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Unregistered Distribution Generation Data Collection and Maintenance

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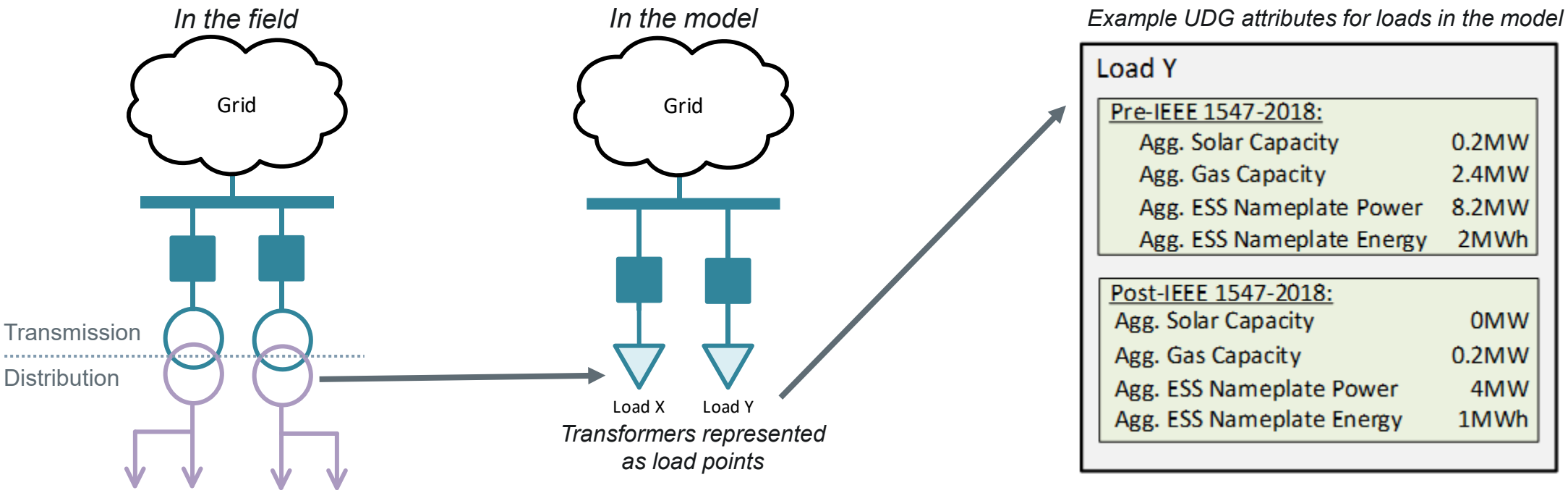
Additional UDG Attributes for CIM Loads

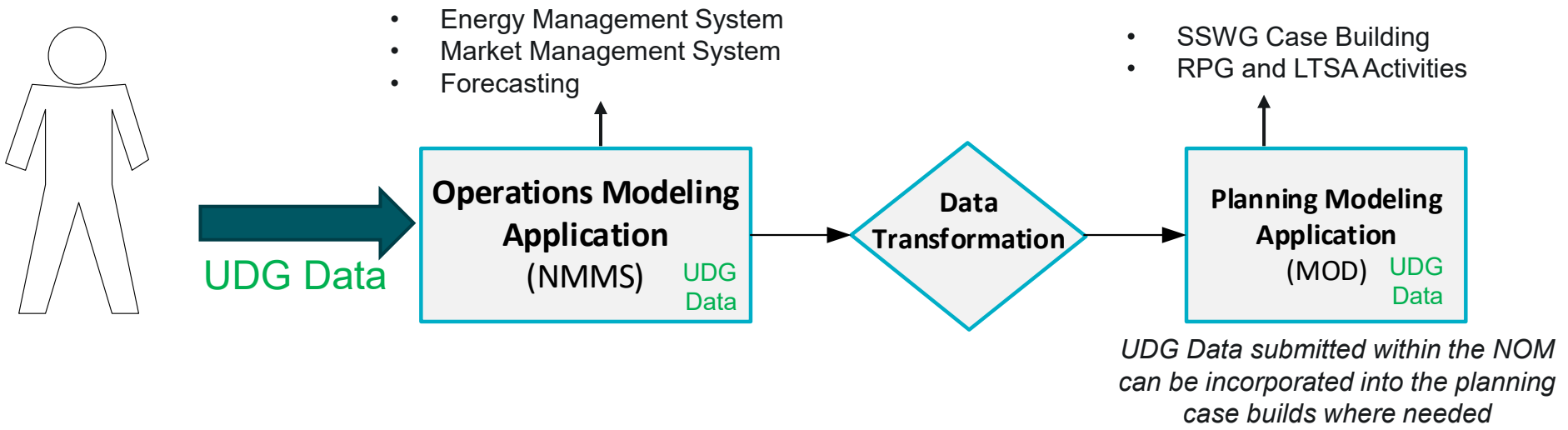
Transformers between the transmission system and distribution system are modeled as individual load points



These “CIM loads” will be given new attributes quantifying the UDG characteristics of the connected distribution system

UDG Data for Operations and Planning Use Cases

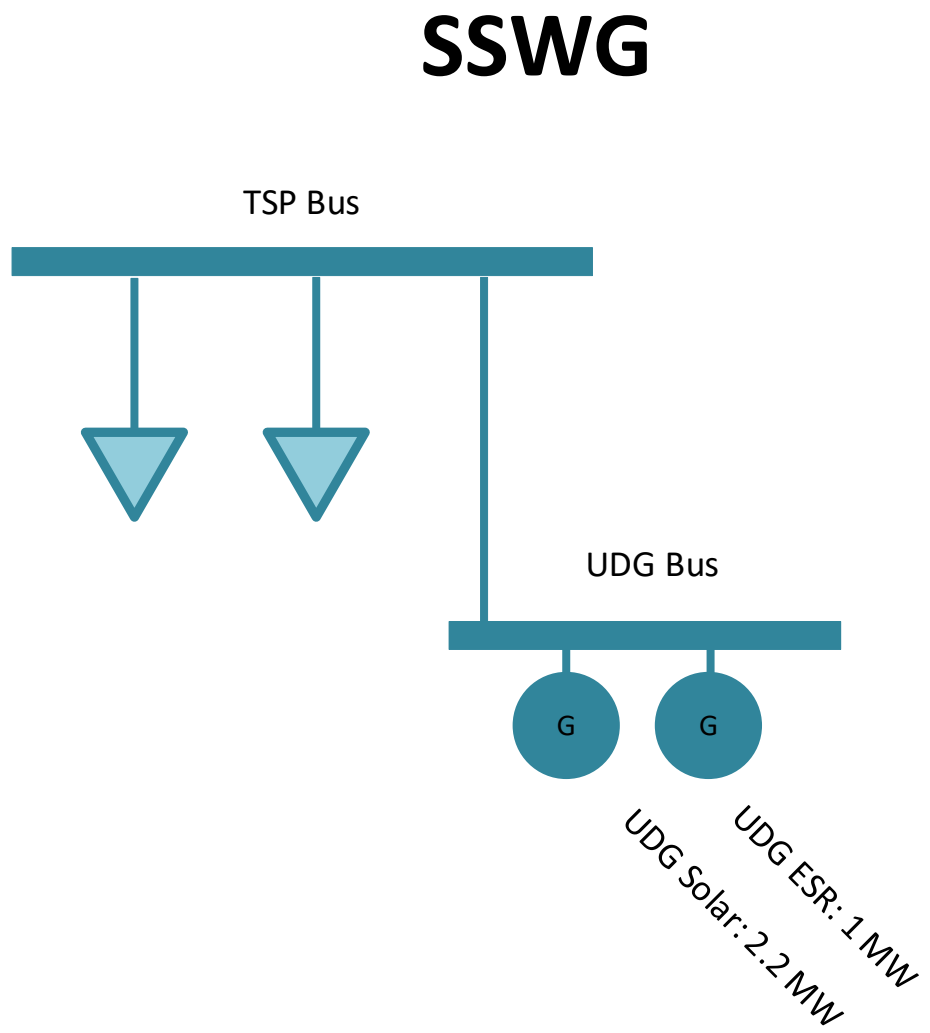
The ERCOT Network Operations Model (NOM) will be extended to hold Unregistered Distribution Generation (UDG) data



The NOM, containing the new UDG data, will be used in operations and as the starting point for each planning build cycle

UDG in Planning Models and Studies

- UDG will be included in the Planning cases as discrete generators and not embedded in the load forecast.
- A script will synchronize the UDG information in NMMS with MOD like we do for SODG.
- They will be aggregated by fuel type on a bus.
- The bus will be in the 800,000 range.
- Dispatching
  - Wind and Solar UDG will be dispatched at the same value of transmission wind and solar
  - All other UDG will be offline
- UDGs will be modeled at unity PF.
- UDG will be used in steady-state Planning studies as it is modeled in the SSWG cases and not embedded in the load forecast.

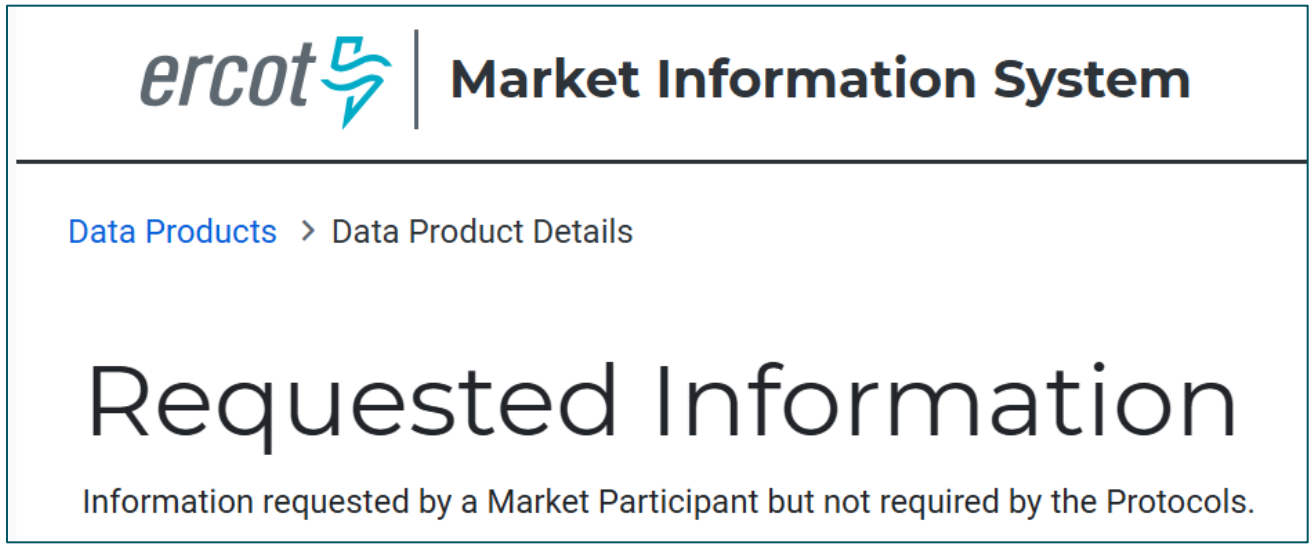


Timeline: NPRR1265 Unboxing and Data Collection

- Before April 30 – ERCOT posts draft pre-populated UDG template to MIS
- April 30 – UDG Workshop #3
- June 1 – Unbox NPRR1265 items
  - Includes 3.2.5.1 *Unregistered Distributed Generator Reporting Requirements*
- Protocol-Driven Dates
  - By Jan. 15, 2027 – ERCOT posts pre-populated UDG template to ERCOT MIS
  - By Feb 1, 2027 – DSP provides aggregated UDG information to TSP
  - By March 30, 2027 – TSP submits updated UDG information to ERCOT
- May 1, 2027 – ERCOT posts UDG report
- October 2027 – UDG Information in ERCOT Planning Cases
- By Jan.15, 2028 – ERCOT posts pre-populated UDG template containing previous year's response to ERCOT MIS

Draft Pre-Populated Template

- ERCOT has posted a draft pre-populated UDG template to the MIS website
  - Prior to unboxing, the template will reside in the Requested Information location
    - https://mis.ercot.com/secure/data-products/data-product-details?id=np12-230
  - Post unboxing, a new MIS location will be created
    - EMIL-ID and URL will be announced via Market Notice



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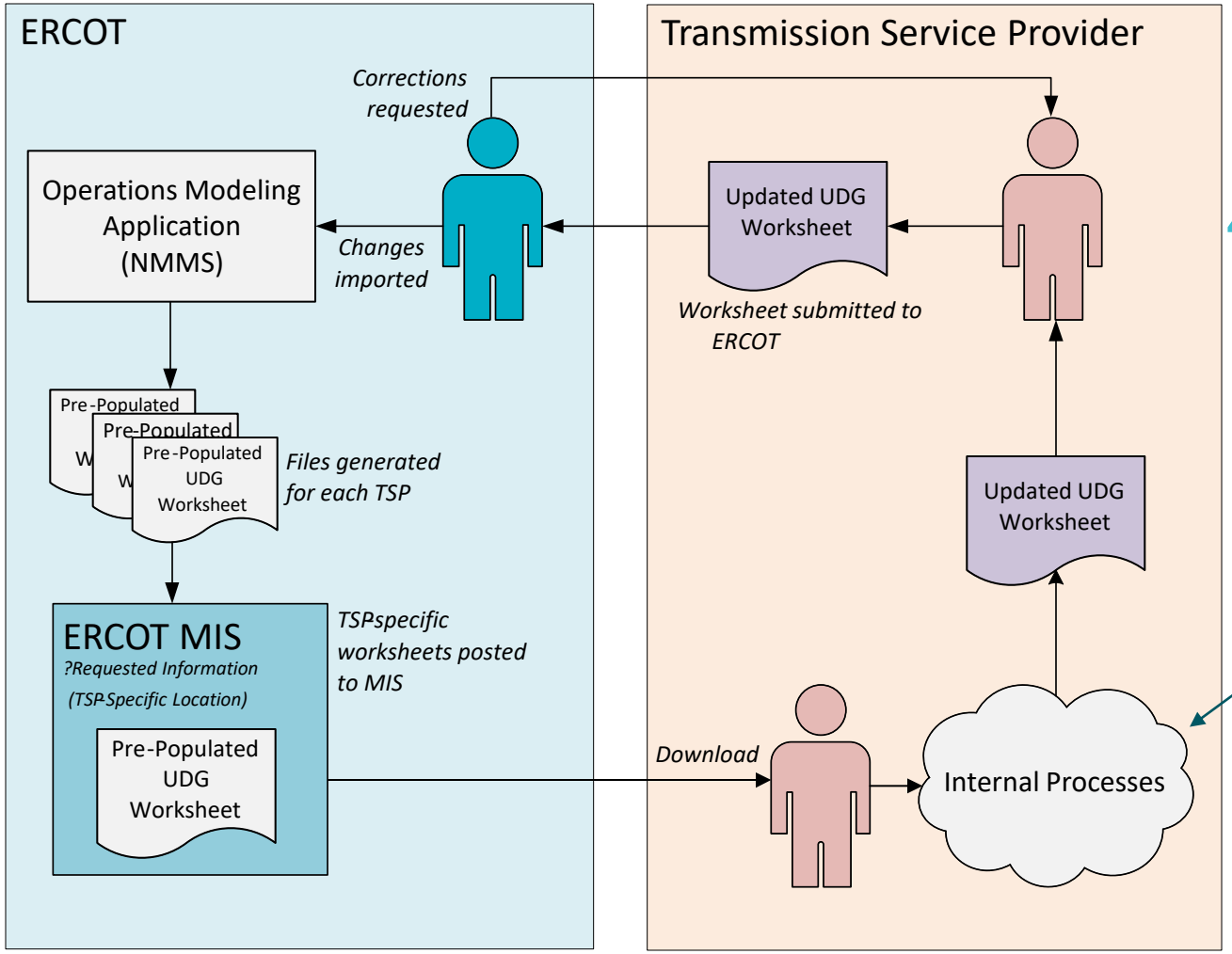
UDG Data Update Process

ERCOT will facilitate a yearly process to request, collect, and incorporate updates to UDG information into the model

1. TSP-specific pre-populated files will be generated containing all associated loads

2. A single file will be provided to each TSP via the MIS



4. An updated worksheet will be submitted to ERCOT

3. Via internal processes the TSP will update the UDG data within the spreadsheet

Draft Pre-Populated UDG Worksheet

ERCOT has posted a pre-populated template worksheet containing all loads associated to TDSPs.

The initial columns of the worksheet are populated by ERCOT, and the contents should not be modified.

CIM Load Information Provided by ERCOT

Rows can be duplicated, but contents within these columns should not be modified.

Unique Identifier (RDFID)	Associated Owners	Associated Operators	Substation Code	Load Name	Modeled Voltage	Bus PSSE ID	Load PSSE ID
_{ABCDEF12-3456-6789-ABCD-EF1234567890}	TSP1	TSP1	AIRPRT1	LD1	138	123456	1
_{ABCDEF12-3456-6789-ABCD-EF1234567891}	TSP1	TSP1	AIRPRT1	LD2	138	123456	2
_{ABCDEF12-3456-6789-ABCD-EF1234567892}	TSP1, TSP2	TSP2	BUSPARK	XFMR1	138	654321	1
_{ABCDEF12-3456-6789-ABCD-EF1234567893}	TSP1, TSP2	TSP2	BUSPARK	XFMR2	138	654321	2

UDG Information Provided via TSP/DSP Coordination

Multiple rows referencing the same CIM load may be required to capture different UDG characteristics within a common distribution system

DG Type	Agg. Nameplate Capacity (kW)	Energy Storage Capacity (kWh)	Agg. Leading Reactive Power Capability (kVAr)	Agg. Lagging Reactive Power Capability (kVAr)	Pre IEEE1547-2018 (yes/no)?

Subsequent columns are to be updated, if necessary, by TSPs/DSPs with the required UDG information

Example: Different UDG Characteristics at One CIM Load

To accommodate UDG that cannot be aggregated together, additional rows have been added

Common types cannot be combined if they have a different 1547 vintage

Provided by ERCOT		UDG Information Provided via TSP/DSP Coordination						
Substation Code	Load Name	DG Type	Agg. Nameplate Capacity (kW)	Energy Storage Capacity (kWh)	Agg. Leading Reactive Power Capability (kVAr)	Agg. Lagging Reactive Power Capability (kVAr)	Pre IEEE1547-2018 (yes/no)?	Optional Submitter Comment
Station1	LD1	Solar	75.0		4.0	2.0	yes	
Station1	LD1	Solar	20.0		1.0	0.5	no	
Station1	LD1	Energy Storage	40.0	200.0	0.0	0.0	yes	
Station1	LD1	Other	1.0	1.0	1.0	1.0	yes	Landfill
Station1	LD2							
Station2	LD3							

Different UDG types cannot be aggregated into a single row

Draft UDG Types

- Draft form allows the following UDG types (captured from the protocols):
  - Solar
  - Wind
  - Natural Gas
  - Diesel
  - Energy Storage, and
  - Other
- ERCOT is open to additional DG types if need is present

Next Steps

1. Download the draft pre-populated template from the ERCOT MIS
   - Requested Information Link
2. Review template and provide feedback at upcoming NDSWG meetings
   - NDSWG Schedule Link
3. Monitor Market Notices for Updated Templates and Potential Additional Meetings