Clean Fleets North Texas
2019 Call for Projects

Surface Transportation Technical Committee
October 25, 2019

Nancy Luong
Air Quality Planner

North Central Texas Council of Governments
**Funding Source:** Environmental Protection Agency (EPA) National Clean Diesel Funding Assistance Program

<table>
<thead>
<tr>
<th>Funding Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remaining Funds from 2017 Award*</td>
<td>$847,224</td>
</tr>
<tr>
<td>New Funds from 2018 Award**</td>
<td>$1,110,350</td>
</tr>
<tr>
<td>Call For Projects Funds Available</td>
<td>$1,957,574</td>
</tr>
</tbody>
</table>

*Funds from 2017 award distributed through Clean Fleets North Texas 2018 Call For Projects. Any funds released from project awards under the Clean Fleets North Texas 2018 Call For Projects will be added to this initiative.

**EPA award included $39,789 for staff administration.
**Project Eligibility**

**Eligible Applicants:** Local Governments; Private Companies who Contract with Local Governments; and Must Adopt RTC Clean Fleet Policy or Similar

<table>
<thead>
<tr>
<th>Eligible Activities</th>
<th>Funding Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace On-Road Diesel Trucks*</td>
<td>45% Cost if New is Electric</td>
</tr>
<tr>
<td>16,001 GVWR and Up; Model Year 1996-2006; (Also Model Year 2007-2009 if Replacing with Electric)</td>
<td>35% Cost if New is Powered by Engine Certified to CARB Optional Low-NO(_X) Standards (Both Natural Gas and Propane Engines Currently Available)</td>
</tr>
<tr>
<td>Replace Non-Road Diesel Equipment*</td>
<td>25% Cost for All Others</td>
</tr>
<tr>
<td>Must Operate &gt;500 Hours/Year; Eligible Model Years Vary</td>
<td></td>
</tr>
</tbody>
</table>

*All Old Vehicles/Equipment Must be Scrapped; Other Model Years Eligible On Case-By-Case Basis.*
Eligibility Screens:

Fleet Policy Adoption
- Purpose: Reserve Funding for Fleets that are Engaged Beyond Grant Opportunities; Consistent with RTC Adoption of Clean Fleet Policy
- Minimum Allowable Subaward: $100,000
  - Purpose: Reduce Risk and Administrative Burden by Limiting Number of Subawards

Scoring Criteria:
- Cost Per Ton NO\textsubscript{X} Emissions Reduced 75%
  - Purpose: Maximize Emissions Reductions
- Subrecipient Oversight Criteria 25%
  - Purpose: Balance Project Benefits with Administrative Burden
## Summary of Applications Received

<table>
<thead>
<tr>
<th></th>
<th>Requested</th>
<th>Eligible</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Applicants</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Number of Activities</td>
<td>12</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Funding Requested</td>
<td>$1,306,108</td>
<td>$1,254,608</td>
<td>$1,254,608</td>
</tr>
<tr>
<td>Funds Remaining after Recommended Awards</td>
<td></td>
<td></td>
<td>$702,967</td>
</tr>
</tbody>
</table>

Total Tons NO$_x$ Reduced Over 6 Years: **45.37 25.96**

Cost per Ton NOX Reduced Across Entire Call for Projects: $27,650 $48,329

Refer to Electronic Item 3.2 for more details.
Feedback from Prospective Applicants:

$100,000 Grant Minimum Too Difficult to Reach
Annual Budget Caps and Application Window Not Aligned
Funding Percentages Too Low
Eligible Model Years Too Restrictive

Governed By Funding Agency

Recommended Next Steps to Exhaust Funding:

Reopen Mid-November for ~90 Day Application Window
Reduce Minimum Allowable Subaward to $50,000
Increased Communication to Prospective Applicants
  Implementation Window
  Non-Road Equipment Eligibility
## Call For Projects Schedule

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Estimated Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>STTC Approval to Open CFP</td>
<td>May 24, 2019</td>
</tr>
<tr>
<td>RTC Approval to Open CFP</td>
<td>June 13, 2019</td>
</tr>
<tr>
<td>CFP Opens</td>
<td>June 14, 2019</td>
</tr>
<tr>
<td>Kickoff Webinar</td>
<td>July 9, 2019, at 2 PM</td>
</tr>
<tr>
<td>Application Deadline</td>
<td>Friday, September 6, 2019 at 5 pm</td>
</tr>
<tr>
<td>Staff Funding Recommendations Finalized</td>
<td>September 2019</td>
</tr>
<tr>
<td><strong>STTC Action</strong></td>
<td>September/October 2019</td>
</tr>
<tr>
<td>RTC Action</td>
<td>October 2019</td>
</tr>
<tr>
<td>Executive Board Authorization</td>
<td>November 2019</td>
</tr>
<tr>
<td>Reopen CFP on Rolling 90-Day Basis to Fully Award Funds</td>
<td>Anticipated November 15, 2019</td>
</tr>
<tr>
<td>Next Application Deadline</td>
<td>Anticipated Mid-February 2020</td>
</tr>
<tr>
<td>Project Implementation Deadline</td>
<td>March 31, 2021</td>
</tr>
</tbody>
</table>
Recommends RTC Approval of Funding Recommendations:

- $929,608 to the City of Dallas to Replace Six Vehicles & Four Equipment
- $325,000 to the City of Benbrook to Replace One Fire Truck

Recommend Second Round of Project Solicitation:

- ~90 Days Application Window Beginning Mid-November
- Reduced Minimum Award Threshold $50,000
- Maintain Scoring Structure:
  - Up to 75 Points Cost per Ton NO\textsubscript{X} Reduced
  - Up to 25 Points Subrecipient Oversight
For More Information

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METROPOLITAN PLANNING ORGANIZATION (MPO)
MILESTONE POLICY UPDATE

Surface Transportation Technical Committee
October 25, 2019
The last Metropolitan Planning Organization (MPO) Milestone Policy was adopted by the Regional Transportation Council (RTC) in June 2015.

Staff identified projects that were funded 10 or more years prior to the policy being approved and had not gone to construction.

New estimated start dates for projects to go to construction by were established by each implementing agency.

In April 2016, the RTC approved a policy to give agencies one additional fiscal year from their proposed construction start date to advance projects (i.e., A project with an estimated start date of June 2017 (FY 2017) would have until the end of FY 2018 to start construction).

The policy stipulates that if a project does not go to construction by the established deadline, the project’s funding will be removed.
Project Monitoring Efforts

• Projects included on the 2016 Milestone List have been monitored to ensure timely implementation has occurred.

• Reminder letters were sent to all agencies with a project on the list in December 2016.

• Staff highlighted the projects and their deadlines during 2019-2022 Transportation Improvement Program (TIP) Development process.

• Staff provided an update on the status of all projects in the Fall of 2018.

• Staff provided an update on the status of the projects that did not meet their deadline of the end of FY 2018 in the Spring of 2019.

• Staff highlighted the projects and their deadlines during 2021-2024 TIP Development process.
Outcomes to Date

• Of the 57 projects on the initial list:
  • 4 projects were canceled initially based on input from the implementing agencies
  • 2 projects were canceled as a result of being on the Federal Highway Administration (FHWA) 10-Year Preliminary Engineering Audit list and replaced with a new project*
  • 1 project was canceled and the funding moved to another project
  • 46 projects have let for construction on time or have been completed
  • 1 project remains that does not have an established deadline and will continue to be monitored
  • 2 projects that had previously let prior to the deadline are being re-bid*
  • 2 projects did not meet their deadline of the end of FY 2019

*The new project had a December 2018 letting deadline, which it met, but is being re-bid. Project being actively monitored.
<table>
<thead>
<tr>
<th>Agency</th>
<th>Facility/Limits</th>
<th>Scope</th>
<th>Let Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dallas County</td>
<td>Camp Wisdom Road from Carrier Parkway to FM 1382</td>
<td>Widen 2 to 4 lane divided</td>
<td>May 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Actual)</td>
</tr>
<tr>
<td>TxDOT Dallas</td>
<td>Northwest Highway (Spur 244) at Jupiter</td>
<td>Traffic signal and pedestrian improvements</td>
<td>April 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Actual)</td>
</tr>
<tr>
<td>TxDOT Dallas</td>
<td>Northwest Highway (Spur 244) at Plano Road</td>
<td>Traffic signal and pedestrian improvements</td>
<td>April 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Actual)</td>
</tr>
<tr>
<td>TxDOT Dallas</td>
<td>SH 78 from IH 635 to Forest Lane</td>
<td>Traffic signals and intersection improvements</td>
<td>April 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Actual)</td>
</tr>
<tr>
<td>City of Denton</td>
<td>McKinney Street (Old FM 426) from 1.4 miles west of SL 288 to 1.1 miles east of SL 288</td>
<td>Widen 2 lane roadway to 4 lane divided urban</td>
<td>October 2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Actual)</td>
</tr>
</tbody>
</table>
## Projects That Did Not Meet Deadline or Had to Be Re-Bid

<table>
<thead>
<tr>
<th>TIP Code</th>
<th>Agency</th>
<th>Facility/ Limits</th>
<th>Scope</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>11258.9</td>
<td>City of Dallas</td>
<td>8 Intersections at KCS RR in Dallas at E Dallas/KCS RR Crossings - Peavy Rd, Gus Thomasson Rd, Barnes Bridge Rd, Centerville Rd, Lakeland Dr, Highland Dr, Santa Anna Ave, &amp; St. Francis Ave at KCS RR</td>
<td>Upgrade gates and install medians at all locations; Install signage at Peavy, Gus Thomasson, Lakeland, Highland, &amp; St. Francis; Resurface at Lakeland and St. Francis</td>
<td>$1,828,070</td>
</tr>
<tr>
<td>533</td>
<td>City of Dallas</td>
<td>Lemmon Avenue at Bluffview</td>
<td>Access improvements to Love Field Airport and construct a pedestrian safety crossing</td>
<td>$800,000*</td>
</tr>
<tr>
<td>633</td>
<td>City of Dallas</td>
<td>Dolphin Rd from Spring Ave to North of Haskell Ave/Military Pkwy</td>
<td>Reconstruct existing roadway from 4 lane undivided to 4 lane divided with intersection improvements at Haskell</td>
<td>$3,755,560</td>
</tr>
<tr>
<td>25043</td>
<td>City of Dallas</td>
<td>Park Lane at US 75; Walnut St at Greenville Ave, Abrams Rd, Richland College</td>
<td>Construct intersection improvements including traffic signal upgrades with radar detection, pedestrian improvements with crosswalks and ADA ramps</td>
<td>$960,000</td>
</tr>
</tbody>
</table>

*Local funds part of a defederalization package
Action Requested

• Recommend RTC approval of the following proposals for each project:
  • TIP Code 533: Monitor for timely letting; Agency may need to repay federal funds from defederalization package if not implemented on time
  • TIP Code 11258.9: Remove funding and return to the regional pool
  • TIP Code 633: Project must re-bid by March 2020 or funding will be returned to regional pool
  • TIP Code 25043: Project must start by March 2020 or funding will be returned to regional pool
Next Steps

• Continue monitoring projects with deadlines after September 30, 2019

• Bring an item to the Surface Transportation Technical Committee (STTC) and the RTC in December 2019 detailing the next group of Milestone Policy Projects, including:
  • Previously let projects with implementation issues (e.g., projects that are being re-bid)
  • Projects selected in 2006-2010 that have not advanced to construction
Questions?

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Transportation Planner  
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Hyperloop Certification Facility Submittal

Assume Specification Table

Assume Stand Alone Hyperloop Cross Section (example 1 or 2)

Requested Information by Entity
  – Approximate alignment on map
  – Assume cross section (1 or 2)
  – Right of way status
  – Will there be any additional funding commitment?

Deadline November 22, 2019, at 5:00 pm to Angela Alcedo via Electronic or Regular Mail
# VHO Phases & Timing

(Dates Will Be Pushed Back)

<table>
<thead>
<tr>
<th>VHO Phase</th>
<th>Timing</th>
<th>Length of Track Built in Phase</th>
<th>Total Length of Track</th>
<th>Number of Tubes</th>
<th>Number of Vacuum Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>18 months (Estimate Feb 2020 to Aug 2021)</td>
<td>1.5 km (straight) (0.9 mi)</td>
<td>1.5 km (straight) (0.9 mi)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>9 months (Estimate Aug 2021 to May 2022)</td>
<td>3 to 5 km (1.9 to 3.1 mi)</td>
<td>4.5 to 6.5 km (2.8 to 4.0 mi)</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>C</td>
<td>9 Months (Estimate May 2022 to Jan 2023)</td>
<td>0</td>
<td>4.5 to 6.5 km (2.8 to 4.0 mi)</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>D</td>
<td>9 Months (Estimate Jan 2023 to Nov 2023)</td>
<td>6 to 8 km (3.7 to 5.0 mi)</td>
<td>10.5 to 14.5 km (6.5 to 9.0 mi)</td>
<td>?</td>
<td>2</td>
</tr>
</tbody>
</table>
Typical Sections

**Number 1**

* Horizontal and vertical clearances allow for the area needed to construct, operate and maintain the guideway and supporting facilities.

** Minimum vertical clearance over roadways is 5 m or 16.5 ft. Vertical clearance of 5.6 m or 18 ft would be required over interstate highways and other roadway corridors designated for freight. Vertical clearance over passenger or freight railroads would be 7 m or 23 ft.*
Typical Sections

Number 2

Horizontal Clearance* 4 m 13.1 ft
Tube 5 m 16.4 ft
AV/Roadway 8.5 m 28 ft
Tube 5 m 16.4 ft
Horizontal Clearance* 4 m 13.1 ft

26.5 m = 87 ft

Vertical Clearance* 4 m 13.1 ft
Tube 5 m 16.4 ft

10 to 10.6 m 32.9 to 34.9 ft
Vertical Clearance Over Roadway** 5 to 5.6 m 16.5 to 18.5 ft

* Horizontal and vertical clearances allow for the area needed to construct, operate and maintain the guideway and supporting facilities.

** Minimum vertical clearance over roadways is 5 m or 16.5 ft. Vertical clearance of 5.6 m or 18 ft would be required over interstate highways and other roadway corridors designated for freight. Vertical clearance over passenger or freight railroads would be 7 m or 23 ft.
Buy America Act Proposed Safety Equipment Exception

Rebekah Hernandez
North Central Texas Council of Governments
Surface Transportation Technical Committee
October 25, 2019
Overview

Buy America Background

Safety Initiatives

Unintended Challenges

Proposed Legislative Solution
Buy America Background

- Restrictions on federally funded transportation projects
- Requires the use of iron, steel, and manufactured products produced in the U.S.
- FHWA Buy America provisions are found under 23 U.S. Code Section 313
Safety Initiatives

- Incident management equipment
- Photogrammetry training courses for first responders
  Image-based 3D system allows investigators to quickly clear crashes
- Helps to improve mobility and safety
Unintended Challenges

• Buy America requirements are restricting the purchase of vital safety equipment

• Cameras and photogrammetry equipment are made up of complex components from all over the world
RTC Letter to the North Texas Congressional Delegation

Propose adding an exception in Title 23 USC Section 313 for traffic incident management safety equipment
Contact Information

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HIGH OCCUPANCY VEHICLE TRANSPORTATION CONTROL MEASURES: APPLICATION OF MANAGED LANES AND SUBSTITUTION OF TRAFFIC SIGNAL PROGRESSION

SURFACE TRANSPORTATION TECHNICAL COMMITTEE

OCTOBER 25, 2019

JENNY NARVAEZ, PROGRAM MANAGER
Interim HOV lanes were added in the 1990’s

Temporary and static mobility option to alleviate congestion

Interim HOV lane emission benefits were committed to in the regions State Implementation Plan

Interim HOV lanes have evolved to Managed Lanes in response to changing conditions by maximizing efficiency of a roadway through active management of the lane(s)

Benefits of Managed Lanes include:

- HOV 2+ discounts during peak commute periods
- Includes options for High-intensity bus
- Variable pricing
- Guaranteed speeds
Near Term Managed Lane System Openings
Three Interim HOV lanes remain in the following State Implementation Plan (SIP) as TCMs:

- *Dallas-Fort Worth 1-Hour Ozone Attainment Demonstration State Implementation Plan Revision* - April 2000

- *Dallas-Fort Worth 1997 8-Hour Ozone Attainment Demonstration and Reasonable Further Progress State Implementation Plan Revision* - May 2007

These Interim HOV lanes are being removed as a TCM in the SIP documentations due to being changed to Managed Lanes.

Removing them requires substituting alternate TCM projects that achieve equivalent emissions benefits.
Location of HOV Lanes to be Substituted

- IH 35E corridor (Stemmons Fwy) between IH 635 and SH 121
- IH 635 east corridor (LBJ Fwy) between Coit Rd and Greenville Ave
- IH 635 west corridor (LBJ Fwy) between Luna Rd/IH 35E and US 75
7 Corridors:
Parker Rd (Midway Rd to Preston Rd)  
9 signals

Park Blvd (Midway Rd to Coit Rd)  
16 signals

Custer Rd (Legacy Dr to SH 121 NB)  
8 signals

Coit Rd (Legacy Dr to SH 121 NB)  
8 signals

Spring Creek Pkwy/Shiloh Rd (Custer Rd to Plano Pkwy)  
14 signals

Plano Parkway (Dublin Rd to Marsh Ln)  
30 signals

SH 121 (Spring Creek Pkwy to Hardin Rd)  
34 signals
Transportation Control Measure Substitution

Transportation Control Measures (TCM) specified in an implementation plan may be replaced with Control Measures if the substitute measures achieve equivalent or greater emissions reductions than the TCMs to be replaced.

### NO\textsubscript{x} Emissions Impact of Three HOV Projects

<table>
<thead>
<tr>
<th>Pollutants</th>
<th>Emissions Impact of Three HOV Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{x}</td>
<td>-0.108 tpd</td>
</tr>
<tr>
<td>VOC</td>
<td>-0.061 tpd</td>
</tr>
</tbody>
</table>
# HOV TCM SUBSTITUTION

## TIMELINE

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>ACTION</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCTCOG</td>
<td>Calculate emissions reductions attributable to the selected project to be used for substitution</td>
<td>Complete</td>
</tr>
<tr>
<td>ESL Substitution Working Group¹</td>
<td>Present projects to be used as the substitute TCMs to Working Group</td>
<td>Complete</td>
</tr>
<tr>
<td>STTC</td>
<td>HOV TCM Substitution – Information</td>
<td>October 25, 2019</td>
</tr>
<tr>
<td>NCTCOG</td>
<td>Request concurrence from Working Group on Pre-Analysis Plan via email, including:</td>
<td>October 25, 2019</td>
</tr>
<tr>
<td></td>
<td>&gt; Selected projects to be used for substitution;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; Emission off-sets and methodology; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; Documentation of implemented projects</td>
<td></td>
</tr>
<tr>
<td>RTC</td>
<td>HOV TCM Substitution – Information</td>
<td>November 14, 2019</td>
</tr>
<tr>
<td>NCTCOG</td>
<td>NCTCOG Public Meetings</td>
<td>November 2019</td>
</tr>
<tr>
<td></td>
<td>&gt; 30-day public notice and comment period</td>
<td></td>
</tr>
<tr>
<td>STTC</td>
<td>HOV TCM Substitution – Action</td>
<td>December 2019</td>
</tr>
<tr>
<td>NCTCOG</td>
<td>Comment period closes</td>
<td>December 2019</td>
</tr>
<tr>
<td></td>
<td>&gt; Review and provide comments and responses to Working Group</td>
<td></td>
</tr>
<tr>
<td>SWG</td>
<td>Conference call for Working Group to concur on TCM Substitution</td>
<td>December 2019</td>
</tr>
<tr>
<td>RTC</td>
<td>HOV TCM Substitution – Action</td>
<td>January 2020</td>
</tr>
<tr>
<td>NCTCOG</td>
<td>Distribute RTC adopted resolution to the TCM Working Group</td>
<td>January 2020</td>
</tr>
<tr>
<td>TCEQ and EPA</td>
<td>Send concurrence letters to the TCM Working Group</td>
<td>February 2020</td>
</tr>
<tr>
<td>TCEQ</td>
<td>Documentation of approved substitution provided to EPA regional office (must occur within 90 days)</td>
<td>May 2020</td>
</tr>
<tr>
<td>EPA</td>
<td>Region 6 office to publish action notice in the Federal Register without a comment period</td>
<td>May 2020</td>
</tr>
</tbody>
</table>

¹ EPA, FHWA, NCTCOG, TCEQ, and TxDOT
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Transportation System Modeler  
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Truck Stop Electrification (TSE) Study Results

Surface Transportation Technical Committee
October 25, 2019
Huong Duong, Air Quality Planner
Purpose of Truck Stop Electrification Study

- Assess overnight idling by diesel-fueled long-haul trucks not using the electrification service
- Assess the extent of overnight idling issues
- Determine why truck stop electrification services are not working effectively
- Identify recommendations for drivers to use TSE Services
Types of Electrification Systems

Single-System

- A single-system electrification is an off-board equipment at truck stops and terminals contained in a structure above the truck (called a gantry) or on a pedestal beside the truck.

- This system provides heating, ventilation, air conditioning (HVAC), and internet access.
Types of Electrification Systems

Dual-System

A dual-system electrification needs both onboard and off-board equipment so that trucks can plug into electrical outlets at truck stops and terminals.
Methodology

STUDY DESIGN

COLLECT DATA

ANALYZE RESULTS
Study Design: Information Source

1. Developed data collection sheet to collect data from observation sites.
   - Three public truck stops, and
   - One private truck terminal

2. Developed survey questionnaires to ask
   - TSE system providers (Single System vs Dual System)
   - Onsite TSE system representatives
   - Truck stop owners/managers
   - Truck drivers idling their trucks
   - Truck drivers using TSE systems
Study Design: Information Collected

- Observational data collected at the site include:
  - Available amenities
  - Type of TSE system(s)
  - Total available parking spaces
  - Occupied Spaces
  - Connected Trucks
  - Certified Clean Idle Trucks
  - Diesel Prices
  - Temperature
  - Humidity Rate
TSE/EPS systems were not working effectively.

Engine idling rates and TSE/EPS usage rates are different among the four stations.

Stations controlled by a manager or a representative had a higher usage rate compared to stations without any control.

Single drivers often idle their trucks more than team drivers.
# TSE Utilization Rates

TSE/EPS Utilization Rate = \[
\frac{\text{Number of Connected Trucks}}{\text{Number of Occupied Spaces (with TSE/EPS Systems)}}
\]

Adjusted TSE/EPS Utilization Rate = \[
\frac{\text{Number of Connected Trucks}}{\text{Number of Occupied Spaces (with Functional TSE/EPS Systems)}}
\]

Space Utilization Rate = \[
\frac{\text{Number of Connected Trucks}}{\text{All Available Spaces (with TSE/EPS Systems)}}
\]

<table>
<thead>
<tr>
<th>Usage Rates (Weekly Average Rate)</th>
<th>Station 1- Single System</th>
<th>Station 2- Single System</th>
<th>Station 2- Dual System</th>
<th>Station 3- Single System</th>
<th>Station 4- Single System</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSE Utilization Rate</td>
<td>14%</td>
<td>37%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Adjusted TSE Utilization Rate</td>
<td>19%</td>
<td>44%</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Space Utilization Rate</td>
<td>7%</td>
<td>34%</td>
<td>0%</td>
<td>0%</td>
<td>37%</td>
</tr>
</tbody>
</table>
Number of available spaces with single and dual-system electrification systems, occupied spaces, and connected trucks at Station 1-4 during a week.
Survey Responses

- Common reasons for idling engines during rest periods instead of using TSE systems:
  - Low-quality service
  - Cigarette and diesel fume smell
  - Broken screen
- Not easy to use service
- Complicated and difficult procedure to connect heavy modules
- Staff unavailability at truck stops
- Non-availability of easy to use instructions
Recommendations

- Offer truck drivers discounts and coupons
- Design large and informative banners
- Design quiet zones at truck stops
- Conduct educational demonstration at truck stops/terminals
- Integrate educational programs with truck company driver training courses
- Communicate with trucking companies and terminals to motivate deployment of electrified parking spaces at freight terminals

Truck Stop Electrification Study can be found at [www.nctcog.org/trans/study](http://www.nctcog.org/trans/study)
Study Impacts on NCTCOG Decisions

- Shift focus towards freight terminal electrification due to more control over EPS usage
- Pursuing grant funding for electrified parking spaces at freight terminal locations
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8-HOUR OZONE NAAQS HISTORICAL TRENDS

Based on ≤70 ppb (As of October 25, 2019)

Exceedance Level indicates daily maximum eight-hour average ozone concentration. Exceedance Levels are based on Air Quality Index (AQI) thresholds established by the EPA for the for the revised ozone standard of 70 ppb.

Source: TCEQ, http://www.tceq.state.tx.us/cgi-bin/compliance/monops/8hr_monthly.pl

ppb = parts per billion
Consecutive Three-Year Periods

As of October 25, 2019

1997 Standard < 85 ppb (Revoked)

2008 Standard ≤ 75 ppb (Serious by 2021)

2015 Standard ≤ 70 ppb¹ (Marginal by 2021)

¹Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the Design Value (three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration) is equal to or less than 70 parts per billion (ppb).

Source: NCTCOG TR Dept

Design Value (ppb)

Consecutive Three-Year Periods