

CITY OF AUSTIN  
PURCHASING OFFICE  
SCOPE OF WORK (RFP)  
SOLICITATION NUMBER: DPA0010  
**Acoustic Testing of Five Fiberglass Tanks using ASTM E-1067**

**1.0 PURPOSE**

The City of Austin Electric Utility Department, dba Austin Energy (AE) seeks proposals in response to this Request for Proposal (RFP) from a Contractor that is qualified and experienced in performing the following services:

Contractor will utilize acoustic emissions testing to determine the integrity of the five large fiberglass tanks that are utilized to store mineral oil during transformer and breaker maintenance in the Austin Energy substations.

**2.0 BACKGROUND**

Austin Energy is a municipal electric utility owned and operated by the City of Austin, Texas, engaged in the generation, transmission and distribution of electricity to approximately 420,000 residential, commercial and industrial customers in Travis and Williamson Counties, Texas.

**3.0 SCOPE OF WORK**

**3.1 Title of Program**

Acoustic Testing of Five Fiberglass Tanks using ASTM E-1067

**3.2 Objectives**

Contractor will utilize ASTM Method E-1067 to determine the integrity of the five large fiberglass tanks. All five tanks will be tested at the AE Kramer Lane facility in north Austin: Austin Energy, 2526 Kramer Lane, Austin, Texas 78758-4416.

This contract is NOT for an ongoing or multi-year service agreement/contract.

CITY OF AUSTIN  
PURCHASING OFFICE  
SCOPE OF WORK (RFP)  
SOLICITATION NUMBER: DPA0010  
**Acoustic Testing of Five Fiberglass Tanks using ASTM E-1067**

**4.0 WORK DESCRIPTION**

In the response to this Request for Proposal, the Contractor shall describe to Austin Energy their method for providing testing (using the ASTM E-1067 standard) for the five fiberglass tanks at the Austin Energy Kramer Lane Facility.

For the site activities, the Contractor will be provided with parking and power for the acoustic emissions trailer and equipment, access for attachment of acoustic emissions sensors and a work plan for filling each tank.

Access for sensor placement can be from ladders, scaffold or a lift truck. Sensor locations at lower levels and on small vessels may be reached by ladder.

Contractor shall provide drawing and plans for meeting the requirements listed in this RFP work description.

**5.0 GENERAL REQUIREMENTS**

5.1. Develop Project Testing and Report Generation Plan

5.1.1 Austin Energy requires a detailed project plan for the procedure of the acoustic testing, the compilation/analysis of test data and the development and completion of the resulting test reports.

5.1.2 A written report will be generated for each of the tanks that are tested. The reports will specify if there has been any damage to the tanks, as well as how severe that damage is. If damage is detected, Contractor will provide as much detail as possible regarding the location of this damage. The written reports will incorporate a copy of the actual ASTM E-1067 standard and related procedures.

5.2 Work to be Performed

Contractor will obtain proper security authorization and security credentials (see Work Force Security provisions including how to get AE work authorization and work/site access badges, in RFP section 0400).

CITY OF AUSTIN  
PURCHASING OFFICE  
SCOPE OF WORK (RFP)  
SOLICITATION NUMBER: DPA0010  
**Acoustic Testing of Five Fiberglass Tanks using ASTM E-1067**

- 5.2.1 The tanks to be tested consist of three 10,000 gallon tanks, one 6,000 gallon tank and one 1,000 gallon tank. All five are FRP (fiber reinforced plastic) tanks.
- 5.2.2 All five of these tanks are mounted on trailers for transportation. All tanks, with the exception of the smallest tank are rotated into the vertical position for filling.
- 5.2.3 Testing will be conducted with the tanks in the vertical orientation, with the exception of the smallest tank. The 1000 gallon tank will be tested in the horizontal position.
- 5.2.4 These tanks will be tested in two mobilizations. The first mobilization will be to test the 6,000 and one of the 10,000 gallon tanks.
- 5.2.5 The second mobilization will be to test two 10,000 gallon tanks and the 1,000 gallon tank.
- 5.2.6 The second mobilization could come as soon as the week following the first mobilization
- 5.2.7 Estimated timing for these tests is March 2012
- 5.2.8 The working fluid for all of these tanks is mineral oil
- 5.2.9 The tanks will be filled using the normal pump utilized by substation fill rates may vary though and may be substantially higher.
- 5.2.10 All mineral oil to be used in this testing will be provided by Austin Energy.
- 5.2.11 Cushion pads (poly and sand base) will be provided by Austin Energy to protect the bottoms of the tanks from abrasion.
- 5.2.12 All movements of these tanks (both setup and tear-down) will be performed by Austin Energy personnel

CITY OF AUSTIN  
PURCHASING OFFICE  
SCOPE OF WORK (RFP)  
SOLICITATION NUMBER: DPA0010

**Acoustic Testing of Five Fiberglass Tanks using ASTM E-1067**

- 5.2.13 All pumping of the mineral oil will be performed by Austin Energy.
- 5.2.14 Power – 110 volts AC (two circuits rated at 20A minimum) will be provided to the work site in order for the testing firm to power their gear.
- 5.2.15 Actual final schedule for testing will be provided to the test firm once contract has been made.
- 5.2.16 Estimated fill times will be provided by Austin Energy based on the pump that will be used in the test procedure.
- 5.2.17 Access to all sensor locations will be provided by Austin Energy.
- 5.2.18 A specific place will be designated for the location of the test trailer in the test area.
- 5.2.19 Site contacts will be provided by Austin Energy to provide logistical support during this testing.
- 5.2.20 Contractor will follow the established test procedure and will provide drawings or diagrams showing the sensor locations and loading sequence.
- 5.2.21 The Contractor will provide all logistical support to the test team to support their test method (acoustic emissions testing crew and transportation of the test equipment).
- 5.2.22 The Contractor will ensure that the test method is followed properly and that the work is performed within the expected test schedule.
- 5.2.23 The Contractor will confirm that Austin Energy will maintain ownership of the test and report data and will describe the format.

**6.0 AUSTIN ENERGY RESPONSIBILITIES**

- 6.1 Provide the projected schedule and estimated fill time to aid with planning and confirm the assumptions made in this proposal.

CITY OF AUSTIN  
PURCHASING OFFICE  
SCOPE OF WORK (RFP)  
SOLICITATION NUMBER: DPA0010

**Acoustic Testing of Five Fiberglass Tanks using ASTM E-1067**

- 6.2 Provide necessary facilities to provide a controlled liquid fill.
- 6.3 Provide Contractor crew with a place to site their trailer in the test area.
- 6.4 Provide two, 110V, 20A power sources for the instrumentation.
- 6.5 Appoint site contacts for logistical support and to receive reports on AE activity.

**7.0 CONTRATOR RESPONSIBILITIES**

- 7.1 Follow the established test procedure and provide drawings or diagrams showing sensor locations and the loading sequence.
- 7.2 Provide logistical support for the Acoustic Emissions testing crew and transportation for the Acoustic Emissions testing equipment.
- 7.3 Ensure the set-up and testing work is performed within the specified schedule.
- 7.4 Follow the agreed test procedure, typically following this sequence:
  - 7.4.1 Place sensors on the equipment to be tested and run cables back to the test equipment.
  - 7.4.2 Measure the attenuation (loss of signal with distance from a sensor) by breaking Pentel pencil lead on the vessel at specified locations.
  - 7.4.3 Perform channel sensitivity checks by breaking Pentel pencil leads near the base of every sensor to determine sensor sensitivity, bonding integrity, and circuit continuity.
  - 7.4.4 Monitor the fill loading following the sequence pre-determined by Contractor and Austin Energy Project Manager. Austin Energy is responsible for the fill or otherwise loading the equipment under Contractor guidance.
  - 7.4.5 Remove and pack up sensors, cables and test equipment.
  - 7.4.6 Issue a draft report with recommendations for follow-up inspection (if any) within two weeks from the final test.

CITY OF AUSTIN  
PURCHASING OFFICE  
SCOPE OF WORK (RFP)  
SOLICITATION NUMBER: DPA0010

**Acoustic Testing of Five Fiberglass Tanks using ASTM E-1067**

- 7.4.7 Further off-site data analysis is required for full documentation and evaluation of the test results. Austin Energy will review the draft report and provide comments to the vendor. Once the Contractor receives Austin Energy's comments, they will have two weeks to modify the report and provide Austin Energy with the final report.