



# Electric Vehicle Readiness Roadmap

## EV Readiness Steering Committee Meeting #2

April 18, 2018 | 1:00p MT

### Attendees

Name	Organization
Aaron Iverson	FCMoves
Carrie Frickman	Environmental Services
Noah Beals	Planning and Zoning
Alex Gordon	North Front Range Metropolitan Planning Organization (NFRMPO)
Nick Heimann	FCMoves
Christine Schraeder	City of Loveland
Mark Houdashelt	EV Enthusiasts
Addison Philips	Electrification Coalition & Drive Electric Northern Colorado
Diane Tjalkens	Social Sustainability
Rick Johnson	TransFort
Lindsay Ex	Environmental Services
Michelle Finchum	Utilities
Pablo Bauleo	Utilities Customer Connections
Caitlin May	Streets
Paul Sizemore	FCMoves
Kenyon Neal	FCMoves
Amanda Mansfield	FCMoves
Aaron Fodge	Colorado State University (CSU)
Joel Danforth	Platte River Power Authority (PRPA)
Wendy Jaglom-Kurtz	ICF
Carrie Ryder	ICF
Stacy Noblet ( <i>via phone</i> )	ICF
Louise Huttinger ( <i>via phone</i> )	ICF
Abby Brown ( <i>via phone</i> )	ICF

## 1. Project Status Update

- The project is on schedule.
- The discovery phase of the project is complete, and the project team is close to completing the assessment phase. The plan development phase will begin this month.

## 2. Vision & Goals

- The Steering Committee provided feedback on the proposed vision and goals through a sticky-note exercise. Discussion included:
  - **Combining goals:** Suggestions to combine numbers 1 and 2, 2 and 3, 3 and 7, 4 and 5, and 5 and 6. The project team recommends having 3-5 goals.
  - **Education:** Mixed opinions on whether there should be a goal about education. Awareness is difficult to measure, and awareness doesn't always mean adoption. Some committee members consider education to be a tactic and not a goal. Others felt it was important to include one awareness-focused goal.
  - **Innovation:** Innovation should be included. It is important to experiment for the purpose of expanding electric vehicles (EVs) in Fort Collins (e.g., use Fort Collins as a living laboratory).
  - **Fleet:** Need a specific goal dedicated to the City fleet.
  - **Vision:** Is the vision too lofty? Or not lofty enough?
  - **Context:** Should acknowledge that e-bikes are part of the overarching strategy, though not part of the roadmap, and point to resources for more information. Discuss how EVs fit into the transportation hierarchy.
  - **Leadership:** Would like to use the terms "best city" or "leading city" for EVs (in Colorado? The country?).
  - **Language:** Need to replace the term "consider" with "use" or "choose."

**Action Item:** The project team will apply committee feedback to revise the vision and goals, and send updated language to the committee for consensus.

## 3. Assessment Phase – Stakeholder Outreach

- Interviews: ICF is conducting interviews with stakeholders about EV adoption in Fort Collins and the role of the City.
  - Stakeholders are enthusiastic about the City's commitment to EVs.
  - Recommendation by the committee:
    - Gas stations: The project team should consider reaching out to local gas stations, as they may play a future role in providing EV charging.
- Community Questionnaire: The team received 457 responses to the questionnaire between March 21 and April 9. A summary of responses is attached. Key findings included:
  - Respondents were generally accepting of and interested in EVs.
  - The majority of respondents did not know about federal and state EV purchase incentives.
  - Education levels about EVs were mixed (e.g., an equal number of respondents thought that EVs were slow and fast).
- The project team is working to better engage under-served/under-represented community members.

#### 4. Assessment Phase – Infrastructure Demand Analysis

- **Methodology:** ICF used demographic data from the American Community Survey and trip data from NFRMPO to determine who is likely to own an EV, where they live, and where they travel.
- **Preliminary Results:** ICF created five maps (described below):
  - **Residential:** This map shows where people are likely to own EVs. We place our weighting emphasis on high income, high single-family home ownership, and high hybrid adoption. This map could be useful in understanding potential grid impacts of people charging EVs at their homes, or where there may be clustering of charging demand.
  - **Multi-Family:** This map shows where people who live in multi-family units but are also likely EV adopters live. It still emphasizes high income and high hybrid adoption, but shifts the priority from single-family home ownership to multi-unit dwellings. This map could show where the City may want to do outreach to residential building owners and managers about how to plan and assess charging needs, install infrastructure, etc.
  - **Low-Income:** This map shows where low-income populations live. The model heavily weights low income and high multifamily dwelling. It considers high hybrid adoption, but that doesn't have as much weight as income and dwelling type. This could be useful to show the City the areas that low-income residents could benefit from more public charging so they can charge close to their homes.
    - Note: College students are included in the census data and are reporting low incomes. As a result, the map shows high low-income demand on the CSU campus.
    - **Action Item:** ICF will create a scenario that filters students out of the mapping to more accurately reflect the needs of Fort Collins' long-term low-income residents.
  - **Workplace:** Draws on the EV owner profile generated in the residential case and shows where those people travel to work. The resulting map shows where the City could work with employers to increase workplace charging.
  - **Public Charging:** Draws on the EV owner profile generated in the residential case and shows where those people travel for purposes other than work (e.g., shopping, recreation). The resulting map shows where there may be a need for public charging and opportunities to work with retailers, etc.
- **Discussion & Questions**
  - **Prioritizing Strategies:** How best to prioritize strategies using these maps?
    - The City will have to determine which outcomes are most important, based on its goals.
    - The maps show different scenarios and their relative demand; density of demand (i.e. color) is not comparable between maps.
    - The City will have to determine the correct density of charging.
      - Should the City determine the focus of infrastructure installation based on the projected trip type demand (e.g., if 25% of trips into Fort Collins are for work, should the City focus 25% of infrastructure efforts on workplace charging)?

- If the City wants to focus on residents of Fort Collins, should it focus on residential charging?
  - The City should focus on areas that are not expected to be developed/redeveloped, as building developers will handle those areas.
  - Should the City overbuild the charging infrastructure system to account for extra dwell time at stations? Should the City focus on Level 2 chargers to encourage drivers to dwell longer (and spend more time in local businesses) or focus on DC fast charging?
- **Cost:** It would be helpful to know how much it would cost to install charging stations to meet projected demand.
  - **Action Item:** The project team will incorporate this information into the roadmap.
- **Station Usage:** Need to consider station usage data. Are the existing stations being used and how are they being used?
  - CSU charging stations provide one or more charges per day per charger. They need additional chargers or to limit dwell time.
  - **Action Item:** PRPA and Fort Collins Utilities will send ICF station usage data.
- **Charger Appearance:** It would be helpful to categorize existing chargers based on type: workplace, residential, and public.
- Does anything look odd or not as expected?
  - College Ave. does not show up as a popular public charging destination.
    - ▶ **Action item:** ICF will take a closer look at the data.
- **Missing stations:** Some existing EV charging stations at multi-family buildings do not appear on the map (as the Alternative Fuels Data Center charging station data does not include residential charging stations). There may also be missing stations at Epic Brewing Company.
  - **Action Item:** ICF will following up as needed and add any missing charging stations.

**Action Item:** Once ICF has revised the siting analysis, the project team will share the link to the maps. They will also share a brief user guide.

## 5. Other Topics

- In discussion, the follow topics were raised to be considered in the development of the roadmap:
  - Solar + EV charging stations
  - **Electric freight movement:** The City has a lot of freight traffic (breweries), and several manufacturers have announced plans for various freight movement EV options. This could be a serious consideration for the grid.
  - **Other alternative fuels:** Possibly recognize the role of other alternative fuels, or acknowledge that EVs are not a one-size-fits-all solution.
  - **Under-served community members:** The project team should outline what it means by “underserved” community members and use that definition to inform its roadmap goals and strategies.
  - **Land use:** EV charging stations are not included in current land use code, while gas stations have specific guidance.

## 6. Next Steps & Action Items

- **Next meeting:** Possible June meeting dates to be determined. Steering committee members will hear more from Carrie and Aaron on this soon.
- **Action items:**
  - The project team will apply committee feedback to revise the vision/goals and send updated language to the committee for consensus.
  - ICF will filter students out of the siting demand analysis mapping results to create a scenario that more accurately reflect the needs of Fort Collins' long-term low-income residents.
  - ICF will follow up with PRPA and Fort Collins Utilities to obtain station usage data.
  - ICF will look at the College Ave. siting analysis data and determine if the current projection for low public charging demand is an error.
  - ICF will following to identify and add any missing charging stations to the siting demand analysis maps.
  - ICF will revise the siting demand analysis based on feedback.
  - The project team will share with the steering committee the link to the siting analysis maps as well as a brief user guide.
- **Attachments:**
  - Community Questionnaire Response Summary