

MEMO

AZ TE PHASE II PLAN – WORKSHOP 1 QUESTION LOG

PREPARED FOR: APS and TEP
PREPARED BY: E3, ILLUME
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The following are questions from the Zoom Q&A feature submitted by attendees at Workshop 1 (August 11, 2020) with the corresponding responses from the E3 and ILLUME team.

STAKEHOLDER1 12:47 PM

Given Illume's expertise in the human dimensions of energy, I'm a bit surprised not to see an "analysis" task focused on social, behavioral, and other human facets of transportation electrification. Is there any plan to include those aspects?

ILLUME Advising has been contracted to lead the stakeholder facilitation process as part of the AZ TE plan. As appropriate, ILLUME will review and provide feedback on E3's Phase II Plan drawing on ILLUME's expertise in the human dimensions of energy resources.

STAKEHOLDER2 12:52 PM

Will this market assessment be publicly available?

Yes, the results of the Market Assessment will be included in the Phase II Transportation Electrification Plan which APS and TEP plan to file with the Arizona Corporation Commission in December 2020.

STAKEHOLDER3 12:52 PM

Will this market assessment include #'s of privately-owned EV's?

Ideally the Market Assessment would document the number of EVs both in Arizona statewide and at a more granular level. However, E3 is still exploring data availability and does not yet know what specifically will be available.

STAKEHOLDER3 12:52 PM

Per city/municipality?

Please see answer to the preceding question, above.

STAKEHOLDER4 12:55 PM

Will the air quality assessment also look at reduction of ozone precursor pollutants and the associated health benefits?

Yes, the Air Quality Analysis will look at the impact of TE on emissions of NOx, SOx, VOCs, and PM.

STAKEHOLDER1 12:56 PM

Are the differences between scenarios primarily in temporality rates? How far do they go in time? We know we need to get to very high rates of adoption eventually to reach carbon neutrality.

E3 will be considering adoption of EVs between 2020 and 2040. The adoption forecasts were developed for APS and TEP by another consultant, and the key differences between those scenarios include assumptions re: battery costs, gasoline prices, consumer awareness of EVs, and EV model availability. E3 will be using the “base” scenario from these analyses, rather than the lower or higher adoption sensitivities.

Separately, E3 plans to use a more ambitious adoption goal (rather than forecast) based on an analysis by the Rocky Mountain Institute. This goal is in turn based on an assessment of the level of EV adoption required to reduce emissions from the transportation sector sufficiently to meet global climate goals (i.e., limiting global temperature increases to 1.8 degrees Celsius).

STAKEHOLDER1 12:58 PM

What assumptions are built into the scenarios about the transition in generation technologies (i.e., renewables) over time in AZ?

E3 is using APS and TEP forecasts of marginal avoided costs on their systems to reflect the electricity supply costs associated with growing TE loads. These forecasts are based on the utilities’ latest Integrated Resource Plans. APS has committed to providing 100% carbon free electricity for its customers by 2050, while TEP plans to provide more than 70% of its power from wind and solar to reduce carbon emissions 80 percent by 2035.

STAKEHOLDER5 12:59 PM

Are Cooperatives participating in this undertaking?

Cooperatives have been included through the stakeholder invitations received by the group in attendance at Workshop 1, but are not directly involved in the process beyond that capacity. We welcome input from the cooperatives and hope that they will be actively engaged participants.

STAKEHOLDER1 01:00 PM

Do your managed charging profiles allow for coordination with future changes in electricity generation and rates?

E3 is still scoping out the specifics of how managed charging will be modeled for this analysis, but has the ability to coordinate charging profiles with generation costs and/or retail rates. Managed charging profiles are typically based on either minimizing electric bills (which assumes that the retail rates are fairly well aligned with electricity supply costs) or on minimizing utility avoided costs directly.

STAKEHOLDER6 01:03 PM

Does the cost benefit analysis include GHG reporting?

Yes, the Cost Benefit Analysis will include the estimated impact of different levels of EV adoption (and different vehicle segments).

STAKEHOLDER7 12:50 PM

DO you have any preliminary sense of how you will try to quantify the statewide goal? is that in terms of Number of vehicles by XX date? or some other metric?

The goal could be based on number of vehicles by a certain date or could be based on some other metric such as reduced carbon emissions. We welcome feedback as to which metrics would be most useful / meaningful and would enable ongoing evaluation of the state's performance towards this target over time.

STAKEHOLDER8 12:52 PM

is this planning being done taking presence of hydrogen production facilities as well and the electricity and grid impacts/load management that technology in concert w DCFC will have on the grid in addition to Level 2 charging

In developing the TE Plan APS, TEP and E3 will consider the potential grid impacts of different charging levels (Level 2, DCFC) on the electricity system, as well as how these impacts change when assuming charging loads are managed rather than unmanaged. The scope of this analysis does not include impacts from hydrogen production facilities.

STAKEHOLDER9 12:54 PM

Will your air quality analysis be conducted for each county our just state-wide?

The U.S. EPA COBRA tool E3 will be using allows for conducting this analysis at either the statewide or county-level. At this time E3 plans to conduct the analysis at the county level for the APS and TEP service territories, and will consider the most appropriate way to reflect the statewide air quality impacts.

STAKEHOLDER8 12:55 PM

no heavy duty?

Assuming this question is in regard to the Cost Benefit Analysis, at this point we are focusing on light duty vehicles (personal and rideshare), parcel delivery vans, and the two different bus types (transit and school).

STAKEHOLDER7 12:56 PM

why just considering parcel delivery vans rather than MD/HD vehicles more broadly?

We have selected the five vehicle segments to represent a range of different TE opportunities. Unfortunately due to time and budget constraints we cannot conduct a Cost Benefit Analysis on more vehicle segments – our intent in choosing the five we will be evaluating was to cover a range of different vehicle types and/or use cases that reflects a decent portion of the potential vehicles which could be electrified.

STAKEHOLDER10 01:03 PM

why can't I see the other participants individually to chat with or see a head count of the number of participants?

ZOOM's webinar functionality does not disclose the names of participants for privacy reasons. Nor does it allow side chats between participants. We did enable the number of participants. We recognize that transparency is important to this process and will share participant information following the meetings and working groups.

STAKEHOLDER10 01:05 PM

who is funding this study? APS and TEP?

Yes, APS and TEP are funding this study, at the direction of the Arizona Corporation Commission.

STAKEHOLDER5 01:05 PM

I understand that SRP is on the line, but will SRP participate in plan development and make commitments in support of the plan implementation?

SRP will be participating in an advisory role. They will not directly be contributing to the plan development in the way that APS and TEP are, and whether or not to endorse additional commitments with respect to TE is a decision for SRP to make.

STAKEHOLDER11 01:06 PM

What projection(s) on public transportation are you using?

E3 will use existing public transit data (i.e., bus routes and annual vehicle miles traveled [VMT]) paired with EV adoption forecasts for transit buses to reflect the level of electrified transit in our Cost Benefit Analysis.

STAKEHOLDER7 01:08 PM

but not any other MD/HD?

wondering why not

[Same answer as above]. We have selected the five vehicle segments to represent a range of different TE opportunities. Unfortunately due to time and budget constraints we cannot conduct a Cost Benefit Analysis on more vehicle segments – our intent in choosing the five we will be evaluating was to cover a range of different vehicle types and/or use cases that reflects a decent portion of the potential vehicles which could be electrified. Medium duty parcel delivery trucks and the two types of buses (transit and school) are representative of the medium and heavy duty classes.

STAKEHOLDER8 01:08 PM

class 8 trucks for heavy duty

Nikola is manufacturing these in AZ

Thank you. We are aware of Nikola's work; at this time we will not be conducting a Cost Benefit Analysis of Class 8 trucks, although the Market Assessment will provide some information as to the current stock of conventional vehicles of this type.

STAKEHOLDER12 01:07 PM

Semi trucks should be included too.

The Market Assessment will provide some information as to the current stock of conventional semi trucks.

STAKEHOLDER13 01:08 PM

Hi Ben, what was the planning horizon(s) for this study?

E3 will be considering adoption of EVs for the years 2020-2040. The lifetime costs and benefits of vehicles adopted in this period will be assessed.

STAKEHOLDER14 01:08 PM

Cut away vehicles are significant components of both School and transit fleet; will they be considered?

E3 does not plan to consider that level of variation within the vehicle segments for the Cost Benefit Analysis.

STAKEHOLDER10 01:09 PM

TEP and APS have fought clean energy tooth and nail. Electric cars are a huge windfall for all power companies. Electric cars will be the only cars made within 10 years.

There does not appear to be a question here.

STAKEHOLDER15 01:11 PM

Can we get a list of who is participating in the stakeholder process. This Webinar format is not very conducive to a true stakeholder/collaboration process.

Yes, this will be provided shortly.

STAKEHOLDER5 01:10 PM

Will this group take into account planned highway projects, such as State Highways and Interstate highways. Clearly, development of these projects will impact travel counts and potential need for charging stations.?

This would be a good question for the working groups to address. We do not have information on planned highway projects. If you have access to that data it may be helpful to inform the work of the infrastructure working group, and we welcome input in this area.

STAKEHOLDER7 01:16 PM

How can we participate in multiple working groups if they all meet concurrently?

Moving forward the working groups will not be scheduled concurrently.

STAKEHOLDER16 01:16 PM

How data related to any/all EV charging systems is handled/analyzed/made available to third parties in terms of managing the pricing/availability of EV charging stations doesn't seem to be a specific topic to be discussed and I would suggest adding data analytics + EV's generally to the discussion mix. I would suggest linking to the activities of the Cities IoT/Smart Infrastructure group in planning what EV infrastructure be deployed and data gathered to maximize the efficiency of any EV deployment....

[Not a question to be answered.]

STAKEHOLDER17 01:23 PM

On the question Kathy is answering on freeways, we will also be including electrified truck stops and depots in our market assessment in our consideration of utility action.

[Not a question to be answered.]

STAKEHOLDER18 01:27 PM

Where are the complete descriptions of the Working Groups?

Additional material will be provided shortly. Thank you for your patience.

STAKEHOLDER15 01:27 PM

Can we get brief descriptions for each breakout group. I know there are descriptions but they are very vague.

Yes, this will be provided shortly.

STAKEHOLDER13 01:33 PM

Kimberly, Ben, I have to leave but plan to continue to participate. We can connect offline as well and see how MAG Regional Transportation Plan and the Air Quality work that we do can be coordinated / contribute to the plan development.

Thank you for the offer STAKEHOLDER13 – we will follow up on this offline.