MINUTES OF THE CITY COUNCIL COMMITTEE
MONDAY, AUGUST 1, 2022

22-0016

ENVIRONMENT AND SUSTAINABILITY COMMITTEE
CITY COUNCIL CHAMBER, CITY HALL/VIDEO CONFERENCE
COUNCILMEMBER PAULA BLACKMON, PRESIDING

PRESENT: [7] Blackmon, Ridley, Arnold (**9:07 a.m.), Bazaldua (**9:08), *Resendez, Schultz, West

ABSENT: [0]

The meeting was called to order at 9:00 a.m. with a quorum of the committee present.

The meeting agenda, posted in accordance with Chapter 551, "OPEN MEETINGS," of the Texas Government Code, was presented.

After all business properly brought before the committee had been considered, the meeting adjourned at 11:02 a.m.

_____
Chair

ATTEST:

_____ _____
City Secretary Staff Date Approved

The agenda is attached to the minutes of this meeting as EXHIBIT A.

The actions taken on each matter considered by the committee are attached to the minutes of this meeting as EXHIBIT B.

The briefing materials are attached to the minutes of this meeting as EXHIBIT C.

***Note: Members of the Committee participated in this meeting by video conference.**
**** Note: Indicates arrival time after meeting called to order/reconvened.**

E X H I B I T A

City of Dallas

1500 Marilla Street,
Council Chambers, 6th Floor
Dallas, Texas 75201

Public Notice

220698

Environment and Sustainability Committee

August 1, 2022

9:00 AM

(For General Information and Rules of Courtesy, Please See Opposite Side.)
(La Información General Y Reglas De Cortesía Que Deben Observarse
Durante Las Asambleas Del Consejo Municipal Aparecen En El Lado Opuesto, Favor De Leerlas.)

General Information

The Dallas City Council regularly meets on Wednesdays beginning at 9:00 a.m. in the Council Chambers, 6th floor, City Hall, 1500 Marilla. Council agenda meetings are broadcast live on WRR-FM radio (101.1 FM) and on Time Warner City Cable Channel 16. Briefing meetings are held the first and third Wednesdays of each month. Council agenda (voting) meetings are held on the second and fourth Wednesdays. Anyone wishing to speak at a meeting should sign up with the City Secretary's Office by calling (214) 670-3738 by 5:00 p.m. of the last regular business day preceding the meeting. Citizens can find out the name of their representative and their voting district by calling the City Secretary's Office.

Sign interpreters are available upon request with a 48-hour advance notice by calling (214) 670-5208 V/TDD. The City of Dallas is committed to compliance with the Americans with Disabilities Act. ***The Council agenda is available in alternative formats upon request***.

If you have any questions about this agenda or comments or complaints about city services, call 311.

Rules of Courtesy

City Council meetings bring together citizens of many varied interests and ideas. To insure fairness and orderly meetings, the Council has adopted rules of courtesy which apply to all members of the Council, administrative staff, news media, citizens and visitors. These procedures provide:

- That no one shall delay or interrupt the proceedings, or refuse to obey the orders of the presiding officer.
- All persons should refrain from private conversation, eating, drinking and smoking while in the Council Chamber.
- Posters or placards must remain outside the Council Chamber.
- No cellular phones or audible beepers allowed in Council Chamber while City Council is in session.

"Citizens and other visitors attending City Council meetings shall observe the same rules of propriety, decorum and good conduct applicable to members of the City Council. Any person making personal, impertinent, profane or slanderous remarks or who becomes boisterous while addressing the City Council or while

Información General

El Ayuntamiento de la Ciudad de Dallas se reúne regularmente los miércoles en la Cámara del Ayuntamiento en el sexto piso de la Alcaldía, 1500 Marilla, a las 9 de la mañana. Las reuniones informativas se llevan a cabo el primer y tercer miércoles del mes. Estas audiencias se transmiten en vivo por la estación de radio WRR-FM 101.1 y por cablevisión en la estación *Time Warner City Cable* Canal 16. El Ayuntamiento Municipal se reúne en el segundo y cuarto miércoles del mes para tratar asuntos presentados de manera oficial en la agenda para su aprobación. Toda persona que desee hablar durante la asamblea del Ayuntamiento, debe inscribirse llamando a la Secretaría Municipal al teléfono (214) 670-3738, antes de las 5:00 pm del último día hábil anterior a la reunión. Para enterarse del nombre de su representante en el Ayuntamiento Municipal y el distrito donde usted puede votar, favor de llamar a la Secretaría Municipal.

Intérpretes para personas con impedimentos auditivos están disponibles si lo solicita con 48 horas de anticipación llamando al (214) 670-5208 (aparato auditivo V/TDD). La Ciudad de Dallas se esfuerza por cumplir con el decreto que protege a las personas con impedimentos, *Americans with Disabilities Act.* ***La agenda del Ayuntamiento está disponible en formatos alternos si lo solicita.***

Si tiene preguntas sobre esta agenda, o si desea hacer comentarios o presentar quejas con respecto a servicios de la Ciudad, llame al 311.

Reglas de Cortesía

Las asambleas del Ayuntamiento Municipal reúnen a ciudadanos de diversos intereses e ideologías. Para asegurar la imparcialidad y el orden durante las asambleas, el Ayuntamiento ha adoptado ciertas reglas de cortesía que aplican a todos los miembros del Ayuntamiento, al personal administrativo, personal de los medios de comunicación, a los ciudadanos, y a visitantes. Estos reglamentos establecen lo siguiente:

- Ninguna persona retrasara o interrumpirá los procedimientos, o se negara a obedecer las órdenes del oficial que preside la asamblea.
- Todas las personas deben abstenerse de entablar conversaciones, comer, beber y fumar dentro de la cámara del Ayuntamiento.
- Anuncios y pancartas deben permanecer fuera de la cámara del Ayuntamiento.
- No se permite usar teléfonos celulares o enlaces electrónicos *(pagers)* audibles en la cámara del Ayuntamiento durante audiencias del Ayuntamiento Municipal

"Los ciudadanos y visitantes presentes durante las

attending the City Council meeting shall be removed from the room if the sergeant-at-arms is so directed by the presiding officer, and the person shall be barred from further audience before the City Council during that session of the City Council. If the presiding officer fails to act, any member of the City Council may move to require enforcement of the rules, and the affirmative vote of a majority of the City Council shall require the presiding officer to act." Section 3.3(c) of the City Council Rules of Procedure.

asambleas del Ayuntamiento Municipal deben de obedecer las mismas reglas de comportamiento, decoro y buena conducta que se aplican a los miembros del Ayuntamiento Municipal. Cualquier persona que haga comentarios impertinentes, utilice vocabulario obsceno o difamatorio, o que al dirigirse al Ayuntamiento lo haga en forma escandalosa, o si causa disturbio durante la asamblea del Ayuntamiento Municipal, será expulsada de la cámara si el oficial que este presidiendo la asamblea así lo ordena. Además, se le prohibirá continuar participando en la audiencia ante el Ayuntamiento Municipal. Si el oficial que preside la asamblea no toma acción, cualquier otro miembro del Ayuntamiento Municipal puede tomar medidas para hacer cumplir las reglas establecidas, y el voto afirmativo de la mayoría del Ayuntamiento Municipal precisara al oficial que este presidiendo la sesión a tomar acción." Según la sección 3.3 (c) de las reglas de procedimientos del Ayuntamiento.

Handgun Prohibition Notice for Meetings of Governmental Entities

"Pursuant to Section 30.06, Penal Code (trespass by license holder with a concealed handgun), a person licensed under Subchapter H, Chapter 411, Government Code (handgun licensing law), may not enter this property with a concealed handgun."

"De acuerdo con la sección 30.06 del código penal (ingreso sin autorización de un titular de una licencia con una pistol oculta), una persona con licencia según el subcapítulo h, capítulo 411, código del gobierno (ley sobre licencias para portar pistolas), no puede ingresar a esta propiedad con una pistola oculta."

"Pursuant to Section 30.07, Penal Code (trespass by license holder with an openly carried handgun), a person licensed under Subchapter H, Chapter 411, Government Code (handgun licensing law), may not enter this property with a handgun that is carried openly."

"De acuerdo con la sección 30.07 del código penal (ingreso sin autorización de un titular de una licencia con una pistola a la vista), una persona con licencia según el subcapítulo h, capítulo 411, código del gobierno (ley sobre licencias para portar pistolas), no puede ingresar a esta propiedad con una pistola a la vista."

"Pursuant to Section 46.03, Penal Code (places weapons prohibited), a person may not carry a firearm or other weapon into any open meeting on this property."

"De conformidad con la Sección 46.03, Código Penal (coloca armas prohibidas), una persona no puede llevar un arma de fuego u otra arma a ninguna reunión abierta en esta propriedad."

The City Council Environmental and Sustainability meeting will be held by videoconference and in the Council Chambers, 6th Floor at City Hall.

The public is encouraged to attend the meeting virtually; however, City Hall is available for those wishing to attend the meeting in person following all current pandemic-related public health protocols.

The following videoconference link is available to the public to listen to the meeting and Public Affairs and Outreach will also stream the City Council Briefing on Spectrum Cable Channel 95 and bit.ly/cityofdallastv.

https://dallascityhall.webex.com/dallascityhall/j.php?MTID=m030dca595463d1843ec5f9202936825d

Call to Order

MINUTES

A. 22-1612 Approval of the June 6, 2022 Committee Minutes

Attachments: Minutes

BRIEFING ITEMS

B. 22-1613 Fleet Electrification Analysis
[Donzell Gipson, Director, Equipment & Fleet Management; Vincent Olsen, Assistant Director, Equipment & Fleet Management; Ken Kelly, Cory Sigler, Matt Jeffers, National Renewable Energy Laboratory]

Attachments: Presentation

C. 22-1614 Gas-Powered Landscape Equipment Policies
[Susan Alvarez, Assistant Director, Office of Environmental Quality & Sustainability]

Attachments: Presentation

D. 22-1615 Environmental Commission Update
[Kathryn Bazan, Chair, Environmental Commission]

BRIEFING MEMOS

E. 22-1616 Bachman Lake Dredging Update
Terry Lowery, Director, Dallas Water Utility; Matthew Penk, Assistant Director, Dallas Water Utility; Marc Cottingame, Engineering Program Administrator, Dallas Water Utility

Attachments: Memo

F. 22-1618 City Forestry Quarterly Update
Carl Simpson, Assistant City Manager

Attachments: Memorandum

G. 22-1642 Environmental Justice Update
[Paul White II, Superintendent, Air, Soil, & Groundwater Division, Office of Environmental Quality & Sustainability; Lori Trulson, Senior Environmental Coordinator, Office of Environmental Quality & Sustainability]

Attachments: Memo

H. 22-1643 OEQS Environmental Legislative Priorities
[Pharr Andrews, Senior Climate Coordinator, Office of Environmental Quality & Sustainability]

Attachments: Memo

DISCUSSION ITEM

I. 22-1619 Environment & Sustainability Committee Priorities for Upcoming Fiscal Year

UPCOMING AGENDA ITEMS

J. 22-1590 Authorize **(1)** the acceptance of a grant from the Texas Commission on Environmental Quality (TCEQ) for the Air Pollution Compliance Program (Contract No. 582-23-40125) in the amount of $2,525,585.00 to continue to provide investigation services and complaint response within the City of Dallas for the period September 1, 2022 through August 31, 2027; **(2)** the receipt and deposit of funds in an amount not to exceed $2,525,585.00 in the TCEQ 22-27 Local Air Pollution Compliance Program Fund; **(3)** the establishment of appropriations in an amount not to exceed $2,525,585.00 in the TCEQ 22-27 Local Air Pollution Compliance Program Fund; **(4)** a required local match in the amount of $1,243,944.85 over the five year period; and **(5)** execution of the contract with TCEQ for the Air Pollution Compliance Program and all terms, conditions, and documents required by the agreement - Not to exceed $3,769,529.85 - Financing: Texas Commission on Environmental Quality Grant Funds ($2,525,585.00) and General Fund ($1,243,944.85) (subject to annual appropriations)

Attachments: Resolution

K. 22-1591 Authorize the **(1)** acceptance of a grant from the U.S. Environmental Protection Agency through the Texas Commission on Environmental Quality (TCEQ) (Contract No. 582-23-40028, CFDA Nos. 66.034 and 66.605) in the amount of $96,707.48 to operate the ambient air monitoring station in Rockwall County and air quality monitoring of the Particulate Matter (PM) 2.5 network, for the period September 1, 2022 through August 31, 2023; **(2)** the receipt and deposit of funds in an amount not to exceed $96,707.48 in the TCEQ 22-23 Rockwall and PM 2.5 Monitoring Program Fund; **(3)** the establishment of appropriations in an amount not to exceed $96,707.48 in the TCEQ 22-23 Rockwall and PM 2.5 Air Monitoring Program Fund; and **(4)** execution of the contract and all terms, conditions, and documents required by the agreement - Not to exceed $96,707.48 - Financing: Texas Commission on Environmental Quality Grant Funds

Attachments: Resolution

L. 22-1592 Authorize the **(1)** first amendment to the contract with the Texas Commission on Environmental Quality (TCEQ) (Contract No. 582-21-22370, CFDA No. 97.091) passed through from the U.S. Environmental Protection Agency to accept additional grant funds in an amount not to exceed $425,924.25 to conduct the Whole Air Monitoring Program for the period September 1, 2022 through August 31, 2023; **(2)** receipt and deposit of funds in an amount not to exceed $425,924.25 in the TCEQ 22-23 Whole Air Monitoring Program Fund; **(3)** establishment of appropriations in an amount not to exceed $425,924.25 in the TCEQ 22-23 Whole Air Monitoring Program Fund; and **(4)** execution of the contract and all terms, conditions, and documents required by the agreement - Not to exceed $425,924.25, from $581,027.03 to $1,006,951.28 - Financing: Texas Commission on Environmental Quality Grant Funds

Attachments: Resolution

M. 22-1537 Authorize **(1)** acceptance of a grant from the Environmental Protection Agency through the North Central Texas Council of Governments for an award through the "Clean Fleets North Texas 2020 Call for Projects" (Project No. TRN6875, CFDA No. 66.039, Federal Award ID No. 01F56701) (to purchase replacement vehicles and equipment to reduce Nitrogen Oxides emissions in the amount of $109,116.00 for the period August 11, 2022 through February 26, 2023); **(2)** the receipt and deposit of grant funds in an amount not to exceed $109,116.00 in the Clean Fleets North Texas 2020 Fund - Award 2; **(3)** the establishment of appropriations in an amount not to exceed $109,116.00 in the Clean Fleets North Texas 2020 Fund - Award 2; **(4)** a required local match in the amount of $255,640.00 from Equipment Notes Series 2021 Fund; and **(5)** execution of the grant agreement and all terms, conditions, and documents required by the grant agreement - not to exceed $364,756.00 - Financing: North Central Texas Council of Governments Grant Funds ($109,116.00) and Equipment Notes Series 2021 Fund ($255,640.00)

Attachments: Resolution

ADJOURNMENT

EXECUTIVE SESSION NOTICE

A closed executive session may be held if the discussion of any of the above agenda items concerns one of the following:

1. seeking the advice of its attorney about pending or contemplated litigation, settlement offers, or any matter in which the duty of the attorney to the City Council under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas clearly conflicts with the Texas Open Meetings Act. [Tex. Govt. Code §551.071]

2. deliberating the purchase, exchange, lease, or value of real property if deliberation in an open meeting would have a detrimental effect on the position of the city in negotiations with a third person. [Tex. Govt. Code §551.072]

3. deliberating a negotiated contract for a prospective gift or donation to the city if deliberation in an open meeting would have a detrimental effect on the position of the city in negotiations with a third person. [Tex. Govt. Code §551.073]

4. deliberating the appointment, employment, evaluation, reassignment, duties, discipline, or dismissal of a public officer or employee; or to hear a complaint or charge against an officer or employee unless the officer or employee who is the subject of the deliberation or hearing requests a public hearing. [Tex. Govt. Code §551.074]

5. deliberating the deployment, or specific occasions for implementation, of security personnel or devices. [Tex. Govt. Code §551.076]

6. discussing or deliberating commercial or financial information that the city has received from a business prospect that the city seeks to have locate, stay or expand in or near the city and with which the city is conducting economic development negotiations; or deliberating the offer of a financial or other incentive to a business prospect. [Tex Govt. Code §551.087]

7. deliberating security assessments or deployments relating to information resources technology, network security information, or the deployment or specific occasions for implementations of security personnel, critical infrastructure, or security devices. [Tex Govt. Code §551.089]

E X H I B I T B

OFFICIAL ACTION OF THE CITY COUNCIL COMMITTEE

AUGUST 1, 2022

Item A: Approval of the June 6, 2022 Committee Minutes

Councilmember Ridley moved to adopt the minutes as presented.

Motion seconded by Councilmember Schultz and unanimously adopted.

OFFICIAL ACTION OF THE CITY COUNCIL COMMITTEE

AUGUST 1, 2022

BRIEFING ITEMS

Item B: Fleet Electrification Analysis

The following individuals briefed the committee on the item:

- Donzell Gipson, Director, Equipment & Fleet Management;
- Ken Kelly, National Renewable Energy Laboratory; and
- Susan Alvarez, Assistant Director, Office of Environmental Quality & Sustainability

OFFICIAL ACTION OF THE CITY COUNCIL COMMITTEE

AUGUST 1, 2022

BRIEFINGS ITEMS

Item C: Gas-Powered Landscape Equipment Policies

The following individuals briefed the committee on the item:

- Susan Alvarez, Assistant Director, Office of Environmental Quality & Sustainability; and
- Carrie Rogers, Director of Government Affairs, City Manager's Office

OFFICIAL ACTION OF THE CITY COUNCIL COMMITTEE

AUGUST 1, 2022

BRIEFINGS ITEMS

Item D: Environmental Commission Update

The following individual briefed the committee on the item:

- Kathryn Bazan, Chair, Environmental Commission

OFFICIAL ACTION OF THE CITY COUNCIL COMMITTEE

AUGUST 1, 2022

BRIEFING MEMOS

Item E: Bachman Lake Dredging Updates

Item F: City Forestry Quarterly Update

Item G: Environmental Justice Update

Item H: OEQS Environmental Legislative Priorities

The committee discussed the items.

OFFICIAL ACTION OF THE CITY COUNCIL COMMITTEE

AUGUST 1, 2022

DISCUSSION ITEM

Item I: Environmental & Sustainability Committee Priorities for Upcoming Fiscal Year

The committee discussed the item.

OFFICIAL ACTION OF THE CITY COUNCIL COMMITTEE

AUGUST 1, 2022

UPCOMING AGENDA ITEMS

Item J: Authorize (1) the acceptance of a grant from the Texas Commission on Environmental Quality (TCEQ) for the Air Pollution Compliance Program (Contract No. 582-23-40125) in the amount of $2,525,585.00 to continue to provide investigation services and complaint response within the City of Dallas for the period September 1, 2022 through August 31, 2027; (2) the receipt and deposit of funds in an amount not to exceed $2,525,585.00 in the TCEQ 22-27 Local Air Pollution Compliance Program Fund; (3) the establishment of appropriations in an amount not to exceed $2,525,585.00 in the TCEQ 22-27 Local Air Pollution Compliance Program Fund; (4) a required local match in the amount of $1,243,944.85 over the five year period; and (5) execution of the contract with TCEQ for the Air Pollution Compliance Program and all terms, conditions, and documents required by the agreement - Not to exceed $3,769,529.85 - Financing: Texas Commission on Environmental Quality Grant Funds ($2,525,585.00) and General Fund ($1,243,944.85) (subject to annual appropriations)

Item K: Authorize the **(1)** acceptance of a grant from the U.S. Environmental Protection Agency through the Texas Commission on Environmental Quality (TCEQ) (Contract No. 582-23-40028, CFDA Nos. 66.034 and 66.605) in the amount of $96,707.48 to operate the ambient air monitoring station in Rockwall County and air quality monitoring of the Particulate Matter (PM) 2.5 network, for the period September 1, 2022 through August 31, 2023; **(2)** the receipt and deposit of funds in an amount not to exceed $96,707.48 in the TCEQ 22-23 Rockwall and PM 2.5 Monitoring Program Fund; **(3)** the establishment of appropriations in an amount not to exceed $96,707.48 inthe TCEQ 22-23 Rockwall and PM 2.5 Air Monitoring Program Fund; and **(4)** execution of the contract and all terms, conditions, and documents required by the agreement - Not to exceed $96,707.48 - Financing: Texas Commission on Environmental Quality Grant Funds

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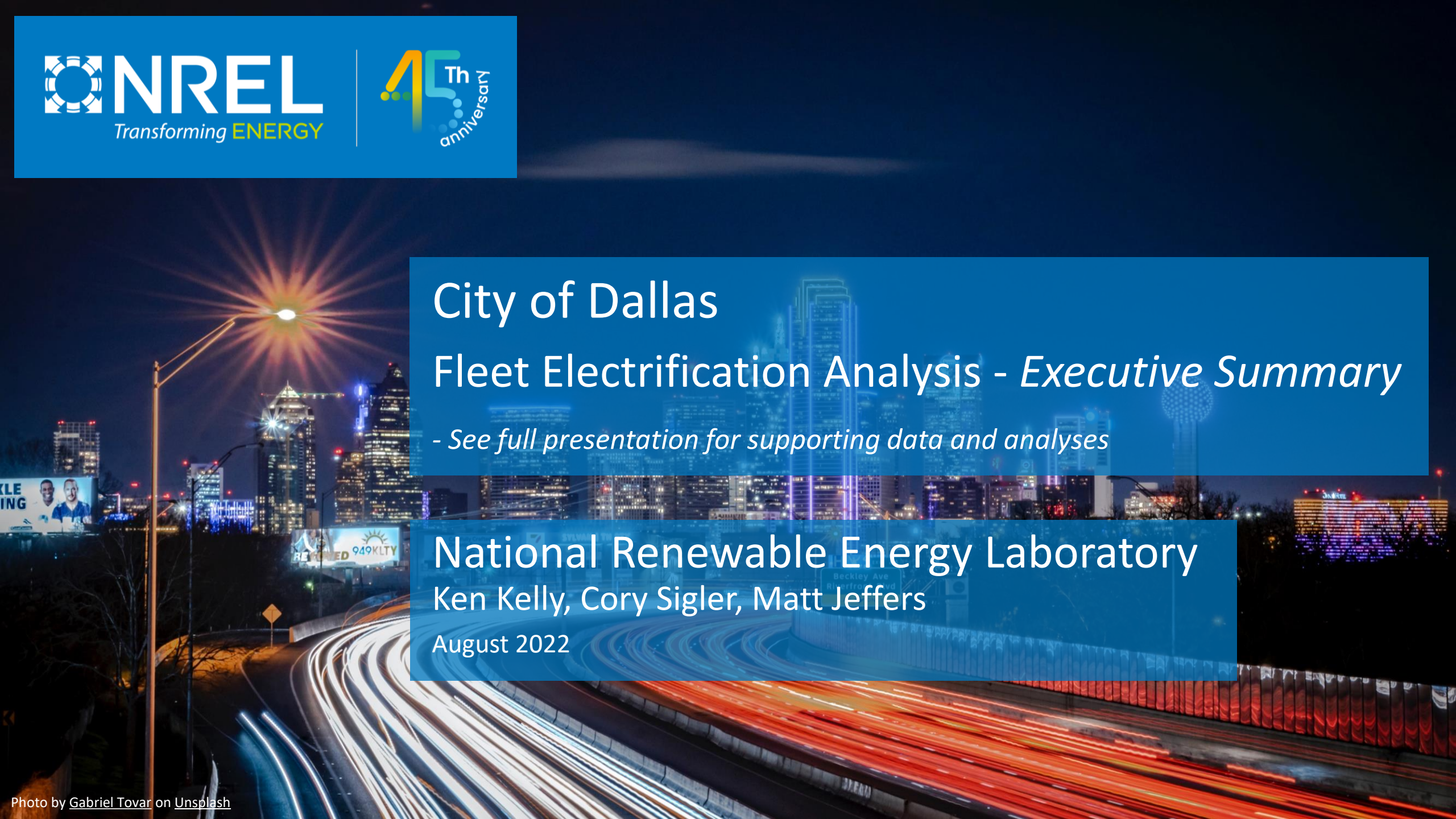
Item M: Authorize **(1)** acceptance of a grant from the Environmental Protection Agency through the North Central Texas Council of Governments for an award through the "Clean Fleets North Texas 2020 Call for Projects" (Project No. TRN6875, CFDA No. 66.039, Federal Award ID No. 01F56701) (to purchase replacement vehicles and equipment to reduce Nitrogen Oxides emissions in the amount of $109,116.00 for the period August 11, 2022 through February 26, 2023); **(2)** the receipt and deposit of grant funds in an amount not to exceed $109,116.00 in the Clean Fleets North Texas 2020 Fund - Award 2; **(3)** the establishment of appropriations in an amount not to exceed $109,116.00 in the Clean Fleets North Texas 2020 Fund - Award 2; **(4)** a required local match in the amount of $255,640.00 from Equipment Notes Series 2021 Fund; and **(5)** execution of the grant agreement and all terms, conditions, and documents required by the grant agreement - not to exceed $364,756.00 - Financing: North Central Texas Council of Governments Grant Funds ($109,116.00) and Equipment Notes Series 2021 Fund ($255,640.00)

The committee discussed the items.

E X H I B I T C



City of Dallas

Fleet Electrification Analysis - *Executive Summary*

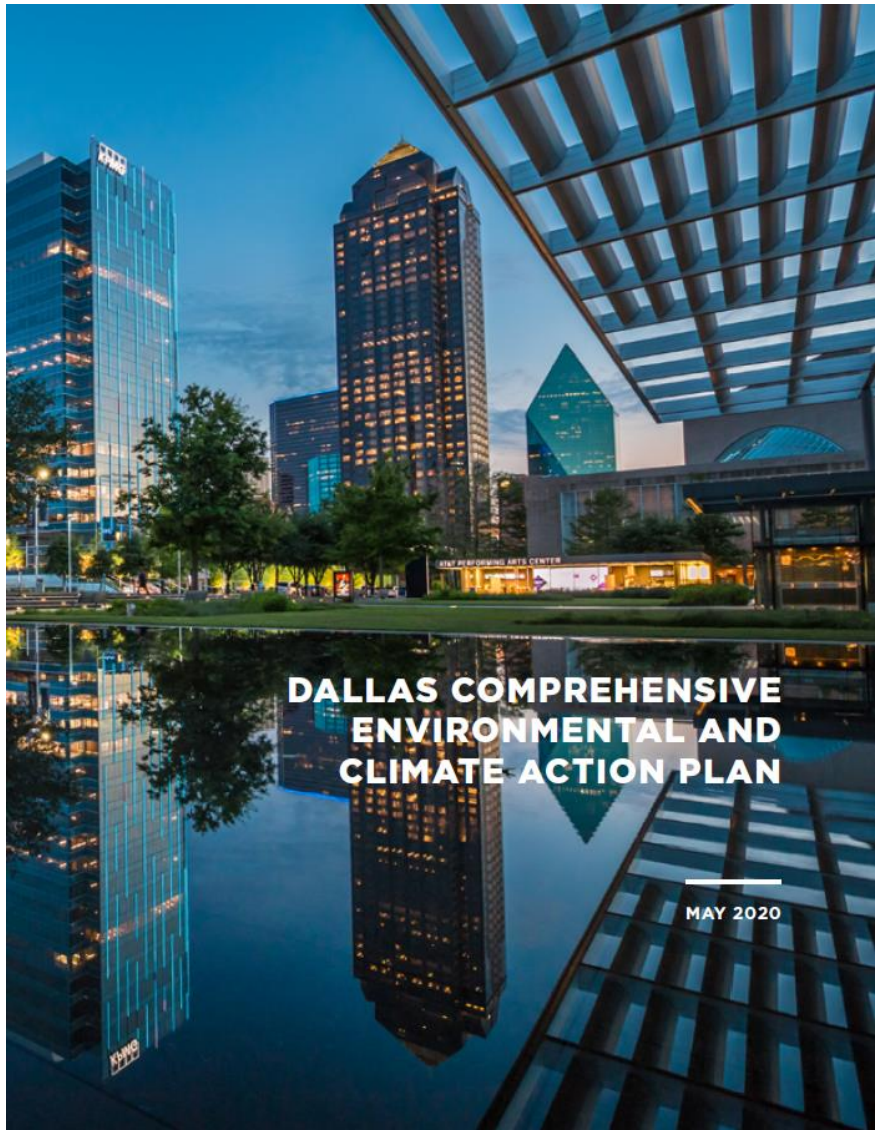
- See full presentation for supporting data and analyses

National Renewable Energy Laboratory

Ken Kelly, Cory Sigler, Matt Jeffers

August 2022

Dallas Fleet Electrification Goals



Dallas Comprehensive Environmental and Climate Action Plan (CECAP)

- The Intergovernmental Panel on Climate Change (IPCC) recommends **reducing GHG emissions to net zero by 2050** to limit the increase in global temperatures to below 1.5°C.
- The City of Dallas is **committed to meeting the international emission reduction targets** set by the Paris Agreement in 2016.
- The 2015 greenhouse gas (GHG) inventory reported that **35% of Dallas' GHG emissions come from transportation sector**.
- The CECAP provides a roadmap for the City to improve quality of life, **to reduce greenhouse gas emissions**, to prepare for the impacts of climate change, and to create a healthier and more prosperous community.

Fleet Electrification Considerations

- What are the overall goals of the Dallas fleet electrification plan?
- Where are the best opportunities for fuel reduction and emissions reduction?
- Which vehicle duty cycles are suitable for electrification?
- Which vehicles are eligible for electrification (i.e., non-emergency response or non-special purpose vehicles)
- Which vehicles are nearing retirement or overdue for replacement?
- Which vehicles have an electric model that's commercially available today?
- Which vehicles have dedicated parking locations suitable for charging equipment?
- Which communities or regions of the city stand to benefit the most from lower emissions and improved air quality?
- What are the vehicle-life economics and what factors influence economic payback and GHG savings

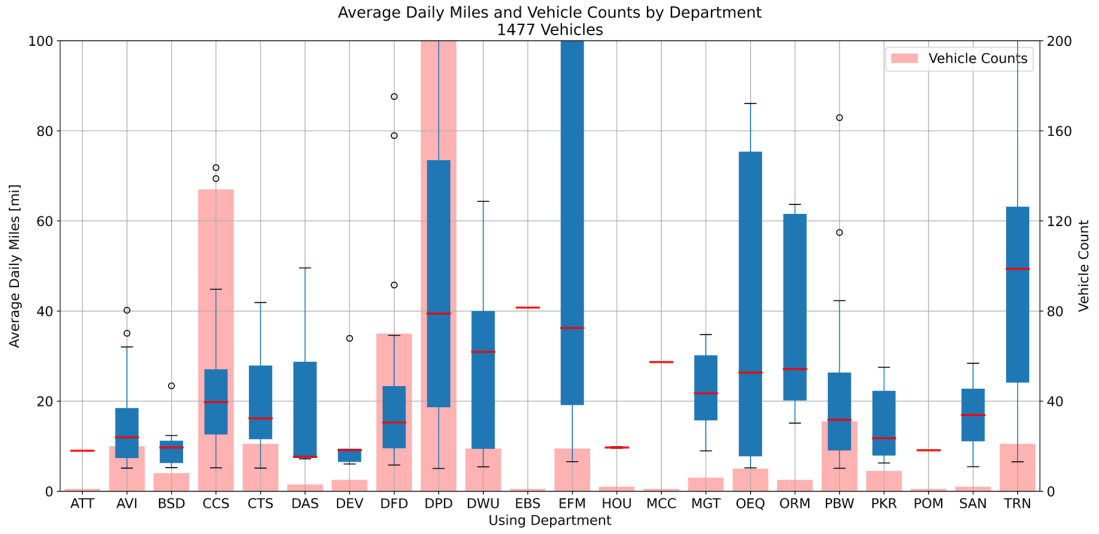
Data-driven Analysis Approach

Vehicle Inventory	• Number of vehicles by department • Vehicle class/type by department • Vehicle age
Vehicle Operation	• Annual vehicle miles traveled (VMT) by department and vehicle type • Estimated daily miles traveled per vehicle
Fuel/Energy Consumption	• Annual fuel consumption by department and vehicle type • Estimated daily energy consumption per vehicle
Vehicle Replacement Criteria	• Review of replacement eligibility criteria • Review of replacement ranking, year and cost by vehicle
EV Availability	• Alternative Fuels Data Center (AFDC) Advanced Vehicle Search tool • Review of commercially available EVs by vehicle class and type • MSRP values
EV and EVSE Economics	• Inputs from steps above feed VICE Economic Model (cost and operations) • Light-duty sedans and pickup scenarios evaluated • Parametric sweeps show impacts of key input parameters
GHG Impacts	• Data on regional energy generation energy and vehicle efficiencies • GREET Model to estimate GHG impacts of EV replacements • Combine VICE economics and GREET GHG to estimate cost of GHG offsets

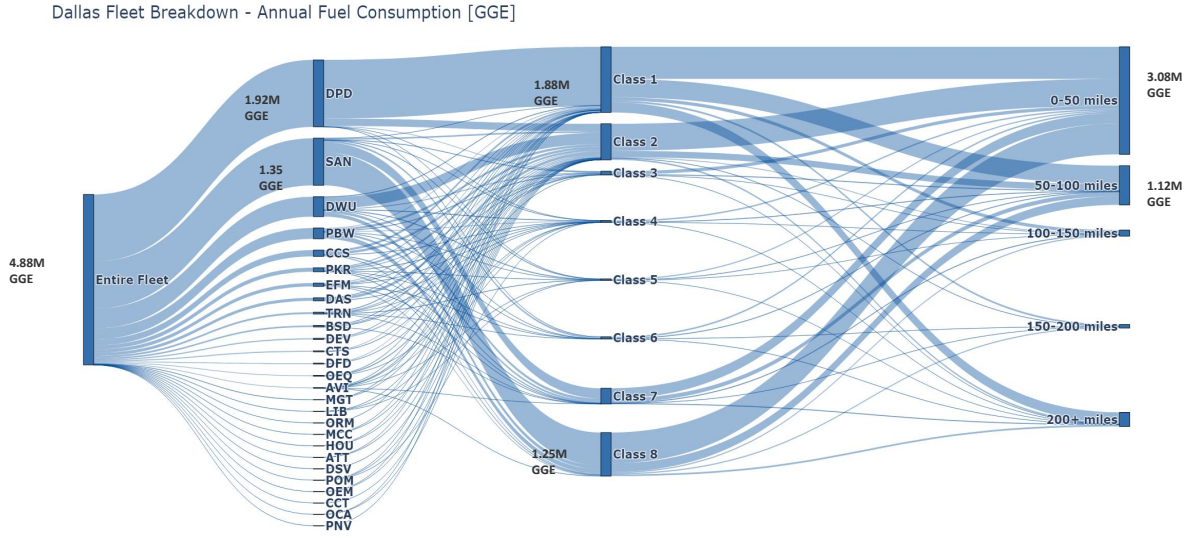
Dallas Fleet Electrification Process

- **Review of Established Transportation Energy Goals / Policies**
- **Dallas Fleet Inventory Energy Consumption and Usage**
  - Fleet inventory and usage statistics
  - ZEV model availability
  - Energy breakdown by vehicle types and departments
  - Vehicle energy requirements / duty cycle analysis
  - Fleet replacement criteria – vehicle age / mileage
  - Selection of priority electrification candidates
- **Infrastructure Requirements**
  - Priority charging locations
  - Vehicle dwell times and fleet parking locations
  - Utility rates / rate structures
- **Cost of Operation / Ownership Estimation**
  - Cost data collection (fleet) – fuel cost, electricity cost, maintenance
  - Cost data collection (market) – fuel cost, electricity cost, maintenance
  - Cost calculations – e.g., Vehicle Infrastructure Cash-Flow Evaluation (VICE) tool

Fleet Inventory Usage Statistics



Entire Fleet Energy Consumption by Department and Vehicle Type



Note: expanded versions of above figures provided in backup slides

Dallas Fleet Vehicle Usage

Dallas fleet inventory data reveals the number, size, and type of vehicles operated by each city department, as well as:

- Annual fuel consumption
- Average daily vehicle miles traveled (VMT)

Review of GPS data for select vehicle groups indicates that

- GPS daily VMT somewhat higher than estimated annual averages
- GPS data indicate that most vehicles have maximum daily driving distances well within the range of suitable replacement EVs

Vehicle age and anticipated replacement dates suggest many Admin Sedans and Light Duty Pickups have met replacement criteria

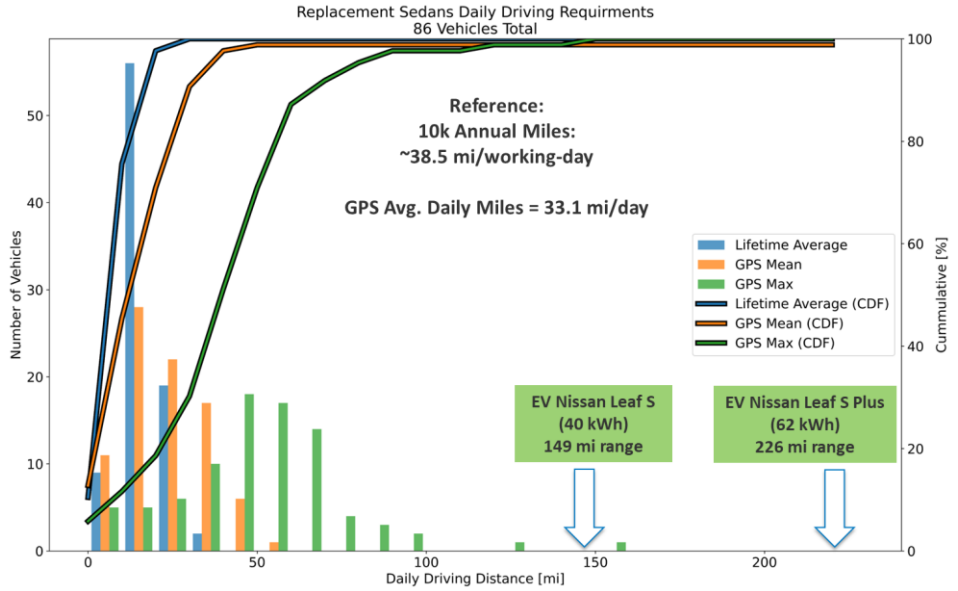
Key Takeaways: *Analysis of fleet inventory, usage statistics, and replacement criteria help to narrow the EV candidates.*

GPS data provides more detailed info on vehicle daily usage

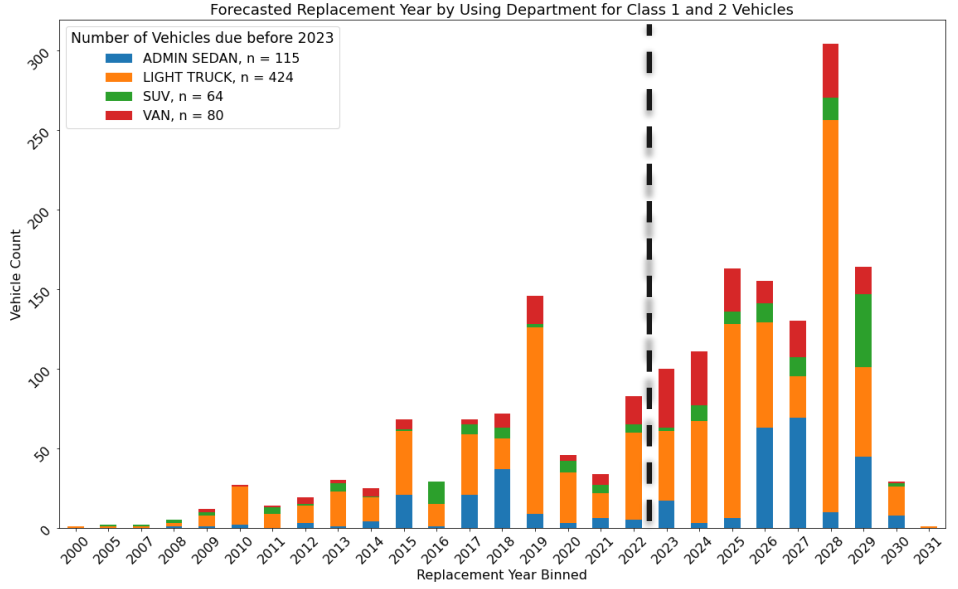
Candidates for replacement with EVs should be reviewed with the operating managers to ensure specific vehicle suitability – including maximum driving range requirements and energy used for loads during idle

Note: expanded versions of above figures provided in backup slides

Comparing GPS to Fleet Aggregate Statistics

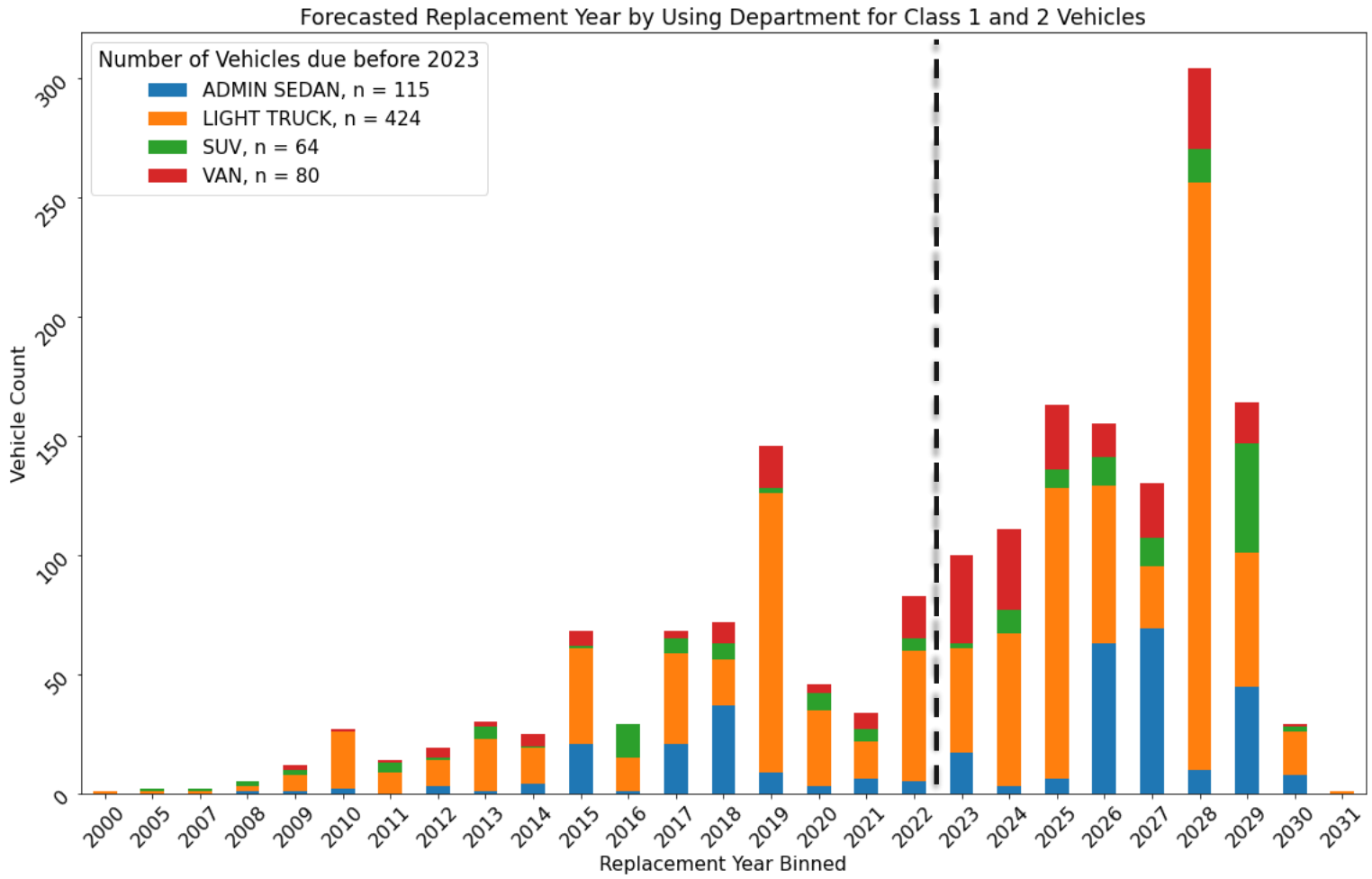


Vehicles Scheduled for Replacement by Type



Vehicle Replacement Schedule

- Dallas has established criteria for replacement/retirement of fleet vehicles, which determines forecasted replacement year
- There are nearly 700 class 1 & 2 vehicles in current fleet with scheduled replacements before 2023 (excluding DPD)
- Sizeable opportunities currently exist for replacement of Admin Sedans and Light Trucks with EV's



Primary cost drivers for EVSE

- **Power level of unit (kW)**
  - Level 2 EVSE tend to be much cheaper than DCFC
- **Number of charging ports per unit**
  - Chargers with multiple connectors/charging ports tend to be cheaper ($/port)
  - Software can enable simultaneous or sequential vehicle charging
- **Mounting type (pedestal or wall-mount)**
  - Wall-mounted units tend to be cheaper than pedestal-mounted, for hardware and installation
- **Internet connectivity**
  - Networked EVSE—enabling mobile app connectivity, point-of-sale capability and other features—increases EVSE costs
- **EVSE location and number of units installed**
  - Will have a large impact on construction and installation costs
- **EVSE costs are variable and can be challenging to predict**
  - It is recommended to purchase and install only the minimum charging level and capabilities needed

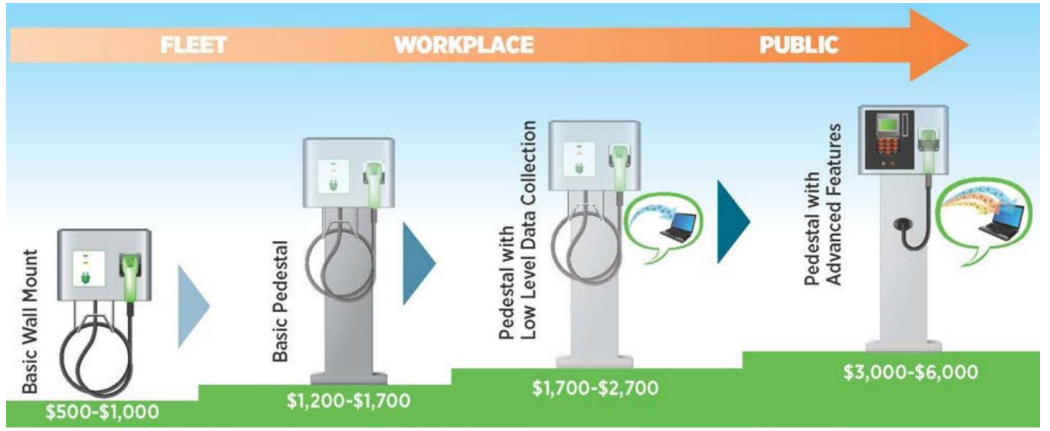
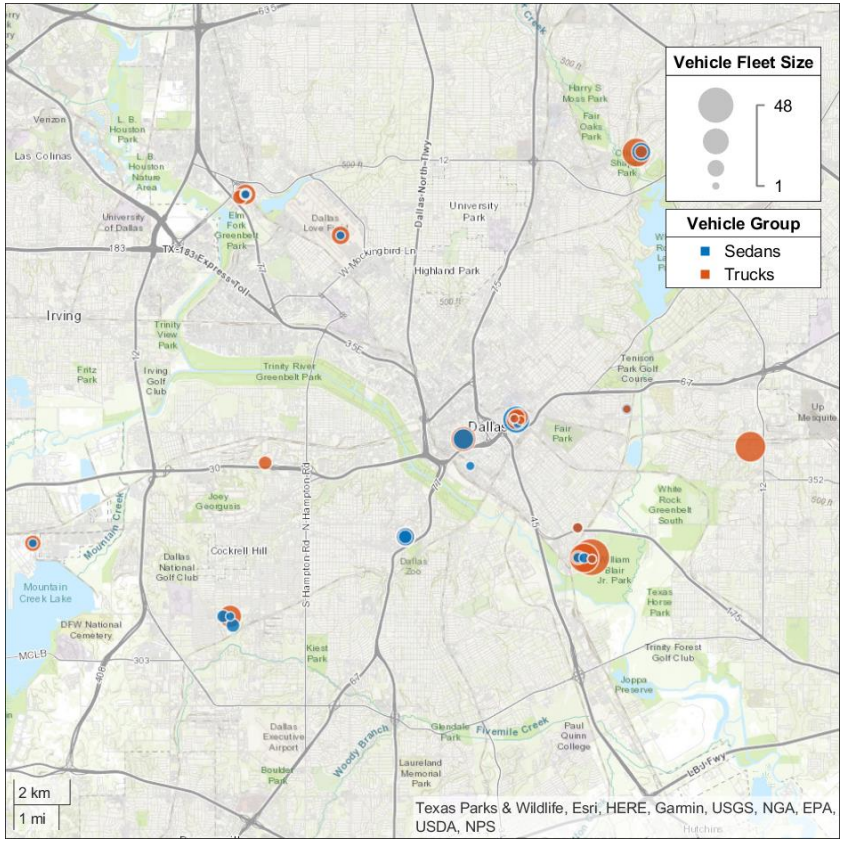


Figure 5. Ballpark cost ranges for different tiers of Level 2 EVSE units. *Image from Kristina Rivenbark, New West Technologies.*

Locations with sedans & light trucks

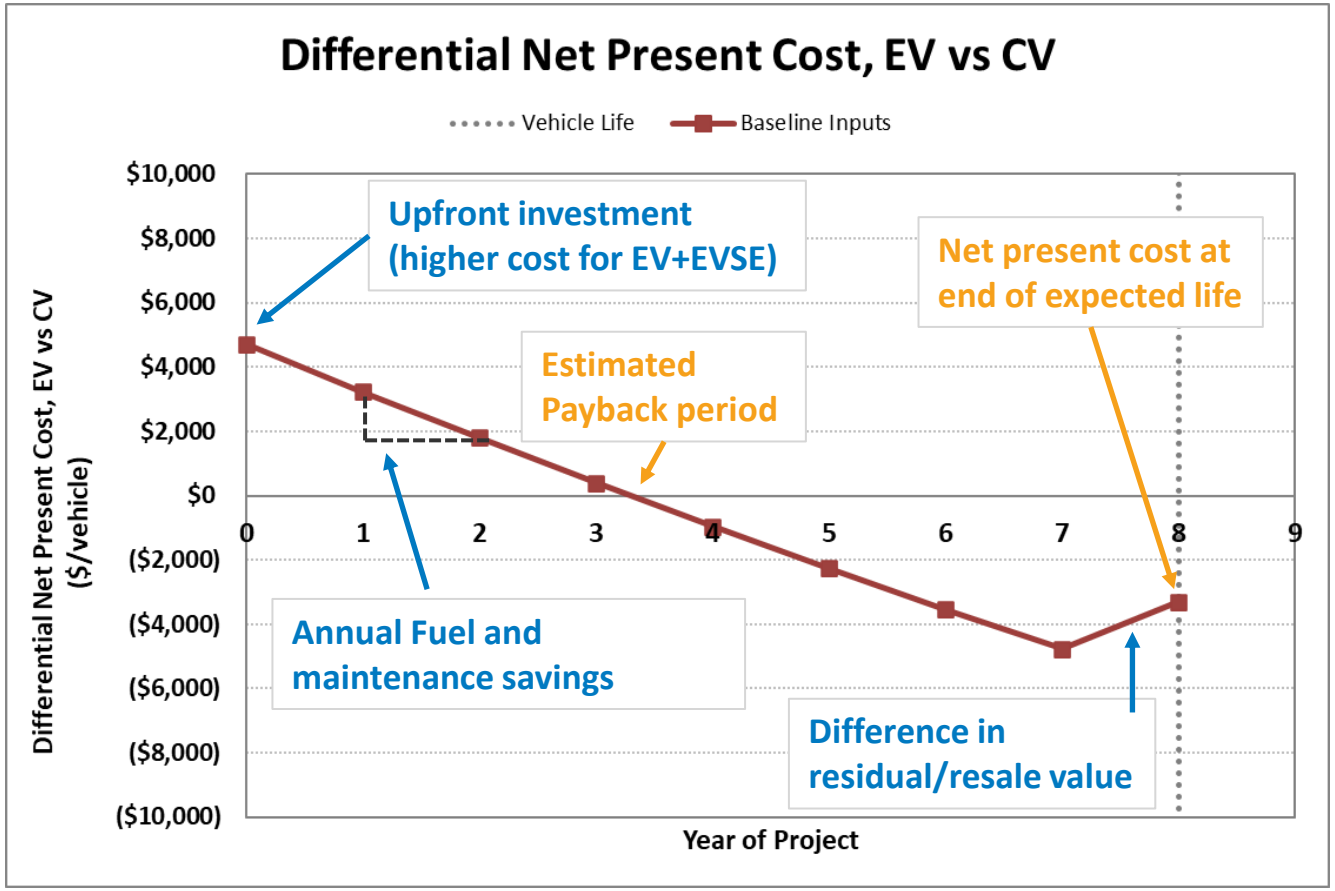


Vehicle and Infrastructure Cash Flow Evaluation (VICE) model Key Inputs & Outputs

General Input Parameters
Number of vehicles
Annual VMT (miles)
Expected vehicle lifetime (years)
Rate of return, discount rate

Vehicle-Specific Inputs	Conventional	Electric
Purchase cost ($)	✓	✓
Fuel efficiency (mpg, kWh/mi)	✓	✓
Fuel/electricity price ($/gal, $/kWh)	✓	✓
Maintenance costs ($/mi)	✓	✓
Residual/salvage value ($)	✓	✓
EVSE purchase cost ($)		✓
EVSE installation cost ($)		✓
Grants/rebates/tax incentives for EVs and EVSE ($)		✓

Example of VICE model results



Baseline Inputs & Parametric Sweeps
Light Duty Sedan

	Parameter	Units	Conventional Vehicle	EV
Values from fleet vehicles to be replaced	Fleet size	#	10	
	Annual VMT	miles	6,382	
Values for replacement vehicle options	**Year/Make/Model**		**2022 Honda Civic LX**	**2022 Nissan Leaf S**
	Capital cost (MSRP)	$/vehicle	$23,365	$28,425
	Fuel efficiency	mpg kWh/mi	34 mpg	112 MPGe 0.268 kWh/mi
Model inputs estimated from other data sources	Fuel price	$/gal $/kWh	$2.36/gal	$1.71/gal $0.052/kWh
	Maintenance cost	$/mi	$0.187	$0.117
	Salvage value	% of MSRP	~31%	~17%
	EVSE cost	$/EVSE	n/a	$1,000 + $2,000
	Rebates	$/vehicle	n/a	$0

Swept Parameters
(see backup slides)

EV Cost
- $28K vs. $23K (base)

EV Rebates
- $0 (baseline), $2.5K, 7.5K, 15K per vehicle

EVSE Cost
- $3K (baseline), $2K, $5K each

Daily VMT (miles/day)
- 24.5 miles, 38.5 miles, 46 miles

Gasoline Price
- $2.36/gal (baseline), $3/gal, $4/gal

Extended vehicle life was also projected
- 8 –year vs. 12-year

Dallas Fleet EV Economics
Light-Duty "Administrative Sedans"

VICE Economic Model Results – Light Duty Sedans

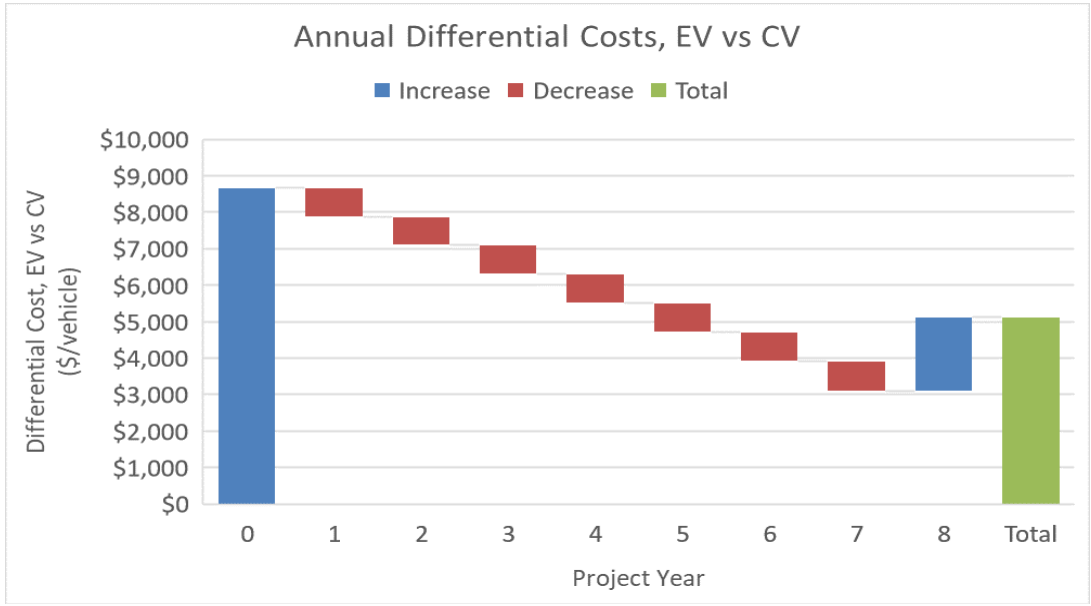
- The base 2022 Nissan Leaf Model S appears capable of meeting "most" driving range requirements at a lower price point – 40-kWh battery/149-mile EV range
- Baseline total net present cost at end of expected 8-year life = $4,345 per vehicle) – vehicle operation beyond year 8 continues to accrue savings
- Operational savings accumulate faster when replacing vehicles that are driven more – this can be done well within estimated Nissan Leaf S range of 149 miles

Scenarios to achieve lifetime "cost parity" include

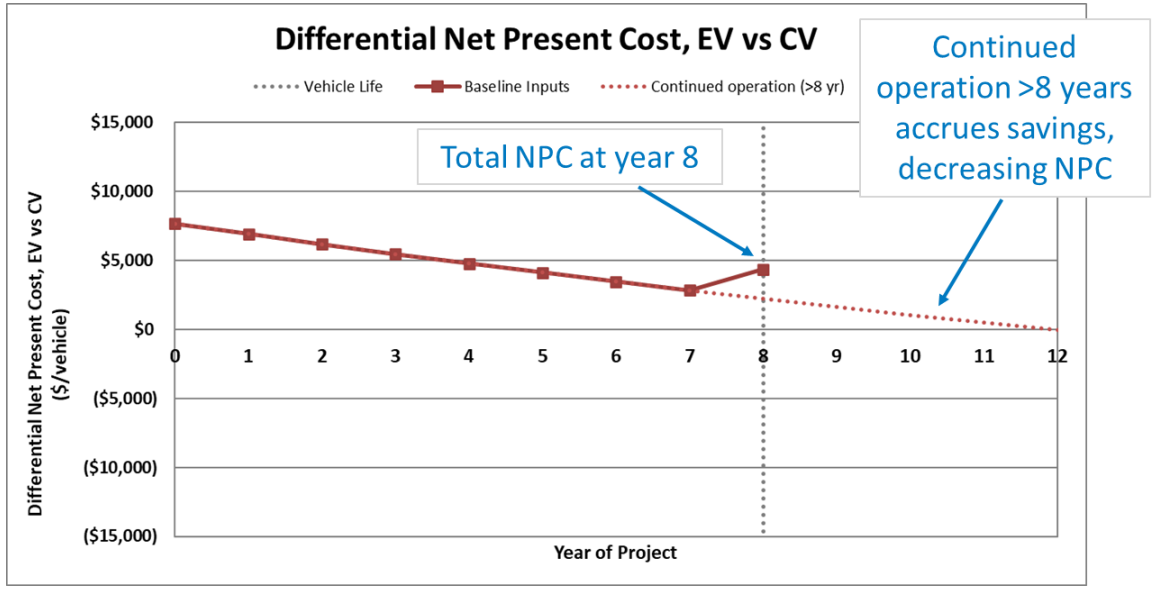
- Case 1: $2.5K EV rebate
- Case 2: Lower EVSE cost ($2.5K), higher gas price ($3/gal) and VMT (8K miles/year)

Note: expanded versions of above figures provided in backup slides

VICE Model Results – baseline lifetime costs & savings



VICE Model Results – lifetime cost differential



Baseline Inputs & Parametric Sweeps
Pickup Trucks

	Parameter	Units	CV	EV
Values from fleet vehicles to be replaced	Fleet size	#	9	
	Annual VMT	miles	7,731	
Values for replacement vehicle options	**Year/Make/Model**		**2022 Ford F-150**	**2022 Ford F-150 Lightning**
	Capital cost (MSRP)	$/veh	$31,685	$41,669
	Fuel efficiency	mpg kWh/mi	18 mpg	67 MPGe 0.426 kWh/mi
Model inputs estimated from other data sources	Fuel price	$/gal $/kWh	$2.36/gal	$1.71/gal $0.052/kWh
	Maintenance cost	$/mi	$0.247	$0.154
	Salvage value	% of MSRP	~31%	~18%
	EVSE cost	$/EVSE	n/a	$1,000 + $2,000
	Rebates	$/vehicle	n/a	$0

Swept Parameters
(see backup slides)

Daily VMT (miles/day)
- 30 miles (baseline), 38.5 miles, 46 miles

Gasoline Price
- $2.36/gal (baseline), $3/gal, $4/gal

Extended vehicle life was also projected
- 8 –year vs. 12-year

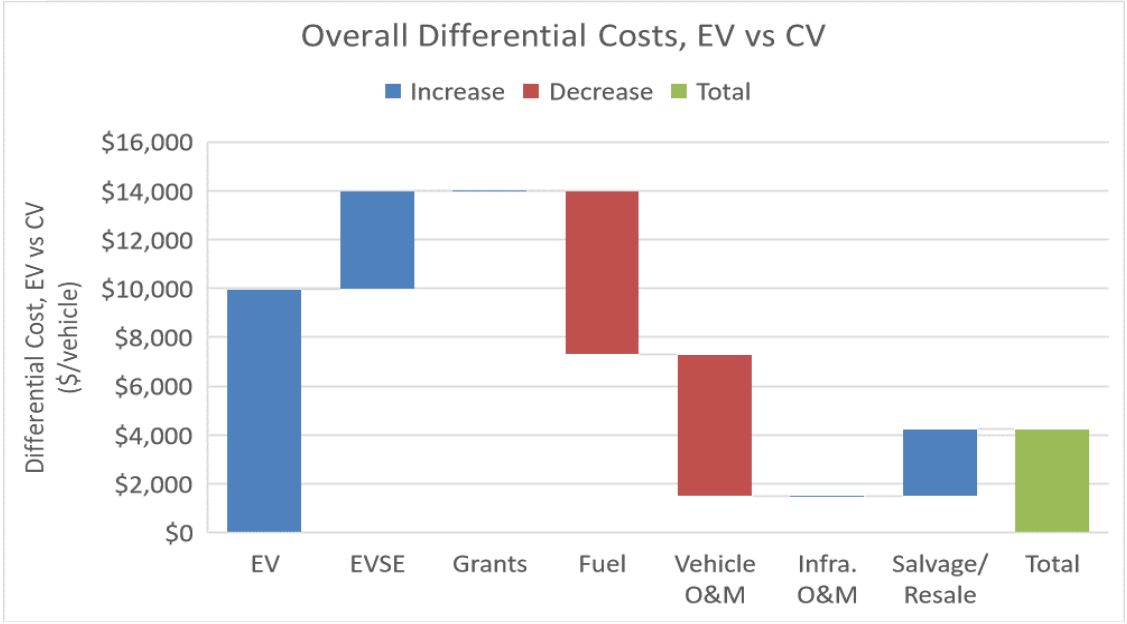
Dallas Fleet EV Economics
Light-Duty Pickup Trucks

VICE Economic Model Results – Light Duty Pickups

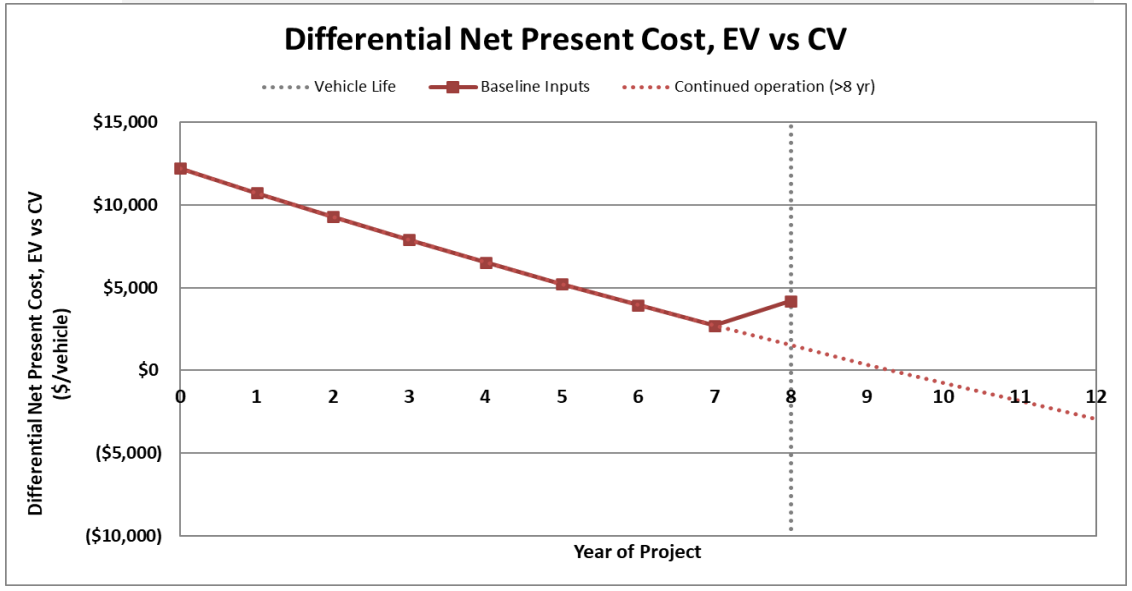
- The 2022 Ford F-150 Lightning Pro appears to be capable of meeting “majority" of driving range requirements at a lower price point – 98-kWh battery/230-mile EV range
- Baseline net present cost at end of 8-year life ~ $4,202 per vehicle – vehicle operation beyond year 8 continues to accrue savings
- Annual Operational savings accumulate faster for EV pickups than EV sedans – due to higher relative energy savings
- Operational savings accumulate faster when replacing vehicles that are driven more – this can be done well within estimated Ford F150 Lightning Pro EV driving range of 230 miles

Note: expanded versions of above figures provided in backup slides

VICE Model Results – baseline lifetime costs & savings



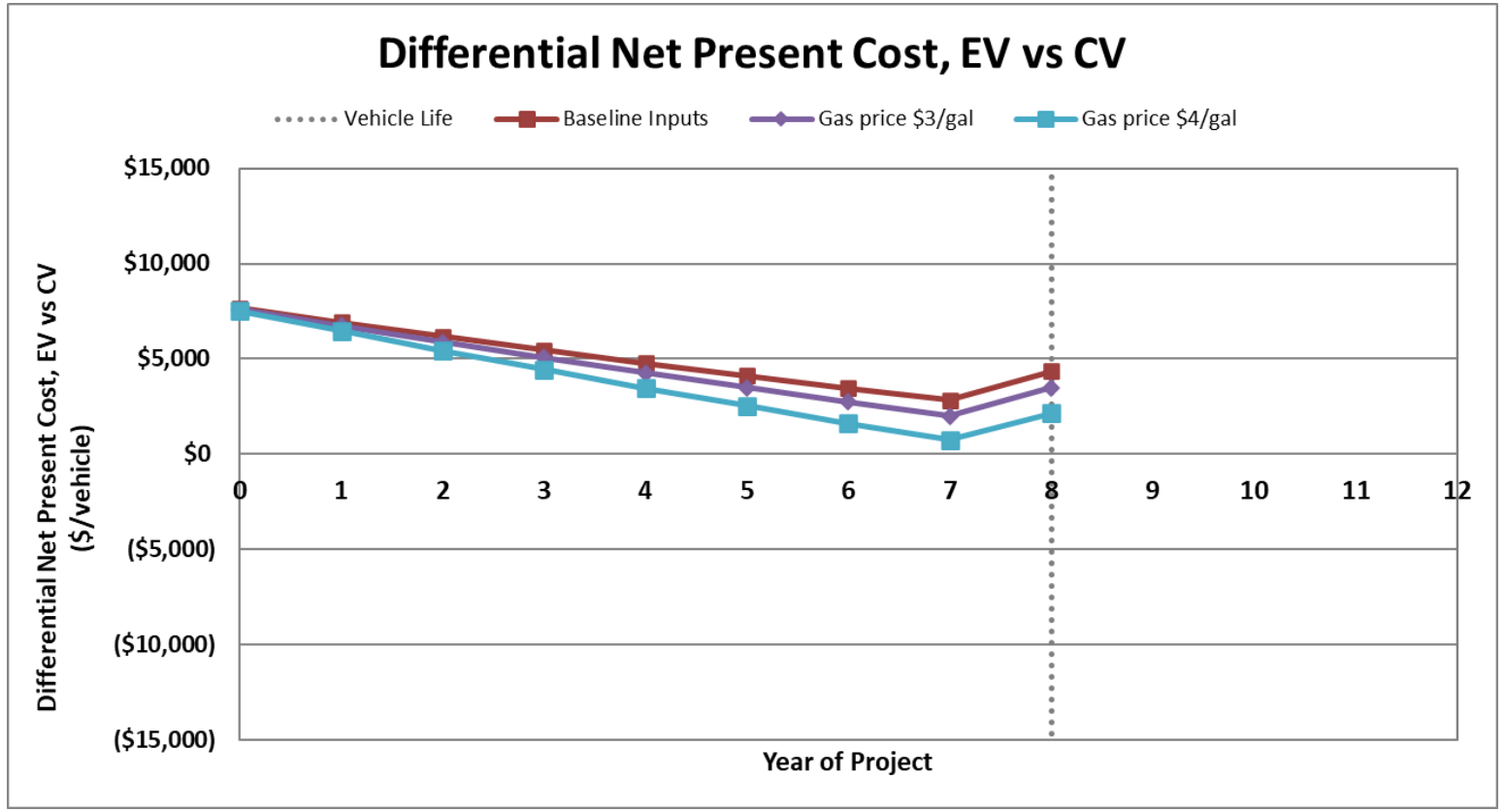
VICE Model Results – lifetime cost differential



VICE Model Results – Impact of Fuel Prices

Impact of gas price

- Baseline gas price = $2.36/gal (2021 Dallas avg.)
- Gas price $3/gal represents small increase
- Gas price $4/gal represents larger increase (similar to current gas prices)



Takeaway: *Higher gasoline fuel prices (relative to electricity costs) impact rate of savings and payback period for the EV option*

Electric Vehicle
2022 Nissan Leaf S

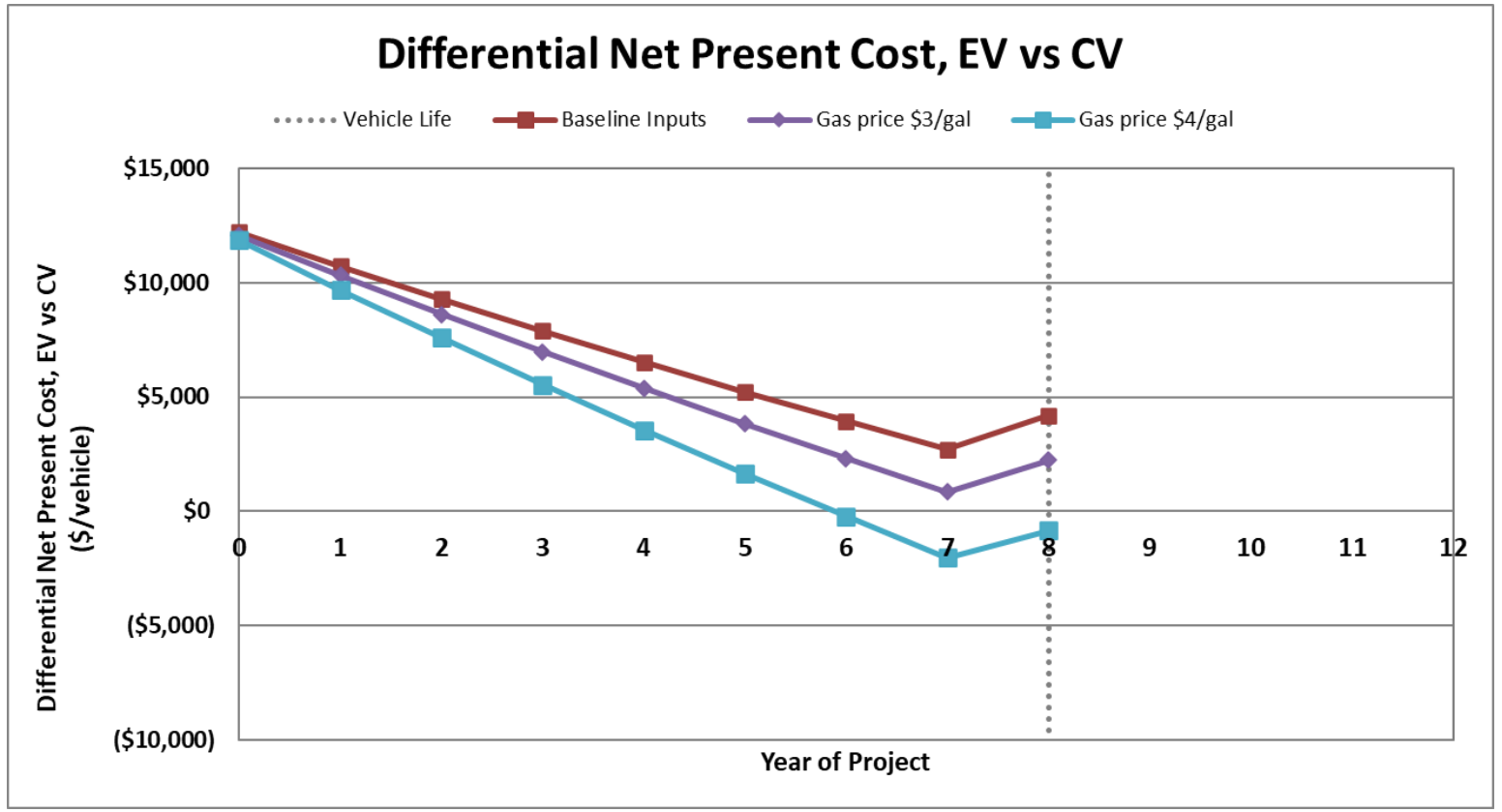
Conventional Vehicle
2022 Honda Civic LX

VICE Model Results – Scenario 2 (trucks)

Impact of gas prices

- Baseline gas price = $2.36/gal (2021 Dallas avg.)
- Gas price $3/gal represents small increase
- Gas price $4/gal represents larger increase (similar to current gas prices)

Takeaway: *Higher gasoline fuel prices (relative to electricity costs) impact rate of savings and payback period for the EV option*



Electric Vehicle

2022 Ford F-150 Lightning

Conventional Vehicle

2022 Ford F-150

VICE Model Summary

- The VICE model provides a comparison of project economics and investigate scenarios for a purchase of EVs and EVSE compared to a purchase of conventional vehicles
- Upfront project costs have a large impact on overall economics
  - Relative purchase price of EV compared to comparable CV
  - Equipment and installation costs of EVSE for EV fleet being purchased
    - Note: EVSE costs are highly variable depending on the specific equipment needs and unique circumstances of the charging location
  - The value of GHG emissions reductions and air quality improvements should be considered
- Financial incentives such as grants, rebates and tax credits can have a large impact on project economics
  - Numerous programs exist for federal and state funding for EVs and for EVSE
- EVs can accrue savings from lower per-mile fuel and maintenance costs compared to CVs, but these costs carry some uncertainty
  - Low fixed electricity price for Dallas is very advantageous for vehicle electrification
- Lead times for EVSE (procurement, permitting, site preparation/construction, installation) can be longer than lead times for EVs
  - Begin process to establish charging infrastructure to enable deployment of EV fleets

Estimation of Cost per ton GHG Offset

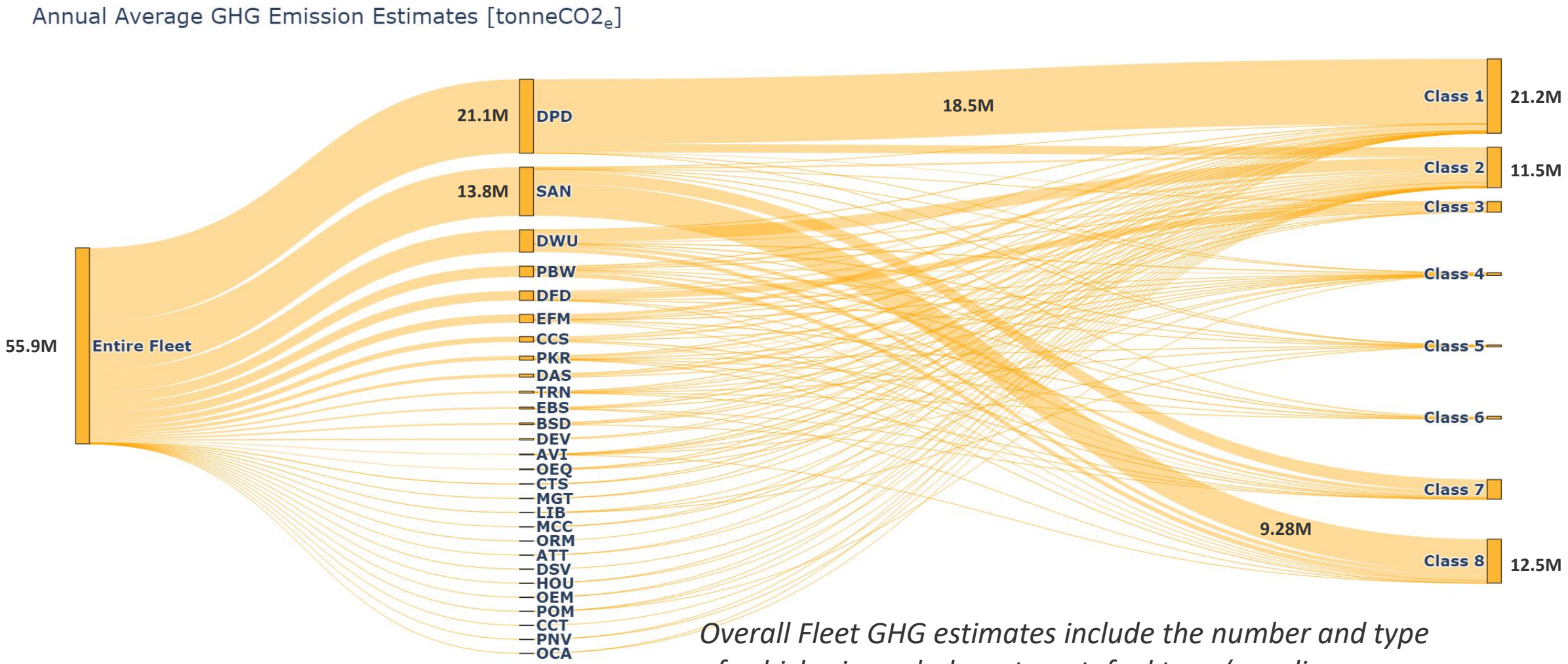
assuming zero-carbon "green" electricity

Parameter	Units	Baseline Scenario 1 (sedans)	Baseline Scenario 2 (light trucks)
VICE model total project cost per vehicle	**$/vehicle**	**4,345**	**4,202**
Lifetime emissions reduction (EV vs CV) per vehicle	**metric ton CO_2e/vehicle**	**16.03**	**36.67**
Project cost per metric ton CO_2e to achieve lifetime emissions reduction	**$/metric ton CO_2e**	**271**	**114**

- The VICE model estimates that purchasing EVs instead of CVs could reduce GHG emissions by
  - 16.03 metric tons CO_2e per light-duty sedan over an eight-year expected lifetime
  - 36.67 metric tons CO_2e per light-duty pickup truck over an eight-year expected lifetime
- Based on the per-vehicle lifetime costs baseline assumptions, GHG emissions reductions are estimated to be
  - $271 per metric ton CO_2e for the light-duty sedan scenario
  - $114 per metric ton CO_2e for the light-duty pickup truck scenario
- **Any improvement in EV cost will lower the cost to achieve GHG reductions**
  - Achieving EV ***cost parity*** (through grants or other means discuss previously) results in GHG emissions savings estimated above at no additional cost

Dallas Fleet Annual GHG Emission Estimates

(Excluding vehicles in fleet less than 1 year)



Overall Fleet GHG estimates include the number and type of vehicles in each department, fuel type (gasoline or diesel), vehicle efficiency, and annual fuel consumption

Recommendations/Next steps

1. **Deploy commercially available LD EV sedans and light trucks and charging infrastructure**
   - Consider factors from VICE model for each purchase decision to replace retired vehicles
   - Meet with individual departments to review EV replacement recommendations, charging infrastructure and review any special requirements
   - Place EVs in relatively high-mileage service (within EV range) to maximize payback
   - Apply for federal and state grants/rebates – working with DFW Clean Cities and others
   - Begin process to install EVSE as soon as possible (working with utility)
   - Track cost and performance data on EVs and EVSE to inform future purchase decisions

Recommendations/Next steps

2. **Test/demonstrate Medium- and Heavy-duty EVs in Dallas fleet service**
   - Medium- and heavy-duty vehicles consume a significant portion of energy within the fleet (e.g., class 8 refuse haulers)
   - MD/HD EVs are emerging – but in some case products/markets are not fully developed
   - Collect detailed in-use data on high priority fleet vehicles to characterize duty cycles and energy requirements to evaluate electrification potential
   - Hydrogen fuel cell vehicles may be suitable alternatives for vehicle types/vocations that are more challenging to replace with battery-electric vehicles

3. **Coordinate and seek lessons learned from others**
   - Clean Cities Coalitions – DFW Clean Cities and national experience
   - Transit industry – including DART
   - DFW Airport is developing similar ZEV strategies
   - Other municipal fleets operating EVs – e.g., refuse, police, fire

Thank You!

www.nrel.gov/transportation

We would like to respectfully acknowledge input and guidance from Dallas Fleet Management and* Office of Environmental Quality & Sustainability*, Dallas Environmental Commission, and DFW Clean Cities
- Donzell Gipson, Susan Alvarez, Lori Clark – and many other contributors

NREL Center for Integrated Mobility Sciences
Ken Kelly, Chief Engineer for Commercial Vehicle Electrification
kenneth.kelly@nrel.gov

Cory Sigler, Commercial Vehicle Research Engineer
cory.sigler@nrel.gov

Matt Jeffers, Senior Commercial Vehicle Research Engineer
matthew.jeffers@nrel.gov

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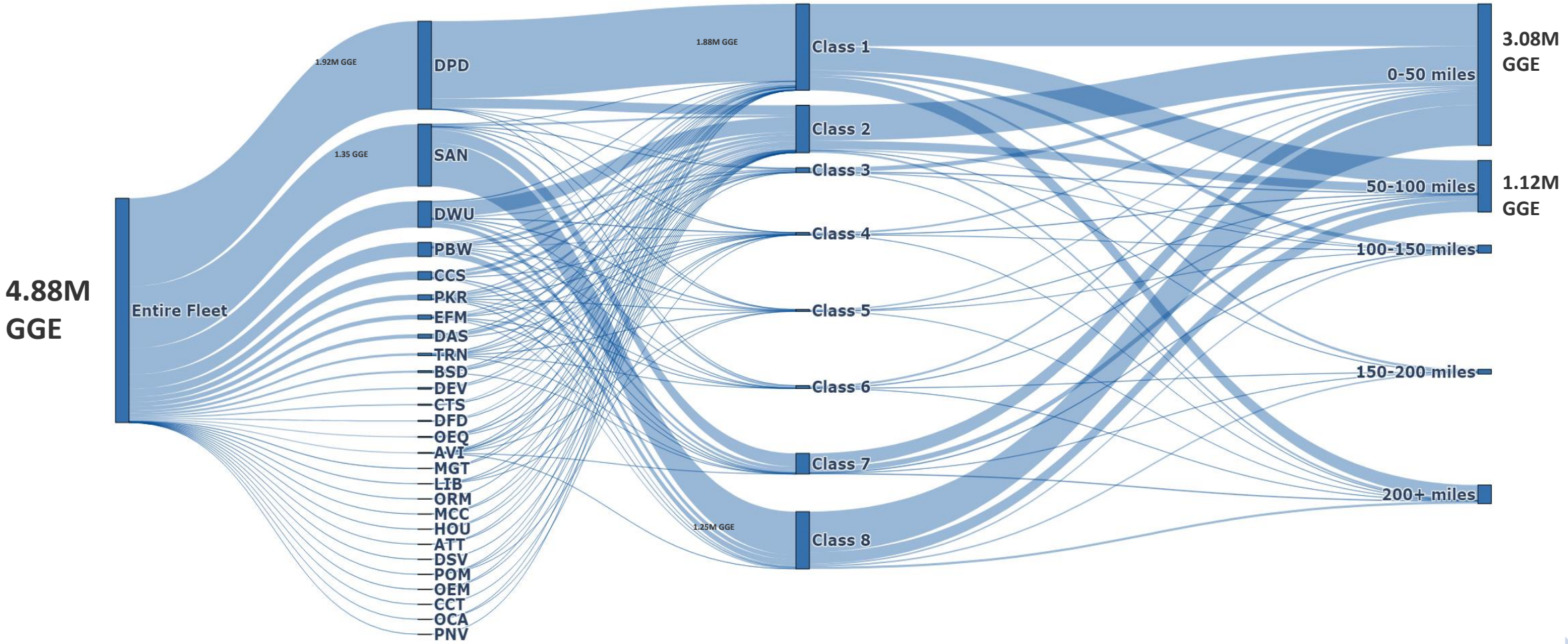
Backup Slides

Annual Energy Consumption by Department and Vehicle Type



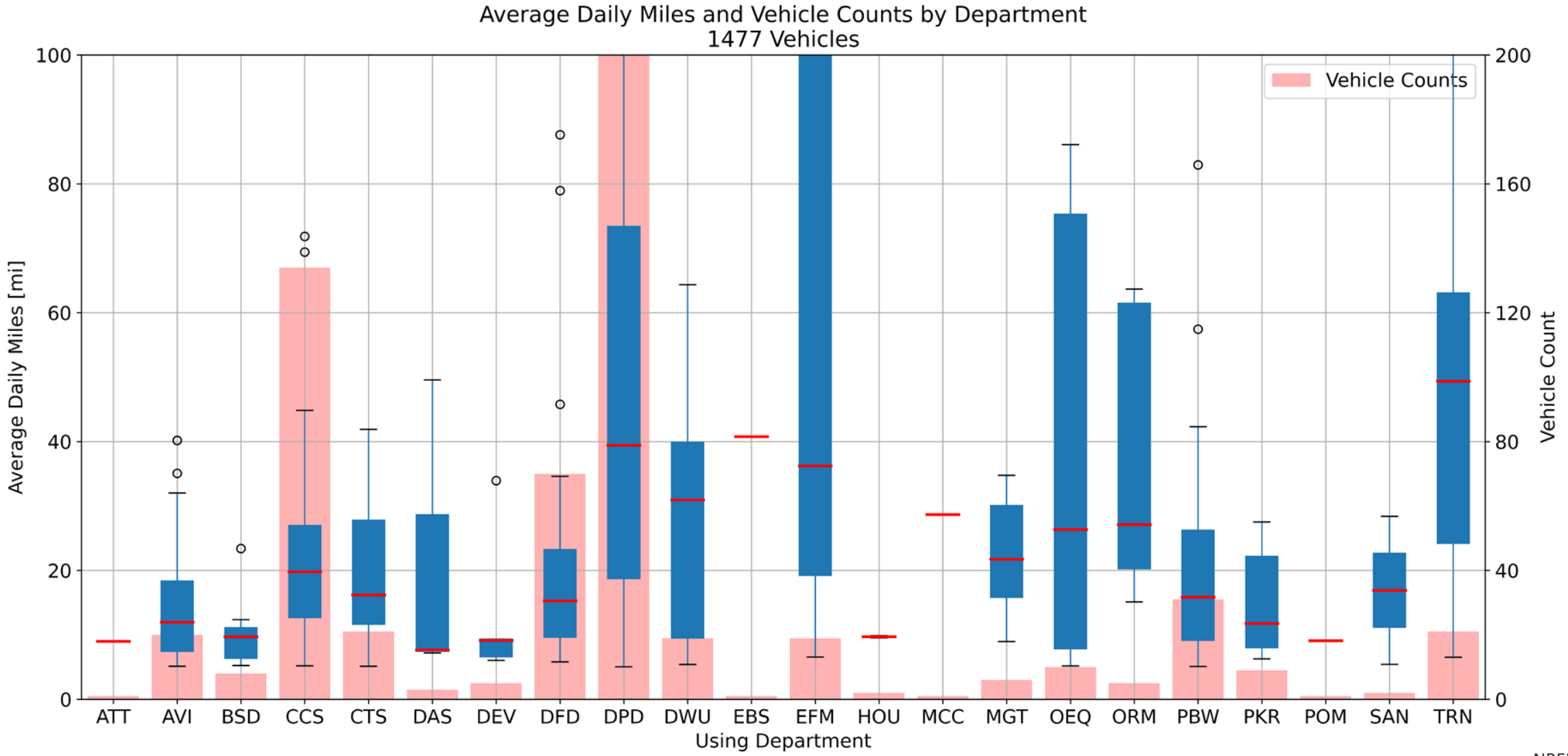
Entire Fleet Annual Fuel Consumption

Annual Fuel Use by Department

Annual Fuel Use by Vehicle Weight Class

Annual Fuel Use by Daily Mileage Driven

Fleet Inventory Usage Statistics



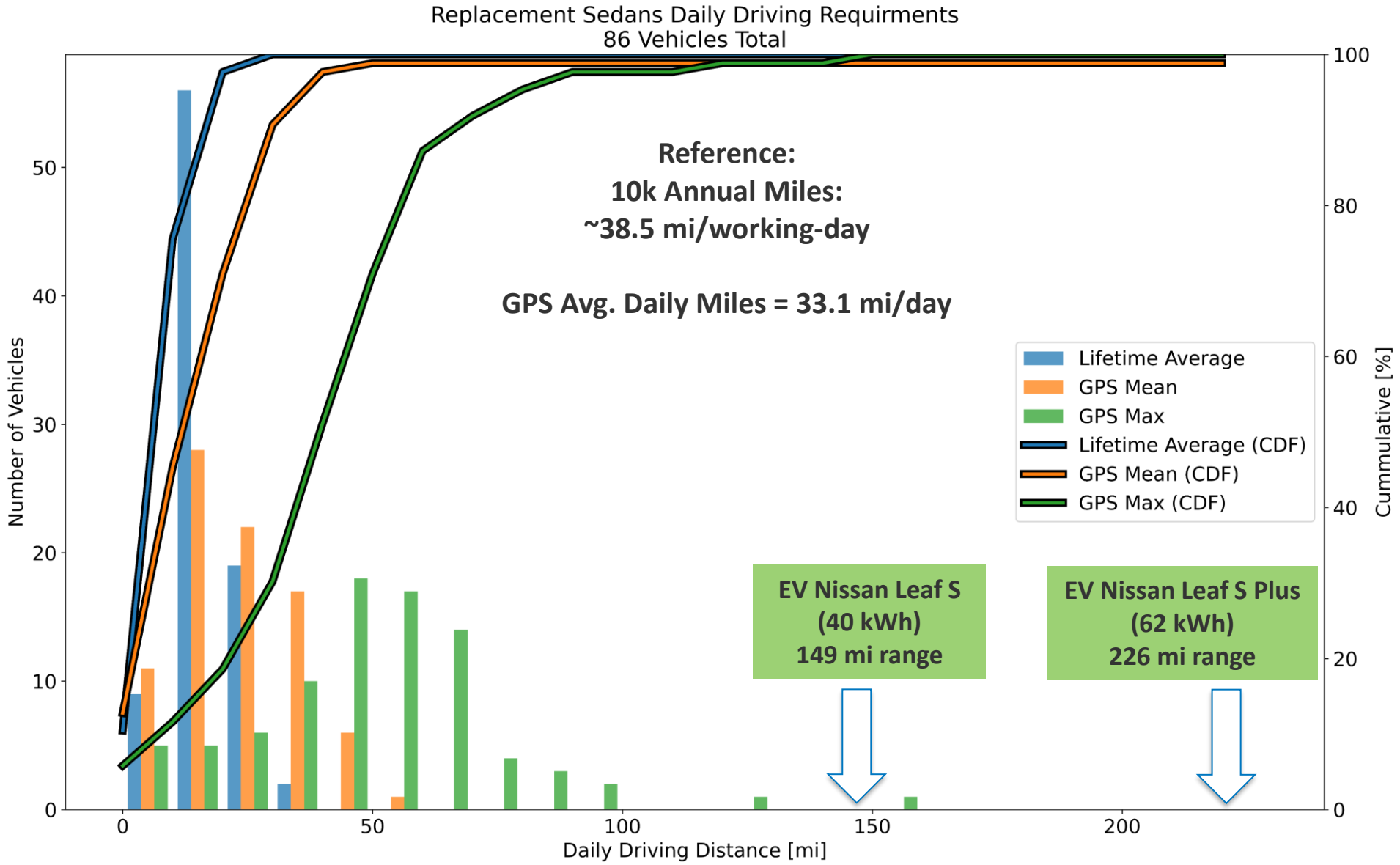
Comparing GPS Data to Aggregate Fleet Averages

– Admin Sedans –

Graph shows comparison of GPS daily driving distances to fleet average stats for 86 Admin Sedans scheduled for replacement (with GPS units

GPS average daily miles (orange) are somewhat higher than fleet aggregated data (blue)

Maximum daily miles traveled from GPS are higher than averages, but still within the driving range of Nissan Leaf EV

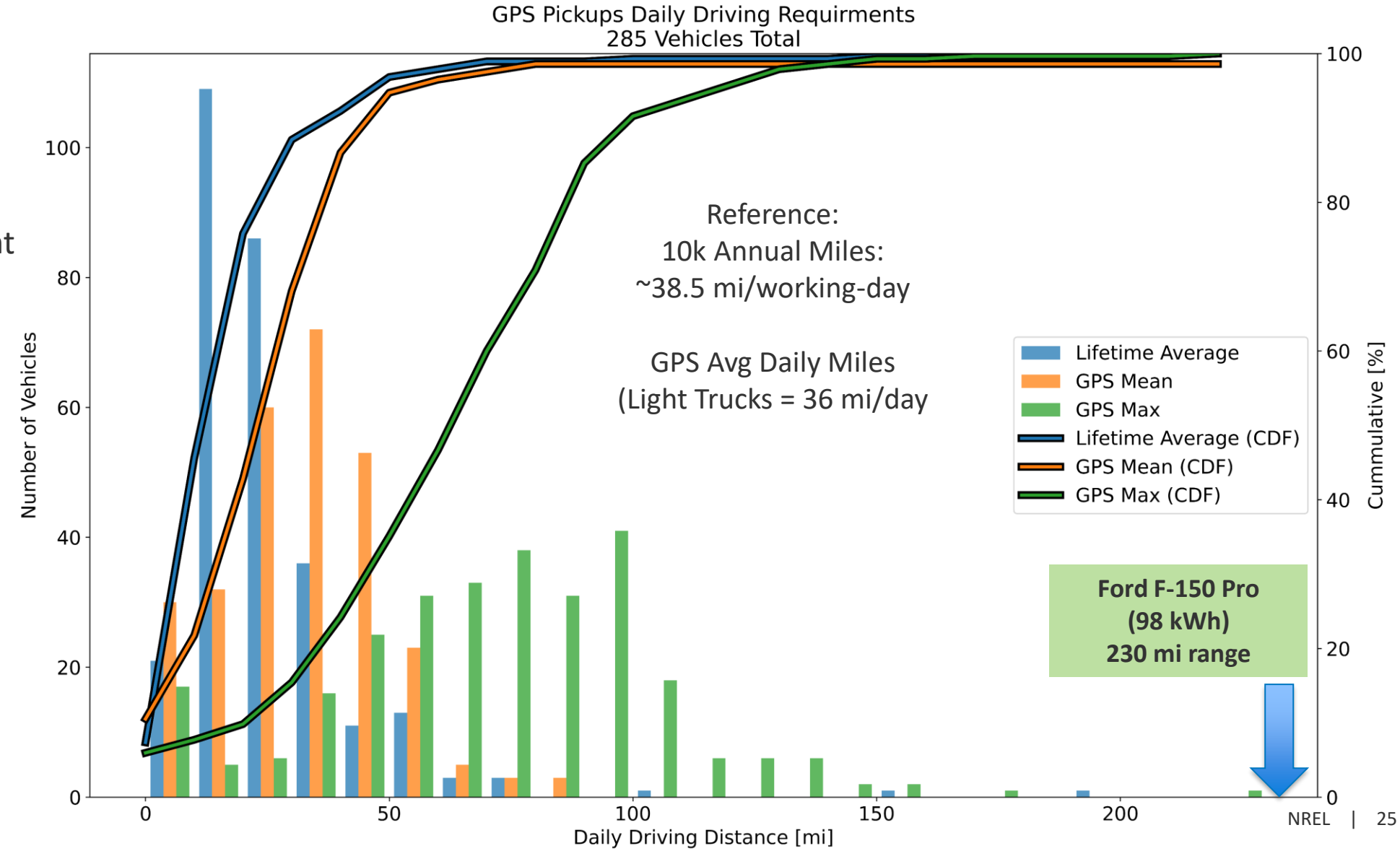


Comparing GPS Data to Aggregate Fleet Averages
– Light Trucks –

Graph shows comparison of GPS daily driving distances to fleet average stats for 285 Light Trucks scheduled for replacement (with GPS units)

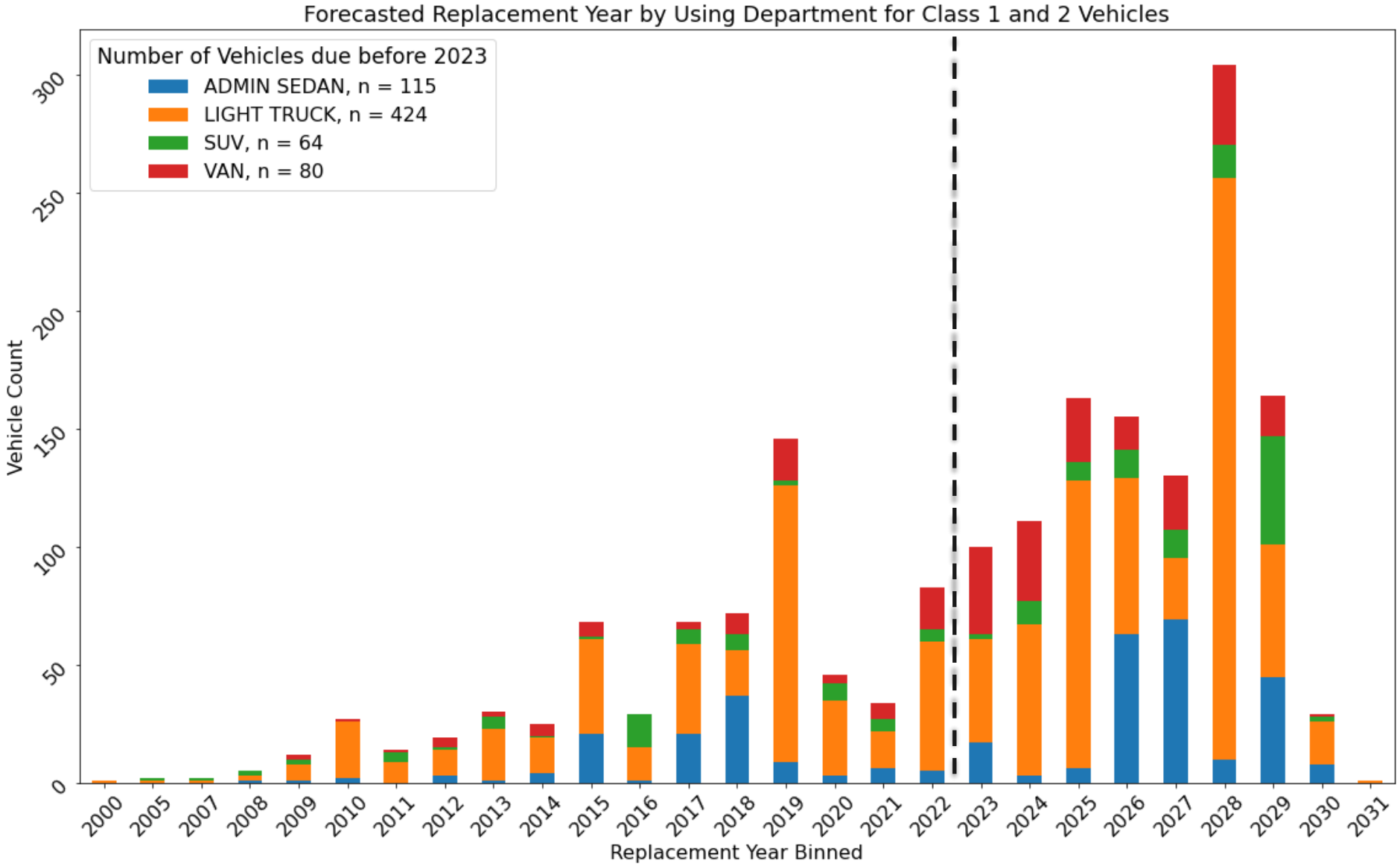
GPS average daily miles (orange) are somewhat higher than fleet aggregated data (blue)

Maximum daily miles traveled from GPS are higher than averages, but still within the driving range of Ford F150 EV



Dallas Fleet

Vehicles Scheduled for Replacement by Type



VICE Model Sources for Key Inputs

	Parameter	Units	Conventional Vehicle (CV)	Electric Vehicle (EV)
Values from fleet vehicles to be replaced	Fleet size	#	Size of subfleet (filtered from fleet inventory)	
	Annual VMT	miles	Average annual VMT of subfleet	
Values for replacement vehicle options	Year/Make/Model		MY 2022 CV	MY 2022 EV
	Capital cost	$/veh	MSRP	MSRP
	Fuel efficiency	mpg kWh/mi	EPA avg for MY 2022 CV	EPA avg for MY 2022 EV
Model inputs estimated from other data sources	Fuel price	$/gal $/kWh	Dallas fuel station 2021 average price	Dallas average electricity price
	Maintenance cost	$/mi	Average of subfleet	Estimated from ANL vehicle TCO report
	Salvage value	% of MSRP	Estimated from ANL vehicle TCO report	Estimated from ANL vehicle TCO report
	EVSE cost	$/EVSE	n/a	Estimated equipment + installation cost
	Rebates	$/vehicle	n/a	Assume $0

EVSE Cost Considerations

- EVSE costs are variable and can be challenging to predict
  - It is recommended to purchase and install only the minimum charging level and capabilities needed
- Many light-duty vehicles in the Dallas fleet have sufficient dwell time during non-working hours to utilize Level 2 chargers
  - Co-located, overnight parking
  - Some vehicles could share multiport chargers
- Dallas chargers likely will not need internet connectivity or point-of-sale system, as needed with public chargers
  - Could use RFID to restrict use to city employees

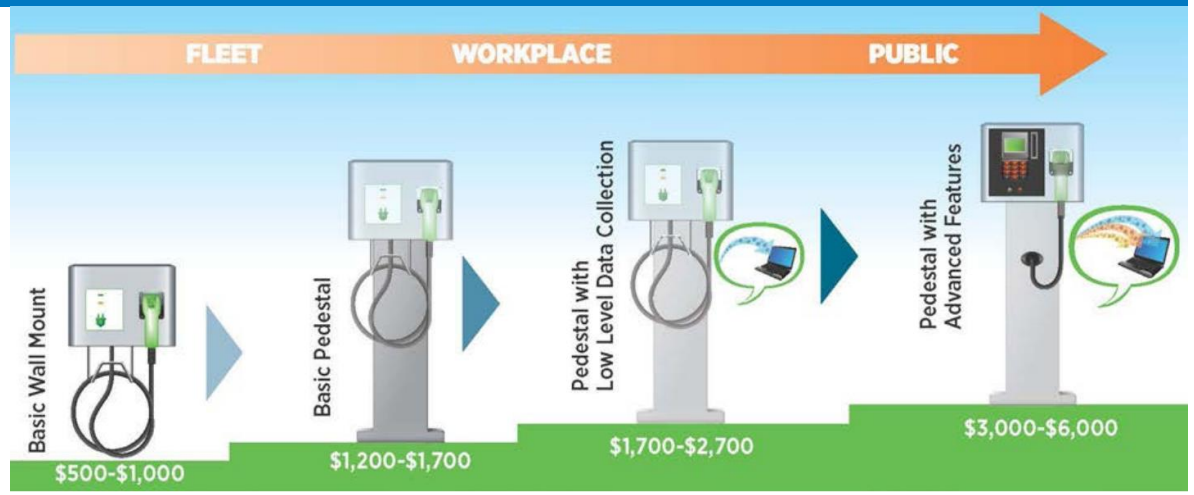
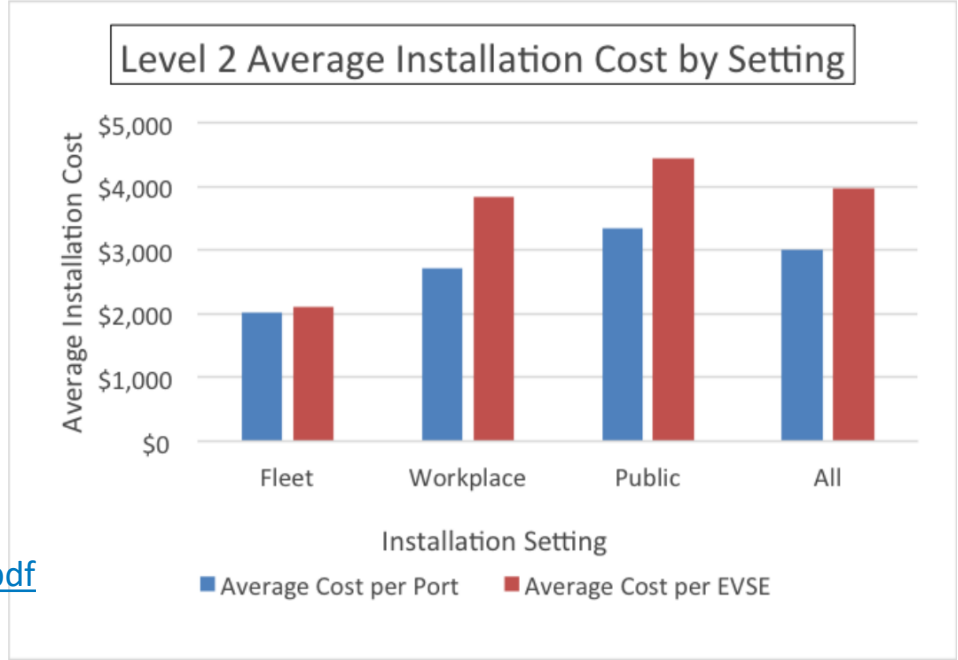
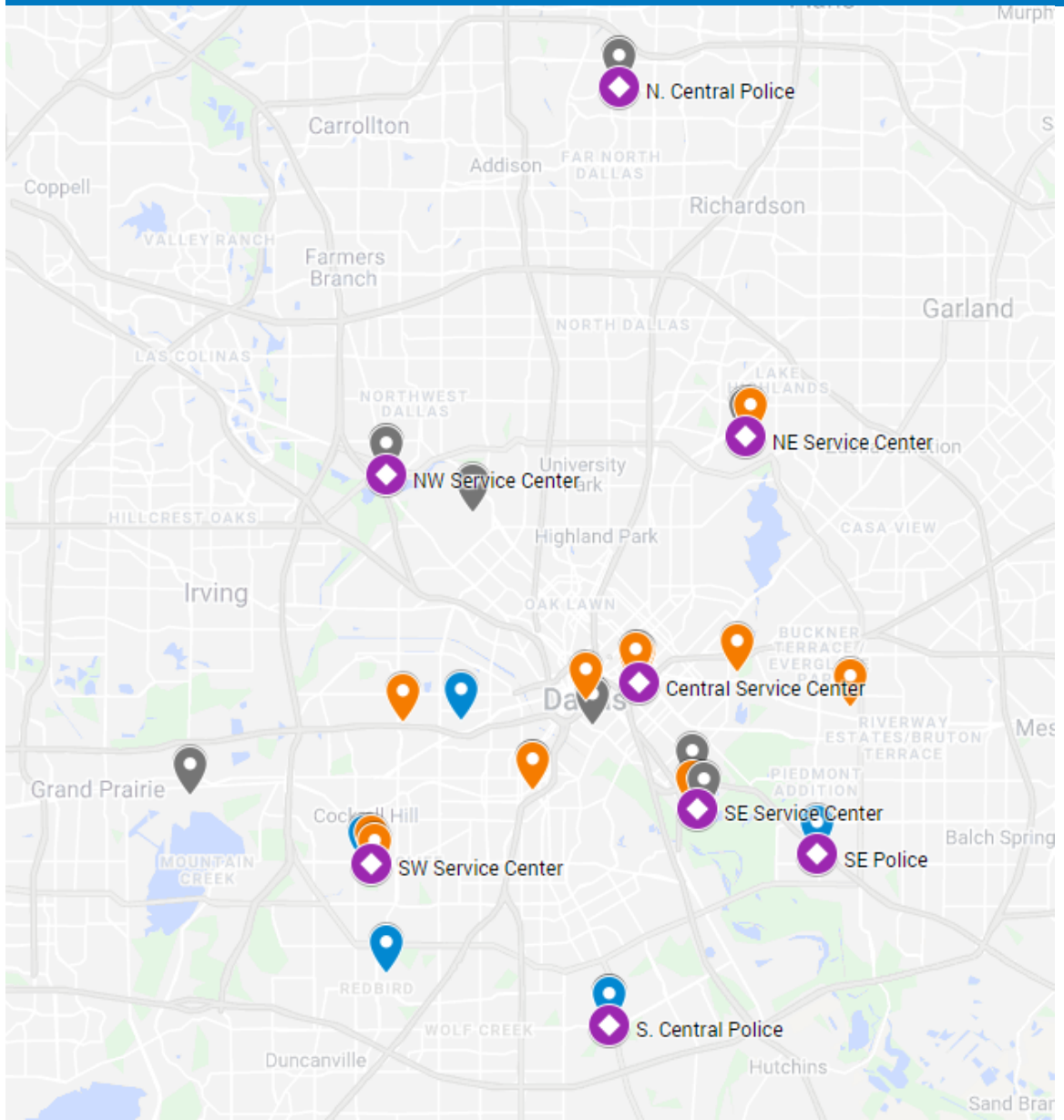


Figure 5. Ballpark cost ranges for different tiers of Level 2 EVSE units. *Image from Kristina Rivenbark, New West Technologies.*



https://theicct.org/sites/default/files/publications/ICCT_EV_Charging_Cost_20190813.pdf
https://afdc.energy.gov/files/u/publication/evse_cost_report_2015.pdf

Dallas Parking & Fueling Locations



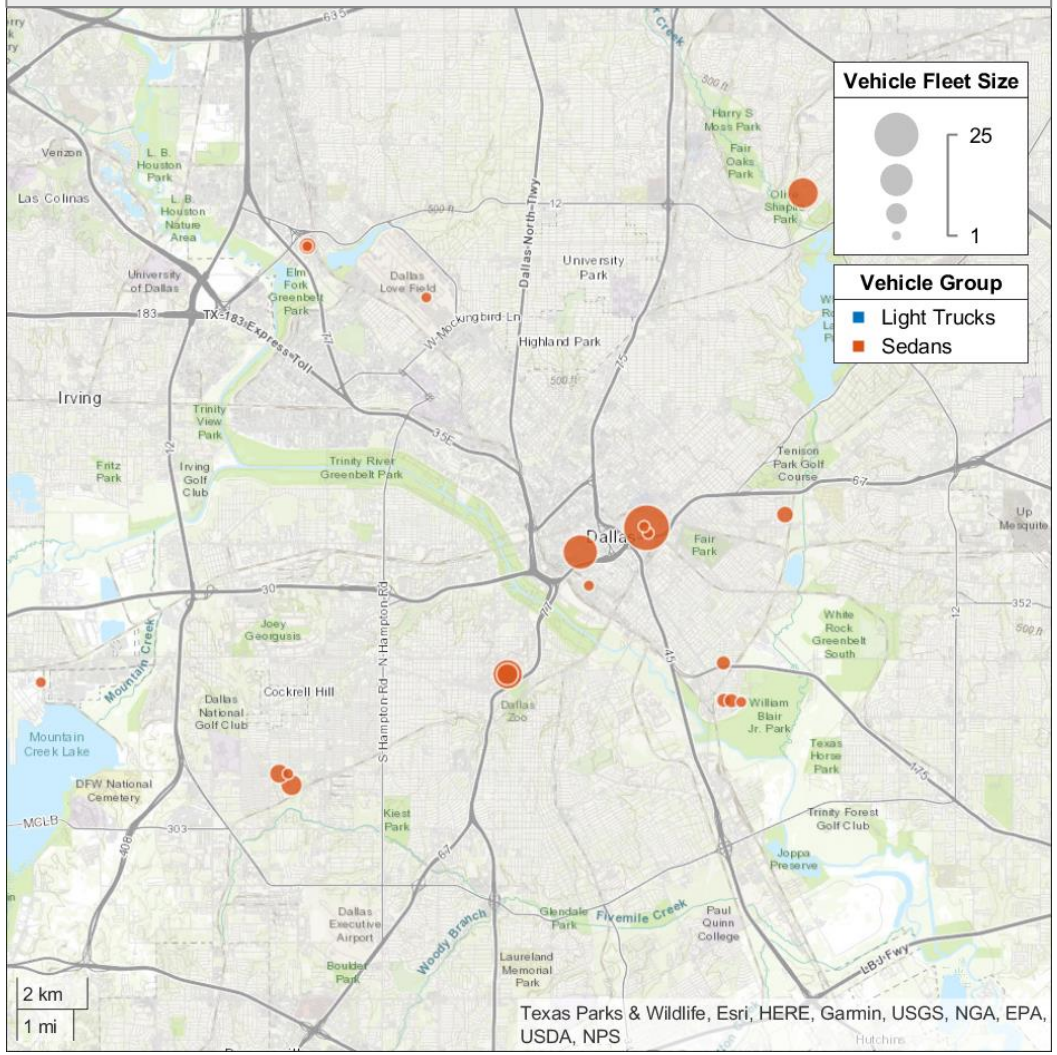
Parking location is an important consideration in selecting vehicles for EV replacement and installing EVSE

- Map shows fuel island locations and all parking locations listed in Dallas vehicle inventory
- Separated DPD vehicle locations from non-DPD locations
- Identified locations with 5 or more vehicles, for class 1 and for class 2

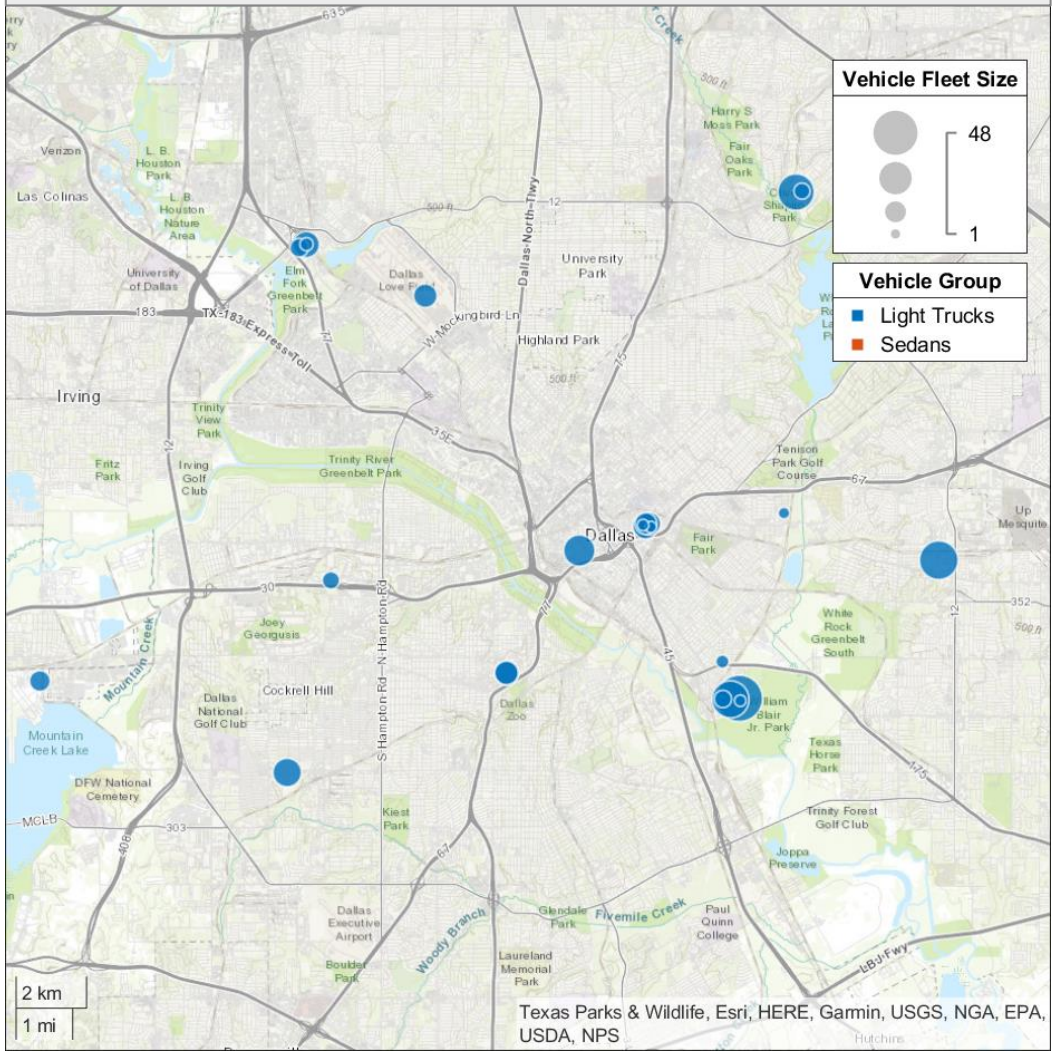
Purple pins – Fueling locations
Blue pins – DPD parking locations
Orange pins – all non-DPD parking locations
Gray pins – other parking (need additional info)

Parking Locations – Sedans & Light Trucks

Locations with sedans



Locations with light trucks



VICE Model Primary Inputs – Scenario 1

2022 Honda Civic	LX (base model)
MSRP [$]	$23,365
Fuel efficiency [mpg]	34

2022 Nissan Leaf	S (base model)	S Plus (upgrade)
MSRP [$]	**$28,425**	$33,425
ESS [kWh]	**40**	62
Range [mi]	**149**	226
Fuel efficiency [kWh/mi]	**0.268**	0.274
MPGe	**112**	104

https://www.caranddriver.com/honda/civic
https://www.caranddriver.com/nissan/leaf

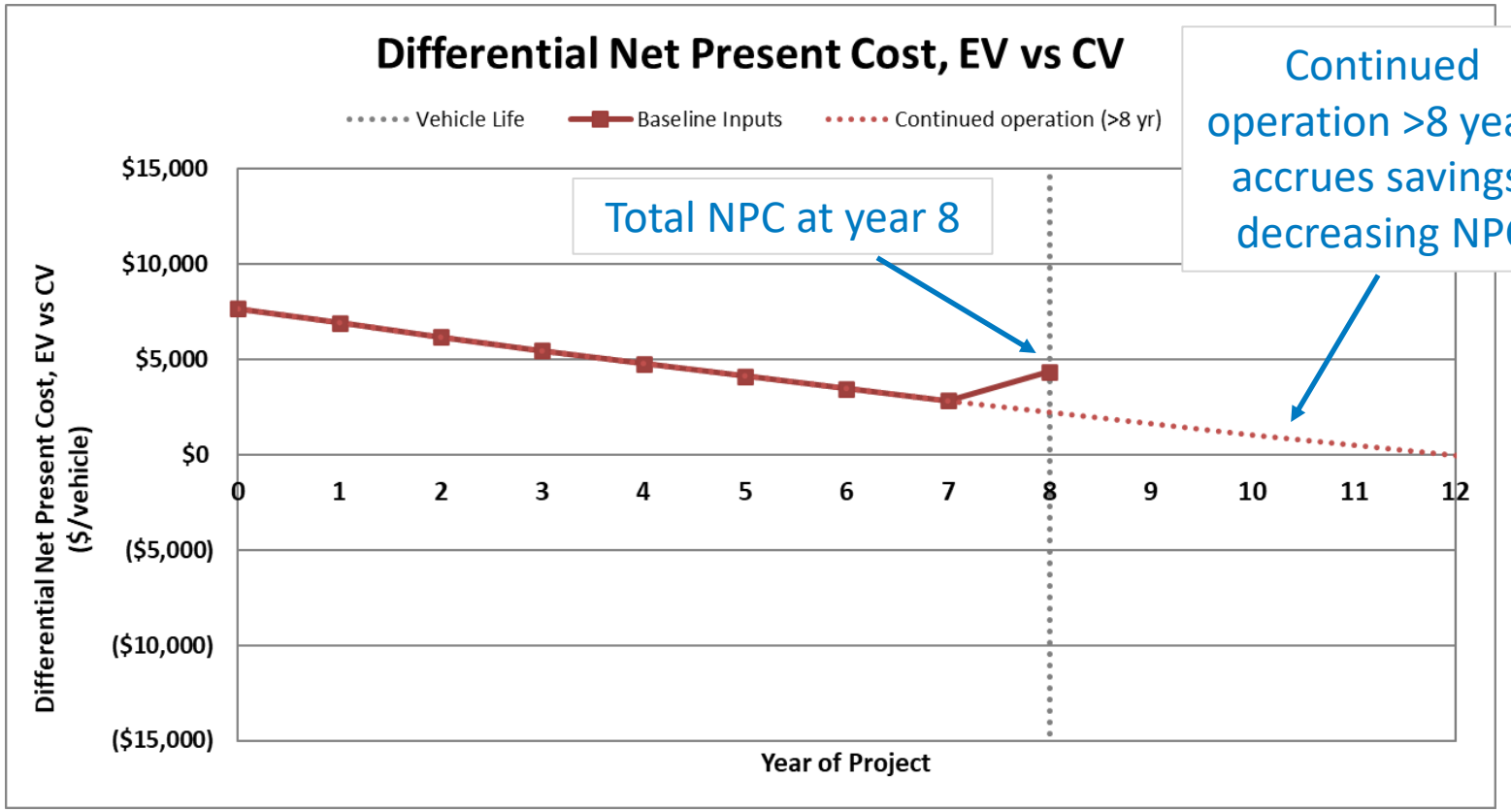
VICE Model Results – Scenario 1 (sedans)

"Baseline" inputs

- EV cost = $28,425 ea.
- EVSE cost = $3,000 ea.
- Rebates = $0
- Annual VMT = 6,382 mi
- Gas price = $2.36/gal

Key Points from baseline analysis:

- EV+EVSE upfront investment is ~$8k more than base sedan
- Total net present cost at end of expected life (year 8) = $4,345 per vehicle (additional cost for EV option)
- Current projections for EV end-of-life salvage value are lower than for conventional vehicle (net incremental cost)
- EV operation beyond year 8 continues to accrue savings



Electric Vehicle

2022 Nissan Leaf S

Conventional Vehicle

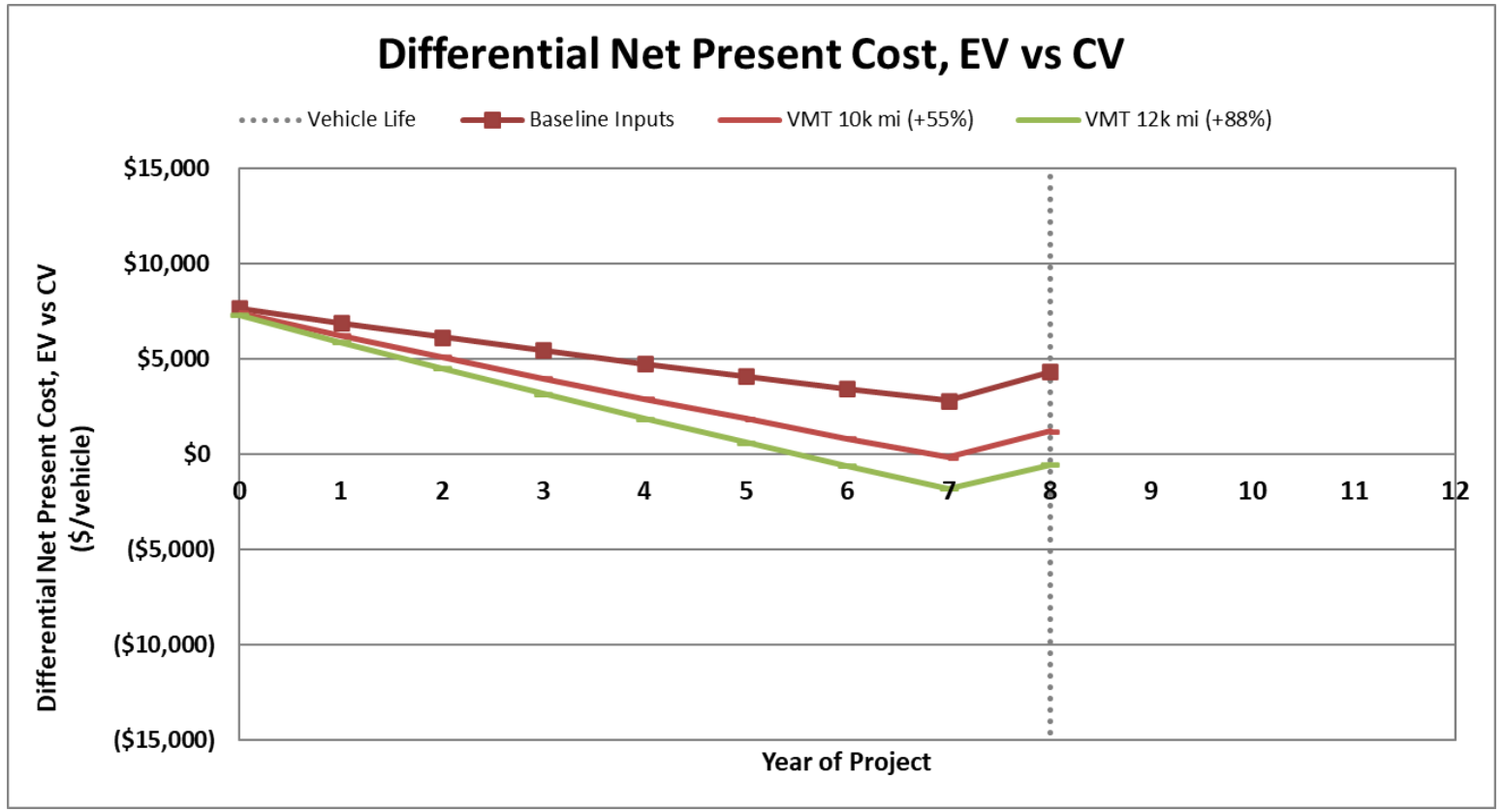
2022 Honda Civic LX

VICE Model Results – Scenario 1 (sedans)

Impact of annual vehicle miles traveled (VMT)

- Baseline VMT = 6,382 mi
  ~ 24.5 miles/day
- VMT 10k mi represents approx. 55% increase
  ~ 38.5 miles/day
- VMT 12k mi represents approx. 88% increase
  ~ 46 miles/day

Takeaway: *Operational savings accumulate faster when replacing vehicles that are driven more (well within estimated Nissan Leaf S range of 149 miles)*



Electric Vehicle
2022 Nissan Leaf S

Conventional Vehicle
2022 Honda Civic LX

VICE Model Primary Inputs – Scenario 2

2022 Ford F-150	XL (base model)
MSRP [$]	$31,685
Fuel efficiency [mpg]	18

2022 Ford F-150 Lightning	Pro (base model)	XLT (upgrade)
MSRP [$]	**$41,669**	$54,669
ESS [kWh]	**98**	131
Range [mi]	**230**	300
Fuel efficiency [kWh/mi]	**0.426**	0.437
MPGe	**70**	69

https://www.caranddriver.com/ford/f-150
https://www.caranddriver.com/ford/f-150-lightning

VICE Model Results – Scenario 2 (trucks)

“Baseline” inputs

- EV cost = $41,669 ea.
- EVSE cost = $3,000 ea.
- Rebates = $0
- Annual VMT = 7,731 mi
- Gas price = $2.36/gal

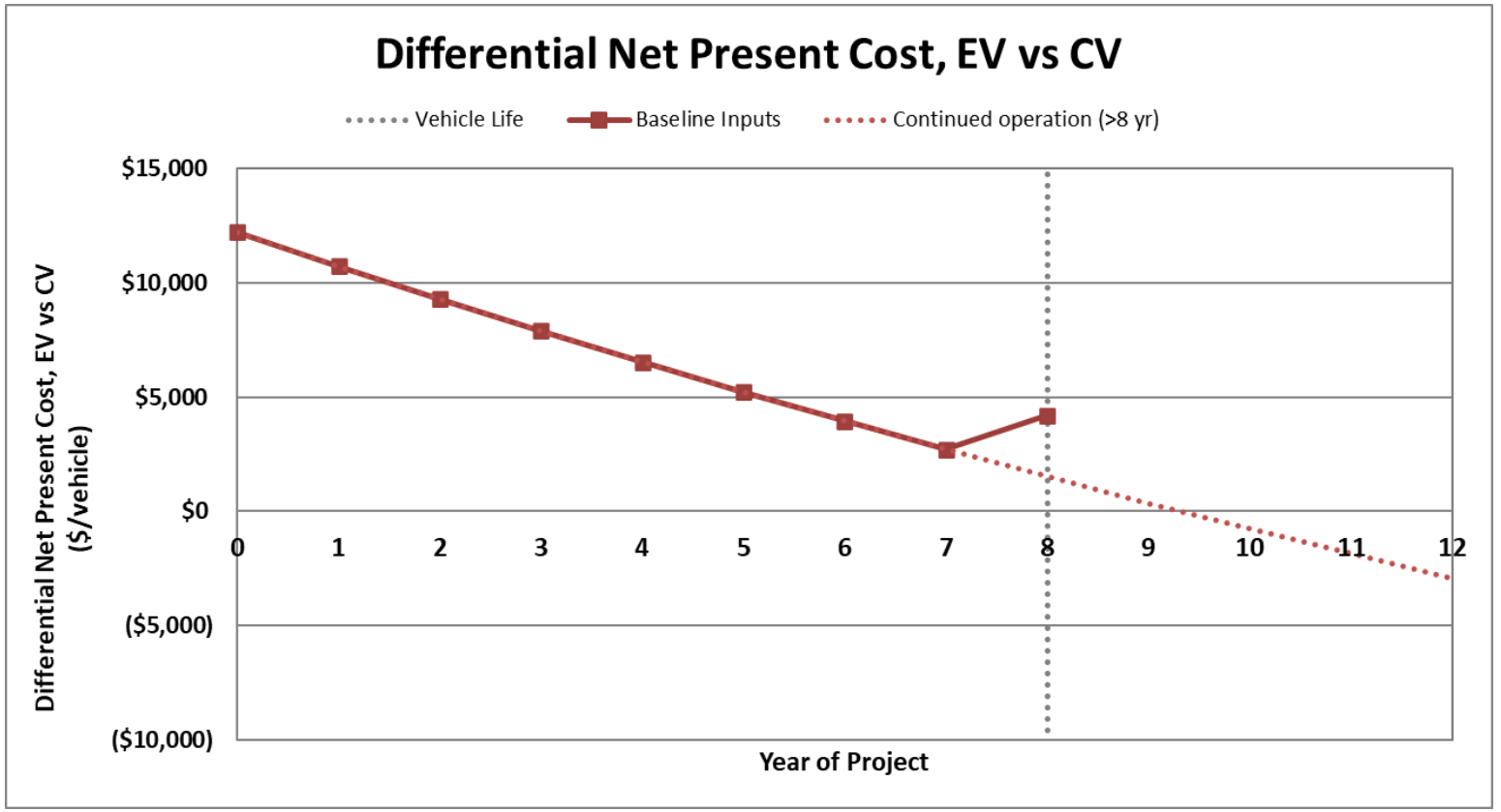
Key Points from baseline pickup analysis:

EV+EVSE upfront investment is ~$13k more than base Conventional Pickup

Total net present cost at end of expected life (year 8) = $4,202 per vehicle (additional cost for EV option)

Current projections for EV end-of-life salvage value are lower than for conventional vehicle (net incremental cost)

Vehicle operation beyond year 8 continues to accrue savings



Electric Vehicle

2022 Ford F-150 Lightning

Conventional Vehicle

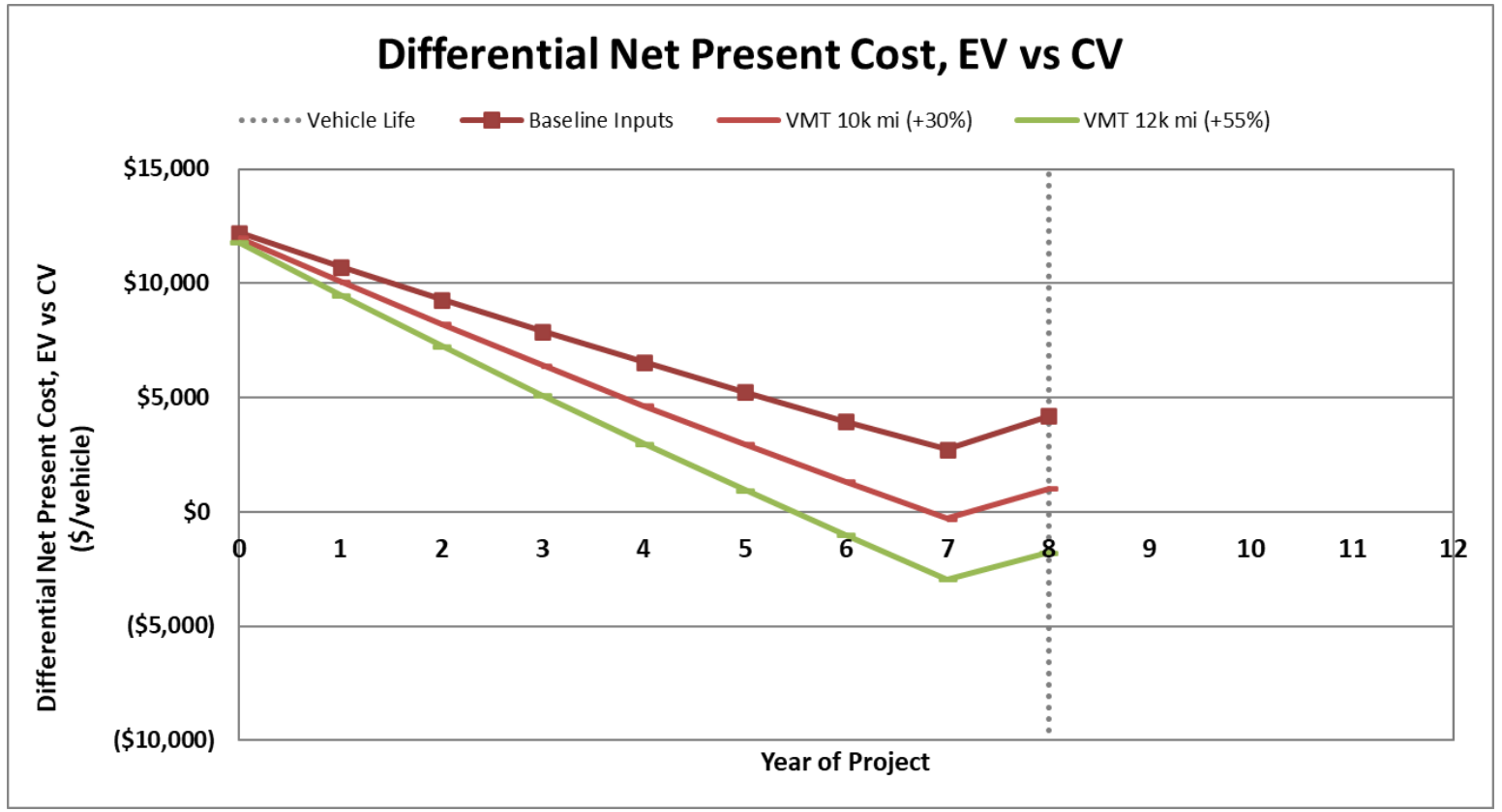
2022 Ford F-150

VICE Model Results – Scenario 2 (trucks)

Impact of annual vehicle miles traveled (VMT)

- Baseline VMT = 7,731 mi
  ~ 30 miles/day
- VMT 10k mi represents approx. 30% increase
  ~ 38.5 miles/day
- VMT 12k mi represents approx. 55% increase
  ~ 46 miles/day

Takeaway: *Operational savings accumulate faster when vehicles are driven more (well within estimated Ford F150 driving range of 230 miles)*



Electric Vehicle
2022 Ford F-150 Lightning

Conventional Vehicle
2022 Ford F-150

Estimation of Cost per ton GHG Offset

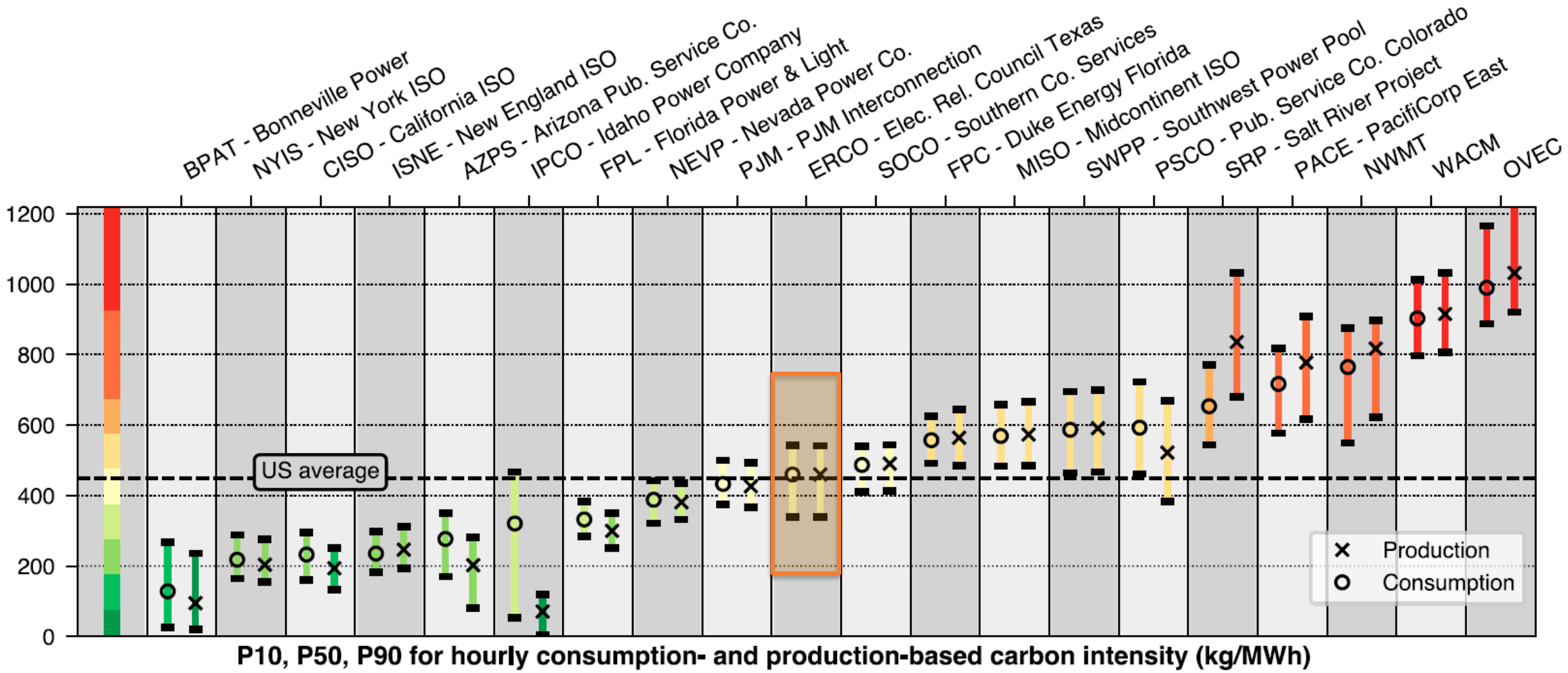
assuming Texas electric grid mix

Parameter	Units	Baseline Scenario 1 (sedans)	Baseline Scenario 2 (light trucks)
VICE model total project cost per vehicle	**$/vehicle**	**4,345**	**4,202**
Lifetime emissions reduction (EV vs CV) per vehicle	**metric ton CO_2e/vehicle**	**8.93**	**23.33**
Project cost per metric ton CO_2e to achieve lifetime emissions reduction	**$/metric ton CO_2e**	**486**	**180**

- The VICE model estimates that purchasing EVs instead of CVs could reduce GHG emissions by
  - 8.93 metric tons CO_2e per light-duty sedan over an eight-year expected lifetime
  - 23.33 metric tons CO_2e per light-duty pickup truck over an eight-year expected lifetime
- Based on the per-vehicle lifetime costs baseline assumptions, GHG emissions reductions are estimated to be
  - $486 per metric ton CO_2e for the light-duty sedan scenario
  - $180 per metric ton CO_2e for the light-duty pickup truck scenario
- **Any improvement in EV cost will lower the cost to achieve GHG reductions**
  - Achieving EV ***cost parity*** (through grants or other means discuss previously) results in GHG emissions savings estimated above at no additional cost

GHG Emissions Estimates

Carbon intensity of Texas electricity grid (ERCO) is very similar to US average, per 2016 analyzed data[1]



[1] https://www.pnas.org/doi/pdf/10.1073/pnas.1912950116

City of Dallas

Fleet Electrification Study Update

Environment and Sustainability Committee
August 1, 2022

Donzell Gipson, Director
Equipment and Fleet Management
City of Dallas

Vincent Olsen, Assistant Director
Equipment and Fleet Management
City of Dallas

Presentation Overview

- Background/History
- Purpose
- Issues/ Operational or Business Concerns
  - Consultant Recommendations
  - Action Plan Update
- Strategies for EV Conversion and Deployment
- Future policy and operational decisions impacting fleet management

Background/History

Electrification of Fleet Assets

In support of CECAP adoption, an amendment approved in the FY2021 Budget provided funds for an electric vehicle feasibility study ($100k)

- On May 26, 2021, the City Council awarded a contract to the National Renewable Energy Laboratory (NREL) to conduct the study.
- NREL is a national laboratory of the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy. The Alliance for Sustainable Energy LLC., operates the NREL Laboratory.
- The study allows the City to develop the most effective and efficient policies and operational strategies for deployment and sustainment of electric vehicle technology in alignment with CECAP.

Background/History

Timeline:

- City Council Budget Amendment – September 2020
- Contract award to NREL – May 2021
- Study Kickoff - August 2021
- Briefed EVNS Committee in January 2022
- Briefed Environmental Commission in June 2022

Purpose

This briefing will:

- Provide an update on the EV study in response to NREL recommendations
- Provide a summary of activities in preparation for EV conversion
- Next steps

NREL Recommendations – Summary

- Implement VICE Model approach for each purchase decision
- Continue to test new technologies
- Benchmark from other agencies

Issues/Operational Concerns

Operational Concerns to address

- Develop Business Model/Policy
- Determine & Validate Vehicles for Conversion
- Install EV Infrastructure
- Purchase EV Vehicles
- Deploy & Monitor EV Vehicles (GPS install)
- EV Maintenance (in-house and third party)

Issues to Address:

- Range Anxiety/Fueling Accessibility
- Educate Operators
- Parking/Site Plan
- Reduce the total number of vehicles
- Greenhouse gas reductions

Strategies for EV Conversion and Deployment

Outline of EV Conversion and Deployment Strategies

- EV Infrastructure Funding Strategies
- EV Infrastructure Operations and Maintenance
- EV Vehicle Funding Strategies
- EV Conversion Selection Strategy with End Users
- Review for Replacement - Electric Vehicles
- Electric Vehicle Make and Model Strategy
- Electric Vehicle End User Migration Strategy
  - Motor Pool as EV Migration Strategy

EV Infrastructure Funding Strategies

Approved EV Charging Infrastructure Funding			
Funding Source	**Amount**	**Install/Equipment**	**Location**
NCTCOG - Call for Projects	$ 193,676.00	(2) DCFC Stations	SE Service Center
NCTCOG - Call for Projects	$ 182,658.00	(2) DCFC Stations	Central Service Center
FY22-23 Proposed Budget	$ 581,027.00	Level II & DCFC Stations	(various - citywide)
Total	**$ 957,361.00**		

Submitted Grant Applications for EV Charging Infrastructure Funding			
Funding Source	**Amount Requested**	**Install/Equipment**	**Location**
TCEQ	$ 338,932.36	(7) DCFC Stations	SW, NE, NW, - Service Ctr Jack Evans
TCEQ	$ 124,785.00	(30) Level II Chargers	CE, SW, NE, NW, SW, - Service Ctr Jack Evans
Total*	**$ 463,717.36**	*Projects total $927,434.71 (requires 50% cash)	

EV Infrastructure Operations and Maintenance

Turn-Key Strategy

Use a third-party supplier(s) to design, install, operate and maintain the City's EV infrastructure

- Telematics (software to provide fleet management data)
- Standardization
- Infrastructure that supports any vehicle make
- Opportunity for long-term partnership with proven supplier

EV Vehicle Funding Strategies

VICE Model Strategy

The City will annually evaluate replacement eligible vehicles that meet the EV conversion criteria and examine them within the VICE Model. (use existing fleet replacement budget)

The City will apply for grants that will offset capital outlay and align with the VICE Model.

Examples include:

Grant Opportunities for EV Vehicles	
Funding Source	**Description**
NCTCOG - Call for Projects	Grant pays for approximately 25-50% cost of vehicle purchases
TCEQ – TERP and VW	Grant pays for approximately 25-50% cost of vehicle purchases

EV Conversion Selection Strategy with End Users

Currently 500+ vehicles meet the initial study eligibility; however, only 76 are under consideration by departments for replacement

A decision tree or rubric will be used to determine/validate conversion of the 76 vehicles under initial review

Considerations	Concern/Comments
Replacement Eligible	Develop multi-year strategy as eligible vehicles become due for replacement
Request for replacement by End User	Policy to include use evaluation
Align with VICE Model	EV Study estimated $4,202-$4,375 gap between conventional and EV vehicle
Stakeholder Involvement	Executive Steering Committee (includes NCTCOG) Infrastructure Committee (includes TXU & Oncor) Education and Operator training (includes potential partnership with Tesla)
Charging Infrastructure Accessible	Logistics in timing, location, and demand
Validate Exceptions	Extended periods of Idling, significant energy consumption at job site
Green House Gases	Document emissions reductions

Review for Replacement – Electric Vehicles

Customer Department Engagement

Equipment and Fleet Management began meeting with departments in July 2022 to discuss the results of the Fleet Electrification study. Also, to evaluate the 76 vehicles under consideration for conversion.

NREL Recommendations:

Department Request Breakdown						
Department	**Total Vehicles**	**Sedan**	**SUV**	**Light Truck**	**Van**	**Other**
Building Services	7	2	0	2	3	0
Code Compliance Services	23	0	14	6	0	3
Public Works	15	0	1	13	0	1
Park and Recreation	12	0	1	2	6	3
Transportation	19	9	1	8	0	1
Total	**76**	**11**	**17**	**31**	**9**	**8**

Electric Vehicle Make and Model Strategy

EV Purchases

The City needs a mix of sedans, sport utility vehicles (SUV) and light duty trucks to conduct operations for successful service delivery.

Recommendations:

EV Vehicles			
Vehicle Type Choices	**Make/Model**	**Fueling**	**Mile Range**
Sedan	Nissan Leaf	100% BEV	149-226
SUV	Ford Escape Plug-In Hybrid	Gas/Electric	520 (37-38 electricity)
Light Duty Truck	Ford F-150 Lighting	100% BEV	230

Electric Vehicle End User Migration Strategy

EV Education and Awareness

The City needs to educate and inform end users on the safe use and operation of these vehicles to include the benefits to service delivery. Training of mechanics on EV maintenance will also be an important part of the migration strategy.

Recommendations:

EV Vehicles	
Plan	**Comments**
Ride and Drive Program	Allow end users to test drive Nissan Leaf, Ford Escape Plug-In Hybrid, and F-150 Lighting
Environmental Education	Benefits to the environment, efficiency, and life-time costs
EV Maintenance	Enhance existing training program and use third party suppliers
Pooling of Resources	Discuss the benefits of sharing vehicles to optimize use and reduce costs

Motor Pool as an EV Conversion Strategy

Assess "Admin" vehicles at each Service Center or Co-located parking of City fleet

- Evaluate use and examine for fleet reductions
- Convert remaining selection to EV
- Centralize the parking of these assets
- Use Key Valet structure for end user access to vehicles
- Monitor utilization via GPS

Future Policy & Operational Decisions

Demonstrations of EV

Until operational needs and electrification options align within public safety and heavy-duty vehicles and equipment, hybrid and compressed natural gas technologies are the prudent alternatives.

Electrification options and alternatives

- Mack Refuse EV Truck – One week pilot being planned for Sanitation Services
  - (Grant awarded for $776k – CNG) – Clean Diesel Grant - NCTCOG
- Ford Explorer – Hybrids - Police Patrol (purchased 11 and anticipated to go into service within the next 90 days)
- Ford EV cargo van pilot – Offered a trial period by local dealer
- San Antonio and Dallas County – "Learn from them"

Observation of EV Experiences

EFM will continue to monitor, research and benchmark the experiences, breakthroughs and lessons learned that impact the City's EV conversion plans.

Recent Articles & Big Picture Items:

- Electric Grid concerns

City of Waco pauses on transition of EV for its Police Department

- www.wacotrib.com/news/local/govt-and-politics/waco-city-council-to-vote-on-hybrid-police-cars-citing-issues-with-electric-models/article_39d1236a-ffd8-11ec-b3a3-037cd043bd1e.html

San Antonio Police testing Tesla, Ford electric cars for official use

- www.mysanantonio.com/business/article/San-Antonio-police-Tesla-ford-electric-cars-17261776.php

Dallas County officials look to electric vehicles for help

- https://www.keranews.org/government/2022-04-25/bad-air-climate-change-dallas-county-officials-look-to-electric-vehicles-for-help

Next Steps

- Continue work on action plan in response to consultant recommendations
- Continue to brief ENVS Committee on status of action plan
- Document Council feedback for development of future policy and operational plans
- Continue to look at emerging technologies like hydrogen and renewable natural gas to enhance the City's alternative fuel infrastructure

Fleet Electrification Study Update

Environment and Sustainability Committee
August 1, 2022

Donzell Gipson, Director
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City of Dallas

City of Dallas

GAS-POWERED LANDSCAPE EQUIPMENT POLICIES

Environment & Sustainability Committee

August 1, 2022

Susan Alvarez, P.E. Assistant Director
Office of Environmental Quality and Sustainability

OVERVIEW

- Update from December 01, 2021 ENVS Briefing
- Park Board Information
- Environmental Health Committee Recommendations
- Impacts of Change
  - Environmental
  - Equity
  - Fiscal
- Policy Options

TIMELINE to DATE

Staff Research/ Stakeholder Engagement

- Sustainable Procurement Policy
  Adopted
  May 5, 2021
- ENVS Committee Briefing
  December 1, 2021
  Initial Program Information
- Park Board Briefing,
  May 19, 2022
  Park Department Pilot Program
- EVC Environmental Health Committee Recommendation
  June 8, 2022
- EVC Recommendation
  August 10, 2022

Types of Leaf Blowers

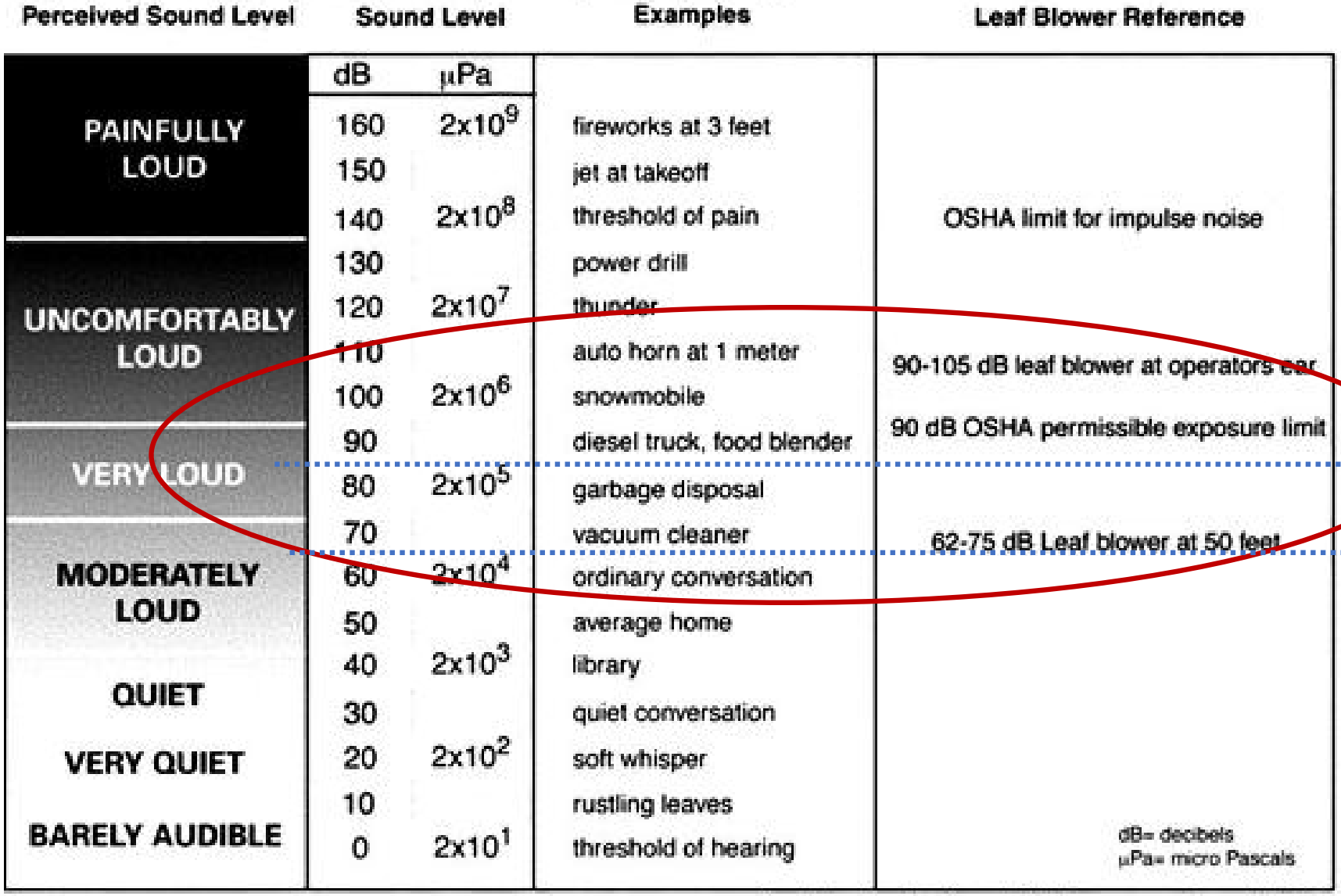
Type of Equipment	Primary Use		Windspeed	Material Moved (CFM)**	Operating Noise (dB)	Weight Range (lbs)	Cost Range (2021 $)
	Comm'l	Resid'l					
*Gas-powered Hand-held	X	X	>180 MPH	400-450	73-100	9-12	~$100 - 200
Backpack	X		~200 MPH	910-940	75-125	23-26	~$300 - 550
Battery Electric - Handheld	X	X	110-165 MPH	530-580	64	8-9	$150 - 200
Backpack	X		145 MPH	600	64	13-20	$400 - 1,200

Data Sources: https://www.protoolreviews.com/gas-vs-battery-powered-leaf-blowers| https://www.popularmechanics.com/home/tools/g37442980/best-gas-leaf-blowers/

* Gas-powered data reflects more commonly used 2-stroke motor

**CFM= Cubic Feet /Minute

Sound Level Chart



Provided by California Air Resources Board, 2000

OSHA Hearing Protection Threshold

Typical Municipal Noise Ordinance Threshold

Dallas Park & Recreation Overview

- ~2,600 pieces of small equipment
  - ~530 Leaf Blowers
- Majority of small equipment is **4-cycle**
  - Use gasoline and oil mixture
  - Comply with the California Act Resource Board (CARB) regulations
- Small number of **2-cycle** equipment that are specialized and used only a few times a year

Dallas Park & Recreation Green Strike Teams

- **Piloting Green Strike Teams for two districts**
  - Use electric (lithium battery-powered) hand-held landscaping equipment
  - Blowers, line trimmers, hedge trimmer, small chainsaw and pole saw
- Strike Teams have 3 men crews
- District 1 maintains the area around White Rock Lake; areas are maintained on a two-week schedule
- District 3 maintains parks in the downtown area; each park is maintained once a week

Dallas Park & Recreation Pilot Results

District 1 – White Rock Lake

- Electric Equipment not sufficient
  - Not powerful enough to maintain growth after two weeks
  - Slowed down rate of work

Employee buy-in was low

- Batteries are heavy
- Equipment is less powerful
- Prefer gas powered equipment

District 3 – Downtown

- Using equipment for three years
  - Operating well
  - Batteries lasted as long as they should
  - Quality of work is good
  - Reliable
  - No repair cost, only cost to replace batteries
- Significant emissions savings

Dallas Park & Recreation Pilot Results

Emissions Savings of Green Strike Teams

Based on Operating Equivalent Gas-Powered Equipment

Type	Model	Fuel Type	Units	Use	Annual Use (hrs)	HC Emissions (lb/yr)	NOX Emissions (lb/yr)	CO2 Emissions (T/yr)
Blower (Large)	BR600	4-Cycle Gas	1	3 hrs/day	540	37.91	27.82	9.61
Handheld blower (small)	BG86	4-Cycle Gas	1	3 hrs/day	540	10.67	7.83	2.71
Line trimmer	FS131	4-Cycle Gas	3	6 hrs/day	1,080	113.73	83.47	28.84
Chainsaw	MS170	4-Cycle Gas	1	3 times per year for 6 hrs each use	18	0.67	0.49	0.17
Hedge trimmer	HL91K	4-Cycle Gas	1	4 times per year for 6 hrs each use	24	0.53	0.39	0.13
Pole Saw	HT103	4-Cycle Gas	1	3 times per year for 6 hrs each use in Fall	18	0.47	0.34	0.12
					Total Annual Emissions	163.98 lbs	120.34 lbs	41.58 tons

Dallas Park & Recreation Future Efforts

- Increase employee buy-in through communication of the benefits of reduced emissions, less noise, and health benefits
- Conduct a side-by-side comparison of fuel powered equipment versus new electric equipment since technology has advanced in the last three years
- Add Green Strike Teams to Park Maintenance Districts with parks that have a weekly maintenance schedule and moderate grass/vegetation growth
- Funding/grant for an electric Zero-Turn mower for District 3, downtown parks that will further reduce emissions

Mower	Model	Fuel Type	Units	Daily Use (hrs)	Annual Use (hrs)	HC Emissions (lb/yr)	NOX Emissions (lb/yr)	CO2 Emissions (T/yr)
Scag – Zero Turn	STTII-72-31KB/DF	3 - cylinder duel fuel	1	5	900	161.77	97.80	130.71

Conclusion: Electric equipment was successfully used for the maintenance of some parks but not all parks

EVC – Environmental Health Committee

"The committee recommends that the Environmental Commission support a phased transition from gas-powered landscaping equipment to battery-operated or electric-hybrid equipment to reduce particulate matter and other pollutants that affect health and contribute to poor air quality."

- Candace Thompson, Chair

Memorandum to the Environmental Commission, June 8, 2022

Leaf Blower Impacts on Air Quality

- 1.2 billion gallons of gas are burned per year by United States garden equipment.[5]
- About 1/3 of this material is discharged as aerosols during equipment use.
- Leaf blowers emit pollution levels comparable to automobiles[1]
- A 2011 test by the car experts at Edmunds showed that "a consumer-grade leaf blower emits more pollutants than a 6,200-pound 2011 Ford F-150 SVT Raptor.[1][4]
- The two-stroke engine (in the Edmunds study) emitted nearly 299 times the hydrocarbons of the pickup truck and 93 times the hydrocarbons of the sedan.
- Leaf blowers emit carbon monoxide and nitrogen oxides. [1] Nitrogen oxides are precursors to ground level ozone; North Texas is in Severe Non-Attainment status.
- Switching to electric (battery or plug in) leaf blowers would sharply reduce air pollution[1]

Leaf Blower Impacts on Public Health

- Children and the elderly are especially vulnerable to the dust (particulate) and toxic emissions from leaf blowers
- Manufacturers recommend a 50 feet minimum safe distance for bystanders.
- The low frequency noise from leaf blowers can penetrate most barriers such as walls. This contributes to hearing loss for adjacent residents.
- In densely populated neighborhoods, a gas blower can affect up to 15 times the number of households as an electric leaf blower.
- Equity impacts can be associated with both the use, and the potential transition away from using two-stroke landscape equipment.

Potential Impacts of Change: Environmental

Estimated Probable Reductions in GHG Emissions

Municipal Equipment	#Gas	#Electric	Reduction in #CO2e/Unit/ Year	Reduction in MTCO2e/Year
Push Mowers	2,400		25	30
Ride-on Mowers	980	1	131	64
Handheld Blowers	189	19	5,420	512
Back Pack Blowers	245		19,220	2,354
Line Trimmers/ Edgers	594	14	28,950	8,598
Hedge/ Pole Trimmers	299	21	260	39
Chain Saws	395	17	340	67
MISC	323	14	240	39
			Total:	**11,665**

Community Equipment	#Gas	#Electric	Reduction in CO2e/Unit/ Year	Reduction in CO2e/Year
Push Mowers	117,100	70,260	25	1,464
Ride-on Mowers	3,407	75.7	131	223
Handheld Blowers	63,725	59,125	5,420	172,695
Back Pack Blowers	6,813	757	19,220	65,473
Line Trimmers	6,813	757	28,950	98,618
Pole Trimmers	776.25	86.25	260	101
Chain Saws	776.25	86.25	240	93
			Total:	**338,666**

Potential Impacts of Change: Fiscal

Municipal Equipment`	#Gas	Cost/Unit	Conversion Cost
Push Mowers	2,400	$ 400	$ 960,000
Ride-on Mowers	980	$ 5,000	$ 4,900,000
Handheld Blowers	189	$ 300	$ 56,700
Back Pack Blowers	245	$ 600	$ 147,000
Line Trimmers/ Edgers	594	$ 250	$ 148,500
Hedge/ Pole Trimmers	299	$ 450	$ 134,550
Chain Saws	395	$ 450	$ 177,750
MISC	323	$ 350	$ 113,050
		Total:	**$ 6,525,000**

Community Equipment	#Gas	Rebate	Implementation Cost
Push Mowers	46,840	250	11,710,000
Ride-on Mowers	1,363	2500	3,406,500
Handheld Blowers	25,490	250	6,372,500
Back Pack Blowers	2,725	300	817,560
Line Trimmers	2,725	200	545,040
Pole Trimmers	310.5	200	62,100
Chain Saws	310.5	200	62,100
		Total:	**$ 22,976,000**

<u>Estimated</u> Probable Cost Impacts Associated with Conversion

Impacts of Change: Equity

- Most landscapers using gas-powered lawn care equipment are subject to exposures to toxic gas & oil, carcinogenic emissions, noxious exhaust, and unsafe noise levels .
- Most lawn crews are unprotected and work full-time at the source of emissions and noise. Workers have few options and little agency. (5) Failure to act continues this legacy.
- Between 2002 and 2016, the number of professional ground maintenance workers, including supervisors, grew by 85 percent to 1.6 million, according to Quiet Communities. (6)
- A large portion of landscape workers are Hispanic[7].
- In 2021 the average annual income for landscape workers was $30,160 and the average hourly wage was $14.50 an hour(8)
- ***Any movement towards reducing or eliminating gas-powered leaf blowers in Dallas will need to address equity considerations related to potential impacts to local landscape crews.***

Related City of Dallas Codes and Ordinances:

- **Does not directly ban gas-powered lawn equipment….**
- **Stormwater Ordinance:** Section 19-118.2(f)(5) of the Dallas City Code prohibits discharge of garbage, rubbish and yard waste into the storm drain with fines of up to $2,000 per occurrence.
- **Code enforcement:** Chapter 30 and Chapter 51A-6.102 for noise violations. 51A-6.102 regulates noise by decibel level. These regulations have maximum decibel thresholds that change dependent on the property zoning.

  *(F) **Exceptions**: the following activities, as long as they are conducted between the hours of 7:00 AM. – 10:00 PM., M-F and between 8:00 AM. and 7:00 PM – weekends and holidays:*

  (i) Lawn maintenance.

(1) A person may not conduct a use that creates a noise level that exceeds the levels established in Subsections (b) through (e) or that exceeds the background level by five dB(A), whichever is greater.	
Decibel Limit (dBA re 0.0002 Microbar)	A Scale **56**
Maximum Permissible Daytime Decibel Limits at the Bounding Lot Line of an Office, Retail, Mixed Use, Multiple Commercial, P(A), WR with a Shopfront Overlay, or WMU District	
Decibel Limit (dBA re 0.0002 Microbar)	A Scale **63**
Maximum Permissible Daytime Decibel Limits at the Bounding Lot Line of a Use in a CS, LI, or IR District	
Decibel Limit (dBA re 0.0002 Microbar)	A Scale **65**
Maximum Permissible Daytime Decibel Limits at the Bounding Lot Line of a Use in the IM District	

Common Approaches in Use/ Dallas Options:

- **Bans on gas-powered lawn equipment**: some are complete bans; some are partial bans related to towards blowers and mowers.
- California implemented state-wide policy in 2018 promoting "*sale and use of emissions free landscape equipment after July 1, 2022*" and relied on local Air Boards to implement local action; rather than "a ban".
- Most cities address equity challenges through **equipment exchanges, rebates and incentives**;
- Some **cities worked with local merchants /landscape professionals** to develop and implement program.
- Many programs included **an implementation time lapse** of **6 months to 2 years** between ordinance adoption and the date for enforcement, to allow for: budgeting, public education, exchange/replacement activities, and training.
- Many **worked with local landscape equipment stakeholders** towards conversion.

Sustainable Procurement Policy

Sustainable Procurement Policy adopted by City Council through CR 21-098 in May 26, 2021 to guide City procurement decisions that positively impact the City's social, economic, and environmental health.

- Working group formed to:
  - maintain an environmentally preferred products lists,
  - identify sustainability labels and standards for specifications,
  - analyze citywide purchases for efficiency and waste reduction opportunities,
  - and make other recommendations related to the social, economic, and environmental aspects of contracting.
- These measures have been incorporated into AD4-05, and apply to current efforts related to landscape equipment.

Sustainable Procurement Actions

Citywide Landscaping /Landscape equipment contracts:

- *Landscape Equipment Contract* - used by 12 departments; includes options for electric, battery-electric and two-stroke equipment including a variety of mowers, string-trimmers, leaf blowers and other ancillary equipment. The City expends approximately **$135,000 per year** for this equipment.
- *Landscaping Services Contract* - 11 current contracts for landscape services, that are used by 19 departments. These contracts rely primarily on traditional gas-powered equipment. The City expends approximately **$1.2 million per year** for these services.
- *Landscape Services Procurement (underway):* Advertised in January 22, 2022; includes options for gas- and non-gas powered equipment line items:
  - 15 City properties identified for electric equipment pilot.
  - 2 contracts totaling about **$32.3M**, are on the draft September 14, 2022 City Council Agenda.

Questions or Comments?

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Cities With Leaf Blower Restrictions

Arlington, MA	Lawndale, CA	Santa Monica, CA
Aspen, CO	Los Altos, CA	Scarsdale, NY
Belvedere, CA	Los Angeles, CA	Scottsdale, AZ
Berkeley, CA	Malibu, CA	Sunnyvale, CA
Beverly Hills, CA	Mamaroneck, NY	Tampa, FL
Boulder, CO	Maplewood, NJ	Tiburon, CA
Brookline, MA	Menlo Park, CA	Toronto, ON
Cambridge, MA	Mill Valley, CA	**San Antonio, TX**
Carmel, CA (banned in 1975 – first city in the USA)	Montclair, NJ	Sunnyvale, CA
Claremont, CA	New Rochelle, NY	Tampa, FL
Del Mar, CA	Oyster Bay, NY	Tiburon, CA
Dobbs Ferry, NY	Palm Beach, FL	Toronto, ON
Evanston, IL	Los Altos, CA	Vancouver BC
Foster City, CA	Palo Alto, CA	Washington, DC
Framingham, MA	Pelham Manor, NY	Westchester County, NY
Hastings, NY	Pelham, NY	West Hollywood, CA
Honolulu, HI	Portland, OR	White Plains, NY
Houston, TX	Portsmouth, NH	Winnetka, IL
Indian Wells, CA	Rye, NY	Yonkers, NY
Laguna Beach, CA	Santa Barbara, CA	(***Highland Park, TX – under consideration***)

GAS-POWERED LANDSCAPE EQUIPMENT POLICIES

Environment & Sustainability Committee

August 1, 2022

Susan Alvarez, P.E. Assistant Director
Office of Environmental Quality and Sustainability

Memorandum

CITY OF DALLAS

DATE July 25, 2022

TO Honorable Chair and Members of the Environment & Sustainability Committee

SUBJECT **Bachman Lake Dredging Update**

In 2016, City Council authorized a feasibility study that yielded three alternatives for Bachman Lake. A Task Force made up of City staff and council district appointed representatives evaluated the alternatives and recommended to "Maintain the Lake." This recommendation was briefed to the Mobility Solutions, Infrastructure and Sustainability Committee on April 8, 2019, who voted to approve the recommendation. Dredging improvements were bid in June 2021 and a construction contract was awarded to Renda Environmental, Inc. on October 27, 2021.

The contractor began removing debris from the lake in February 2022 and initiated hydraulic dredging in June. Approximately 400 tons of debris has been removed from the lake and shoreline as the contractor is encountering large amounts of trash and plastic bags. The dredge barge is working eastward toward the narrow area of the lake where deposits are thickest, and islands of sediment have formed. Dredged material is screened and dewatered before being hauled for disposal. The Contractor is hauling the material to privately owned land to dry, test, and mix with native soil to produce a potential low-cost product for public use. If successful, this effort will eliminate disposal of the dredged material in local landfills.

The contractor's staging area is located at the Bachman Lake parking lot off Shorecrest Drive and the dewatering site is located on City of Dallas property between Denton Drive and Harry Hines Boulevard. Water removed from the dredged silt is clarified and pumped back into Bachman Lake.

The project is anticipated to take about 12 months to complete and will remove approximately 370,000 cubic yards of accumulated sediment. Sediment removal will restore the lake to recreational levels and prevent invasive vegetation, improving water quality. Park users have been advised to keep clear of the barge and floating pipe during the project. The latest information on the Bachman Lake Dredging Project can be found on the project website at https://bachmanlakedam.com.

If you have any questions, please contact Terry Lowery, Director of Dallas Water Utilities.

Kimberly Bizor Tolbert
Deputy City Manager

c: T.C. Broadnax, City Manager
Chris Caso, City Attorney
Mark Swann, City Auditor
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Robert Perez, Assistant City Manager
Carl Simpson, Assistant City Manager
Jack Ireland, Chief Financial Officer
Genesis D. Gavino, Chief of Staff to the City Manager
Directors and Assistant Directors

Memorandum

CITY OF DALLAS

DATE August 1, 2022

TO Honorable Members of the Environment & Sustainability Committee: Paula Blackmon (Chair), Paul Ridley (Vice Chair), Carolyn King Arnold, Adam Bazaldua, Jaime Resendez, Jaynie Schultz, Chad West

SUBJECT **City Forestry Quarterly Update**

The City Forestry Taskforce (Forestry Taskforce) has been working on several initiatives since the June 6th Briefing to the Environment and Sustainability Committee meeting. This memo serves as an overview of actions taken during this time.

Partnering Sessions
The City met with multiple departments and our local, state, federal, and non-profit partners/stakeholders in June as part of our Quarterly Partnering Session. The focus of this meeting was to address the confirmation of the Emerald Ash Borer (EAB) within the City of Dallas, discuss upcoming planting activities for the fall, and to brainstorm ways to continue to diversify the tree canopy.

EAB discussions included an overview of the City's approach to assess and treat, and the development of education and outreach materials and videos for use by the City and others. All material produced by the City is reviewed and approved by the Texas A&M Forest Services (TFS) to ensure accurate and consistent messaging. Several non-profits have offered to distribute all materials to their members and volunteer groups, and to work with the private community of arborists and nurseries. The group discussed the ability of non-profits or non-municipal entities to provide funding assistance to residential property owners for treatment, removals, and potential replacement.

Emerald Ash Borer Update
Staff from various departments met with the TFS on site at Camp Broadway to observe the impact of EAB infestation five years after the initial confirmation. This visit provided an opportunity to review TFS outreach and education efforts, how to increase our partnerships, and explore the next steps. In conjunction with the TFS, the City will continue to assess and inventory the existing ash canopies on public property and treat when significant ash or grove of ash is present. TFS confirmed the approach and is encouraged by the number of actions taken by the City and is using our EAB Action Plan and planting plans as a template for other communities. However, TFS has stressed that it is important to recognize the long-term strategies as the EAB will likely be prevalent for the next decade and that planting new and diverse canopies is integral to the overall health of urban forests for future generations.

The staff has been assessing and inventorying the ash canopies in areas most at risk for infestation (Northwest, West, and Southeast) and will be moving strategically through the City over the next six months. To date, staff is primarily seeing weather-related damage to the ash population that will warrant additional follow-up assessments over time but has identified and will be treating certain significant ash trees over the next month in these areas. All work is inputted into Tree Keeper.

It has been determined that updates to Article X to address EAB will require Zoning Ordinance Advisory Committee (ZOAC), City Plan Commission (CPC), and City Council. This action is anticipated to occur in August for ZOAC, and September/October for CPC and City Council. The requested actions will:

- Modify the definitions of Class 3 tree and Unprotected tree to remove Arizona ash from Class 3 to Unprotected
- Amend acceptable plant materials to prohibit nursery stock ash trees from required landscaping and city property to allow for control of regulated landscaping and city tree species
- Amend Reforestation Fund definition of "natural deforestation event" to include invasive insect under Texas Department of Agriculture (TDA) determination to allow for providing trees to damaged private property
- Include the provision of defense to prosecution for vulnerable or threatened tree species as determined by the TDA to allow for removal of protected ash prior to infestation, as needed

Public Education and Outreach Efforts

Efforts to publicize and encourage residents and businesses to utilize the City Forestry website continue through our social media campaign, Council newsletters, and our public, private and non-profit partners. Over 2,200 people have viewed the website, which was soft launched in March 2022 and officially launched in May 2022.

Community meetings were held in July with interested residents to provide information on EAB by the City of Dallas. Several non-profit partners also held informational meetings with their members to provide an overview of EAB and instructions on how to tell if an ash tree is on your private property.

EAB water bill inserts have been prepared and will be in the August billing insert. In addition, the City's electronic billboard messaging contract includes an EAB message that will run during the next several months. Also, the website continues its updates with information for the general public.

City staff and TFS will participate in a series of filmed PSA and panel discussions on Urban Forestry and EAB in August for use on public channels, websites, and social media. The short PSAs will be a future One Dallas Update.

The City–Wide Forestry Technical Team will be conducting trainings with all Code Compliance staff to train them on EAB to better educate residents during community meetings and presentations. Also, the team will partner closely with CCS's Citizens Code Academy and the Community Clean Trash–Off program to increase messaging on EAB to residents.

Annual training's such as Park Maintenance, Arborist School and Community Forester Academy all include EAB training and updates.

Tree Assessments and Survey

City staff has completed training associated with Tree Keeper and has begun to utilize the assessment and inventory software as part of the daily activities related to inspections and inventory. Additionally, the Forestry Taskforce has been working with the Fund Development Unit in the Office of Government Affairs to seek funding opportunities for tree inventory and assessment of City of Dallas properties. Several options are being pursued, including a direct Congressional appropriation via a Community Project request in the House budget and grant opportunities.

Fall Planting Efforts

Branch Out Dallas, the program providing 2600 trees for residents in Dallas, is scheduled for Dallas Arbor Day on November 5, 2022. This program will be open for registration on September 1 and more information will be shared as we move closer to the overall program.

Branching Out Dallas, the program for public parks and open space has finalized the fall planting schedule will be planting 300 trees, and Texas Tree Foundation are in the planning stages for Cool School Program. As a reminder, the reforestation fund provides supports for these two programs and has provided 1700 trees in FY22 with a similar level of support in FY23.

Carl Simpson
Assistant City Manager, City of Dallas

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Memorandum

DATE August 1, 2022 CITY OF DALLAS

TO Honorable Members of the Environment & Sustainability Committee: Paula Blackmon (Chair), Paul Ridley (Vice Chair), Carolyn King Arnold, Adam Bazaldua, Jaime Resendez, Jaynie Schultz, Chad West

SUBJECT **Environmental Justice Updates**

The Office of Environmental Quality & Sustainability (OEQS) has previously provided information on work being done regarding several sites in Dallas that have produced environmental justice and community public health concerns. This memorandum will serve as a status update on several of these sites:

Former Blue Star Site

Recent activities at the former Blue Star property include the following:

- Surface soil screening was performed on May 6, 2022, to supplement prior investigative work and inform the placement of additional soil borings.
- Sixteen additional soil borings were completed on May 10, 2022, which confirmed no elevated lead concentrations in soil extended off-site to the north, east, or south.
- Oncor was contacted in June 2022 to allow additional investigation to the west.
- On July 11, 2022, five (5) additional soil borings were completed in the west adjacent Oncor right-of-way with none of these exceeding residential criteria of 500 mg/Kg.
- The assessment report is anticipated to be submitted to the Texas Commission on Environmental Quality (TCEQ) Voluntary Cleanup Program in September 2022.

Lane Plating, U.S. Environmental Protection Agency (EPA) Superfund Site

The EPA is planning additional sampling near the Lane Plating Superfund Site. The plan is to install five additional monitoring wells for further characterization of the groundwater. Two of the proposed monitor-well locations are on City of Dallas property. The drilling will likely occur the week of September 12, 2022, and samples will be collected the following week.

Texas Vermiculite Facility Site

The former site of the Texas Vermiculite Facility may contain asbestos. The operator of that facility, W. R. Grace & Co.-Conn. (WR Grace), is working with the EPA to test for and remediate the presence of possible asbestos at the property and the surrounding area.

The WR Grace Texas Vermiculite plant operated from 1953-1992 and processed vermiculite, a mineral containing asbestos, into a variety of products including fire retardant and insulation materials. The plant was dismantled sometime during 2001 or 2002.

Memorandum

DATE August 1, 2022

CITY OF DALLAS

TO Honorable Members of the Environment & Sustainability Committee: Paula Blackmon (Chair), Paul Ridley (Vice Chair), Carolyn King Arnold, Adam Bazaldua, Jaime Resendez, Jaynie Schultz, Chad West

SUBJECT **OEQS Legislative Priorities**

The 88th Session of the Texas Legislature will convene in January 2023 and many issues affecting local governments will be considered. This memorandum provides information on recommendations the Office of Environmental Quality and Sustainability submitted to the Office of Government Affairs for possible inclusion in the City of Dallas Legislative Program. Items included in the adopted legislative program will be submitted the Texas Legislature for their consideration.

As background, In May 2020, the City adopted the Comprehensive Environmental and Climate Action Plan (CECAP) that established the pathway to guide the city towards addressing climate and environmental risk with effective, equitable, and common-sense solutions. The CECAP has established a goal to reduce the City of Dallas greenhouse gas emissions by 43 percent by 2030 and 100% by 2050. The following recommended environmental legislative priorities support the actions in the City's CECAP:

- Support legislation related to batch plants that require, for example: buffers between the plant and neighborhoods; onsite air monitoring; controls on stacks; annual inspections.
- Support legislation related to grid improvements and distributed energy resources (e.g., battery, solar, wind).
- Supporting legislation related to climate and climate mitigation and adaptation actions.
- Supporting legislation that advances the use of electric vehicles and EV infrastructure.
- Supporting legislation that advances environmental justice, such as: incentives for infrastructure investment in populations disproportionately impacted by pollution; enhanced community engagement by State agencies; and fund an Office of Environmental Justice in the Office of the Public Interest Counsel.
- Support legislation that encourages the donation of pre-consumer edible food from food service vendors directly to those in need.
- Prevent the narrowing of the definition of State waters.

- Support legislation that expands public participation/community involvement in State decision-making processes.
- Support legislation that expands producer responsibility.
- Support legislation that advances the reduction of harmful greenhouse gas emissions.
- Support legislation that bans the disposal into landfills of certain recyclable and organic materials.
- Support legislation to update substandard home stock (e.g., weatherization, energy efficiency, health and safety upgrades).
- Support legislation that promotes clean energy job creation and training.
- Support legislation that bans single use food containers (e.g., polystyrene).
- Support legislation that ensures greater coordination between TCEQ departments when issuing permits.
- Support legislation that requires and incentivizes the recycling of certain construction, remodeling, and demolition debris.
- Support legislation that encourages the use of alternative modes of transportation.
- Support legislation that requires the incorporation of reusable and recyclable materials into municipal road construction and maintenance projects.
- Support legislation that encourages the pickup and delivery of food and organic waste from food service vendors for composting.
- Support legislation that allows per ton surcharges on materials disposed in landfills to fund a variety of waste reduction and diversion activities.

The Office of Government Affairs is currently reviewing recommendations from all City departments. An update on the City of Dallas Legislative Program will be presented to the Legislative Ad Hoc Committee August 2, 2022. The final program will be presented to the full Council during the first quarter of FY23. If you have questions, or need additional information, please contact Carlos Evans, OEQS Director (214-670-1642), Susan Alvarez, OEQS Assistant Director (214-671-9505) or Sr. Climate Coordinator, Pharr Andrews (214-670-3291).

M. Elizabeth (Liz) Cedillo-Pereira, J.D.
Assistant City Manager, City of Dallas

cc: T.C. Broadnax, City Manager
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EPA sent out 30 access agreements for 60 properties. 40 agreements have been signed totaling 90% of the square footage within the study area. 38 properties have been sampled. The remaining two properties are on Oncor and Dallas, Garland & Northeastern (DGNO) Railroad properties.

The EPA attempted to obtain access agreements on several occasions:

- Three separate mailers were sent to the surrounding community on November 8, 2021, December 16, 2021, and February 28, 2022.
- Phone calls were made continuously on a weekly basis to property owners from November 8, 2021, through March 2, 2022.
- Two in-person visits were performed with support from Singleton United on March 2, 2022, and March 22, 2022.
- Three separate community meetings were held to solicit more people to sign access agreements. Two were virtual and one was in-person.

Soil samples were found at, or more than, soil clearance standard (asbestos >.25%) on seven (7) properties. Because these seven (7) properties exceed the standard, they will require soil removal followed by backfill with clean soil and sod. The EPA anticipates removal work beginning at the site in early September 2022 with a goal of completing all properties by November 2022. The EPA will continue to share information as it becomes available.

General Aniline & Film (GAF) Materials Corporation

Deputy Mayor Pro Tem Omar Narvaez and community members are having conversations with GAF related to their plans to vacate the site. Discussions are ongoing.

Contacts

If you have questions, or need additional information, please contact OEQS staff:
Carlos Evans, Director, 214-670-1642
Paul White II, Superintendent – Air, Soil, and Groundwater Division, 214-948-4189
Lori Frauli Trulson, Senior Environmental Coordinator, 214-671-8967

M. Elizabeth (Liz) Cedillo-Pereira, J.D.
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