MINNESOTA POLLUTION CONTROL AGENCY

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July 10, 2023

Tim Gross, Fueling Minnesota
Executive Director
Fueling Minnesota
3244 Rice Street
St. Paul, MN 55126

RE: MPCA E-15 underground storage tank system upgrade estimates

Dear: Tim Gross

Please see attached information that was prepared and presented to the Minnesota Governor's Council on Biofuels on September 2020. The MPCA has not updated the data since it was last presented in 2020. Although there have been some changes to Minnesota's underground storage tank systems infrastructure since that data was last run, it is believed that the difference is minor and that the cost estimates that were presented in 2020 have actually increased since then.

Sincerely,

Nate Blasing
Tanks Compliance and Enforcement Unit Supervisor
Minnesota Pollution Control Agency

Estimates for E15 upgrades
Approximate number of federally regulated UST facilities -3,900
Approximate number of Federally Regulated UST Tanks – 13,000

Approximate number of Federally Regulated UST sites that store gasoline (excludes sites that only store diesel) **3500**
Approximate number of Federally Regulated UST Tanks that store gasoline – 7,140

Estimate that 15% of the sites will be compatible with E15 as they were installed or upgraded within the last 5 years.

Estimate that 85% or greater of current facilities would currently not be able to demonstrate compatibility for E-15 (Entire tank system including dispensers).

Estimate **30%** of current **tanks** in use currently would not be compatible for E-15. (Early generation fiberglass and old bare steel tanks). This would require replacement of tanks, piping and dispensers. Most sites have all tanks in same tank basin so all tanks would most likely need replacement.
Costs below also include costs of removal of old tanks
30% of 3,500 sites =1,050 sites needing total replacement.
Average of 3 tanks per sites X $160,000 per tank =$480,000 for each site
Total statewide costs $480,000 X 1,050 = **$504,000,0**00

Estimate that **35%** of sites do not have **piping** compatible with E15. (Steel pipe and early generation flex piping.) In this estimate tanks are compatible and do not require replacement. Replacement of tank tops and piping up to the dispensers. Since all piping is typically in same trench, all piping would most likely be replaced.
35% of 3,500 sites =1,225 sites needing new tank tops and piping to dispensers.
Average of 3 pipe runs per site x 50,000 per pipe = $150,000 per site
Total statewide costs $150,000 x 1,225 =**$183,750,000**

Estimate that **20%** of sites would need some sort of upgrading of **equipment** other than tanks, piping or dispensers. Examples of this would be submersible pumps, probes, drop tubes, spill buckets, dispenser hanging hardware etc. This could range from $1,000 to $10,000 per tank storing E15
20% of 3500 sites = 700 sites needing some other upgrades
Average of 2 tanks per site at $1,000 to $10,000 per site = $2,000 to $20,000 per site
Total statewide costs $2,000 to $20,000 per site x 700 sites = **$1,400,000 to $14,000,000**

Dispenser costs-

25,000 gasoline dispensers state wide (average of 7 gasoline dispensers per site)

Existing infrastructure=

70% Gilbarco dispensers= 17,500
20% Wayne dispensers = 5,000
10% other dispensers = 2,500

50% of Gilbarco not compatible with E15 = 8,750
50% of Wayne not compatible with E15 = 2,500
50% of other not compatible with E15 = 1,250

Guesstimate- 75% of 8,750 Gilbarco dispensers can retro fit @ $3,000 = $19,687,500
Guesstimate -75% of 2,500 Wayne dispensers can retro fit @ $3,000 = $5,625,000
Dispenser **retro fit** cost = **$25,312,500**
(did not include "other brand dispensers in cost)

25% of 8750 Gilbarco need new dispenser @ $20,000 = $35,000,000
25% of 850 Wayne need new dispenser @ $20,000 = $12,500,000
New dispenser cost = **$47,500,000**

*These are only retail dispenser numbers, non-retail dispenser numbers not included.

Ethanol
Started working with facilities in 2012 on compatibility
Currently 435 tank systems storing E-85
Currently 218 tank systems storing E-15

Tank removal costs (largest risk but lower frequency)-

Pull tanks that were installed prior to 1980 (gas and diesel) = 500
Estimate that average facility has 2.5 tanks (500/2.5) = 200
Removal cost $15,000/facility = 250 x $15,000 = $3,000,000

Pull tanks that were installed prior to 1990 (gas and diesel) = 1000
Estimate that average facility has 2.5 tanks (1000/2.5) = 400
Removal cost $15,000/facility = 400 x $15,000 = $6,000,000

Realistically 10 yrs
Franklin Fuel thinks they could keep up