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Determining Critical Assets

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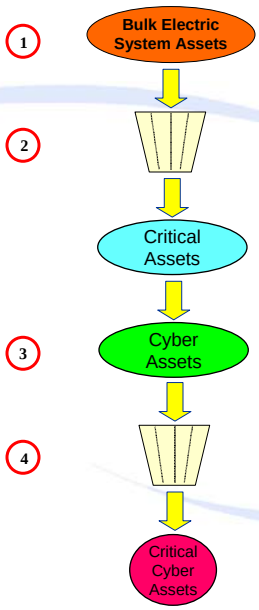
Definitions

- Bulk Electric System: The electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included.
- Critical Assets: Facilities, systems, and equipment which, if destroyed, degraded, or otherwise rendered unavailable, would affect the reliability or operability of the Bulk Electric System.
- Cyber Assets: Programmable electronic devices and communication networks including hardware, software, and data.
- Critical Cyber Assets: Cyber Assets essential to the reliable operation of Critical Assets and meet CIP 002 R3.

The Process



Inputs – List of: generation resources; substations; control centers & backup control centers; system restoration, automatic load shedding, & system Protection assets, etc.

Filtering - Risk Based Assessment
(Required Document)

Output - List of Critical Assets
(Required Document)

Inputs – Cyber assets supporting Critical Assets

Filtering - Essential to operation of critical asset
and meet CIP 002 R3

Output - List of Critical Cyber Assets
(Required Document)

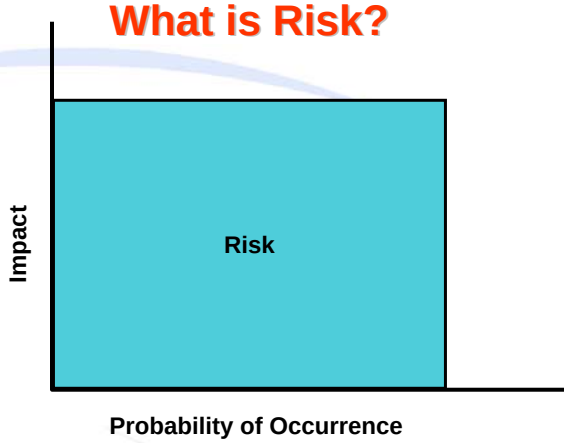
Step 1: Develop a List of Bulk Electric System Assets

The following assets must be considered as input to the Risk Based Assessment

- Control centers and backup control centers
- Transmission substations that support the reliable operation of the Bulk Electric System
- Generation resources that support the reliable operation of the Bulk Electric System
- Systems and facilities critical to system restoration, including blackstart generators and substations in the electrical path of transmission lines used for initial system restoration
- Systems and facilities critical to automatic load shedding under a common control system capable of shedding 300 MW or more
- Special Protection Systems that support the reliable operation of the Bulk Electric System.
- Any additional assets that support the reliable operation of the Bulk Electric System

⇧ ☺ **Exemptions** - Facilities regulated by the U.S. Nuclear Regulatory Commission or the Canadian Nuclear Safety Commission.

What is Risk?



Impact = ƒ (type & extent of damage)
Probability of Occurrence = ƒ (threat, vulnerability) - Default Value = 1.0

Step 2: Perform Risk Based Assessment

- **Types of risk based assessment**
  - Experience based
  - Calculation based
  - Combination of the above
- **Risk Assessment Basis**
  - If the asset were to be compromised or removed from service, what would be the impact, either direct or indirect to the Bulk Electric System reliability or operability?