

UFLS Reference Document:

- R4. Each Planning Coordinator shall have a documented methodology for design and performance of its UFLS program. [*Violation Risk Factor: Lower*] [*Time Horizon: Long-term Planning*]
- Range of island imbalance conditions, inertia assumptions, and generating unit governor response assumptions
 - An intentional relay time delay of no greater than ten cycles, with the following documented exceptions. The documentation shall consist of reports of misoperations or distributed generation issues or analysis of large motor Loads:
 - For installations where large motor Loads may be isolated, undercurrent supervision shall be used to avoid false operation during Fault isolation. If this is not available, planned total time delay may be increased to no greater than 29 cycles.
 - For installations where distributed generation may be isolated, undercurrent supervision shall be used to avoid false operation during Fault isolation. If this is not available, planned total time delay may be increased to no greater than 29 cycles.
- R10. Each Distribution Provider, or Transmission Owner with reactive power devices, system protection schemes, or load and resource balancing methods that may impact the UFLS programs in the MRO footprint shall provide the device or protection scheme data to its Planning Coordinator in an agreed upon format.
- Applicable reactive power devices may include capacitor banks, static var compensators, inductor banks, especially devices that are tripped by frequency or voltage relays
 - Appropriate data may include:
 - Point of interconnection on the transmission system where the reactive power device effect can be modeled
 - A block quantity and size for each reactive power device
 - Set points for any frequency or voltage tripping function associated with the reactive power device
 - Time delay duration for each frequency or voltage tripping function
 - Voltage range of reactive power devices and their voltage step sizes
 - Applicable schemes may include: non-Fault clearing schemes, tie-tripping schemes, islanding schemes, or additional Load shedding schemes.
 - Provide the scheme data in sufficient detail to allow proper modeling of the scheme in dynamics simulation.