|  |  |  |  |
| --- | --- | --- | --- |
| NPRR Number | [025](http://www.ercot.com/mktrules/issues/RRGRR025) | RRGRR Title | Related to NPRR1005, Clarify Definition of Point of Interconnection (POI) and Add Definition Point of Interconnection Bus (POIB) |
| Date Posted | | February 26, 2020 | |
|  | |  | |
| Requested Resolution | | Normal | |
| Resource Registration Glossary Sections Requiring Revision | | Section 2, Resource Registration Glossary – Unit Information | |
| Related Documents Requiring Revision/Related Revision Requests | | Nodal Protocol Revision Request (NPRR) 1005, Clarify Definition of Point of Interconnection (POI) and Add Definition Point of Interconnection Bus (POIB)  Nodal Operating Guide Revision Request (NOGRR) 210, Related to NPRR1005, Clarify Definition of Point of Interconnection (POI) and Add Definition Point of Interconnection Bus (POIB) | |
| Revision Description | | This Resource Registration Glossary Revision Request (RRGRR) clarifies language by use of new NPRR1005-proposed defined term Point of Interconnection Bus (POIB). | |
| Reason for Revision | | Addresses current operational issues.  Meets Strategic goals (tied to the [ERCOT Strategic Plan](http://www.ercot.com/content/wcm/lists/144926/ERCOT_Strategic_Plan_2019-2023.pdf) or directed by the ERCOT Board).  Market efficiencies or enhancements  Administrative  Regulatory requirements  Other: (explain)  *(please select all that apply)* | |
| Business Case | | The current definition of the term Point of Interconnection (POI) requires that a POI must be at a substation (at a specified voltage level) but also that this substation must be reflected in the Standard Generation Interconnection Agreement (SGIA). This is problematic not only because many Generation Resources that are either older or Non-Opt-In Entity (NOIE)-owned do not have an SGIA, but also because the SGIA in Section 1.14 defines the POI to be the point where ownership changes from the generator to the Transmission Service Provider (TSP), and in many cases, the POI designated in the SGIA is at some location other than the substation. In these cases, it is not clear what point should be considered the POI under the definition of that term.  In many cases where the term POI is used in the Protocols, the meaning is material to the application of the provision. For example, in paragraph (1) of Protocol Section 10.3.2.2, Loss Compensation of EPS Meter Data, POI must be understood to refer to the point of ownership change, and not necessarily the TSP’s substation, because the provision applies only when “the EPS Meter is not located at the [POI]” and would therefore have no meaning if the POI was always understood to be at the substation where the EPS Meter is located. In other cases, such as with the Voltage Support Service (VSS) requirements in Section 3.15 and Section 6.5.7.7, POI must be understood to refer to a TSP-owned substation because the TSP metering equipment used to monitor voltage is always located at the substation, and not necessarily at the point of ownership change defined in the SGIA.  Given these differing uses of the term POI, ERCOT has concluded that two terms are necessary—one to refer to the point of ownership change, consistent with the definition in the SGIA, and one to refer to the substation downstream of the point of ownership change, or more precisely, to one or more buses in that substation (given that electrical differences may exist at different buses in the same substation, and that, for all instances in the Protocols where POI should be understood to refer to the downstream substation, bus-level measurements appear to be appropriate). For the sake of consistency with the SGIA, ERCOT proposes to modify the existing term POI to conform with the SGIA’s conception of the POI as the point of ownership change. At the same time, ERCOT proposes to remove the reference to the SGIA in that definition, since NOIE generators and certain older generators may not have an SGIA. For the purpose of existing POI references that may be reasonably understood to refer to some point in the TSP’s substation downstream of that point of ownership change, ERCOT is proposing a new term POIB. | |

|  |  |
| --- | --- |
| Sponsor | |
| Name | Jay Teixeira |
| E-mail Address | [Jay.Teixeira@ercot.com](mailto:Jay.Teixeira@ercot.com) |
| Company | ERCOT |
| Phone Number | 512-248-6582 |
| Market Segment | Not Applicable |

|  |  |
| --- | --- |
| **Market Rules Staff Contact** | |
| **Name** | Brittney Albracht |
| **E-Mail Address** | [Brittney.Albracht@ercot.com](mailto:Brittney.Albracht@ercot.com) |
| **Phone Number** | 512-225-7027 |

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

|  |
| --- |
| Market Rules Notes |

Please note that the following RRGRR(s) also propose revisions to the following section(s):

* RRGRR023, Related to NPRR1002, BESTF-5 Energy Storage Resource Single Model Registration and Charging Restrictions in Emergency Conditions
  + Section 2, Unit Information

|  |
| --- |
| Proposed Guide Language Revision |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **RARF Tab** | **Wind** | **Solar Photovoltaic (PV)** | **Conventional Generation (Gen)** | **Combined Cycle (CC)** | **Load Resources** | **Distributed Generation** | **Notes** | **Field Name** | **Definition / Detailed Description** | **Screening Study (SS)  (R, C, O, A)** | **Full Interconnect Study (FIS)  (R, C, O, A)** | **Planning Model (R, C, O, A)** | **Full Registration  (R, C, O, A)** |  |
| **Unit Information** | | | | | | | | | | | | | | |
| Unit Information | X | X | X |  |  | X |  | Resource Site Code: | Enter the Site Code established in the General and Site Information tab of the GENERAL\_SITE\_ESIID\_Information workbook. | R | R | R | R |  |
| Unit Information | X | X | X | X |  | X | All Caps | UNIT NAME | Enter Unit Code for the generator unit (e.g. Cedar Bayou Plant Gen 1 is "CBYG1"). | R | R | R | R |  |
| Unit Information | X | X | X | X |  | X | Automatic | Resource Name (Unit Code/Mnemonic) | Concatenated mnemonic of Resource Site Code and Unit name (e.g. CBY\_CBYG1). |  |  | A | A |  |
| Unit Information | X | X | X |  |  |  | Y/N | Settlement Only Generator (SOG) | Refer to ERCOT Protocol Section 2.1, Definitions, for the definition of a Settlement Only Generator (SOG). |  |  | R | R |  |
| Unit Information | X | X | X |  |  |  |  | PUC Registration Number | Enter the PUCT registration number. |  |  |  | O |  |
| Unit Information | X | X | X | X |  |  |  | ERCOT Interconnection Project Number - Only New Units | Enter the ERCOT INR number. Required for new or upgraded units. |  | C | C | C |  |
| Unit Information | X | X | X |  |  |  |  | NERC Number | Enter NERC NCR number. |  |  |  | O |  |
| Unit Information | X | X | X |  |  |  | Y/N | Qualifying Facility | Refer to ERCOT Protocol Section 2 for the definition of Qualifying Facility. |  |  |  | R |  |
| Unit Information | X | X | X | X |  |  | mm/dd/yyyy | Transmission Only MRD | Proposed model load date for RE-owned transmission equipment. |  |  |  | O |  |
| Unit Information | X | X | X | X |  |  | mm/dd/yyyy | Standard Generation Interconnection Agreement (SGIA) Signature Date | Enter the date the Resource signed SGIA. For NOIEs, use MOU date. |  |  |  | R |  |
| Unit Information | X | X | X | X |  | X | mm/dd/yyyy | Unit Start Date (Model Ready Date) | Proposed model load date for unit. Required for new units only. |  |  |  | O |  |
| Unit Information | X | X | X | X |  |  | mm/dd/yyyy | Commercial Operations Date | Enter the unit's planned Commercial Operations Date. After the unit completes operational performance testing, this field should be updated by the RE with the actual Commercial Operations Date. | R | R | R | R |  |
| Unit Information | X | X | X | X |  | X | mm/dd/yyyy | Unit End Date | Entry of a date in this field will result in the unit being removed from the ERCOT model. Enter the model ready date of expected or actual retirement. Leave blank if not known/applicable. |  |  |  | O |  |
| Unit Information | X | X | X | X |  |  | All Caps | SubStation Code/SubStation Mnemonic | Enter the interconnecting transmission station code. If you need assistance in determining the corresponding ERCOT Substation Code\Mnemonic, please consult your TDSP, or ERCOT. For the SS/FIS, if a substation code cannot be identified, leave field blank and enter the expected electrical connection point as text in the comment section. | O | O | R | R |  |
| Unit Information | X | X | X | X |  |  | kV | Voltage Level | Enter the nominal voltage level at the Point of Interconnection Bus (e.g. 69kV, 138kV, 345kV). If you need assistance in determining the corresponding Voltage Level, please consult your TDSP, or ERCOT. | R | R | R | R |  |
| Unit Information | X | X | X | X |  |  | # | PTI Bus Number | Enter the PTI Bus Number at the Point of Interconnection Bus in the planning model. If you need assistance in determining the corresponding PTI Bus Number, please consult your TDSP, or ERCOT. | O | O | R | R |  |
| Unit Information | X | X | X | X |  | X | List | Primary Fuel Type | AB -- Agriculture Byproducts (bagasse, straw, energy crops) BFG -- Blast-Furnace Gas BIT -- Bituminous Coal BL -- Black liquor DFO -- Distillate Fuel Oil (diesel, No1 fuel oil, No 2 fuel oil, No 4 fuel oil) GEO -- Geothermal JF -- Jet Fuel KER -- Kerosene LFG -- Landfill Gas LIG -- Lignite MSW -- Municipal Solid Waste (refuse) NA -- Not Applicable NG -- Natural Gas (use this fuel type for steam turbines which are part of a Combined Cycle Train) NUC -- Nuclear (uranium, plutonium, thorium) OBG -- Other - Biomass Gas (methane, digester gas) OBL -- Other - Biomass Liquids (ethanol, fish oil, waste alcohol, other gases) OBS -- Other - Biomass Solids (animal manure/waster, medical waste, paper pellets, paper derived fuel) OG -- Other - Gas (butane, coal processes, coke-oven coal, methanol, refinery gas) OO -- Other - Oil (butane, crude, liquid byproducts, oil waste, propane) OTH -- Other (batteries, chemicals, hydrogen pitch sulfur, misc. technologies) PC -- Petroleum Coke PG -- Propane RFO -- Residual Fuel Oil (No 5 and No 6 fuel oil) STM -- Steam from other units SLW -- Sludge Waste SUB -- Sub-bituminous Coal SUN -- Solar (photovoltaic, thermal) TDF -- Tires T -- Tidal WAT -- Water (conventional, pumped storage) WDL -- Wood/Wood Waste - Liquids (red liquor, sludge wood spent sulfite liquor, other liquors) WDS -- Wood/Wood Waste - Solids (peat, railroad ties, utility poles, wood chips, other solids) WH -- Waste heat  WND -- Wind  WOC -- Waste / Other Coal | R | R | R | R |  |
| Unit Information | X | X | X | X |  |  | List | Secondary Fuel Type | Same data entry elements as primary fuel type, but for secondary or start-up fuel. | R | R | R | R |  |
| Unit Information | X | X | X |  |  |  | List | Fuel Transportation Type | CV -- Conveyor PL -- Pipeline RR -- Railroad TK -- Truck NA -- Not Applicable |  |  |  | R |  |
| Unit Information | X | X | X |  |  | X | List | Resource Category | Nuclear Hydro Coal and Lignite Combined Cycle ≤ 90 MW\* Combined Cycle > 90 MW\* Gas Steam - Supercritical Boiler Gas Steam - Reheat Boiler Gas Steam - Non-reheat or Boiler without air-preheater Simple Cycle ≤ 90 MW Simple Cycle > 90 MW Diesel Renewable Reciprocating Engine Solar Power Storage Other |  |  | R | R |  |
| Unit Information | X | X | X |  |  | X | Y/N | Renewable | Indicate if the unit is a Renewable Energy Credit (REC) generator, as certified with the PUCT. |  |  |  | R |  |
| Unit Information | X | X | X |  |  | X | Y/N | Renewable/Offset | REC offset generators that produce generation to cover offsets they have been approved to provide, as certified with the PUCT. |  |  |  | R |  |
| Unit Information | X | X | X | X |  | X | List | Physical Unit Type | CA -- Combined cycle steam turbine part (includes steam part of integrated coal gasification combined cycle) CC -- Combined cycle total unit (use only for plants/generators that are in planning stage, for which specific generator details cannot be provided) CE -- Compressed air energy storage CS -- Combined cycle single shaft (combustion turbine and steam turbine share a single generator) CT -- Combined cycle combustion/gas turbine part (includes comb. turbine part of integrated coal gasification combined cycle) FC -- Fuel Cell GT -- Simple-cycle Combustion (gas) turbine (includes jet engine design) HY -- Hydraulic turbine (includes turbines associated with delivery of water by pipeline IC -- Internal combustion (diesel, piston) engine NA -- Unknown at this time (planned units only) OT -- Other PS -- Hydraulic Turbine - Reversible (pumped storage) PV -- Photovoltaic ST -- Steam Turbine including nuclear, geothermal and solar. Does not include combined cycle. WT -- Wind Turbine | R | R | R | R |  |
| Unit Information | X | X | X | X |  | X | MVA | Name Plate Rating | Manufacturer designed MVA Rating of this unit at its rated power factor (gross). | R | R | R | R |  |
| Unit Information | X | X | X | X |  |  | MW | Real Power Rating | Manufacturer designed MW at rated power factor (gross). | R | R | R | R |  |
| Unit Information | X | X | X | X |  |  | MVAR | Reactive Power Rating | Manufacturer designed MVAr at rated power factor (gross) | R | R | R | R |  |
| Unit Information | X | X | X | X |  |  | MW | Turbine Rating | Manufacturer designed MW of the turbine (gross) | C | C | R | C |  |
| Unit Information | X | X | X | X |  |  | kV | Unit Generating Voltage | Terminal voltage of generating unit, as modeled (typically equivalent to low side of GSU) | R | R | R | R |  |
| Unit Information | X | X | X | X |  |  |  | Governor Droop Setting | The percent change in frequency that will cause generator output to change from no Load to full Load. (e.g. for 5%, use .05) |  |  |  | C |  |
| Unit Information | X | X | X | X |  |  | Hz | Governor Dead-band | The range of deviations of system frequency (+/-) that produces no Primary Frequency Response. |  |  |  | R |  |
| Unit Information | X | X | X | X |  |  | degree F | Design Max Ambient Temperature | This is the plant design maximum (high) air temperature. |  |  |  | O |  |
| Unit Information | X | X | X | X |  |  | degree F | Design Min Ambient Temperature | This is the plant design minimum (low) air temperature. |  |  |  | O |  |
| ***[RRGRR019: Insert Unit Information - Switchable Generation Resource below upon system implementation:]*** | | | | | | | | | | | | | | |
| Unit Information | X | X | X | X |  |  | Y/N | Switchable Generation Resource | Is the unit able to switch between the ERCOT Control Area and a non-ERCOT Control Area? | R | R | R | R |  |