



The leading authority for petroleum and energy handling equipment.

September 6, 2013

Mr. Todd Campbell, Acting Chief of Staff
Rural Development
U.S. Department of Agriculture
1400 Independence Ave. SW
Washington, DC 20250

Dear Mr. Campbell:

You asked on August 13 if the Petroleum Equipment Institute (PEI) had any information regarding the average price for installing E15 storage equipment and blender pumps at retail stations. You provided several scenarios for which you wanted information.

The accompanying attachment describes the scenarios you provided and includes ballpark figures for each scenario. These numbers represent the mean and median from a confidential survey of PEI members from across the nation conducted August 22 through September 5, 2013, using your scenarios.

We hope this is helpful to you.

Sincerely,

A handwritten signature in black ink that reads "Robert N. Renkes". The signature is written in a cursive, slightly slanted style.

Robert N. Renkes

Scenarios to Determine Approximate Cost for E15 Station Readiness

Prepared by PEI for USDA
September 6, 2013

Assumptions

- Work to be performed within 10 miles of your office.
- Do not consider other scenarios, even if they might make more practical and/or economic sense.
- All estimates refer to total project cost.

Scenario #1: Everything aboveground and underground is compatible, including UST systems, dispensers and hanging hardware. This might simply require labeling/signage changes.

Average: \$1,167 Median: \$1,000

Scenario #1a: Same as #1, but tank is not compatible. Replace with one E15 UST system (see below). Cost to include replacing one UST system (tank, piping and components*) with one secondarily contained UST system (tank, piping and components*, including labor) of similar size (assume 10,000 gallons). Include cost of a closure assessment, but no contamination.

Average: \$112,968 Median: \$115,000

Scenario #2: Dispensers are not compatible, but will use a “listed** by report” retrofit kit to make compatible to satisfy local AHJ requirements. Also replace hanging hardware that is listed** to dispense E15. Please use dispenser counts of 2, 4, 6 and 10.

2 dispensers: Average: \$8,385 Median: \$7,600

4 dispensers: Average: \$16,378 Median: \$15,200

6 dispensers: Average: \$25,264 Median: \$22,800

10 dispensers: Average: \$41,622 Median: \$38,000

Scenario #2b: Same as #2, but will not replace hanging hardware (the AHJ accepts the existing hanging hardware as compatible).

2 dispensers: Average: \$6,961 Median: \$6,452

4 dispensers: Average: \$13,812 Median: \$13,000

6 dispensers: Average: \$20,661 Median: \$19,500

10 dispensers: Average: \$34,240 Median: \$32,500

Scenario #2c: Same as #2, but tank is not compatible. Replace with one secondarily contained E15 UST system, including components* (see below). Cost to include replacing one UST system with one of similar size (assume 10,000 gallons). Include cost of a closure assessment, but no contamination.

2 dispensers: Average: \$121,222 Median: \$126,170

4 dispensers: Average: \$136,667 Median: \$135,200

6 dispensers: Average: \$149,607 Median: \$152,800

10 dispensers: Average: \$170,889 Median: \$188,000

Scenario #3: Dispensers are not compatible, replace with new E15-listed** dispensers and hanging hardware listed to dispense E15. Hanging hardware to include E15 listed** equipment. Need to know the total **installed** cost. Please use dispenser counts of 2, 4, 6 and 10.

2 dispensers: Average: \$40,874 Median: \$36,200

4 dispensers: Average: \$81,334 Median: \$72,000

6 dispensers: Average: \$119,538 Median: \$108,000

10 dispensers: Average: \$201,380 Median: \$187,380

Scenario #3a: Same as #3, but tank is not compatible as well. Replace one UST system (assume 10,000 gallon tank) with a secondarily contained E15 tank system and listed** components. Include cost of a closure assessment, but no contamination.

2 dispensers: Average: \$156,667 Median: \$166,000

4 dispensers: Average: \$198,102 Median: \$212,736

6 dispensers: Average: \$239,444 Median: \$241,696

10 dispensers: Average: \$321,778 Median: \$310,000

Scenario #4: Dispensers are not compatible. Station owner decides to install a stand-alone dispenser for E15, listed** for E15, on existing island. Assume there is enough room. Must include piping from existing compatible tank.

Average: \$31,775 Median: \$30,000

Scenario #4a: Same as #4, but tank is not compatible. Replace one non-compatible UST system with one E15 listed** secondarily contained UST system, including components. Assume 10,000 gallon tank that would hold E15. Include cost of closure assessment, but no contamination.

Average: \$144,496 Median: \$140,199

Scenario #5: Figure you are building a new station on virgin land. Estimate the **additional cost (over and above what a “traditional” E10 system would cost)** for putting in E15 at a new station. The E15 system would have two USTs: One UST would hold E85 and have equipment listed** as such. The other UST would hold E10. The pumps would be listed** blender pumps capable of blending E85 and E10 to produce E15. Compare that with a “traditional” E10 system that would have two tanks: One UST containing a premium grade E10 and the other UST containing a regular grade E10. The blender pump would be capable of blending a premium grade E10 with a regular grade E10 to produce a mid-grade E10. Please estimate the **overall (labor and equipment) over and above costs for the E15 system described above, compared to the E10 system described above**, assuming 2, 4, 6 and 10 dispensers.

2 dispensers: Average: \$21,803 Median: \$24,000

4 dispensers: Average: \$43,606 Median: \$40,000

6 dispensers: Average: \$65,407 Median: \$60,000

10 dispensers: Average: \$100,476 Median: \$100,000

*Compatible: Federal underground storage tank (UST) law (40 CFR 280.32) requires owners/operators of UST systems storing ethanol-blended fuels greater than 10 percent to use compatible equipment. This can be done by having the equipment listed or obtaining a statement (letter) of approval of compatibility from the manufacturer. As far as EPA OUST is concerned, the equipment that must demonstrate compatibility includes:

- Tank or internal tank lining
- Piping
- Line leak detector
- Flexible connectors
- Drop tube
- Spill and overfill prevention equipment
- Submersible turbine pump and components
- Sealants (including pipe dope and thread sealant), fittings, gaskets, o-rings, bushings, couplings, and boots
- Containment sumps (including submersible turbine sumps and under dispenser containment)
- Release detection floats, sensors and probes
- Fill and riser caps
- Product shear valves

**Listed: Certified or listed by a nationally recognized, independent testing laboratory (e.g., UL).