

SED EVALUATION REPORT
FOR SAN DIEGO GAS AND ELECTRIC COMPANY
2018 LEAK ABATEMENT COMPLIANCE PLAN

I) EXECUTIVE SUMMARY

On March 15, 2018, San Diego Gas and Electric Company (SDG&E) submitted a Methane Leak Compliance Plan, as directed by Commission decision (D.) 17-06-015 in R. 15-01-008, the Rulemaking to Adopt Rules and Procedures Governing Commission-Regulated Natural Gas Pipelines and Facilities to Reduce Natural Gas Leakage Consistent with Senate Bill 1371.¹ Pursuant to D. 17-06-015, the Commission's Safety and Enforcement Division, in cooperation with the CA Air Resources Board, has evaluated the Compliance Plan and provides this written response.

SDG&E representatives and other gas utilities participated in an April 19 workshop to review major elements of the Compliance Plan, especially proposals for Pilot/Research & Development programs and plans for addressing the 26 Best Practices for methane emissions detection, quantification and reduction, as well as for operations and training, as detailed in D. 17-06-015.

SED has evaluated and approves the SDG&E 2018 Methane Leak Abatement Compliance Plan, with the following key observations or conditions:

Emission Reduction by 2030

SED expects the 2020 Compliance plan will provide a comprehensive in-depth analysis for how SDG&E plans to meet the 2030 goal. While the 2018 Plan discusses best-practice reduction programs and gives short-term reduction estimates, the steps to achieve the 40% reduction by 2030 goal are not sufficiently addressed. There should be a continuing effort to identify new opportunities for reduction including ideas that go beyond the current set of Best Practices. SED expects the 2020 Compliance plan will provide a comprehensive in-depth analysis for how SDG&E plans to meet the 2030 goal.

BP-15 Three-Year Leak Survey

SDG&E proposes to adopt a 3-year leak survey for all distribution pipeline except for certain high-leakage materials, which they will survey annually. SED approves this proposal.

BP-18 Stationary Methane Detection

SDG&E proposes two options under this best practice but has requested funding for Option 1, a pilot program to evaluate cost effectiveness, in the Advice Letter. SED approves Option 1.

¹ The Plan is available online at <http://www.cpuc.ca.gov/riskassessment/>

BP-20a Leak Quantification

Like PG&E and SoCalGas, SDG&E has identified a program to quantify Grade 3 leaks and promptly repair “large” leaks above a certain volume threshold. However, the program cost of \$3,457 per thousand cubic feet (MCF) is quite high compared to other utilities’ costs. SDG&E recommends that it not pursue this program. SED agrees that this program should not be supported by the Commission.

BP-21 Find-It/Fix-It

SDG&E states that some underground Grade 3 pipeline leak repairs may require blowdown emissions significantly greater than the leak volumes themselves, and that other Grade 3 leaks may be quite costly to repair relative to the emission abated. SDG&E suggests that repair exception requests should be made in the annual Leak Inventory report. SED agrees and further recommends that requested exceptions should also be detailed in future Compliance Plans.

Pilot and R&D Projects

SDG&E proposes to participate in most of the same research projects as SoCalGas which have been documented in the SoCalGas Amended Compliance Plan of July 20, 2018.

II) INTRODUCTION

BACKGROUND: D. 17-06-015 ordered jurisdictional gas pipeline operators to file a Biennial Compliance Plan, detailing how they would adopt the Decision’s 26 Best Practices for methane emissions detection, quantification and reduction, as well as for operations and training. The Compliance Plans were required to be part of the operator’s annual Gas Safety Plan under CPUC GO 112-F. Some of the Best Practices included allowance for Pilot or R&D programs to evaluate potential methods and technologies for cost effectiveness and application to the utility’s specific operating conditions before adoption.

EVALUATION APPROACH: SED reviewed the SDG&E Compliance Plan in collaboration with California Air Resources Board (CARB) and considered comments received from members of the Best Practices Working Group². Elements of the Compliance Plan which raised concerns will be discussed in detail in below.

III) EMISSION REDUCTION ESTIMATES

The Decision orders that the “Compliance Plans shall include information on how each Respondent plans to achieve a 40% reduction of emissions below 2013 levels by 2030, what level of reduction would be achieved by 2020, and how they plan to achieve the 2020 reduction level.” It has been established that the 2013 baseline will be represented by the 2015 emissions inventory as reported in the annual Leak Inventory Report under D. 17-06-015, since 2015 is the first year that the emissions inventory was compiled for.

² Working Group members who gave informal comments are the Environmental Defense Fund (EDF) and the Coalition for Utility Employees (CUE).

Staff notes that the 2015 Baseline emissions for SDG&E are 282,047 MCF. The total 2015 Baseline leak inventory for all ten California gas utilities was 6,601,200 MCF. A 40% reduction of SDG&E's baseline would provide a 1.7% reduction in the total baseline.

While estimated reductions by 2020 are presented, SDG&E does not discuss how the 40% by 2030 reduction will be achieved as required in the Decision. SED expects the 2020 Compliance plan will provide a comprehensive in-depth analysis for how SDG&E plans to meet the 2030 goal, possibly including new ideas beyond the 26 Best Practices. Included in that analysis, SDG&E may propose alternative means of determining emission volumes that currently rely on emissions factors, such as the application of results from the pilot and R&D projects. These proposals to change the emission measurement methods would be reviewed by interested parties in Workshops and if uniformly applicable would be approved for use by CARB.

Staff has identified some typographical errors in Table 1 of the Compliance Plan which should be corrected but do not change the outcome of this evaluation.

- 1) For BP-20a, the 2018-2019 reduction figure should be 162 MCF not 1944 (which is the total for 12 years).
- 2) The column heading: "Estimated Compound Emission Reduction 2018-2030" should be in units of MCF, not dollars as shown.

IV) BEST PRACTICES COMPLIANCE

BP-1 to BP-13 Policies, Procedures, and Training

SDG&E proposes to modify existing operating procedures and company policies to minimize emissions of methane as a greenhouse gas, and to ensure that employees are trained in these policies and procedures. There are no emission reductions directly attributable to these Best Practices. The effect of blow-down emission reduction policies is captured in the section on BP-23, Operations and Maintenance. SED finds these BP proposals are consistent with D. 17-06-015 expectations.

BP-15 Three-Year Leak Survey

SDG&E proposes to adopt a 3-year leak survey for all distribution pipeline except for certain high-leakage materials, which it will survey annually. SDG&E has already proposed annual surveys for Aldyl-A and other vintage plastic pipelines in the current General Rate Case. Under this Compliance Plan, SDG&E is also proposing annual surveys for pre-1950 steel pipe. SDG&E states that the cost effectiveness of the proposed surveys will be similar, on average \$243/MCF. SED approves of this best practice.

BP-16 Special Leak Surveys

The company proposes annual surveys on pre-1950 steel pipe as a special leak survey. SED approves of this best practice.

BP-18 Stationary Methane Detection

Both SoCalGas and SDG&E offer two options in the Compliance Plans. Option One is a pilot program with limited installation of currently available devices to better understand cost effectiveness. Option Two is full implementation of current devices without regard for cost effectiveness or consideration of research into emerging technologies which may be more effective. SED approves the first option.

BP-20a Leak Quantification

Like SoCalGas and PG&E, SDG&E presents a program to identify “large” Grade 3 leaks which would otherwise remain open and repair them promptly. However, SDG&E gives a cost effectiveness figure of \$3,457/MCF. In comparison the SoCalGas estimated cost is \$12/MCF while PG&E’s “Super Emitter” cost is \$22/MCF. SED has clarified that SDG&E does not recommend pursuit of this program which has a very limited reduction potential of 162 MCF per year. SED agrees that this program is not cost effective and that SDG&E should not proceed with it.

BP20b Geographic Tracking of Leaks

Staff notes that this BP requires all operators to work together on a common approach. SED Staff will host a workshop to focus on this topic. SDG&E shall use this common approach for its mapping.

BP-21 “Find-it/Fix-it”

This BP requires repair of any gas leak within 3 years after discovery, with reasonable exceptions for leaks that are costly to repair relative to the estimated size of the leak. The targeted leaks are those that don’t already require prompt repair under existing safety regulations. These leaks are usually referred to as “Grade 3” leaks.

SDG&E proposes to adopt this policy but makes special note of situations where some repairs may require blowdown emissions far exceeding the leak emission itself or may otherwise be very costly compared to the emission saved. SDG&E recommends that requests for reasonable exceptions for such repairs should be entered in the annual Leak Inventory report. SED Staff agrees with this recommendation but also expects such requests for exception should be detailed in the biennial Compliance Plan.

BP-23 Minimize Emissions from Operations and Maintenance

SDG&E estimates reductions for blowdown activities and replacement of high-bleed pneumatics. The blowdown proposal has a high cost while the pneumatic device replacement appears quite economical.

SDG&E reports that some practices are already in place for minimizing blowdown emissions. It now proposes to capture additional blowdown emissions with mobile equipment to create compressed natural gas for storage and re-introduction into the system. The original anticipated cost effectiveness was \$1,413/MCF, which seemed quite high compared to a similar program for SoCalGas. SED Staff contacted SEMPRA and found the estimate was based on the average emission reduction from all

projects, many of which have small estimated emissions. When restricted to only the larger projects, the cost effectiveness is \$98/MCF. SED approves the proposed practice for those larger projects.

Another cost-effective program is the proposal to replace high-bleed gas-operated pneumatic devices with low-bleed or no-bleed devices at a cost of \$9/MCF. SED staff approves this program.

BP-24 Dig-Ins and Public Education

SDG&E proposes to expand the Public Awareness program to cover previously underserved communities. The estimated cost effectiveness is \$212 /MCF based on analysis of the number of pipeline damage events compared to Public Awareness campaign dollars spent. SED approves the proposed program for the initial Compliance plan but recommends that a more rigorous model for the effect of spending on dig-ins, such as the one adopted in the SoCalGas Amended Compliance Plan, should be used by SDG&E in future.

V) PILOT AND R&D PROJECTS.

Ordering Paragraph 10, part b, of Decision 17-06-015 requires that justifications for proposed R&D and Pilot projects are consistent with criteria in Pub. Util. Code Section 740.1. SED reviewed the proposed Pilot and R&D projects according to PU Code 740.1 and considered suggestions and comments made by interested parties.

Overall, SDG&E proposes to take part in most of the same collaborative research projects that SoCalGas has proposed, further sharing the research costs over several operating companies from around the country. Many of these projects are led by national research organizations including Operations Technology Development (OTD) and NYSEARCH. SED has received updated project descriptions from SoCalGas which describes the projects in enough detail to satisfy criteria.

SED and CARB will be conducting review meetings with the SEMRPA and SDG&E R&D team. These project reviews will examine progress towards meeting milestones and discuss whether to continue or cease projects based on trigger points. SED may direct SDG&E to discontinue a project that SED determines is no longer in the ratepayers' interest.

###