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| NPRR Number | [959](http://www.ercot.com/mktrules/issues/NPRR959) | NPRR Title | Creation of a Panhandle Region for Calculation of Seasonal Peak Average Capacity Contributions for Wind |
| Date of Decision | October 8, 2019 |
| Action | Approved |
| Timeline | Normal |
| Effective Date | November 1, 2019 |
| Priority and Rank Assigned | Not Applicable |
| Nodal Protocol Sections Requiring Revision  | 3.2.6.2.2, Total Capacity Estimate |
| Related Documents Requiring Revision/Related Revision Requests | None |
| Revision Description | This Nodal Protocol Revision Request (NPRR) splits the existing non-coastal wind region in the Report on Capacity, Demand and Reserves in the ERCOT Region (CDR) into a Panhandle wind region and an Other wind region. |
| Reason for Revision |  Addresses current operational issues. Meets Strategic goals (tied to the [ERCOT Strategic Plan](http://www.ercot.com/content/news/presentations/2013/ERCOT%20Strat%20Plan%20FINAL%20112213.pdf) or directed by the ERCOT Board). Market efficiencies or enhancements Administrative Regulatory requirements Other: (explain)*(please select all that apply)* |
| Business Case | The CDR currently categorizes Wind-powered Generation Resources (WGRs) into either coastal or non-coastal regions for the purposes of reporting wind capacity and calculating the Peak Average Wind Capacity, a component of the Planning Reserve Margin (PRM) calculation. Splitting the non-coastal wind region into Panhandle and Other wind regions results in a more accurate estimation of Peak Average Wind Capacity. This is due to WGRs in the Panhandle region typically having different output patterns compared to otherwise equivalent non-Panhandle WGRs as well as the high WGR development activity in the Panhandle region. |
| Credit Work Group Review | ERCOT Credit Staff and the Credit Work Group (Credit WG) have reviewed NPRR959 and do not believe that it requires changes to credit monitoring activity or the calculation of liability. |
| PRS Decision | On 8/15/19, PRS voted unanimously to recommend approval of NPRR959 as submitted. All Market Segments were present for the vote. On 9/12/19, PRS voted unanimously to endorse and forward to TAC the 8/15/19 PRS Report and Impact Analysis for NPRR959. All Market Segments were present for the vote.  |
| Summary of PRS Discussion | On 8/15/19, there was no discussion. On 9/12/19, there was no discussion. |
| TAC Decision | On 9/25/19, TAC voted unanimously to recommend approval of NPRR959 as recommended by PRS in the 9/12/19 PRS Report. All Market Segments were present for the vote. |
| Summary of TAC Discussion | On 9/25/19, there was no discussion. |
| ERCOT Opinion | ERCOT supports approval of NPRR959. |
| Board Discussion | On 10/8/19, the ERCOT Board approved NPRR959 as recommended by TAC in the 9/25/19 TAC Report. |

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| Sponsor |
| Name | Connor Anderson |
| E-mail Address | Connor.Anderson@ercot.com |
| Company | ERCOT |
| Phone Number | 512-248-6549 |
| Cell Number |  |
| Market Segment | Not applicable |

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| **Market Rules Staff Contact** |
| **Name** | Jordan Troublefield |
| **E-mail Address** | Jordan.Troublefield@ercot.com |
| **Phone Number** | 512-248-6521 |

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| **Comments Received** |
| **Comment Author** | **Comment Summary** |
| None |  |

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| Market Rules Notes |

Please note that the following NPRR also proposes revisions to the following section:

* NPRR958, Modifications to Wind and Solar Capacity Calculations in the CDR
	+ Section 3.2.6.2.2

Please note that administrative corrections have been made to the language below and authored as “ERCOT Market Rules”.

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| Proposed Protocol Language Revision |

3.2.6.2.2 Total Capacity Estimate

(1) The total capacity estimate shall be determined based on the following equation:

**TOTCAP *s ,i* = INSTCAP *s*, *i +* PUNCAP *s, i +* WINDCAP *s, i, r*  + HYDROCAP *s, i* + SOLARCAP*s,*** ***i* + RMRCAP *s,*** ***i* + DCTIECAP *s* + PLANDCTIECAP** *s* **+ SWITCHCAP *s, i* + MOTHCAP *s, i* + PLANNON *s, i* + PLANIRR *s, i, r* – UNSWITCH *s, i* – RETCAP *s, i***

The above variables are defined as follows:

| Variable | Unit | Definition |
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| TOTCAP *s, i* | MW | *Total Capacity*—Estimated total capacity available during the Peak Load Season *s* for the year *i.* |
| INSTCAP *s, i* | MW | *Seasonal Net Max Sustainable Rating*—The Seasonal net max sustainable rating for the Peak Load Season *s* as reported in the approved Resource Registration process for each operating Generation Resource for the year *i* excluding WGRs, hydro Generation Resource capacity, solar unit capacity, Resources operating under RMR Agreements, and Generation Resources capable of “switching” from the ERCOT Region to a non-ERCOT Region. |
| PUNCAP *s, i* | MW | *Private Use Network Capacity*—The forecasted generation capacity available to the ERCOT Transmission Grid, net of self-serve load, from All-Inclusive Generation Resources in Private Use Networks for Peak Load Season *s* and year *i*. The capacity forecasts are developed as follows. First, a base capacity forecast, determined from Settlement data, is calculated as the average net generation capacity available to the ERCOT Transmission Grid during the 20 highest system-wide peak Load hours for each preceding three year period for Peak Load Season *s* and year *i*. The base capacity forecast is then adjusted by adding the aggregated incremental forecasted annual changes in net generation capacity as of the start of the summer Peak Load Season *s* for forecast year *i* reported for Private Use Networks pursuant to Section 10.3.2.4, Reporting of Net Generation Capacity. This calculation is limited to All-Inclusive Generation Resources in Private Use Networks (1) with a Resource Commissioning Date that occurs no later than the start of the most current Peak Load Season used for the calculation, and (2) that have not been permanently retired by the start of the most current Peak Load Season used for the calculation.

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| ***[NPRR921: Replace the definition above with the following upon system implementation of NPRR889:]****Private Use Network Capacity*—The forecasted generation capacity available to the ERCOT Transmission Grid, net of self-serve load, from Generation Resources and Settlement Only Generators (SOGs) in Private Use Networks for Peak Load Season *s* and year *i*. The capacity forecasts are developed as follows. First, a base capacity forecast, determined from Settlement data, is calculated as the average net generation capacity available to the ERCOT Transmission Grid during the 20 highest system-wide peak Load hours for each preceding three year period for Peak Load Season *s* and year *i*. The base capacity forecast is then adjusted by adding the aggregated incremental forecasted annual changes in net generation capacity as of the start of the summer Peak Load Season *s* for forecast year *i* reported for Private Use Networks pursuant to Section 10.3.2.4, Reporting of Net Generation Capacity. This calculation is limited to Generation Resources and SOGs in Private Use Networks (1) with a Resource Commissioning Date that occurs no later than the start of the most current Peak Load Season used for the calculation, and (2) that have not been permanently retired by the start of the most current Peak Load Season used for the calculation. |

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| WINDPEAKPCT *s, r* | % | *Seasonal Peak Average Wind Capacity as a Percent of Installed Capacity*—The average wind capacity available for the summer and winter Peak Load Seasons *s* and region *r*, divided by the installed capacity for region *r*, expressed as a percentage. The Seasonal Peak Average, derived from Settlement data, is first calculated as the average capacity during the 20 highest system-wide peak Load hours for a given year’s summer and winter Peak Load Seasons. The final value is the average of the previous ten eligible years of Seasonal Peak Average values. Eligible years include 2009 through the most recent year for which COP data is available for the summer and winter Peak Load Seasons. If the number of eligible years is less than ten, the average shall be based on the number of eligible years available. This calculation is limited to WGRs (1) with a Resource Commissioning Date that occurs no later than the start of the most current Peak Load Season used for the calculation, and (2) that have not been permanently retired by the start of the most current Peak Load Season used for the calculation. |
| WINDCAP *s, i, r* | MW | *Existing WGR Capacity*—The capacity available for all existing WGRs for the summer and winter Peak Load Seasons *s,* year *i*, and region *r*, multiplied by WINDPEAKPCT for summer and winter Peak Load Seasons *s* and region *r*. |
| HYDROCAP*s, i* | MW | *Hydro Unit Capacity*—The average hydro Generation Resource capacity available, as determined from the COP, during the highest 20 peak Load hours for each preceding three year period for Peak Load Season *s* and year *i*. This calculation is limited to hydro Generation Resources (1) with a Resource Commissioning Date that occurs no later than the start of the most current Peak Load Season used for the calculation, and (2) that have not been permanently retired by the start of the most current Peak Load Season used for the calculation. |
| SOLARCAP*s, i* | MW | *Solar Unit Capacity*—The average PVGR capacity available, as determined from the COP, during the highest 20 peak Load hours for each preceding three year period for Peak Load Season *s* and year *i.* This calculation is limited to PVGRs (1) with a Resource Commissioning Date that occurs no later than the start of the most current Peak Load Season used for the calculation, and (2) that have not been permanently retired by the start of the most current Peak Load Season used for the calculation. |
| RMRCAP *s, i* | MW | *Seasonal Net Max Sustainable Rating for Generation Resource providing RMR Service*—The Seasonal net max sustainable rating for the Peak Load Season *s* as reported in the approved Resource Registration process for each Generation Resource providing RMR Service for the year *i* until the approved exit strategy for the RMR Resource is expected to be completed. |
| DCTIEPEAKPCT *s* | % | *Seasonal Peak Average Capacity for existing DC Tie Resources as a Percent of Installed DC Tie Capacity*—The average net emergency DC Tie imports for the summer and winter Peak Load Seasons *s*, divided by the total installed DC Tie capacity for Peak Load Seasons *s*, expressed as a percentage. The average net emergency DC Tie imports is calculated for the SCED intervals during which ERCOT declared an Energy Emergency Alert (EEA). This calculation is limited to the most recent single summer and winter Peak Load Seasons in which an EEA was declared. The total installed DC Tie capacity is the capacity amount at the start of the Peak Load Seasons used for calculating the net DC Tie imports. |
| DCTIECAP *s* | MW | *Expected Existing DC Tie Capacity Available under Emergency Conditions*—DCTIEPEAKPCT*s* multiplied by the installed DC Tie capacity available for the summer and winter Peak Load Seasons *s*, adjusted for any known capacity transfer limitations. |
| PLANDCTIECAP *s* | MW | *Expected Planned DC Tie Capacity Available under Emergency Conditions*—DCTIEPEAKPCT*s* multiplied by the maximum peak import capacity of planned DC Tie projects included in the most recent Steady State Working Group (SSWG) base cases, for the summer and winter Peak Load Seasons *s*. The import capacity may be adjusted to reflect known capacity transfer limitations indicated by transmission studies. |
| SWITCHCAP *s, i* | MW | *Seasonal Net Max Sustainable Rating for Switchable Generation Resource*—The Seasonal net max sustainable rating for the Peak Load Season *s* as reported in the approved Resource asset registration process for each Generation Resource for the year *i* that can electrically connect (i.e., “switch”) from the ERCOT Region to another power region. |
| MOTHCAP *s, i* | MW | *Seasonal Net Max Sustainable Rating for Mothballed Generation Resource*—The Seasonal net max sustainable rating for the Peak Load Season *s* as reported in the approved Resource Registration process for each Mothballed Generation Resource for the year *i* based on the lead time and probability information furnished by the owners of Mothballed Generation Resources pursuant to Section 3.14.1.9, Generation Resource Status Updates.If the value furnished by the owner of a Mothballed Generation Resource pursuant to Section 3.14.1.9 is greater than or equal to 50%, then use the Seasonal net max sustainable rating for the Peak Load Season *s* as reported in the approved Resource registration process for the Mothballed Generation Resource for the year *i*. If the value furnished by the owner of a Mothballed Generation Resource pursuant to Section 3.14.1.9 is less than 50%, then exclude that Resource from the Total Capacity Estimate. |
| PLANNON *s, i* | MW | *New, non-IRR Generating Capacity*—The amount of new, non-IRR generating capacity for the Peak Load Season *s* and year *i* that: (a) has a Texas Commission on Environmental Quality (TCEQ)-approved air permit, (b) has a federal Greenhouse Gas permit, if required, (c) has obtained water rights, contracts or groundwater supplies sufficient for the generation of electricity at the Resource, and (d) has a signed Standard Generation Interconnect Agreement (SGIA), or a public, financially-binding agreement between the Resource owner and TSP under which generation interconnection facilities would be constructed; or for a Municipally Owned Utility (MOU) or Electric Cooperative (EC), a public commitment letter to construct a new Resource. Exclude new, non-IRR generating capacity that has met the requirements of (a), (b), (c) and (d) above for which ERCOT has received written Notification from the developer that the new capacity will not be constructed. |
| PLANIRR *s, i, r* | MW | *New IRR Capacity*—For new WGRs, the capacity available for the summer and winter Peak Load Seasons *s,* year *i*, and region *r*, multiplied by WINDPEAKPCT for summer and winter Load Season *s* and region *r*. For new solar units, 100% of the nameplate capacity units until a threshold value of 200 MWs of registered wholesale installed solar capacity is reached for summer Peak Load Season *s* and year *i*. Once the 200 MW threshold value is reached, the average solar unit capacity available, as determined from the COP, during the highest 20 peak Load hours for each preceding three-year period for summer Peak Load Season *s* and year *i.* New IRRs must have an SGIA or other public, financially binding agreement between the Resource owner and TSP under which generation interconnection facilities would be constructed or, for a MOU or EC, a public commitment letter to construct a new IRR. |
| UNSWITCH *s, i*  | MW | *Capacity of Unavailable Switchable Generation Resource*—The amount of capacity reported by the owners of a switchable Generation Resource that will be unavailable to ERCOT during the Peak Load Season *s* and year *i* pursuant to paragraph (2) of Section 16.5.4, Maintaining and Updating Resource Entity Information. |
| RETCAP *s, i* | MW | *Capacity Pending Retirement*—The amount of capacity in Peak Load Season *s* of year *i* that is pending retirement based on information submitted on a Notification of Suspension of Operations (NSO) form (Section 22, Attachment E, Notification of Suspension of Operations) pursuant to Section 3.14.1.11, Budgeting Eligible Costs, but is under review by ERCOT pursuant to Section 3.14.1.2, ERCOT Evaluation Process, that has not otherwise been considered in any of the above defined categories. For All-Inclusive Generation Resources within Private Use Networks, the retired capacity amount is the peak average capacity contribution included in PUNCAP. For reporting of individual All-Inclusive Generation Resources in the Report on the Capacity, Demand and Reserves in the ERCOT Region, only the summer net max sustainable rating included in the NSO shall be disclosed.

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| ***[NPRR921: Replace the definition above with the following upon system implementation of NPRR889:]****Capacity Pending Retirement*—The amount of capacity in Peak Load Season *s* of year *i* that is pending retirement based on information submitted on a Notification of Suspension of Operations (NSO) form (Section 22, Attachment E, Notification of Suspension of Operations) pursuant to Section 3.14.1.11, Budgeting Eligible Costs, but is under review by ERCOT pursuant to Section 3.14.1.2, ERCOT Evaluation Process, that has not otherwise been considered in any of the above defined categories. For Generation Resources and SOGs within Private Use Networks, the retired capacity amount is the peak average capacity contribution included in PUNCAP. For reporting of individual Generation Resources and SOGs in the Report on the Capacity, Demand and Reserves in the ERCOT Region, only the summer net max sustainable rating included in the NSO shall be disclosed. |

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| *i* | None | Year. |
| *s* | None | Summer and winter Peak Load Seasons for year *i*. |
| *r* | None | Coastal, Panhandle, and Other wind regions. WGRs are classified into regions based on the county that contains their Point of Interconnection (POI). The coastal region is defined as the following counties: Aransas, Brazoria, Calhoun, Cameron, Kenedy, Kleberg, Matagorda, Nueces, Refugio, San Patricio, and Willacy. The Panhandle region is defined as the following counties: Armstrong, Bailey, Briscoe, Carson, Castro, Childress, Cochran, Collingsworth, Crosby, Dallam, Deaf Smith, Dickens, Donley, Floyd, Gray, Hale, Hall, Hansford, Hartley, Hemphill, Hockley, Hutchinson, Lamb, Lipscomb, Lubbock, Moore, Motley, Ochiltree, Oldham, Parmer, Potter, Randall, Roberts, Sherman, Swisher, and Wheeler. The Other region consists of all other counties in the ERCOT Region. |