

From: Clanon, Paul  
Sent: 4/18/2011 7:35:12 PM  
To: Cherry, Brian K (/O=PG&E/OU=CORPORATE/CN=RECIPIENTS/CN=BKC7)  
Cc:  
Bcc:  
Subject: Re: New problem found with PG&E SMs !!

Want to hear my opinion on testing of equipment to be deployed in the Central Valley that fails between 110 and 115 degrees?

On Apr 18, 2011, at 7:30 PM, "Cherry, Brian K" <[BKC7@pge.com](mailto:BKC7@pge.com)> wrote:

Perhaps but that is the absolute high estimate. I'm told it is closer to the low end. We will see....

**From:** Clanon, Paul [mailto:[paul.clanon@cpuc.ca.gov](mailto:paul.clanon@cpuc.ca.gov)]  
**Sent:** Monday, April 18, 2011 07:27 PM  
**To:** Cherry, Brian K  
**Subject:** Re: New problem found with PG&E SMs !!

Aloke thinks it might be 500,000.

On Apr 18, 2011, at 7:04 PM, "Cherry, Brian K" <[BKC7@pge.com](mailto:BKC7@pge.com)> wrote:

Yes. Sadly. So far we think it is a problem with a very limited set since error messages are thrown off. We are replacing those 1500 meters and testing each one along with the manufacturer. We believe these are first generation meters and that the number is limited.

**From:** Clanon, Paul [mailto:[paul.clanon@cpuc.ca.gov](mailto:paul.clanon@cpuc.ca.gov)]  
**Sent:** Monday, April 18, 2011 06:57 PM  
**To:** Cherry, Brian K  
**Subject:** Fwd: New problem found with PG&E SMs !!

You know any more about this?

Begin forwarded message:

**From:** "Gupta, Aloke"  
<[aloke.gupta@cpuc.ca.gov](mailto:aloke.gupta@cpuc.ca.gov)>  
**Date:** April 18, 2011 5:04:13 PM PDT  
**To:** "Kaneshiro, Bruce"

<bruce.kaneshiro@cpuc.ca.gov>, "Skala, Pete"  
<pete.skala@cpuc.ca.gov>, "Sterkel, Merideth  
\"Molly\" <merideth.sterkel@cpuc.ca.gov>,  
"Fitch, Julie A." <julie.fitch@cpuc.ca.gov>,  
"Clanon, Paul" <paul.clanon@cpuc.ca.gov>,  
"Meeusen, Karl" <karl.meeusen@cpuc.ca.gov>,  
"Brown, Carol A." <carol.brown@cpuc.ca.gov>,  
"Ryan, Nancy" <nancy.ryan@cpuc.ca.gov>,  
"Sullivan, Timothy J."  
<timothy.sullivan@cpuc.ca.gov>  
**Cc:** "Zafar, Marzia"  
<marzia.zafar@cpuc.ca.gov>, "Villarreal,  
Christopher"  
<christopher.villarreal@cpuc.ca.gov>  
**Subject: New problem found with PG&E SMs**  
**!!**

PG&E has just alerted me to a new problem recently discovered with their smart meters. The bad news is that this is the worst case scenario in terms of the location and circumstances.

**Problem:**

Apparently, a particular batch of SMs show a sensitivity to temperature, which ultimately can lead to inaccurate usage readings. The faulty reading occurs only in a narrow band of temperature (approx 100 to 115 estimated). Below and above this, the meter functions properly. This was not discovered in testing because the ANSI requirements are at temperature points outside this band. The meter does put out an error signal while this faulty condition is active, but the implication of that signal was not understood until now (essentially, it was ignored before).

**Scope:**

The problem is with the L&G portion of the meter, not Silver Spring NIC. The affected batch is potentially upto 500K meters. Problem has been found in 1500 SMs so far. The faulty readings could potentially lead to about 2% error in the monthly bill (the actual impact during the faulty condition could be 8% or more). Because PG&E has a record of the error signal, it may be possible to retroactively reconstruct the correct bill.

**Why is this Worst-Case Scenario:**

The affected meters are all in Center Valley (at least, so far)! They are also Residential!! And the error leads to a HIGHER bill (albeit, around 2% higher is

currently estimated)!!!

**What's Next:**

Much is still not known. I have asked PG&E to provide an update asap next week as more engineering and billing analysis is completed and corrective actions become clearer.

Aloke Gupta

**California Public Utilities Commission**

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