

ELECTRIC VEHICLE SUBMETERING PROTOCOL ROADMAP DEVELOPMENT

Use Cases Meeting Notes

Friday, December 16, 2011, 10:00 am – 12:00 am PST

10:05 Meeting Commenced

Chetna Nanjappa (SCE) talks to Slides 1-6 - Welcome

Janet Combs (SCE) talks to Slide 7 – Joint IOU Perspectives, Open issues, Consumer protection questions,

Guiding principles

Chris Warner (PG&E) – From PG&E’s perspective, we need to agree on guiding principles for next steps on the roadmaps. IOUs have Smart Grid plans in front of the CPUC for all of our initiatives. On these technology initiatives, we need to crawl before we run given that any interaction with our AMI billing systems in terms of communication protocols needs to be carefully scaled up. We agree the next steps are for all interested parties are to think carefully on the crawl before we run. As Janet Combs pointed out, we need to pinpoint the role of the CPUC.

Richard Lowenthal (Coulomb) – Are these slides supposed to be speaking for the utilities or the consensus of the workshop?

Janet Combs (SCE) – From my view, this is reflecting the IOUs. This is not something that we have discussed as part of the working groups. We wanted to raise these issues now because we feel that they need to be mentioned in the roadmap.

Richard Lowenthal (Coulomb) – I don’t feel we’ve had a consensus building process yet. I feel it is important for the IOUs to express their concerns, but they need to emphasize that it is not a consensus of the working groups.

Chris Warner (PG&E) – These principles are only reflecting IOUs as they see as issues. There may be other issues that other parties want to add. I think it would be valuable to get the input on all stakeholders before we go further down the road.

Richard Lowenthal (Coulomb) – I agree with that. We need to be clear which to be attributed to the group and which to be attributed to the IOUs.

Chetna Nanjappa (SCE) – Janet, I feel we might want to wait on Adam before we continue. I think we should come back to Slide 7 once he’s on the phone.

Janet Combs (SCE) – I think if he’s not on the line, he could take note of the issue. I don’t think we need his assistance.

Janos Kakuk (SCE) – My suggestion is to come back to these slides when Adam is back on the phone.

Chris Warner (PG&E) – It is fine if we wait for Adam. We would like any initial thoughts on how we can focus on the next steps of the use cases.

Tam Hunt (CRS) – There is a report coming out next week. I’m curious if that report will have any impact on the road map.

Janet Combs (SCE) – I don’t think that report touches on these issues.

Herb Moses (SCE) – I believe that’s correct.

Chetna Nanjappa (SCE) – You can present the rest of the slides, but if anything comes up that we need Adam’s input, we can take note of it.

Janet Combs (SCE) talks to Slides 8-9 - – Joint IOU Perspectives, Open issues, Consumer protection questions, Guiding principles

Richard Lowenthal (Coulomb) – In this particular case, I think we’ve had some confusion during the discussions whether there are proposed rule changes and whether they are part of the jurisdiction of this road map. I know some players in the conversations have stated that particular rules don’t work with existing rules. Do the things that we have to do the protocol development have to be consistent with the existing rules?

Janet Combs (SCE) – I believe the protocol would involve rule changes. The Direct Access (DA) rules would be used as a guide. I don’t think we’re looking at changing the jurisdiction over third parties. We feel the jurisdiction of the protocol is that the CPUC can enforce the relationship between customers and the utilities.

Chris Warner (PG&E) – We need to distinguish the difference between billing (which requires updates to our systems) and enabling “beyond the meter” monitoring devices. For PG&E, we are less concerned about rules changing than having to upgrade our systems to implement a new billing system.

Richard Lowenthal (Coulomb) – My concern is on the rules of resale electricity.

Redacted (PG&E) – Right now, there is no legal constraint on the resale of electricity or on EVSPs selling and billing electricity directly to customers. Right now, EVSPs are free to resale electricity downstream from the utility meter without any utility involvement.

Richard Lowenthal (Coulomb) – The DA rules seem to resurface that issue.

Redacted (PG&E) – No, both the Phase 1 and Phase 2 decision state the same thing: the CPUC does not regulate the reselling electricity.

Janet Combs (SCE) – The CPUC could enforce a protocol to force third parties to submit data in a timely manner. Selling fuel is beyond the protocol. We could add a bullet that specifies that the reselling fuel is beyond the scope of the protocol.

Chetna Nanjappa (SCE) – This has been a very good discussion. We should move on to the next slide.

Janet Combs (SCE) talks to Slides 10-11 - – Joint IOU Perspectives, Open issues, Consumer protection questions, Guiding principles

Chetna Nanjappa (SCE) – The last 3-4 slides were an IOU perspective. It was not developed within the working groups over the last couple months. I will talk to our legal team and talk to Adam (CPUC) and get back to the team on his thoughts. We will send out meeting minutes after these discussions.

Tam Hunt (CRS) – Is there a deadline for written comments?

Chetna Nanjappa (SCE) – Today is the last day for comments. We ask that hold your comments over the next two weeks to finish the roadmap, but we can talk about any timelines during the next steps.

Redacted (SCE) talks to Slides 12 – Use Case Overview

Richard Lowenthal (Coulomb) – What constitutes a third party? Would, for example, Silver Spring be considered a third party?

Redacted (PG&E) – No.

Richard Lowenthal (Coulomb) – Who would be a third party?

Chris Warner (PG&E) – A contractor of the utility would not be a third party. An agent of a customer would be a third party.

Richard Lowenthal (Coulomb) – When the EVSP is the utility, the DMA would not be a third party, correct?

Redacted (PG&E) – That’s correct. It is not like DA.

Richard Lowenthal (Coulomb) – In all of these cases, where you say no third party involvement, certainly someone has to collect data from the meter. The role of a company would change in these scenarios.

Janet Combs (SCE) – It’s like an agency relationship.

Tam Hunt (CRS) – What was the criteria that was used to develop these use cases? How did you choose the use cases?

Redacted (PG&E) – Technical assessment, availability, customer cost, billing & regulatory, and customer experience were used as factors.

Tam Hunt (CRS) – What made you decide that these 16 use cases were the most important to look at?

Chetna Nanjappa (SCE) – The use case team is still doing their analysis of the feasibility thereof.

Paul Stith (SUM) – Paul, can you address the technical challenges that you were considering regarding net metering?

Redacted (PG&E) – We haven’t had the time to look at this use case yet. We will relay this information to you.

Paul Stith (SUM) – We would like to know the challenges thereof. Net metering is something that has been brought up since the first meeting.

Chetna Nanjappa (SCE) – We will come back with a response to whether or not it will come as part of the report. The requirements for the report do not include net metering at this time. We will be looking at the feasibility of net metering.

Redacted (SCE) **talks to Slides 13 – Preliminary Assessment of Use Case Timing**

Chris Warner (PG&E) – We may want to pause at this time. We may want to receive input from the third parties to see which use cases are in the business scopes of the third parties.

Chetna Nanjappa (SCE) – We would really like to find out what use cases line up with their business models.

Richard Lowenthal (Coulomb) – We are not in any disagreement on what you have displayed. Use Cases 1-3 were used to get everyone to start thinking. We think those cases work well. We were pleased with those original 3 cases; we are glad they made the cut. (PG&E) – From a cost standpoint, if the costs were the same between parallel and submetering, would both types of metering provide you the same functionality?

Richard Lowenthal (Coulomb) – I would have to think about this before I could make this statement

Adrene Briones (ECOtality) – I think there is some confusion that the numbers were renumbered. Use Case 3 originally was renumbered as 6, which is now considered unfeasible.

Paul Stith (SUM) – This is a site by site case. It is not a simple question.

(PG&E) – For the sake of argument, let’s suppose the costs were somehow the same.

(AeroVironment) – Cost is a big factor. We’d have to think about this before we can answer.

Redacted (PG&E) went over the billing process for IOUs

The current billing process has the following steps:

- Create customer of record
- Associate meter to the customer
- Assign rate class to customer's usage
- Assign other customer charges to the customer's bill
- Calculate bill charges for specific period and rate version
- Print and Send bill , populate usage and billing info to web portal for customer access

For submetering, a new billing process is required that changes how the utility manages the usage of a customer and because submetering can theoretically affect every rate class, all the billing process would affect all existing rates. From a high level, this process would be:

- Create new customers of record for submeters
- Associate submeters with master meters to allow subtractive billing
- Assign rate class to submeters
- Receive and process 3rd party data
- Perform analysis by interval of usage on submeters and associated master meter , notify 3rd party DMA of any data anomalies/omissions
- Reprocess corrected data submitted by 3rd party DMA, if any
- Create new bill with overall usage and submeter usage
- Assign costs to only residual master meter usage (MM minus SubM)
- Assign costs to submeters

Assign other customer charges to submeter bills and master meter bills Print and Send bill , populate usage and billing info to web portal for customer access There are other changes required that would be required if submeters are allowed. This would include customer presentation tool changes, to ensure consistency across the online bill and the printed bill. There would need to be a verification process to ensure that the submetering usage was validated, estimated, and error checked as needed. There would need to be an established dispute mechanism for the inevitable billing disputes by customers, EVSPs, and the utilities. There may also need to be changes to each rate to account for different types of charges that each rate may or may not have, such as demand charges.

Richard Lowenthal (Coulomb) – Could we go to Use Case 1 and look at the diagram, what is the green arrow and blue arrow? Are they not two different usage numbers?

Redacted (PG&E) – They are two different numbers, but both numbers are being billed to the utility.

(PG&E) – This use case assumes subtractive billing. This use case is not feasible now without advanced upgrades to the AMI.

Richard Lowenthal (Coulomb) – I thought you were treating it like Use Case 6, which was dismissed. You're saying this case is feasible but not in the near future.

(PG&E) – That is correct.

Richard Lowenthal (Coulomb) – When Case 6 got demoted, what was the threshold that put it down there?

Janet Combs (SCE) – You have the IOU customer premise load and the second IOU customer as the fuel supplier. We'd have separate metering because there are two separate customers. It goes against the IOU's right to separately meter the customers to ensure accuracy.

(PG&E) – Use Case 6 can be adjusted to a parallel metering, in which case it would be feasible.

Janet Combs (SCE) – That's true.

Richard Lowenthal (Coulomb) – Most of our discussion has been with the goal to remove parallel metering.

(PG&E) – Our consensus on the protocol is the question: from a billing system and timing standpoint, can subtractive billing be done?

Alex Keros (GM) – The goal is to install a less complex and cheaper method for the customers. We can imply submetering will hopefully be better than separate metering, but that has not yet been described by anyone.

Richard Lowenthal (Coulomb) – The CPUC created the protocol to get rid of the separate metering.

(PG&E) – You are both correct. The CPUC is trying to use submetering to create a cheaper method for customers. If we don't think submetering will make sense in the near future, we should look back at parallel metering and see if maybe that is better.

Tam Hunt (CRS) – Could you describe what you mean by short, mid, and long-term?

(PG&E) – The timing was based on discussions in our calls. The full implementation analysis will still be done before we can state any time frame.

Joshua McDonald (SCE) – Some use cases were chosen as “short-term” because we suspect the ESPI standard could be used for those use cases whereas other use cases would require updates to that standard.

Chetna Nanjappa (SCE) – We are in the defining and planning phase of the project. We are trying to plan for this over the next 5-10 years. Issues still need to be answered and resolved. For now, we are stating short-, mid-, and long-term, and discuss the time specifics in the future.

Paul Stith (SUM) – We should look at the regulatory side for funding so that you can get costs. I think you're missing construction costs.

(PG&E) – There is the assumption that parallel metering will always cost more than submetering, but we don't know the costs to the customers. Utilities need to provide the numbers to compare the costs of parallel and submetering.

Herb Moses (SCE) speaks to Slides 14-16 – Billing & Regulatory Requirements

Glenn Pincus (SCE) speaks to Slides 17-23 –Technical Requirements, Compliance and Standards

?? – On the V2G functionality, was there a time frame on the discussion of when that would be completed?

Chetna Nanjappa (SCE) – I don't think the team would like to put a time frame on this.

Gary Fox (GE) – What does MSP stand for?

Chetna Nanjappa (SCE) – MSP stands for Meter Service Provider.

Janet Combs (SCE) – It could be an IOU as well.

Joshua McDonald (SCE) speaks to Slides 24-28 –Communication Functionality, Standards, Security

Chetna Nanjappa (SCE) speaks to Slides 33-35 -Closing

Tam Hunt (CRS) – Even net metering should be added to the roadmap by implication, but I feel we should talk of this offline since we're running out of time.

Chetna Nanjappa (SCE) – It will be added a use case and we will perform an analysis on it in the future.

Paul Stith (SUM) – Thank you for displaying the list of open issues. Hopefully, people will address more issues to continue the list.

Tam Hunt (CRS) – Have you thought of requesting an extension for this roadmap?

Chetna Nanjappa (SCE) – We were told that after we file the report the CPUC will allow for comments. We expect the report may be changed as time progresses and we learn additional information.

Janet Combs (SCE) – The CPUC will issue a ruling setting a formal comment period.

(PG&E) – Although many parties may want an extension, the burden is on the IOUs to complete the document.

Tam Hunt (CRS) – I’m afraid that once it is written down, it will be difficult to change.

Chetna Nanjappa (SCE) – That is something the IOUs need to discuss internally and we should talk to Adam at the CPUC before we state any comments. Please email us any comments. Thank you!

12:05 Meeting Adjourned