

UFLS Approach

Background:

The team has identified two approaches to present UFLS requirements to the industry:

1. A NERC Directive that would require the Regions to develop Regional Standards that meet the performance characteristics set forth in the directive.
2. A continent-wide standard that include the performance characteristics.

The team will present its recommendation based on deliberation of the following considerations to the Standards Committee for a decision.

Discussion:

In order to conclude which of the options is most suitable, the team conducted a brainstorm session on pros/cons for each of the options:

Option 1: NERC Directive

Section 312 (ROP)

2. Regional Reliability Standards That are Directed by a NERC Reliability Standard — Although it is the intent of NERC to promote uniform reliability standards across North America, in some cases it may not be feasible to achieve a reliability objective with a reliability standard that is uniformly applicable across North America. In such cases, NERC may direct regional entities to develop regional reliability standards necessary to implement a NERC reliability standard. Such regional reliability standards that are developed pursuant to a direction by NERC shall be made part of the NERC reliability standards

Pros	Cons
wide-spread industry support (based on first comment period)	uncertainty of the process to review/balloted the directive by industry and by FERC
maximize coordination – simplifies coordination by assigning responsibility of coordination at a regional level	uncertainty of the on-going review/feedback process of the characteristics (what if someone wants to change the characteristics – ex. 58 Hz should be something else, etc.) uncertainty of the on-going review process of the regional standards that are to meet the characteristics (is it the five year review program?)
this approach mandates the use of a FERC approved open process to develop the	uncertainty of completion of regional standards (using a standards process is

UFLS program (use of the Regional Standards Development Procedures)	lengthy– similar to the challenges with the NERC standards process)
FERC will be able to review all the details of the UFLS programs (in the regional standards)	uncertainty of enforcement for the characteristics upon the regions (unsure how to enforce that the Regions develop standards that adhere to the characteristics)
the directive leverages the existing UFLS programs in place in the regions (regions have UFLS programs that work)	changes to the characteristics would require changes to the regional standards that are possibly already approved
FERC would be able to review the coordination details of the programs in their review of Regional Standards	the directive would be a unique circumstance (PRC-006) – extensive work to fully document process for directive but could only possibly used once
this approach leverages the existing regional standards projects that are developing UFLS regional standards (most of the eight regions have initiated UFLS projects)	NERC cannot guarantee that the Regional Standards pass the standards process (are voted in favor).

- Implementation of the program is deferred to the RE’s to define in the development of the regional standards

Option 2: UFLS Continent-wide Standard

Pros	Cons
established review method (every five years)	this approach requires coordination of many entities to develop a UFLS program (increasing the complexity of coordination) – potentially detrimental to the program – 73 ish PC’s registered according to the Registry – there is no existing forum for the PC’s to get together to develop the program
development process/ FERC approved	This approach would not specify how or what process the responsible entity would use to develop the UFLS program
enforcement is straightforward at both levels (characteristics + implementation if we use a statement similar to below)	
FERC would get to comment on the characteristics (alternate would be that they would be reviewed when the Regional Standards are filed).	the implementers of the program may have very limited influence on the schedules and details of the implementation

- Implementation of the program (TO's/DP's) would be included in the cws – “TO's and DP's that are identified by the PC shall comply with the program defined by the PC's”
- enforcement of coordination is an issue for both approaches – need to consider revising characteristics
 - FERC would not be able to determine if coordination has been accomplished (since they would not be reviewing regional standards/regional criteria using this approach)
- there are flaws in the registration of entities that may impact the development – inappropriate entities may be involved because of variations of registered entities – REMOVED FROM OPTION 2 CONS LIST BECAUSE THE TEAM FELT THAT THIS IS AN ISSUE FOR BOTH APPROACHES. REGIONAL STANDARDS WOULD HAVE TO ASSIGN RESPONSIBILITY TO ENTITIES IN THE SAME FLAWED REGISTRY

Option 3:

Continent-wide standard with Regional Standards:

This approach would propose a continent wide standard that is applicable to Transmission Owners and Distribution Providers that own the equipment to implement the UFLS program. The continent wide standard would contain the performance requirements of the under frequency load shedding programs that the TO's and DP's equipment would have perform to in order to be compliant with the standard. A second element of this approach is a NERC directive (as allowed by ROP Section 312) that would direct the Regions to develop Regional Standards that specify the under frequency load shedding program details. These regional standards would be applicable to... and would implement the NERC continent-wide UFLS standard by proposing requirements by which the entities within the region are performing to a coordinated under frequency load shedding program.

Continent-wide standard:

- propose uniform characteristics that all under frequency load shedding programs must support
- would not address the implementation of the under frequency load shedding program

Regional Reliability Standards:

- define the under frequency load shedding methodology that is sensitive to regional differences while performing to the characteristics as specified in the continent wide standard
- ensure that nuances in implementation are captured in the regional standards

Option 4: Continent Wide Standard (with Regional Standards if necessary)

This approach would propose a continent wide standard that is applicable to Planning Coordinators and **would require Planning Coordinators to join a group made up of other Planning Coordinators within their Region** to design / develop a program that follows the performance characteristics. The performance characteristics would form the requirements of this continent wide standard.

- This option does not preclude the development of regional standards