



# Fleets and Fuels Implementation Partner Workshop Notes

*Workshop Date: March 20, 2018*

## Welcome and introductions

Josh Proudfoot welcomed attendees and thanked them for participating in the workshop. He invited attendees to introduce themselves:

- Peter Passarelli, City of Milwaukie Public Works Director, project manager for the CAP
  - Recapped project progress thus far and schedule going forward
  - Outlined implementation partner workshops and explained that this workshop was rescheduled from February
  - Explained the purpose of the implementation partner workshops is to hear from technical experts about their experience and ideas for mitigation and adaptation strategies
- Tristan Sewell, City of Milwaukie Climate Action Plan intern
  - Tristan is a Masters student in Regional and Urban Planning at PSU and has been supporting the City's climate action planning efforts for a year
- Damien Farwell, City of Milwaukie Fleets and Facilities Division Director
  - Damien moved to Portland in 2008 and has lived in Milwaukie for 3 years. He is excited to see progress in the division, including a transition to more efficient vehicles and the use of metrics to track change
- Vic Foley, shop foreman of the City of Milwaukie's fleet department
  - Vic has worked with the City for 4 months and is originally from New York. He is interested in learning more about how goals around efficiency related to vehicles can be moved forward
- Greg Platt, owner of Platt Auto Group
  - Greg's dealership in Milwaukie sells 100% electric vehicles (EVs) and he has significant experience working with customers looking to purchase EVs
- Shanna Brownstein, Manager of Government and Community Affairs at Northwest Natural
  - Shanna is interested in working with communities to understand how Northwest Natural can help them improve emissions, including through the use of compressed and renewable natural gas
- Rick Durst, founder of Durst Energy LLC
  - Rick previously worked for PGE before starting his own firm. Durst Energy repairs and installs EV charging stations and implemented the Electric Avenue demonstration project at PSU. Durst Energy will be working with the City on replacing the current charging station downtown with two new charging stations
- Vince Alvarez, Milwaukie resident and member of the CAPC
  - Vince is a life-long recycler and environmentalist. He wants to help the community make a difference through the CAPC process
- Mark Gamba, Mayor of Milwaukie
  - Mayor Gamba said climate was the reason he entered politics. As a former National Geographic Photographer, the Mayor saw the results of climate change first hand, as well as the impact of government inaction
- John Isaacs, Public Affairs Specialist for Uber
  - John said he looks forward to hearing the goals of the City of Milwaukie and said Uber sees itself as part of the solution to congestion and carbon emissions problem facing the region



- Catherine Teebay, Program Manager with Forth
  - Forth is an automotive trade organization focused on advancing and advocating for autonomous and connected shared mobility. Catherine organizes ride and drive demonstration projects. She explained Forth has a strong focus on equity work and ensuring accessibility to these technologies for everyone
- Duke Castle, Lake Oswego Sustainability Network
  - Duke is working on Lake Oswego's climate action planning process and is excited to learn from this conversation to inform their efforts
- Josh Proudfoot, Good Company
- Emma Sagor, EnviroIssues

## Key Discussion Points

- The group discussed whether the low carbon fuel standard and renewable fuel standard are incorporated in the model for projected GHG reduction by 2030 and 2050.
  - Josh explained the impact of these standards would be barely visible in this model.
  - Shanna said these standards should be discussed in the final CAP.
- Corporate Average Fuel Economy (CAFE) standards make the biggest difference in terms of emissions.
  - These standards are driving EV development more than anything else.
  - The group discussed how fuel economy improvements are reducing gas tax revenue.
  - CAFE standards may be under threat at the federal level, but Shanna said the several states are moving to implement policies based on these. For example, California's standards are already stricter than the federal requirements.
- The Oregon Clean Fuels Program calls for a 10 percent reduction in average carbon intensity from 2015 levels by 2025.
  - Oregon's standard is based on California's low carbon fuel standard.
  - Shanna explained the potential benefits of finding a pathway for renewable natural gas.
- The group discussed the carbon intensity of different fuels.
  - Electric vehicles are about 3.5 time more efficient and delivering fuel to motion.
  - Not all renewable diesel is the same—the carbon score is dependent on feed stocks.
  - Shanna explained the emissions from natural gas depend on where the gas is pulled from and how tight the system is. She said Northwest Natural's system is the tightest in the country.
  - To understand the full emissions of biofuels, you have to look at upstream land use impacts.
  - The compressed natural gas carbon score includes emissions from production and losses to methane. Josh explained this uses the 100-year CO<sub>2</sub> equivalent number.
- Autonomous vehicles will almost certainly be electric. Catherine explained it is much easier to engineer autonomous technology on an electronic vehicle than a gas or diesel vehicle, which has many more moving parts. Electrification also allows for better scaling.
- Transitioning heavy-duty fleets is more complicated because of potential grid problems. For example, the Port of Los Angeles wants to fully electrify, but this is not economically feasible.
  - Josh explained the Port is looking at Hydrogen. TriMet and Northwest Natural are also considering hydrogen for storage and refueling fleets.
  - However, Hydrogen infrastructure takes a long time to install and is expensive.
- Peter and Mayor Gamba described the work the City is engaged with as part of its "path to net zero."
  - Milwaukie is working with the Energy Trust on construction efficiency.



- The City is also working with PGE on various strategies, including installing six new EV charging stations. Milwaukie will serve as a pilot project. The City is also working with PGE on a demand response pilot program.
- Rick explained that TriMet is introducing electric buses starting on west side. PGE is providing charging infrastructure. Buses will charge at high powered charging stations en route.

## Identified mitigation and adaptation actions

Blue font = will be scaled for mitigation benefit (we will be following up soon)

Green font = will be characterized for adaptation benefits

Agency-Level Mitigation Actions			
Number of dots	Action	Agencies/Resources Involved	Additional considerations
4	(Light fleet) Identify and replace least efficient vehicles with most efficient vehicles (Heavy duty fleet) Target diesel fleet for conversion to low carbon fuels	City of Milwaukie	
4	(Light fleet) Align and justify fleet use with true needs	City of Milwaukie (policy change)	Implement metrics to help “right size” fleet, e.g. average mph, average miles traveled per year/per vehicle
4	Partner with waste haulers, school district and waste water agency on fleet transition	City of Milwaukie, North Clackamas School District, Clackamas County	Could add fuel requirements to franchise agreements
1	Examine opportunities for capturing fuels from Clackamas County wastewater treatment plant	City of Milwaukie, Clackamas County	
1	Partner with Clackamas, Multnomah, Washington and other counties	City of Milwaukie, Clackamas County, Multnomah County, Washington County	

Community-Level Mitigation Actions			
Number of dots	Action	Agencies/Resources Involved	Additional considerations
7	Incentivize multi-family complexes to install EV charging infrastructure	City of Milwaukie, PGE	Engage at time of construction of renovation when adding



			infrastructure is easier
6	Incentivize workplace charging in parking lots	City of Milwaukie, large employers (PCC, Blount)	
6	Implement “EV ready” building codes or zoning regulations. Opportunities could include: <ul style="list-style-type: none"> <li>• Providing incentives through zoning</li> <li>• Implementing public area requirements</li> </ul>	City of Milwaukie	Building codes determined by the state
3	Outreach efforts to encourage shift to EV <ul style="list-style-type: none"> <li>• “Ride and drive” events</li> <li>• Information sharing through farmers’ markets, business organizations</li> </ul>	City of Milwaukie, business organizations, community groups	Reaching/appealing to renters with charging obstacles may be a challenge
3	Micro-transit from park-and-ride or light rail station to charging stations	City of Milwaukie, transit providers	
1	Implement or enable curbside charging	City of Milwaukie, PGE	Could start as a trial; Could consider a permit system; Possibility to tap into lighting infrastructure, but could be challenging
1	Explore new charging solutions, e.g. valet or movable chargers	City of Milwaukie, private sector companies	
	Develop an “electric avenue” downtown	City of Milwaukie, PGE	Possibly parking-lot based
	Introduce short-term EV rentals (e.g. Reach Now) at park-and-ride destinations	City of Milwaukie, short-term rental companies	

Adaptation Actions		
Number of dots	Action	Agencies/Resources Involved
3	Review location of fleet yard and fuel storage to examine flood vulnerability	City of Milwaukie
1	Look at fuel movement during flood conditions and diversify fuel sources in terms of fuel transport into	City of Milwaukie



# CITY OF MILWAUKIE Climate Action Plan



	Milwaukie to prepare for climate event-related import challenges	
1	Determine potential for micro-grids, storage, etc. in weather events	City of Milwaukie, PGE
1	Implement intergovernmental agreements or MOUs with other agencies for fleet support in emergencies (e.g. large scale debris removal)	City of Milwaukie, North Clackamas Parks and Recreation District, Clackamas County
	Address temperature related cable tension problems on the Orange Line	TriMet