# NINA

# Safety Panel 2

**Nuclear Innovation** North America LLC

Fukushima Recommendation 4.2 (Mitigation Strategies)

Design Vulnerabilities in Electrical Systems
Open Phase Condition

## **FLEX Strategy Summary**



- Combustion Turbine Generators Available, but Not Credited
- Phase 1 36 hours
  - ABWR Installed Equipment
    - Reactor Core Isolation Cooling System
    - AC Independent Water Addition System
    - Containment Overpressure Protection System
    - Remote Shutdown System
- Phase 2 Portable Onsite Equipment Available, but Not Credited
- Phase 3 Offsite Equipment

## **Open Phase Condition**



### **STP Implementation**

- Detect Open Phase Condition
- Alarm in Control Room
- Negative Phase Sequence Relays actuate upon detecting conditions that could damage equipment
- Negative Phase Sequence Relays included in Technical Specifications