

Summary of Evidence on Smart Meter Fires



In California and around world, smart meters have been linked to fires, explosions, and damaged appliances. For every fire started at the meter, in an appliance, or on wiring, smart meter causality should be suspected.

In 2012 a Pacific Gas and Electric (PG&E) whistleblower Pat Wrigley, who worked as a meter reader for 9 1/2 years testified at California Public Utilities Commission judicial hearing:

- **Smart meters cause fires**
- **PG&E is covering up the risk**

<https://youtu.be/EnxIoltNUek>



Matt Beckett, a California fire department captain stated, *“Two years ago PG&E replaced that meter [analog] with a “Smart Meter”. Immediately following we noticed power surges in the form of our refrigerator motor intermittently speeding up simultaneously with our lights becoming brighter. As a seventeen year veteran and current Fire Captain this caused me to become very concerned.”* The Smart meter on his house was replaced with an analog, and there were no problems, until a new Smart Meter was reinstalled. This time he had two surge protectors burn out. <http://emfsafetynetwork.org/fire-captain-finds-hazardous-power-surges-follow-smart-meter-installations/>

Another California fire captain, Ross writes, *“I was at home doing yard work in the late afternoon when my wife came outside and told me that “half the power was off again”. This had been happening on and off for about two weeks ... I then went outside to*

where my meter was and I could instantly smell the burnt electrical smoke. As I was looking at the meter I inadvertently placed my hand on the meter itself and almost burned my hand...the metal box into which all the home's wiring from the meter is stored was also too hot to touch with a bare hand." <http://emfsafetynetwork.org/smart-meter-arcing/>

California Public Utilities Commission, and PG&E's response

In 2009 PG&E reported to the California Public Utilities Commission (CPUC) smart meters interfered with AFCI's and GFI's *"During the second quarter of 2009, PG&E discovered a limited number of cases of SmartMeter™ radio interference with customer electronics, including ground fault circuit interrupters (GFCI) and arc fault circuit interrupters (AFCI). Pages 6-7 Advanced Metering Infrastructure; January 2010 Semi-Annual Assessment Report and SmartMeter™"*http://emfsafetynetwork.org/wp-content/uploads/2010/03/Updated-Semi-Annual-AMI-Report_Jan_2010-12.pdf

January 2011: PG&E, The Utility Reform Network, CPUC Office of Ratepayer Advocates, California Energy Commission, CPUC Energy Division and others discussed "smart meter incidences involving fires..." Meeting agenda: http://emfsafetynetwork.org/wp-content/uploads/2016/01/TAP-Agenda-1282011-inc-smart-meter-fires-SB_GTS_0652075.pdf

2.	Provide insight (incident rates) on TURN-identified issues: smartmeter incidences involving fires and electrical shorts; interference (900MHz, garage and consumer devices) and 'dead sockets' (Dec meeting)	Jim Meadows	January meeting
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2013: PG&E Data Response on smart meter fires. <http://emfsafetynetwork.org/wp-content/uploads/2010/03/Data-Response-PGE-smart-meter-fires.pdf> Much of the document is redacted, and PG&E states, *"In no instance has PG&E found that a SmartMeter™, either gas or electric, has caused a fire."* However, PG&E now monitors temperature and voltage readings of smart meters for hazardous conditions. *"PG&E issues field orders to perform safety inspections at potentially overloaded and or high temperature sites. The data has led to panel inspections at customer premises that have found undersized wiring, physical panel damage, and overloaded conditions."*

The CPUC is charged with overseeing utility safety. In the CPUC's Annual Report to the Governor and the Legislature May 2014, they state, *"There was some concern regarding fires in smart meters but this was investigated by CPUC staff in 2013. Staff determined that, of reported fires involving smart meter installation, none were actually caused by the smart meter."* (p.5) **EMF Safety Network sent a records act request in December 2014 for the details of that investigation, however the CPUC has not provided any details.** <http://emfsafetynetwork.org/wp-content/uploads/2016/01/Smart-Grid-Annual-Report-2013-.pdf>

Smart meter fires, surges, exploding meters, and damaged appliances in California and around the world



Bakersfield, California, Smart Meter Blows Up At Business (2009): “employees at Henry M.M. Engines said their Smart Meter caught fire, which sparked concern and questioned the safety of these new meters. On Wednesday, a PG&E technician was called out to replace the meter after employees found the device burned up and lying on the ground.” “Basically it was an explosion. I saw the meter on the ground and the face plate was blew off and the whole meter was blackened. Even the breaker box that housed the meter was blackened by what

seemed to be an electrical short,” said Vernon Nelson, an employee.” <http://www.turnto23.com/news/your-neighborhood/north-river-county/smart-meter-blows-up-at-business>

Berkeley California Fire Department report (2010) states, “Investigation revealed the newly installed PG&E Smart Meter in the kitchen was hot to touch and smoking, with a orange glow inside the meter housing” <http://emfsafetynetwork.org/wp-content/uploads/2010/07/Berkeley-Smart-Meter-Fire.pdf>



Stockton California (2015): Dozens of smart meters exploded and caught fire after an electrical surge cut power to about 5800 homes near Stockton CA. CBS News reports, “A power surge left thousands without power for most of the day in Stockton after smart meters on their homes exploded on Monday.” “Neighbors in the South Stockton area described it as a large pop, a bomb going off, and strong enough to shake a

house.” <http://emfsafetynetwork.org/dozens-of-smart-meters-explode-from-power-surge/>

Santa Rosa, California (2011): Three smart meters explode at a shopping mall. According to the incident report from the Santa Rosa Fire Department firefighters found the electrical room at the Santa Rosa Mall “charged with smoke” and “upon investigation found 3 PG&E meters that had blown off the electrical panel causing damage to the interior wiring of the electrical panel. A fire was still smoldering...” <http://emfsafetynetwork.org/3-pge-smart-meters-explode-at-santa-rosa-mall/>

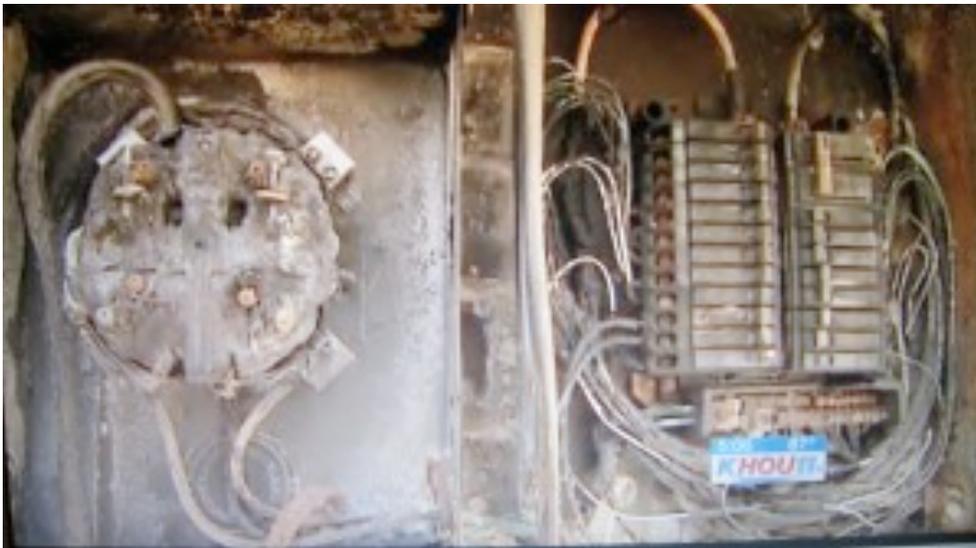
Palo Alto (2011): 80 PG&E smart meters caught on fire and burned out after a power surge. The incident raised questions for residents and utilities officials about smart meter safety. *“Mindy Spatt, communications director for The Utility Reform Network (TURN), said the utility-consumer advocacy group received many complaints about surges damaging appliances when the SmartMeters were first installed. Comparing analog to the new meters, she added, “In the collective memory of TURN, we have not seen similar incidents with analog meters.”* <http://www.paloaltoonline.com/news/2011/09/04/power-surge-raises-questions-about-smartmeters>

Power mishap damages appliances for Livermore residents (2012): 28 smart meters were replaced by PG&E when a power line replacement caused a power surge which fried appliances, TVs and air conditioners. *“The surge of electricity ripped through 28 homes on Hudson Way in Livermore.”* <http://abc7news.com/archive/8770840/>

Nevada (2014): Reno and Sparks fire chiefs call for smart meter fire investigation, *“in the wake of a troubling spate of blazes they believe are associated with the meters, including one recent fire that killed a 61-year-old woman.”* <http://www.rgj.com/story/news/2014/09/13/reno-sparks-fire-chiefs-call-smart-meter-probe/15580069/>

Florida, News Investigative report (2011): *“I went over to the FPL meter and it had caught on fire, it was all black smoke and charred,”* <http://www.wptv.com/news/region-c-palm-beach-county/some-homeowners-concerned-about-meter-installation#ixzz1d3MvQ4r5>

Chicago Illinois (2012): 2012 ComEd confirms smart meter fires. http://articles.chicagotribune.com/2012-08-30/business/chi-comed-confirms-smart-meters-involved-in-small-fires--20120830_1_smart-meters-comed-customers-poor-connection



Philadelphia Pennsylvania (2012): utility PECO suspended smart meter installation due to fires. <https://youtu.be/g8nwrRchtuk>

Texas (2012): Customers of Centerpoint report smart meter fires. <http://www.khou.com/story/news/2014/07/21/11803806/>



Oncor Changing Smart Meter Installation After Fires « CBS Dallas / Fort Worth: *“The Chief Executive Officer of Oncor says the company has a new procedure for installation of smart meters after two house fires in Arlington last week. Robert Shapard says old wiring in two homes could not support the new smart meters.”*

<http://dfw.cbslocal.com/2010/08/24/oncor-changing-smart-meter-installation-after-fires/>

Canada: Nanaimo mother of two left without power for two days after smart meter smoked and caused a power outage <https://youtu.be/9NO6wIx8UFc>

New Zealand: Fire Prone Meter boxes causing concern. *“Front line firefighters are concerned about the number of household power meter boxes that are bursting into flames. There have been 67 callouts in Christchurch to electrical malfunctions so far this year, and new smart meters have*

been involved in three in the last five days.”<http://www.3news.co.nz/nznews/fireprone-meter-boxes-causing-concern-2010060317#axzz3vYE7LXcr>

Australia:

- **“Smart Meter Disaster”** is a 2012 Australian TV news report on smart meter hazards, including fires. https://youtu.be/4e71qAr_qGk
- **Smart meter shock: electrical hazards found in 3500 homes** *“Victoria's energy regulator has conceded smart meter contractors might lack required skills and is reviewing the qualifications of workers rolling out the \$2 billion scheme.”* *“smart meter installers have identified dangerous and possibly life-threatening electrical hazards in 3500 Victorian homes.”* http://www.theage.com.au/victoria/smart-meter-shock-electrical-hazards-found-in-3500-homes-20110212-1are0.html?from=age_sb
- **Smart meter blasts covered up 2012:** A whistleblower claims power companies know smart meters are exploding and are lying to consumers to cover it up. 'John' works for Jemena and claims at least six smart meters have exploded in and around Pascoe Vale, since Christmas. John was installing a meter yesterday which burst into flames in front of him. He's told Neil Mitchell under strict anonymity power companies are misleading the public and smart meters are dangerous. <http://www.3aw.com.au/blogs/breaking-news-blog/smart-meter-blasts-covered-up/20120222-1tmqr.html>

Thousands of smart meters replaced due to fire risk

- Portland General Electric Oregon replaced 70,000 smart meters due to fire risk. http://www.oregonlive.com/business/index.ssf/2014/07/pge_replacing_some_electricity.html
- Lakeland Florida replaced 10,657 smart meters due to fire risk: <http://www.theledger.com/article/20140826/NEWS/140829388/1410?Title=Overheating-Concerns-Lakeland-Electric-to-Replace-10-657-Residential-Smart-Meters->
- In Canada SaskPower replaces 105,000 smart meters due to fire risk. <http://www.cbc.ca/news/canada/saskatchewan/saskpower-to-remove-105-000-smart-meters-following-fires-1.2723046>
- Ontario, Canada Thousands of smart meters in Ontario to be removed over safety worries: “Some 5,400 of Ontario’s 4.8 million smart meters are being removed and replaced because of a risk they could heat up, cause an electrical short and possibly spark a fire.” <http://www.thestar.com/news/queenspark/2015/01/22/thousands-of-smart-meters-in-ontario-to-be-removed-over-safety-worries.html>

Industry and expert commentary



IEEE [professional technological association]: “Obviously all companies with smart meter programs, and all their suppliers and sub-contractors, are going to have to take a close look at the issue of fire hazards. This is just the beginning of a difficult story.” <http://spectrum.ieee.org/energywise/energy/the-smarter-grid/smart-meter-fire-reports>

TESCO: According to research by TESCO smart meters are more prone to “hot socket” than analog meters. Failure modes include catastrophic (expected) “Catastrophic failure” is defined as “a meter which has burnt, melted, blackened, caught fire,

arced, sparked, or exploded.” See: <http://smartgridawareness.org/2015/11/03/catastrophic-failures-expected-with-smart-meters/> See also: <http://emfsafetynetwork.org/wp-content/uploads/2010/03/TESCO-Lawton-on-Hot-Sockets.pdf>

Wireless Smart Meters and Potential for Electrical Fires. Commentary by Cindy Sage, Sage Associates and James J. Biergiel, EMF Electrical Consultant July 2010: Smart meters can create an over-current condition on the wiring and produce heat, which the neutral cannot properly handle, which can lead to fires.

- “The use of smart meters will place an entirely new and significantly increased burden on existing electrical wiring because of the very short, very high intensity wireless emissions (radio frequency bursts) that the meters produce to signal the utility about energy usage.”
- “The location of the fire does NOT have to be in close proximity to the main electrical panel where the smart meter is installed.”
- “A forensic team investigating any electrical fire should now be looking for connections

to smart meters as a possible contributing factor to fires.”

- <http://emfsafetynetwork.org/wp-content/uploads/2011/06/Smart-Meters-Risk-for-fire.pdf>

Ontario Fire Marshall Report: *“During our initial research of the new meters we encountered an unusual amount of fire incidents involving smart meters. “Anecdotal information supported [the fact that] problems occurred after the old analog meters were updated to the new digital smart meters.” The report noted the possibility of a fire resulting from “a loose connection in the meter base.”*

“What could be the reason for this? The old meter base connections may not have been in a condition for seamless exchange to a new meter. New meters may have defects that cause electrical failures or misalignment with old meter base. Careless installation during changeover.”

<http://www.oafc.on.ca/article/unusual-number-fires-smart-meters-linked-ontario-fire-marshall-says-faulty-base-plates-could>

American Electric Power (AEP) How hot are your meters? 2015: *“Today’s meters are light. The old ones were heavy and dissipated heat a lot better, actually,” said Ken Dimpfl, of American Electric Power (AEP). In 2010, they started seeing smart meter failures due to high temps or thermal overload. “This began our journey of looking at ‘hot sockets,” Dimpfl said. “Over the course of a two-year period, AEP analyzed roughly 25 meters that failed. Post event analysis concluded that the root cause was a poor connection at the meter.”*

<http://www.intelligentutility.com/article/15/10/how-hot-are-your-meters>

Hydro Quebec requires 3 meters distance between a smart meter and gas tank

<http://ofsys.hydroquebec.com/T/OFSYS/SM2/2/S/F/4947/13087532/Dnm3qyNW.html>

Norm Lambe, an insurance claims adjustor, contends the utility companies are tampering with the evidence by immediately removing smart meters when there’s a fire. *“A dangerous precedent is being followed in the insurance industry concerning the investigation of smart meter fires... When the local electrical utility arrives and determines that a smart meter is the issue, they have been removing the meter, and preventing the inspection of the meter by the experts... This is a serious situation, as the utility company, upon removal of the meter is tampering with what is evidence concerning the cause of the fire and can be held criminally responsible.”* <http://www.examiner.com/article/are-insurance-companies-avoiding-the-smart-meter-problem>



Summary of Evidence on Smart Meter Fires compiled by Sandi Maurer, EMF Safety Network Director, January 2015. Sandi Maurer has intervened on smart meter proceedings at the CPUC since 2010. See also EMF Safety Network Smart Meter Fires and Explosions: <http://emfsafetynetwork.org/smart-meters/smart-meter-fires-and-explosions/>