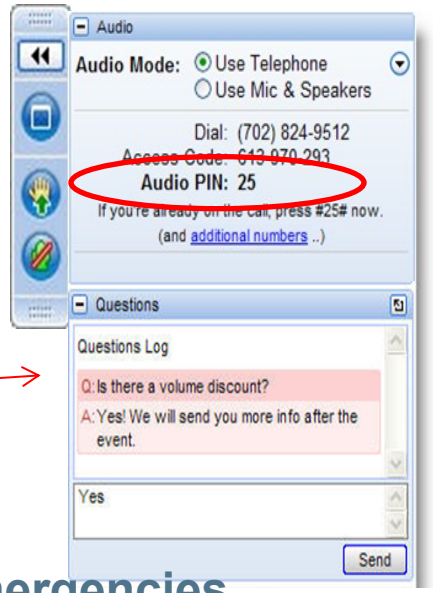
Non Road Electric Vehicle New Technologies

Participants will be muted for today's webinar.

Your webinar toolbar:

- Audio pin (must be entered to use hand raise function)
- Questions may be submitted in writing using the question tool



January Safety – Being Mentally Prepared for Emergencies

Be sure to review your site's Emergency Action Plan Periodically and know what steps to follow when calling for emergency help. You come to work every day prepare for work at hand and knowledgeable on how to handle work-related problems at work. Be prepared to ACT if one of your co-works is injured. Know how to protect yourself.

- ✓ HOW AND WHO do you notify in an emergency?
- ✓ SHOULD YOU STAY with an injured person or run for help?
- ✓ IF YOU ARE NOT First Aid or CPR certified, do you know who in your work area is?
- ✓ DOES THE EMERGENCY scene need to be secured?
- ✓ DO YOU KNOW the chain of command – who is it charge during an emergency?
- ✓ DO YOU KNOW who is in charge of your site's emergency response plan?

Heavy Duty Truck Stop Electrification Systems (TSE)

Program Overview

Angela Carroll, Program Manager
EnergyRight® Solutions

January 12, 2016

Background

- In April 2011, the Tennessee Valley Authority (TVA) board approved clean air agreements with the Environmental Protection Agency, four states, and three environmental groups that support TVA's vision for low-cost and cleaner energy

- TVA chose projects to align with its vision for a cleaner energy future
  - Non-Road Transportation Electrification and Infrastructure Applications Project

Heavy Duty Truck Stop Electrification

- The Heavy Duty Truck Stop Electrification (TSE) Program will be delivered through a request for proposal (RFP) to be released January 19, 2016
- The RFP will target customers and vendors (anyone who can provide a turnkey installation of TSE equipment) in TVA service territory
- The Available Funding for TSE Program is $350,000

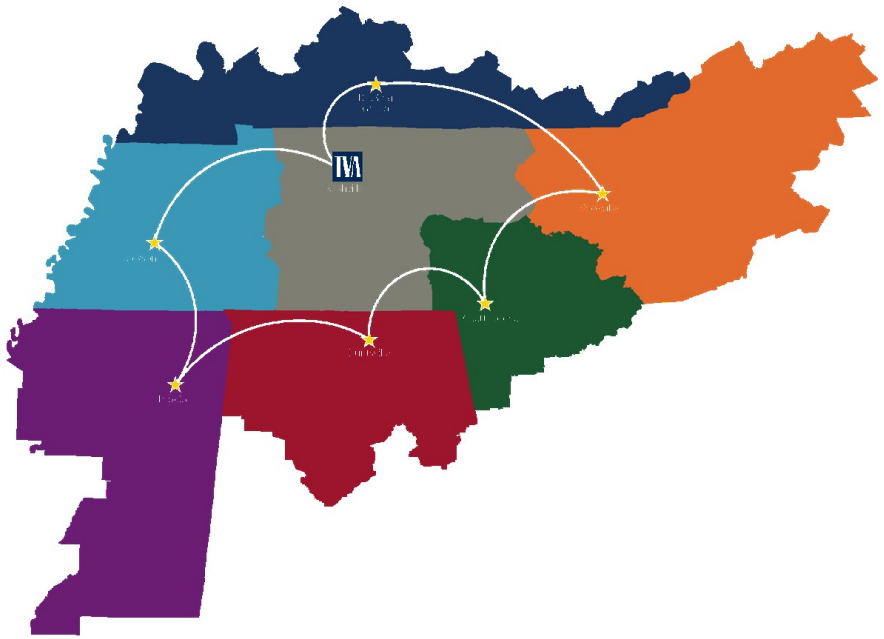
- The Program objective is to reduce emissions generated by trucks idling during rest stops through the installation of TSE equipment

Heavy Duty Truck Stop Electrification

- TSE equipment may include any type of TSE equipment that:
  - Require the user vehicle to have plug-in capability, or
  - Are used by vehicles with or without internal plug-in capability
- Projects utilizing a combination of these two technologies will also be considered

RFP Applicants

- This RFP is open to any company that can provide turnkey installation of TSE equipment at truck stop facilities within the TVA service territory.
  - Interested applica
    - TSE Vendors
    - LPC customers,
      - Flying J
      - Pilot
      - TA/Petro
      - Love's



TSE Timeline

MILESTONE	DATE
Webinar Session for Potential Offerors	January 12, 2016
Solicitation Release Date	January 19, 2016
Intent to Bid/Not Responding Due	January 29, 2016
Questions Due	February 5, 2016
Responses to Questions	February 12, 2016
Proposals Due	February 22, 2016
Evaluation Period (estimated)	February 22-March 18, 2016
Award Contract (estimated)	April 11, 2016
Project Implementation Begins	May 16, 2016
Project Completion and Issue Funding Payment(s) upon completion of project(s)	August 31, 2016

Acceptable Proposals

- Proposals must contain the information requested and shall be in sufficient form and detail to enable a comprehensive understanding and analysis
- Prior to evaluation, the Contracting Officer may review proposals to determine compliance with preparation instructions, terms and conditions, and other administrative conditions
- Failure to comply with the requirements of this solicitation may cause a proposal to be rejected without further consideration

Proposal Response Form

1. Respondent Contact Information
2. Project Participant Information
    a) Site name
    b) Site location
    c) Vendors utilized
    d) Additional Information
3. Local Power Company
    a) Account Number
    b) Rate Class

Proposal Response Form

4. Project Scope
   a) Overall quantity and type of TSE Equipment being installed
   b) Attach applicable Specification Sheets
   c) Number of Spaces serviced by TSE Equipment
   d) Emissions Reduction Potential will be determined by TVA using methodology in Addendum 1 of RFP.
   e) Range of truck sizes and configurations supported
   f) Anticipated annual hours of use based on similar installations
   g) Describe how this project improves truck stop operations
   h) Project Implementation Methodology
5. Estimated project cost
6. Requested funding amount
7. Project and payment schedules

Emissions Reduction Potential

- Proposal emissions reduction potential will be calculated by TVA in concurrence with the standardized methodology published by the U.S. Environmental Protection Agency (EPA), Argonne National Laboratory (ANL), and American Trucking Associations (ATA). The following types of emissions and assumed emission factors for truck idling are defined in the table below:

Symbol	Emission Type	Idling Emission Factor	Source
HC	Hydrocarbons	12.6 g/hr	ATA[1]
CO	Carbon Monoxide	94.6 g/hr	ATA[1]
NO_x	Nitrogen Oxides	135 g/hr	EPA[2]
PM_{10}	Particulate Matter	0.52 g/hr	EPA[2], 2016-2025 average
CO_2	Carbon Dioxide	8,224 g/hr	EPA[3]

- A deemed average utilization rate based on the empirical data from multiple truck stop idling evaluations will be used to estimate activity levels. The average utilization of TSE spaces and average time of overnight idling was found to be 25% or 6 hrs/day. The following equation was used to calculate TSE annual emission reduction potential per space

$$Gross\ Emissions\ Savings = 8{,}760\left(\frac{hours}{year}\right) * \text{utilization rate (\%)} * \text{emission factor}\left(\frac{grams}{hour}\right) * \frac{1}{453.6}\left(\frac{lb}{grams}\right)$$

Evaluation Factors

Evaluation criteria to be considered by TVA in determining which proposal is most advantageous to TVA will include total cost of ownership to TVA. Evaluation criteria considered may also include:

- Ability of Offeror to Perform the Work described in Attachment A of RFP
- Estimated Number of Proposed TSE Equipment Installations
- Number of Spaces serviced by TSE Equipment
- Emissions Reduction Potential - Calculated by TVA using methodology listed in Addendum 1 of RFP.
- Percentage of Awarded Funds to Total Project Costs
- Project Timing
- Location- TVA is seeking performance of work in environmentally challenged areas. Consideration will be given to locations within non-attainment areas, but shall not be the determining factor in awarded funds.
- Completeness of Proposal
- Acceptance of TVA's Terms and Conditions
- Financial Capability

Evaluation Process

- TVA will evaluate the proposals using numeric scoring and a total score will be computed for each proposal. Using these scores, TVA will establish a competitive range
- TVA may, at its discretion, request clarifications or conduct discussions with any or all Offerors, or only those Offerors in the competitive range

Next Steps

TSE:

- Submit Intent to Bid Form – Jan. 29, 2016
- Submit Questions – Feb. 5, 2016
- Complete Proposal – Due Feb. 22, 2016
- Submit to Brad Wagner with TVA at brwagner0@tva.gov

Questions?

Please send ALL clarifying questions in writing to **Brad Wagner,** at brwagner0@tva.gov no later than

5:00PM ET on February 5, 2016.

Please note: Other TVA employees and contractors are not authorized to discuss the RFP in any capacity.