

ALL HANDS

DESIGN

Participation and Democracy as Innovation



Program administrators, implementers, and evaluators can learn a lot from stakeholders, trade allies, and customers, but only if we listen.

There is often a disconnect between a customer's experience in a program and what the designers of that program envisioned. After all, administrators and implementers often design from the perspective of their own preferences and experiences and/or what an evaluation team has recommended to them. Yet, because most consumers are not well informed on energy offerings, particularly when we are discussing emerging energy technologies, there is often a gulf between the best intentions of a program or service and the experience of participants. Participatory design can help solve for this disconnect.

Using participatory design, we can gather a wide range of stakeholders from administrators and implementers to trade allies, customers, and community-based organizations to get offerings right before they hit the market.



The core of participatory design is that the people who will be impacted by the design (end users, market actors, trade allies) are integrated into the design and have a voice in the design process from the beginning.

So how do we integrate participatory design into our planning processes?

Below we illustrate a re-envisioned process from the perspective of a utility electric vehicle servicing equipment (EVSE) offering, drawing on our recent evaluation work with partner ERS. In this work, we listened to EV charging station site hosts through in-depth interviews. We found that the motivations of site hosts vary considerably; some prospective site hosts were interested in owning and operating charging stations to generate revenue from this service (especially DCFC stations) while others were motivated to provide a better experience for their customers by offering onsite charging.¹

The situation:

Utility X wants to develop a program to support residential customers adopt EVs in their territory by driving EV charging infrastructure development.

The question:

How can we design an EV program to meet utility and state goals?



Step 1: Understanding

As written, the design question, “how can we design an EV program to meet utility and state goals?” is utility-centered, not user-centered. This question does not address why a commercial customer might be interested in installing EV charging infrastructure, nor any challenges or barriers they might face in doing so.

The first step to remedy this disconnect is simple: identify and understand the needs and concerns of the future participants of an EV charging infrastructure program. In this case, it is also critical to understand the needs of commercial customers who might install EV charging infrastructure at their sites. To do that, we can begin by listening to their needs and concerns through **in-depth qualitative research**.

There are a number of actors who may be interviewed in this stage, from EV owners who might seek out charging, to facilities managers, to business owners. Additionally, it can be valuable to speak with external stakeholders who require that the EVSE program meet particular success metrics.

In this stage, the design team will likely identify an important finding: that the program must be designed to serve two EVSE installer constituencies—those who want to earn a profit from charging stations and those who want to enhance the experience of their customers and/or constituents by providing the service.

Empowered with this knowledge, the designers can move to develop two program concepts, each meeting the needs of the two EVSE installer constituents.

Step 2: Concept Development

Once the team understands the needs and concerns of the individuals who might want to access the EV charging stations or might want to be involved in their installation and site oversight, Utility X's program design team can integrate these findings into a product and go-to-market strategy that meets their customers' needs while supporting Utility X in meeting its goals.

Given that our research identified a wide range of motivations to installing EV chargers, the Utility X team can develop two different program model prototypes to support EV charging infrastructure: one that maximizes revenue, and another that maximizes customer experience.

BUSINESS MOTIVATIONS FOR FAST CHARGING HOSTS

Revenue model:

- Expectation of pay-to-charge
- Streamlined implementation to minimize costs
- No frills design, little investment in aesthetics
- Minimal investment in customer experience
- Higher initial investment to maximize returns
- Placed in a high traffic parking area, not focused on being a display item

Customer Experience model:

- Expectation of free charging or low-cost charging rates
- Opportunity for a leasing model where vendor or utility covers maintenance costs
- Placed in an area where it is on display
- Integrate with other amenities (e.g. park, food court, urban farms)
- Aesthetics are primary – chargers can be designed differently to mimic the architecture of the space
- Work with urban planners to develop green space, benches, shade trees, etcetera
- Pair with information about clean energy benefits as well as benefits to EV customers

Step 3: Cocreate and Iterate

Once the team has developed the prototypes of the revenue and customer service models (described above), its time to test them with those most impacted by the design. The team and Utility X can use this feedback loop to return to potential participants and conduct more research.

a. Reach out to the previous research participants:

The team can start by reaching out to the participants (or a subset of participants) from the initial round of research to get their perspective on the prototype designs. This act of “closing the loop” ensures that community members and other stakeholders feel included in the whole process, rather than feel like they are a part of an extractive or exploitative model.

The project team integrates feedback from the previous participants to refine the prototypes.

b. Start small:

Next, the team expands input to individuals beyond those already involved in the design. The team can begin small by working within networks of “friendly” contacts (e.g. friends and family of utility employees, trade allies and others connected to the utility) and gather feedback from this small group to identify initial learnings, explore how the concepts resonate more broadly, and integrate them before a broader rollout.

c. Pilot the design:

Utility X moves forward with a pilot in a limited set of places/communities. The pilot design includes research activities throughout the process to ensure that commercial customers, their employees or tenants, as well as members of the public have the opportunity to provide feedback on the experience.

With the results of the pilot in hand, the program team iterates and refines a final time before launching a full program as part of their portfolio.

STEP 4: LAUNCH (Introduce a Program)

Through this co-design process, stakeholders have multiple opportunities to share their experiences and provide input and feedback as initial concepts are vetted and tested.

Utility X now has sufficient input to develop an offering that includes program designs tailored to meet the various needs and concerns of commercial customers exploring EV charging station installations.