1) Technology Development Pathway Challenges
   • Technology development efforts are needed now to create the technologies needed here and elsewhere
     ▪ Development process & lead-time, long-lifespan conventional infrastructure, need to achieve dramatic GHG goals
     ▪ Also need to achieve economic and environmental co-benefits
   • Barriers Assessment – updated blue chart & highest priorities identified by ETAAC members
     ▪ Including up front capital costs, externalities, “Valley of Death” for commercialization stage, approval processes, information gaps, infrastructure

2) Relevant Lessons Learned from Policies and Programs to overcome barriers
   • US DOE, US EPA, national labs
   • California – South Coast AQMD technology advancement program, BAAQMD, Prop 118, PIER, CALSTART
   • Europe, Asia – UK Carbon Trust, Germany, Japan, China

3) Existing ETAAC report technology areas – green chart
   • Summarize & update key points
   • Relevant new federal funding, where there are remaining gaps
     ▪ Examples: electricity storage, some transportation policies not covered at federal level
   • Relevant federal funding, where CA can help direct and/or compete for federal resources
     ▪ Examples: Investing in CA transportation electrification increases GHG benefits due to CA low-carbon electricity; while CA may have specialized needs due to ambitious renewable energy goals

4) Additional steps needed to develop advanced technologies needed to meet California GHG goals
   • Examples include plug-in hybrid and battery/fuel cell full electric drive vehicles, electricity storage to enable higher levels of renewables, others indentified by ETAAC based on existing ETAAC report and AB32 scoping plan.