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| RRGRR Number | [031](http://www.ercot.com/mktrules/issues/RRGRR031) | RRGRR Title | Related to NPRR995, RTF-6 Create Definition and Terms for Settlement Only Energy Storage |
| Date of Decision | October 22, 2021 |
| Action | Recommended Approval |
| Timeline | Normal |
| Proposed Effective Date | Upon system implementation of Nodal Protocol Revision Request (NPRR) 995, RTF-6 Create Definition and Terms for Settlement Only Energy Storage |
| Priority and Rank Assigned | Not applicable |
| Resource Registration Glossary Sections Requiring Revision  | Section 2, Resource Registration Glossary – General and SiteSection 2, Resource Registration Glossary – Unit InformationSection 2, Resource Registration Glossary – Unit Info - DGSection 2, Resource Registration Glossary – Unit Info - Energy Storage ResourceSection 2, Resource Registration Glossary – ESR Connectivity Section 2, Resource Registration Glossary – Parameters |
| Related Documents Requiring Revision/Related Revision Requests | NPRR995 |
| Revision Description | This Resource Registration Glossary Revision Request (RRGRR) amends the Resource Registration Glossary to accommodate registration of Settlement Only Energy Storage Systems (SOESSs), proposing to require the same level of registration detail for an SOESS that is required for Energy Storage Resources (ESRs) under RRGRR023, Related to NPRR1002, BESTF-5 Energy Storage Resource Single Model Registration and Charging Restrictions in Emergency Conditions. This RRGRR should be implemented simultaneously with NPRR995. |
| 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 | An Energy Storage System (ESS) that is one MW or greater in size and that does not choose to register as an ESR must register as an SOESS. These modifications to the Resource Registration Glossary will create the framework for enabling changes to the Resource Integration & On-going Operations – Resources Services (RIOO-RS) system needed to accommodate SOESSs. |
| ROS Decision | On 7/8/21, ROS unanimously voted via roll call to recommend approval of RRGRR031 as submitted. All Market Segments participated in the vote.On 8/5/21, ROS unanimously voted via roll call to endorse and forward to TAC the 7/8/21 ROS Report and the Impact Analysis for RRGRR031. All Market Segments participated in the vote. |
| Summary of ROS Discussion | On 7/8/21, ERCOT Staff provided an overview of RRGRR031 and confirmed its planned implementation alongside NPRR995.On 8/5/21, there was no discussion. |
| TAC Decision | On 8/27/21, TAC unanimously voted via roll call to recommend approval of RRGRR031 as recommended by ROS in the 8/5/21 ROS Report. All Market Segments participated in the vote. |
| Summary of TAC Discussion | On 8/27/21, TAC reviewed the ERCOT Opinion and ERCOT Market Impact Statement for RRGRR031. |
| ERCOT Opinion | ERCOT supports approval of RRGRR031. |
| ERCOT Market Impact Statement | ERCOT Staff has reviewed RRGRR031 and believes the market impact for RRGRR031, along with NPRR995, clarifies the registration and treatment of SOESSs. |
| Board Decision | On 10/22/21, the ERCOT Board recommended approval of RRGRR031 as recommended by TAC in the 8/27/21 TAC Report. |

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| E-mail Address | Sandip.sharma@ercot.com |
| Company | ERCOT |
| Phone Number | 512-248-4298 |
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| Market Segment | Not applicable |

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| **Market Rules Staff Contact** |
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| **Phone Number** | 512-248-6464 |

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

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| Market Rules Notes |

Please note that the baseline language in the following section(s) have been updated to reflect the incorporation of the following RRGRR(s) into the Resource Registration Glossary:

* RRGRR025, Related to NPRR1005, Clarify Definition of Point of Interconnection (POI) and Add Definition Point of Interconnection Bus (POIB)
	+ Section 2, Resource Registration Glossary – Unit Information (incorporated 9/1/21)

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

* RRGRR029, Related to NPRR1077, Extension of Self-Limiting Facility Concept to Settlement Only Generators (SOGs) and Telemetry Requirements for SOGs
	+ Section 2, Resource Registration Glossary – Unit Information
	+ Section 2, Resource Registration Glossary – Parameters

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| Proposed Guide Language Revision |

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| **Resource Registration Data** | **Wind** | **Solar Photovoltaic (PV)** | **[RRGRR023: Insert column "Energy Storage System (ESS)" upon system implementation of NPRRs 1002, 1026, and 1029]** | **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) - Steady-State, Short Circuit, and Facility(R, C, O, A)** | **FIS - Stability Study(R, C, O, A)** | **Planning Model(R, C, O, A)**  | **Full Registration (R, C, O, A)**  |
| **GENERAL\_SITE\_ESIID\_Information - General and Site Information** |
| General and Site | X | X | X | X | X |   | X | List | This submittal is for: | Select from drop down: New Site, Revision, Addition of unit(s), or Deletion of unit(s).  |   |   |   | R | R  |
| General and Site | X | X | X | X | X |   | X | mm/dd/yyyy | Date Form Completed: | Enter date that form completed/revised in the format MM/DD/YYYY. |   |   |   |   | O |
| General and Site | X | X | X | X | X |   | X | Text | Resource Entity Submitting Form: | Enter the name of the Resource Entity/ Interconnecting Entity. The RE must be the same entity name that filed on the Standard Form Agreement. The IE must be the same entity name that filed on the Generation Entity Information Sheet. The Protocols require that a Load Resource must also complete and submit an Application.  |   |   |   | R | R |
| General and Site | X | X | X | X | X |   | X | Number | Resource Entity DUNS #: | Enter the Market Participant unique identifier as registered with ERCOT for the Resource Entity (e.g. DUNS number plus '3XXX' as assigned by ERCOT). | R | R | R | R | R |
| General and Site | X | X | X | X | X |   | X | Text | Resource Site Name: | Resource site or main Facility name (e.g. Cedar Bayou Plant). Determined jointly with ERCOT.  |   |   |   |   | R |
| General and Site | X | X | X | X | X |   | X | Text | Resource Site Code: | Code for Resource site (e.g. Cedar Bayou Plant is CBY). Determined jointly with ERCOT.  | R | R | R | R | R |
| General and Site | X | X | X | X | X |   | X | Text | Street Address: | Physical Street Address of the plant site |   |   |   | R | R |
| General and Site | X | X | X | X | X |   | X | Text | City: | City associated with the physical street address of the plant site. |   |   |   |   | R |
| General and Site | X | X | X | X | X |   | X | Text | State: | State associated with the physical street address of the plant site. |   |   |   |   | R |
| General and Site | X | X | X | X | X |   | X | Text | Zipcode: | Zip code associated with the physical street address of the plant site. |   |   |   |   | R |
| General and Site | X | X | X | X | X |   | X | List | County: | County associated with the physical street address of the plant site. | R | R | R | R | R |
| General and Site | X | X | X | X | X |   | X | Date | Site In-Service Date: | Date is the date when site was (or is planned to be) commissioned.Entered once initially for the Screening Study. Updated once for FIS. Updated once for the Full Registration. Updated finally for the site commissioning. | R | R | R | R | R |
| General and Site | X | X | X | X | X |   | X | Date | Site Stop Service Date: | Model Ready Date when RE retires or relinquishes ownership of all equipment. Blank if not applicable/known. |   |   |   |   | O |
| General and Site | X | X | X | X | X |   | X | List | Congestion Management Zone for 2003: | This information can be found in the ERCOT Data Dictionary on the Planning and Operations Information website. For newer units, please contact ERCOT. |   |   |   |   | R |
| General and Site | X | X | X | X | X |   | X | Y/N | Resource owned by NOIE? | Indicate Non Opt-In Entity Ownership of Resource | R | R | R | R | R |
| General and Site | X | X | X | X | X |   | X | Y/N | Is Resource behind a NOIE Settlement Meter Point? | For Resources that are connected to the grid behind NOIE Settlement Meter Points |   |   |   |   | R |
| General and Site | X | X | X | X | X |   | X |   | Number of EPS Primary meters: | Enter the total number of primary ERCOT-Polled Settlement (EPS) Meters associated with this site. |   |   |   |   | R |
| General and Site | X | X | X | X | X |   |   | List (Transmission or Distribution) | Is Resource Transmission or Distribution Connected? | Refer to Protocol Section 2.1, Definitions, for the definition of a Resource. |   |   |   |   | R |
| **[RRGRR023: Insert "General and Site" rows below upon system implementation of NPRRs 1002, 1026, and 1029:]** |
| General and Site | X | X | X |   |   |   |   | Y/N | Is Resource a DC-Coupled Resource as defined in ERCOT Protocol Section 2.1, Definitions? | Refer to ERCOT Protocol Section 2.1, Definitions, for the definition of a DC-Coupled Resource.  |   |   |   |   |   |
| General and Site |   |   | X |   |   |   |   | Y/N | Is Resource a Self-Limiting Resource as defined in ERCOT Protocol Section 2.1, Definitions? | Refer to ERCOT Protocol Section 2.1, Definitions, for the definition of a Self-Limiting Resource. |   |   |   |   |   |
| General and Site | X | X | X | X | X |   |   | Y/N | Is Resource a part of a Self-Limiting Facility as defined in ERCOT Protocol Section 2.1, Definitions? | Refer to ERCOT Protocol Section 2.1, Definitions, for the definition of a Self-Limiting Facility. |   |   |   |   |   |
| General and Site | X | X | X | X | X |   | X | Y/N | Is Resource claiming status as a Settlement Only Generator (SOG) or Settlement Only Energy Storage System (SOESS) as defined in ERCOT Protocol Section 2.1, Definitions? | Refer to Protocol Section 2.1, Definitions, for the definition of a Settlement Only Generator (SOG) and Settlement Only Energy Storage System (SOESS). |   |   |   |   | R |
| General and Site | X | X | X | X | X |   | X | Y/N | Is Resource >10 MW? | Indicate if the Resource nameplate rating is greater than 10 MW (Gross). Required if Resource is claiming Settlement Only Generator (SOG) status. |   |   |   |   | C |
| General and Site | X | X | X | X | X |   | X | Text | Printed Name: | Enter the Primary Contact person who can address ERCOT questions regarding Resource Registration submittal. Enter the contact's name, title, phone number, and email address.  | R | R | R | R | R |
| General and Site | X | X | X | X | X |   | X | Text | Title: | Enter the Title of the Primary Contact | R | R | R | R | R |
| General and Site | X | X | X | X | X |   | X |   | Phone Number: | Enter the Phone Number for the Primary Contact | R | R | R | R | R |
| General and Site | X | X | X | X | X |   | X |   | E-mail Address: | Enter the E-mail Address for the Primary Contact | R | R | R | R | R |
| General and Site | X | X | X | X | X |   | X | Text | Printed Name: | Enter the Secondary Contact person who can address ERCOT questions regarding Resource Registration submittal. Enter the contact's name, title, phone number, email address, and fax number.  | O | O | O | O | O |
| General and Site | X | X | X | X | X |   | X | Text | Title: | Enter the Title of the Secondary Contact |   |   |   | O | O |
| General and Site | X | X | X | X | X |   | X |   | Phone Number: | Enter the Phone Number for the Secondary Contact |   |   |   | O | O |
| General and Site | X | X | X | X | X |   | X |   | E-mail Address: | Enter the E-mail Address for the Secondary Contact |   |   |   | O | O |
| **Unit Information** |
| Unit Information | X | 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 | R |
| Unit Information | X | 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 | R |
| ***[RRGRR023: Replace "Unit Information - UNIT NAME" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Unit Information | X | 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"). For an ESS this is the name of the ESS while discharging. | R | R | R | R | R |
| Unit Information | X | 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 |
| ***[RRGRR023: Insert "Unit Information" rows below upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Unit Information |   |   | X |   |   |   |   | All Caps | Energy Storage System (ESS) Name  | This name is used to tie ESS discharging and charging, prior to single ESS model era.  | R | R | R | R | R |
| Unit Information |   |   | X |   |   |   |   | All Caps | Dispatch Asset Code (provided by ERCOT) | For ESS enter the Dispatch Asset Code (this code will be provided by ERCOT). This code will be used for the ESS while charging. |   |   |   |   | R |
| Unit Information |   |   | X |   |  |   |   |   | ESIID assigned to meter | ESI ID number assigned to the meter. For NOIEs, the TDSP will create a non-settlement ESI ID. |   |   |   |   | R |
| Unit Information |   |   | X |   |  |   |   | Y/N | Wholesale Delivery Point? | Enter Y or N, if the point of delivery is a wholesale delivery point. |   |   |   |   | R |
| Unit Information | X | X | X | X |  |   |   | Y/N | Settlement Only Generator (SOG) or Settlement Only Energy Storage System (SOESS) | Refer to ERCOT Protocol Section 2.1, Definitions, for the definition of a Settlement Only Generator (SOG) and Settlement Only Energy Storage System (SOESS).  |   |   |   | R | R |
| Unit Information | X | X | X | X |  |   |   |  | PUC Registration Number | Enter the PUCT registration number.  |   |   |   |   | O |
| ***[RRGRR023: Insert "Unit Information" rows below upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Unit Information | X | X | X |   |   |   |   | Y/N | DC-Coupled Resource | Refer to ERCOT Protocol Section 2.1, Definitions, for the definition of a DC-Coupled Resource | R | R | R | R | R |
| Unit Information |   |   | X |   |   |   |   | Y/N | Self-Limiting Resource | Refer to ERCOT Protocol Section 2.1, Definitions, for the definition of a Self-Limiting Resource | R | R | R | R | R |
| Unit Information | X | X | X | X | X |   |   | Y/N | Part of Self-Limiting Resource Facility | Refer to ERCOT Protocol Section 2.1, Definitions, for the definition of a Self-Limiting Resource Facility | R | R | R | R | R |
| Unit Information | X | X | X | X | X |   |   | # | Self-Limiting Facility #  | Self-Limiting Facility # 1, 2, 3….Leave blank if not Self-Limiting Facility. Refer to definition of Self-Limiting Facility in Protocol Section 2.1, Definitions. | R | R | R | R | R |
| Unit Information | X | X | X | X | X |   |   | Automatic | Site\_Self-Limiting Facility# | Automatic field. All Resources that are part of the same Self-Limiting Facility will have same code | R | R | R | R | R |
| Unit Information | X | 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 | C |
| Unit Information | X | X | X | X |  |   |   |  | NERC Number | Enter NERC NCR number. |   |   |   |   | O |
| Unit Information | X | 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 | X |   |   | mm/dd/yyyy | Transmission Only MRD | Proposed model load date for RE-owned transmission equipment. |   |   |   |   | O |
| Unit Information | X | 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 |   | 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 | 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 | R |
| Unit Information | X | 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 | 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 | O | R | R |
| Unit Information | X | X | X | X | X |   |   | kV | Voltage Level | Enter the nominal voltage level at the Point of Interconnection (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 | R |
| ***[RRGRR025: Replace "Unit Information - Voltage Level" above with the following upon system implementation of NPRR1005:]*** |
| Unit Information | X | 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 | R |
| Unit Information | X | X | X | X | X |   |   | # | PTI Bus Number | Enter the PTI Bus Number at the Point of Interconnection in the planning model. If you need assistance in determining the corresponding PTI Bus Number, please consult your TDSP, or ERCOT. | O | O | O | R | R |
| ***[RRGRR025: Replace "Unit Information - PTI Bus Number" above with the following upon system implementation of NPRR1005:]*** |
| Unit Information | X | 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 | O | R | R |
| ***[RRGRR023: Insert "Unit Information - Transmission Station Load Name in Network Operations Model" below upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Unit Information |   |   | X |   |   |   |   | All Caps | Transmission Station Load Name in Network Operations Model | Enter the Load Name as listed in the ERCOT model as provided by the TDSP to be used by the ESS while charging. |   |   |   |   | R |
| Unit Information | X | X | X | X | X |   | X | List | Primary Fuel Type | AB -- Agriculture Byproducts (bagasse, straw, energy crops)BFG -- Blast-Furnace GasBIT -- Bituminous CoalBL -- Black liquorDFO -- Distillate Fuel Oil (diesel, No1 fuel oil, No 2 fuel oil, No 4 fuel oil)GEO -- GeothermalJF -- Jet FuelKER -- KeroseneLFG -- Landfill GasLIG -- LigniteMSW -- Municipal Solid Waste (refuse)NA -- Not ApplicableNG -- 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 CokePG -- PropaneRFO -- Residual Fuel Oil (No 5 and No 6 fuel oil)STM -- Steam from other unitsSLW -- Sludge WasteSUB -- Sub-bituminous CoalSUN -- Solar (photovoltaic, thermal)TDF -- TiresT -- TidalWAT -- 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 | R |
| ***[RRGRR023: Replace "Unit Information - Primary Fuel Type" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Unit Information | X | X | X | X | X |   | X | List | Primary Fuel Type | AB -- Agriculture Byproducts (bagasse, straw, energy crops)BFG -- Blast-Furnace GasBIT -- Bituminous CoalBL -- Black liquorDFO -- Distillate Fuel Oil (diesel, No1 fuel oil, No 2 fuel oil, No 4 fuel oil)GEO -- GeothermalJF -- Jet FuelKER -- KeroseneLFG -- Landfill GasLIG -- LigniteMSW -- Municipal Solid Waste (refuse)MWH – Electricity (use this fuel type for battery energy storage)NA -- Not ApplicableNG -- 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 (chemicals, hydrogen pitch sulfur, misc. technologies)PC -- Petroleum CokePG -- PropaneRFO -- Residual Fuel Oil (No 5 and No 6 fuel oil)STM -- Steam from other unitsSLW -- Sludge WasteSUB -- Sub-bituminous CoalSUN -- Solar (photovoltaic, thermal) or DC-Coupled Resources combining photovoltaic and battery energy storageTDF -- TiresT -- TidalWAT -- 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 and DC-Coupled Resources combining wind and battery energy storage WOC -- Waste / Other CoalWND\_SUN – DC-Coupled Resources combining wind, photovoltaic and battery energy storage | R | R | R | R | R |
| Unit Information | X | 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 | R |
| ***[RRGRR023: Replace "Unit Information - Secondary Fuel Type" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Unit Information | X | X | X | X | X |   |   | List | Secondary Fuel Type | Same data entry elements as primary fuel type, but for secondary or start-up fuel. For DC-Coupled Resource use MWH  | R | R | R | R | R |
| Unit Information | X | X |   | X |  |   |   | List | Fuel Transportation Type | CV -- ConveyorPL -- PipelineRR -- RailroadTK -- TruckNA -- Not Applicable |   |   |   |   | R |
| Unit Information | X | X | X | X |  |   | X | List | Resource Category | NuclearHydroCoal and LigniteCombined Cycle ≤ 90 MW\*Combined Cycle > 90 MW\*Gas Steam - Supercritical BoilerGas Steam - Reheat BoilerGas Steam - Non-reheat or Boiler without air-preheaterSimple Cycle ≤ 90 MWSimple Cycle > 90 MWDieselRenewableReciprocating EngineSolarPower StorageOther |   |   |   | R | R |
| ***[RRGRR023: Replace "Unit Information - Resource Category" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Unit Information | X | X | X | X |  |   | X | List | Resource Category | NuclearHydroCoal and LigniteCombined Cycle ≤ 90 MW\*Combined Cycle > 90 MW\*Gas Steam - Supercritical BoilerGas Steam - Reheat BoilerGas Steam - Non-reheat or Boiler without air-preheaterSimple Cycle ≤ 90 MWSimple Cycle > 90 MWDieselRenewableReciprocating EngineSolarBattery Energy Storage DC-Coupled Battery Energy Storage and SolarDC-Coupled Battery Energy Storage and WindDC-Coupled Battery Energy Storage and Solar and WindOther |   |   |   | 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 |   | 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 storageCS -- 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 CellGT -- 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) engineNA -- Unknown at this time (planned units only)OT -- OtherPS -- Hydraulic Turbine - Reversible (pumped storage)PV -- PhotovoltaicST -- Steam Turbine including nuclear, geothermal and solar. Does not include combined cycle.WT -- Wind Turbine | R | R | R | R | R |
| ***[RRGRR023: Replace "Unit Information - Physical Unit Type" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Unit Information | X | X | X | X | X |   | X | List | Physical Unit Type | BA – Battery Energy StorageBA-PV – DC-Coupled Battery Energy Storage and PhotovoltaicBA-WT – DC-Coupled Battery Energy Storage and Wind TurbineBA-PV-WT – DC-Coupled Battery Energy Storage, Photovoltaic and Wind TurbineCA -- 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 storageCS -- 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 CellGT -- 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) engineNA -- Unknown at this time (planned units only)OT -- OtherPS -- Hydraulic Turbine - Reversible (pumped storage)PV -- PhotovoltaicST -- Steam Turbine including nuclear, geothermal and solar. Does not include combined cycle.WT -- Wind Turbine | R | R | R | R | R |
| Unit Information | X | 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 | R |
| Unit Information | X | X | X | X | X |   |   | MW | Real Power Rating | Manufacturer designed MW at rated power factor (gross). | R | R | R | R | R |
| Unit Information | X | X | X | X | X |   |   | MVAR | Reactive Power Rating | Manufacturer designed MVAr at rated power factor (gross) | R | R | R | R | R |
| Unit Information | X | X |   | X | X |   |   | MW | Turbine Rating | Manufacturer designed MW of the turbine (gross) | C | C | C | R | C |
| Unit Information | X | 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 | R |
| Unit Information | X | 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 | 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 | X |   |   | degree F | Design Max Ambient Temperature | This is the plant design maximum (high) air temperature.  |   |   |   |   | O |
| Unit Information | X | X | X | X | X |   |   | degree F | Design Min Ambient Temperature | This is the plant design minimum (low) air temperature.  |   |   |   |   | O |
| ***[RRGRR019 and RRGRR023: Insert applicable portions of "Unit Information - Switchable Generation Resource" below upon system implementation of RRGRR019 or NPRRs 1002, 1026, and 1029 respectively:]*** |
| Unit Information | X | 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 | R |
| **Unit Info - DG** |
| Unit Info - DG |   |   |   |   |  |   | X | List | Technology Type | (FS) Fossil Fuel Steam(GT) Gas Turbine(H) Hydro(W) Wind, (S) Solar(BA) Battery(X) Other  |   |   |   |   |   |
| Unit Info - DG |   |   |   |   |   |   | X | # | If Wind, Number of Turbines | Count total of wind turbines | R | R | R | R | R |
| Unit Info - DG |  |  | X |  |  |  | X | MW | SODG or SOESS Nameplate MW Rating | If SODG or SOESS is an aggregation of multiple units, mathematical summation of nameplate ratings of all units in the aggregation  |  |  |  |  |  |
| Unit Info - DG |  |  | X |  |  |  | X | MWh | If SODESS, Nameplate MWh Rating. If SODESS is an aggregation of multiple units MWh Rating of all ESSs in the aggregation. | If SODESS, mathematical summation of the nameplate MWh ratings of all battery modules in the ESS. If SODESS is an aggregation of multiple units, mathematical summation of nameplate MWh ratings of all ESSs in the aggregation. |  |  |  |  |  |
| Unit Info - DG |  |  | X |  |  |  | X | % | For SODG that are aggregation of multiple units % of ESS capacity in the aggregation. | For an SODG that is an aggregation of multiple units, the portion of ESS MW capacity in the aggregation, in % of total SODG MW rating. |  |  |  |  |  |
| Unit Info - DG |  |  | X |  |  |  | X | % | For SODG that are aggregation of multiple units % of non-ESS capacity in the aggregation. | For an SODG that is an aggregation of multiple units, the portion of non-ESS MW capacity in the aggregation, in % of total SODG MW rating. |  |  |  |  |  |
| Unit Info - DG |   |   |   |   |   |   | X | Y/N | Private Network / Cogen  | A cogen is a generating facility that produces electricity and another form of useful thermal energy used for industrial, commercial, heating, or cooling purposes. N/A for DRG |   |   |   |   |   |
| Unit Info - DG |   |   |   |   |   |   | X | MW | Amount of Self Serve for Cogen | Amount of the unit output used for self serve and not available for the grid |   |   |   |   |   |
| Unit Info - DG |   |   |   |   |   |   | X | MW | Private Network Net Interchange | For private networks, the net interchange shall be provided along with gross MW and MVAr per generating unit.(ERCOT Operating Guides) |   |   |   |   |   |
| Unit Info - DG |   |   |   |   |   |   | X | MW | Private Network Gross Unit (MW) | For private networks, the net interchange shall be provided along with gross MW and MVAr per generating unit.(ERCOT Operating Guides) |   |   |   |   |   |
| Unit Info - DG |   |   |   |   |   |   | X | MVAR | Private Network Gross Unit (MVAR) | For private networks, the net interchange shall be provided along with gross MW and MVAr per generating unit.(ERCOT Operating Guides) |   |   |   |   |   |
| Unit Info - DG |   |   |   |   |   |   | X | List | Generic Fuel Category | 1) Coal and Lignite2) Combined Cycle greater than 90 MW3) Combined Cycle less than or equal to 90 MW4) Diesel (and all other diesel or gas-fired Resources)5) Gas Steam Non-reheat Boiler or Boiler without air-preheater6) Gas Steam Reheat Boiler7) Gas Steam Supercritical Boiler8) Hydro9) Nuclear10) Other Renewable (i.e. non-hydro renewable Resources)11) Power Storage12) Simple Cycle greater than 90 MW13) Simple Cycle less than or equal to 90 MW |   |   |   |   |   |
| Unit Info - DG |   |   |   |   |   |   | X | List | Generic Start-up / Operating Category | 1) Base Load2) Gas-Cyclic3) Gas-Intermediate4) Gas-Peaking5) Renewable (Including Hydro) |   |   |   |   |   |
| Unit Info - DG |   |   |   |   |   |   | X | All Caps | Substation Name for POD | Enter the name of the substation as provided by the TDSP. (Where the DG will be mapped.) |   |   |   |   | R |
| Unit Info - DG |   |   |   |   |   |   | X | All Caps | Substation Code for POD | Enter the TDSP substation code as provided by the TDSP. (Where the DG will be mapped.) |   |   |   |   | R |
| Unit Info - DG |   |   |   |   |   |   | X |   | Transmission Bus POD (PTI Bus No) | Enter the transmission PTI bus number as provided by the TDSP. (Where the DG will be mapped.) |   |   |   |   | R |
| Unit Info - DG |   |   |   |   |   |   | X | kV | Transmission Station Voltage | Enter the transmission level voltage of the TDSP station as provided by the TDSP. Normally this will be 69 kV or higher. (Where the DG will be mapped.) |   |   |   |   | R |
| Unit Info - DG |   |   |   |   |   |   | X | All Caps | Transmission Station Load Name in Network Operations Model | Enter the Load Name as listed in the ERCOT model as provided by the TDSP. (Where the DG will be mapped.) |   |   |   |   | R |
| Unit Info - DG |   |   |   |   |   |   | X | All caps | Resource Entity Name Owner | Enter the name of the Resource Entity who owns all or a portion of this unit. |   |   |   |   | R |
| Unit Info - DG |   |   |   |   |   |   | X |   | Resource Entity Owner Duns Number | Enter the name of the Resource Entity/ Interconnecting Entity. The RE must be the same entity name that filed on the Standard Form Agreement. The IE must be the same entity name that filed on the Generation Entity Information Sheet. The Protocols require that a Load Resource must also complete and submit an Application.  |   |   |   |   | R |
| ***[RRGRR023: Insert Section "Unit Info - Energy Storage Resource" below upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| **Unit Info - Energy Storage System** |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | degree F | Maximum Operating Temperature | The highest ambient temperature at which ESS may cease operating due to procedural requirements or equipment limitations. (Most limiting condition) |   |   |   |   | R |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | degree F | Minimum Operating Temperature | The lowest ambient temperature at which ESS may cease operating due to procedural requirements or equipment limitations. (Most limiting condition) |   |   |   |   | R |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | ft | Distance above base flood elevation | Flood level elevation |   |   |   |   | R |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | MW | Nameplate DC Capacity | Mathematical summation of the DC nameplate capacities of all battery modules in the ESS. |   |   |   |   | R |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | MW | Nameplate AC Capacity | Mathematical summation of the AC nameplate capacities of all inverters in the ESS. |   |   |   |   | R |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | MWh | Nameplate MWh Rating | Mathematical summation of the nameplate MWh ratings of all battery modules in the ESS. |   |   |   | R | R |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | % | Roundtrip Efficiency | Roundtrip Efficiency of an ESS at the POI. Roundtrip Efficiency should take into account all energy used to complete the cycle of “withdraw/ store/inject” as seen from the POI and should include the energy required for thermal management even though that may be metered and/or provided through a separate feed. |   |   |   | R | R |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | % /day | Self-discharge Rate | % Energy loss/day |   |   |   |   | R |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | seconds | Minimum discharge time | Minimum discharge time to ramp from 0 MW to rated MW discharging capacity |   |   |   |   | R |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | seconds | Minimum charge time | Minimum charge time to ramp from 0 MW to Maximum Discharge Power |   |   |   |   | R |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | MW | Maximum Charge Power | Power needed to fully charge the ESS from completely discharged state |   |   |   |   | R |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | Hr | Standard discharge duration | Estimated distribution of the state of charge and power level in operation --Maximum discharge time |   |   |   |   | R |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | # | Cycling capacity | Number of times the ESS can release energy level it was designed for after re-charge (#/days; #/week, etc.) |   |   |   |   | R |
| Unit Info - Energy Storage System |   |   | X |   |   |   |   | Yrs | Life Expectancy  | Estimated ESS life expectancy in years |   |   |   |   | R |
| ***[RRGRR023: Insert Section "ESS Connectivity" below upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| **ESS Connectivity** |
| ESS Connectivity |   |   | X |   |   |   |   | All Caps | Resource Name (Unit Code/Mnemonic) | Concatenated mnemonic of Resource Site Code and Unit name (e.g. CBY\_CBYG1). |   |   |   |   | A |
| ESS Connectivity |   |   | X |   |   |   |   | List | Skid/Array Configuration Identifier | Select one from drop down list |   |   |   |   | R |
| ESS Connectivity |   |   | X |   |   |   |   | # | Number of Skid/Arrays per Skid/Array Configuration Identifier | Enter the total number of Skid/Arrays of the identifier selected in the preceding cell |   |   |   |   | R |
| ESS Connectivity |   |   | X |   |   |   |   |  List | Battery Module Configuration Identifier | Select one from drop down list |   |   |   |   | R |
| ESS Connectivity |   |   | X |   |   |   |   | # | # of Battery Modules per Module Configuration | Enter the total number of battery modules of the identifier selected in the preceding cell |   |   |   |   | R |
| **Parameters** |
| Parameters |   | X | X |   | X |   |   | List | SITECODE | For Parameters - CFG - enter the Site Code established in the General and Site Information tab of the GENERAL\_SITE\_ESIID\_Information workbook. |   |   |   | R | R |
| Parameters |   | X |   |   | X |   |   | List | Train Code | For Parameters - CFG - enter the Train Code as provided on the Unit Information Train tab. Select from drop-down list. |   |   |   | R | R |
| Parameters |   | X |   |   | X |   |   | List | Configuration Code | For Parameters - CFG - enter the Concatenated code of the Train Code and the Configuration Number. Select from drop-down list. |   |   |   | R | R |
| Parameters | X | X | X | X | X |   |   | List | UNIT NAME | Code for name of generator unit, as provided on the Unit Information tab. |   |   |   | R | R |
| Parameters | 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 |
| Parameters | X | X | X | X | X |   |   | MW | High Reasonability Limit | A theoretical value of net generation above which, the generator is not expected to operate under most conceivable conditions. This value is used by ERCOT market systems to validate COP submissions of HSL, telemetered HSL, and certain offers which may have been entered in error by the QSE. The HRL is also used in settlements to deconstruct prices at a CCT logical resource node. |   |   |   |   | R |
| ***[RRGRR023: Replace "Parameters - High Reasonability Limit" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Parameters | X | X | X | X | X |   |   | MW | High Reasonability Limit | A theoretical value of net generation above which, the generator is not expected to operate under most conceivable conditions. This value is used by ERCOT market systems to validate COP submissions of HSL, telemetered HSL, and certain offers which may have been entered in error by the QSE. The HRL is also used in settlements to deconstruct prices at a CCT logical resource node. Self-Limiting Resources should use this field to enter the limit for maximum MW injection. |   |   |   |   | R |
| ***[RRGRR023: Insert "Parameters - High Reasonability Limit, Self-Limiting Facility" below upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Parameters | X | X | X | X | X |   |   | MW | High Reasonability Limit, Self-Limiting Facility | Limit for maximum MW injection for Self-Limiting Facility above which the Self-Limiting Facility is not expected to operate.This field should not be used by Resources that are not part of Self-Limiting Facility. |   |   |   |   |   |
| Parameters | X | X | X | X | X |   |   | MW | Low Reasonability Limit | A theoretical limit of net generation below which, the generator is not expected to operate under most conceivable conditions. This value is used by ERCOT market systems to validate COP submissions of LSL, telemetered LSL, and certain offers which may have been entered in error by the QSE. |   |   |   |   | R |
| ***[RRGRR023: Replace "Parameters - Low Reasonability Limit" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Parameters | X | X | X | X | X |   |   | MW | Low Reasonability Limit | A theoretical limit of net generation below which, the generator is not expected to operate under most conceivable conditions. For Energy Storage System (ESS) Low Reasonability limit is a negative value showing theoretical limit of net withdrawal/charging below which ESS is not expected to withdraw/charge. This value is used by ERCOT market systems to validate COP submissions of LSL, telemetered LSL, and certain offers which may have been entered in error by the QSE. Self-Limiting Resources should use this field to enter the limit for maximum MW withdrawal. |   |   |   |   | R |
| ***[RRGRR023: Insert "Parameters - Low Reasonability Limit, Self-Limiting Facility" below upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Parameters | X | X | X | X | X |   |   | MW | Low Reasonability Limit, Self-Limiting Facility | Limit for maximum MW withdrawal of Self-Limiting Facility above which the Self-Limiting Facility is not expected to operate This field should not be used by Resources that are not part of Self-Limiting Facility |   |   |   |   |   |
| Parameters | X | X | X | X | X |   |   | MW/min | High Reasonability Ramp Rate Limit | An "Out-of-Bounds" value chosen by the Resource Entity that represents the maximum magnitude of the values entered for the up and down ramp rates used by SCED. Used by ERCOT to alarm/reject data exceeding this value. |   |   |   |   | R |
| Parameters | X | X | X | X | X |   |   | MW/min | Low Reasonability Ramp Rate Limit | An "Out-of-Bounds" value chosen by the Resource Entity that represents the minimum magnitude of the values entered for the up and down ramp rates used by SCED. Used by ERCOT to alarm/reject data below this value.  |   |   |   |   | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Max Sustainable Rating - Spring | Spring months are March, April, and May. Ambient conditions (dry bulb temperature) assumptions by ERCOT Weather Zone shall be as follows: - 87 deg F for Coastal Weather Zone, - 89 deg F for East Weather Zone, - 96 deg F for Far West Weather Zone, - 90 deg F for North Central Weather Zone, - 89 deg F for North Weather Zone, - 92 deg F for South Central Weather Zone,- 90 deg F for South Weather Zone, - 93 deg F for West Weather Zone.These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   | R | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Sustainable Rating - Spring | Spring months are March, April, and May. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   | R | R |
| ***[RRGRR023: Replace "Parameters - Seasonal Net Min Sustainable Rating - Spring" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Sustainable Rating - Spring | Spring months are March, April, and May. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. For ESS this value is negative, showing seasonal net maximum withdrawal/charging. |   |   |   | R | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Max Emergency Rating - Spring | Spring months are March, April, and May. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   |   | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Emergency Rating - Spring | Spring months are March, April, and May. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   |   | R |
| ***[RRGRR023: Replace "Parameters - Seasonal Net Min Emergency Rating - Spring" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Emergency Rating - Spring | Spring months are March, April, and May. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. For ESS this value is negative, showing seasonal net maximum emergency withdrawal/charging.  |   |   |   |   | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Max Sustainable Rating - Summer | Summer months are June, July, and August. Ambient conditions (dry bulb temperature) assumptions by ERCOT Weather Zone shall be as follows: - 94 deg F for Coastal Weather Zone, - 98 deg F for East Weather Zone, - 98 deg F for Far West Weather Zone, - 101 deg F for North Central Weather Zone, - 99 deg F for North Weather Zone, - 99 deg F for South Central Weather Zone,- 96 deg F for South Weather Zone, - 99 deg F for West Weather Zone.These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   | R | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Sustainable Rating - Summer | Summer months are June, July, and August. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   | R | R |
| ***[RRGRR023: Replace "Parameters - Seasonal Net Min Sustainable Rating - Summer" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Sustainable Rating - Summer | Summer months are June, July, and August. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. For ESS this value is negative, showing seasonal net maximum withdrawal/charging.  |   |   |   | R | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Max Emergency Rating - Summer | Summer months are June, July, and August. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   |   | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Emergency Rating - Summer | Summer months are June, July, and August. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   |   | R |
| ***[RRGRR023: Replace "Parameters - Seasonal Net Min Emergency Rating - Summer" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Emergency Rating - Summer | Summer months are June, July, and August. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. For ESS this value is negative, showing seasonal net maximum emergency withdrawal/charging.  |   |   |   |   | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Max Sustainable Rating - Fall | Fall months are September, October, and November. Ambient conditions (dry bulb temperature) assumptions by ERCOT Weather Zone shall be as follows: - 86 deg F for Coastal Weather Zone, - 86 deg F for East Weather Zone, - 87 deg F for Far West Weather Zone, - 87 deg F for North Central Weather Zone, - 84 deg F for North Weather Zone, - 88 deg F for South Central Weather Zone,- 88 deg F for South Weather Zone, - 86 deg F for West Weather Zone.These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   | R | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Sustainable Rating - Fall | Fall months are September, October, and November. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   | R | R |
| ***[RRGRR023: Replace "Parameters - Seasonal Net Min Sustainable Rating - Fall" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Sustainable Rating - Fall | Fall months are September, October, and November. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. For ESS this value is negative, showing seasonal net maximum withdrawal/charging. |   |   |   | R | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Max Emergency Rating - Fall | Fall months are September, October, and November. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   |   | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Emergency Rating - Fall | Fall months are September, October, and November. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   |   | R |
| ***[RRGRR023: Replace "Parameters - Seasonal Net Min Emergency Rating - Fall" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Emergency Rating - Fall | Fall months are September, October, and November. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. For ESS this value is negative, showing seasonal net maximum emergency withdrawal/charging.  |   |   |   |   | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Max Sustainable Rating - Winter | Winter months are December, January, and February. Ambient conditions (dry bulb temperature) assumptions by ERCOT Weather Zone shall be as follows: - 37 deg F for Coastal Weather Zone, - 30 deg F for East Weather Zone, - 26 deg F for Far West Weather Zone, - 26 deg F for North Central Weather Zone, - 23 deg F for North Weather Zone, - 31 deg F for South Central Weather Zone,- 40 deg F for South Weather Zone, - 26 deg F for West Weather Zone.These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   | R | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Sustainable Rating - Winter | Winter months are December, January, and February. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   | R | R |
| ***[RRGRR023: Replace "Parameters - Seasonal Net Min Sustainable Rating - Winter" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Sustainable Rating - Winter | Winter months are December, January, and February. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. For ESS this value is negative, showing seasonal net maximum withdrawal/charging. |   |   |   | R | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Max Emergency Rating - Winter | Winter months are December, January, and February. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   |   | R |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Emergency Rating - Winter | Winter months are December, January, and February. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. |   |   |   |   | R |
| ***[RRGRR023: Replace "Parameters - Seasonal Net Min Emergency Rating - Winter" above with the following upon system implementation of NPRRs 1002, 1026, and 1029:]*** |
| Parameters | X | X | X | X | X |   |   | MW | Seasonal Net Min Emergency Rating - Winter | Winter months are December, January, and February. These are not the HSL/LSL or HEL/LEL values that are submitted in the COP. For ESS this value is negative, showing seasonal net maximum emergency withdrawal/charging. |   |   |   |   | R |
| Parameters |   |   |   | X |   |   |   | MW | MW1 | Net MW value where the steam generator typically reaches rated pressure (required value for steam turbines). |   |   |   |   | C |
| Parameters |   |   |   | X |   |   |   | PSI | PSI1 | Rated throttle pressure (required value for steam turbines) at MW1 |   |   |   |   | C |
| Parameters |   |   |   | X |   |   |   | MW | MW2 | Net unit output (breakpoint value used to define the pressure/MW curve). If pressure is constant for the normal operating range enter the same value as is entered for MW1. |   |   |   |   | C |
| Parameters |   |   |   | X |   |   |   | PSI | PSI2 | Throttle steam pressure (psi) at MW2 value (breakpoint value used to define the pressure/MW curve). If pressure is constant for the normal operating range enter the same value as is entered for PSI1. |   |   |   |   | C |
| Parameters |   |   |   | X |   |   |   | MW | MW3 | Net unit output (breakpoint value used to define the pressure/MW curve). If pressure is constant for the normal operating range, or is not needed, enter the same value as is entered for MW2. |   |   |   |   | C |
| Parameters |   |   |   | X |   |   |   | PSI | PSI3 | Throttle steam pressure (psi) at MW3 value (breakpoint value used to define the pressure/MW curve). If pressure is constant for the normal operating range, or is not needed, enter the same value as is entered for PSI2. |   |   |   |   | C |
| Parameters |   |   |   | X |   |   |   | MW | MW4 | Net unit output (breakpoint value used to define the pressure/MW curve). If pressure is constant for the normal operating range, or is not needed, enter the same value as is entered for MW3. |   |   |   |   | C |
| Parameters |   |   |   | X |   |   |   | PSI | PSI4 | Throttle steam pressure (psi) at MW4 value (breakpoint value used to define the pressure/MW curve). If pressure is constant for the normal operating range, or point is not needed, enter the same value as is entered for PSI3.  |   |   |   |   | C |
| Parameters |   |   |   | X |   |   |   | MW | MW5 | Net unit output (breakpoint value used to define the pressure/MW curve). If pressure is constant for the normal operating range, or point is not needed, enter the same value as is entered for MW4. |   |   |   |   | C |
| Parameters |   |   |   | X |   |   |   | PSI | PSI5 | Throttle steam pressure (psi) at MW5 value (breakpoint value used to define the pressure/MW curve). If pressure is constant for the normal operating range, or point is not needed, enter the same value as is entered for PSI4. |   |   |   |   | C |
| Parameters |   |   |   | X |   |   |   | MW | MW6 | Net unit MW output where the steam generator typically reaches minimum pressure (required value for steam turbines). |   |   |   |   | C |
| Parameters |   |   |   | X |   |   |   | PSI | PSI6 | Throttle steam pressure (psi) at MW6 value (required value for steam turbines). |   |   |   |   | C |
| Parameters |   |   |   | X |   |   |   | PSIG/MW | Limiting K Factor | The K factor is used to model the stored energy available to the resource. The value ranges between 0.0 and 0.6 psig per MW change. Additional information on determining the K factor can be found in Attachment 2, Primary Frequency Response Reference Document, of NERC Reliability Standard, of BAL-001-TRE-1, Primary Frequency Response in the ERCOT Region. The default value would be zero (required for steam turbines). |   |   |   |   | C |