READ ME

This repository contains the data for enhanced IEEE 39-Bus System with Inverter Based Resources (IBRs) built on multi-time-scale platforms. The IEEE 39-Bus test system is modified by adjusting various model parameters based on recent industry practices and integrating with IBRs to reflect accurate grid characteristics for power system phasor-based dynamics and electro-magnetic transient (EMT) studies. The enhanced IEEE 39-Bus test system is validated in various commercial tools like PSSE, PSLF and PSCAD.

The information contained in each folder in the repository is listed as follows:

* Enhanced IEEE 39-Bus System
  + Contains PSSE, PSLF, PSCAD files of improved IEEE 39 Bus System for running dynamic simulations with two events- Bus fault at bus 16, Generator trip at Gen 32
  + Sample plots for the two events
* Enhanced IEEE 39-Bus System\_Single IBR
  + Contains PSSE, PSLF, PSCAD files of improved IEEE 39 Bus System with single IBR for running dynamic simulations with two events- Bus fault at bus 16, Generator trip at Gen 32
  + Sample plots for the two events
  + IBR is modeled using generic models approved by WECC
* Enhanced IEEE 39-Bus System\_Three IBRs
  + Contains PSSE, PSLF, PSCAD files of improved IEEE 39 Bus System with three identical IBRs for running dynamic simulations with two events- Bus fault at bus 16, Generator trip at Gen 32
  + Sample plots for the two events
  + IBRs are modeled using generic models approved by WECC