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7 March 2012

California Public Utilities Commission (CPUC)
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Protest by Pacific Gas and Electric Company customer Edward Hasbrouck and request for evidentiary hearing regarding Advice Letter 3278-G/4006-E (Pacific Gas and Electric Company ID U 39 M) , "Approval of Electric Rate Schedule E-SOP, Residential Electric SmartMeterTM Opt-Out Program, and Gas Rate Schedule G-SOP, Residential Gas SmartMeterTM Opt-Out Program, in Compliance with D.12-02-014 "

In accordance with CPUC Rules 3.11 and 7.4, as established by CPUC General Order 96-B, I hereby protest and request an evidentiary hearing regarding Advice Letter 3278-G/4006-E (Pacific Gas and Electric Company ID U 39 M) , "Approval of Electric Rate Schedule E-SOP, Residential Electric SmartMeterTM Opt-Out Program, and Gas Rate Schedule G-SOP, Residential Gas SmartMeterTM Opt-Out Program, in Compliance with D.12-02-014 ".

Advice Letter 3278-G/4006-E was filed by PG&E on 16 February 2012. Pursuant to CPUC Rule 7.4.1, and as stated in the Advice Letter (at p. 3), protests must be filed within 20 days of the filing of the Advice Letter, which is today, 7 March 2012.

I hereby certify that this letter is being filed and served today by e-mail and U.S. Mail.

I protest and request an evidentiary hearing regarding this Advice Letter on the following grounds, as provided for by CPUC Rule 7.4.2 and as discussed further below:

"(2) The relief requested in the advice letter ... is not authorized by ... Commission order on which the utility relies;

(3) The analysis, calculations, or data in the advice letter contain material errors or omissions;...

(5) The relief requested in the advice letter requires consideration in a formal hearing, or is otherwise inappropriate for the advice letter process; or

(6) The relief requested in the advice letter is unjust, unreasonable, or discriminatory[.]"

The Advice Letter relies on and claims to be "in Compliance with D.12-02-014 ".

CPUC Decision D.12-02-014 contains the following directive regarding the advice letter and the tariff sheets to be included in it:

"The advice letter shall include tariff sheets to modify PG&E's SmartMeter Program to include an opt-out option for customers who do not wish to have a wireless SmartMeter installed at their location and to implement a SmartMeter Opt-Out Tariff. The Advice Letter filing shall:

a. Establish procedures for residential customers to select the option to have an analog meter if *they do not wish to have* a wireless SmartMeter.

b. Establish procedures to inform customers that a SmartMeter opt-out option is available. A customer currently on the delay list shall be informed that the customer will be *scheduled* to receive a wireless SmartMeter unless the customer elects to exercise the opt-out option."[emphasis added]

The opt-out program authorized by the Commission's decision was thus expressly limited to those customers who, as a factual matter, "do not wish to have a SmartMeter".

And the action authorized to be taken in cases where a customer does not affirmatively opt out was limited to "scheduling" the customer to "receive" a SmartMeter. What, if anything, might happen thereafter, was not addressed by, and is outside the scope of, this decision.

The Commission's decision does not authorize PG&E to make any determinations with respect to the wishes of those customers who do not affirmatively opt out, does not make any determination whatsoever with respect to access to customer premises or the locations where SmartMeters are placed (including whether they are placed on or off customer premises), limits the authorized PG&E action in the absence of an opt-out to "scheduling" the customer to "receive" a SmartMeter, and does not authorize imposition of the opt-out tariff on anyone who does not affirmatively opt out by indicating that they "do not wish to have a SmartMeter".

PG&E concedes in the tariff sheets that "Pursuant to Decision 12-02-014, a customer must *affirmatively* elect to opt-out of the SmartMeterTM Program" [emphasis added].

However, the proposed tariff sheets included with the Advice Letter contain the following provision not authorized by CPUC Decision D.12-02-014 :

"If PG&E makes a field visit to a customer's residence for purposes of installing a SmartMeterTM and the customer does not provide reasonable access to PG&E to install a SmartMeterTM after being provided notice of eligibility for service under this Opt-Out Program and not electing to opt-out, the customer shall be deemed to have elected service under this Opt-Out Program."

The Commission's decision neither made nor authorized such a conclusive factual inference that any such customers "do not wish to have a SmartMeter" or have "elected" any particular type of service or tariff. PG&E has not previously made such a proposal, and the Commission has neither considered nor conducted any fact-finding concerning this issue.

This is a factual question concerning the actual wishes of such customers. To the extent that PG&E claims that all such customers "do not wish to have a SmartMeter", that is a disputed

factual issue which requires, and with respect to which I request, an evidentiary hearing.

Such an evidentiary hearing must consider and allow introduction of evidence concerning the actual wishes of such customers as well as the reasons why customers might not be at home when PG&E makes a field visit, might not be authorized to grant access for this purpose, and/or might not grant access for reasons other than that they "do not wish to have a SmartMeter".

PG&E has never previously proposed, and the Commission has never considered, in what circumstances it might not be "reasonable" for a customer to provide access for this purpose.

To the extent that PG&E proposes to include a requirement for customers to "provide reasonable access to PG&E to install a SmartMeterTM" as a criterion of assignment to a particular tariff and/or the assessment of additional fees associated with such a tariff, this requires and I hereby request a formal proceeding including an evidentiary hearing and full consideration of what, if any, provision of access by customers to PG&E for this purpose is "reasonable", including the factual criteria, the procedures, and the designation of the adjudicator for making such determinations of "reasonableness" in the cases of individual customers.

To the extent that PG&E claims that all such customers "do not wish to have a SmartMeter", that is also a "material error" of fact and grounds for this protest.

And PG&E's failure to recognize in the Advice Letter and tariff sheets that there are many reasons other than that they "do not wish to have a SmartMeter" why customers might not be home, might not be authorized to grant access for this purpose, and/or might not grant access even if they are authorized to do so, is a "material omission" and grounds for this protest.

CPUC Rule 5.1, "Matters Appropriate to Advice Letters", provides that, "The advice letter process provides a quick and simplified review of the types of utility requests that are expected neither to be controversial nor to raise important policy questions. The advice letter process does not provide for an evidentiary hearing; a matter that requires an evidentiary hearing may be considered only in a formal proceeding."

The reasons why customers may not grant access to PG&E to install a SmartMeter on customer premises, whether there is any reason or need to install SmartMeters on customer premises rather than off those premises (and whether this would result in costs or cost savings), what, if any, access to customer premises it is "reasonable" to require as a condition of a utility tariff, and who (if anyone) has the authority to grant such access, (1) are likely to be highly controversial, (2) raise important policy questions, especially as they relate to real estate law and relationships among property owners, utility customers, utilities, and other parties with interests in the use of customer premises, and (3) require an evidentiary hearing. For these reasons, the relief requested in the advice letter is inappropriate for the advice letter process.

It would be unjust and unreasonable to impose a requirement of "reasonable access" without any finding that access to customer premises is, as a factual question, necessary. In fact, SmartMeters could more easily and cheaply be installed on utility poles or "drops" from electric supply lines, off customer premises and outside customers' homes. No access to customer premises would be necessary for off-premises SmartMeter installation or maintenance. Existing analog meters could be left in place without interfering with the functioning of off-premises SmartMeters. Off-premises SmartMeters could fully achieve the Commission's stated goals of time-based billing and real-time monitoring of each customer's usage. Substantial cost savings would accrue both to PG&E and to customers from the elimination of time wasted in scheduling access and having to be home to give access. (These costs are material omissions from PG&E's

filing.) Of course, if PG&E disputes these facts, that dispute is further evidence of the need for an evidentiary hearing and of the inappropriateness of this matter for the advice letter process.

It would also be unjust and unreasonable to impose a requirement of "reasonable access" without clear criteria for what access is reasonable, the procedures for making such determinations of reasonable, and who will make such determinations. It would certainly be unjust and unreasonable to allow such determinations to be made by PG&E itself.

And it would be unjust and unreasonable to impose additional fees or a higher tariff on a customer, on the basis of their not granting access to PG&E to install an on-premises SmartMeter, when such customers may have no authority to grant access for that purpose, and may even be specifically be forbidden from doing so by existing contracts.

Finally, it would be unjust and unreasonable to require a customer and/or property owner to grant access to PG&E to install an on-premises SmartMeter without (a) compensating them for PG&E's use of the SmartMeter to transmit third-party data, (b) requiring PG&E to indemnify the customer and/or property owner against any damages caused by the SmartMeter including any violations of FCC operating regulations, and (c) authorizing the customer and/or property owner to shut off the SmartMeter transmitter if it is operating in violation of FCC regulations -- all of which conditions are the norm in other contracts for the placement of radio transceivers.

The following are some of the reasons, other than that they "do not wish to have a SmartMeter", that some PG&E customers might not be at home when PG&E makes a field visit, might not be authorized to grant access to PG&E to install a SmartMeter, and/or might not grant access for reasons other than that they "do not wish to have a SmartMeter".

This is not intended to be an exhaustive list of such reasons or factual issues, and I reserve the right to submit additional arguments and evidence should PG&E make a formal proposal and/or should the Commission choose to consider this issue through a formal proceeding. This is intended solely to establish, as a threshold showing, that are sufficient disputed material factual issues to make this matter inappropriate for the advice letter process, and to require a formal proceeding including an evidentiary hearing.

As an initial matter, the Commission must recognize that many utility meters, including perhaps most meters in the City and County of San Francisco, are located not only on customer or third-party premises but actually *inside* customers' or other people's homes. On-premises SmartMeters appear to be PG&E's preference, although there has been no formal proposal or proceeding, evidentiary hearing, or Commisison decision on whether SmartMeters actually need to be on or inside customer premises to serve the ostensible goals of the program. Granting access to PG&E to install an on-premises SmartMeter involves granting access to PG&E (or, perhaps, to a PG&E contractor or sub-contractor, although that too isn't clear) to the inside of the home. This isn't just about opening a gate to let someone into a yard or the "curtilage" of a home.

There are three reasons that analog meters were traditionally installed on customer premises, and in some cases inside homes, rather than on utility poles or at "drops" or other off-premises locations. As a factual matter, none of these reasons apply to SmartMeters.

First, analog meters have moving parts, are relatively fragile, and require a transparent (and therefore at least somewhat fragile) window through which they can be read, which provides a reason to install them in a stable and perhaps at least somewhat protected location. But SmartMeters have no moving parts, need no reading window, can be fully encapsulated in a waterproof housing, and should not be affected by swaying or vibration. PG&E itself claims that

they are far sturdier than analog meters. There is no need to put them indoors for their protection.

Second, analog meters needed to be mounted at ground level so that they could be read with minimum labor and without the need to climb utility poles. Obviously, by their nature SmartMetrers are freed from any such constraint on where they are mounted, since they can transmit from anywhere except RF-shielded locations. To the extent that buildings may contain RF shielding, this is if anything a reason to prefer external mounting of SmartMeters.

Third, analog meters are installed on customer premises to enable customers to verify that they haven't been tampered with. But because (1) customers are unable to disassemble a SmartMeter or verify what hardware components it includes (whether, for example, it includes chemical or audio sensors in addition to amperage sensors) and (2) customers do not have access to the firmware source code or the ability to monitor remote firmware modifications, physical access to the SmartMeter on customer premises is inadequate to enable customers to detect or prevent tampering or the introduction into the home of malicious and unwanted hardware or software as part of the sealed SmartMeter package. On the other hand, while an off-premises SmartMeter can still invade a customer's privacy (and that of other people in their home) through real-time usage monitoring, installing a SmartMeter outside the home would mitigate some of the other privacy concerns related to potential use of the SnmartMeter as a general-purpose data-transmission "bug" which might be used to introduce and monitor other sensors inside the home.

So there are good reasons, as could be more fully explored at an evidentiary hearing, why some customers who have no objection to having a SmartMeter would reasonably prefer that, if one is to be installed on their electric service line or gas pipe, it be installed at an "upstream" location off their premises or at least outside their home. And again, as a factual matter there would be no need to remove or alter existing analog meters in any way in order to install SmartMeters upstream from them on the gas and/or electric service feed(s) to the home.

Moreover, some customers would prefer not to have to arrange to be home to give access to PG&E when that is necessary to service a meter, or would prefer not to have to let PG&E personnel into their homes at all, and would therefore prefer an off-premises SmartMeter to an analog meter for the same reasons that they would *not* prefer an on-premises SmartMeter.

Any inference that all those customers who don't want SmartMeters *inside* their homes also don't want them *outside* their homes is thus factually erroneous and legally unsupportable.

Some customers simply won't be home when PG&E happens to come calling. It may come as a surprise to PG&E, but in some households all the adults have jobs outside the home, and other customers are -- as they are legally entitled to be -- away from their homes at various times, for various durations, for various reasons. It is, at best, unclear -- especially in the absence of any record before the Commission of legal argument or factfinding -- what, if any, authority PG&E and/or the CPUC have to compel the attendance of utility customers at any particular place or time to grant access to customer premises; what, if any, compensation is required to be paid for such compelled attendance; and whether uncompensated attendance constitutes an unconstitutional "taking" of property (especially where the SmartMeter equipment to be installed on customer premises will be used by PG&E for its profit) and/or "involuntary servitude". Even if some such attendance can be compelled without compensation, a decision as to what would be "reasonable" provisions for such access clearly involves numerous disputed factual questions.

In many other cases the customer does not have the authority to grant access to PG&E to install a SmartMeter on customer premises, much less inside the home, even if the customer

chances to be at home when PG&E schedules an installation visit.

Like many PG&E customers, I am a legal resident authorized to obtain utility service, but I am not the owner of the property where I live and where the meter for my service is located.

There are a wide range of relationships between PG&E customers, property owners, and property managers. Some customers are family members of property owners, some are domestic partners, some are merely housemates or people who share an apartment, some are tenants-in-common or members of condominium associations, and of course many -- especially in certain portions of PG&E's service territory including San Francisco -- are rental tenants.

These relationships are subject to a wide variety of contracts, including rental leases, tenancy-in-common agreements, condominium association bylaws, property management agreements, written and unwritten living-together agreements, and pre-existing leases, easements, and other contracts with other wireless data network operators and third-party intermediary antenna-siting companies (who may rent space for use by multiple operators).

In most cases only the property owner(s), who often is not the PG&E customer, has the authority to authorize installation or maintenance or grant easements for commercial transceivers or antennae for use by and for non-resident, non-property-owner third parties. For condominiums or tenancies-in-common, such authority typically resides with the condominium association or tenancy-in-common as a body, not the owners of the individual residential units.

Rental agreements typically limit tenants' authority to install or allow the installation of radio transceiver or antenna equipment to equipment solely for tenants' own use (such as home Wi-Fi networks). This restriction may be explicit, or may be implicit in general restrictions in the lease regarding use of the premises. As the right to license placement of cellphone and other antennae on apartment buildings has come to be recognized as a significant profit center for building owners, it has become increasingly common for residential rental agreements to explicitly reserve this as the exclusive right of the property owner, and to forbid tenants from installing or allowing the installation of transceivers or antennae for the benefit of third parties.

Similarly, condominium and tenancy-in-common agreements may explicitly or implicitly prohibit antennae and transceivers other than for residents' own use, or may forbid individual tenants-in-common or condominium owners to authorize such installations, and reserve that right to the tenancy-in-common or condominium association as a whole. (Keep in mind that in San Francisco even many two- and three-flat buildings are condominiums or tenancies-in-common.)

The extent of the authority delegated to a property manager by an absentee owner of a rental property varies, but does not usually include the authority to execute leases or easements for installation or maintenance of transceivers or antennae by non-tenants. Cellphone, Wi-FI, and other wireless antenna and base-station siting rights are too valuable for many property owners to delegate the power to negotiate such contracts to a property manager.

Other existing contracts may assign or encumber antenna and transceiver siting rights in ways that preclude even the property owner from granting rights to PG&E to install its wireless mesh network infrastructure on customer premises.

In particular, contracts for the siting of cellphone antennas on or in apartment buildings or other structures frequently grant the licensee exclusivity, and would forbid the property owner who has granted such an exclusive license from authorizing PG&E to install the transceivers and

antennae included in SmartMeters. And rental contracts providing tenants with warranties with respect to usage and enjoyment of the property during the term of the lease might be inconsistent with actions that PG&E might consider to be necessary for RF access to a SmartMeter. (This is also among the reasons why a formal proceeding and evidentiary hearing are necessary prior to any determination of what access is "reasonable".) For example, a tenant may have rented a property with the expectation of being able to install a Faraday cage in their garage or storage area, which includes the area in which the utility meters are situated, or the space where the meters are located may have insulation in its walls or ceilings that includes a metal-foil vapor barrier, or may be enclosed by metal security grates, screens, or doors. None of these interfere with the operation of analog meters, as long as there is a (perhaps screened) window through which the meters can be read. But removing these to allow RF access to a smart meter at the same location might be precluded by the terms of the residential lease assuring continued usage of the space by the tenant for the purposes and in the condition in which it was leased.

Contracts such as these may be subject to modification only by mutual agreement of the parties. The operator of another wireless network for which PG&E's mesh network might be a potential competitor would have no reason or obligation to agree to such a modification.

In other cases, there may be no provision for modification of the rental terms during the term of the lease. Under San Francisco's rent control ordinance, rental leases can be renewed indefinitely, by default, as long as the tenant continues to occupy the dwelling unit.

For these reasons, it would be unjust and unreasonable to expect even the property owner(s), much less a non-owner PG&E customer, to be able to obtain agreement to such a modification. Fact-finding including an evidentiary hearing would be necessary to determine what procedures and how much time are "reasonable" in cases where obtaining a grant of access rights requires either PG&E or a non-owner customer to contact and negotiate with an absentee landlord (who may, and in San Francisco often does, live overseas or be travelling), or arranging for a meeting of a condominium association or of the participants in a tenancy-in-common.

PG&E could and should have recognized from the start of the SmartMeter program that the access it wanted, at least in cases such as mine and many others in San Francisco where current analog meters are located inside customers' homes, would be possible only if consented to by property owners and possibly others (such as competing wireless operators with contracts for antennae on the premises) with contractual interests in the use of the premises.

Instead, PG&E has entirely ignored the issue of access and siting rights for non-PG&E premises, and has not yet begun to make any effort whatsoever to contact owners of non-owner customer properties, propose licensing and/or easement terms (including compensation and indemnification), or negotiate with those property owners for the rights it would need to have in order to execute its plans -- rights which, in many cases, customers have no authority to grant.

It would be unjust and unreasonable to impose on ratepayers any of the costs of PG&E management's failure to recognize and act on these reasonably forseeable issues, especially to impose such costs on customers who do not, in fact, "wish not to have a SmartMeter".

The radios and antennae in SmartMeters are general-purpose digital transceivers capable or originating or relaying telemetry and control signals from and to any sort of sensor or servo. The nature of the network and the built-in capability for remote firmware modifications ensures that its functionality is not limited to customer or utility-related data, but can be made available to third parties for unrelated purposes. So far as I can tell, nothing in the Commission's orders or PG&E's tariffs prohibits PG&E from licensing access to this mesh network to third parties for

the transmission of data unrelated to the provision of utility services, for PG&E's profit, without compensation, indemnification, or consent of PG&E customers or property owners.

One can imagine a wide variety of potential customers for such mesh network telemetry and remote control data transmission services, including security and alarm companies and services providing "panic buttons" for the elderly and infirm. These may may be useful services, but that doesn't mean that PG&E or the Commission have the authority by tariff or CPUC order to compel PG&E customers, property owners, or holders of (potentially competing) antenna and transceiver site licenses to consent to installation, operation, and maintenance of PG&E mesh network base stations on their premises, or to impose surcharges or additional fees on those who do not or are not authorized to consent to such installations.

Replacing an analog meter that serves only a particular customer with a SmartMeter designed to relay third-party data isn't like upgrading the supply line to a home. It's more like replacing a gas line that goes into a home and terminates at the meter with a gas main that goes through the basement and across the back yard to serve a new development on the next block -- or, to make the analogy more precise, like replacing a gas line into the home with a fiber optic cable through the home carrying third-party data unrelated to the provision of gas service.

Even if PG&E arguably (which I do not concede, and determination of the scope of which would require an evidentiary hearing) holds some implied or constructive easement to maintain, on customer premises, equipment reasonably necessary for the provision of contracted utility services by the customer, such an easement does not automatically extend to equipment for the provision of utility service to other customers, much less for the provision of non-utility services to third parties. Any such additional equipment requires the permission of the property holder, typically obtained through the purchase or rental of a license and/or easement.

PG&E can, and routinely does, obtain easements for use of non-PG&E premises to install PG&E infrastructure to serve third parties, but it does so -- as do other operators of radio transceiver, antenna, and data network equipment -- on the basis of agreements negotiated and entered into with property owners, and subject to existing leases, licenses, and contracts.

I'm especially concerned that if PG&E is allowed to use existing on-premises gas and electric usage meters as the basis for a claim of entitlement to install digital mesh network antennae and transceivers for third-party data at current meter locations, AT&T could, on the same basis, claim the "right" to replace the telephone junction box inside my home with a cellphone antenna and base station, without compensation, indemnification, or consent. (It's typical in San Francisco for the telephone "terminator" box, like the gas and electric meters, to be located inside the home, sometimes in a garage or basement but sometimes in an area that was originally, or has at some point been converted into, a portion of the living quarters.)

If PG&E wants to build out a digital wireless mesh network infrastructure for for-profit use by third parties, it can do so in the same way that every competing digital wireless data network operator has done: by purchasing or leasing property for this purpose, and/or by negotiating and obtaining permission to place equipment on non-PG&E property.

If property owners do not choose to grant such permission, the proper procedure for attempting to obtain such rights to private property or its use is the power of eminent domain -- not a CPUC order , PG&E tariff, or Advice Letter.

In effect, PG&E is seeking through this Advice Letter to use its "foothold" on customer premises at the gas and electric meters to effect an uncompensated taking of valuable radio

transceiver and antenna siting rights, which property owners would otherwise be entitled to reserve, to exercise for themselves, or to sell or rent to parties and on terms of their choosing.

Regardless of whether property owners would agree to this proposal, non-property-owner PG&E customers such as myself simply have no authority to grant such licenses or easements. And it would be unjust and unreasonable to impose surcharges, additional fees, or a higher tariff on us because of our not taking an action which we have no legal authority to take.

But again, the issues of access rights and authority to grant access posed by placement of this transceiver and antenna equipment on customer premises, including inside customers' homes, rather than on PG&E premises, are distinct from any of the issues such as time-based utility usage monitoring and billing which have been considered to date by the CPUC, on which there is any factual record, or which are the subject of Commission orders. If these new issues are to be addressed by the CPUC, they require a formal proceeding and an evidentiary hearing.

Sincerely,

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7 March 2012

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