

HHIA - Utility Report for Meeting on 2018.11.19

Main San Gabriel Key Water Well Level updates:

**** Historic Low: 170.20 ft. (on 2018.10.31)**

(Previous Historic Low: 170.70 ft. on 2018.10.19)

Historic High: 295.30 ft. on 1983.07.20 (Since entry of judgment in 1973)

Current: (As of 2018.10.31), **170.20 ft.**, (57.64% vs High; 0.82% less than 10/19/2018); **marking as Historic Low @ 170.20 ft.**

Related link:

<http://www.watermaster.org/>

Local Groundwater Level: 20% of Capacity

Major Reservoir Condition in CA: 77% of Capacity

Local Rainfall: 46% of Season Normal

CA Snowpack Level: 0% of Normal to Date

* "Main San Gabriel Key Water Well Level" has been continuously hitting record low since January 2018 (only February was a bit higher than January). Current level is 6.07% lower than already very low in January, 2018 (170.20 ft vs. 181.20 ft). Saving water is not only a matter of voluntary and mandatory, also an urgent responsibility and awareness on our daily usage.

Southern California Gas

SoCalGas Study Offers Lessons in Resiliency Planning to Help Communities and Utilities Prepare for Disasters

Study of 2017-18 hurricanes and wildfires analyzes utility damage, disruptions, and opportunities to increase resilience

Oct 30, 2018

LOS ANGELES, Oct. 30, 2018 /PRNewswire/ -- As wildfire season arrives and the U.S. recovers from two Category 4 hurricanes, Southern California Gas Co. (SoCalGas) today released a new study that looks at how utilities and communities across the country can be better prepared for such disasters. The study, conducted for SoCalGas by global consulting firm ICF, investigated damage and disruptions in the energy and transportation sectors caused by four disasters--hurricanes Harvey and Irma, last October's Northern California wildfires, and the December 2017 wildfires and subsequent mudslides in Southern California. The report reveals examples of resilience and best practices by various utilities, drawing from utility and state Energy department reports, interviews recounting first-hand observations, and other sources. The full study is available here.

"This study gave us key insights into how we can create a stronger energy system that better protects communities," said Jimmie Cho, SoCalGas senior vice president of customer services and distribution operations. "We hope that sharing the results can help enhance resiliency both in California and across the country. The impact of these disasters makes it clear that it's time for action, and we're proud to play a part in that."

"This case study analysis makes clear the importance of gathering information through technologies such as SCADA systems and drone capability, then sharing that data in real-time interaction between utilities and government in a natural disaster," said Don Boland, executive director of the California Utilities Emergency Association. "Utilities, law enforcement, Fire, DOT and emergency responders cannot be siloed. Everyone needs to share information so that all parties know what can be brought to bear in a disaster response."

"There are real and growing risks that energy utilities face," said Susan Asam, the project lead and Vice President of Climate Adaptation and Resilience at ICF. "SoCalGas has shown leadership in recognizing the need to better understand these risks, the value of learning from past events, and the importance of sharing best practices widely."

The study revealed findings that may be useful for utilities and communities anywhere:

- Backup generation powered by natural gas pipelines is a crucial component of overall resiliency but is not established in some facilities. During the four disasters, hospitals, nursing homes, grocery stores and other facilities that had backup generation were able to continue effective functioning. Conversely, lack of backup generation resulted in failure of water pumps in some locations, leaving some firefighters without water during the California fires. In addition, lack of generators to power air conditioning caused the death of several seniors due to excessive heat at a nursing home in Florida. SoCalGas and many other utilities offer distributed generation systems for customers.
- Combined heat and power (CHP) systems, a highly efficient form of distributed generation, can increase resiliency so long as they use generators that can start and operate during grid outages. Because they do not rely on the electric grid, CHP systems can support critical loads when necessary. The U.S. Environmental Protection Agency provides a list of manufacturers, engineers and consultants that can assist communities or critical facilities with putting in a CHP generation system.
- Natural gas-fired generators can also be fueled by portable natural gas cylinders brought in to evacuation sites away from dangerous areas.
- Proactive shut-off of both electric and gas utilities can be used effectively to prevent damage, but service restoration for natural gas is particularly time-consuming and expensive. To reduce the impact to gas and electric customers in future disasters, utilities can work to further subdivide their service territories, so that smaller areas are affected when service is intentionally interrupted. For example, SoCalGas installed additional isolation valves when restoring natural gas after the Southern California mudslides, to make it easier to safely isolate sections of the distribution system in the future.
- Because it is underground, natural gas infrastructure is generally more resilient than above-ground electric power lines. Electric outages due to weather-related impacts on above-ground electricity infrastructure were much more common in the four disasters studied. However, mudslides following California's Thomas fire caused localized impacts to the natural gas pipeline system.
- Satellite and drone image analysis can pinpoint damage to infrastructure when physical access is limited and speed up response in the time-critical hours following an event. Following the Southern California mudslides, SoCalGas used satellite images to locate exactly where mudflows had occurred and where those locations overlapped with their pipelines. Similarly, drones equipped with methane sensors and high-definition cameras were able to survey for leaks and rapidly assess damage.
- The latest natural gas technologies, such as automated shut-off valves and advanced meters, can help prevent damage or locate damaged areas.
- Enhanced cross-training exercises between utilities and emergency response personnel can help communities prepare for successful disaster response. Clear communication and coordination

between utilities and first responders is necessary to coordinate access to infrastructure when conditions are unsafe.

SoCalGas is using the findings from this study to help enhance resiliency locally. The company will apply lessons learned through its Climate Adaptation and Resiliency Planning Grant Program, which will provide \$100,000 in planning grants to two selected municipalities.

Related link:

<https://sempra.mediaroom.com/2018-10-30-SoCalGas-Study-Offers-Lessons-in-Resiliency-Planning-to-Help-Communities-and-Utilities-Prepare-for-Disasters>

SoCalGas Announces New Truck Loan Program for Fleets Interested in Switching from Diesel to Natural Gas Trucks

Program allows qualified fleets to test a near-zero emissions truck for up to two weeks

Oct 24, 2018

LOS ANGELES, Oct. 24, 2018 /PRNewswire/ -- Southern California Gas Co. (SoCalGas) today announced the launch of the new SoCalGas Truck Loan Program. The program allows qualified fleet owners the opportunity to try out the latest in heavy-duty natural gas truck technology by test driving a 12-Liter near-zero truck. This "try before you buy" program provides fleet owners with the opportunity to haul loads with the new truck for up to two weeks. Operators will experience the similarities between natural gas trucks and diesel trucks with respect to power, drivability, fuel range and fuel availability. Additionally, fleet owners will see the advantages natural gas trucks have over diesel, including lower fuel costs.

SoCalGas is working in partnership with the truck's owner, Rush Truck Centers, the only company with a 12-Liter near-zero natural gas truck equipped with a Cummins Westport ISX12N engine and Momentum Fuel system available for rent in Southern California. As part of the rental program, customers will participate in a "pre-rental" and "post-rental" survey of their natural gas vehicle driving experience. The survey will include topics such as truck performance, fueling availability, grants and incentives and purchase decision.

"More fleet owners have switched to natural gas trucks over the last few years, due in part to available incentive funding," said Sharon Tomkins, vice president of customer solutions and strategy for SoCalGas. "However, some are unfamiliar with the technology and are hesitant to make the switch. The SoCalGas Truck Loan Program is the perfect way to put natural gas trucks to the test on routes driven every day."

"We had the opportunity to be one of the first participants in the Truck Loan Program," said Gordy Reimer, president of Southern Counties Express. "Our drivers were able to successfully test the newest 12-Liter renewable natural gas engine on trade lanes they current operate their own trucks on and discover for themselves the advances in natural gas engine technology."

This loan program is just one tool SoCalGas is using to get more drivers behind the wheel of the cleanest heavy-duty truck commercially available. SoCalGas account executives have assisted dozens of fleet owners with incentive funding applications to purchase more than 350 near-zero natural gas trucks and build five new CNG fueling stations since the beginning of the year. Replacing 350 diesel

trucks with near-zero natural gas trucks is the equivalent of taking more than 20,000 passenger cars off the road.

For more information on the Truck Loan Program or to inquire about upcoming funding programs, please contact Wendell Peoples at WPeoples@semprautilities.com.

Related link:

<https://sempra.mediaroom.com/2018-10-24-SoCalGas-Announces-New-Truck-Loan-Program-for-Fleets-Interested-in-Switching-from-Diesel-to-Natural-Gas-Trucks>

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