

# MEMO

## AZ TE PHASE II PLAN – WORKSHOP 3 QUESTION LOG

**PREPARED FOR:** APS and TEP

**PREPARED BY:** E3, ILLUME

**DATE:** February 10, 2021

The following questions and comments were submitted by attendees at Workshop 2 (November 11, 2020) through the Zoom Q&A and chat box features. We show corresponding responses provided in real-time during the workshop as well as follow-up responses provided by the E3 and ILLUME team.

### PRESENTATION OF FINAL REPORT

#### STAKEHOLDER1 01:13 PM

September In Norway Goes Off The Charts — Record Plugin Vehicle Market Share Of 82%

<https://cleantechnica.com/2020/10/01/september-in-norway-goes-off-the-charts-record-ev-market-share-of-82/>

#### STAKEHOLDER2 01:16 PM

Has there been an analysis of what EVs would be for personal vs fleet? [2:05 PM] ...For looking at different types of vehicle segments that are going to be adopted between 2020 and 2040, ...was there any analysis done to...give an approximate percent of what the mix would be (of different vehicle types)?

**Answer from E3** The focus here has been more on what the costs and benefits are versus more consumer adoption modeling. We have not attempted to look at (percent by vehicle type). The only extent to which we've done that was to use some assumptions around how the transportation network company or rideshare light duty vehicle portion changes over time. There's some detail on this in the appendix with the modeling details.

#### STAKEHOLDER7 02:05 PM

**STAKEHOLDER7** In support of STAKEHOLDER2's target, the city has 785 LDVs that could go to EVs.

#### STAKEHOLDER3 01:17 PM

Why didn't Salt River Project (SRP) participate in this AZTE? Do they already have EV-supportive rates/policies?

**Answer from STAKEDHOLER2** SRP did participate in this AZTE, to provide guidance and support. In 2019, SRP's Board of Directors approved a goal to support the enablement of 500,000 EVs in SRP's service territory and manage 90% of EV charging by 2035. This goal was set through SRP's stakeholder process and SRP is working hard to shape our EV future by identifying opportunities for increased adoption and setting strategic priorities for each EV sector.

**ANONYMOUS ATTENDEE 01:18 PM**

On slide 8, are the PCT, IM and SCT in a ratio? Does that mean for every dollar invest statewide in the low scenario, that there will be \$1,297 in net present benefits? Please clarify. Thank you!

**Answer from E3** Hi there. These are not ratios (although those cost tests are often reported as benefit:cost ratios). The values on that slide, alternatively, are net present benefits, in millions of dollars.

**STAKEHOLDER4 01:20 PM**

Does the Societal Cost Test factor reduced healthcare costs associated with cleaner air?

**Answer from APS** I would ask E3 to weigh-in but they indicated that they used SCT as defined by the CPUC which, as I understand, includes healthcare benefits associated with environmental attributes.

**STAKEHOLDER1 01:29 PM**

A local policy toolkit for electric transportation. <https://www.goecity.org/policy-toolkit>

**STAKEHOLDER1 01:32 PM**

Rocky Mountain Institute Report Highlights How Fleet Managers Can Prepare For Coming Wave Of Electrified Vehicles <https://cleantechnica.com/2021/01/21/rocky-mountain-institute-report-highlights-how-fleet-managers-can-prepare-for-coming-wave-of-electrified-vehicles/>

**STAKEHOLDER6 01:33 PM**

FYI - The Swedish-American Chamber of Commerce Annual Summit will be held in Arizona, instead of in Washington D.C., this year. Reserve the date, November 3, 2021. One key industry area for the summit is Mobility, with a focus on Electric and Autonomous Vehicles. For more information connect with me, [joacim.mattisson@saccarizona.org](mailto:joacim.mattisson@saccarizona.org) or on LinkedIn <https://www.linkedin.com/in/joacimmattisson/>

**STAKEHOLDER7 01:39 PM**

An important one missing: % of total vehicle sales! [2:06 PM] An important indicator is % of total vehicle sales, as it is dynamic, and monitor effectiveness of programs...could that be added as indicator to track?

**Answer from E3** It is an important indicator and one that could be added to the list. It would require being able to source that data from ADOT, or another source.

**STAKEHOLDER8 01:39 PM**

What mechanisms will be put in place to help with not just grid capacity needs but also balancing the electricity demand coming online?

**Answer from E3** The low hanging fruit there is through time of Use rates and trying to get as much charging done in a managed fashion as possible. Perhaps the utilities could say more?

**Answer from TEP** ...(addressing increase in demand)...There are ways to program in diversity factors. Certainly, us at Tucson Electric Power, we're looking at some load management platforms which presumably would have some connectivity to chargers. (You could stagger the timing of charger use) to not have an adverse impact on the grid or on the charging functions of those chargers and those customers.

STAKEHOLDER9 01:40 PM

The ratio of DCFC stations to EV adoption can be misleading. We are getting more DCFC and EVs but which causes the other? Or do they both grow on their own. The VW settlement has led to the most growth yet their VW ID4 is not here yet. So, no real correlation.

**Answer from E3** Hi STAKEHOLDER9. It's a good point that there's often a "chicken and egg" question with charging infrastructure and EV adoption. However, we think that tracking this ratio as one (but not the only) metric will nonetheless be useful in assessing progress towards the goal.

STAKEHOLDER10 01:42 PM

Will the report include a few detailed goal scenarios, also broken down by utility?

**Answer from E3** Hi STAKEHOLDER10. Yes, the report has detail on the different adoption scenarios, at both the utility service territory level (for APS and TEP), and the extrapolated results at the statewide level.

STAKEHOLDER11 01:45 PM

What will be done to protect access and limit damage to EV charging stations? [2:02 PM] ...I am referring to blocking by ICE vehicles and sabotage. I would recommend cameras in all chargers taking photos of cars at chargers and video triggered by damage to the cables...

**Answer from APS** Interesting question STAKEHOLDER11. We use protective bollards to help with accidental impact with vehicles, for the APS DCFC they will be in well lighted commercial locations.

**STAKEHOLDER11** This is a problem at Tesla Superchargers, even in well-lighted commercial locations.

**Answer from APS** That's unfortunate and something that could be looked at.

STAKEHOLDER12 01:47 PM

Is the APS EV program for builders currently available?

**Answer from APS** Yes, this was approved in APS's 2020 DSM plan. The APS DSM team is managing that project, for specifics please reach out to [Christopher.Baggett@aps.com](mailto:Christopher.Baggett@aps.com).

STAKEHOLDER1 01:56 PM

Demand Charges: What Are They Good For? <https://www.raponline.org/knowledge-center/demand-charges-what-are-they-good-for/>

STAKEHOLDER9 02:03 PM

Is there a way to record and measure progress, the number of EVs, fleets going electric, number of EV buses in the state etc.?

**Answer from E3** Check ADOT for this type of information. There are other private services that can provide detail on vehicle registrations to check ratios of EVs to classic vehicles.

STAKEHOLDER13 02:03 PM

Congratulations TEP, APS and Illume for great work! Arizona Forward looks forward to continued participation and how we can help!

STAKEHOLDER3 02:03 PM

APS proposed DCFC tariff for EVSP-operated stations. Can you please explain what that means for a transit agency transitioning to battery electric buses?

**Answer from APS** As was identified in a lot of the working groups, rates for specific use cases are going to be a really important part of transitioning. Especially fleets to electrification and that includes buses. It includes transit vehicles, but also, fleet and delivery trucks – things that are parked at a depot. The DC fast charging rates for the third-party EVSPs, those are really the public charging stations that get put out by EVgo, Electrify America, Tesla, ChargePoint, Blink, some of those others, which is a really specific use case. So, this rate was specifically designed for that use case. We have work to do to understand how to come up with DCFC rate for transit buses, and perhaps a different rate for fleets. They have different use cases, and we have to understand how they really integrate with the grid, how we can get the right charging behavior, plus how we can encourage more electrification. More to come on that, but this existing rate is just for third-party DCFC stations.

STAKEHOLDER14 02:04 PM

Since this is an AZ plan, what can we expect from TEP's Unisource cohort. Will they at least trail behind TEP, using the best and dropping the worst?

**Answer from TEP** Hi STAKEHOLDER14, we are currently developing a Roadmap for our Unisource territory and yes, we will certainly use lessons learned from our work in TEP territory.

STAKEHOLDER11 02:07 PM

Ideal to capture license plates of vehicles blocking (including ICE vehicle and EVs that remain parked in front of a charger long after charge is complete) and faces and license plates of saboteurs. [2:12 PM] ...(Blocked charging spaces – non-electric vehicles or EVs that are done charging – is a problem. The other thing is the cutting of cables – that's the sabotage I'm referring to. I would recommend a camera that takes pictures of the cars parked in the space with timestamps...

**Answer from E3** Thank you for the suggestion.

**STAKEHOLDER 9** Yes, enforcing fines for those that block charging is a big issue.

STAKEHOLDER15 02:08 PM

<https://www.gogoro.com/> The way gogoro electrified transportation through electric scooters with swappable batteries could be fantastic for our power grids. As of 2 years ago, they had 1/3 of Taiwan's market share

STAKEHOLDER16 02:12 PM

How were "Underserved Communities" defined? Was it similar to how California defines it in AB-841, or does Arizona have their own definition?

**Answer from E3** No specific definition, there may be one included in Equity working group's final report.

**Answer from ILLUME on behalf of the Equity working group** We looked at populations that had inadequate access to transportation electrification including communities with low-income households, communities of color, non-English speakers, indigenous peoples, rural communities. We also looked at Equity from a lens of procedural equity, distributional equity, structural equity, and intergenerational equity.

**Answer from TEP** To add a bit more about how TEP has defined disadvantaged communities in our commercial program, it's linked to the census definitions.

**Answer from STAKEHOLDER17** The TEP Commercial Charger definition for Disadvantaged Communities is: \*Includes U.S. Census tracts where average household incomes do not exceed 80 percent of the median Arizona household income. For a map of qualifying areas, visit <https://www.census.gov/>

**STAKEHOLDER1 02:12 PM**

Being able to specify a "done charging" time gives the utility a lot of room to manage charging. I don't care what time charging starts. I care that the car is ready to leave when I am.

**Answer from STAKEHOLDER17** The City of Tucson is keeping their parking meters in place at our public charging sites in the Commercial Charging programs projects to limit parking time at chargers and allow for rapid turnover of EV charging sites.

**STAKEHOLDER18 02:20 PM**

Thank you, APS, TEP, E3 and Illume for all your hard work on this and involving us in this important process!