MEMO

AZ TRANSPORTATION ELECTRIFICATION PLAN, PHASE II - STAKEHOLDER ENGAGEMENT FRAMEWORK

PREPARED FOR: APS and TEP
PREPARED BY: E3, ILLUME
DATE: August 25, 2020

This memo documents the framework for stakeholder engagement for Phase II of the Statewide Transportation Electrification Plan. The framework includes working group objectives, terms of engagement, and a calendar of events.

OVERALL PROJECT OBJECTIVE

Electric vehicle (EV) technology has progressed dramatically in recent years and is beginning to create changes to our conventional transportation system. Transportation electrification (TE) can provide significant benefits to EV purchasers and utility customers generally, improves air quality, and aids in the growth of the Arizona economy. To unlock this value, Arizona's electric utilities along with regulatory agencies, policymakers, automakers, third-party charging service providers, and other stakeholders must work together to support EV adoption while also integrating this new load into the existing electricity system.

Arizona's Statewide Transportation Electrification Plan is intended to provide a roadmap for TE in our state, focused on realizing the associated air quality and economic development benefits for all residents along with understanding the impact of EV charging on the grid. In 2020, Arizona utilities – Arizona Public Service (APS), Tucson Electric Power (TEP) – and other stakeholders will discuss proposed TE programs and initiatives with the ultimate goal of drafting a plan to expand TE in Arizona.

OVERALL GOALS FOR STAKEHOLDER WORKING GROUPS

The overall goal of the stakeholder working groups is to elicit key points of feedback for consideration in the Phase II planning process from stakeholders. The stakeholders' feedback will be used to give context to the research, understand and identify barriers, and plan ways to overcome barriers. The working groups' findings and recommendations will inform the gaps and recommendations in the Phase II TE plan and shared with the broader stakeholder group at the upcoming workshops. Specifically, the stakeholders' recommendations and proposed actions will help to inform:

- The "Gaps Analysis" E3 is conducting to identify barriers to TE and initiatives to overcome them.
- The coordinated actions required by utility and non-utility partners to support TE.
- Additional analysis by E3, if feasible.

Participating in the working groups is the most direct way to provide input to the plan. It is important to APS and TEP that stakeholders' voices are heard and reflected in the final deliverable to ensure that Arizona can support a robust TE sector.

INDIVIDUAL WORKING GROUP OBJECTIVES

Working group objectives provide structure and guidance for the working groups participating in the development of the Phase II Arizona Statewide Transportation Electrification (TE) Plan (Phase II TE Plan) being led by APS and TEP.

We have outlined objectives to focus each working group's discussion and tie into the Phase II TE plan. For each working group, we will provide:

1. A facilitator (for the chair kickoff meeting and formal working group meetings)
2. Reference reports
3. Subject matter experts to answer questions and recommend additional resources

To catalyze the working group discussions, we included a number of questions from various sources including some that came from the Southwest Energy Efficiency Project's (SWEEP's) Arizona Transportation Electrification Forum held in October 2019. We welcome working group members to develop additional questions as the stakeholder process continues.

Please refer to APPENDIX A. Working Group Objectives for details on objectives and guiding questions for each group.

EXPECTATIONS OF WORKING GROUP CHAIRS

To lead stakeholder working groups through the Phase II planning process, we ask working group chairs to fulfill the following responsibilities:

Convene your working group at least two times to address the objectives set forth in this document;

- Meetings should take place in between full-group Workshops.
- The number of times your working group meets should be contingent upon the level of engagement of your working group members.

Assign roles within your working group sessions to ensure:

- **Minutes are taken** and stored on SharePoint.
- **Action items are documented and summarized at the close of the meeting**, stored on SharePoint, and circulated to the working group.
- **Follow-up meetings are scheduled** in accordance with most working group members' schedules.

Create a safe meeting space to allow for:

- All voices to be heard, encouraging multiple viewpoints to be discussed.
- Working group members to state their views clearly, ask questions when things are unclear, and allow development of collective feedback.

Refer to Terms of Engagement for guidelines on how to encourage constructive engagement. Please share these guidelines with your working group members. Group facilitators may also help in ensuring balanced input from working group members.

Empower your working group members to collaborate throughout the process by:

- Identifying opportunities for your working group members to collaborate such as forming 2-3 person teams to tackle a guiding research question.
- Another activity you deem critical for moving the group forward.

Ensure resources are provided through the appropriate channels. Working groups have access to tools designed to facilitate collaboration:

- SharePoint: a place to archive meeting notes and save group-specific inputs.
- Microsoft Teams: a place to communicate online and to schedule meetings.

When it is unclear which tool is appropriate or how features of these tools work, reach out to Goldie Christensen at goldie@illumeadvising.com

Elevate any concerns you have with the working group to Kimberly Jaeger Johnson at kimberly@illumeadvising.com. We are committed to ensuring that you have the support you need to resolve any issues that may arise.

TERMS OF ENGAGEMENT

We ask that stakeholders adhere to a set of ground rules designed to encourage constructive engagement:

Be clear. State your views using clear language and with the intent of sharing information. Share all information you have that is relevant to discussion topics.

Be curious. When something is unclear to you, it may be unclear to others. Ask genuine questions to understand the information others share and be curious about the differences in others' views.

Be aware. Engage in discussion mindfully such that you hold space for others' contributions as much as your own.

SUPPORT FOR WORKING GROUPS

The stakeholder development process within the Statewide Transportation Electrification Plan – Phase II is driven by the utilities with support from E3 and ILLUME Advising. The table below outlines the roles and responsibilities of these respective organizations, as well as whom to contact, and under what circumstances.

TABLE 1. SUPPORTING ROLES AND RESPONSIBILITIES

ORGANIZATION	ROLES AND RESPONSIBILITIES
APS AND TEP	• Provide Plan Development: guidance, direction, establish objectives towards the implementation of the TE process. • Utility representatives attend all Workshops and will attend all Working Group Meetings to assist stakeholders as questions arise with regard to utility offerings, current programs, and regulatory-related questions. Utility representatives will not drive stakeholder discussions. • Utility representatives will assist in answering questions that come through the Microsoft Teams environment. • Questions typically answered by this group: "What type of incentive programs are currently available to EV customers in TEP's territory?"
Energy + Environmental Economics (E3)	• Provide Research and Evaluation: As the lead driver on the TE Plan E3's role is to provide stakeholders with research findings in the areas of: Market Assessment, Air Quality Potential & Analysis, Cost-Benefit Analysis, Gaps Analysis and Proposed Actions. • E3 representatives attend all Workshops and several of the initial Working Group Meetings (Kickoff and First Working Group meetings for EV Infrastructure, Goods Movement and Transit, and Vehicle Grid Integration) to provide technical assistance in the above-mentioned areas. E3 will attend additional working group meetings to offer technical support on an as-needed basis. • E3 representatives are available to field technical assistance questions that arise within individual working groups within the Microsoft Teams environment. Responses will be returned within 3 working business days. • Questions typically answered by this group: "What type of inputs have other states used as they create cost-benefit analyses?" "Where can I find out how many charging stations are currently installed in Coconino County?"
ILLUME Advising	• Responsible for facilitation of Working Groups, communication tools/environment, stakeholder customer service. ILLUME is responsible for facilitating, hosting, and logistics around stakeholder meetings and the creation of an online environment for stakeholder communication, feedback, and reporting. • ILLUME representatives attend all Workshops and formal Working Group Meetings) to assist working group leadership in keeping conversations within the scope/objectives, and to step in as appropriate to model ways to elicit feedback from participants. ILLUME is also responsible for troubleshooting technical issues around the Microsoft Teams and SharePoint environment. The ILLUME team is responsible for onboarding new stakeholders and providing customer service to stakeholders. • ILLUME representatives monitor the Microsoft Teams environment for stakeholder comments, questions, and to ensure scheduling of meetings. Responses to questions will be returned within 3 working business days. • Questions typically answered by this group: "How do I create a working group meeting and where do I include the zoom link?" "I have a colleague that wants to join the group. How can we onboard this person?" "Where do I upload our meeting notes?"

Each working group is supported by a team of subject matter experts. The following individuals are designated representatives of APS, TEP, E3 and ILLUME:

EV INFRASTRUCTURE

- Plan context: Devon Rood, APS – devon.rood@aps.com; Judson Tillinghast, APS – Judson.tillinghast@aps.com
- Plan context: Art Fregoso, TEP – afregoso@tep.com
- Study insights: Ben Shapiro, E3 - ben.shapiro@ethree.com
- Group facilitation support: Anne Dougherty, ILLUME Advising - anne@illumeadvising.com
- Technical support: Goldie Christensen, ILLUME Advising - goldie@illumeadvising.com

EQUITY

- Plan context: Kathy Knoop, APS – Kathy.knoop@aps.com; Mike Denby, APS – Michael.denby@aps.com
- Plan context: Nicole Hopkins, TEP – Nicole.Hopkins@tep.com
- Group facilitation support: Victor Mercado, ILLUME Advising - victor@illumeadvising.com
- Technical support: Goldie Christensen, ILLUME Advising - goldie@illumeadvising.com

PROGRAMS AND PARTNERSHIPS

- Plan context: Brent Goodrich, APS – brent.goodrich@aps.com; Kerri Carnes, APS – kerri.carnes@aps.com
- Plan context: Camila Martins-Bekat TEP – cmartins-bekat@tep.com
- Group facilitation support: Kimberly Jaeger Johnson, ILLUME Advising - kimberly@illumeadvising.com
- Technical support: Goldie Christensen, ILLUME Advising - goldie@illumeadvising.com

GOODS MOVEMENT AND TRANSIT

- Plan context: David Peterson, APS – David.peterson@aps.com
- Plan context: Francisco Castro, TEP – Fcastro@tep.com
- Study insights: Ben Shapiro, E3 - ben.shapiro@ethree.com
- Group facilitation support: Amanda Maass, ILLUME Advising - amaass@illumeadvising.com
- Technical support: Goldie Christensen, ILLUME Advising - goldie@illumeadvising.com

VEHICLE GRID INTEGRATION (VGI)

- Plan context: Jay Delaney, APS – Jason.delaney@aps.com; Derek Seaman, APS – derek.seaman@aps.com
- Plan context: Ray Martinez, TEP – RMartinez1@tep.com
- Study insights: Eric Cutter, E3 - eric@ethree.com
- Group facilitation support: Anne Dougherty, ILLUME Advising - anne@illumeadvising.com
- Technical support: Goldie Christensen, ILLUME Advising - goldie@illumeadvising.com

STAKEHOLDER ENGAGEMENT TOOLS

The following table summarizes the working group tools that will remain available throughout the duration of the project.

TABLE 2. STAKEHOLDER ENGAGEMENT TOOLS

TOOL	USES
Microsite	The microsite is an informational website that houses the formal output of the Phase II Plan and the stakeholder process. This will include: 1. Webinar and presentation recordings 2. Interim deliverables from the working groups and/or E3 if any 3. A list of upcoming meeting dates 4. A summary of the working groups including the focus areas, guiding research questions, and chair names / contact information 5. How-To demos for using SharePoint and Microsoft Teams
SharePoint	The SharePoint site will serve as a library for studies, inputs, and materials provided by the working group. It will also serve as a platform for storing working documents such as meeting minutes produced by the stakeholder groups.
Microsoft Teams	Microsoft Teams will be used as a Working Group communications platform, where each group will have their own group to self-organize communications, calendars, and deliverable dates. We will encourage the groups to keep content posted on SharePoint and provide links to that content (vs. storing content on Teams). Working groups will be able to utilize Teams' video conferencing technology for meetings.

In addition to these tools, we will provide working group chairs with other materials including a draft meeting agenda and a draft slide deck with built-in background information to support.

CALENDAR OF EVENTS

TABLE 3. CALENDAR OF EVENTS & OBJECTIVES

EVENT	DATE	OBJECTIVES
Workshop 1	**Aug 11**	• Introduced the general approach to stakeholder engagement • Convened initial working groups • Identified working group chairs
WG Chair Kickoff	Week of Aug 31	• Orient chairs to the stakeholder engagement framework • Review objectives and guiding questions • Review resources and supports for chairs • Answer questions (e.g., overall process, expectations for chairs, use of working group input in Phase II TE Plan)
WG Meetings	Aug 31-Oct 2	• Schedule meetings using Microsoft Teams • Track attendance and meeting minutes • Discuss guiding questions • Prepare feedback for consideration in the Phase II plan • Prepare an update to share out with the whole group during Workshop 2, plan on a 10-minute update per Working Group
Workshop 2	**Oct 7** (tentative)	• E3 presents initial study findings • Working groups share general updates on their activities including what's been done so far and what's planned next for the whole group during the workshop
WG Chair Check-ins	On-going	• Chairs meet with APS, TEP, E3, and ILLUME to provide general updates on how working groups are going including activities to date, anticipated next steps, and any areas where support is needed • APS, TEP, E3, and ILLUME provide support as needed
WG Meetings	Oct 7-Nov 6	• Schedule meetings using Microsoft Teams • Track attendance and meeting minutes • Discuss guiding questions • Prepare feedback for consideration in the Phase II plan • Prepare an update to share out outcomes of the group's work to date during Workshop 3
Workshop 3	**Nov 10** (tentative)	• E3 presents draft "Gaps Analysis" results and potential TE-enabling actions • Working groups share outcomes of the group's work to date
WG Chair Debrief	Week of Nov 16 (tentative)	• Chairs meet with APS, TEP, E3, and ILLUME to debrief on their experiences in leading working groups

APPENDIX CONTENTS

APPENDIX A. WORKING GROUP OBJECTIVES

Arizona Statewide Transportation Electrification Plan, Phase II
Working Group Guidance

Introduction

This document is intended to provide structure and guidance for the working groups participating in the development of the Phase II Arizona Statewide Transportation Electrification (TE) Plan (Phase II TE Plan) being led by Arizona Public Service (APS) and Tucson Electric Power (TEP).

For each working group, we have outlined objectives to focus the group's discussion and tie into the Phase II TE plan. Reference reports and subject matter experts will be available to the working group participants to answer questions or recommend additional resources and welcome working group members to introduce additional references.

To catalyze the working group discussions, we have included a number of questions from various sources including some that came from the Southwest Energy Efficiency Project's (SWEEP), Arizona Transportation Electrification Forum held in October 2019. We welcome working group members to develop additional questions as they may arise.

How Working Group input will be used:

Working group findings and recommendations will be incorporated into the Phase II TE plan and shared with the broader stakeholder group at the upcoming workshops. Specifically, recommendations and proposed actions will help to inform:

- The "Gaps Analysis" E3 is conducting to identify barriers to TE and initiatives to overcome them.
- The coordinated actions required by utility and non-utility partners to support TE.
- Additional analysis by E3, if feasible.

It is important to APS and TEP that stakeholders' voices are heard and reflected in the final deliverable to ensure that Arizona can support a robust TE sector.

+ EV Infrastructure

o   Objectives and Ties to Phase II TE Plan

- Identify key barriers and opportunities to develop sufficient charging capabilities to support anticipated levels of EV adoption.
- Identify and prioritize, by lead stakeholder, the near-, medium- and long-term actions necessary to enable greater TE in Arizona sufficient to meet the outlined adoption goal.

o   Discussion Questions

  + Charging Deployment
      o What are the barriers and best policies for enabling and expanding Level 2 EV Infrastructure to multi-unit dwellings, vehicle fleets and workplaces?
      o Given the forecast for EV chargers, what are the primary barriers to meeting this level of development of EV Infrastructure, including different types (Level 2, DCFC) and locations (home, workplace, public)?
      o What missed opportunities for EV charging station infrastructure exist across the state? What should be done to address these missed opportunities?
      o Which organizations and/or entities are best positioned to overcome these barriers?
      o Where do potentials for collaboration exist (e.g., local governments working with the utilities and electric vehicle service providers) to develop building codes and permitting processes that streamline installation of EV supply equipment (EVSE) without compromising safety considerations.
      o What are the challenges around interoperability and open charging protocols for both Level 2 and DCFC?

  + Ownership of Infrastructure
      o How will/should different charging station ownership models play out in Arizona (i.e. utility versus third-party owned)?

  + Building Codes and Policies
      o How can we overcome zoning codes issues that may hinder the development of EVSE in multi-family residences or commercialized zones?
      o What opportunities exist to adopt residential and commercial EV-ready building codes to spur EV adoption, and can performance-based incentives play a role?

+ Equity

o   Objectives and Ties to Phase II TE Plan

  + Determine how EV policies and programs can grow access to Transportation Electrification in underserved communities.
  + Identify key considerations and opportunities to ensure all Arizonans can share in the benefits offered by EVs and related technologies, especially those parts of the community which have historically been underserved or disadvantaged.
  + Identify and prioritize, by lead stakeholder, the near-, medium- and long-term actions necessary to ensure equity in the development of programs and deployment of TE infrastructure in Arizona.

o   Discussion Questions

  + Accessibility
      o Identify the primary ways in which the conventional transportation sector produces or exacerbates existing inequities between or within communities across the state.

- Discuss how increasing electrification of transportation modes and options in Arizona may perpetuate existing inequities; develop recommendations for how this can be avoided or mitigated.
- Investigate how equity in TE is being handled in other jurisdictions; report out on "best practices," as well as any pitfalls to avoid.
- Research the effectiveness of different incentive programs (e.g., upfront rebates, financing options, and discounted retail rates), awareness campaigns, or other programs that may focus on including underserved or disadvantaged communities in the transition to TE.
- Develop potential metrics for assessing whether existing or initial TE programs and offerings in Arizona are sufficiently addressing equity concerns.
- How can EVs and related technology be made accessible to these consumers in ways that address their mobility needs and energy and transportation budget?

+ Funding Mechanisms

- How can tools like vouchers, rebates, and financing assistance programs be designed and implemented to bring down the costs of EV ownership for low-income consumers?

+ Education and Outreach
- How can we promote EV awareness in underserved and hard-to-reach communities? What are the channels of communication for these populations? Who are the trusted messengers? How can we develop plans to educate and promote EVs as an option to these communities?
- How can we educate auto dealers on EV benefits and incentives, and especially on available incentives for low-income consumers?

+ Employment Opportunities
- How can Arizona's growing EV economy prioritize and target underserved community members for hiring and training?

+ Programs and Partnerships

o Objectives and Ties to the Phase II TE Plan

+ Identify key opportunities and synergies for the development of programs and partnerships to support the broad adoption of EVs in Arizona.
+ Map the core competencies of different TE stakeholders to the barriers which need to be addressed; identify which players are best positioned to help overcome specific barriers, and where gaps remain.

o Discussion Questions

+ Program and Policy Design
- What best practices, program and incentive models exist in other states for partnerships between government entities, fleets, Transportation Network Companies (TNCs), nonprofits, and industry to expand EV education and outreach? Which of these practices/models are ripe for adoption and implementation in Arizona?

- What programs and incentives exist and/or are the most effective nationally for encouraging EV adoption? Which of these offerings are ripe for adoption and implementation in Arizona?
- What is the potential for pilot programs to test new program models and concepts? What should the process be for proposing and funding smaller-scale pilot programs outside of rate cases?
- What are the primary barriers to further adoption of EVs in different vehicle segments and from the perspective of different stakeholders, as well as potential actions for overcoming these barriers?

✛ Goods Movement and Transit

o   Objectives and Ties to the Phase II TE Plan

- ✛ Describe and document the primary barriers or challenges to electrification of different medium duty and heavy duty (MD/HD) vehicles, focusing on distinctions between these vehicles and light-duty vehicles. Examples may include lack of sufficient charging infrastructure to power these larger vehicles, availability of EV models for the required use cases, and load management challenges due to the size of charging loads, among others.
- ✛ Identify and prioritize, by lead stakeholder, the near-, medium- and long-term actions necessary to enable MD/HD TE in Arizona.
- ✛ Discuss EV load impacts and related management or mitigation strategies to integrate electric MD/HD vehicles into the electricity system.
- ✛ Document the specific needs of fleet operators, transit agencies and other stakeholders.

o   Discussion Questions

- ✛ Charging Deployment
  - o Considering the work under the Alternative Fuel Corridor Study, are there other locations that should be considered?[1]

- ✛ Partnerships
  - o Identify the best practices around partnerships to catalyze electrification of transit systems and delivery van fleet electrification.
  - o What are the barriers related to inland ports and ports of entry?

- ✛ Grid and Resource Planning Impacts
  - o Given the potential impacts of MD/HD vehicles on the grid, what are the opportunities around managed charging and non-wire alternatives to assist in reducing those impacts?
  - o What are the energy demand and load effects associated with the outlined adoption goals?

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[1] https://azdot.gov/planning/transportation-planning/alternative-fuel-corridors

✚ Vehicle Grid Integration (VGI)

o **Objectives and Ties to the Phase II TE Plan**

✚ Provide guidance on the priority VGI opportunities to be explored and developed in Arizona including managed charging, demand response, vehicle-to-home, and vehicle-to-building.

✚ Develop recommendations for VGI programs and partnerships to prioritize, and the specific actions which the utilities and other TE stakeholders should take to realize these opportunities. Focus on near-term actions, while documenting medium- and long-term needs to develop a comprehensive approach to VGI planning and use cases.

o **Discussion Questions**

✚ Grid Resilience
  - o What is the current state of technology of vehicle-to-grid and associated residential and business applications?

✚ Demand Response
  - o How can utility efficiency and demand response programs help reduce projected demand resulting from EV charging?

✚ Managed Charging
  - o What are the resource planning impacts if EV charging occurs with or without control or coordination (i.e. managed versus unmanaged charging)?

✚ Resource Planning
  - o What are the resource planning implications for various organizations of more than one million electric vehicles on Arizona's roads by 2030?
  - o What is the relationship between EV charging, renewable energy, and intermittent energy resources? How can we leverage EV deployment to alleviate the duck curve? Under what use cases could increased EV deployment exacerbate the duck curve? How can this information be used to inform other EV offerings?
  - o What are the best practices around managed charging and other VGI programs and pilots? Which ones are ripe to be implemented in Arizona?