

# NERC

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# Field Test objectives/ Phased Approach

Dmitry Kosterev, NERC LMTF Chair

Mohamed Osman, NERC Staff

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**RELIABILITY | RESILIENCE | SECURITY**



- Two-tier approach:
  - **Regional Studies:** NERC LMTF Transmission Planners expressed preference towards regional models for their regional reliability studies
    - Manageable data
    - Diverse views on air-conditioner modeling among regions
    - Simulation time
  - **Interconnection-Wide Studies:** There is a need for interconnection-wide load models, e.g. for studies of frequency response, low inertia generation, wide-area disturbances, etc...

- Load Model Data Sets:
  - NERC LMTF developed “default” area-specific load model records
  - Transmission Planners can use the default data in their studies or develop their own data sets
- Field test:
  - Field test is planned for 2020
  - Transmission Planners will provide feedback on their experience with dynamic load model to NERC LMTF
  - NERC LMTF will make appropriate model revisions
  - 2021 dynamic load model deployment

- September 1 2019 – Load model data sets are completed, tested by NERC staff and LMTF members
- Fall 2019 – MMWG workshop on preparing dynamic load models
- Goal 2021 study cases to include area-specific dynamic load model records

- **Powerflow Base Case:**
  - Load MWs and MVARs
  - DER MWs and MVARs
  - Load Type Identifier – climate zone and feeder type ( available in PSLF and PW, scheduled for implementation in TSAT, planned in PSS<sup>®</sup>E )
- **Dynamic Models:**
  - Can be defined by area, zone, Load Type Identifier, bus number
    - The latter overrides the former in the above order
  - Build-in filters on min MW size, |P/Q| ratio, powerflow initial voltage level, and voltage class for adding a transformer
  - Reference appropriate DER models
  - Modular structure referencing end-use models



# Questions and Answers