



ATC Generator Modeling Decision Methodology

Version 2.0

1. Introduction

This document describes ATC Planning's methodology for modeling generators in power flow model development process. The methodology applies to all existing generators as well as future generators in the ATC footprint.

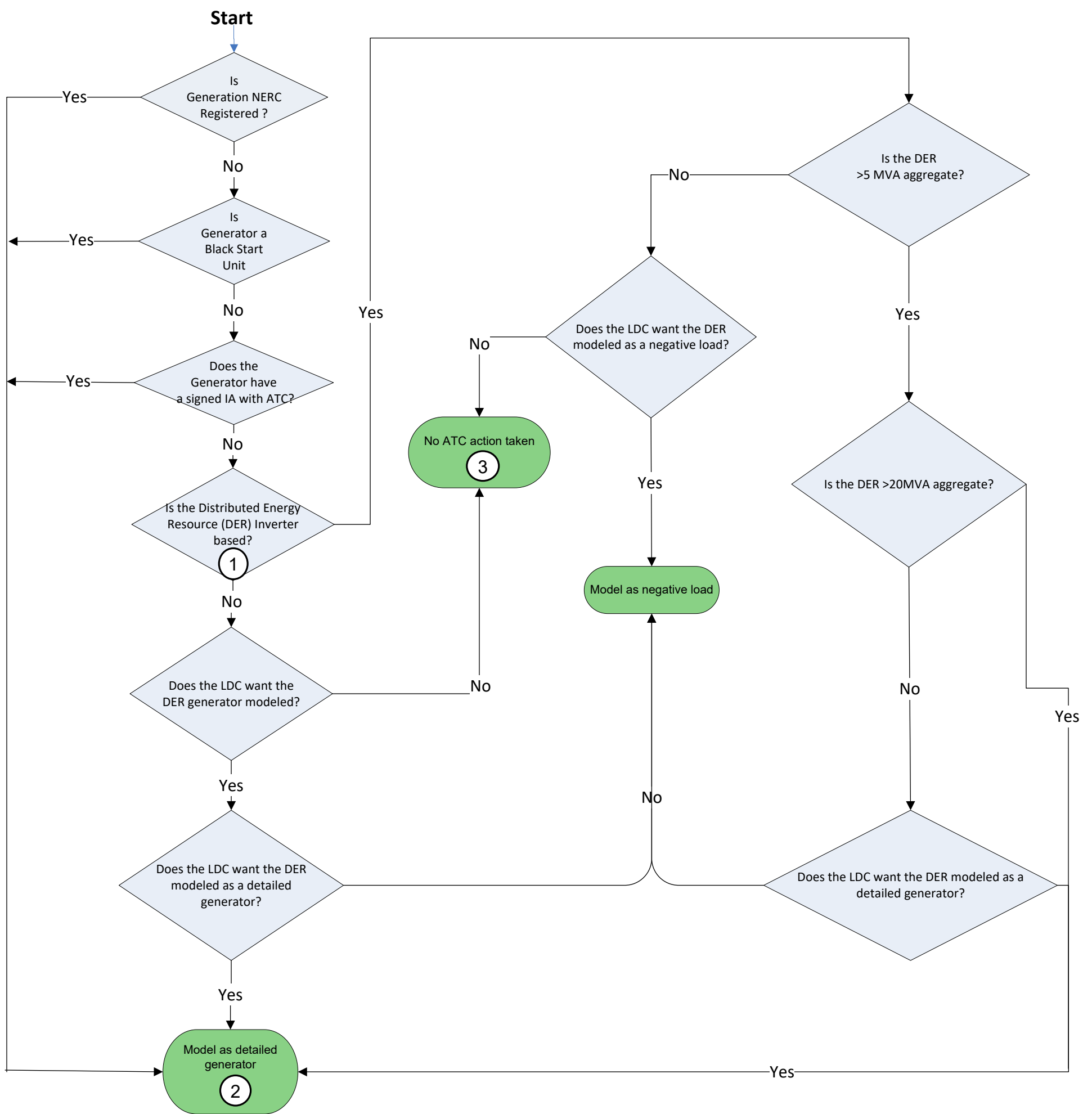
The decision tree covers both generators connected to the Bulk Electric System (BES) as well as distributed energy resources (DER). Generators in the ATC system should be modeled in one of the following four categories:

- 1) model as detailed generator for dynamics
- 2) model as generation in power flow but netted for dynamics
- 3) model as negative load separate from other load
- 4) model generator and load consistent with Local Distribution Company (LDC)
Midwest Independent System Operator (MISO) Module E load forecast

2. Generator Modeling Decision Trees

The following decision tree should be used to determine how each generator should be modeled by answering proper questions listed in the tree. Notes are added to provide explanations for questions asked and certain terminologies.

ATC Power Flow and Dynamics Modeling Selection Decision Tree For Generation Operating Parallel to ATC Transmission Grid



Notes:

DER: is defined as “any resource located on the distribution system, any subsystem thereof or behind a customer meter.” These resources may include, but are not limited to, resources that are in front of and behind the customer meter, electric storage resources, intermittent generation, distributed generation, demand response, energy efficiency, thermal storage, and electric vehicles and their supply equipment – as long as such a resource is “located on the distribution system, any subsystem thereof or behind a customer meter”.

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② Submit detailed generator dynamics data and steady-state data according to ATC Generation Interconnection Guide (Appendix B-Generator Data Requirements). Submit data to giaoanotices@atcllc.com.

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③ LDC should account for DER consistent with MISO Module E Load Forecast.

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Additional Notes:

i. ATC may request detailed modeling data for behind the meter generating (BTMG) facilities that do not fit criteria within this document, but otherwise are reasonably anticipated to have a material impact on the reliability of the ATC transmission system.

ii. ATC is respectful of customer requests for confidential treatment of their BTMG modeling data and will not share the confidential modeling data with entities outside of ATC without coordination with impacted entities.