CLEAN CONSTRUCTION EQUIPMENT CALL FOR PROJECTS AND DEMONSTRATION PROJECT UPDATE

Regional Transportation Council
July 14, 2011

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Air Quality Policy & Program Development
Transportation Department
CALL FOR PROJECTS - OVERVIEW

Structure

Competitive Call for Projects for Public and Private Sector

Funds Available

~$741,112 Environmental Protection Agency (EPA) Funds
  $476,884 from 2010 Award
  $264,228 from 2008 Award

Eligible Activities

Equipment Replacements, Repowers, and Retrofits
EPA-Verified Engines/Technologies

Additional Eligibility Requirements

Operate a Majority of Time in Nonattainment Area
Commit to 5-Year Activity Life
Exceed Normal Fleet Attrition Schedule (Replacements)
Adopt Clean Fleet Vehicle Policy (Public Sector)
EVALUATION CRITERIA

Quantitative Assessment

- Cost per Ton Nitrogen Oxides (NO\textsubscript{x}) Reduced
- Cost per Ton Particulate Matter (PM) Reduced
- Cost per Gallon Gasoline/Diesel Reduced
- Cost per Ton Carbon Dioxide (CO\textsubscript{2}) Reduced

Qualitative Assessment

- Partnership
- Feasibility/Risk
- Strategic Program Goals

Note: Quantitative Assessment is Primary Consideration
**FUNDING RECOMMENDATION**

<table>
<thead>
<tr>
<th>Applicant</th>
<th>Project Description</th>
<th>Funds Requested</th>
<th>Cost per Ton NO\textsubscript{x}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaufman County</td>
<td>Replace 1 Grader</td>
<td>$51,449</td>
<td>$16,077</td>
</tr>
<tr>
<td>Mac’s Excavating</td>
<td>Replace 1 Excavator</td>
<td>$39,900</td>
<td>$34,467</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$91,349</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Balance Remaining</strong></td>
<td></td>
<td></td>
<td><strong>$649,763</strong></td>
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</tbody>
</table>

**Funding Recommendation and Next Steps:**
- Fully Fund All Submitted Applications
- Re-open CFP on Rolling Monthly Basis

**Funded Project Benefits (Over 5-Year Activity Life):**
- Emissions Reduced: 4.29 Tons NO\textsubscript{x}
  - 0.2665 Tons PM*
  - 513.93 Tons CO\textsubscript{2}
- Fuel Displaced: 46,300 Gallons Diesel

*EPA Methodology
DEMONSTRATION PROJECT OVERVIEW

Clean Construction Specification
  Equipment/Engine Requirements
  Operational Requirements
  Reporting to Contracting Entity
  Enforcement

Goal: Gather Information on Potential Impacts
  Bid Price
  Emissions
  Administrative Process

One Year Beginning Late Spring/Early Summer 2010
  Extend to Late 2011

Local Government Involvement + Staff Support
  City of Arlington
  City of Denton
  City of Fort Worth
  City of Plano
  Northgate Constructors
# RESULTS: BID ALTERNATE/MOCK BID

## Bid Alternate Evaluation (32 Responses, 6 Projects)

<table>
<thead>
<tr>
<th>Metric</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Cost Increase</td>
<td>3.0% (Range from 0-16.7%)</td>
</tr>
<tr>
<td>Potential NO\textsubscript{x} Reductions*</td>
<td>1.83 Tons</td>
</tr>
<tr>
<td>Cost per Ton*</td>
<td>$144,262</td>
</tr>
</tbody>
</table>

*Evaluation of Awarded Bids Only

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### Percent Increase to Bid Price (33 Responses*)

- **0-1%**: 10 Responses (10% of total responses)
- **1-2%**: 6 Responses (6% of total responses)
- **2-3%**: 2 Responses (2% of total responses)
- **3-10%**: 6 Responses (6% of total responses)
- **10-18%**: 3 Responses (3% of total responses)

*Arlington Bid Alternates and DFW Connector Mock Bid*
RESULTS: QUESTIONNAIRE

Percent Increase to Bid Price
(41 Responses)

- 1-5% (12 Responses)
- 6-10% (12 Responses)
- 11-20% (2 Responses)
- >20% (5 Responses)
- 0% (19 Responses)

Affected Fleet Size
(49 Responses)

- <10 (12 Fleets)
- 11-20 (10 Fleets)
- 21-50 (15 Fleets)
- 51-75 (4 Fleets)
- 76-100 (3 Fleets)
- >100 (5 Fleets)
**RESULTS: QUESTIONNAIRE**

**What Actions Would You Take to Comply?**
(50 Responses)

- Purchase: 11
- Repower: 5
- Retrofit: 4
- Rent: 17
- Rearrange Fleet: 13
- No Action Needed: 24

**Familiarity With Emissions-Based Requirements**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heard Of</td>
<td>22</td>
<td>28</td>
</tr>
<tr>
<td>Bid On</td>
<td>21</td>
<td>30</td>
</tr>
</tbody>
</table>

**Experience With Emissions-Based Requirements**

- Positive
- Neutral
- Negative

- 4
- 13

*Only Includes Respondents Who Bid on Projects*
CLEAN CONSTRUCTION ACT OF 2011

Applicability
Particulate Matter (PM$_{2.5}$) Nonattainment/Maintenance Areas
Highway and Transportation Projects
Affected Equipment
Time on Project
Size
Exemptions

Requirements/Implementation
Reduce PM$_{2.5}$ by 85% or the “Maximum Achievable”
Paid for by Federal Funds
Capped at 1% or Actual Cost
Change Order
Written Plan with Inventory

Source: EPA
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