

Supplementary Guide for Application of the Criteria for San Francisco

Power is supplied to the City of San Francisco from a combination of local generation and transfers into the City through transmission. The City is located at the end of a peninsula, and all of the major overhead transmission lines are forced into a common corridor adjacent to the San Francisco Airport. This corridor extends between Martin Substation, just south of San Francisco, and San Mateo Substation, located 13 miles to the south.

Given the location of the City, the nature of its supply, and the lack of significant seasonal diversity, special planning criteria that consider simultaneous outage of multiple system elements for San Francisco have been in place since 1978. Historically there have been five important multi-element outages to be considered in planning San Francisco's supply. These may be viewed as an application of the NERC Planning Standards – Table I with explicit consideration for planned generator maintenance outages.

At all times, the resources available to serve the City of San Francisco shall be sufficient to serve all loads within the city limits for NERC Category A and B as well as the following Category C contingencies:

- A. Loss of the largest available generation unit plus the loss of one overhead transmission circuit from San Mateo to Martin in addition to any generation unavailable due to regular overhaul schedules. (ISO Grid Criteria Level B)
- B. Loss of one underground circuit from San Mateo to Martin plus the loss of the largest available generation unit in addition to any generation unavailable due to regular overhaul schedules. (ISO Grid Criteria Level B)
- C. Loss of one underground transmission circuit plus the loss of one overhead transmission circuit from San Mateo to Martin in addition to any generation unavailable due to regular overhaul schedules.
- D. Overlapping loss of the two largest available generation units in addition to any generation unavailable due to regular overhaul schedules.

The controlled interruption of customer demand, excluding downtown network loads and critical public services, is permitted to prevent facilities from overloading for the following Category D disturbance.

- E. Loss of all overhead transmission from San Mateo Substation to Martin Substation in addition to any generation unavailable due to regular overhaul schedules.