**Distributed Generation Gap Analysis: Current CDR Treatment**

| **Category** | **Subcategory – Operational or Planned** | **Included in CDR?** **(Yes, No, Partial)** | **CDR Reporting Location** | **Data source(s)** | **Reporting Issues/****Limitations** | **Comments** |
| --- | --- | --- | --- | --- | --- | --- |
| Distribution Generation Resource (DGR) | Operational | Yes | Line items in the Capacities tabs | RARF, NSOs (for retired units) | CDR Protocol Section 3.2.6.2.2 does not require explicit identification of DGRs; units are currently identified only by Fuel Type. | * A reasonable strategy is to report DGRs as Planned if they have an Interconnection Agreement and have not been approved for commercial operations by ERCOT.
* This category currently consists only of batteries but could be any technology.
* Is distinguishing between DGR, TGR, and SODG types necessary for the CDR given the increased reporting complexities?
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| Planned | Yes | Line items in the Capacities tabs | RARF | * As with Operational DGRs, planned units are identified only by Fuel Type.
* The interconnection approval process for DGRs is currently under development, so progress tracking is challenging; current projected CODs reported by developers are not informed by ERCOT interconnection/ operational requirements under development.
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| Settlement Only Distribution Generator (SODG) – Fossil Fuel | Operational | Partial | A portion is currently included in ERS total | DG-RARF | * CDR Protocol Section 3.2.6.2.2 does not require inclusion of SODGs; since there is uncertainty in how much export capacity is available during seasonal on-peak periods and reserve scarcity conditions, these resources have been excluded from the CDR.
* SODGs participate in the Emergency Response Service (ERS) program, so reporting will need to identify the amount of ERS capacity provided by SODG to avoid double-counting.
* ERCOT assumes that an SODG becomes operational per the Commercial Operations Date reported in the DG-RARF since the Resource provides the metering data.
* Retirements are not formally tracked; a process is needed to ensure that the CDR reflects an up-to-date inventory of operational SODG units.
 | * SODGs are not factored into the long-term peak load forecast, so double-counting is not an issue.
* The incorporation of this category into the CDR, and how to represent its peak-average capacity contribution, is an ongoing discussion item at SAWG meetings.
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| Planned | No | N/A | N/A | * CDR Protocol Section 3.2.6.2.2 does not require inclusion of SODGs.
* Same issues as for operational fossil SODGs regarding characterizing the capacity availability during seasonal on-peak/reserve scarcity periods.
* SODGs are typically already in operation at the time that DG-RARFs are submitted, so there are effectively no planned SODGs to report.
* There is currently no forecast methodology to account for incremental growth beyond SODGs that have already submitted DG-RARFs.
 | * SODGs do not go through the regular GINR process
* The forecasting of this category in the CDR is an ongoing discussion item at SAWG meetings. ERCOT has proposed a distributed generation workshop for DSPs to solicit information on growth expectations for fossil-fuel SODGs.
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| Settlement Only Distribution Generator (SODG) – Wind, Solar, Hydro, Biomass, and Storage | Operational | Yes | Line items in the Capacities tabs | DG RARF | Retirements are not formally tracked, so a process is needed to ensure that the CDR reflects an up-to-date inventory of SODG units. | Identified with a “DG\_” unit code prefix. |
| Planned | No | N/A | N/A | SODGs are typically already in operation at the time that DG-RARFs are submitted, so there are effectively no planned SODGs to report.  | * SODGs do not go through the regular GINR process.
* The forecasting of this category in the CDR is an ongoing discussion item at SAWG meetings.
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| Unregistered Distribution Generation (UDG) – Competitive TDSP Territory | Operational | Partial | Accounted for in the peak load forecast for facilities operating during the LTDEF model-building period (e.g.,1/1/2013 – 8/10/2018 for the 2019 LTDEF)  | ERCOT’s LTDEF | * Separate reporting of the UDG that is embedded in the LTDEF requires forecast model enhancement and sufficient end-use data for model building. (See Comments)
* Synchronizing the LTDEF distributed PV forecast with the Unregistered Distributed Generation Report may be necessary.
* The amount of UDG in the LTDEF is considered “frozen” at the level observed at the end of the model-building period, which, for the 2019 forecast, was August 10, 2018. Consequently, UDG capacity added after the model-building period is not accounted for.
 | ERCOT plans to start developing a distributed PV forecast for the Mid-term Load Forecast (MTLF) this year, and ultimately integrate that into the LTDEF. ERCOT will accurate model data through a vendor RFP. Such integration may be an interim phase depending on the progress of the project to configure NREL’s Distributed Generation Market Demand (dGen) model for ISO usage. Project completion is expected by fall 2021. |
| Planned | No | N/A | N/A | * Separate reporting of the UDG that is embedded in the LTDEF requires forecast model enhancement and sufficient end-use data for model building.
* Pending development of distributed PV forecast functionality for the LTDEF, ERCOT expects to use an S-curve adoption model as an interim approach.
* Utility-scale distributed PV requires a separate forecasting tool.
 | UDG forecasting for the CDR is an ongoing discussion item at SAWG meetings. |
| Unregistered Distribution Generation – NOIE Territory | Operational | Partial | There is no line item for reporting UDG capacity; rather, it is embedded in ERCOT’s Long Term Demand and Energy Forecast (LTDEF) | ERCOT’s LTDEF | * Separate reporting of the UDG that is embedded in the LTDEF requires forecast model enhancement and sufficient end-use data for model building. (See Comments)
* Pending development of distributed PV forecast functionality, ERCOT expects to use the proposed S-curve adoption model as an interim approach.
* Synchronizing the LTDEF distributed PV forecast with the Unregistered Distributed Generation Report may be necessary.
* The amount of UDG in the LTDEF is considered “frozen” at the level observed at the end of the model-building period, which, for the 2019 forecast, was August 10, 2018. Consequently, UDG capacity added after the model-building period is not accounted for.
 | ERCOT plans to start developing a distributed PV forecast for the Mid-term Load Forecast (MTLF) this year, and ultimately integrate that into the LTDEF. ERCOT will acquire model data through a vendor RFP. Such integration may be an interim phase depending on the progress of the project to configure NREL’s Distributed Generation Market Demand (dGen) model for ISO usage. Project completion is expected by fall 2021. |
| Planned | No | N/A | N/A | * Separate reporting of the UDG that is embedded in the LTDEF requires forecast model enhancement and sufficient end-use data for model building.
* Pending development of distributed PV forecast functionality, ERCOT expects to use the proposed S-curve adoption model as an interim approach.
* A separate forecasting tool for utility-scale distributed PV (NOIE community solar projects) is needed.
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