2016 Annual Report for Southern California Edison Company (U338-E) of Compliance with General Order 166

Volume II: Southern California Edison Storm Plan

Public Version

October 31, 2016
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About Southern California Edison

Southern California Edison (SCE), an Edison International company, is one of the nation’s largest investor-owned utilities, serving nearly 14 million people in a 50,000-square-mile service area within Central, Coastal and Southern California. The utility has been providing electric service in the region for more than 120 years.

SCE’s service territory includes about 430 cities and communities with a total customer base of 4.9 million residential and business accounts. SCE is regulated by the California Public Utilities Commission and the Federal Energy Regulatory Commission.

In 2012, SCE generated about 25 percent of the electricity it provided to customers, with the remaining 75 percent purchased from independent power producers. One of the nation’s leading purchasers of renewable energy, SCE delivered nearly 15 billion kilowatt-hours of renewable energy to its customers in 2012, enough to power 2.3 million homes.
**Record of Review and Revisions**

As directed by the California Public Utilities Commission, Southern California Edison updates its Corporate Emergency Response Plan at a minimum each September. All revisions are recorded in the table below.

<table>
<thead>
<tr>
<th>Date Modified</th>
<th>Changes Made</th>
<th>Reviewer/Reviser</th>
<th>Change Requested By</th>
</tr>
</thead>
<tbody>
<tr>
<td>04-26-13</td>
<td>Updated Storm Intensity Level chart (Section 5.2) Added Communication/IT Unit activation information (Section 11.4.1)</td>
<td>Rebecca Dugan</td>
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<tr>
<td>04-26-13</td>
<td>Updated Finance/Admin org structure and role descriptions (Section 12)</td>
<td>Rebecca Dugan</td>
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<tr>
<td>05-05-13</td>
<td>Corrected title of Mutual Assistance Coordinator (Section 11.5.1)</td>
<td>Rebecca Dugan</td>
<td>Nancy Sacre</td>
</tr>
<tr>
<td>06-05-13</td>
<td>Changed Transmission Org Structure for Commercial and Technical Supervisors from &quot;Division&quot; to &quot;Group&quot; Supervisors</td>
<td>Rebecca Dugan</td>
<td>Functional Exercise</td>
</tr>
<tr>
<td>06-28-13</td>
<td>Made ICS 800 training optional Revised Section 11.4.1 with current IT/Communication roles Activated links</td>
<td>Rebecca Dugan</td>
<td>B. Stonerock Thomas Jacobus Molly Latham</td>
</tr>
<tr>
<td>7-25-13</td>
<td>Section 5 rewrite to reflect final Storm Intensity Declaration and Escalation Guidelines. 5.3 Re-written. 5.5 Percentages of customers impacted adjusted.</td>
<td>R Dugan</td>
<td>T Jacobus/ Storm Intensity Team</td>
</tr>
<tr>
<td>6-30-15</td>
<td>Corporate Emergency Response Plan renamed to Storm Plan. Final authority for activating IMT/ISTs now rests with the Business Resiliency Duty Manager. Updated to add IST and reflect changes in IMT structure and naming. Added One Voice Team and Watch Office.</td>
<td>J Abbott</td>
<td>T Jacobus</td>
</tr>
<tr>
<td>6-30-16</td>
<td>Complete re-organization, rewrite, and reformatting of plan. Alignment with all-hazards planning.</td>
<td>M Weber</td>
<td>Annual Review</td>
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PART I – INTRODUCTION

STATEMENT OF PURPOSE

The Storm Plan is part of Southern California Edison’s (SCE) effort to respond to emergency incidents resulting in the disruption of the electrical system. It describes the policies and concepts of operations that guide how SCE plans for, addresses, and responds to electrical emergency incidents using the ICS structure adapted with utility-specific solutions.

Scope of the Plan

The term “storm” is used throughout the electric industry to describe emergencies that affect electric service. The Storm Plan applies to emergency incidents including but not limited to, severe weather, heat storms, earthquake, flooding, civil disturbance, fire, explosion, or other major disruptions to the electrical system or any other instance for which additional assistance or coordination is needed. Additionally, it defines how SCE addresses situations that have the potential to adversely affect the company or the community.

This plan helps ensure safe and efficient restoration through:

- Consistent use of the ICS response structure and principles
- Application of pre-determined priorities
- Application of pre-determined processes to manage emergency roles like damage assessment, line clearing, estimated restoration times, communications, etc.
- The development of accurate situational awareness and the distribution of a consistent common operating picture

Objectives

The intent of this plan is to help ensure SCE prepares for and responds to emergency incidents as one team using common protocols, terminology, and organizational structure that aligns with nationally recognized best practices. SCE will collaborate with the communities they serve in preparing for and responding to emergency events.

The objectives are as follows:

- To define the criteria for activating and deactivating the SCE Storm Plan
- To outline the communications strategy and notification procedures by which SCE will communicate with its customers, the public at large, appropriate state and local government agencies, and other important stakeholders in the restoration process
To provide an overview of the strategies that SCE will employ for mutual assistance to share resources with other utilities to expedite the restoration of service to customers in emergency situations

**PLAN GOVERNANCE**

The Storm Plan and associated documentation apply to SCE personnel, affiliate company employees, mutual assistance resources, and contractors or other personnel working at the direction or under the authority of SCE. Specific procedures, phone lists, and process documents will be maintained separately as supporting documents.

**Guiding Principles**

This plan was developed and will be maintained according to a set of guiding principles:

- SCE personnel will hold themselves and their teammates accountable for working safely, protecting the public, and each other
- This plan, the tactics, and the strategies contained in the Storm Plan are intended to be interpreted and applied by those with appropriate knowledge, training, and experience so that the plan can flex to accommodate the unique needs of the incident using ICS principles
- To the extent practical, SCE will activate the plan, or elements of it, in preparation for managing predictable incidents such as weather events
- When incident information is shared with customers, the media, elected officials, and regulators, SCE will provide the consistent and accurate information
- Restoration of electric service may be only one component of larger public sector response efforts; the IC will, to the extent practical, consider the needs of public sector emergency response agencies and the communities SCE serves, when determining incident objectives
- SCE will continually improve by conducting exercises, training, and evaluating plan activation performance, and conducting annual plan updates incorporating lessons learned
Regulatory Requirements

The Storm Plan and its key supporting documents provide policy guidance and authority to the Storm Plan.


- General Order Number 95 and General Order Number 128

- California Independent System Operator (CISO) Standards for Reliability and Safety during Emergencies and Disasters (December, 1997)

- Edison System Operating Bulletin No.21: Capacity Shortage Contingency Plan (Revised June 13, 2012)

- Fire Prevention Plan

- SCE North Coast Region Severe Weather Plan (Santa Barbara)

This plan does not supersede or replace existing procedures for safety, hazardous materials response, or other similar procedures adopted and in place. The Storm Plan does not supersede specific response plans prepared to address particular circumstances or to comply with regulatory requirements.

The Storm Plan is designed to comply with and shall not supersede or contradict any requirement or regulation prescribed by various regulatory authorities including, but not limited to:

- **The California Public Utilities Commission (CPUC)** regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. The CPUC serves the public interest by protecting consumers and ensuring the provision of safe, reliable utility service and infrastructure at reasonable rates, with a commitment to environmental enhancement, and a healthy California economy.

- **The Federal Energy Regulatory Commission (FERC)** is an independent agency that regulates the interstate transmission of natural gas, oil, and electricity.

- **The California Independent System Operator (ISO)** provides open and non-discriminatory access to the bulk of the state’s wholesale transmission grid, supported by a competitive energy market and comprehensive infrastructure planning efforts.
• **Occupational Health and Safety Administration (OSHA)** ensures safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education, and assistance.

• **Environmental Protection Agency (EPA)** provides federal level environmental protection oversight.

• **National Incident Management System (NIMS)** is the comprehensive, nationwide systematic approach to incident management. SCE’s emergency planning training is NIMS compliant.

### PLAN OWNERSHIP AND ADMINISTRATION

Business Resiliency is the owner and administrator of the Storm Plan. Administration of the Storm Plan includes:

- Managing regular updates and improvements
- Making sure the plan is accurate and meets regulatory requirements
- Documenting and reporting changes to the plan
- Distributing and providing access to the plan’s stakeholders
- Facilitating the training and exercising of the plan
- Governing the processes that support the plan such as damage assessments, restoration activities, and consistent, accurate messaging.

#### Plan Updates

All changes to the plan must be entered in the Record of Review and Revisions table at the beginning of the document (page ii). Each business line is responsible for supplying plan updates to Business Resiliency quarterly or as required due to organizational or process changes. Every plan holder is responsible for filing the plan updates they receive. Storm Plan updates are the responsibility of the plan coordinator. Business Resiliency maintains the Storm Plan in the EOC.

#### Annual Review

Annual review and update of EEAP Appendices A through G (Rotating Outage Load Shed Groups) will be scheduled, initiated, and revised as necessary by the GCC at least once per
calendar year. Grid Operations, Distribution Engineering, and CS may participate in the review.

**Incremental Reviews**
In addition to changes resulting from after-action debriefs, the Storm Plan may be revised from time to time by Business Resiliency. Changes may be communicated to stakeholders through refresher training, email updates and/or during.

**Distribution and Retention of the Plan**
The current version of the plan and its supporting documents are to be stored in a common electronic location behind the SCE firewall. Additionally, supervisors and managers should have the key information available electronically and in hardcopy in the event that the electronic copies are not available. The Storm Plan may be downloaded from Business Resiliency’s Portal page.

**SCE’s APPROACH TO EMERGENCY MANAGEMENT**
The Storm Plan is consistent with the SCE Incident Management Program’s approach to emergency preparedness, safety protocol and business resiliency strategies; as well as those of the Federal Emergency Management Agency (FEMA).

SCE incident management is comprised of five key preparedness tiers:

1. **Prevent** disruptive events that could negatively impact the company, customers, employees, and/or infrastructure through the use of intelligence and information sharing that drives tactical decisions to avoid or stop disruptive events.
2. **Protect** the company from physical, social, cyber, and financial threats through asset hardening, barriers, and specialized equipment to strengthen critical assets.
3. **Mitigate** the impact of an incident by developing investment strategies to improve processes and procedures so they minimize the company’s vulnerabilities, risks, and the loss of life, resources, and infrastructure.
4. **Respond** to all incidents using a uniform approach consistent with those used by the emergency management community, public agencies, and first responders.
5. **Recover** using established plans and procedures to rapidly return SCE and the communities it serves to a state of normalcy, while helping ensure appropriate corrective actions provide for an environment of continuous improvement.

This tiered approach to emergency management is the foundation for maintaining core capabilities during any type of incident, hazard, threat, and event regardless of scope and origin. A core capability is defined as a business activity that a company performs at a
consistently high level of competency; designated by the company as critical to their position in the marketplace – they are how a company operates. SCE identifies 14 core capabilities essential to its business continuity and resiliency [Table 1].

**Table 1- SCE Core Capabilities**

<table>
<thead>
<tr>
<th>Core Capabilities</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deliberate Planning</td>
<td>Conduct a systematic process engaging the whole community as appropriate in the development of executable strategic and operational-based approaches to meet defined resilience objectives.</td>
</tr>
<tr>
<td>Incident Management</td>
<td>Establish and maintain a unified and coordinated operational structure and process that appropriately integrates all critical stakeholders and supports the execution of core capabilities.</td>
</tr>
<tr>
<td>Operational Communication Methods</td>
<td>Helping ensure the capacity for timely communications in support of security, situational awareness, and operations by any and all means available, among between affected communities in the impact area and all response forces.</td>
</tr>
<tr>
<td>Public and Employee Messaging</td>
<td>Deliver coordinated, prompt, reliable, and actionable information to businesses, employees, and public through the use of clear, consistent, accessible, and culturally and linguistically appropriate methods.</td>
</tr>
<tr>
<td>External Agency Reporting</td>
<td>Effectively communicate needs and situational assessments with external business partners, agencies, or vendors.</td>
</tr>
<tr>
<td>Situational Awareness</td>
<td>Provide relevant information regarding nature and extent of a threat, risk, impact, and hazard associated with a disruption or disaster.</td>
</tr>
<tr>
<td>Logistics and Transportation</td>
<td>Provide transportation, infrastructure access and accessible transportation services to respond to a set of priority objectives that include the delivery of vital response personnel, equipment, and services.</td>
</tr>
<tr>
<td>Health and Safety</td>
<td>Helping ensure availability of guidance and resources to address health and safety hazards, including, but not limited to, hazardous materials, biological toxins, infectious agents, physical hazards, and natural disasters. Provide support to responder operations and affected business units.</td>
</tr>
<tr>
<td>Environmental Response</td>
<td>Protect human health and the environment by aligning with local, state, and federal environmental regulations.</td>
</tr>
<tr>
<td>Finance</td>
<td>Establish a resilient financial system capable of supporting SCE’s corporate economic needs following a disruptive event.</td>
</tr>
<tr>
<td>Infrastructure Systems</td>
<td>Stabilize critical infrastructure functions, minimize health and safety threats, and efficiently restore and revitalize systems and services to the community.</td>
</tr>
<tr>
<td>Physical Security and Protection</td>
<td>Reduce or mitigate risk by controlling movement in, around, and out of critical, non-critical, and regulated (e.g. NERC) facilities. Limit access to authorized individuals to carry out legitimate activities.</td>
</tr>
<tr>
<td>Information Security and Protection</td>
<td>Protect against damage to, unauthorized use of, and the exploitation of electronic and non-electronic information systems and services. Restore damaged systems and information contained therein.</td>
</tr>
<tr>
<td>Power Generation and Delivery</td>
<td>Maintain and manage transmission, distribution and generation systems to provide safe, reliable, and affordable electrical services throughout the SCE territory.</td>
</tr>
</tbody>
</table>

Emergency response for storms can be complicated and include a combination of incidents types. They can be localized or affect a large area with a variety of infrastructure, facilities, and
personnel, sometimes located in remote and often isolated conditions. Depending on the type of incident, any number of SCE’s core capabilities may be impacted.

HELPING ENSURE SCE IS READY AND RESILIENT

Business Resiliency is responsible for making sure that SCE is prepared to address and rapidly recover from emergency incidents by:

- Helping ensure that this Storm Plan and associated documentation are developed, maintained, distributed, and updated as necessary
- Providing support of the Storm Plan execution during responses to emergency incidents
- Coordinating with Local Public Affairs (LPA) to reach out to municipalities and other key stakeholders as necessary prior to, during, and after an incident
- Engaging in day-to-day responsibilities in conjunction with Grid Operations to continuously monitor weather conditions and initiate actions to evaluate potential weather related incidents
- Making sure necessary contractual agreements are in place to meet resource and facility requirements
- Maintaining SCE’s emergency management logistic and resources:
  - Emergency Operations Center (EOC) in a state of readiness
  - Rosters of personnel assigned to emergency duty
  - Key personnel receive emergency duty training and qualifications
  - Maintaining Business Resiliency emergency contact numbers
  - Coordination and evaluation of drills and exercises
  - Conducting industry benchmarking and best practice evaluations

Personal Preparedness

Employees should personally prepare and make sure their families are prepared for the challenges they may face during prolonged outages, so that families remain safe and secure while the employee is committed to emergency response duties. Not only is this important to SCE, but it also helps ensure that employees are able to contribute to the successful restoration of SCE customers by being able to carry out their responsibilities at work.

Operational Services Employee Support

Responsibility for safe conditions and behavior rests with every employee and every level of the company. Under non-emergency circumstances, Customer and Operational Services work with SCE organizations to prevent work injuries and environmental impacts and help ensure compliance with safety and environmental requirements.
When an incident occurs – regardless of whether or not it affects customer service – several additional programs relating to employee safety are implemented. Business Resiliency, part of Customer and Operational Services, has the lead responsibility for these emergency response and management programs, including:

- The Emergency Response Coordinator Program
- Life Safety Coordinator Program
- Survival Supplies Program

The objectives for these programs are:

- Facilitate evacuation from unsafe locations, including damaged facilities
- Mitigate possible injury
- Account for personnel following evacuation

**Second Role Preparedness**

During each rotation for emergency duty, employees are on call during non-business hours, weekends, and holidays. Employees on emergency duty are expected to respond when called to assist with an incident. It is the responsibility of the individual to find a qualified replacement ahead of time if they will be unavailable during the time they are to be on call. It is the responsibility of the individual to notify the job roster administrator of the substitution. Employees with a second role must also make sure that their work equipment is functioning and is readily available.

**External Resources**

Emergency incidents often require unusual types and numbers of resources. SCE maintains, or makes sure that the organization units maintain, contracts and agreements with outside organizations to provide services to SCE during emergency circumstances. This is done to foster SCE’s ability to restore widespread system disruptions and respond to emergency events.

SCE maintains memberships in three mutual assistance organizations. Each facilitates the process of identifying mutual assistance crews and assists the utilities in the coordination of obtaining resources. Business Resiliency develops and maintains contacts with member utilities, using these agreements to help ensure SCE’s ability to obtain resources. Parties to the agreements provide field crew assistance, based on their own status, to other member utilities that request assistance.
THE PREPAREDNESS CYCLE

SCE uses the FEMA National Preparedness Cycle that provides an iterative framework for planning, organizing, training, equipping, exercising, evaluating, and taking corrective actions to promote a continuous improvement process. The Preparedness Cycle is one element of a broader National Preparedness System (NPS) to prevent, protect, mitigate, respond to, and recover from, natural disasters, man-made disasters, and acts of terrorism.

1. Plan
SCE develops a variety of plans for emergency management, safety, and business resiliency purposes. In general, these plans fall into one of four categories: Strategic, Operational, Tactical, and Procedures. The Southern California Edison Business Resiliency Strategy, a strategic plan, outlines the company’s approach for preventing and protecting the company from malicious attacks, mitigating its impacts and consequences, and responding to and recovering from any type of emergency. The Corporate All-Hazards Plan is an operational plan that allows the company to rapidly adapt and respond to internal and external dynamic changes, disruptions, and threats – it can be used for any hazard.

The Storm Plan is an operational plan that includes procedures that personnel at each facility are to follow for specific types of incidents that impact the company’s ability to maintain its core capabilities.

2. Organize
SCE responds to incidents following FEMA’s National Incident Management System (NIMS) framework and its Incident Command System (ICS). Personnel from various organizational units throughout the company are trained and exercised to use the system. This plan incorporates the NIMS/ICS protocols for managing emergencies, non-emergency incidents, and pre-planned events at all its dams, facilities, and critical infrastructure. This is consistent with SCE’s Incident Management Program requirements.
Crisis Management Council
At the top of the organizational structure is the CMC headed by SCE’s most senior officers. The CMC is a governance body that provides strategic direction during an incident. Its role is more oversight than tactical. The CMC makes an incident declaration when it is determined that there is significant risk to the company as a whole.

Business Resiliency Duty Manager (BRDM)
The CMC is to be notified of incident the Business Resiliency Duty Manager (BRDM) determines to be of significant complexity. SCE maintains a roster of BRDM on-call 24/7 for engaging the CMC when necessary. This BRDM is trained and prepared to act and respond appropriately to represent interests of the CMC during the transition from notification to incident declaration to IMT implementation.

If for any reason the regularly assigned BRDM is not able to fulfill the obligations, temporary transfer of the duty is arranged with the next available BRDM. During the period a BRDM has duty he/she must remain accessible by telephone and/or other means, remain in the general service territory, and able to respond to an incident.
The Incident Support Team
An IST may be activated to coordinate activities and manage resource requirements for large and multiple simultaneous incidents in which several IMTs are activated.

The Incident Management Team
An IMT is a team of trained personnel from different SCE OUs aligned to five functional areas of the company, any of which may be asked to lead the response to an emergency or incident.

Each team consists of eight key positions representing multiple disciplines who manage major and complex incidents that are expected to be prolonged (generally more than one day) and will require planning and coordinated resource allocation.
**Incident Commander (IC)** oversees all incident operations. The IC is accountable to the CMC, but has direct tactical and operational authority and governance of the incident. The IC helps ensure incident safety, internal, government and external stakeholders are well-informed, and liaison with other agencies participating in the incident.

If activated, the IST’s incident commander has authority over incident response operations while the IMT incident commander assumes responsibility for frontline management of the incident, tactical planning, and execution, determining resource needs, and making requests for internal resources and outside assistance.

**Safety Officer (SO)** monitors safety conditions and develops measures for assuring the safety of all assigned personnel.

**Liaison Officer (LNO)** is the primary contact for supporting agencies assisting at an incident.

**Public Information Officer (PIO)** is the primary contact for information to internal and external stakeholders, customers and media, regarding the incident or event.

**Operations Section Chief (OSC)** develops and manages the Operations Section to help ensure that incident objectives set by the IC are accomplished. The span of control for the Operations Section can be geographically divided according to areas of responsibility and the complexity of the incident.

**Planning Section Chief (PSC)** collects, evaluates, and disseminates information related to the incident and prepares Incident Action Plans documentation. The PSC monitors situational awareness (current and forecasted) and the status of resources assigned to the incident.

**Logistics Section Chief (LSC)** is responsible for providing facilities, services, and materials for the incident.

**Finance Section Chief (FSC)** is responsible for all incident costs and financial considerations.

ICS allows for a scalable response. A single incident management team may be activated for situations that are limited in scope such as a localized disruption. An incident or event that is complex, widespread, or escalating may require multiple IMTs may be needed and an Incident Support Team is activated to coordinate overall response and recovery efforts that require corporate-wide support and resource allocations.

The decision to activate an IST or IMT begins with recognizing that an event or incident with the potential to adversely affect the company, employees, customers, or the public is occurring or may occur. The IST differs from IMTs in that an IST:
• Commands rather than coordinates
• Is led by a company officer or executive
• Has members trained to a higher standard
• Does not conduct operations – has no OSCs
• Is not a functionally aligned team
• Activates in all-hazards situations

ISTs and IMTs can call upon subject matter experts as needed to provide support in legal, human resource, environmental, and customer service matters.

**Storm Manager**
The storm manager assesses impacts or potential impacts any incident may have on the Edison electrical grid. The Storm Manager is then responsible for escalating the event to the Watch Office for consideration by the Business Resiliency Duty Manager (BRDM), provide subject matter expertise to the BRDM for evaluation of the incident, and determining the appropriateness of holding resources back in preparation for a potential response.

**The Watch Office**
The Business Resiliency Watch Office is a 24/7 operation that provides situational awareness for the company. It is the first point of contact during an event and can rapidly disseminate information. When significant incidents, events and threats arise the Watch Office notifies the Business Resiliency Duty Manager who assesses the severity and potential impact of the event in coordination with the on-call IMT IC. The BR Duty Manager decides whether to activate an IMT and/or and IST and will inform the Officer in Charge (OIC), and as appropriate, senior leaders of the impacted organizational unit(s). The OIC decides whether the incident requires activating the CMC.

**Emergency Operations Facilities**
SCE has four resources to provide a range of venues equipped for gathering and reporting emergency related information and for coordinating response and recovery resources and activities. They are the SCE Situation Room, the Emergency Operations Center (EOC), Alternate EOC (AEOC), and the Mobile Command Center (MCC). They can be activated individually, in sequence, or in combination, as the situation requires.

**Emergency Operations Center**
The Emergency Operations Center EOC was built with flexibility in mind. While the conference rooms were set up with ICS in mind, the main floor and telephone systems have not been pre designated or assigned to any one group. The reason for this is that
those departments working in the EOC during an incident would be very different from those working on another type of emergency.

The EOC has 40 dedicated workstations with laptops, three conference rooms, plus one briefing room with modular furniture that can be set up to fit the need (classroom style, round table, etc.). The main floor and conference rooms have display monitors. Monitors can display satellite TV, computer screens, security cameras, etc. The EOC also houses a robust communication infrastructure including:

- 3 phone systems: voice over internet protocol (VOIP), satellite, and plain ordinary telephone service (POTS)
- 2 network systems: land line and satellite
- 2 radio systems: (VOIP and antenna) and additional hand held satellite phones
- 900 MHz radios
- Backup generation to power the facility systems

If the EOC is unavailable, an alternate EOC will be identified. The Alternate EOC should be equipped with tables, chairs, televisions, power and data drops, and basic office supplies. The alternate EOC must be capable of being set up and operational within 4-8 hours.

**Mobile Command Center**

The Mobile Command Center (MCC) is an operationally ready emergency management and communications center, which can be deployed to the scene of an emergency incident. When deployed, the MCC is managed by an experienced emergency manager from Business Resiliency.

In circumstances with high profile customer impact, the MCC provides a focal point for customers. The MCC is also ideally suited as a venue for coordinating the exchange of information with local and emergency authorities, fire agencies, environmental officials, and the media.

**3. Train and Equip**

A great deal of organizing is required for effective emergency preparedness. Preparation requires that all storm response personnel have the knowledge, skills, abilities, resources, and tools necessary to assume their roles and responsibilities during incidents and events. Training decisions are based on information derived from assessments, strategies, and plans.

Key personnel are trained: in the use of this Storm Plan, to understand their role and responsibilities, and, if applicable, to operate emergency equipment.
Employees should familiarize themselves with SCE’s Incident Management Program. It is also advisable that they complete FEMA’s Emergency Management Institute, Independent Study Program (www.training.fema.gov) free web-based training on NIMS and ICS.

SCE provides NIMS compliant Intermediate and Advanced ICS training and position specific training to Incident Support and Incident Management team members. Business Resiliency provides web-based and instructor led training to meet annual requalification and specific organizational unit requirements when needed.

Business Resiliency helps ensure that all users are trained to the Storm Plan and the processes/procedures it contains and references. Training, followed by exercises, must be conducted according compliance schedules established by the various regulatory entities that govern this plan. For example, General Order 166 requires annual training and exercises to be completed by June 30. Business Resiliency maintains all training and exercise records.

4. Exercise
SCE uses Homeland Security Exercise and Evaluation Program (HSEEP) principles for the design, development, and management of its exercise program. In accordance with company’s Incident Management Program, this Storm Plan will be exercised to:

- Validate the plan and all related policies, agreements and procedures
- Clarify roles and responsibilities among different entities
- Identify resource gaps in an operational environment and opportunities for improvement
- Improve interagency coordination and communications
- Build procedural (muscle) memory through repetition

**Drills** are a coordinated, supervised activity usually employed to test a specific operation or function within a single entity, such as testing sirens and warning systems, calling suppliers, checking material on hand, and conducting a call-down drill of those listed on notification flowcharts. It is conducted in-house to validate telephone numbers, other means of communication and response. Drills help ensure that personnel are fully cognizant of the procedures and actions required during an emergency.

**Tabletop Exercises** involve a meeting of the licensee and state and local emergency management officials in a conference room environment. These exercises are used to assess plans, policies, and procedures. The exercise begins with the description of a simulated event and proceeds with discussions by the participants to evaluate the plan and response procedures.
The purpose of the tabletop exercise is to familiarize participants with the roles, procedures, responsibilities, and personalities of the licensee and the emergency management agencies. The exercise is used to identify needed improvements to the plan, emergency management system and the licensee's organization, training/personnel deficiencies, and areas requiring additional coordination.

**Functional Exercises** examine and validate the coordination, command and control among various multi-agency coordination centers such as emergency operation centers (EOCs) and joint field offices. It does not involve boots-on-the-ground, such as first responders and emergency officials responding to an incident in real time. Exercises simulate an event in a stress-induced environment with time constraints. Participants act out their actual roles in a simulated emergency.

These comprehensive exercises test participants' responses to real-life conditions without actual field deployment of resources. They are designed to evaluate individual and system-wide performance, the workability of the plan, and how well SCE coordinates with external emergency management personnel and first responders.

**Full-Scale Exercises** are multi-agency, multi-jurisdictional, multi-discipline boots-on-the-ground exercises in which participants respond to a very realistic simulated event, such as an actual dam failure. The exercises are used to evaluate the operational capability of all facets of the emergency management system to interact in a stressful environment that involves the deployment and mobilization of personnel and resources. Actual evacuation of critical residents may be exercised if previously announced to the public.

**5. Evaluate and Improve**
Any implementation of an emergency action plan (exercise or actual activation) requires a formal assessment of the incident to capture lessons-learned, identify strengths and weaknesses, spur best practices, and sustain/enhance existing capabilities. Hot Washes, debriefs and after-action reports are part of SCE’s emergency process. They help provide an objective assessment of gaps and shortfalls within plans, policies and procedures, and are used to make recommendations for course corrections and improvements.

**Hot Washes and Incident Debriefings**
Hot Washes and Incident Debriefings are required as a follow-up to drills, tabletop, functional, and full-scale exercises. They are evaluation sessions.
Hot Washes are held immediately following an exercise or the terminating of an incident. These sessions ask participants to share their observations and opinions in a discussion format. They are encouraged to suggest changes that might improve the plan and help them perform their responsibilities during emergencies more effectively.

After the Hot Wash, all controllers and evaluators meet with other members of the exercise planning team to hold a Debrief. The purpose of debriefings is to discuss experiences, voice concerns and offer up suggestions for corrective actions and improvements.

**Reports**

Written evaluations are required following all exercises and incidents. The written report describes the event, including notification and response actions. All staff involved in the event provides input to the report. Any problems or weaknesses identified in existing emergency policies or procedures must be noted as well as plans for improvements. They do not have to be elaborate, but must be clear and concise. The reports should include:

- Documentation and an evaluation of the various aspects of the exercise, including the timeliness of responses and areas of concern.
- Observations and recommendations that result from the exercise.
- A summary of the Hot Wash comments and lessons learned by the participants.
- Comments made during the Hot Wash and Debrief including participating emergency management authorities regarding their respective participation in the exercise.
- The participants' written evaluations.
- Any subsequent clarifications or discussions.
- A plan and schedule to make changes to the plan and any other follow-up actions.
PART II – STORM MANAGEMENT

INCIDENT TYPES

The intent of this plan is to prepare for, respond to, and recover from abnormal electrical conditions resulting from any storms and other disruptive events. These conditions are typically brought on by severe storm activity and extreme weather events that affect SCE and determine how the company should respond.

- Natural Incidents:
  - Severe Weather
    - Wind
    - Rain
    - Flooding
    - Lightning
    - Heat
    - Snow-Sleet
  - Fire
  - Earthquake – Seismic - Slides

- Technological:
  - Loss of electrical control systems networks
  - Cyber Breach
  - Capacity Shortages (EEAP)

- Manmade Incidents:
  - Sabotage
  - Terrorist Attacks
  - Insider Threats
  - Human Error

Natural Incidents

- Severe Weather

  - Wind
    Windstorms typically occur in SCE territory from late fall to early spring. Although strong wind is often associated with winter rain and lightning storms, more damage is caused by northeasterly winds referred to as Santa Ana winds.
They are caused by relative high barometric pressure to the north of the service territory and low pressure to the south.

The greater the pressure variance, the stronger the wind is. Areas that are in close proximity to the southern and western slopes of the coastal mountain ranges are most affected by the Santa Ana winds. Damage is usually sustained when tree limbs are broken and fall into distribution lines and poles.

- **Rain**
  Rainstorms occur during the same time of the year as Santa Ana winds. Most of the storms are of the winter cold front variety. They typically enter the service territory from the Pacific Ocean and move east. Winter rainstorms are frequently accompanied by lightning, strong winds, and snow at higher elevations. Most cold fronts pass through within a day, but often a series of storms move across the service territory causing storm damage for several days, occasionally lasting a week or more.

  Most rain related damage to the utility's infrastructure is caused by lightning strikes, broken tree limbs, toppled trees, fallen poles due to ground saturation, high winds, snow, and ice on trees and conductors. Some areas are prone to mud and rock slides that frequently damage facilities and block access to storm-damaged areas. Historically, rainstorms cause more damage to the distribution system than any other storm type.

- **Flood**
  SCE does not typically encounter flood activity. Heavy rains may cause temporary and localized flooding.

- **Lightning**
  Lightning storms have the potential to cause extensive damage to transmission and distribution systems. SCE defines “high lightning areas” as those areas with an isokeraunic level of four or more (four or more days of lightning activity per year). High lightning areas are primarily located in the deserts, mountains, and Central Valley regions of the service territory. Lightning strikes peak in summer. They have a secondary peak in winter. Summer lightning strikes are normally associated with the northeasterly movement of moist air from the Mexican Pacific, coupled with an uplift caused by the mountains and desert heat. Together, the effects produce convective storms and associated lightning. Frequently, this type of lightning occurs in the desert and mountain regions at
the same time urban districts are experiencing heat storm activity. Winter lightning strikes are normally associated with Pacific rainstorms and can be widely spread across the service territory. When lightning strikes a circuit it can produce conductor, insulator, and equipment damage including damage to transformers.

- **Snow/Sleet**
  Snow and sleet typically affect only the mountain regions during the winter months. Ice and snow loading on tree limbs can damage equipment when tree limbs break and fall on wires or poles.

- **Heat**
  Heat storms occur from late spring to early fall and peak during the summer months up until early fall. Areas that normally have moderate summer temperatures are most susceptible to heat storms when usage of air conditioners increases load. Heat storms frequently cause abnormally high loads and imbalances on distribution circuits. Other than circuit problems, most heat storm recovery efforts involve identifying and replacing overloaded and failed distribution transformers.

- **Fires**
  Fires are a frequent occurrence throughout the SCE territory. The highest fire danger typically begins during the summer and peaks in the fall. Most fire recovery efforts involve rebuilding distribution facilities after the fire has passed through affected areas. As fires often affect areas that are relatively inaccessible, outage lengths are usually much longer than other types of storms and catastrophic events. The California Department of Forestry may declare "Red Flag Warning" conditions when extreme fire weather conditions are forecast within the next 12-hour period. These conditions are defined as wind speed greater than 25 miles per hour and relative humidity less than 15 percent. During Red Flag Warning periods, System Operating Bulletin 322 restrictions are implemented. System Operating Bulletins are online at: [http://go2ntdoma01.sce.com/applications/tdbu/grid/dl020219.nsf/(WebViewGCCdocs)?OpenAgent&docType=sob](http://go2ntdoma01.sce.com/applications/tdbu/grid/dl020219.nsf/(WebViewGCCdocs)?OpenAgent&docType=sob)
  The bulletins are maintained in hard copy by the switching centers, Grid Control Center (GCC), and Alternate Grid Control Center (AGCC) for backup purposes. The district may be asked to supply fire observers. These individuals should be assigned and outfitted with proper equipment before they report to the fire scene.
- **Earthquakes**
  Earthquakes occur frequently throughout the service territory. Although most cause little or no damage to SCE's transmission and distribution system, periodically one will occur with sufficient magnitude to cause extensive damage to SCE facilities. When this occurs, the transmission, substation, and distribution facilities are affected. This may result in large numbers of outages due to substation bank relays. Slides may be caused by earthquakes or ground saturation during heavy rains causing the earth to shift. Slides may result in damage to equipment and/or prevent access to affected area.

**Technological Incidents**
- **Loss of Electrical Control Systems**
  SCE depends on multiple IT based systems to support the monitoring and remote operation of the electrical grid. Loss of any one of these systems would inhibit SCE's ability to monitor and remotely operate the electrical grid and contingency plans would be activated.

- **Cyber Breach**
  The federal government of the United States has warned that the electric power system is susceptible to cyber-attacks. The United States Department of Homeland Security, the Department of Energy, and other Federal agencies work with industry to identify vulnerabilities and to help industry enhance the security of control system networks.

- **Capacity Shortage (EEAP)**
  A sudden shortage in our ability to meet electrical demand with available capacity can result in the initiation of load curtailment and rotating outages to maintain the stability of the SCE electric grid. The processes and procedures SCE utilizes to manage a sudden capacity shortage are outlined in the SCE Electric Emergency Action Plan (EEAP), which is developed and maintained by the Business Resiliency department. A copy of the EEAP can be found on the Storm Resources page located on the Business Resiliency portal page.

**Human Caused**
- **Sabotage, Terrorist Attacks, Insider Threats, and Human Error**
  Depending on the nature and location of a terrorist attack, a surprise attack involving the deliberate use of violence against civilians or employees in the hope of attaining political or religious aims, SCE may need to activate the Storm Plan if there is an effect on the electrical system.
**PREVENTION and PROTECTION - MITIGATION**

**Vegetation Management**
In many emergencies, vegetation management is a critical factor for public safety, access, and restoration. Vegetation issues can be a deciding factor in the duration of the restoration. Further, vegetation issues often must be addressed early in the restoration to facilitate the repairs. It is common in an emergency incident to require more vegetation resources than are normally employed on a day-to-day basis. Thus, it is imperative that SCE acquire the adequate vegetation resources and have them on property working as soon as possible. As with line contracts, emergency vegetation contracts are pre-arranged with both existing vegetation contractors and emergency only, non-standard contractors.

**Weather and Hazard Monitoring**
The most common early indicator of a potential incident is the weather forecast. Thus, as a cornerstone of situational awareness, SCE continuously monitors weather. SCE escalates predictions of potentially damaging weather incidents or other hazards. Under normal circumstances, Grid Ops personnel perform the weather monitoring as part of normal duties. SCE may also enlist contract weather specialists to monitor weather and issue alerts as appropriate. When the circumstances warrant heightened attention, a specific person is assigned this duty under the oversight of the BR, CMC, or IMT as appropriate. Based on the risk (likelihood and potential extent of damage), controlling authorities shall take all necessary preparatory actions as summarized in this Storm Plan in accordance with the predicted incident.

For non-weather incidents, BR is responsible for collecting necessary intelligence information from Corporate Security, state or federal agencies or other sources as they arise. In order to efficiently share critical situational data, SCE employees have access to an information dashboard that displays weather information as well as outage data, statistics, maps, and damage assessment information.

**Electrical Systems Monitoring**
Grid Ops is responsible for monitoring and operating SCE’s electrical grid in a safe and reliable manner in conjunction with appropriate regulatory agencies. Operating 24 hours per day, 365 days per year, Grid Ops responds first to emergent incidents and monitors situations that might require a significant emergency response. Grid Ops makes the appropriate notifications through the Grid Control Center’s notification process as well as notifying the appropriate emergency response personnel whenever a possible or current situation might require a significant response.
RESPONSE

The response section details how personnel are expected to respond to an actual emergency incident. It details roles and responsibilities, and the appropriate actions to take for each threat type. All incident types follow the same basic emergency response approach with the Incident Command System (ICS) being used to manage all corporate level activations, where significant customer impacts are anticipated.

Prior to the activation of ICS, the Transmission and Distribution Organizational Unit will respond to the incident in accordance with standard response procedures. For all incidents, there are five steps to the emergency response process:

1. Detect and evaluate the situation as soon as an emergency event is observed or reported
2. Determine the level of the threat the incident poses using the incident complexity analysis
3. Notify internal and external entities including ISO according to the appropriate System Operating Bulletin (SOB) and continue communications to help ensure all emergency responders have the information needed to make timely and sound decisions
4. Assume the appropriate role and respond to the incident using the SOB and incident management protocols with public and employee safety being the highest priority.
5. Once the incident is officially terminated, conduct formal hot washes/debriefing sessions and follow decommissioning best practices including After Action Reports; a thorough follow-up includes reviewing all plans and procedures, making the necessary revisions from lessons learned, and helping ensure distribution to all stakeholders/plan holders

Step 1: Detection and Evaluation – Early Warning and Tracking

When severe weather is forecasted, SCE conducts an evaluation of the storm severity using historical response and management judgment to determine the potential intensity and appropriate response. In anticipation of a storm response, the following actions should be considered:

- Alerting the duty IMT using the established rosters
- Alerting the duty IST using the established rosters if the forecasted situation is of sufficient scope and/or complexity
- Determining the pre-storm objectives
- Conducting incident briefing and pre-incident planning and tactics meetings
- Evaluating the appropriate restoration strategies
- Communicating situation information internally and externally as the Incident Commander determines necessary
- Assess and determine the need to hold resources in preparation for a potential response
- Utilize the existing forecasting model to predict potential impacts the SCE network
- Where appropriate, pre-stage resources in anticipation for a response activation utilizing projected impacts from computer and subject matter expertise modeling

Conference Call Coordination

Since emergencies may arise at any time, potentially, with little or no prior notice, T&D will coordinate with the SCE Watch Office for escalating the appropriate response when an incident occurs. If necessary, the Watch Office works with the Business Resiliency Duty Manager (BRDM) to conduct a conference call to review the situation and utilize the Complexity Analysis to determine if an activation of the Incident Management Teams (IMT) or Incident Support Team (IST) is necessary.

Step 2: Incident Classification

Classifying incidents according to their intensity provides a framework and consistency for communicating the severity of an incident and to aid in the development of restoration strategies and activation of response. The Storm Plan uses incident intensity levels established for the entire SCE service territory and for individual districts. The overall SCE incident intensity level is based on the aggregation of the district level information with consideration for widespread incidents such as transmission or substation interruptions.

There are four levels based on the complexity of the event, extent of the damage, customer impact, and consideration for the response. The storm intensity level is then fed to the BRDM for inclusion into the corporate complexity analysis. These incident levels are used as a guideline to understand the severity of an incident. Actual response and resource needs are determined per incident.
Mild

A mild incident is typically localized to districts within a single region and resources at the district or local level are sufficient to manage response and recovery activities. Mild incidents are frequent, occurring several times in one season. Such incidents can be characterized by average to slightly higher than average number of storm related sustained incidents resulting in:

- Customer interruptions: Typically, less than 2.5% of total customers affected in a district or sector. Region or territory wide: the number of customers impacted is typically less than 1%.
- Restoration: sufficient distribution, transmission, substation, and other design, construction, and maintenance resources can be deployed to provide assistance with extended shifts for personnel.
- Resources available within the locally impacted area or adjacent areas to respond (or equivalent area of responsibility for other departments).
- Majority of customers are typically expected to be restored in less than 24 hours.
- Assets damaged are typically available.
- Other significant events requiring an elevated response, as determined by management.

Moderate

A moderate incident is typically spread over multiple districts or in a more intense isolated incident that requires additional resources to manage response and recovery activities. Moderate incidents are experienced only a few times in any one year. Such incidents can be characterized by a higher than normal number of storm related sustained incidents resulting in:

- Customer interruptions: Typically, between 2.5-10% of total customers impacted in a district or sector. Region or territory wide: less than 2-3%.
- Restoration: sufficient distribution, transmission, substation, and other design, construction, and maintenance resources from the surrounding Regions can be deployed / reallocated to provide assistance with extended shifts for personnel.
- Resources scheduled within the impacted areas or adjacent areas to respond (or equivalent area of responsibility for other departments).
- Majority of customers are typically expected to be restored in less than 48 hours.
- Assets damaged are typically available.
- Isolated damage to transmission or substation facilities within a local region.
- Other significant events requiring this elevation of response, as determined by management.
Severe

A severe incident is either an incident with escalating affecting across multiple regions or a severe intensity isolated incident. Such incidents are rarely experienced on a yearly basis, occurring on average once or twice every ten years. Such incidents are characterized by an extremely high number of storm related sustained incidents resulting in:

- Customer interruptions: Typically, between 10-20% of total customers impacted. Region or territory wide: 5-10%.
- Restoration: insufficient distribution, transmission, substation, and other design, construction, and maintenance resources. Assistance from non-adjacent areas may be required.
- Resource requirements (>100% of area resources) that affect multiple zones and require coordinated effort to manage response and recovery activities.
- Majority of customers are expected to be restored in less than 72 hours.
- Assets damaged may exceed those available.
- Extensive damage to transmission and/or distribution facilities.
- Other significant events requiring this elevation of response, as determined by management.

Catastrophic

A catastrophic emergency or incident may require additional assistance if the resources required to respond exceed the available SCE resources and restoration may be prolonged beyond 72 hours. Such incidents are extremely rare and may cause such significant damage to the system resulting in:

- A company-wide need to focus on electrical restoration efforts.
- Customer interruptions: Greater than 20% of total customers affected in district or sector.
- Greater than 10% region or territory wide.
- Restoration: insufficient distribution, transmission, substation, and other design, construction, and maintenance resources. Assistance from non-adjacent areas is required (>100% of SCE resources).
- Restoration may be prolonged beyond 72 hours.
- Assets damaged may exceed those available.
- Extensive damage to transmission and/or distribution facilities.
- Potential safety and/or health concerns.
- Other significant events requiring this elevation of response, as determined by management.

**Step 4 – Mobilization and Activation**

SCE’s operational response to any type of incident share the common goal of employing the most appropriate resources to safely and effectively address the incident based on the best available information. Effectively managing response activities requires communicating priorities, establishing achievable objectives and making strategy adjustments as situations evolve. Three primary response phases are used when SCE has advanced notice of an upcoming incident:

- Phase 1: Monitoring the situation/storm and its potential to impact company operations
- Phase 2: Preparing for imminent mobilization and activation
- Phase 3: Responding to the incident

<table>
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<tr>
<th>PHASE 1 - Monitor</th>
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<tr>
<td><strong>Initiation</strong></td>
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| **Mobilization and Activation** | 1. Supplemental emergency action and/or other plans and procedures may be referenced or activated for different regions of the SCE service territory.  
2. Daily email notifications are sent to key personnel providing details of the event prepared by the Watch Office – Notification may take place via Watch Office Daily Report. Distribution list may include (among others):  
- T & D Storm Manager  
- Short-Term Demand Forecasting  
- On-Call IST Incident Commander(s)  
- On-Call Electrical Services IMT Incident Commander(s)  
3. Short-Term Demand Forecasting may send daily updates to the Watch Office as requested by the BRDM or Storm Manager.  
4. Threat subsides and no further actions are required or the risk continues and an event is predicted within 72 hours - **transition to Phase 2**. |
<p>| <strong>Demobilization</strong> | The T&amp;D Storm Manager and BRDM determine the threat has subsided and response activities are officially suspended. |
| <strong>Transition to Phase 2</strong> | All key stakeholders have a consistent understanding of the risk of weather activity and potential impacts to the company. |</p>
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<th><strong>PHASE 2 – Prepare</strong></th>
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<td><strong>Initiation</strong></td>
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<td>Business Resiliency Duty Manager and/or Storm Manager initiate and facilitate a coordination call through the Watch Office to officially enter into Phase 2 activities. Call includes:</td>
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<tr>
<td>- T&amp;D Storm Manager</td>
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<tr>
<td>- Business Resiliency Duty Manager</td>
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<tr>
<td>- Watch Office</td>
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As needed, additional attendees for situational awareness may include:  
- Short-Term Demand Forecasting - Meteorologist  
- On-Call IST team members (roster maintained by Watch Office)  
- On-Call Electrical Services IMT team (Watch Office maintained roster)  
- GCC, BCD, CSOD, CRE, Consumer Affairs, Claims, Corporate Security, Power Production, and other stakeholders as necessary

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<th><strong>Mobilization and Activation</strong></th>
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<td>1. Reporting IST, IMT(s) and select field personnel identified by the Incident Commander and T&amp;D Storm Manager are placed on alert 72 hours prior to expected event</td>
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<td>2. Situational awareness continues to be monitored, documented, and distributed throughout the event</td>
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<td>3. Inventory assessments are conducted in the forecasted impact regions to make sure that critical assets and equipment are available/ordered, and able to be in place at least 24 hours prior to the event</td>
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<td>4. ICS form 201 may be completed, as necessary - outlining initial IMT activities once plans for full Phase 3 activation are developed</td>
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<td>5. When appropriate, key public messaging is coordinated within SCE and shared with appropriate audiences as necessary i.e. County Public Information Officers (PIO). Messaging may be released in advance of the event</td>
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<td>6. Threat subsides no further actions are required or the risk continues requiring a <strong>transition to Phase 3</strong></td>
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<td>7. When determined appropriate by the BRDM and/or Storm Manager, reach out to county emergency management agencies to discuss potential impacts and appropriate staffing</td>
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<th><strong>Demobilization</strong></th>
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<tr>
<td>The T&amp;D Storm Manager and BRDM determine the threat has subsided and response activities are officially suspended.</td>
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<th><strong>Transition to Phase 3</strong></th>
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<td>- The IST, IMT, Business Resiliency Duty Manager, and other key stakeholders have a common understanding of the situation</td>
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<td>- An inventory check has been performed and required assets and equipment are onsite or in transit</td>
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<td>- All required personnel have been notified of a possible activation</td>
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<td><strong>PHASE 3 – Respond</strong></td>
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<tr>
<td><strong>Timeframe</strong></td>
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<tr>
<td><strong>Initiation</strong></td>
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</table>
| **Mobilization and Activation** | 1. As the situation warrants, all required IMT personnel have been notified and are prepared to initiate response activity within 2 hours of activation.  
2. 12-hour operational period (o-period) of 0700 - 1900 established.  
3. Safety Operations Section is staffed and safety personnel have been deployed to suitable locations.  
4. Mitigation activities conclude at potential impact sites (e.g. substation pre-event inspections, transmission inspections, equipment staging/rental, etc.).  
5. Key messaging is coordinated within SCE and is shared with appropriate audiences.  
6. The organizational structure for ICS teams and select field personnel is reassessed.  
7. Strategies for early damage assessments, a restoration plan, and Incident Action Plan are developed as necessary.  
8. ICS teams remain active until the threat has completely subsided and all impacts have been resolved or transitioned to a long-term recovery taskforce or other such team. |
| **Demobilization**    | The T&D Storm Manager and BRDM determine the threat has subsided and response activities are officially suspended. |
| **Demobilization**    | Utilizing intel from Short-Term Demand Forecasting, the T&D Storm Manager, and the Incident Commanders, BR Duty Manager determines the threat has subsided and response activities are officially suspended. |
| **End State**         | All critical systems have been restored and impacted regions are no longer at risk. Long-term restoration activities have been transitioned to the appropriate personnel/teams who are in operational. |
**Restoration Priorities**

Due to the wide range and nature of incidents, SCE has identified guidelines to restore the most critical and the largest numbers of customers as quickly as possible while prioritizing public health and safety.

*Public Safety*

With safety of the public and employees as our first priority, then the restoration effort needs to be done in the most efficient manner while maintaining the reputation and property of the company.

The prioritization of activities informs the strategy for a restoration of the SCE electric system and customer service:

- **If there is a total system shutdown and subsequent restoration,** SCE's first priority is to deliver off-site power for reactor safety purposes. During the process of routing power to San Onofre Nuclear Generating Station (SONGS), some customers are restored for bulk power voltage control and to facilitate picking up station light and power while energizing 220/66 kV banks for the coordination of protective relaying equipment.
  - SONGS offsite power
  - Offsite power to Diablo and Palo Verde Nuclear Generating Stations if required
  - Startup power for bulk power generation
  - Transmission stations station light and power
  - Customer load
- **If the total system is not shut down:**
  - Protect public safety and help ensure that utilities and public agencies have electricity
  - Repair any facilities that have sustained damage
  - Repair transmission lines (66 to 500 kV)
  - Help ensure substations and circuits are energized
  - Repair distribution lines (4 to 66 kV) to restore/maintain service to large numbers of customers
  - Repair tap lines to restore service to smaller numbers of customers
  - Repair individual customer problems

Some examples of the Restoration Strategy & Priority Order (high to low) are:

- Clear electrical hazard with imminent danger as reported by a public agency
- Clear electrical hazard with imminent danger as reported by the public
- Circuit interruptions
- Unclear electrical hazard with unclear imminent danger as reported by a public agency
- Unclear electrical hazard with unclear imminent danger as reported by the public
- Area Outs
- Single No Lights
- Single Part Lights

**High Priority Customers**

In order to identify customers that provide essential public service as well as critical care customers who have been pre-identified to be imperative to wider customer safety, SCE has developed a method which prioritizes outages in the system based the combination of several factors:

- Pre-identified criticality (hospitals, critical care facilities, police, fire, utilities, food, community support, etc.)
- Length of time without service addresses the outages by criticality further to be addressed as soon as the system has been repaired to support them
- Number of customers affected

**First Responders**

A high volume of high priority issues typically occurs at the beginning of a significant incident and often continues throughout the incident. SCE responds to these issues in the order of pre-determined priorities. Personnel are on property throughout SCE territory and on duty 24 hours a day, 365 days a year to respond to these issues. There are qualified personnel throughout SCE who may be called in for additional support.

An appropriate number of resources should be reserved to address these critical responses throughout the restoration.

**Split Jurisdictions**

Substation System Operators manage multiple systems within geographic jurisdictions. In an emergency, it may become necessary for an operator to maintain the entire system while concentrating on a particular sub-system. In this case, the operator may assign a portion of the system to another operator. This frees up the operator to concentrate on the area of elevated activity as well as providing reasonable service to the customers not affected by the incident.
Restoration Strategies

SCE may have more than one incident concurrently. Therefore, they may employ different restoration strategies based on the size, scope, and intensity of each incident. In smaller, more isolated incidents, SCE typically employs the standard order-based strategy that it uses under routine outage circumstances. As described below, this strategy is not effective in larger incidents where there is an overwhelming volume of orders. Thus, in larger incidents, SCE moves to an area-based strategy where repair priorities are assigned by areas and circuits. This is a tactical decision made during the planning process for a given operational period and documented in the IAP. The two strategy types, order- and area-based can be used together within an event as needed.

Order-Based Strategy

Order based restoration is most frequently applied during less complex incidents where the number of trouble orders is within the capacity of the available workforce to efficiently process and complete.

Order based strategies may also be useful during less complex, distributed incidents where there is not a significant amount of physical damage experienced by the system (e.g., a heat storm). It is also useful before and concurrently with the initial damage assessment before the extent of the damage has been discerned.

The order based restoration strategy is used when there are a relatively small number of trouble orders. Under this strategy, day-to-day restoration processes predict, locate, and repair faulty equipment or line sections. OMS facilitates prioritization of trouble orders based on number of outages and availability of responders.

Order based restoration is very effective when the instances of damage are not substantial and when the number of trouble orders allows efficient work package development and prioritization. The effectiveness of this type of restoration strategy may be diluted when the physical damage is substantial because the time necessary to restore a specific trouble order is not easily incorporated into the analysis, which prioritizes and assigns work. Consequently, during significant incidents where there is widespread damage resulting in a large number of trouble orders with physical damage, an area based restoration strategy may be more appropriate to optimize the restoration effort.

Area-Based Strategy
Area based restoration strategy is used when the number of orders exceeds the ability to assign work on an individual order basis. Work is assigned to crews by areas or circuits and prioritized at the area or circuit level rather than evaluating individual orders. Areas and circuits are prioritized based on considerations such as customer density and critical restoration issues. Crews are typically expected to complete all the work in their assigned area before moving on to the next. The area based restoration strategy focuses on decentralizing the management of significant restoration work to improve productivity while simultaneously addressing high priority issues.

This type of restoration strategy capitalizes on directing multiple resource types, including: damage assessors, first responders, company line crews, contract line crews, and mutual assistance resources under one authority; thereby, optimizing their efforts.

**Step 5 – Demobilization and Follow Up**

Demobilization and Follow-Up activities begin with the official termination of the activation and include formal hot washes and debriefs, after-action reporting, evaluations, lessons learned, and if necessary plan revisions.

The Incident Commander evaluates situational awareness and makes the determination that the emergency and threat potential no longer exist and the activation can be terminated. The IC then arranges for the appropriate individuals and agencies to be notified and leads the IMT through the follow-up process.
Incident Command System (ICS) Organizational Structure

Below is outlined a sample organizational structure for an Electrical Services Incident Management Team (ES-IMT). The Business Resiliency Duty Manager (BRDM), in conjunction with the assigned Incident Commander (IC) should adapt this structure to meet the needs of the current operation.

Incident Commander (IC)

- Public Information Officer (PIO)
- Safety Officer (SOF)
- Liaison Officer (LNO)

Operations Section Chief (OSC)

Planning Section Chief (PSC)

Logistics Section Chief (LSC)

Finance Section Chief (FSC)

Sample Branch Directors:
- Transmission Branch
- Distribution Branch
- Substation Branch
- Grid Ops Branch
- Engineering Unit Branch
- Ground Support Unit Branch
- Customer Contact Center Branch
- Air Operations Branch
- Carrier Solutions Branch
- Vegetation Management Branch
APPENDIX A - Glossary

**Branch:** The organizational level having functional or geographic responsibility for major parts of the Operations or Logistics functions. The Branch level is organizationally between Section and Division/Group in the Operations Section, and between Section and Units in the Logistics Section.

**Corporate Emergency Response Plan (Storm Plan):** The document herein which describes, at a strategic level, the accepted SCE approach to responding to an emergency event.

**Chain of Command:** A series of management positions in order of authority; instructions flow downward along the chain of command and accountability flows upward.

**Chief:** In ICS, the chief is the head of a General Staff function, typically, over Operations, Planning, Logistics, or Finance/Administration. All General Staff Chiefs report directly to the IC.

**Crisis Information Team (CIT):** The team of communications specialists assembled in a crisis to support the Public Information Officer.

**Construction Maintenance Accountant (CMA)**

**Crisis Management Council (CMC):** The officer-level team that serves an oversight and support role to assure appropriate implementation of emergency response. The CMT does not have direct command of the incident.

**Crisis Management Council Advisor (CMCA):** The CMCA is available 24/7 to activate the CMC if needed and advise the CMC.

**California Utilities Emergency Association (CUEA):** State level association with which SCE has a mutual assistance agreement.

**Cyber-event** – Any observable occurrence in a system or network; these can originate on individual systems, networks, security devices, and other devices. Cyber-events can be detected in a wide variety of ways by any number of different sources. An event may indicate that the security of an information system, service, or network has been breached or compromised. An event may also indicate that an information security policy has been violated, or that a safeguard has failed. For guidance on Events, Event Handling and Resolution processes, please see the companion document Standard Operational Procedures for Event Management.

**Cyber-incident** – A threat, event, or series of events that require additional investigation and/or response actions due to the possible impact of an event on the organization’s systems and business. An incident may require a broader response effort that includes skill sets and capabilities other than those of the standard cybersecurity monitoring teams. These additional efforts may require representatives or subject matter experts (SME) from such groups as Desktop Engineering, Network, or Power Systems Controls. Incidents also may have specific reporting and escalation requirements.

**Damage Assessment:** Coordinated effort to gather accurate intelligence regarding the level, extent, and severity of the damage and the amount of effort and resources needed to restore the system to normal.
Debrief – When team members discuss any issues and concerns noted during the exercise and areas for improvement. Should be conducted immediately after the Hot Wash.

Deputy: A fully qualified individual who can be delegated the authority to manage a functional operation or perform a specific task. The deputy assumes responsibility for managing a specific part of the responsibilities of a superior to free the superior for concentrated tasks or to provide a remedy for a span of control issue. In some cases, a Deputy could act as relief for a superior and therefore must be fully qualified in the position. Deputies can be assigned to the IC, General Staff, and Branch Directors.

Division: The geographic segment of a Branch to divide the work and support span of control. The Division Leader reports to a Branch Director.

Distribution Operations Center (DOC)

Drill – A drill is a coordinated, supervised activity usually employed to test a single specific operation or function within a single entity, such as testing sirens and warning systems, calling suppliers, checking material on hand, and conducting a call-down drill of those listed on the Notification Flowchart.

Edison Electric Institute (EEI): National level association with which SCE has a mutual assistance agreement.

Emergency – (NIMS definition) Any incident – natural or manmade – requiring responsive action to protect life and property.

Emergency action plan (EAP) – A formal document identifying potential emergency conditions that may occur at the dam and specifying preplanned actions to minimize potential failure of the dam or minimize failure consequences including loss of life, property damage, and environmental impacts.

Emergency action plan coordinator: As defined in the Emergency Action Plan, the coordinator is the Division Manager.

Emergency alert system – A federally established network of commercial radio stations that voluntarily provide official emergency instructions or directions to the public during an emergency.

Emergency management authority – State, local, tribal, or territorial agency responsible for emergency operations, planning, mitigation, preparedness, response, and recovery for all hazards. Names of emergency management authorities vary (e.g., Division of Emergency Management, Comprehensive Emergency Management, Disaster Emergency Services, Emergency and Disaster Services).

Emergency management organization: A leadership team will be put in place upon activation of the Emergency Action Plan. The leadership team will include the Division Manager, Managers of Operations & Maintenance, Engineering, and Regulatory Compliance.

Emergency operations center – The location or facility where responsible officials gather during an emergency to direct and coordinate emergency operations, to communicate with other jurisdictions and with field emergency forces, and to formulate protective action decisions and recommendations during an emergency.
Emergency planning committee: Members of management with authority to approve expenditures at the highest levels. The Finance Manager, in addition to those persons of the emergency management organization listed above.

Emergency response coordinator (ERC) – An individual with the responsibility for the welfare of the employees at ERC’s respective facility. The ERC is typically the senior manager of the largest population at the facility, or the senior manager’s direct report.

Emergency Response Organization (ERO): The SCE organization that responds to an incident

Energy Management System (EMS): A computer system connected to devices throughout the physical electrical system that allows system operators to monitor system condition and control field devices.

Environmental Protection Agency (EPA): Provides federal level environmental protection oversight.

Estimated Restoration Time (ERT): The projected time by which all customers’ service is expected to be restored.

Evacuation map – A map showing the geographic area downstream of a dam that should be evacuated if it is threatened to be flooded by a breach of the dam or other large discharge.

Evacuation route – The shortest path from an affected area to an area of safety, a shelter area, or a location out or away from the building.

Exercise – Activity designed to promote prevention, preparedness, and response to incidents and emergencies, and may be extended to include recovery operations. The exercise also demonstrates the EAP’s effectiveness in an actual situation and demonstrates the readiness levels of key personnel. Periodic exercises result in an improved EAP because lessons learned are incorporated into the updated EAP document. Exercises consist of testing and performing the duties, tasks, or operations identified and defined within the EAP through a simulated event.

Exercise plan – General information documents that help operation based exercises run smoothly by providing participants with a synopsis of the exercise.

Facility Emergency Action Plan

Field Accountant Operator (FAO)

Finance/Administration Section (FAS): The F/A Section is the Command Staff section responsible for the set of “back-office” financial, accounting and administrative functions that support an emergency response with particular emphasis on proper administration of FEMA documentation and procedures and response costs.

Finance/Administration Section Chief (FASC): Command Staff position reporting to the IC responsible for the financial, administrative, and accounting functions of the F/A Section.

Full-Scale Exercises – a multi-agency, multi-jurisdictional, multidiscipline exercise involving functional, e.g., joint field office, emergency operation centers, and “boots on the ground” response to a simulated event, such as activation of the EOC and role-playing to simulate an actual dam failure.
**Functional Exercise** – An exercise that examines and/or validates the coordination, command, and control between various multi-agency coordination centers, such as Emergency Operation Centers (EOCs) and joint field offices. A functional exercise does not involve any "boots on the ground," such as first responders or emergency officials responding to an incident in real time.

**Grid Control Center (GCC)**

**Grid Management Center (GMC)**

**Group:** A functional segment of work with specific responsibilities within a branch. A Group Supervisor reports to a Branch Director.

**Hazardous Materials** – a material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the unified program agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

**Hot Wash** – An oral after-action review of the EAP exercise conducted with the exercise participants, planning team members, facilitators, and evaluators.

**Incident Action Plan (IAP):** An oral or written plan containing general objectives for the operating period, reflecting the overall strategy for managing an incident. The IAP should include the identification of operational resources and assignments. The IAP may also include attachments that provide direction and important information for management of the incident during the operational period.

**Incident:** An occurrence or event, natural or human caused, that requires an emergency response to protect life or property.

**Incident Commander (IC):** The highest predetermined official available at the scene of an emergency. Responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.

**Incident Command System (ICS):** A standardized, on-scene, all-hazards incident management concept that enables a coordinated response among various jurisdictions and agencies, establishes common processes for planning and management of resources, and allows for integration within a common organizational structure.

**Incident Management Team (IMT):** The IC and their direct reports in the command staff (PIO, Liaison Officer, and Safety Officer) and general staff (Operations Section Chief, Planning Section Chief, Logistics Section Chief, and Finance/Administration Section Chief).

**Injects** – Scripted details of messages or events transmitted during an exercise to the participants so that they will be able to respond with an action or decision.
Liaison Officer (LNO): Command staff member responsible for interfacing with other responding agencies to coordinate and communicate efforts between the agencies.

Local Public Affairs (LPA): Department, which outside of incidents is responsible for SCE interaction with government, regulatory and other local stakeholders.

Logistics Section: General staff section responsible for all support activities and services including human, material, and equipment resource acquisition, food and lodging, transportation, fuel, facilities and any other necessary services or support.

Logistics Section Chief (LSC): General Staff member responsible for leading the Logistics Section and all support and service functions therein.

Mutual Assistance Coordinator (MAC)

Master Scenario Events List – A chronological listing of scripted events and injects that take place during an operations-based exercise.

National Incident Management System (NIMS)

Notification – To immediately inform appropriate individuals, organizations, or agencies about a potentially emergency so they can initiate appropriate actions.

Officer: In ICS, a member of the Command Staff who supports the IC. Typically, areas include Public Information, Safety, and Liaisons; however, other officers may be added as needed.

One Voice: The strategy to keep all communications consistent, including all numbers reported, during an emergency event.

Outage Management System (OMS): Computer system that connects to the physical electrical system to provide telemetry and status of equipment in the field as well as alarms when condition fall outside of nominal and give the system operators remote control of breakers and other devices from the control room or operations center. OMS is an integral interface with the SCADA system.

Operations Section: General Staff section responsible for carrying out the Incident Action Plan and all activities necessary to restore and repair the system to normal operation.

Operation Section Chief (OSC): General staff position responsible for leading the Operations Section in all operational activities in an emergency response.

Personal Protective Equipment (PPE)

Plain Ordinary Telephone System (POTS)
Planning Section: General Staff section responsible for planning the response to an emergency event. Planning Section is responsible for understanding the current situation, assessing the damage, preparing the IAP, anticipating the need for and tracking the deployment of resources, and determining the ERT.

Planning Section Chief (PSC): General Staff position responsible for leading the Planning Section and representing Planning Section Activities on the IMT.

Public Information Officer (PIO): A member of the Command Staff responsible for interfacing with the public and media or with other agencies that require information about the incident.

Recovery Team: The recovery team will include the Managers of Engineering, Operations & Maintenance, Regulatory Compliance. Assistance may be sought from Power Production’s Engineering & Technical Services, Civil Engineering, and/or Dam Safety Engineering. The Recover Team will evaluate the structures, systems, equipment, and operations, as needed. This team would develop the alternatives to be evaluated and approved for returning to normal operations.

Release – any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, unless permitted or authorized by a regulatory agency.

Resources: Workers, equipment, or material needed to effectively execute an emergency event restoration. Resources can be normally owned or employed by SCE or acquired specifically to support the restoration.

Resource Support Manager (RPPM)

Return to Normal Operations: The time when an incident response is considered complete

Risk – A measure of the likelihood and severity of an adverse consequence.

Situation Manual – A written overview for participants of a discussion-based exercise, which typically includes an introduction, scenario, participant questions, and references.

Tabletop Exercise – A tabletop exercise involves key personnel discussing simulated scenarios in an informal setting. Tabletop exercises can be used to assess plans, policies, and procedures.

Time Sensitive – When the time required to detect/verify the emergency, notify local EMA’s and warn/evacuate the population at risk exceeds the arrival time of the flood wave, the EAP is said to be Time Sensitive.

Workshop – A workshop resembles a seminar but is used to build specific products, such as a draft plan or policy. For example, a Training and Exercise Plan Workshop is used to develop a Multi-Year Training and Exercise Plan.

Safety Officer (SFO): A member of the Command Staff responsible for assuring the safety of workers and the general public during the execution of a restoration effort. The SFO provides safety plans, briefings, and general oversight of safety through the event.
**Scalability**: A key element of ICS, scalability is the ability to expand or contract the response to an emergency event based on the scope, scale, intensity, and unique features of a particular event while maintaining the critical structural and strategic elements in any response.

**Section Chief (SC)**: The section Chief is the head role of a section, having responsibility for a major functional area of incident management (e.g., Operations, Planning, Logistics, and Finance/Administration). The section is organizationally situated between the branch and the Incident Command.

**Span of Control**: The number of direct reports in an organization structure. Preferred spans of control in an ICS structure are between 3 and 7 direct reports.

**Strike Team**: A specified team of the same kind and type of resource with common communications and a leader.

**Supervisory Control and Data Acquisition (SCADA)**: A system of monitoring and control devices, communication, and computer systems that allows the system operators to monitor and control the devices in the electrical system.

**Task Force**: Any combination of resources assembled to support a specific mission or operational need. All resource elements within a Task Force must have common communications and a designated leader.

**Unit**: The lowest organizational level in ICS above single resources, strike teams, and taskforces. Units are typically used in Planning, Logistics, and Finance/Administration Sections.

**Unity of Command**: An ICS organizational concept where each position in the response organization takes direction from only one person (position) in the organization.

**Western Regional Mutual Assistance Agreement (WRMAA)**: Regional level association with which SCE has a mutual assistance agreement.
APPENDIX B – Abbreviations and Acronyms

AOC   Automated Outage Communication System
API   American Petroleum Institute
AP-I  Agricultural & Pumping Interruptible Program
APSA  Aboveground Petroleum Storage Act
AREP  Area Representative
AWE   Alerts, Warnings, and Emergencies
BCD   SCE Business Customer Division
BR    Business Resiliency
Cal ISO California Independent System Operator
Cal OES California Office of Emergency Services
CCC   Customer Contact Center
CEC   California Energy Commission
CEII  Critical Energy Infrastructure Information
CFR   Code of Federal Regulations
CMC   Crisis Management Council
COL   City of Colton
CP&S  SCE Customer Programs and Services
CPUC  California Public Utilities Commission
CRM   Customer Relationship Management
CS    SCE Customer Service
CUPA  Certified Unified Program Agency
DCS   Distribution Control System
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>DR</td>
<td>Demand Response</td>
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<tr>
<td>DTSC</td>
<td>Department of Toxic Substances Control</td>
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<tr>
<td>EEAP</td>
<td>SCE Electric Emergency Action Plan</td>
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<tr>
<td>EH&amp;S</td>
<td>Environment, Health &amp; Safety</td>
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<tr>
<td>EMP</td>
<td>Emergency Management Plan</td>
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<tr>
<td>EOB</td>
<td>Emergency Operations Bureau</td>
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<td>ERC</td>
<td>Emergency Response Coordinator</td>
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<td>ESEP</td>
<td>CAISO Electric System Emergency Procedure 4420</td>
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<tr>
<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
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<tr>
<td>FERC</td>
<td>Federal Energy Regulatory Commission</td>
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<tr>
<td>FSC</td>
<td>Finance Section Chief</td>
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<tr>
<td>GCC</td>
<td>Grid Control Center</td>
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<tr>
<td>HSEEP</td>
<td>Homeland Security Exercise and Evaluation Program</td>
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<tr>
<td>IC</td>
<td>Incident Commander</td>
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<tr>
<td>ICS</td>
<td>Incident Command System</td>
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<td>IMT</td>
<td>Incident Management Team</td>
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<td>IVR</td>
<td>Interactive Voice Response</td>
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<td>IST</td>
<td>Incident Support Team</td>
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<tr>
<td>LACMTA</td>
<td>Los Angeles County Metropolitan Transit Authority</td>
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<td>LACSD</td>
<td>Los Angeles County Sheriff’s Department</td>
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<tr>
<td>LNO</td>
<td>Liaison Officer</td>
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<tr>
<td>LPA</td>
<td>Local Public Affairs</td>
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<td>LSC</td>
<td>Life Safety Coordinator</td>
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<td>LSC</td>
<td>Logistics Section Chief</td>
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<td>Abbreviation</td>
<td>Full Name</td>
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<tr>
<td>NERC</td>
<td>North American Electric Reliability Corporation</td>
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<td>NERC CIP</td>
<td>North American Electric Reliability Corporation - Critical Infrastructure Protection</td>
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<tr>
<td>NIMS</td>
<td>National Incident Management System</td>
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<tr>
<td>O&amp;M</td>
<td>Operation &amp; Maintenance</td>
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<tr>
<td>OBMC</td>
<td>Optional Binding Mandatory Curtailment Program</td>
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<tr>
<td>OIC</td>
<td>Officer-In-Charge</td>
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<tr>
<td>ONC</td>
<td>SCE Outage Notification Communication System</td>
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<tr>
<td>OSC</td>
<td>Operations Section Chief</td>
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<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Agency</td>
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<tr>
<td>OVT</td>
<td>One Voice Team</td>
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<tr>
<td>PE</td>
<td>Professional Engineer</td>
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<tr>
<td>PIO</td>
<td>Public Information Officer</td>
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<tr>
<td>PSC</td>
<td>Planning Section Chief</td>
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<tr>
<td>PTO</td>
<td>Participating Transmission Owner</td>
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<tr>
<td>RMR</td>
<td>Reliability Must Run</td>
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<tr>
<td>ROC</td>
<td>Rail Operations Center</td>
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<tr>
<td>SCWC</td>
<td>Southern California Water Company</td>
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<tr>
<td>SDP</td>
<td>Summer Discount Plan</td>
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<tr>
<td>SED</td>
<td>CPUC Safety and Enforcement Division</td>
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<tr>
<td>SES</td>
<td>Safety &amp; Environmental Specialist</td>
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<td>SIC</td>
<td>Standard Industrial Code</td>
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<tr>
<td>SO</td>
<td>Safety Officer</td>
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<tr>
<td>SOM</td>
<td>Substation Operation and Maintenance</td>
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<tr>
<td>SOS</td>
<td>Substation Operation Supervisor</td>
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</table>
SPCC  Spill Prevention Control and Countermeasure
SSI  Standard Station Instructions
STI  Steel Tank Institute
TOU-BIP  Time-of-Use Base Interruptible Program
T & D  Transmission and Distribution
TSD  Transportation Services Division
WECC  Western Electricity Coordinating Council
2016 Annual Report for Southern California Edison Company (U338-E) of Compliance with General Order 166

Appendix A
CPUC Emergency Reporting
REPORTING EMERGENCIES TO THE CPUC

If you are the customer of a utility, call 911 to report an emergency such as a downed electrical wire or the smell of gas. You can also call your utility company to report the emergency. Here are phone numbers for some utilities:

- Pacific Gas & Electric (PG&E) 1-800-743-5000
- Southern California Edison (SCE) 1-800-611-1911
- Southern California Gas Company (SCG) 1-800-427-2200
- San Diego Gas & Electric (SDG&E) 1-800-611-7343
- Southwest Gas – select applicable territory below
  - Northern 1-800-772-4555
  - Southern 1-800-867-9091
  - Needles 1-800-447-5422

To report an unsafe or emergency situation to the Commission, call 1-800-649-7570 or click here: http://www.cpuc.ca.gov/PUC/forms/Complaints/

EMERGENCY REPORTING FOR UTILITIES AND GENERATING ASSET OWNERS

Gas or electric utilities, and generating asset owners (GAO) should make required reports to the Commission via online reporting which is the preferred method. If internet access is not available, please telephone the applicable event reporting hotlines.

- **Online Reporting** http://www.cpuc.ca.gov/emergency
- **Telephonic Reporting (if internet access is not available)**
  - For utilities to report gas or electric incidents 1-800-235-1076
  - For GAOs to report safety-related incidents 1-415-355-5503

REFERENCES

1. **Incident Reporting Requirements (D. 06-04-055, Appendix B)**

Within 2 hours of a reportable incident during normal working hours or within 4 hours of a reportable incident outside of normal working hours, the utility shall provide notice to designated CPUC staff of the general nature of the incident, its cause and estimated damage. The notice shall identify the time and date of the incident, the time and date of notice to the Commission, the location of the incident, casualties that resulted from the incident, identification of casualties and property damage, and the name and telephone number of a utility contact person. This notice may be by (a) using to the Commission’s Emergency Reporting Web Page, or (b) calling an established CPUC Incident Reporting Telephone Number designated by the Commission’s Consumer Protection and Safety Division (CPSD) or its successor (c) sending a message to an electronic mail address designated by the Commission’s CPSD or its successor or (d) sending a message to...
REPORTING EMERGENCIES TO THE CPUC

the Commission’s facsimile equipment using a form approved by the Commission’s CPSD or its successor and at numbers CPSD may designate for use during normal business hours. Telephone notices provided at times other than normal business hours shall be followed by a facsimile or email report by the end of the next working day.

- Within twenty business days of a reportable incident, the utility shall provide to designated CPUC staff a written account of the incident which includes a detailed description of the nature of the incident, its cause and estimated damage. The report shall identify the time and date of the incident, the time and date of the notice to the Commission, the location of the incident, casualties which resulted from the incident, identification of casualties and property damage. The report shall include a description of the utility’s response to the incident and the measures the utility took to repair facilities and/or remedy any related problems on the system which may have contributed to the incident.

- Reportable incidents are those which: (a) result in fatality or personal injury rising to the level of in-patient hospitalization and attributable or allegedly attributable to utility owned facilities; (b) are the subject of significant public attention or media coverage and are attributable or allegedly attributable to utility facilities; or (c) involve damage to property of the utility or others estimated to exceed $50,000.

2. GO112-E, RULE 122
   Gas Incident Reports

122.1 Each operator shall comply with the requirements of 49 CFR Part 191, for the reporting of incidents to the United States Department of Transportation (DOT). The operator shall submit such reports directly to the DOT, with a copy to the California Public Utilities Commission (CPUC).

122.2 Requirements for reporting to the CPUC.
(a) Each operator shall report incidents to the CPUC that meet the following criteria:
   1. Incidents which require DOT notification.
      i. An event that involves a release of gas from a pipeline or of liquefied natural gas (LNG) or gas from an LNG facility and
         • A death, or personal injury necessitating in-patient hospitalization;
         or
         • Estimated property damage, including cost of gas lost, of the operator or others, or both, of $50,000 or more.
      ii. An event that results in an emergency shutdown of an LNG facility.
   2. Incidents which have either attracted public attention or have been given significant news media coverage, that are suspected to involve natural gas, which occur in the vicinity of the operator’s facilities; regardless of whether or not the operator's facilities are involved.
(b) In the event of an incident listed in 122.2(a) above, an operator shall go to the Commission’s website, select the link to the page for reporting emergencies and follow the instructions thereon.

1. If the utility is notified of the incident during its normal working hours, the report should be made as soon as practicable but no longer than 2 hours after the utility is aware of the incident and its personnel are on the scene.

2. If the utility is notified of the incident outside of its normal working hours, the report should be made as soon as practicable but no longer than 4 hours after the utility is aware of the incident and its personnel are on the scene.

3. All reports required by this section shall be followed by the end of the next working day by an email or telefacsimile (fax) of the standard reporting form, "Report of Gas Leak or Interruption," CPUC File No. 420 (see attachment).

(c) Written Incident Reports

1. The operator shall submit to the CPUC on DOT Form PHMSA F7100.1 (http://ops.dot.gov/library/forms/forms.htm#7100.1) for distribution systems and on DOT Form PHMSA F7100.2 (http://ops.dot.gov/library/forms/forms.htm#7100.2) for transmission and gathering systems a report describing any incident that required notice by telephone under Items 122.2(a)(1) or (2).

2. Together with the form required by (c)(1) above, the operator shall furnish a letter of explanation giving a more detailed account of the incident unless such letter is deemed not necessary by the CPUC staff. The operator may confirm the necessity of a letter of explanation while making the telephonic report. If, subsequent to the initial report or letter, the operator discovers significant additional information related to the incident, the operator shall furnish a supplemental report to the CPUC as soon as practicable, with a clear reference by date and subject to the original report. These letters, forms, and reports shall be held confidential under the provisions of Paragraph 2, Exclusions, of General Order 66-C and Public Utilities Code Section 315.

3. The operator of a distribution system serving less than 100,000 customers need not submit the DOT forms required by paragraph (1) above; however, such operator must submit the letter of explanation required by (2) above, subsequent to any telephonic report to the CPUC, unless such letter is deemed unnecessary by the CPUC staff.

(d) Quarterly Summary Reports. Each operator shall submit to the CPUC quarterly, not later than the end of the month following the quarter, a summary of all CPUC reportable and non-reportable gas leak related incidents which occurred in the preceding quarter as follows:

1. Incidents that were reported through the Commission’s Emergency Reporting website.
REPORTING EMERGENCIES TO THE CPUC

2. Incidents for which either a DOT Form PHMSA F7100.1 or F7100.2 was submitted.

3. Incidents which involved escaping gas from the operator's facilities and property damage including loss of gas in excess of $1,000.

4. Incidents which included property damage between $0 and $1,000, and involved fire, explosion, or underground dig-ins.

**CFR 49 § 191.9 Distribution system: Incident report.**

(a) Except as provided in paragraph (c) of this section, each operator of a distribution pipeline system shall submit Department of Transportation Form RSPA F 7100.1 as soon as practicable but not more than 30 days after detection of an incident required to be reported under §191.5.

(b) When additional relevant information is obtained after the report is submitted under paragraph (a) of this section, the operator shall make supplementary reports as deemed necessary with a clear reference by date and subject to the original report.

(c) The incident report required by this section need not be submitted with respect to master meter systems or LNG facilities.

3. Major Utility Reporting Requirements (GO 166)

**Definitions:**

**Emergency or Disaster:** An event which is the proximate cause of a major outage, including but not limited to storms, lightning strikes, fires, floods, hurricanes, volcanic activity, landslides, earthquakes, windstorms, tidal waves, terrorist attacks, riots, civil disobedience, wars, chemical spills, explosions, and airplane or train wrecks.

**Major Outage:** Consistent with Public Utilities Code Section 364, a major outage occurs when 10 percent of the electric utility's serviceable customers experience a simultaneous, non-momentary interruption of service. For utilities with less than 150,000 customers within California, a major outage occurs when 50 percent of the electric utility's serviceable customers experience a simultaneous, non-momentary interruption of service.

**Standard 6. Initial Notification Standard:**

Within one hour of the identification of a major outage or other newsworthy event, the utility shall notify the Commission and the Warning Center at the Office of Emergency Services (OES) of the location, possible cause and expected duration of the outage. The Warning Center at the OES is expected to notify other state and local agencies of the outage. Subsequent contacts between state and local agencies and the utility shall be conducted between personnel identified in advance, as set forth in Standard 4.B. From time to time the Commission staff may issue instructions or guidelines regarding reporting.
4. Generator Reporting Requirement (GO 167)  
   Rule 10.4 - Safety-related Incidents

Within 24 hours of its occurrence, a Generating Asset Owner shall report to the Commission’s emergency reporting web site any safety-related incident involving a Generating Asset. If internet access is unavailable, the Generating Asset Owner may report using the backup telephone system. Such reporting shall include any incident that has resulted in death to a person; an injury or illness to a person requiring overnight hospitalization; a report to Cal/OSHA, OSHA, or other regulatory agency; or damage to the property of the Generating Asset Owner or another person of more than $50,000. The Generating Asset Owner shall also report any other incident involving a Generating Asset that has resulted in significant negative media coverage (resulting in a news story or editorial from one media outlet with a circulation or audience of 50,000 or more persons) when the Generating Asset Owner has actual knowledge of the media coverage. If not initially provided, a written report also will be submitted within five business days of the incident. The report will include copies of any reports concerning the incident that have been submitted to other governmental agencies.
2016 Annual Report for Southern California Edison Company (U338-E) of Compliance with General Order 166

Appendix B
System Operating Bulletin No. 21 Capacity Shortage Contingency Plan

Redacted/Public

June 2016
Operating Reserve Deficiency Contingency Plan

Distribution Restricted: This document may contain Critical Energy Infrastructure Information.

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1. Introduction

1.1 Purpose

This System Operating Bulletin (SOB) describes Southern California Edison's (SCE) operating reserve deficiency contingency plan.

1.2 General

1. This Plan is designed to curtail interruptible and firm load within SCE's service territory and provide a course of action in the event the California Independent System Operator (CISO) implements CISO Operating Procedures, System Emergency and/or Load Management Programs and Underfrequency Load Shedding.

2. This SOB supplements both CISO Operating Procedures and outlines SCE's actions as a result of the implementation of either procedure.

3. Both procedures work in conjunction to achieve a balance between available system resources and system loads when a statewide or regional operating reserve deficiency is imminent or exists.

4. An operating reserve deficiency exists when the availability of resources is inadequate to meet load demand obligations.

5. Operating Reserve is the margin of operating capacity above that required to meet the demand. This margin is necessary to maintain reliability and protects against the sudden loss of resources.

6. The CISO shall declare that an operating reserve deficiency exists when all available system operating resources are exhausted and the statewide or regional operating reserve is less than specified by the Western Electricity Coordinating Council (WECC) regional reliability standards.

7. An operating reserve deficiency is often foreseeable and can be corrected in the day ahead, hour ahead, or real time markets.

8. If not corrected, this deficiency may require implementation of the above mentioned CISO procedures and SOB-21.

9. The notification procedures described herein shall be tested at least annually during a communication exercise.
1.3 Notification Responsibilities

1. During the Emergency Stages, each Switching Center and the Generation Operations Center (GOC)\(^1\) shall complete their designated notification in accordance with Attachment A of this SOB.

2. When each operating location is assured that all field notification are completed as outlined in Attachment A, they shall report to the GCC Transmission Dispatcher.

2. Summary of CISO Operating Procedures

2.1 Procedure

1. If Procedure is enacted the CISO will:

   A. Determine necessary action.

   B. Notify the appropriate CISO personnel, regulatory agencies and Participating Transmission Owners (PTO's) Grid/Transmission Control Centers.\(^2\)

   C. Coordinate with the appropriate PTO's the notification of the news media to identify the current situation and provide any curtailment requests to the public.

   D. Implement the Utility Distribution Companies (UDC) Electrical Emergency Plans for the curtailment of demand in ascending order as outlined in this plan.

2. The procedure contains instructions for Restricted Maintenance Operations (RMO), System Emergency (Transmission), and System Emergency (Staged).

2.1.1 Restricted Maintenance Operations

1. To prevent a System Emergency, and to maintain system reliability, the CISO may issue a restricted maintenance operations, Alert, or Warning notice.

2. Restricted maintenance operations apply to all pre-scheduled Outages and/or any planned maintenance.

Note: Refer to CISO Procedure for allowable Transmission maintenance activities.

---

\(^1\) The GOC is within the SCE Trading and Energy Operations Department's (T&EO) Energy Operations Division Real-Time Operations group.

\(^2\) PTO's may include Pacific Gas and Electric (PG&E), SCE, San Diego Gas and Electric (SDG&E), City of Pasadena (PASA), City of Vernon (VERN), City of Anaheim (ANHM), City of Riverside (RVSD), City of Azusa (AZA), City of Banning (BAN) and Lassen Municipal Utility District (LMUD).
2.1.2 System Emergency (Transmission)

1. A Transmission Emergency may be declared for any event that threatens, harms, or limits capabilities of any element of the transmission grid and threatens grid reliability.

2. All necessary actions, including interruptible and firm load shedding, may be taken to mitigate or eliminate the emergency.

3. Declaration of a Transmission Emergency may be caused by events including, but not limited to:
   - Transmission line/path overloads or loss (including Interconnection Reliability Operating Limits (IROL) and System Operating Limits (SOL)).
   - Transformer overloads or loss
   - Instability
   - Frequency deviations or decay
   - Voltage that exceeds limits
   - Fires, earthquake, severe weather, sabotage, terrorism

2.1.3 System Emergency (Staged)

1. A System Emergency (Staged) is issued during an Operating Reserve Deficiency when Operating Reserves fall below levels specified in Western Electric Coordinating Council (WECC) standard BAL-002-WECC-2.

2. There are five action statements for a System Emergency (Staged).
   A. Each statement specifies certain actions to be taken to preclude succeeding or more stringent action statements and may be issued system wide or regionally.
   B. The specific action outlined in each statement is based on the nature and severity of the deficiency and is designed to provide minimum adverse impact on our customers.
   C. Under these conditions, all practical reductions and/or curtailments of SCE facility energy use shall have been accomplished or implemented upon initiation of the second action statement of the plan.

3. The CISO may declare a System Emergency (Staged) for any event that limits or prevents the ability of the CISO to safely and reliably operate the grid or energy markets through normal modes of operation.

4. All necessary actions, including interruptible and firm load shedding, may be taken to mitigate or eliminate the emergency.
2.1.4  Operating Reserve Deficiency Action Statements

The following are the five CISO action statements for an Operating Reserve Deficiency:

*Alert*
An Alert shall be issued by the CISO by 1500 hours the day before operating reserves are forecasted to be less than WECC Operating Reserve requirements.

*Warning*
A Warning shall be issued by the CISO when the Real-time Market (hour ahead) run results indicate that Operating Reserves are anticipated to be less than WECC Operating Reserve requirements.

*Emergency Stage 1*
An Emergency Stage 1 shall be issued by the CISO when Operating Reserve shortfalls exist or are forecast to occur, and available market and non-market resources are insufficient to maintain Operating Reserve requirements.

*Emergency Stage 2*
An Emergency Stage 2 shall be issued by the CISO when it has taken all actions, including dispatching all available competitive bid and non-bid resources, and cannot maintain its Non-Spinning Reserve requirement as indicated by their EMS system. Make preparations for involuntary service interruptions.

*Emergency Stage 3*
An Emergency Stage 3 shall be issued by the CISO when the Spinning Reserve portion of the Operating Reserve depletes, or is anticipated to deplete below the WECC Operating Reserve requirement and cannot be restored. The WECC Operating Reserve requirement states that Spinning Reserve shall be no less than 50% of the total Operating Reserve requirements. Implement involuntary service interruptions.

---

3 During a Warning the CISO will enable Reliability Demand Response Resources (RDRR) and dispatch them via an Automatic Dispatch Signal (ADS) to the SCE GOC. The GOC will then issue a CISO Outage Management System (OMS) ticket for the resource(s).
2.2 Procedure

If Procedure is enacted the CISO will:

1. Determines curtailment demand of Interruptible load by each UDC.

1. Notifies the appropriate CISO personnel, regulatory agencies, and PTO's.

2. Coordinates with the appropriate PTO's the notification of the news media to identify the current situation, and provide any curtailment requests to the public.

3. Implement the UDC Interruptible Service curtailment of demand in ascending order as outlined in this Plan.

2.2.1 Interruptible Service Available from UDC's

1. SCE has approximately MW of interruptible load available divided into three categories and shall be interrupted in the following order:

<table>
<thead>
<tr>
<th>MW Amount</th>
<th>Type of Service</th>
<th>Timing Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Summer Discount Plan</td>
<td>10 minutes</td>
</tr>
<tr>
<td></td>
<td>Agriculture and Pump Load</td>
<td>10 minutes</td>
</tr>
<tr>
<td></td>
<td>Industrial Load (TOU-BIP)</td>
<td>15/30 minutes</td>
</tr>
</tbody>
</table>

Note: Load curtailments are subject to tariff and seasonal limitations.

2. Curtailment of SCE Interruptible load may be initiated by the CISO when a Warning Notice is issued with Operating Reserves anticipated to be less than the WECC Operating Reserve requirements.

3. Annually, SCE shall make known its amount of interruptible demands and controllable interruptible loads to the CISO upon request within 30 calendar days.

---

4 Interruptible load MW amounts change monthly as customers are added/removed from the program. Refer to the Demand Side Management (DSM) Program for current available interruptible load MW values.
3. Enacting the Plan

Dependent on the nature and circumstance of the emergency, it may be necessary to bypass certain stages of the plan to match the stage and action appropriately with the level of operating reserve deficiency. Actions bypassed in stages for this reason should be implemented as soon as possible when appropriate.

3.1 CISO Emergency Response Team

The CISO Emergency Response Team consist of the following personnel:

- CISO Executive in Charge
- CISO Shift Manager
- CISO Public Information Coordinator
- CISO Emergency Response Coordinator

3.2 SCE Internal Notification Procedure

The GCC Transmission Dispatcher shall notify the appropriate Operations and Operations Support personnel of an Alert, Warning, Stage 1, 2, or 3 System Emergency or implementation/termination of this plan as outlined below:

**Note:** For all notifications refer to the GCC Notification Portal page and Attachment A.

3.2.1 Restricted Maintenance Operations Notification Procedure

1. The GCC Transmission Dispatcher shall make verbal contact with the following:

   - GCC Management

2. The applicable information is automatically posted on the GCC Publications Portal page under "Power System Events" when the GCC Transmission Dispatcher enters the event into the GCC Daily Log and sets the "Power System Events" flag to yes.

3. The GCC Transmission Dispatcher shall utilize the company wireless messaging system to notify additional Transmission Substations and Operations (TS&O) management personnel using the CAISO No Touch Day group.
3.2.2 Alert Notification Procedure

1. The GCC Transmission Dispatcher shall make verbal contact with the following:
   - GCC Management

2. The applicable information is automatically posted on the GCC Publications Portal page under "Power System Events" when the GCC Transmission Dispatcher enters the event into the GCC Daily Log and sets the "Power System Events" flag to yes.

3. The GCC Transmission Dispatcher shall utilize the company wireless messaging system to notify additional Transmission Substations and Operations (TS&O) management personnel utilizing the CISO Capacity Shortage group.

3.2.3 Warning Notification Procedure

1. The GCC Transmission Dispatcher shall make verbal contact with the following:
   - GCC Management
   - Director of Grid Operations
   - GOC
   - Eastern Distribution Operations Center (DOC)
   - Business Resiliency Duty Manager
   - Business Resiliency Watch Office
   - Customer Programs and Services (CP&S) Emergency Duty Supervisor
   - Corporate Communications

2. The applicable information is automatically posted on the GCC Publications portal page under "Power System Events" when the GCC Transmission Dispatcher enters the event into the GCC Daily Log and sets the "Power System Events" flag to yes.

3. The GCC Transmission Dispatcher shall utilize the company wireless messaging system to notify additional TS&O management personnel utilizing the CISO Capacity Shortage group.

4. Update the Rotating Outage Information (ROI) for SCE.com via the GCC Log ROI Webpage link.
3.2.4 Stage 1, 2, and 3 Notification Procedures

1. The GCC Transmission Dispatcher shall make verbal contact with the following:
   - GCC Management
   - Director of Grid Operations
   - GOC
   - Eastern DOC
   - Business Resiliency Duty Manager
   - Business Resiliency Watch Office
   - CP&S Emergency Duty Supervisor
   - Corporate Communications
   - Lighthipe Grid Management Center (GMC)
   - Mira Loma GMC
   - Ventura GMC
   - Orange County GMC

2. The applicable information is automatically posted on the GCC Publications Portal page under "Power System Events" when the GCC Transmission Dispatcher enters the event into the GCC Daily Log and sets the "Power System Events" flag to yes.

3. The GCC Transmission Dispatcher shall utilize the company wireless messaging system to notify additional TS&O management personnel utilizing the CISO Capacity Shortage group.

4. Update the Rotating Outage Information (ROI) for SCE.com via the GCC Log ROI Webpage link.
3.2.5 System and Transmission Emergency Notification Procedure

1. If an emergency has been declared and the CISO instructs the GCC Transmission Dispatcher to shed interruptible and/or firm loads then the GCC Transmission Dispatcher shall make verbal contact with the following:
   - GCC Management
   - Director of Grid Operations
   - GOC
   - Eastern DOC
   - Business Resiliency Duty Manager
   - Business Resiliency Watch Office
   - CP&S Emergency Duty Supervisor
   - Corporate Communications
   - Lighthipe GMC
   - Mira Loma GMC
   - Ventura GMC
   - Orange County GMC

2. The applicable information is automatically posted on the GCC Publications Portal page under "Power System Events" when the GCC Transmission Dispatcher enters the event into the GCC Daily Log and sets the "Power System Events" flag to yes.

3. The GCC Transmission Dispatcher shall utilize the company wireless messaging system for notifying additional TS&O management personnel utilizing the CISO Capacity Shortage group.
3.3 Regulatory and Governmental Agencies Communications Plan

1. Communications activities shall begin as soon as a potential capacity shortage condition is forecast or exists and continue throughout the duration of the shortage.

2. The Governmental and Regulatory Communications responsibilities are as follows:
   
   A. The GCC Transmission Dispatcher shall notify SCE Regulatory Operations (Sacramento and San Francisco), and Business Resiliency.5
   
   B. Regulatory Affairs is responsible for communicating with the California Public Utilities Commission (CPUC) Commissioner's Staff, through their San Francisco office, and the California Energy Commission (CEC), through their Sacramento office, advising them of the situation.
   
   C. SCE Business Resiliency notifies the CPUC Energy Division and CPUC Safety and Enforcement Division advising of the situation.
   
3. Grid Control management shall notify the Department of Energy (DOE) in the event of an occurrence that results in the interruption of firm or interruptible load.
   
   A. Refer to the GCC Notification Menu and the DOE OE-417 Report Form for DOE Emergency Operations Center contact information and reporting requirements.

   Note: Refer to SOB-10 for SCE Electric System Disturbance and Event Reporting.

3.4 Media and Customer Communications Plan

In the event the CISO operating reserve margin is expected to reach critical levels, as determined by the CISO, Corporate Communications personnel shall implement a multi-stage communications plan to advise SCE customers of the electric supply situation and actions which they should take. This communication plan is outlined in "SCE’s Electric Emergency Action Plan (EEAP)."

5 This notification is made via the SCE wireless messaging system when the GCC Dispatchers send a wireless message via the "Paging-CISO-Capacity Shortage" group list.
4. **GCC Implementation Plan**

4.1 **Alert**

1. An Alert shall be issued by the CISO by 1500 hours the day before operating reserves are forecasted to be less than WECC Operating Reserve requirements.

2. Notification of the implementation of the Alert statement shall be given to all participating PTO Control Centers and market participants by the CISO.

3. The SCE GCC Transmission Dispatcher shall perform the following:
   
   A. Initiate a wireless message to key management personnel listed on the GCC Notification Portal page notifying them of the Alert Statement.

   B. The applicable information is automatically posted on the GCC Publications Portal page under "Power System Events" when the GCC Transmission Dispatcher enters the event into the GCC Daily Log and sets the "Power System Events" flag to yes.

   C. It may be necessary to bypass the Alert Statement entirely and proceed immediately to the Warning or Stage 1, 2, or 3 Emergency.

   D. Query and log the amount of interruptible load that is available for interruption and prepare to implement.

4. The message examples listed in Attachment B shall be used for notification via wireless to communicate the GCC Transmission Dispatcher's intent to initiate or terminate an Alert.
4.2 Warning

1. A Warning shall be issued by the CISO when the Real-time Market (hour ahead) run results indicate that Operating Reserves are anticipated to be less than WECC Operating Reserve requirements.

2. Notification of the implementation of the Warning shall be given to all participating PTO Control Centers and market participants by the CISO.

3. The SCE GCC Transmission Dispatcher shall perform the following:
   A. Initiate a wireless message to key management personnel listed on the GCC Notification Portal page notifying them of the Warning.
   B. Notify by telephone key personnel listed on the GCC notification Portal page of the Warning.
   C. The applicable information is automatically posted on the GCC Publications portal page under "Power System Events" when the GCC Transmission Dispatcher enters the event into the GCC Daily Log and sets the "Power System Events" flag to yes.
   D. It may be necessary to bypass the Warning Statement entirely and proceed immediately to Stage 1, 2, or 3 Emergency.
   E. Notify Eastern DOC to initiate notification to curtail electrical usage at Edison facilities to minimum essential levels.

4. If a Warning, Stage 1, 2, or 3 Emergency is imminent, the GCC Transmission Dispatcher shall perform the following:
   A. Interrupt an amount of non-firm interruptible load as directed by the CISO in the following order:
      - Interrupt Summer Discount Plan
      - Interrupt Agriculture and Pumping Interruptible Load
      - Interrupt 15 minute TOU-BIP blocks
      - Interrupt 30 minute TOU-BIP blocks
   B. Log type and amount of load interrupted.
   C. Initiate a wireless message to key management personnel listed on the GCC Notification Portal page notifying them of which load is interrupted.
   D. Notify by telephone key personnel listed on the GCC notification Portal page of which load is interrupted.
5. SCE, in conjunction with the CISO and through media announcements, shall announce measures that all customers should take to reduce electrical demand. Customers are to be told that our request for load reduction is not intended to disrupt employment or curtail industrial production or commerce, but voluntary action will help avoid involuntary service interruptions.

6. The message examples listed in Attachment B shall be used for alerting the GOC, Eastern DOC, Corporate Communications, via wireless or telephone, of the GCC Transmission Dispatcher's intent, to initiate or terminate a Warning.

### 4.3 Emergency Stage 1

1. An Emergency Stage 1 shall be issued by the CISO when Operating Reserve shortfalls exist or are forecast to occur, and available market and non-market resources are insufficient to maintain WECC Operating Reserve requirements. Make preparations for involuntary service interruptions.

2. Notification of the implementation of Stage 1 Emergency shall be given to all PTO Control Centers, market participants and the State's regulatory agencies by the CISO.

3. SCE, in conjunction with the CISO and through media announcements, shall announce measures that all customers should take to reduce electrical demand. Customers are to be told that our request for load reduction is not intended to disrupt employment or curtail industrial production or commerce, but voluntary action will help avoid involuntary service interruptions.

4. The SCE GCC Transmission Dispatcher shall perform the following:

   A. Initiate a wireless message to key management personnel listed on the GCC Notification Portal page notifying them of the Stage 1 Emergency.

   B. Notify by telephone the GOC, Switching Centers and other key personnel listed on the GCC notification Portal page of the Stage 1 Emergency.

   C. The applicable information is automatically posted on the GCC Publications portal page under "Power System Events" when the GCC Transmission Dispatcher enters the event into the GCC Daily Log and sets the "Power System Events" flag to yes.

   D. It may be necessary to bypass the Stage 1 Emergency entirely and proceed immediately to Stage 2 or 3 Emergency.
E. Notify Eastern DOC to initiate notification to curtail electrical usage at Edison facilities to minimum essential levels.

5. QF Resources implement requests to DGs, IPPs, and QFs for maximum generation referenced in and .

6. The message examples listed in Attachment B shall be used for alerting the GOC, Eastern DOC, Corporate Communications and Switching Centers via wireless or by telephone, of the GCC Transmission Dispatcher’s initiation or termination of Stage 1 of this Plan.

4.4 Emergency Stage 2

1. An Emergency Stage 2 shall be issued by the CISO when it has taken all actions, including dispatching all available competitive bid and non-bid resources, and cannot maintain its Non-Spinning Reserve requirement as indicated by their EMS system. Make preparations for involuntary service interruptions.

2. Notification of the implementation of the Stage 2 Emergency shall be given to all PTO Control Centers, market participants and the State’s regulatory agencies by the CISO.

3. The SCE GCC Transmission Dispatcher shall perform the following:

   A. Initiate a wireless message to key management personnel listed on the GCC Notification Portal page notifying them of the Stage 2 Emergency.

   B. Notify by telephone the GOC, Switching Centers and other key personnel listed on the GCC notification Portal page of the Stage 2 Emergency.

   C. The applicable information is automatically posted on the GCC Publications Portal page under "Power System Events" when the GCC Transmission Dispatcher enters the event into the GCC Daily Log and sets the "Power System Events" flag to yes.

   D. It may be necessary to bypass the Stage 2 Emergency entirely and proceed immediately to Stage 3.

   E. Notify Eastern DOC to initiate notification to curtail electrical usage at Edison facilities to minimum essential levels.

   F. SCE shall continue its media appeal program and implementation of the augmented and supplemental conservation programs.
G. Implement notification procedures for possible implementation of Stage 3 Emergency of Plan. Ascertain personnel availability to determine which Manual Load Shed Procedure should be utilized in the event Stage 3 Emergency is implemented.

4. The message examples listed in Attachment B shall be used for alerting the GOC, Eastern DOC, and Switching Centers via wireless or by telephone, of the GCC Transmission Dispatcher's initiation or termination of Stage 2 of this Plan.

4.5 Emergency Stage 3

1. An Emergency Stage 3 shall be issued by the CISO when the Spinning Reserve portion of the Operating Reserve depletes, or is anticipated to deplete below the WECC Operating Reserve requirement and cannot be restored. The WECC Operating Reserve requirement states that Spinning Reserve shall be no less than [Blank] of the total Operating Reserve requirements. Implement involuntary service interruptions.

2. Notification of the implementation of Stage 3 Emergency shall be given to all PTO Control Centers, market participants and the State's regulatory agencies by the CISO.

3. The CISO shall order sufficient quantities of load interrupted to maintain sufficient real time operating reserves.

4. During a Stage 3 Emergency, interruption of load shall be achieved within the time frame directed by the CISO, or within ten minutes, upon receiving the emergency order from the CISO.

5. If a PTO is unable to achieve the interruption criteria, the remaining PTO's may be directed to shed additional load until sufficient amounts of load have been shed.

6. During Stage 3 each PTO and UDC shall interrupt load on a pro rata basis based upon 2013 peak load data. The ratios for 2014 are in section "5.1 Share of Load Shedding".

7. The City of Colton (COL) and the Golden State Water Company (SCWC6) shall participate in manual load shedding as outlined in section "5.1 Share of Load Shedding".

---

6 Bear Valley Electric Service is a subsidiary of GSWC and covers the Big Bear Lake area. American States Water Company is the parent company of GSWC.
8. Customers participating in the Optional Binding Mandatory Curtailment (OBMC) plan shall participate in manual load shedding as outlined in section "5.1 Share of Load Shedding".

9. The GCC Transmission Dispatcher shall perform the following:

   A. Implement non-voluntary rotating service interruptions as outlined in SCE Manual Load Shedding Procedures section as applicable.

   B. Initiate a wireless message to key management personnel listed on the GCC Notification Portal page notifying them of the Stage 3 Emergency.

   C. During manual load shedding, notify COL and SCWC of their share of load to interrupt based upon SCE’s share.

   D. During manual load shedding, notify CP&S Emergency Duty Manager of OBMC customer percentage obligation based upon SCE’s share in increments.

   **Note:** Percentage calculator located on the GCC Notification Portal page.

   E. Notify by telephone key personnel listed on the GCC Notification Portal page of the Stage 3 Statement. Refer to Attachment B.

   F. The applicable information is automatically posted on the GCC Publications Portal page under "Power System Events" when the GCC Transmission Dispatcher enters the event into the GCC Daily Log and sets the "Power System Events" flag to yes.

   G. Notify Eastern DOC to initiate notification to curtail electrical usage at Edison facilities to minimum essential levels.

   H. Brief key management personnel on the Operating Reserve Deficiency and actions performed under this Plan.

10. The message examples listed in Attachment B shall be used for alerting the GOC, Eastern DOC, and Switching Centers via wireless or by telephone, of the GCC Transmission Dispatcher’s initiation or termination of Stage 3 of this Plan.
4.6 System Emergencies (Transmission or Staged)

1. A System Emergency (Transmission) may be declared for any event that threatens, harms, or limits capabilities of any element of the transmission grid and threatens grid reliability.

2. A System Emergency (Staged) may be implemented by the CISO for any event that limits or prevents the ability of the CISO to safely and reliably operate the grid or energy markets through normal modes of operation.

Note: Refer to Section 2.1 and CISO Procedure for examples of each emergency.

3. Notification of the implementation of a System Emergency (Transmission or Staged) shall be given to all PTO Control Centers, market participants and the State's regulatory agencies by the CISO.

4. The SCE GCC Transmission Dispatcher shall perform the following:

   A. Follow all CISO directives to mitigate or eliminate the emergency, including implementing interruptible and firm load shedding. Load shedding and notifications shall be accomplished as outlined above.

   B. Initiate a wireless message to key management personnel listed on the GCC Notification Portal page notifying them of any load shedding event.

   C. Notify by telephone key personnel listed on the GCC Notification Portal page of any load shedding event.

   D. The applicable information is automatically posted on the GCC Publications portal page under "Power System Events" when the GCC Transmission Dispatcher enters the event into the GCC Daily Log and sets the "Power System Events" flag to yes.
5. **SCE Manual Load Shedding Procedures**

1. SCE shall maintain three manual load shedding procedures. The Procedures shall be implemented utilizing the following priority:

   A. Procedure C (automated and non-automated nonessential Distribution Circuits) is the preferred procedure and shall be implemented when there is sufficient notice provided by the CISO.

   B. Procedure B (B Bank Stations) shall only be implemented when Procedure C is unavailable due to computer malfunction, or if the CISO request is urgent and of an immediate need.

   C. Procedure A (A Bank Stations) shall only be implemented when Procedures C and B are unavailable due to computer malfunction, or the CISO request is immediate and required to prevent underfrequency load shedding from occurring.

2. These procedures shall be rotated on approximately a one hour basis, the GCC Transmission Dispatcher shall order other load dropped and an equal amount of load shall be picked up.

3. Interrupted load shall be picked up gradually in an effort not to restore service to more load than was previously dropped. A balance of outage time shall be maintained between individual Groups.

4. When implemented, Procedure (A) or (B) de-energize larger amounts of load and does not differentiate between essential and nonessential loads.

5. During these circumstances, an equal amount of load shall be dropped as soon as possible using Procedure (C) to allow the restoration of load which was shed using Procedures (A) or (B).

6. The GCC Transmission Dispatcher shall implement these procedure(s) by issuing notifications via the "Dedicated Auto Dial Private Automatic Exchange (PAX) telephone system to Switching Centers utilizing the message examples in Attachment B.

   **Note:** Refer to [insert] and [insert] for SCE's Use of Communications Services and Communications Plan.

7. After each notification, Switching Centers shall take the action required and, immediately thereafter, notify the area Grid Operations Manager or their representative.

8. Do not restore load until notified. Unless it is to restore essential customer load per section 5.6.1.
9. TS&O personnel shall be dispatched and directed by Switching Centers to coordinate operations.

10. Switching Centers shall be given a directive of reporting procedures by the GCC Transmission Dispatcher.

11. This may include not reporting back to the GCC Transmission Dispatcher, completion times, etc., until requested. The reporting structure shall be determined based on the nature and extent of the emergency.

5.1 Share of Load Shedding

5.1.1 Municipal Utilities

Based on SCE’s share of load shed, the Municipal Utilities’ share of load shedding is based on the following percentages:

- COL .........................................................
- SCWC ......................................................

5.1.2 OBMC Customer’s

OBMC customer’s share of the load shedding is achieved in 5% increments to a maximum of based on SCE’s share of the load shed.

5.1.3 SCE and Other PTO’s

The ratios for 2016 are as follows:

- PGAE .........................................................
- SCE .........................................................
- SDGE .........................................................

Note: Refer to CISO Procedure for Load Shed Calculation Guidelines.
5.2 Manual Load Shed Procedure A (Appendix 21-01)

1. Manual Load Shedding Procedure A shall be implemented by the GCC Transmission Dispatcher when the CISO has implemented a Stage 3 Emergency and calls for immediate interruption to prevent underfrequency load shedding, or when Procedures (C) and (B) are unavailable.

2. Manual load shedding shall be performed by interrupting load utilizing selected "A" Banks which meets the amount of SCE load required to be interrupted.

Note: Refer to Manual Load Shedding Procedure "A" Appendix of this SOB (21-01) for selected "A" Banks to be interrupted.

3. The GCC Transmission Dispatcher shall make the final determination of which "A" Bank load to interrupt based on the amount of CISO requested load reduction.

4. The "A" Bank load shall be shed on orders from the GCC Transmission Dispatcher only.

5. Restoration of "A" Bank load shall be performed as soon as it is determined that an equal amount of load reduction can be achieved using procedures (C) or (B). This time should not exceed 1 hour.
5.3 Manual Load Shed Procedure B (Appendix 21-02)

1. Manual Load Shedding Procedure B shall be implemented by the GCC Transmission Dispatcher when the CISO has implemented a Stage 3 Emergency, Procedure (C) is unavailable due to a computer program malfunction or there is less than 10 minutes notice provided by the CISO to implement Procedure (C).

2. The Manual Load Shedding procedure, outlined in this SOB, shall be achieved by interrupting "B" Bank Stations sequentially.

**Note:** Refer to Manual Load Shedding Procedure B Appendix of this SOB (21-02) for selected "B" Bank Stations to be interrupted.

3. The amount of load to be interrupted shall be determined by the CISO.

4. The GCC Transmission Dispatcher shall determine how many "B" Bank Stations to interrupt by evaluating B-Bank load availability utilizing the GCC Load Shed "B" Bank Program on the Energy Management System (EMS) or the Microsoft Excel Curtailment folder located on the SCE shared Network drive.

5. After evaluating the "B" Bank Stations to be interrupted the GCC Transmission Dispatcher shall notify the appropriate Switching Center to interrupt "B" Banks at selected stations.

6. In some cases, it may be necessary for the Switching Center to relay the order to an adjacent Station.

7. The load shall be shed on orders from the GCC Transmission Dispatcher.

8. These stations shall be de-energized for periods of approximately one hour.

9. After one hour, the GCC Transmission Dispatcher shall order the next series of stations interrupted and the first series of stations restored.

10. The "B" Banks Stations, which were interrupted, shall be rotated such that they are the last to interrupt for future load interruptions.

11. This shall be done until the emergency condition has been concluded.
5.4 Manual Load Shed Procedure C

1. Manual Load Shedding Procedure C is the preferred procedure and shall be implemented by the GCC Transmission Dispatcher when the CISO has implemented a Stage 3 Emergency and provided at least 10 minutes’ notice.

2. The amount of load to be interrupted is determined by the CISO.

3. The Switching Center System Operator, on orders from the GCC Transmission Dispatcher, shall shed the load.

4. Automated distribution circuit groups shall be interrupted via EMS's Distribution Circuit Load Shed (DCLS) program, while TS&O personnel who have been dispatched to unattended stations shall interrupt non-automated circuits.

5. Automated partial distribution circuit groups shall be interrupted via the Distribution Management System (DMS).

6. To interrupt Subtransmission Customer Substations, the GCC Transmission Dispatcher shall notify the CP&S Emergency Duty Manager and request the groups needed to be interrupted.

   A. Customer Service shall contact the customers and request that they reduce their demand on the system to zero MW or to the maximum extent possible as allowed under the customer’s generator interconnection agreement with SCE.

   B. Customers who have made arrangements with SCE in advance to have their load interrupted by an SCE operator are notified by the On Duty Manager of the approximate time of interruption.

5.4.1 Manual Load Shed Procedure C SOB-21 Appendices

1. Utilize the following SOB-21 Appendices for Manual Load Shed Procedure C:
   - 21-03 Automated Distribution Circuit Load Shed Groups
   - 21-04 Non-automated Distribution Circuit Load Shed Groups
   - 21-05 Subtransmission Customer Substation Load Shed Groups
   - 21-06 Remote Controlled Partial Distribution Circuit Load Shed Groups

2. When operationally feasible, all Groups shall be interrupted sequentially and all four shall rotate individually.
3. Automated groups shall be used for the initial rotating outages unless the CISO provides sufficient advance notice to allow staffing of substations for the purposes of implementing non-automated group interruptions.

4. All automated groups, non-automated groups, and Customer Substations shall be interrupted once before returning to interrupt a group or Customer Substation that has already been interrupted.

5. Depending on CISO operations, there may be situations where automated groups could be interrupted more than once before all other groups and Customer Substations have been interrupted.

6. Interruption periods shall last approximately one hour, but may be shorter or longer depending upon circumstances.

7. To continue interruptions, the GCC Transmission Dispatcher shall order the next load to be dropped and the previous interrupted load picked up.

8. This shall be done until the emergency condition has been concluded.

9. The last group that was interrupted on a list shall be moved to the bottom of the list.

10. Non-automated distribution groups and Customer Substations shall be used to supplement the automated distribution groups as substation staffing and operations permit.

11. During utilization of the non-automated groups, the System Operator shall relay this information to the appropriate station that has jurisdiction.

12. During utilization of the non-automated groups, personnel attending stations shall report to the substation having jurisdiction.

13. Jurisdictional substations shall report back to the Switching Center that originated the request.

14. During utilization of customer substations, the GCC Transmission Dispatcher shall notify the CP&S Emergency Duty Manager who shall relay the information to the appropriate customers.
5.4.2 *Updating Load Shed Groups for Procedure C*

1. When a nonessential circuit presently in this SOB becomes an essential circuit, the DOC Supervisor shall notify the jurisdictional Switching Center immediately.

2. For an automated circuit, the System Operator shall use the EMS Load Shed displays to locate the circuit and turn on the skip flag.

3. For a non-automated circuit, the System Operator shall locate the circuit on Attachment 21-04, and line out, initial and date the change.

4. The Grid Operations Manager shall make written notification of all corrections to SOB-21 Load Shed Groups to the Manager of Grid Control and the Manager of Distribution Engineering.

5. The Grid Operations Managers should review the Load Shed Groups to ensure that no essential customer circuits are included when a Stage 3 Emergency is imminent.

6. The GCC shall revise and publish the corrected Load Shed Attachment(s).

7. The GCC shall coordinate with Power System Controls (PSC) group any additions or deletions of circuits to the DCLS and DMS programs.

5.5 *Notification of Interruptions*

1. The Customer Communications Center (CCC) is the primary contact from the customer.

2. This notification may come directly from a Mass Market Customer or Major Account Customer.

3. Notification may also be made from the customer to their Account Manager or Account Executive.

4. Following notification and request for restoration the CCC creates a trouble order and notify the DOC System Supervisor by phone.

5. The DOC System Supervisor shall notify the Business Customer Division (BCD) Duty Manager, who may assist in identifying the customer and the appropriate circuit.

6. The DOC System Supervisor shall also notify the jurisdictional Switching Center.
5.6 Restoration of Service

1. The jurisdictional Switching Center shall verify the cause of the outage was the result of the initiation of a rotating outage.

2. After verification, the identified circuit, or if automated the circuit section, may be restored to service.

3. The DOC, using the Outage Management System (OMS), shall verify restoration of service to the customer.

5.6.1 Restoration to Certain Essential Customers

1. Under certain conditions (e.g. if providing firefighting water, to avoid sewage spill, etc.), Water and Sewage Treatment facilities or Essential Customers with a back-up power supply that fails may request their service restored for health or safety concerns.

2. Essential customers without a back-up supply who are interrupted as a result of a change in the electrical system configuration will also require their service restored.

5.6.2 Notification of Restoration

1. The DOC System Supervisor shall contact the BCD Duty Manager when verification of restoration has been made on OMS.

2. The Mass Market Representative, Account Manager or Account Executive contacts the customer after receiving notification from the Duty Manager to verify restoration of service with the customer.

3. Following restoration of service the Switching Center shall contact the GCC Transmission Dispatcher as soon as practical.

4. The GCC Transmission Dispatcher shall determine if additional load dropping is required to remain in compliance with the Stage 3 Emergency instructions from CISO.
6. **Next Review Date**

1. This SOB shall be reviewed and updated at least annually.

2. Annual updates of this document shall be tracked in the “Cumulative Revision History” associated with this document (maintained in the Grid Control Misc doclib) and shall be reflected in the revision date and Revisions History section herein.

7. **Data Retention**

1. Once retired or replaced, this document shall be retained for a minimum of four (4) years from the revision date indicated within the header.

2. A signed hard-copy of all current and in-force SOBs are kept in the Grid Control Outage Request area.

3. Electronic copies are kept on the Grid Control file share server in the folder: 

   ```plaintext
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8. **Distribution**

   This System Operating Bulletin shall be distributed to:
9. Approval

Please cancel and destroy copies of System Operating Bulletin No. 21 dated July 7, 2015.

Manager,
Grid Control

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## Attachment B. Wireless and Telephone Message Examples

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<th>Initiate/ Terminate</th>
<th>Message Type</th>
<th>Example</th>
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<td>Initiate</td>
<td>Wireless</td>
<td>&quot;California ISO has issued an Alert informing the Grid Control Center that based on the day ahead forecast they may be at minimum reserves for hours ending XXXX through XXXX. GCC.&quot;</td>
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<tr>
<td>Alert</td>
<td>Terminate</td>
<td>Wireless</td>
<td>&quot;California ISO has informed the Grid Control Center that the Alert Statement has been terminated effective XXXX. GCC/46056.&quot;</td>
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<tr>
<td>Warning</td>
<td>Initiate</td>
<td>Wireless</td>
<td>&quot;California ISO has issued a Warning informing the Grid Control Center that based on the hour ahead forecast they may be at minimum reserves for hours ending XXXX through XXXX. GCC.&quot;</td>
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<tr>
<td>Warning</td>
<td>Terminate</td>
<td>Wireless</td>
<td>&quot;California ISO has informed the Grid Control Center that the Warning Statement has been terminated effective XXXX. GCC.&quot;</td>
</tr>
<tr>
<td>Warning</td>
<td>Terminate</td>
<td>Telephone</td>
<td>&quot;Effective XXXX theWarning has been terminated effective XXXX. Resume normal electric usage at all SCE facilities.&quot;</td>
</tr>
<tr>
<td>Stage 1 Emergency</td>
<td>Initiate</td>
<td>Wireless</td>
<td>&quot;California ISO has issued a Stage 1 Emergency informing the Grid Control Center that a Stage 1 Emergency exists. GCC.&quot;</td>
</tr>
<tr>
<td>Stage 1 Emergency</td>
<td>Terminate</td>
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<td>&quot;California ISO has informed the Grid Control Center that the Stage 1 Emergency has been terminated effective XXXX. GCC.&quot;</td>
</tr>
<tr>
<td>Stage 1 Emergency</td>
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<td>Telephone</td>
<td>&quot;Effective XXXX the Stage 1 Emergency of the Operating Reserve Deficiency Contingency Plan outlined in SOB 21 has been terminated. Resume normal electric usage at all SCE facilities.&quot;</td>
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<tr>
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<tr>
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<td>&quot;California ISO has informed the Grid Control Center that the Stage 2 Emergency has been terminated effective XXXX. GCC.&quot;</td>
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<tr>
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<td>Telephone</td>
<td>&quot;Effective XXXX, the Stage 2 Emergency of the Operating Reserve Deficiency Contingency Plan outlined in SOB 21 has been terminated. Resume normal electric usage at all SCE facilities.&quot;</td>
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<td>Action</td>
<td>Initiate/ Terminate</td>
<td>Message Type</td>
<td>Example</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>---------------------</td>
<td>--------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------</td>
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<tr>
<td>Stage 3 Emergency Procedure A</td>
<td>Initiate</td>
<td>Wireless</td>
<td>“California ISO has issued a Stage 3 Emergency informing the Grid Control Center that a Stage 3 Emergency exists. GCC.”</td>
</tr>
<tr>
<td>Stage 3 Emergency Procedure A</td>
<td>Initiate</td>
<td>Telephone</td>
<td>“Effective XXXX, the ISO has issued a Stage 3 Emergency. Implement procedures as outlined in the SCE Operating Reserve Deficiency Contingency Plan, System Operating Bulletin No. 21.” “A-Bank load at XXXXX and XXXXX stations will be interrupted during this period. A total of XXX MW will be shed during each one hour period which is expected to continue until XXXXX.”</td>
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<td>Stage 3 Emergency Procedure A</td>
<td>Terminate</td>
<td>Wireless</td>
<td>“California ISO has informed the Grid Control Center that the Stage 3 Emergency has been terminated effective XXXX. GCC.”</td>
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<tr>
<td>Stage 3 Emergency Procedure A</td>
<td>Terminate</td>
<td>Telephone</td>
<td>“Effective XXXX, Stage 3 Emergency will be terminated. Service to A-Bank station load at XXXXX and XXXXX which have been interrupted, will be restored.”</td>
</tr>
<tr>
<td>Stage 3 Emergency Procedure B</td>
<td>Initiate</td>
<td>Wireless</td>
<td>“California ISO has issued a Stage 3 Emergency informing the Grid Control Center that a Stage 3 Emergency exists. GCC.”</td>
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<tr>
<td>Stage 3 Emergency Procedure B</td>
<td>Initiate</td>
<td>Telephone</td>
<td>“Effective XXXX, the ISO has issued a Stage 3 Emergency. Implement procedures as outlined in the SCE Operating Reserve Deficiency Contingency Plan, System Operating Bulletin No. 21.” “B-Bank load at XXXXX and XXXXX stations will be interrupted during this period. A total of XXX MW will be shed during each one hour period which is expected to continue until XXXXX.”</td>
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<td>Stage 3 Emergency Procedure B</td>
<td>Terminate</td>
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<tr>
<td>Stage 3 Emergency Procedure B</td>
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<td>Telephone</td>
<td>“Effective XXXX, Stage 3 Emergency will be terminated. Service to B-Bank station load at XXXXX and XXXXX which have been interrupted, will be restored.”</td>
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<td>Stage 3 Emergency Procedure C</td>
<td>Initiate</td>
<td>Wireless</td>
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<td>Stage 3 Emergency Procedure C</td>
<td>Initiate</td>
<td>Telephone</td>
<td>“Effective XXXX, the ISO has issued a Stage 3 Emergency. Implement procedures as outlined in the SCE Operating Reserve Deficiency Contingency Plan, System Operating Bulletin No. 21.” “Distribution circuits in Group(s) XXXX will be interrupted during this period. A total of XXX MW will be shed during each one hour period which is expected to continue until XXXXX.”</td>
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### Action

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<th>Stage 3 Emergency Procedure C</th>
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<td>Telephone</td>
<td>“Effective XXXX, Stage 3 Emergency will be terminated. Service to Distribution Circuits in Groups XXXX which have been interrupted will be restored.”</td>
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<tr>
<td>Procedure A</td>
<td>Load Drop$^8$</td>
<td>PAX</td>
<td>“At XXXX time, in accordance with System Operating Bulletin No. 21, drop “A” Bank station load at XXXXX Substations.”</td>
</tr>
<tr>
<td>Procedure A</td>
<td>Load Restoration$^9$</td>
<td>PAX</td>
<td>“At XXXX time, in accordance with System Operating Bulletin No. 21, pick up “A” Bank station load at XXXXX Substations.”</td>
</tr>
<tr>
<td>Procedure B</td>
<td>Load Drop$^6$</td>
<td>PAX</td>
<td>“At XXXX time, in accordance with System Operating Bulletin No. 21, drop “B” Bank station load at XXXXX Substations.”</td>
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<tr>
<td>Procedure B</td>
<td>Load Restoration$^7$</td>
<td>PAX</td>
<td>“At XXXX time, in accordance with System Operating Bulletin No. 21, pick up “B” Bank station load at XXXXX Substations.”</td>
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<td>Procedure C</td>
<td>Load Drop$^6$</td>
<td>PAX</td>
<td>“At XXXX time, in accordance with System Operating Bulletin No. 21, drop Group(s) XXXX”</td>
</tr>
<tr>
<td>Procedure C</td>
<td>Load Restoration$^7$</td>
<td>PAX</td>
<td>“At XXXX time, in accordance with System Operating Bulletin No. 21, pick up Group(s) XXXX”</td>
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</tbody>
</table>
2016 Annual Report for Southern California Edison Company (U338-E) of Compliance with General Order 166

Appendix C
SCE Fire Prevention Plan

Redacted/Public

June 2016
POLICY TITLE:

Fire Prevention Plan

Contact: Joseph Bauza

1.0 PURPOSE

This document describes measures implemented by Southern California Edison (SCE or Company) to mitigate the threat of overhead power-line fire ignitions within its service territory.

2.0 APPLICABILITY

This Fire Prevention Plan is applicable to Transmission and Distribution (T&D) departments and organizations responsible for the operation, design, construction, inspection and maintenance of SCE overhead lines and structures and is supported by applicable SCE or T&D policies, practices, and procedures to reduce the probability of power-line caused ignitions.

3.0 COMPLIANCE

D.12-01-032 required SCE to prepare a fire-prevention plan to identify 3-second wind gusts in real time and address situations where all three of the following conditions occur simultaneously: (i) 3-second wind gusts exceeding the structural or mechanical design standards for the affected overhead power-line facilities, (ii) these 3-second gusts occur during a period of high fire danger, and (iii) the affected facilities are located within a high fire-threat area.

D.14-05-020 modified D.12-01-32 and eliminated the requirement to identify 3-second wind gusts in real time if a utility does not deploy fire-prevention measures that rely on real time observations of wind gusts. D.14-05-020 also required SCE to “identify the parts of its service territory where it is reasonably foreseeable that the following conditions may occur simultaneously: (i) 3-second wind gusts exceed the structural or mechanical design standards for the affected overhead power-line facilities, (ii) these 3-second gusts occur during a Red Flag Warning, and (iii) the affected facilities are in a high fire-threat area; and further that “[i]n making this determination, the utility shall use a minimum probability of 3% over a 50-year period that 3-second wind gusts which exceed the design standards for the affected facilities will occur during a Red Flag Warning in a high
This Fire Prevention Plan is compliant with D.14-05-020 in that it is applied during Red Flag Warning conditions, regardless of measured wind speed, and requires specified and necessary actions to be taken whether or not the Red Flag Warning occurs in a high fire area and whether or not wind speeds in the area may exceed design criteria for the affected overhead facilities; and does not require or depend on real-time wind speed measurements or monitoring.

4.0 DEFINITIONS

For the purpose of this plan, the following definitions apply:

3-second gust - the highest sustained gust over a 3 second period having a probability of being exceeded per year of 1 in 50 (ASCE 7-05).

Structural and mechanical design standards - the material strengths and working stresses set forth in Section IV of General Order (GO) 95.

High fire danger - the period covered by a Red Flag Warning issued by the United States National Weather Service and/or Riverside Fire Weather Office.

High fire-threat or High Fire Areas - areas designated as such on the fire-threat maps adopted by D.12-01-032 or SCE’s Bulletin 322 area, whichever is greater.

5.0 OPERATIONS

5.1.1 Grid Operations

Grid Operations is responsible for the monitoring and operation of SCE’s electric system. During significant events, Grid Control Center personnel act as SCE’s official representatives in matters concerning the operation of the system when senior management or an “Officer in Charge” is unavailable. Grid Operations is also responsible for applying System Operating Bulletins which encompass operating protocols, remedial actions, communication and notification protocols, ratings and limits of lines and equipment, and system protection schemes.

Qualified employees, typically Troublemens, Senior Patrolmen, Foremen, or Field Supervisors may contact Grid Operations at any time to request a line or line segment be temporarily de-energized, or sectionalizing equipment be set to “non-automatic” to promote public safety and system reliability.

To reduce power-line ignitions during dry weather conditions, including periods of drought, overhead lines and line sections are subject to operating restrictions described in SCE’s System Operating Bulletin 322, as summarized below:

A. From December 1st to September 30th, reclosers associated with non-automated
distribution circuits are set to “automatic.”

1. When a Red Flag Warning is not in effect, if the line or line section relays and tests good or relays to lockout:
   a. The line or line section may be isolated and tested without restriction. A line patrol is not required before re-energizing.
   b. Once the trouble has been isolated, the recloser may be returned to automatic.

2. When a Red Flag Warning is in effect, if the line or line section relays and tests good or relays to lockout:
   a. The recloser is made non-automatic until patrolled.
   b. If locked out, the line or line section is not re-energized until patrolled.
      • Patrolled line section may be sectionalized and re-energized until the faulted line section is found or the entire line has been patrolled
   c. Once the fault is located and isolated, the line section is patrolled from the fault to the source circuit breaker or source boundary line prior to energizing.
   d. After the patrol is completed, if the problem is found and isolated; or if no cause is found; the line or line section recloser remains non-automatic until the Red Flag Warning expires or is cancelled.

B. From October 1st to November 30th, reclosers associated with non-automated distribution circuits are set to “non-automatic.”

1. When a Red Flag Warning is not in effect, if a line relays:
   a. The recloser remains non-automatic during this period.
   b. The line or line section may be isolated and tested without restriction.
      • A line patrol is not required before re-energizing.

2. When a Red Flag Warning is in effect, if the line relays:
   a. Lines or line sections are patrolled prior to being re-energized.
      • Subsequent line sections are patrolled, isolated, and may not be re-energized until the faulted line section is found or the entire line has been patrolled.
   b. Once the fault is located and isolated, the line section is patrolled from the fault to the source circuit breaker or boundary line prior to energizing.
   c. Once the patrol has been completed, whether the problem was found and isolated or there was no cause found, the line or line section recloser shall remain non-automatic until November 30th.

C. Reclosers associated with automated distribution circuits are normally “automatic”
unless Operating Restrictions are in effect. Operating Restrictions are implemented by each GMC Manager for their entire area of responsibility on lines or line sections that have been identified as traversing a fire hazard area when a Red Flag Warning is in effect for that area.

Note: If remote control of an Automated Distribution Circuit is temporarily unavailable, the circuit is operated as though it is a Non-Automated Distribution Circuit in the period of December 1st to September 30th until repairs are made.

1. Upon notification that Operating Restrictions are in effect, jurisdictional Switching Center System Operators will make all reclosers associated with Automated Distribution Circuits non-automatic as soon as practical.

   a. If the line or line section relays, it will not be re-energized until patrolled.

   b. A patrolled line section may be sectionalized and re-energized. Subsequent line sections may then be patrolled, isolated and re-energized until the faulted line section is found or the entire line has been patrolled.

   c. When a line or line section relays and the fault is located and isolated, the line section will be patrolled from the fault to the source CB or boundary line prior to energizing. This is to ensure that all line faults or abnormalities have been identified prior to energizing.

   d. Once the patrol has been completed, whether the problem was found and isolated or there was no cause found, the line or line section recloser will remain non-automatic until the Red Flag Warning expires or is cancelled.

6.0 SUPPORT ORGANIZATIONS

6.1 Emergency Response

6.1.1 The Emergency Response group provides Fire Management Representatives to serve as liaisons to local, county, state, and federal, fire agencies on a 24/7 basis.

The Fire Management team also assists Grid Operations by providing timely and useful information to employees working in Fire Threat Areas, especially during Red Flag Warnings and peak fire conditions. Additionally, certain Transmission and Distribution department personnel have been identified and trained to act as Fire Watchers to supplement the Fire Management Representatives to assure coverage should multiple fires occur simultaneously within the service territory.

6.1.2 During a Red Flag Warning, certain T&D personnel shall display the Red Flag Fire Patrol magnetic vehicle signs. When SCE receives notice that a Red Flag Warning has been issued, all participating area personnel are to:
• Display the “Red Flag Fire Patrol” magnetic signs on designated vehicles.

• Suspend all non-essential work within known fire hazard areas.

• If work must be continued or performed within fire hazard areas, exercise additional fire awareness during the work process and keep adequate firefighting equipment readily available. (e.g., backpack pumps, shovels, and fire extinguishers, etc.)

• Be extra alert for fires, or the possibility of a fire, while traversing fire hazard areas.

• Report all fires, or possible fires, to the appropriate Switching Center or GMC without intentional delay. Accuracy in reporting, particularly of location and fuel source information, is essential.

6.2 Transmission and Distribution

6.2.1 Engineering and Construction
Overhead electric and communication lines and structures comprising SCE’s bulk-electric system are engineered and constructed to meet or surpass the requirements set forth in the CPUC’s GO 95. Where necessary and appropriate, based either on a predictive model or study, material strengths may be increased to exceed GO 95 minimum requirements.

6.2.2 Design and Construction
Overhead electric and communication lines and structures comprising SCE’s subtransmission and distribution system are designed to meet or surpass the requirements set forth in the CPUC’s GO 95. Where necessary and appropriate, based either on a predictive model or study, material strengths of structures may be increased to exceed GO 95 minimum requirements.

A supplemental design criterion is applied to overhead lines throughout the service territory (including fire threat areas) known to experience high winds. This criterion is contained in T&D’s Pole Loading Manual. T&D’s design and construction manuals also include standards for Avian Safe construction; and encompass special Heavy Loading Areas above 5,000 ft. elevations in support of short and long term efforts to prevent power-line ignitions and in support of system reliability.

• In conformance with D.14-05-020, Attachment 1 is included to identify areas in SCE’s service territory where “3-second wind gusts which exceed the design standards for the affected facilities will occur during a Red Flag Warning in a high fire-threat area” utilizing a minimum probability of 3% over a 50-year period (1 occasion in 1,642 years).
Further, where hot work (arc welding/cad welding, burning, grinding, brazing, thawing pipes, etc.) is performed, each site develops a site-specific Hot Work Plan. The Hot Work Plan identifies hazards and control measures associated with Hot Work Activities. The plan is maintained at each site and made available for employees to review at any time. (See Attachments 2, 3 and 4)

6.2.3 Inspection and Maintenance
Inspection and maintenance programs help ensure conformance with applicable regulatory requirements. Scheduled patrols of transmission, distribution, and communication lines (and structures) located in high fire areas “Are performed annually”. Supplemental patrols are also performed as-needed, typically following circuit interruptions, storms, or in advance of approaching fires. Detailed inspections of overhead distribution and communication lines located in high fire areas are performed on a five-year cycle. In-service wood poles are inspected in accordance with GO 165 requirements and T&D standards.

The Distribution Inspection and Maintenance Program, Transmission Inspection and Maintenance Program, and Edison Carrier Solutions (ESC) Inspection and Maintenance Program meet or exceed the requirements set forth in General Order 95, General Order 128, and General Order 165. (GO 166 does not include inspection/maintenance requirements.)

6.2.4 Vegetation Management
The Vegetation Management organization oversees the inspection, pruning, and removal of vegetation adjacent to T&D overhead power-lines. T&D Vegetation Management staff meets and accompanies local, county, and/or state fire agency personnel in the performance of supplemental patrols of overhead power-lines each year before the high-fire season. This activity is known as “Operation Santa Ana.”

SCE’s “summer readiness” program includes the performance of supplemental vegetation inspections before June 1, within and outside of high fire areas, to identify trees for pruning or removal based on proximity to transmission lines, visible health, and expected growth (or decline) due to known or anticipated environmental conditions, such as drought.

In response to CPUC Resolution ESRB-4, supplemental patrols and inspections of vegetation within SCE's High Fire Areas are performed quarterly to identify and remove dead or declining trees affected by drought conditions.

6.2.5 Pole Assessment and Remediation
Utilizing proprietary wind load design maps, T&D’s Pole Loading Program (PLP) is focused on performing pole load calculations on subtransmission and distribution poles. Subsequently, poles requiring remediation are prioritized, and repaired or
replaced. Inspections and resulting work are performed throughout the SCE service territory, with an initial focus on high fire areas. ‘PLP’ is part of SCE’s ongoing investment in facility maintenance to promote public safety and system reliability.

6.3 Transportation Services
Aircraft Operations assists in the patrolling of transmission and distribution lines. Air Operations also provides aerial surveillance as-necessary following fire and weather related storms and as conditions allow, assist in the transport of personnel and material to remote locations.

7.0 ASSOCIATED SPECIFICATIONS, STANDARDS, and GUIDES

7.1 Transmission Engineering
- Transmission Planning Criteria and Guidelines (TPG)

7.2 T&D Design / Construction / Maintenance
- Transmission Design and Right-of-Way Manual (TDR)
- Transmission Operations and Maintenance Manual (TOM)
- Transmission Overhead Construction Standards (TOH)
- Transmission Inspection and Maintenance Program (TIMP)
- ECS Inspection and Maintenance Program
- Distribution Design Standards (DDS)
- Distribution Operations and Maintenance Manual (DOM)
- Distribution Overhead Construction Standards (DOH)
- Distribution Inspection and Maintenance Program (DIMP)

7.3 Grid Control Center
- System Operating Bulletin 0014 – Authority and Obligation of Grid Control Center
- System Operating Bulletin 0008 – Initial Event Notifications
- System Operating Bulletin 0800 – Major Disaster Notification Process
- System Operating Bulletin 0322 – Operation of Distribution Voltage Lines Traversing Fire Hazard Areas

7.4 Vegetation Management
- Vegetation Management Operations Manual (VMOM)

7.5 Air Operations
- OS-TSD-AO-PL-005 – Power Line Patrols
- OS-TSD-AO-PL-008 – Helicopter External Load Operations

7.6 Safety
- SCE-CHS-CS-PG-5 – Fire Prevention Plan
- EHS-CS-PG-007 – Hot Work Program

7.7 Industry
ATTACHMENT 1: SCE Territory Extreme Wind Maps

ATTACHMENT 2: Safety Bulletin (July 2012)
Wildfire Season Safety Tips

When a wildfire is on the loose, SCE crews may be called to duty.

Everyone who lives in Southern California is familiar with wildfires. In recent years, we have seen hundreds and thousands of acres scorched by wind-driven flames. Wildfires not only threaten homes and other structures, they can also potentially cause serious damage to Southern California Edison's infrastructure.

Wildfires have multiple triggers. Some are deliberately set, but many occur naturally due to changes in the climate. For example, on June 1, 2012, the National Interagency Fire Center's Predictive Services (NIFC) issued a National Wildland Significant Fire Potential Outlook report. The report indicated that "severe to extreme drought conditions worsened across much of the Great Basin and Southwest, and drought continues to dominate the southwestern quarter of the country." This has created areas of below-normal fuel moisture conditions across New Mexico, spreading west through California and north to southern Oregon, Idaho and Wyoming. The report concludes that during July through September above-normal significant fire potential will develop over the mountains and foothills of southern and central California as well as the inland valleys.

Hot Work Safe Practices

Since our climate is dry, employees should be aware of potential fire risks in their work area. Prior to starting a job, ask yourself:
- Is there flammable material near where I am working?
- If there is a fire, can I put it out?
- Should I call for a second person to help?
- What if this gets out of my control?

A site Hot Work Plan identifies approved site work locations and designated areas where hot work activities can be performed safely. If hot work is necessary outside a designated area, a Hot Work Authorization (Hot Work Permit) must be issued. This work includes but is not limited to tasks involving: welding/cad welding, oxy-fuel gas welding, oxy-fuel cutting, open flame soldering, brazing, thawing pipes, grinding and burning. Before initiating hot work, ensure precautions are in place, for instance, make sure an appropriate fire extinguisher is readily available and that a fire-watch is set up.

There are other activities our crews perform that do not require formal Hot Work Authorization but still pose a fire danger. Even though making a hot secondary circuit, closing a fuse into a faulty line or even parking your truck in tall weeds is not considered hot work, it's good practice to make sure the area is safe and clear of combustible materials prior to starting a job. For instance, grading roads can cause sparks that could ignite a fire. Certain work requires a permit issued by the United States Forest Service (USFS) while working within their borders.

On-Scene Fire Safety Practices

Although at SCE we work primarily with electricity, our crews play an integral part when it comes to addressing the effects of wildfires. In the past, SCE crews have responded to several local wildfires to assist with restoration. Responding to wildfires might not be an everyday scenario for SCE crews, but there are special points to consider when working in fire zones:
- Ensure that you are authorized by the appropriate fire agency to enter an area.

ATTACHMENT 3: EH&S Bulletin - Hot Work Program (May 2012)
EH&S Site Team
Compliance Program Talking Points

Background and General Information
The Hot Work Program (EH&S-CS-FG-007) is designed to help prevent fires or explosions from occurring during Hot Work Activities that involve arc welding/cadwelding, braising, grinding, brazing, thawing pipes, etc. The Hot Work Program does not apply to high-voltage electrical work, which is regulated under the High Voltage Electrical Safety Orders.

Each site, where hot work is performed, must develop a site-specific Hot Work Plan. The Hot Work Plan identifies hazards and control measures associated with Hot Work Activities. The plan must be maintained at each site and made available for employees to review at any time. For an unstaffed location, the site Hot Work Plan will be maintained at the staffed location responsible for that site.

Site-Specific Responsibility
Ensure that a site-specific Hot Work Plan is developed, implemented, maintained, and has the following elements:

1. Hot Work Activities
   - A site Hot Work Plan shall identify work activities that are capable of initiating a fire or explosion at the site. Activities may include: (Revision)
     - Arc Welding/Cadwelding
     - Oxygen & Arc Cutting
     - Oxy-fuel gas welding
     - Open Flame Soldering
     - Brazing
     - Thawing Pipes
     - Grinding
     - Burning

2. Approved Locations for Hot Work Activity
   - A site Hot Work Plan shall identify approved site work locations and designated areas that are or have been made fire-safe for Hot Work Activities. A written Hot Work Authorization Form and Fire Watch are NOT required for such locations.
   - Non-designated Permit-Required Areas are locations where Hot Work Activities are performed outside of designated areas. These areas require a Fire Watch and the completion of a Hot Work Authorization Form to ensure fire safety. (Revision)
   - Non-Permit Areas (e.g. areas not authorized by the Site Manager or Employee in Charge, locations in the presence of explosive atmosphere, etc.) require the completion of a Hot Work Authorization Form (Attachment A within the site-specific plan). (Form Revised)

3. Hot Work Authorization (Hot Work Permit) Process
   - Periodically review and verify the accuracy of the Hot Work Plan to ensure the contacts are current and that the appropriate individuals or job families are listed as authorized to approve Hot Work in a non-designated area.
   - Ensure all elements of the Hot Work Job are in compliance. This means there is no debris or combustible material (e.g. wood, cardboard, paper, rags, etc.) within 35 ft. of the designated area. For Hot Work performed outside of the designated area, ensure the authorization process has been followed and that all employees are properly completing Hot Work Authorization Forms (Attachment A within the site-specific plan). (Form Revised)
   - Note: Begin using the revised authorization forms immediately.

4. Housekeeping
   - A site Hot Work Plan shall identify housekeeping procedures used in the designated Hot Work Areas to control the accumulation of flammable combustible materials.

5. Training
   - Ensure that the appropriate information and training for the Hot Work Plan is provided. Per TDBU policy, employees who have not received Hot Work Compliance Training shall not perform Hot Work activities.
   - The site Hot Work Plan shall identify Hot Work Plan training for site personnel performing Hot Work Tasks, serving as a Fire Watch, or issuing Hot Work Authorizations.

6. Recordkeeping
   - Ensure proper recordkeeping of the Hot Work Authorization Forms. All forms must be placed in the "Hot Work" folder (or the folder must contain directions to where the forms are maintained) within 30 days of the designated area. For Hot Work performed outside of the designated area, ensure the authorization process has been followed and that all employees are properly completing Hot Work Authorization Forms (Attachment A within the site-specific plan). (Form Revised)

7. Working with Contractors
   - Before starting a job, the SCE Representative or designated Point of Contact shall discuss the planned project completely, identify approved site work locations, review the site-specific emergency procedures with the contractor, and ensure the work procedures do not conflict with the objectives of the SCE Hot Work Program. (Revision)

The program is available in its entirety on the Environment, Health and Safety page of the Edison Portal. If any questions arise concerning Hot Work Activity or there are additional Hot Work areas you would like to designate at your facility, please contact your TDBU Safety Specialist for assistance.

Updated May 2012
HOT WORK PERMIT

BEFORE INITIATING HOT WORK, ENSURE PRECAUTIONS ARE IN PLACE!
MAKE SURE AN APPROPRIATE FIRE EXTINGUISHER IS READILY AVAILABLE!

This Hot Work Permit is required for any activities that are capable of initiating a fire or explosion. Activities may include: Arc Welding/Cadwelding, Oxy-fuel gas welding, Burning, Oxygen and Arc cutting, Grinding, Open flame soldering, Brazing, Thawing pipes, Torch applied roofing, Thermal spraying, etc.

INSTRUCTIONS

Verify precautions listed at right (or do not proceed with the work).

DATE:

LOCATION:

WORK TO BE DONE:

The employee performing hot work in non-designated hot work areas must obtain the approval from the Employee in Charge prior to performing hot work.

NAME OF PERSON DOING HOT WORK:

I verify the above location has been examined, the precautions checked on the Precautions Checklist have been taken to prevent fire, and permission is authorized for work.

SIGNED:

Date/Time

Precautions Checklist

☐ Available sprinkler, hose streams, and extinguishers are in service/operable.

☐ Hot work equipment in good repair.

☐ Floors swept clean

☐ Fire-resistant tarpaulins suspended beneath work.

☐ Construction is noncombustible and without combustible covering or insulation.

☐ Combustibles on other side of walls moved away.

☐ Enclosed equipment cleaned of all combustibles.

☐ Containers purged of flammable liquids/vapors.

☐ Fire watch is trained in use of this equipment and in sounding alarm.

☐ Fire watch may be required for adjoining areas, above, and below.

☐ Area protected with smoke or heat detection.

Fire watch required: ☐ Yes ☐ No

Permit Expires:

Date: ____________________________

Time: ____________________________ AM/PM

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Appendix D
SCE 2016 Electrical Emergency Action Plan

Redacted/Public

June 2016

Load Shed groups are confidential.

<table>
<thead>
<tr>
<th>Group</th>
<th>SOB no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Load Shed Procedure A</td>
<td></td>
</tr>
<tr>
<td>Manual Load Shed Procedure B</td>
<td></td>
</tr>
<tr>
<td>Load Shed Groups for Manual Load Shed: Procedure C</td>
<td></td>
</tr>
<tr>
<td>Automated Distribution Circuit Groups</td>
<td></td>
</tr>
<tr>
<td>Load Shed Groups for Manual Load Shed: Procedure C</td>
<td></td>
</tr>
<tr>
<td>Non-Automated Distribution Circuit Groups</td>
<td></td>
</tr>
<tr>
<td>Load Shed Groups For Manual Load Shed: Procedure C</td>
<td></td>
</tr>
<tr>
<td>Partial Circuit Groups For Subtransmission Customer Substation Groups</td>
<td></td>
</tr>
<tr>
<td>Load Shed Groups for Manual Load Shed: Procedure C</td>
<td></td>
</tr>
<tr>
<td>Remote Controlled Partial Distribution Circuit Groups</td>
<td></td>
</tr>
</tbody>
</table>

Plan filed with the CPUC 6/29/2016
2016 Annual Report for Southern California Edison Company (U338-E) of Compliance with General Order 166

**Appendix E:**
Corporate Emergency Communications Management Plan
### 1. Media— in the course of obtaining information for publication and broadcast

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication*</th>
<th>Supporting Organizations</th>
</tr>
</thead>
</table>
| Local - Small daily/weekly newspaper, radio stations** | Status of local system, expected duration of outages, cause, damage estimate, overall impact, newsworthy incidents, local recovery plan, special programs offered | • Telephone  
• Telephone interviews  
• News releases/Advisories  
• Standby Statements  
• Email  
• Facebook  
• Twitter  
• YouTube  
• SCE Newsroom  
• SCE.com Outage page  
• SCE Mobile Outage App | When requested and ongoing  
One Voice information release cycle | Storm reports, Distribution Operations Centers (DOC/GMC)  
ICS Incident Action Plans  
One Voice messages  
Watch Office | Corporate Communications | Local Public Affairs  
Customer Service, Business Customer Division  
DOC/GMC  
Business Resiliency |
| Metro - Greater LA and major/national news media, ethnic press | Status of metro system, expected duration of outages, cause, damage estimate, overall impact, newsworthy incidents, metro and system recovery plan, special programs offered | • Telephone  
• On-site interviews as appropriate  
• News releases/Advisories  
• Standby Statements  
• Email  
• Facebook  
• Twitter  
• YouTube  
• SCE Newsroom  
• SCE.com Outage page  
• SCE Mobile Outage App | Proactive and when requested  
One Voice information release cycle | Storm reports, DOC/GMC  
ICS Incident Action Plans  
One Voice messages  
Watch Office | Corporate Communications | Customer Service, Business Customer Division  
Local Public Affairs  
Distribution Staff  
DOC/GMC  
Business Resiliency |

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.
**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
<table>
<thead>
<tr>
<th>Regional - Larger daily newspapers, local electronic**</th>
<th>Status of the system, expected duration of outages, cause, damage estimate, overall impact, newsworthy incidents, system recovery plan, special programs offered</th>
<th>Regional - Larger daily newspapers, local electronic**</th>
<th>Status of the system, expected duration of outages, cause, damage estimate, overall impact, newsworthy incidents, system recovery plan, special programs offered</th>
<th>Proactive and when requested</th>
<th>Storm reports, DOC/GMC ICS Incident Action Plans One Voice messages Watch Office</th>
<th>Corporate Communications</th>
<th>Customer Service, Business Customer Division Local Public Affairs DOC/GMC Business Resiliency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Users</td>
<td>Status of the system, expected duration of outages, cause, damage estimate, overall impact, newsworthy incidents, system recovery plan, special programs offered</td>
<td>Internet Users</td>
<td>Status of the system, expected duration of outages, cause, damage estimate, overall impact, newsworthy incidents, system recovery plan, special programs offered</td>
<td>Regular updates</td>
<td>Storm reports, DOC/GMC ICS Incident Action Plans One Voice messages Watch Office</td>
<td>Corporate Communications</td>
<td>Information Technology DOC/GMC Business Resiliency</td>
</tr>
</tbody>
</table>

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.

**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
## 2. Media Vendors — for dissemination of Edison customer information (i.e., purchased advertising)

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication *</th>
<th>Supporting Organizations</th>
</tr>
</thead>
</table>
| Local, metro, regional | Status of system, expected duration of outages, cause, overall impact, newsworthy incidents, public safety information, recovery plan, special programs offered | • Print  
• Radio  
• TV  
• News releases/ Advisories  
• Purchased advertising  
• Public service announcements  
• Email  
• Facebook  
• Twitter  
• YouTube  
• SCE.com Outage Page  
• Region Managers | Periodically  
One Voice information release cycle | Storm reports,  
DOC/GMC  
ICS Incident Action Plans  
One Voice messages | Corporate Communications Watch Office | Local Public Affairs  
Customer Service,  
Business Customer Division  
Business Resiliency |

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.

**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
### 3. Customers

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication</th>
<th>Supporting Organizations</th>
</tr>
</thead>
</table>
| Major Accounts (large commercial and industrial customers whose electrical supply is critical to operations) | Status of service to the customer, expected time of restoration, description of problem, overview of system, special programs offered | • Telephone  
• Fact sheets  
• Email  
• Facebook  
• Twitter  
• YouTube  
• SCE.com Outage Page  
• SCE Mobile Outage App | Proactively and when requested  
One Voice information release cycle | Storm reports, DOC/GMC  
ICS Incident Action Plans  
One Voice messages | Customer Service, Business Customer Division | • Local Public Affairs  
• Customer Communications Center  
• Corporate Communications for Social Media support (Twitter, Facebook)  
• Business Resiliency |
| Major Accounts (public entities such as cities and counties) | Status of service to the customer, expected time of restoration, description of problem, overview of system, special programs offered | • Telephone  
• Fact sheets  
• Email  
• Facebook  
• Twitter  
• YouTube  
• SCE.com Outage Page  
• SCE Mobile Outage App  
• Flash Coms | Proactively and when requested  
One Voice information release cycle | Storm reports, DOC/GMC  
ICS Incident Action Plans  
One Voice messages | Local Public Affairs | • Customer Service, Business Customer Division  
• Customer Communication Center  
• Corporate Communications for Social Media support (Twitter, Facebook)  
• Business Resiliency |
| Small Business Accounts and Residential | Status of service to the customer, expected time of restoration, description of problem, overview of system, special programs offered | • Telephone  
• Email  
• Facebook  
• Twitter  
• YouTube  
• SCE.com Outage Page  
• SCE Mobile Outage App  
• Flash Coms | Upon customer call  
One Voice information release cycle | Storm reports, DOC/GMCSS  
ICS Incident Action Plans  
One Voice messages | Customer Communications Organization  
Business Customer Division | • Local Public Affairs  
• Customer Service, Business Customer Division  
• District Service Center  
• Corporate Communications for Social Media support (Twitter, Facebook)  
• Business Resiliency |

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.

**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication*</th>
<th>Supporting Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical (residential customer with life sustaining equipment and less than 2 hours tolerance)</td>
<td>Status of service to the customer, expected time of restoration, description of problem, overview of system, special programs offered</td>
<td>Customer’s Preferred method • Telephone • Email • Door-knock if no response to customer’s preferred method • Facebook • Twitter • YouTube • SCE.com Outage Page • SCE Mobile Outage App</td>
<td>Upon customer call One Voice information release cycle</td>
<td>Storm reports, DOC/GMC CSS ICS Incident Action Plans One Voice messages</td>
<td>Customer Communications Organization</td>
<td>Local Public Affairs Customer Service, Business Customer Division District Service Center Corporate Communications for Social Media support (Twitter, Facebook) Business Resiliency</td>
</tr>
</tbody>
</table>

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.

**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
### 3. Customers

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication</th>
<th>Supporting Organizations</th>
</tr>
</thead>
</table>
| Essential (customers providing essential public health and safety services) | Status of service to the customer, expected time of restoration, description of problem, overview of system, special programs offered  
*Note: this is a priority restoration customer. Confirm restoration plan with storm management center* | Customer’s Preferred method  
• Telephone  
• Email  
• Door-knock if no response to customer’s preferred method  
• Facebook  
• Twitter  
• YouTube  
• SCE.com Outage Page  
• SCE Mobile Outage App  
• Flash Com | Upon customer call  
Proactively  
When requested | Storm reports, DOC/GMC  
ICS Incident Action Plans  
One Voice messages | Customer Communications Organization  
Customer Service, Business Customer Division  
Local Public Affairs | Distribution Staff  
District Service Center  
Corporate Communications for Social Media support (Twitter, Facebook Business Resiliency) |

### 4. Community Organizations and Groups

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication</th>
<th>Supporting Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chambers of Commerce</td>
<td>Status of service to specific group of customers, expected time of restoration, description of problem, overview of system, special programs offered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
• Telephone  
• Email  
• Facebook  
• Twitter  
• YouTube  
• SCE.com Outage Page  
• SCE Mobile Outage App | When requested  
One Voice information release cycle | Storm reports, DOC/GMC  
ICS Incident Action Plans  
One Voice messages  
Areps | Local Public Affairs  
Business Customer Division | Customer Service, Business Customer Division  
Corporate Communications for Social Media support (Twitter, Facebook Business Resiliency) |

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.  
**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
<table>
<thead>
<tr>
<th>Rotary, Lions, etc.</th>
<th>Status of service to specific group of customers, expected time of restoration, description of problem, overview of system, special programs offered</th>
<th>List of communication methods:  - Telephone  - Email  - Facebook  - Twitter  - YouTube  - SCE.com Outage Page  - SCE Mobile Outage App</th>
<th>When requested One Voice information release cycle</th>
<th>Storm reports, DOC/GMC ICS Incident Action Plans One Voice messages</th>
<th>Local Public Affairs</th>
<th>Customer Service, Business Customer Division Corporate Communications for Social Media support (Twitter, Facebook)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Homeowner Associations</td>
<td>Status of service to specific group of customers, expected time of restoration, description of problem, overview of system, special programs offered</td>
<td>List of communication methods:  - Telephone  - Email  - Facebook  - Twitter  - YouTube  - SCE.com Outage Page  - SCE Mobile Outage App</td>
<td>When requested One Voice information release cycle</td>
<td>Storm reports, DOC/GMC ICS Incident Action Plans One Voice messages</td>
<td>Local Public Affairs Business Customer Division</td>
<td>Customer Service, Business Customer Division Corporate Communications for Social Media support (Twitter, Facebook)</td>
</tr>
<tr>
<td>Economic Development Agencies</td>
<td>Status of service to specific group of customers, expected time of restoration, description of problem, overview of system, special programs offered</td>
<td>List of communication methods:  - Telephone  - Email  - Facebook  - Twitter  - YouTube  - SCE.com Outage Page  - SCE Mobile Outage App</td>
<td>When requested One Voice information release cycle</td>
<td>Storm reports, DOC/GMC ICS Incident Action Plans One Voice messages</td>
<td>Economic and Business Development</td>
<td>Local Public Affairs Corporate Communications for Social Media support (Twitter, Facebook)</td>
</tr>
</tbody>
</table>

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.
**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
### 5. Elected Officials and Staff

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication</th>
<th>Supporting Organizations</th>
</tr>
</thead>
</table>
| Federal         | Status of the system including generation and bulk-power, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, system recovery plan | • Telephone  
• Email  
• Facebook  
• Twitter  
• YouTube  
• SCE.com Outage Page  
• SCE Mobile Outage App | Proactively and when requested  
One Voice information release cycle | Storm reports,  
DOC/GMC  
ICS Incident Action Plans  
One Voice messages | Local Public Affairs  
Public Affairs  
Government Affairs | Regulatory Policy and Affairs, through Washington office  
Corporate Communications |
| State           | Status of the system, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, newsworthy incidents, system recovery plan | • Telephone  
• Email  
• Facebook  
• Twitter  
• YouTube  
• SCE.com Outage Page  
• SCE Mobile Outage App | Proactively and when requested  
One Voice information release cycle | Storm reports,  
DOC/GMC  
ICS Incident Action Plans  
One Voice messages | Local Public Affairs  
Public Affairs  
Government Affairs | Regulatory Policy and Affairs, through San Francisco and Sacramento office  
Corporate Communications  
Business Resiliency |

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.

**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
### 6. Governmental Agencies (Non-regulatory)

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication</th>
<th>Supporting Organizations</th>
</tr>
</thead>
</table>
| Federal         | Status of the system including generation and bulk-power, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, system recovery plan, mutual assistance | • Telephone  
• Email  
• Facebook  
• Twitter  
• YouTube  
SCE.com Outage Page | Proactively and when requested  
One Voice information release cycle | Storm reports,  
DOC/GMC  
GCC  
ICS Incident Action Plans  
CIT One Voice messages | Local Public Affairs  
Public Affairs  
Government Affairs | Corporate Communications  
Customer Service, Business Customer Division  
Corporate Communications  
Distribution Staff  
Corporate Public Affairs  
Corporate Communications  
Business Resiliency |
| FEMA (Courtesy Notification Only) | Status of the system including generation and bulk-power, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, system recovery plan | | | | |
| Department of Energy  
Emergency Operations Center  
CPUC | Status of the system including generation and bulk-power, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, system recovery plan | | | | |

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.

**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
### 6. Governmental Agencies (Non-regulatory)

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication *</th>
<th>Supporting Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>Status of the system, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, newsworthy incidents, system recovery plan</td>
<td>• Telephone • Email • Facebook • Twitter • YouTube • SCE.com Outage Page</td>
<td>Proactively and when requested</td>
<td>Storm reports, DOC/GMC GCC</td>
<td>Local Public Affairs</td>
<td>Customer Service, Business Customer Division</td>
</tr>
<tr>
<td>Cal OES</td>
<td>Status of the system, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, newsworthy incidents, system recovery plan</td>
<td></td>
<td>When CA-ISO issues a sixty-minute rotating outage notice</td>
<td>Storm reports, DOC/GMC GCC</td>
<td>Business Resiliency</td>
<td>Corporate Communications</td>
</tr>
<tr>
<td>California Energy Commission</td>
<td>Status of the system, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, newsworthy incidents, system recovery plan</td>
<td></td>
<td></td>
<td>ICS Incident Action Plans One Voice messages</td>
<td>Business Resiliency</td>
<td>Business Resiliency</td>
</tr>
<tr>
<td>Metropolitan Transportation Authority</td>
<td>The MTA Operations Center is called only when the California Independent System Operator issues a sixty-minute rotating outage notice.</td>
<td></td>
<td></td>
<td></td>
<td>Customer Service, Business Customer Division</td>
<td>Local Public Affairs</td>
</tr>
</tbody>
</table>

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.

**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)**

Rev. 6/2016
### 6. Governmental Agencies (Non-regulatory)

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance To the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication</th>
<th>Supporting Organizations</th>
</tr>
</thead>
</table>
| California Independent System Operator (CAISO) Emergency Management Operations | Status of the system including generation and bulk-power, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, system recovery plan | • Telephone  
• Email  
• Facebook  
• Twitter  
• YouTube • SCE.com Outage Page | Proactively and when requested  
One Voice information release cycle | Storm reports,  
DOC/GMC  
GCC  
ICS Incident Action Plans  
One Voice messages | Business Resiliency  
GCC | Corporate Communications Business Resiliency |
| Counties | Status of service to the county, number of customers affected, expected duration of outages, cause of damage, overall impact on Edison, newsworthy incidents, county recovery plan | • Telephone  
• Email  
• Facebook  
• Twitter  
• YouTube • SCE.com Outage Page SCE Flash Communication | Proactively and when requested  
One Voice information release cycle | Storm reports,  
DOC/GMC  
GCC  
ICS Incident Action Plans  
One Voice messages | Local Public Affairs Corporate Security and Business Resiliency  
See Note | Customer Service, Business Customer Division  
Corporate Communications Business Resiliency |

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.

**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
<table>
<thead>
<tr>
<th>Cities</th>
<th>Status of service to the city, number of customers affected, expected duration of outages, cause of damage, overall impact on Edison, newsworthy incidents, county recovery plan</th>
</tr>
</thead>
</table>
|        | * Telephone  
|        | Email  
|        | Facebook  
|        | Twitter  
|        | YouTube  
|        | SCE.com Outage Page  
|        | SCE Flash Communication  
|        | Proactively and when requested  
|        | One Voice information release cycle  
|        | Storm reports, DOC/GMC  
|        | GCC  
|        | ICS Incident Action Plans  
|        | One Voice messages  
|        | Local Public Affairs  
|        | Corporate Security and Business Resiliency  
|        | See Note  
|        | Customer Service, Business Customer Division  
|        | Corporate Communications |

**Note:** *Corporate Security* will communicate with City, County, State and Federal law enforcement, *Fire Management* with fire agencies, and *Business Resiliency* with emergency managers.

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.
** News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
## 6. Governmental Agencies (Non-regulatory)

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication</th>
<th>Supporting Organizations</th>
</tr>
</thead>
</table>
| Governmental Associations | Status of service to a specified area, number of customers affected, expected duration of outages, cause of damage, overall impact on Edison, newsworthy incidents, recovery plan | • Telephone  
• Email  
• Facebook  
• Twitter  
• YouTube  
• SCE.com Outage Page | Proactively and when requested  
One Voice information release cycle | Storm reports,  
DOC/GMC  
GCC  
ICS Incident Action Plans  
One Voice messages | Local Public Affairs  
Government Affairs | Corporate Communications  
Business Resiliency |
### 7. Regulators

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication</th>
<th>Supporting Organizations</th>
</tr>
</thead>
</table>
| FERC Commissioners       | Status of the system including generation and bulk-power, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, system recovery plan  
Staff                      | Status of the system including generation and bulk-power, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, system recovery plan | • Telephone  
• Email                                                                 | Proactively and when requested  
One Voice information release cycle                                                                 | Storm reports, DOC/GMC  
GC  
ICS Incident Action Plans  
One Voice messages                                                                 | Regulatory Policy and Affairs, through Washington office  
Regulatory Policy and Affairs, through Washington office                                                                 | Law                                    |
| Nuclear Regulatory Commission | As specified by commission                                                                                                                                                                                                                    | As specified by commission               |                                                                                                                                  | Nuclear  
Nuclear                                                                 | Nuclear                                                                 | Nuclear                                                                 |
| Cal OSHA                 | Report work-related or suspected work-related fatalities, catastrophes, and serious injuries or illnesses                                                                                                                        | • Telephone  
• Email                                                                 | Proactively, but not later than eight (8) hours after knowledge of the event  
GCC  
ICS Incident Action Plans  
One Voice messages                                                                 | Corporate Safety  
GCC                                                                 |                                                                                       |
<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication *</th>
<th>Supporting Organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPUC Safety Branch</td>
<td>Status of the system, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, newsworthy incidents, system recovery plan</td>
<td>• Telephone • Email</td>
<td>Proactively and when requested</td>
<td>Storm reports, DOC/GMC GCC</td>
<td>Claims</td>
<td>GCC</td>
</tr>
<tr>
<td>Consumer Affairs Branch</td>
<td>Status of the system, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, newsworthy incidents, system recovery plan</td>
<td>• Telephone • Email</td>
<td>One Voice information release cycle</td>
<td>ICS Incident Action Plans One Voice messages</td>
<td>Consumer Affairs</td>
<td></td>
</tr>
<tr>
<td>Commission's Staff</td>
<td>Status of the system, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, newsworthy incidents, system recovery plan</td>
<td>• Telephone • Email</td>
<td></td>
<td>Regulatory Policy and Affairs, through San Francisco office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy Division</td>
<td>Status of the system, number of customers affected, expected duration of outages, cause of damage, damage estimate, overall impact, newsworthy incidents, system recovery plan</td>
<td>• Telephone • Email</td>
<td></td>
<td>Business Resiliency GCC Business Resiliency</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.

**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
# 8. Investment Community

<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication *</th>
<th>Supporting Organizations</th>
</tr>
</thead>
</table>
| Financial Institutions (including insurance carriers) | Overview of system status and effects of event on the corporation and community | • Telephone  
• Media  
• Email | Proactively  
One Voice information release cycle | Storm reports, DOC/GMC  
ICS Incident Action Plans  
One Voice messages | Finance  
Investor Relations (IR) | Corporate Communications  
Business Resiliency |
| Stock Exchanges and Securities, Exchange Commission | Overview of system status and effects of event on the corporation and community | • Telephone  
• Media  
• Email | Proactively and when requested  
One Voice information release cycle | Storm reports, DOC/GMC  
ICS Incident Action Plans  
One Voice messages | Law  
IR | Corporate Communications  
Business Resiliency |
| Security Analysts (major brokerage houses) | Overview of system status and effects of event on the corporation and community | • Telephone  
• Media  
• Email | Proactively  
One Voice information release cycle | Storm reports, DOC/GMC  
ICS Incident Action Plans  
One Voice messages | Finance  
IR | Business Resiliency |
| Major Investors  
Shareholders  
Bondholders | Overview of system status and effects of event on the corporation and community | • Telephone  
• Media  
• email | Proactively and when requested  
One Voice information release schedule | Storm reports, DOC/GMC  
Watch Office  
ICS Incident Action Plan  
One Voice messages | Finance  
Law  
IR | Distribution Staff  
Corp Comm  
Business Resiliency |

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.

**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
<table>
<thead>
<tr>
<th>Target Audience</th>
<th>Information of Importance to the Target Audience</th>
<th>Best Methods of Communication</th>
<th>Timing of Initial Communication and Frequency of Follow-ups</th>
<th>Sources of Information</th>
<th>Organization Responsible for Communication</th>
<th>Supporting Organizations</th>
</tr>
</thead>
</table>
| Board of Directors | Status of the system including generation and bulk-power, number of customers affected, expected duration of outages, cause of damage, damage estimate, human resource issues, overall impact, system recovery plan. | • Telephone  
• Board room  
• Email | Proactively  
One Voice information release cycle | Storm reports,  
DOC/GMC  
GCC  
ICS Incident Action Plans  
One Voice messages | CEO | Corporate Governance (Corporate Secretary)  
Corporate Communications |
| Executives | Status of the system including generation and bulk-power, number of customers affected, expected duration of outages, cause of damage, damage estimate, human resource issues, overall impact, system recovery plan. | • Telephone  
• Board room  
• Email | Proactively  
One Voice information release cycle | Storm reports,  
DOC/GMC  
GCC  
ICS Incident Action Plans  
One Voice messages | CEO  
CMC | Corporate Governance (Corporate Secretary)  
Corporate Communications |
| Employees | Status of the system including generation and bulk-power, number of customers affected, expected duration of outages, cause of damage, damage estimate, human resource issues, overall impact, system recovery plan, special programs | • Email  
• Bulletin board  
• All hands meetings at field locations  
• Portal  
• SCE.com Outage Page  
• SCE Mobile Outage App  
• Emergency Notification System (ENS) | Proactively and as major developments occur  
One Voice information release cycle | Storm reports  
Corporate Communications information  
HR information  
ICS Incident Action Plans  
One Voice messages | Corporate Communications | Human Resources Business Resiliency |

* Every organization responsible for communications will implement this plan via the procedures in the Storm Plan.

**News agencies with which Corporate Communications Media Team and/or Local Public Affairs Region Managers have close, ongoing working relationships (i.e., weekly community papers and cable producers.)
2016 Annual Report for Southern California Edison Company (U338-E) of Compliance with General Order 166

Appendix F

Phone Lists

Redacted/Public

SCE
<table>
<thead>
<tr>
<th>Mobile Command Center 1 (MCC1)</th>
<th>Mobile Command Center 2 (MCC2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>PAX</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
## Emergency Operations Center
### Phone Directory

<table>
<thead>
<tr>
<th>SCE Emergency Operations Center – Conf. Rooms &amp; Devices</th>
<th>External Telephone Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command Conf. Room – Table – VoIP Phone – PAX</td>
<td></td>
</tr>
<tr>
<td>Command Conf. Room – Table POTS Phone</td>
<td></td>
</tr>
<tr>
<td>Command Conf. Room – Table Sat Phone</td>
<td></td>
</tr>
<tr>
<td>Command Conf. Room – Wall VOIP Phone – PAX</td>
<td></td>
</tr>
<tr>
<td>Command Conf. Room – Wall – POTS Phone</td>
<td></td>
</tr>
<tr>
<td>Logistics Conf. Room – Table – VoIP Phone – PAX</td>
<td></td>
</tr>
<tr>
<td>Logistics Conf. Room – Table – POTS Phone</td>
<td></td>
</tr>
<tr>
<td>Logistics Conf. Room – Table – Sat Phone</td>
<td></td>
</tr>
<tr>
<td>Logistics Conf. Room – Wall – VoIP Phone – PAX</td>
<td></td>
</tr>
<tr>
<td>Logistics Conf. Room – Wall – POTS Phone</td>
<td></td>
</tr>
<tr>
<td>Planning Conf. Room – Table – VoIP Phone – PAX</td>
<td></td>
</tr>
<tr>
<td>Planning Conf. Room – Table – POTS Phone</td>
<td></td>
</tr>
<tr>
<td>Planning Conf. Room – Table Sat Phone</td>
<td></td>
</tr>
<tr>
<td>Planning Conf. Room – Wall POTS Phone</td>
<td></td>
</tr>
<tr>
<td>Planning Conf. Room – Wall – POTS Phone</td>
<td></td>
</tr>
<tr>
<td>Ops Briefing Room – Wall Phone 1 – VoIP – PAX</td>
<td></td>
</tr>
<tr>
<td>Ops Briefing Room – Wall Phone 2 – VoIP – PAX</td>
<td></td>
</tr>
<tr>
<td>Ops Briefing Room – Wall Phone 2 – POTS</td>
<td></td>
</tr>
<tr>
<td>Radio Room – VoIP Phone – PAX</td>
<td></td>
</tr>
<tr>
<td>Radio Room – POTS Phone</td>
<td></td>
</tr>
<tr>
<td>Radio Room – Sat Phone</td>
<td></td>
</tr>
<tr>
<td>MFM #1 FAX – PAX</td>
<td></td>
</tr>
<tr>
<td>MFM #2 FAX – PAX</td>
<td></td>
</tr>
<tr>
<td>Company Central – Sat FAX</td>
<td></td>
</tr>
<tr>
<td>Café Central – Wall Phone – PAX</td>
<td></td>
</tr>
</tbody>
</table>
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Appendix G
900 MHz Radio Emergency Talk Groups

Redacted/Public
<table>
<thead>
<tr>
<th>900 Mhz Talk Group Colors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Security</td>
</tr>
<tr>
<td>Business Resiliency/Emergency Management</td>
</tr>
<tr>
<td>T&amp;D Grid Ops Management</td>
</tr>
<tr>
<td>T&amp;D Power Delivery</td>
</tr>
<tr>
<td>T&amp;D Engineering and Technical Services</td>
</tr>
<tr>
<td>Transportation Services - Fleet</td>
</tr>
<tr>
<td>Transportation Services - Air</td>
</tr>
<tr>
<td>Power Production</td>
</tr>
<tr>
<td>Nuclear</td>
</tr>
<tr>
<td>Audit Services</td>
</tr>
<tr>
<td>Law / Claims</td>
</tr>
<tr>
<td>Finance</td>
</tr>
<tr>
<td>Power Procurement</td>
</tr>
<tr>
<td>Human Resources / Labor Relations</td>
</tr>
<tr>
<td>Law</td>
</tr>
<tr>
<td>Supply Management</td>
</tr>
<tr>
<td>Corporate Communications</td>
</tr>
<tr>
<td>Customer Service</td>
</tr>
<tr>
<td>Corporate Safety</td>
</tr>
<tr>
<td>Local Public Affairs</td>
</tr>
<tr>
<td>Regulatory Affairs</td>
</tr>
<tr>
<td>Corporate Real Estate</td>
</tr>
<tr>
<td>Information Technology</td>
</tr>
<tr>
<td>Santa Clara/Moorpark</td>
</tr>
<tr>
<td>Radios are assigned by the Watch Office when additional channels are needed</td>
</tr>
</tbody>
</table>