



Strategic Directive 11 Decarbonization

Update to the Tacoma Public Utility Board

October 13th 2021



● ● ● Presentation Overview

- Strategic Directive Purpose Overview
- COVID Impacts
- Legislative Support
- Environmental Action Plan
- Transportation Electrification
- Long-term planning and Next Steps
- Outreach
- Innovation and modernization projects
- Research and development
- Long-term planning and Next Steps
- Questions

●●● Purpose

“Tacoma Public Utilities seeks to be a leader in decarbonization of the electric utility system and transportation electrification and to promote Tacoma Power’s renewable and nearly carbon free generation portfolio as a driver of economic development and a competitive advantage for existing customers.”

●●● COVID Impacts



- In-person outreach and education limited, while what works best is experiencing EVs first-hand
- Economic impacts and social unrest moved EVs off the radar for many
- Concern for rate impacts led to conservative budgeting for 2021-2022 program spending

Legislative Support

2021 Legislative Session-Rules to be established by Jan. 2023

- HB 1091 – Low Carbon Fuel Standard. Establishes a statewide program to reduce emissions from transportation
- SB 5126 - Climate Commitment Act (WA State Cap and Invest Program). Establishes a cap and invest program (also called a cap and trade) to reduce emission on an economy-wide basis
- SB 5192 – EVSE Interoperability Standards. Establishes requirements for public charging stations

Environmental Action Plan

The Environmental Action Plan concluded at the end of 2020

- Progress tracked and reported to the Senior Leadership Team quarterly from 2017-2020. Reported annually to General Government
- TPU met or exceeded nearly every goal
- Currently participating in the development of the Climate Action Plan, the next iteration of the EAP
- GHG Inventory completed as a part of the CAP process

Current Emissions in Tacoma

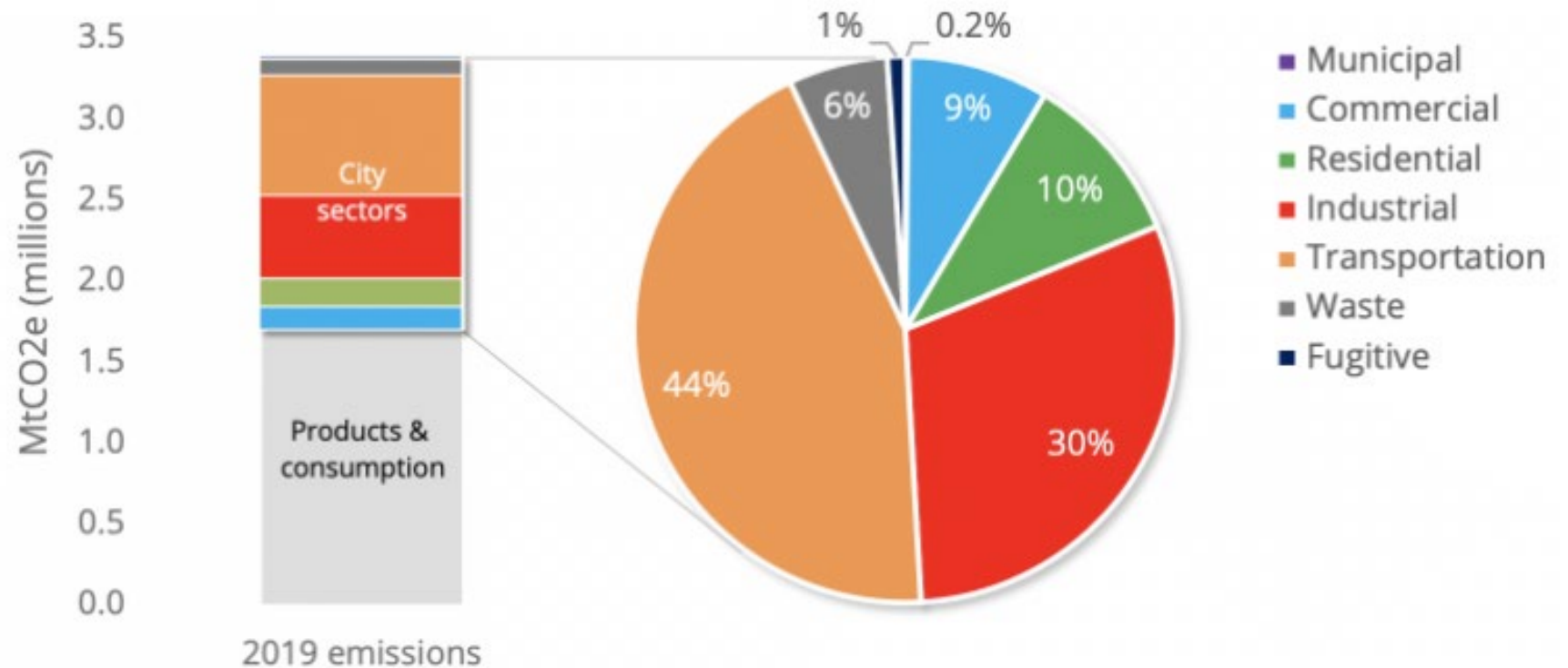


Figure X. Emissions by sector for Tacoma, 2019.

Transportation Electrification

Current Programs

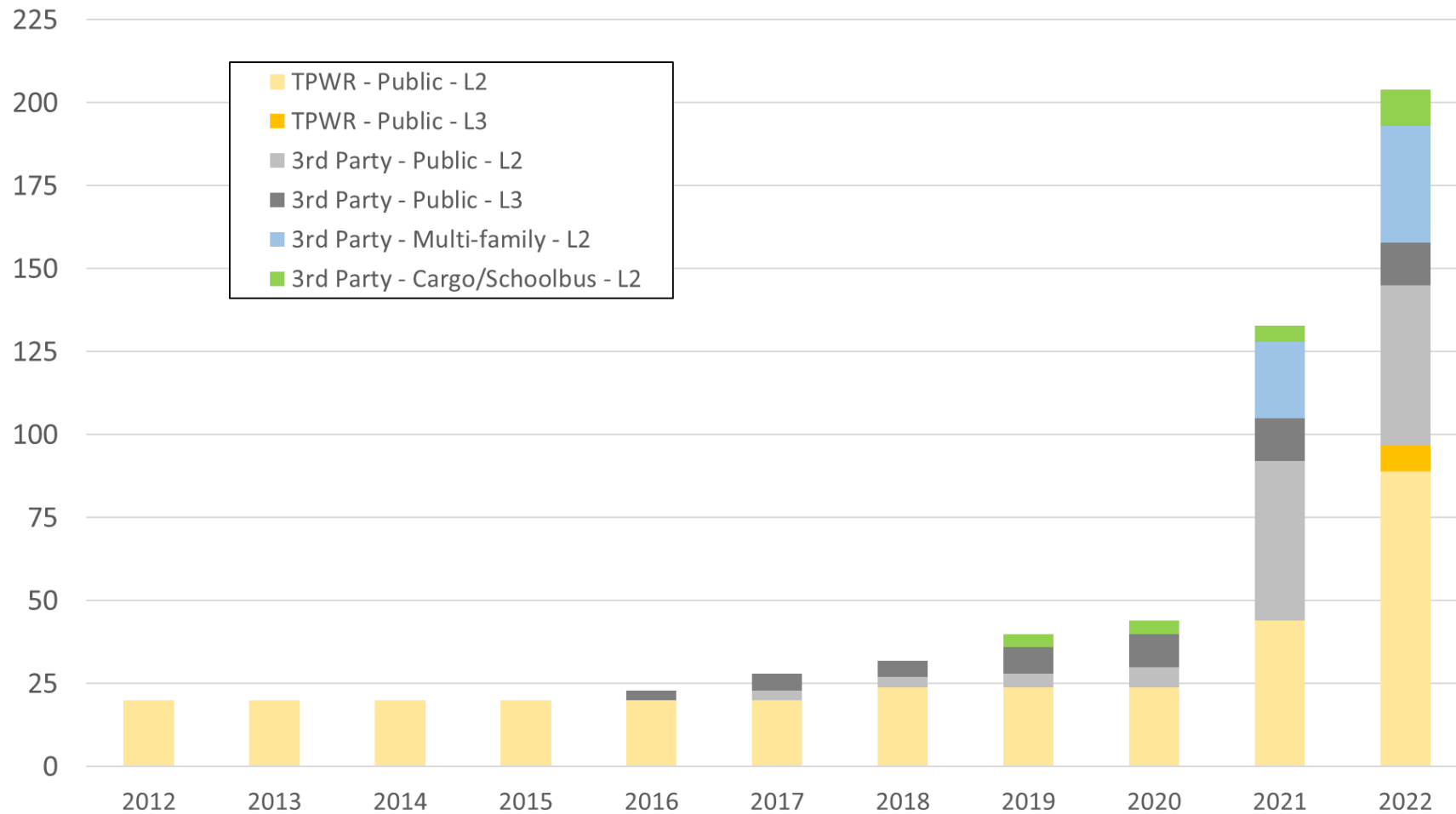
- Education and Outreach
- Electric Vehicle Charging Study
- Public EV Charging
- City of Tacoma Parking EV Charging
- DCFC Customer Care
- Multi-Unit Dwelling Pilot
- TPU Campus Charging
- Electric School Bus Program
- Franklin Pierce High School Microgrid
- Port of Tacoma Electrification
- Cargo/Material Handling Equipment

New Programs in 2021-2022

- Home EV Charging Pilot
- Fleet Charging Pilot
- Streetside EV Charging Pilot
- Co-op EV Carshare
- Review of Public EV Charging Fees
- Research studies:
 - BESS to support DCFC Study
 - Alternative Fuel Locomotive Tech
 - Ketron Island Microgrid Study
 - Mobile Cold Ironing Research
 - FCEV fleet vehicle study

Transportation Electrification

EV Charging Ports Installed with Tacoma Power Support



Supporting Customers

- Secured \$852,366 for charging equipment installation from external SEP fund
- Used \$100,000 as match for additional \$597,558 in Dept. of Commerce grants
- New Charging Ports:
 - 38 added to the downtown core (partnership with City of Tacoma)
 - 15 added to City of Tacoma business districts
 - 21 added for workplace/public charging at local businesses
 - 35 added to Multifamily complexes (half are in equity index areas)
 - 6 added to support cargo handling electrification in the Port
- Supported Shore Power at Husky Terminal - developing a special tariff and assisting with grant funding
- Partnership with school districts (Franklin Pierce and University Place) on school bus electrification efforts
- Completed an in-depth study of Residential EV charging behavior; results will be used to develop future EV programs
- Launched a program to promote level 2 home charging



Community Outreach

- Outreach teams have incorporated information about evergreen options, demand response, and electric vehicle programs into their public outreach events
- Eleven public events with over 330 conversations
- Ten virtual events (~80 participants total) including:
 - EV workshops
 - Sustainability series on solar and EVs
 - National Drive Electric week event
 - Girl Scout STEAM event
 - Climate Impacts on Utilities/Electrification
- 2021 event and conversation numbers down due to COVID-19 restrictions



Communication Activities

EV charging programs-Multifamily, Public, Home, and Cargo & Material

Handling:

- Flyers, letters, Social Media, owned media channels, Tacoma Rainiers and TV Tacoma
- Over 30,000 web impressions, 900+ click-throughs and 139 direct mail letters sent

Communication for EV charging Study participants:

- Quarterly eNewsletter sent to all participants with open rates between 63%-73%

Promotion for Workshops, National Drive Electric Week and EV Savings

Calculator:

- Social media, Newsletter, owned media channels
- Nearly 3,000 impressions, page views and click-throughs, newsletters to over 10,000 customers

Communication Activities



Public EV Charging Guide



Limited-Time Offers

Tacoma Public Utilities @MyTPU · Oct 2
 This year's National Drive Electric Week is going virtual, and we've got a line up you don't want to miss!

Join us on Saturday at 10:00am via Zoom for two hours of informative and interactive discussions on electric vehicles. Register Today: bit.ly/2RRMSOW

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Electric transportation plans roll out after a long haul seeking legislative authority

"With their endorsement, Tacoma Power is now able to offer programs that will promote transportation electrification for all the communities we serve."

Tacoma Power is a member of a coalition of publicly owned utilities that for years sought clear legislative authority to offer electric transportation programs to customers. Until HB 1512 passed into law, our ability to engage the public to promote electric transportation was uncertain due to legal precedent. HB 1512 clarifies that the legislature...

events. Education and outreach are critical to informing the public about the benefits of EVs and continue to be an ongoing effort.

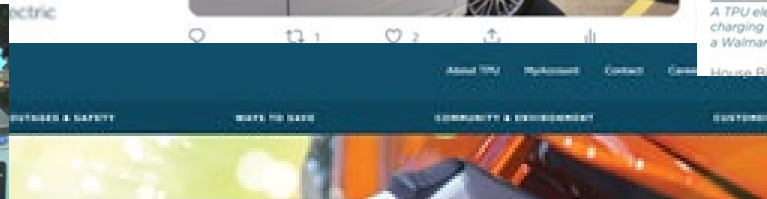
"Electric vehicles are less expensive to operate and provide cleaner air for everyone, especially in Tacoma where the power is clean and inexpensive," Cam stated.

Our utility also assisted the City of Tacoma in launching the first Electric Car Discount Program in the State of Washington and is currently in year two of a residential EV Charging Study.



Steps to prepare for an EV charging station at your multifamily property

1. Learn about the different levels of EV charging.



Electric Vehicle (EV) Benefits

Check out our Electric Vehicle (EV) savings and carbon reduction tools. These tools let you compare both new and used gasoline powered vehicles to electric vehicles to see the estimated fuel and carbon reduction benefits. Tacoma Power's electricity is some of the lowest priced in the country and is mostly carbon free. Explore the benefits of driving electric.

[Learn More](#)

Tacoma Public Utilities
 Monday at 2:15 PM · 📍

New and improved electric vehicle models are being released each year. They have greater range, more options and lower prices!

Join us tomorrow, Apr. 13, from 4:30-5:30 PM for an electric vehicle workshop. Learn how EVs are better for the environment, how an EV might fit your lifestyle and get an idea of the savings you might expect switching to an EV! Attendees will have the chance to ask questions about their EVs in real-time.

Prior registration is required: https://zoom.us/webinar/register?WN_Qsy4Cb68R1V5QV1DcPGg

Tacoma Earth Month 2021

Enviro

TUE, APR 13
Free Workshop: Electric Vehicles - Ever Better! What's New

You like Tacoma Environmental Services

EV savings calculators help you crunch the numbers.

EV savings calculators help you crunch the numbers.

Compare new and used gasoline powered vehicles to electric vehicles.



Innovation and Modernization

Modernization:

- Received grant funding for twenty new Electric Vehicle chargers at TPU campus
- Implemented successful campus energy and water efficiency measures in collaboration between Facilities and Power Conservation groups
- Adding more electric and hybrid vehicles to our fleet
- Reduced fossil fuel emissions by our fleet by 38.5% during the Environmental Action Plan period (2015-2020)

Innovation:

- Launch and support of the Tacoma Maritime Innovation Incubator
- Chartered the TPU Sustainability Action Team to make an impact at TPU through projects and education
- Continued to expand use of R99 renewable diesel



Research and Development

Research Projects

- Renewable Hydrogen Cluster
- Mobile Cold-Ironing System
- Renewable Electro-fuels Tariff
- High-Speed Electric Passenger Ferry
- Franklin Pierce High School Microgrid design
- Water Heater Demand Response Pilot
- Alternative Fuel Technology for Rail



Emerging Efforts

Planning for electrification of building, transportation

- Load impacts for Tacoma Power demographics
- Will incorporate electrification scenario in 2022 IRP update

Building the case for Tacoma as a Green Hydrogen Hub

- Green H₂ produced from carbon-free electricity is a key to decarbonizing heavy transportation, including shipping and rail
- Tacoma uniquely positioned: Port; Tacoma Rail; Joint Base; Electrofuel tariff; industrial base; I-5; affordable carbon-free power
- Challenges include gaining public support and restrictive tideflat regulations, application of the Gross Earnings Tax to grant funding



● ● ● QUESTIONS

