



GRIDWORKS

Joint Agencies Vehicle-Grid Integration (VGI) Working Group Two

WORKSHOP #2

10 AM – 5 PM

SEPTEMBER 26, 2019

SAN FRANCISCO, CA

Agenda

10:00-10:15 Participant Introductions and Agenda

10:15-11:10 Presentation of Subgroup Results

- Subgroup overview
- Proposed Joint IOU VGI Valuation Methodology
- Illustrative use case process

11:10-12:10 Participatory Exercise to Clarify Methodology

- Go through Steps 1-6 for a new use case

12:10-12:30 Issues from Stakeholder Comments

12:30-1:30 Lunch

Agenda

1:30-4:10 Structured Discussion on VGI Valuation Methodology

- Brainstorm on outstanding issues and resolutions
- Cluster and define issues and resolutions
- Achieve consensus on going forward

4:10-5:00 Further Business

- Work Plan
- Formation of Subgroup B

Participant Introductions

VGIWG – 2

Sub-Group A Overview

VGIWG 2 Workshop

San Francisco

9/26/2019

Work Plan – Sub-Group A Process

- Assess each step of PG&E Valuation Method
- Propose additions, variations, amendments, or updates, as needed
- Consider proposals through sub-group calls
- Acknowledge and identify unknowns and potential strategies for managing them
- Objective: Propose VGI Use Case Valuation Method(s) for application in later stages of the Working Group; prepare presentation of proposal for full Working Group consideration in the 9/26 Workshop

Sub-Group A Participants

Subgroup 1 lead:

Jordan Smith (SCE)

Mauro Dresti (SCE)

Subgroup 1 Participants:

Karim Fahrat (PG&E)

Vincent Weyl (Kitu Systems)

Taylor Marvin (SDG&E)

Mark Monbouquette (Enel X)

Tom Ashley (Greenlots)

Lance Atkins (Nissan)

John Holmes (Honda)

Jessie Denver (EBCE
Energy)

Dave McCready (Ford)

Jin Noh (CESA)

Rich Scholer (Fiat Chrysler)

Phillip Kobernick (PCE)

Ann Smart (Chargepoint)

Dean Taylor (CaETC)

Adam Langton (BMW)

Jigar Shah (Electrify America)

John Wheeler (Fermata)

Sub-Group A Results

- **The Sub-Group completed all steps in the work plan**
 - Advanced a proposed California VGI Valuation Method (Joint IOU Proposal)
- Six working meetings held:
 - **Meeting 1 (8/23):** Kick off the group, set schedule, objectives, action items
 - Main discussion was the original PG&E VGI Valuation Methodology
 - **Meeting 2 (9/10):** Voluntary working session -- to discuss and resolve comments on original PG&E Methodology
 - **Meeting 3 (9/12):** Formal working session -- reveal and discuss new proposals
 - One proposal submitted: Joint IOU Proposal: California VGI Valuation Method
 - Key revisions made in Steps 1-6 based on stakeholder input
 - **Meetings 4 and 5 (16, 17):** Sub-working sessions -- test the Joint IOU Proposal with some trial use cases
 - **Meeting 6 (9/18):** Working session -- address and resolve comments on Joint IOU proposal

* <https://onedrive.live.com/?authkey=%21AEncszViF83uW0Q&id=5891771FBA4AFF14%21448&cid=5891771FBA4AFF14>

Sub-Group A Results

- Developed a method to receive, record, and resolve comments
 - Each submitter to:
 - Describe comment fully and email to sub-group or working group
 - Post comment to WG One Drive
 - Record the comment in the Comment Record Table (record no., submitter, organization/field, comment, resolution, date)
 - 23 comments recorded
 - 15 resolved so far

* <https://onedrive.live.com/?authkey=%21AEnczViF83uW0Q&id=5891771FBA4AFF14%21448&cid=5891771FBA4AFF14>

Proposed Joint IOU VGI Valuation Methodology (updated 9/24 version)

[Link to posted document](#)

Participatory Exercise to Clarify Methodology

Handout: Outline of Valuation Methodology

Step 1: Define A VGI Framework

Step 2: Identify Hypothetical VGI Use-Cases

Step 3: Screen Out Impractical VGI Use-Cases

Step 4: Assess Each VGI Use-Case's Potential Benefits & Costs

Step 5: Rank VGI Use-Cases by Practical Net Benefits

Step 6: Make Recommendations on Policy, Market, or Technology in Order to Capture and/or Improve the VGI Use-Cases' Value

Issues from Stakeholder Comments

Comments from Subgroup resolved in updated Joint IOU proposal:

Chargepoint: clarification about alignment, particularly for workplace and fleet operators

PCE: define vehicle types

PCE: how are use cases weighed against each other

Enel X: parallel analysis after Step 3 for use cases deemed presently impractical

Enel X: switch Steps 5 and 6 to prioritize based on possible enabling policies

Fermata: can we create new categories within the (six) dimensions as we go along?

Fermata: meaning of Type for flow to micro-grid or other non-conventional meaning of “grid”

Fermata: full example of Steps 1-4?

Issues from Stakeholder Comments

Comments from Subgroup resolved in updated Joint IOU proposal:

SMUD: for Sector dimension add attributes for nominal dwell timing and energy recovery

SMUD: Step 3 prioritization allow some subjectivity for high-interest cases

Nissan Step 1 better define "EVSE Actor"

Nissan Step 1 Sector elements don't include a differentiator for charge power level.

Nissan Step 3 technological feasibility screening doesn't make much sense for "future"

Nissan Step 4 input doesn't have the basic grid profile as a necessary item for value calculation

Nissan Step 4 including costs but excluding Approach & Resource Alignment seems contradictory

Nissan Step 6 how to capture value when Approach & Resource Alignment have not been evaluated?

Issues from Stakeholder Comments

Comments/items from Subgroup that may not yet be resolved:

Chargepoint: five example use cases for workplace/fleets

CESA: greater granularity of service stacking in MUA framework, such as two reliability services

CESA: valuation that considers non-energy benefits

EVBox: Step 3 screening out use cases based on market rules if no market rules exist

EVBox: Step 3 forecasting use cases with low adoption rates

Enel X: Step 3 still need to do Steps 4-6 for use cases deemed practical for 2023-2030

Enel X: Step 4 standardized Benefits inputs for all choices in Section, Application, and Type

FCA: too many Sectors and Applications, can be consolidated, and delete Type

Lunch

Structured Discussion: VGI Valuation Methodology

Objectives of this discussion:

- (1) Identify and resolve any outstanding issues on the proposed methodology
- (2) Achieve consensus to go forward with the methodology, with agreed-upon resolutions

Outcomes of this discussion:

- (1) List of outstanding issues organized into clusters
- (2) Suggested resolutions to issues or clusters that allow the Working Group to go forward using the methodology

Structured Discussion: VGI Valuation Methodology

BRAINSTORM:

To further clarify the methodology, or develop how we employ it during the Working Group, we could....

Possible actions to resolve issues:

- REV Revisions to enhance/clarify methodology
- SUB Subgroup B guidance for actions or process to employ
- SAV Save for later methodology improvements beyond WG
- DEL Discard now

Structured Discussion: VGI Valuation Methodology

CLUSTER AND NAME.....

Structured Discussion: VGI Valuation Methodology

RESOLVE.....

Work Plan – Revised Schedule

Stage	Content	Sub-Group Working Schedule	Workshop	Draft Final Materials/ Report by Gridworks
1	Kick-off	---	8/19	---
2	Vet and finalize PG&E VGI Valuation Methodology	8/20-9/20	9/26	10/8
3	PUC Question 1	9/26-11/8	11/14-11/15	11/26
4	Interim Report	---	---	12/10
5	PUC Question 2 (compare to other DERS)	11/15-1/10	1/16-1/17	1/28
6	PUC Question 3 (policy recommendations)	1/17-2/21	2/27	3/10
7	Final Report	---	4/9	3/27

Final Report Submitted: 4/28/2020

Preliminary Principles and Priorities from Gridworks VGI Framing Document

Our methods of evaluating VGI's value should be:

- Inclusive without prejudice
- Able to leverage available information, identify and narrow any information gaps, and adapt to new information
- Reasonably efficient to implement, balancing progress, consensus building, time and accuracy
- Technology and business model neutral
- Transparent and clear
- Allows quantifiable analysis and assessment of benefits and costs
- Capable of recognizing the needs and interests of a broad constituency

Launching Subgroup "B"

PUC Question 1: What VGI use cases can provide value now, and how can that value be captured?

- Subgroup leader(s)
- Subgroup participants
- Subgroup process
- Plan and schedule
- Progress calls (10/10, 10/17, 10/24, 10/31)
- Foundational materials
- Outputs (due 11/8 as input to 11/14-11/15 Workshop)

Subgroup “B” Process from Work Plan

- Apply Use Case Valuation Methods developed in Stage 1, identifying, screening, quantifying and weighing, and prioritizing potential use cases
- Parties propose answers to Question 1 for sub-group consideration
- Sub-group calls allow for presentation of party proposals, feedback, and refinement
- Identify key assumptions underpinning proposals and recommendations that may further proposals (identify now, evaluate in Stage 5)
- Unknowns acknowledged and documented
- Outcomes: Sub-group proposal(s) containing recommended high-value use cases, documented unknowns and assumptions; presentations of proposal for the Workshop; "Still to Do" List

Wrap Up

General

- Recap action items
- Next Workshop: 11/14-11/15 in San Francisco or Oakland

Subgroup “B” on PUC Question #1

- Sub-group work schedule: 9/26-11/8
- First sub-group planning call: (Date and time)
- Sub-group progress calls: 10/10, 10/17, 10/24, 10/31
- Deadline for parties to submit proposals: 10/16