

**Safety and Enforcement Division**  
**SB 900 Incidents and Audits Report**  
**Sempra Utilities’**  
**2019 General Rate Cases (A.17-10-007/-008)**



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# SB 900 Incidents and Audits Report

## Sempra Utilities' 2019 General Rate Cases<sup>1</sup>

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<sup>1</sup> A.17-10-007/-008 consolidated, a.k.a. Sempra GRCs.

## INTRODUCTION

### Senate Bill 900

Established January 1, 2015 under Senate Bill 900 (Stats. 2014, Ch. 552), Public Utilities Code Section 750<sup>2</sup> enacted as follows:

*The commission shall develop formal procedures to consider safety in a rate case application by an electrical corporation or gas corporation. The procedures shall include a means by which safety information acquired by the commission through monitoring, data tracking and analysis, accident investigations, and audits of an applicant's safety programs may inform the commission's consideration of the application.*

### Risk-based decision-making framework

As a result of the above directives, D.14-12-025 adopted a risk-based decision-making framework for large energy utilities. This framework consists of the following:

For the large energy utilities, this will take place through two new procedures, which feed into the GRC applications in which the utilities request funding for such safety-related activities. These new procedures are:

“[F]iling of a Safety Model Assessment Proceeding (S-MAP) by each of the large energy utilities, which are to be consolidated; and a subsequent Risk Assessment Mitigation Phase (RAMP) filing in an Order Instituting Investigation for the upcoming GRC wherein the large energy utility files its RAMP in the S-MAP reporting format describing how it plans to assess its risks, and to mitigate and minimize such risks. The RAMP submission, as clarified or modified in the RAMP proceeding, will then be incorporated into the large energy utility's GRC filing.<sup>3</sup>

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<sup>2</sup> [http://leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=PUC&sectionNum=750](http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PUC&sectionNum=750).

<sup>3</sup> D.14-12-025 at 2-3

The information provided includes the utility's prioritization of the risks it believes it is facing and a description of the methodology used to determine these risks.

## **Safety information acquired by the commission informing consideration of GRC Application**

The Commission collects data from electric and gas utilities through audits, investigations, and incident reports that utilities are required to submit.

Electric Utilities must report any incident that results in:

- A fatality or personal injury rising to the level of in-patient hospitalization;
- Significant public attention or media coverage; or,
- Damage to property of the utility or others estimated to exceed \$50,000 and attributable or allegedly attributable to utility owned facilities.

Within twenty business days of a reportable incident, the utility must provide a written account of the incident, including a detailed 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.

Gas utilities must report any incident which results in:

- A fatality or personal injury rising to the level of in-patient hospitalization;
- Public attention or significant news media coverage, including events 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;

- Estimated property damage of \$50,000 or more;
- Unintentional estimated gas loss of three million cubic feet or more;
- An event that results in an emergency shutdown of an LNG facility.
- Activation of an emergency shutdown system for reasons other than an actual emergency does not constitute an incident;
- Incidents which require DOT notification; and
- An event that is significant in the judgment of the operator, even though it did not meet the criteria previously listed.

Utilities must follow up with a fuller report within 30 days.

### **Compliance with SB 900 directive**

The adoption by the Commission of a Risk-based decision-making framework combined with safety information acquired by the commission informing consideration of the Sempra utilities' GRC applications fulfills SB 900's directive.

The following report from Safety & Enforcement Division's Risk Assessment and Safety Advisory (SED/RASA) section is provided as a supplement to the previous staff report and evaluation conducted as part of the precursor report: "Risk and Safety Aspects of Risk Assessment and Mitigation Phase Report of San Diego Gas & Electric Company and Southern California Gas Company" produced by SED/RASA on March 8, 2017.<sup>4</sup>

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<sup>4</sup> A.k.a. SED RAMP report.

## INCIDENT REPORTING

### Gas Incidents

Incident information reported to the CPUC Gas Safety and Reliability Branch (GSRB) includes, but is not limited to the following:

- general nature of the incident
- causes
- estimated damage
- time and date
- location
- casualties
- property damage

As one part of our efforts to fulfill SB 900's directive, we reviewed the SED electric and gas incident databases for SDG&E and SoCalGas (Sempra) data from 2013-2017<sup>5</sup>.

### Number of Gas Incidents

The table below summarizes data on the causes of incidents that involved fatalities and/or injuries from 2013-2017.<sup>43</sup>

**Table 1: Number of Gas Incidents with Injuries and/or Fatalities by Cause**

Cause	2013	2014	2015	2016	2017	Total
Excavation Damage	0	3	2	0	0	5
Incorrect Operation	0	0	0	0	1	1
Equipment Failure	0	0	0	0	1	1
Other Outside Force Damage	0	2	2	2	1	7
Other	0	0	0	1	5	6
Total	0	5	4	3	8	20

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<sup>5</sup> It is important to note that the incidents database has not been double checked for accuracy. The database has not typically been used to aggregate data and assess trends, and is typically used to review individual incidents and their associated report.

There were twenty gas incidents reported involving fatalities and/or injuries from 2013-2017. Four involved fatalities and sixteen were injury only. In 2017 SoCalGas was found in violation of 49 CFR 192.603(c) for Incorrect Operation for performing a tap on a steel pipeline which led to an injury.

- On November 20, 2014, at approximately 0930 hours, a house fire at a residence caused two deaths and one injury. This incident was initially reported to the DOT and CPUC due to the casualties and the cost of damage potentially exceeding \$50k. However, the incident was later rescinded. The investigation found that the incident was probably caused by household facilities installed on the customer side, and concluded that SoCalGas was not in violation of GO 112-E.
- On March 1, 2015, at approximately 1350 hours, a vehicle lost control, leaving its designated path of travel, and impacted a SoCalGas commercial meter set assembly (MSA). This collision resulted in an unintentional release of 69MCF of natural gas into the atmosphere, damage to a service riser and a commercial building, and loss of service to one customer for approximately seven hours. There was one fatality: the driver of the vehicle was found deceased in the vehicle at the incident scene by a sheriff's deputy. There were no other gas-related injuries or fire reported. The incident became reportable due to media attention. SED's investigation found that the incident was caused by a third party vehicle hitting a SoCalGas MSA. SED did not find any GO 112-F violation by SoCalGas.
- On July 8, 2016, at approximately 0855 hours, a fire started at a residential structure and melted a SoCalGas MSA resulting in gas leak and ignition of the gas. The service was shut down until further notice. There was one fatalities reported. An estimated of \$415,000.00 property and content losses were also reported. The incident became reportable to both the DOT and the CPUC due to

one fatality and damages above \$50,000.00. Media, Police and Fire departments, and SED were also on scene. SED's investigation found that the incident was caused by a structural fire with undetermined cause. Therefore, SED did not find any GO-112F violation by SoCalGas.

- The fourth fatality was due to a house fire with an unknown cause.

The common injuries reported can be classified as caused by Excavation Damage and Other Outside Force Damage. Common conclusions reached in the investigations of injuries were that incidents were: caused by private third party resident or contractor failing to call for USA markings before conducting excavation; contractor failing to ascertain that the service line was live before construction or exercise proper care within the vicinity of a service line; and vehicles striking a protected SDG&E MSA.

- On October 25, 2017, at approximately 10:25, NPL, a contractor working for SoCalGas, was injured during a distribution main replacement from steel to 2-inch plastic pipe at 1428 Packard Avenue in Pomona, Los Angeles county. The contractor did not necessitate in-patient hospitalization and was treated at the scene of the incident for slight burns on the face and released back to work within the same day. Both the fire fighters and police officers were on scene. There were 25 gas meter interruptions and 30 outages (an outage at a master meter with 5 customers was affected). The incident was initially reported due to natural gas escaping and possibility of injured contractor that could be hospitalized. Based on this investigation, SED found that the incident was caused due to inadequate procedure from SoCalGas for performing a tap on a steel pipeline. There is not a step in SoCalGas Gas Standard 184.0375 Section 4.6 which allows the employee to close the control valve after inserting the plug but prior to removing the D-5 drilling machine from the pipeline. Therefore, SoCalGas is in violation of 49

CFR 192.603(c). This investigation was closed October 2017.

Many of these incidents are reported because they exceed \$50,000 in damage and/or have media coverage. It is important to note that serious violations and safety problems can be identified without an injury or fatality occurring. Serious violations can be addressed through the citation programs, discussed later. Because the majority of incidents with fatalities and injuries are not related to utility operations, it would be difficult to use this data to support any GRC funding requests.

## **Electric Incidents**

Electric utilities must report electric incidents (accidents involving electric facilities), which meet any of the criteria below:

- A fatality or injury involving electric facilities.
- Damage to property of the utility or others in excess of \$50,000.
- Significant media coverage.
- A major outage to at least 10% of the utilities entire service territory is experienced at a single point in time.

In general, the electric utility must report these types of incidents to the CPUC within two (2) hours of their occurrence. The Electric Safety and Reliability Branch (ESRB) investigates these incidents to enforce the CPUC's rules and regulations and to determine how we can limit the occurrences of such incidents in the future. ESRB produces an investigative report for each incident reported and investigated.

As one part of our efforts to fulfill SB 900's directive, we reviewed the ESRB's Electric Incident Database for Sempra from 2013-2017.<sup>6</sup>

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<sup>6</sup> It's important to note that the electric incidents database has not been double checked for accuracy. The database has not typically been used to aggregate data and assess trends, and is typically used to review individual incidents

## Number of Electric Incidents

The table below summarizes data on the causes of incidents that involved fatalities and injuries from 2013-2017<sup>7</sup>.

***Table 2: Number of Electric Incidents with Injuries and/or Fatalities by Cause***

Cause	2013	2014	2015	2016	2017	Total
Overhead Contact	1	1	0	0	0	2
Tree Trimmer	0	0	1	0	0	1
Utility Contractor	0	0	0	0	1	1
Utility Working Overhead	0	2	2	0	2	6
Vehicle	3	0	0	0	0	3
Animal	1	0	0	0	0	1
Overhead Conductor Failure	0	0	0	1	0	1
Unknown	0	0	0	0	1	1
Total	5	3	3	1	4	16

There were four fatalities between 2013 -2017. One fatality was deemed a violation of SDG&E’s PPG Manual, Section 7.5, and OSHA’s 29 CFR 1926 Subpart V Appendix C—Section III(D)(2)(ii), but not of GO 95. SED in practice does not duplicate rule violations by other state agencies. One fatality found SDG&E in violation of GO 95, Rule 31.1, for failing to replace a connector before it corroded and failed, thus causing the conductor to fall and result in an electrocution.

Fatalities were associated with a vehicle striking a pole; a minor child being crushed by a horse he was riding when the horse got caught up on a guy wire, rose upon its hind legs and lost its footing falling back upon the child rider; utility worker

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and their associated report.

<sup>7</sup> It’s important to note that the electric incidents database has not been double checked for accuracy. The database has not typically been used to aggregate data and assess trends, and is typically used to review individual incidents and their associated report.

accident, and homeless trespassing and coming in contact with a down power line. The majority of electric injuries are associated with utility workers working on overhead lines. Many of these incidents are reported because they exceed \$50,000 in damage and/or have media coverage.

## **ELECTRIC AND GAS AUDITS**

In addition to incident data, the CPUC regularly audits the electric and gas systems of utilities to insure the utilities are complying with the law and the Commission's general orders. Staff normally conducts audits of the large electric utilities regional units every five years. The gas audit schedule is developed considering the following criteria: the length of time since the unit was last inspected, the safety and compliance history of the inspection unit, the results of Staff's most recent inspections, any activities undertaken by the operator of particular note or interest (such as construction), any significant incidents that indicate systemic problems, weather patterns, and availability of resources.

In the event violations are found, letters listing detailed issues with relevant rules are issued requesting corrective actions. Follow-up audits may be conducted to verify compliance.

The Electric and Gas Audits databases are not currently structured to be able to view aggregated data and determine trends. SED Staff will consider how this data can be organized so that it can be analyzed in a meaningful way. Although this data cannot be viewed in aggregate, serious safety violations can be escalated to a Staff citation or investigation, which we have reviewed in the next section.

## **CITATION PROGRAMS**

In December of 2011, the Commission adopted a Gas Safety Citation

Program. Under the citation program, CPUC Staff has the authority to issue a written citation to gas companies when during the course of an inspection a violation of General Order 112-E or federal standards is found. General Order 112-E contains specific rules governing the design, construction, testing, maintenance, and operation of utility gas gathering, transmission, and distribution pipeline systems and supplements compliance with the federal standards in the Code of Federal Regulations, Title 49, Parts 190, 191, 192, 193, and 199.

In a series of orders and decisions, the Commission has delegated to Safety & Enforcement Division staff the authority to impose citations against utilities for violations of various electric and natural gas related general orders, satisfying the requirement in Senate Bill 291, which required the Commission to develop and implement safety enforcement programs for gas corporations and electrical corporations by July 1, 2014 and January 1, 2015, respectively (Stats. 2013, Ch. 601).

These citation programs provide important data on serious safety violations by a utility.

## **Gas Citations**

SED has issued a total of three gas safety citations to SoCalGas since the inception of the program. For comparison, PG&E has received twelve citations, and West Coast Gas received one. No other gas companies have received citations. Southern California Gas Company most recent citation was May 13, 2016, \$2.25 million for failing to take prompt remedial action to correct deficiencies found in its corrosion control of its natural gas pipeline system<sup>8</sup>.

The citations issued by SED summarize the nature of the violation(s), the risk level of the violations, whether the utility cooperated, and what steps were taken to remedy the situation. Most citations were either identified as low risk or posing

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<sup>8</sup> <http://www.cpuc.ca.gov/General.aspx?id=2494>

unnecessary risk.<sup>9</sup>

## Electric Citations

SED has issued no electric safety citations to SDG&E since the inception of the program. For comparison, PG&E has been issued two electric safety citations since the inception of the program and Southern California Edison has not been cited under this program (although there have been settlements of investigations related to SCE electric incidents in Long Beach and Huntington Beach that involved financial penalties).

It is important to note that the citations detail immediate corrective actions taken by the utility, as opposed to actions to be taken at a later date in a proceeding such as the GRC.

## ANALYSIS

In accordance with Senate Bill 900 (Stats. 2014, Ch. 552) the safety information acquired by the commission is being used to inform the commissions' consideration of Sempra's 2019 GRC applications. In this case the analysis gleaned from the gas incidents data directed staff to focus our analysis on how Sempra addresses damage involving third-party dig-ins. Sempra addresses this in their Risk Assessment and Mitigation Phase (RAMP) Report dated November 20, 2016,<sup>10</sup> and SED addressed this topic in its Risk and Safety Aspects of Risk Assessment and Mitigation Phase Report dated March 8, 2017.<sup>11</sup>

The RAMP report served to inform Sempra's GRC Testimony SCG-04 (GOM-18) stating "As noted in the RAMP Report, damages resulting from excavation activity

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<sup>9</sup> Violations include, but are not limited to: late reporting, lack of written quality control and quality assurance procedures to guide its personnel during normal operation and maintenance activities, failure to set pipeline relief valve within the allowable pressure limit, non-standard pipeline testing, and missed leak survey.

<sup>10</sup> <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M170/K705/170705141.PDF> (Page SCG 1-2)

<sup>11</sup> <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M179/K248/179248872.PDF> (Page 30)

is the number one RAMP risk and represents the greatest safety threat to SoCalGas' pipeline infrastructure with potential for catastrophic consequences for public safety.”

The analysis gleaned from the electric incidents data directed staff to focus our analysis on how Sempra addresses injuries to utility employees working on overhead conductors. Sempra addresses this in the RAMP Report dated November 20, 2016,<sup>12</sup> and SED addressed this topic in its evaluation report.<sup>13</sup> The RAMPs report served to inform Sempra's GRC Testimony:<sup>14</sup>

*The incremental request for Workforce Planning includes risk mitigation efforts such as the creation of formal training programs for engineering. These programs are designed to further reduce our Workforce Planning risk by enhancing skill sets to prepare the less experienced work force to be ready to move into critical operational roles.*

And,

*Skills and Compliance Training programs support a workforce with the required skills to safely and reliably maintain and operate the electric distribution and transmission system, in compliance with General Orders 95, 128, 165, and SDG&E standards, work methods and operating procedures.*

Sempra's GRC testimony outlines the actions being developed and implemented.

Information from the incident reports and citation programs may be used to inform the review of Sempra's risk assessment methodologies, but this data should not entirely drive the risk prioritization. Specifically, the lack of a citation or reported incident may not indicate the likelihood of a risk occurring or not occurring.

The complex risk prioritization described by Sempra in its RAMP and GRC likely provides a much more complete picture of how funding should be prioritized and distributed. From our review, there are no obvious repeated offenses that would warrant a departure from the

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<sup>12</sup> <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M170/K705/170705141.PDF> (Page SCG 2-1)

<sup>13</sup> <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M179/K248/179248872.PDF> (Page 43 and 91)

<sup>14</sup> SDG&E-15 (Page WHS-14 and WHS-46)

risk assessment described in the GRC testimony; however, we do believe it is important to continue to monitoring the data to determine if pervasive problems occur in the future that could inform the risk assessment framework.