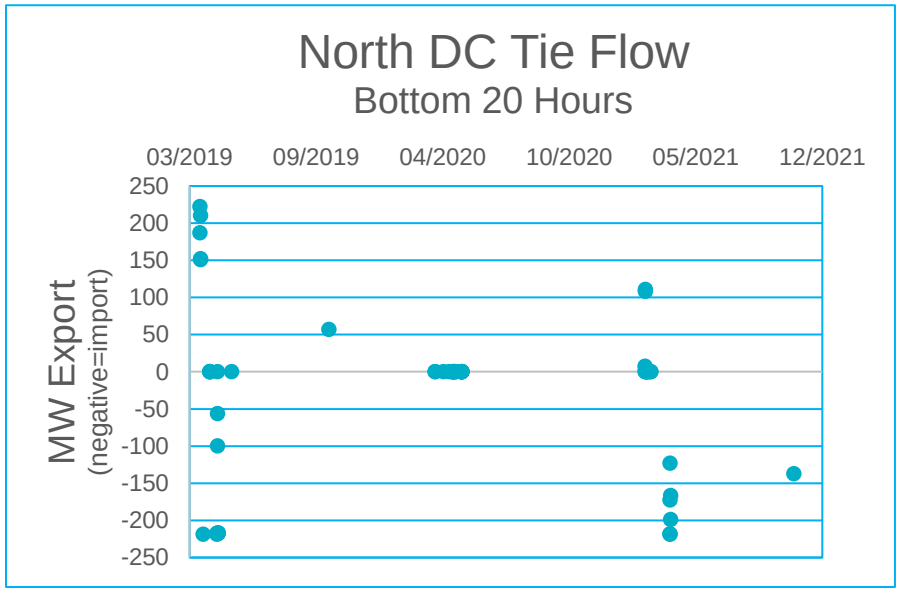


2019-2021 Top/Bottom 20 Load Hours– North DC Tie

2019 - 2021 Top 20 Load Hours	
Average Flow	187.1 MW Import
Median Flow	218.5 MW Import
Flow	**% of hours within range**
Import 200 – 220 MW	83%
Import 100 – 200 MW	4%
Import 0 – 100 MW	3%
Export 0 – 100 MW	3%
Export 100 – 220 MW	7%

2019 - 2021 Bottom 20 Load Hours	
Average Flow	24.8 MW Import
Median Flow	0.0 MW
Flow	**% of hours within range**
Import 200 – 220 MW	13%
Import 5 – 200 MW	11%
No Flow	60%
Export 5 – 200 MW	11%
Export 200 – 220 MW	3%

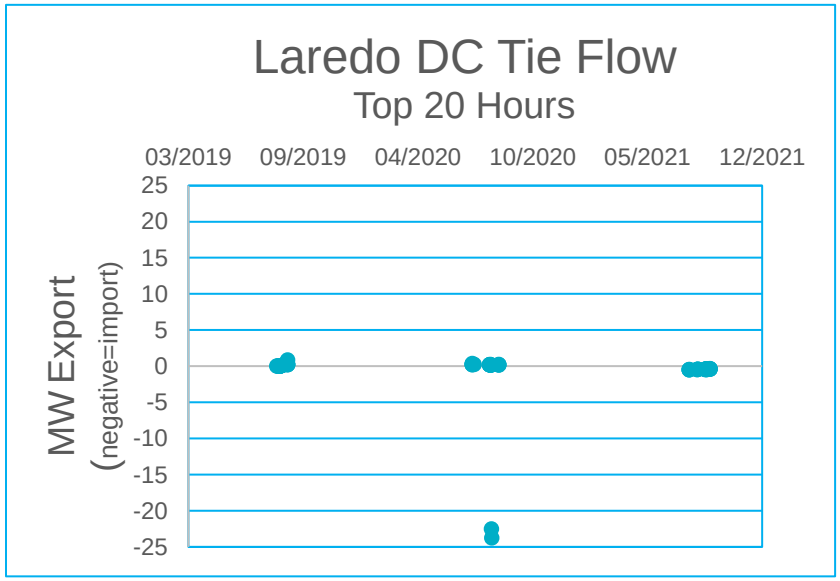


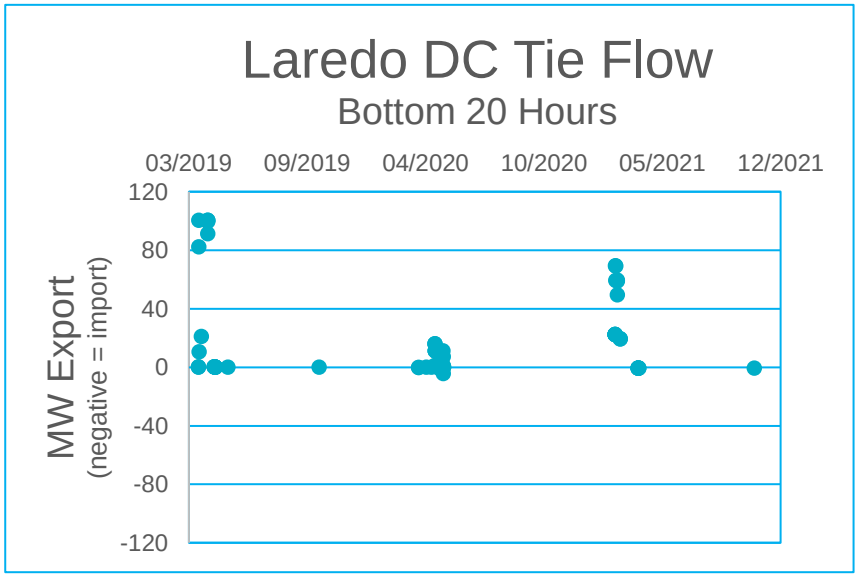


2019-2021 Top/Bottom 20 Load Hours– Laredo DC Tie

2019 - 2021 Top 20 Load Hours	
Average Flow	0.8 MW Export
Median Flow	0.0 MW Export
Flow	**% of hours within range**
Import 50 – 100 MW	0%
Import 5 – 50 MW	3%
No Flow	97%
Export 5 – 50 MW	0%
Export 50 – 100 MW	0%

2019 - 2021 Bottom 20 Load Hours	
Average Flow	20.2 MW Export
Median Flow	0.7 MW Export
Flow	**% of hours within range**
Import 50 – 100 MW	0%
Import 5 – 50 MW	0%
No Flow	53.3%
Export 5 – 50 MW	28.3%
Export 50 – 100 MW	18.3%





2019-2021 Top/Bottom 20 Load Hours– Railroad DC Tie

2019 - 2021 Top 20 Load Hours	
Average Flow	12.1 MW Import
Median Flow	0.0 MW Import
Flow	**% of hours within range**
Import 150 – 300 MW	0%
Import 50 – 150 MW	10%
Import 5 – 50 MW	13%
No Flow	77%
Export 5 – 300 MW	0%

2019 - 2021 Bottom 20 Load Hours	
Average Flow	22.4 MW Export
Median Flow	0.0 MW
Flow	**% of hours within range**
Import 5 – 300 MW	0%
No Flow	72%
Export 5 – 100 MW	15%
Export 100 – 200 MW	10%
Export 200 – 300 MW	3%