

Reno smart meter fires more widespread than first feared

[Anjeanette Damon](#), RGJ 12 a.m. PDT September 21, 2014

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Pat Ponder and her dogs were sitting on the porch of her Sparks home on a mild November afternoon two years ago when she heard a sudden loud popping noise.

"I looked over and the meter was on fire," Ponder, 70, said. "It scared me to death. It scared my dogs."

Ponder's exploding electric meter did little damage to her house on H Street. The fire department quickly extinguished it. NV Energy came out and replaced the smart meter, painted her wall and returned her to normal within hours.

"It certainly was a scary day," she said. "If I had not been out there on the patio, I don't know how long it could've burned."

EARLIER: [Reno, Sparks fire chiefs call for smart meter probe](#)

NEVADA FIRE MARSHAL: [Nevada Fire Marshal: Smart meters warrant investigation](#)

Two months later, 37-year-old Sara Macias wasn't so lucky. She awoke to her teenage son knocking on her bedroom door, saying he thought someone was trying to break into the garage of her Lincoln Way home in Sparks.

"We went out there and there was smoke and heat. We came in and closed the door and everything started filling up with smoke," Macias said in an interview last week. "We ended up losing all of our items. We had two cars in the driveway, those caught on fire and another car in the garage."

That fire on H Street was the first in a series of three smart meter fires that caught the attention of Sparks Fire Department investigators in late 2012 and early 2013, prompting the chief to ask the state fire marshal to conduct an inquiry into their safety.

That inquiry turned up no evidence of fire danger, despite the three blazes in Sparks.

But the fires are happening again, and Reno and Sparks fire chiefs say it's time to take a serious look at what exactly is causing them.



In 2010, NV Energy started building its smart grid with the help of a \$130 million grant from the U.S. Energy Department. Since then, the company has replaced about 1.1 million traditional analog meters that must be physically read at the home with smart meters that wirelessly transmit information on a customer's power usage every 15 minutes to the company.

Company officials said they have earnestly investigated the fires and steadfastly maintain the meter itself isn't causing them, even if they occur at the meter site.

A Reno Gazette-Journal review of the investigation reports on the nine fires Reno and Sparks investigators say started in smart meters indicate the blazes occurred in old and new homes, in urban and suburban neighborhoods, to low-income homeowners and those who are more well-off.

The fires generally caused very little damage, destroying the meter itself and charring the outside wall of the home. Two fires, however, consumed much of the homes. One burned a man's face. One killed a woman.

The investigation files also offer evidence that the meter blazes could be more widespread than even fire investigators know. In the reports, NV Energy employees on the scenes of two of the fires told investigators that such blazes happened regularly.

In an interview last week, an electrician who helps NV Energy replace the meters told the Reno Gazette-Journal that often meters would be fixed before the fire department could even be called. The RGJ has withheld his name because he continues to do work for NV Energy and didn't want to put his employment at risk.

"NV Energy was so quick in having me or one of the other guys out there that the fire department never knew about them," he said. "We'd have the panel changed out and power turned on within five hours and a guy painting the wall right behind us."

He said that he's fixed 15 or 16 burned-out meters in the past two years in Reno, Sparks and Gardnerville.

"The fire department was never called on most of them. I only saw the fire department on two or three of them," he said.

'Big problem'

One NV Energy employee told firefighters at Ponder's house in November 2012 that hers was the "third meter they have had similar problems with this month alone."

At a fire in June 2013, an NV Energy trouble technician told firefighters that exploding smart meters were a "big problem," and that trouble technicians and meter technicians have opted out of having them installed on their own homes — which they did out of safety concerns as well as in protest to NV Energy's decision to lay off meter readers once the smart meters were installed.

Another worker on scene at that fire told Sparks investigators he "has been replacing about two smart meters a month that have failed and caused damage to the residential or commercial buildings."

"NV Energy collects all the damaged smart meters and has not admitted to the problems with them," he told investigators, according to the report.

NV Energy vice president Pat Egan said the company is responsible for ensuring electricity is restored as quickly as possible in the event of a malfunctioning meter, but has never refused to turn over evidence if requested.

Although city fire investigators determined each of the nine blazes originated in the smart meters, they have been unable to determine exactly what ignited the fire — a malfunctioning meter, weakness from tampering, an excess of voltage from the home, the structure's aging electrical system or something else.

Without a confirmed ignition source identified by fire investigators, NV Energy officials claim that not one of their smart meters have caused a structure fire. Ignition sources are often difficult to identify due to damage from the blaze itself.



NV Energy's smart meters were manufactured by North Carolina-based Sensus.(Photo: RGJ file)

Conflicting reports

In fires with little damage, NV Energy simply replaces the meter, cleans up any staining and paints over sooty walls. In fires with more significant damage, the company hires its own inspectors, who find a different cause than city investigators.

That's what happened to Sara Macias. The blaze that destroyed much of her home in January 2013 started in the electric panel on the outside of her garage, according to the city fire investigators.

Macias said her insurance company inspector found the same origin. But NV Energy's inspector found the fire started inside the garage, she said.

Her home has been rebuilt, and she said the insurance company and the power company continue to wrangle over who is financially responsible for it. NV Energy Director of Smart Technology Gary Smith said that fire was determined to have started inside the garage and that Macia's insurance has not filed a claim against the company.

In the meantime, Macias refused to allow NV Energy to install another smart meter, opting to pay a higher monthly bill for the traditional model.

"I just didn't want something to happen again," she said.

When Macias began seeing recent news reports on the smart meter fires, she said she could empathize with the other victims.

"I could feel their frustration," she said. "Unless somebody gets hurt or sees where the fire started, to me, it just seems like nothing will happen. I feel like NV Energy will just keep denying it."

In some cases, fire investigators who did respond had difficulty confiscating the burned meters as evidence.

"I notified (the NV Energy employee) that the smart meter remains were evidence for the investigation and would be logged in at the Sparks Police Department for investigation hold," the Sparks investigator on a fire on Windswept Drive wrote. "(He) asked under what authority we have to keep their property."

The most recent fire, on Rhinestone Drive in Reno, killed 61-year-old Michelle Sherman. Reno fire investigators determined the origin of the fire to be the smart meter on the outside of her townhouse. An NV Energy inspector, however, found it to be physically impossible for the smart meter to be the source because it continued to transmit for a time after the blaze began. If the meter started the fire, it couldn't have continued to transmit, a company official said.

NV Energy: no pattern

In an interview earlier this month, NV Energy vice president Pat Egan said the company has experienced 70 "consumed meters," a very small fraction of the 1.1 million meters installed across Nevada.

Egan and Smith said they take concerns over meter flame outs very seriously and have worked hard to determine the fault of each individual fire reported by the department. In most cases, the cause remains elusive. In others, outside factors played a role, Smith said.

In one case, the fire was helped along by water damage. In another case, the company had the burned out meter X-rayed and found the inside components intact, indicating the fire came from somewhere else. In another case, wind slammed a door shut, likely jiggling loose a connection in the meter and sparking the blaze, Smith said.

Often, the fire is started by arcing within the panel that the meter is plugged into. NV Energy realized this year, Smith said, and replaced many customer panels in order to reduce the probability of a fire.

"There's many, many situations you have to study," Smith said. "Each one of these conditions are unique. There's not a common pattern that we have seen. We have not found an individual meter to be defective in all the meters we have studied this far."

Electrician points to overheating relays

While city fire investigators have been unable to determine exactly what is causing the meters to combust, the electrician who replaces the burned meters said it appears to him that the "relays" inside the meter are overheating at the switch NV Energy uses to remotely disconnect the power.

"That's where I think the problems are occurring," he said. "I even saw a couple here where the meters had just started to turn black. Everything in the panel is fine, it's just the meter is starting to go."

A forensic investigator hired by the Reno Fire Department to examine four of the meters involved in the Reno and Sparks fires found that the blazes started within the meter itself.

"The ... meters also displayed common characteristics, suggesting that they may have failed," the investigator wrote. "Given the common data amongst each of the meters, a common failure mode cannot be eliminated and needs to be seriously considered regarding Sensus smart meters."

Most of the meters installed in Nevada were manufactured by North Carolina-based Sensus, which has had hundreds of thousands of its meters removed from homes in Portland, Saskatchewan and Philadelphia.

Portland officials began removing the meters after reports of just three fires.

NV Energy had been required to provide semi-annual reports on the meters to the Public Utilities Commission, but stopped filing the reports in June 2012.

Those reports contain somewhat haphazard data on meter malfunctions, using different terminology to describe meters that appear to have been damaged or destroyed by some sort of overheating.

In short, the company reported 45 "burned" or "smoked" meters between Jan. 1, 2011 and June 30, 2012. A total of 3,767 malfunctioning meters that succumbed to a variety of problems.

The electrician interviewed by the Reno Gazette-Journal said he still has a smart meter on his home.

"But I check it a lot," he said, noting that if it is hot enough to hurt your hand or the screen goes black help should be sought.

"The lawyers say it's a real low percentage, but when it's your house a real big percentage," he said.

What you can do

City officials have not recommended that meters be removed. They are waiting for the Public Utilities Commission to decide whether an investigation is warranted. But if you're worried about your smart meter, here is what you can do:

- If your meter is extremely hot, smoking or you notice signs of arcing, call 911 to have the fire department check it.
- If you are experiencing a problem, but have no immediate fire danger, you can call the Public Utilities Commission consumer line: 775-684-6100.
- You can opt out of the smart meter program and return to a traditional meter. It will cost you an extra \$8.72 a month on your electric bill, plus a one-time charge of \$52.44 — fees that were approved by the PUC last year. For more information on the opt-out program, you can call NV Energy at 1-888-559-9744.

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