



Triskett CNG

Operations and Maintenance

Presented to: Organizational, Services & Performance Monitoring Committee

January 7, 2025

*Connecting
the
Community*

Project Overview: Triskett CNG O&M

- Understanding CNG: Cost Components (2023)
 - Natural Gas: \$471,900
 - Electricity: \$113,100
 - Operation & Maintenance Program: \$218,500
 - Total CNG Cost: \$803,500
- Cost per Diesel Gallon Equivalent (DGE)
 - \$1.19 before Tax Credit
 - \$0.60 after Tax Credit

Project Overview: Triskett CNG O&M



Greater Cleveland Regional Transit Authority

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Project Overview: Triskett CNG O&M

OH East Cleveland RIA Hayden - Statistics

Daily Statistics Thursday, June 2, 2022 10:55:13 AM

| Station Status | 60 Min. Trending | Seq. Step Trending | Alarm History | Load/Lag | Resets | Master Panel | Daily Statistics | Historical Statistics | Set Points & Utilities |
|----------------|------------------|--------------------|---------------|----------|--------|--------------|------------------|-----------------------|------------------------|
|----------------|------------------|--------------------|---------------|----------|--------|--------------|------------------|-----------------------|------------------------|

| Fueling | | Ariel | | Hourly Statistics | |
|---------|-----|----------------|------|-------------------|------|
| Fills | | Starts | | Fueling | |
| Hose 1 | 57 | Avg. Fill Time | 475 | Starts | 44 |
| Hose 2 | 63 | Underfills | 38 | Run Time (min) | 2752 |
| Hose 3 | 46 | DGEs | 7121 | Loaded % | 95 |
| Total | 166 | Avg. GPM | 5.4 | Shutdowns | 0 |

Stats Reset at Hour 15

| Number of Fills by Length | | | | | | | |
|---------------------------|-------|---------|---------|---------|---------|---------|--------|
| | 0 - 9 | 10 - 19 | 20 - 29 | 30 - 39 | 40 - 49 | 50 - 59 | Totals |
| 0 Min | 2 | 2 | 2 | 15 | 0 | 1 | 22 |
| 1 Min | 4 | 2 | 2 | 1 | 2 | 1 | 12 |
| 2 Min | 0 | 1 | 0 | 4 | 0 | 0 | 5 |
| 3 Min | 2 | 2 | 0 | 2 | 2 | 1 | 9 |
| 4 Min | 2 | 1 | 1 | 0 | 1 | 1 | 6 |
| 5 Min | 1 | 1 | 1 | 1 | 0 | 1 | 5 |
| 6 Min | 1 | 2 | 2 | 2 | 0 | 1 | 8 |
| 7 Min | 2 | 0 | 3 | 1 | 1 | 1 | 8 |
| 8 Min | 1 | 0 | 0 | 1 | 3 | 2 | 7 |
| 9 Min | 4 | 1 | 3 | 2 | 4 | 1 | 15 |
| 10 Min | 1 | 3 | 4 | 4 | 1 | 2 | 15 |

| | Fueling | | Ariel | | HyC | |
|----------|---------|----------|-------|---------|--------|----------|
| | Fills | Avg Time | DGEs | Avg GPM | Starts | Run Time |
| Midnight | 15 | 573 | 669 | 4.7 | 0 | 240 |
| 1 AM | 10 | 529 | 566 | 5.7 | 4 | 193 |
| 2 AM | 14 | 496 | 661 | 5.7 | 0 | 240 |
| 3 AM | 5 | 623 | 355 | 6.8 | 4 | 154 |
| 4 AM | 9 | 864 | 585 | 4.5 | 0 | 240 |
| 5 AM | 12 | 714 | 667 | 4.7 | 0 | 238 |
| 6 AM | 11 | 779 | 654 | 4.6 | 0 | 239 |
| 7 AM | 0 | 0 | 0 | 0.0 | 0 | 25 |
| 8 AM | 5 | 48 | 35 | 8.8 | 2 | 11 |
| 9 AM | 6 | 93 | 116 | 12.5 | 2 | 50 |
| 10 AM | 4 | 50 | 38 | 11.3 | 2 | 30 |
| 11 AM | 1 | 37 | 9 | 14.4 | 1 | 7 |
| Noon | 9 | 71 | 94 | 8.9 | 7 | 57 |
| 1 PM | 12 | 101 | 236 | 11.6 | 6 | 113 |
| 2 PM | 1 | 37 | 8 | 12.9 | 1 | 16 |
| 3 PM | 6 | 68 | 81 | 13.5 | 5 | 47 |
| 4 PM | 5 | 125 | 142 | 13.6 | 6 | 65 |
| 5 PM | 3 | 259 | 141 | 10.9 | 6 | 56 |
| 6 PM | 14 | 241 | 410 | 7.3 | 5 | 155 |
| 7 PM | 12 | 409 | 499 | 5.3 | 0 | 213 |
| 8 PM | 12 | 484 | 520 | 5.4 | 4 | 155 |
| 9 PM | 9 | 642 | 412 | 4.3 | 0 | 215 |
| 10 PM | 0 | 0 | 0 | 0.0 | 0 | 0 |
| 11 PM | 14 | 474 | 632 | 5.7 | 4 | 193 |

OH East Cleveland RIA Hayden - Historical Statistics

Historical Statistics Thursday, June 2, 2022

| Station Status | 60 Min. Trending | Seq. Step Trending | Alarm History | Load/Lag | Resets | Master Panel | Daily Statistics | Historical Statistics |
|----------------|------------------|--------------------|---------------|----------|--------|--------------|------------------|-----------------------|
|----------------|------------------|--------------------|---------------|----------|--------|--------------|------------------|-----------------------|

| Monthly Statistics | | | | | | | | | |
|--------------------|---------|----------|------|---------|------------|--------|----------|--------|-----------|
| Date | Fueling | | | | Ariel | | | | |
| | Fills | Avg Time | DGEs | Avg GPM | Underfills | Starts | Run Time | Load % | Shutdowns |
| 5/1 | 102 | 422 | 780 | 5.4 | 49 | 40 | 2174 | 95 | 0 |
| 5/2 | 105 | 263 | 6311 | 8.3 | 30 | 60 | 2542 | 91 | 0 |
| 5/3 | 138 | 276 | 5720 | 7.9 | 22 | 52 | 2240 | 91 | 0 |
| 5/4 | 156 | 331 | 6443 | 7.5 | 22 | 46 | 2491 | 91 | 0 |
| 5/5 | 164 | 296 | 5983 | 7.4 | 36 | 49 | 2346 | 93 | 0 |
| 5/6 | 152 | 280 | 6080 | 8.8 | 44 | 35 | 2313 | 94 | 0 |
| 5/7 | 79 | 321 | 3808 | 9.8 | 19 | 32 | 1332 | 87 | 0 |
| 5/8 | 104 | 293 | 7896 | 9.8 | 23 | 50 | 1617 | 87 | 0 |
| 5/9 | 153 | 314 | 5605 | 7.8 | 58 | 50 | 2262 | 92 | 0 |
| 5/10 | 166 | 348 | 6163 | 8.4 | 60 | 54 | 2442 | 94 | 0 |
| 5/11 | 169 | 353 | 6562 | 6.2 | 56 | 54 | 2601 | 93 | 0 |
| 5/12 | 171 | 329 | 6433 | 6.8 | 64 | 51 | 2526 | 93 | 0 |
| 5/13 | 147 | 436 | 6355 | 6.8 | 40 | 35 | 2487 | 95 | 0 |
| 5/14 | 98 | 285 | 2304 | 7.5 | 38 | 48 | 1512 | 91 | 0 |
| 5/15 | 110 | 294 | 4550 | 8.4 | 26 | 71 | 1922 | 87 | 0 |
| 5/16 | 154 | 399 | 6384 | 6.4 | 89 | 46 | 2622 | 94 | 0 |
| 5/17 | 165 | 390 | 6191 | 6.7 | 76 | 61 | 2679 | 92 | 0 |
| 5/18 | 160 | 349 | 6333 | 7.4 | 28 | 58 | 2516 | 92 | 0 |
| 5/19 | 163 | 316 | 5095 | 6.5 | 56 | 57 | 2314 | 91 | 0 |
| 5/20 | 139 | 372 | 3651 | 6.8 | 34 | 36 | 2354 | 94 | 0 |
| 5/21 | 88 | 325 | 4338 | 7.8 | 22 | 43 | 1735 | 91 | 0 |
| 5/22 | 108 | 342 | 4665 | 7.6 | 22 | 60 | 1892 | 88 | 0 |
| 5/23 | 158 | 341 | 6650 | 7.4 | 50 | 46 | 2576 | 93 | 0 |
| 5/24 | 146 | 362 | 6178 | 7.4 | 28 | 34 | 2484 | 92 | 0 |
| 5/25 | 159 | 317 | 5993 | 7.1 | 38 | 53 | 2431 | 92 | 0 |
| 5/26 | 165 | 343 | 6625 | 7.8 | 58 | 46 | 2643 | 93 | 0 |
| 5/27 | 151 | 394 | 6480 | 6.5 | 54 | 54 | 2611 | 95 | 0 |
| 5/28 | 161 | 399 | 4864 | 7.5 | 36 | 56 | 1625 | 89 | 0 |
| 5/29 | 86 | 382 | 3631 | 6.6 | 16 | 49 | 1515 | 91 | 0 |
| 5/30 | 101 | 312 | 4896 | 7.7 | 26 | 52 | 1796 | 90 | 0 |
| 5/31 | 188 | 388 | 6888 | 5.6 | 66 | 53 | 2276 | 93 | 0 |

Greater Cleveland Regional Transit Authority



Project Overview: Triskett CNG O&M

Scope of Services

- 24/7 Monitoring & Support
- Maintenance Management System w/ Remote Monitoring
- Scheduled Maintenance & Emergency Repairs

All inclusive of qualified labor, parts, and consumables.

Project Overview: Triskett CNG O&M

Current Triskett Fleet – Total Size: 136 coaches

- 63 40 ft CNG coaches
- 29 40 ft Diesel coaches
- 23 60 ft Diesel coaches
- 9 MCIs (Diesel)
- 12 Trolleys (Diesel)

Fleet transitioning from Diesel to CNG

Project Overview: Triskett CNG O&M

- Critical that CNG fueling station is maintained, uninterrupted, and available 24/7.
- Disruption of CNG fueling would result in a catastrophic impact on service.

Project Overview: Triskett CNG O&M

- Projected Costs Based on:
 - Anticipated miles for CNG coaches
 - Estimated miles per MCF of CNG coaches
 - Calculated Diesel Gallon Equivalent (DGE)
 - Estimated per DGE Contract Rate
- Monthly Costs = Rate x DGE Volume

Procurement Overview

- Non-competitive purchase with Trillium Transportation Fuels, LLC dba Trillium CNG
 - R.C. 306.43 H
 - Trillium is the original installer and Operations and Maintenance (O&M) provider for Triskett's CNG facility
 - Programmable Logic Control (PLC) is proprietary to Trillium

Procurement Overview

- Procurement requested a proposal December 18, 2024
- A proposal was received December 30, 2024
- A 0% DBE goal was assigned to this project
- Proposal was reviewed by representatives from Accounting, Operations and Procurement

Procurement Overview

- Firm's Experience
 - Leader in CNG station construction and fuel distribution in North America
 - Extensive work with public transit agencies
 - Operate & maintain over 200+ CNG fueling stations in 25+ states
 - Invest over \$40,000 in training for each mechanic

Procurement Overview

Firm's Experience

- Extensive and experienced O&M team across more than 80% of US
- Turnkey O&M program customized to GCRTA's needs with 24/7 availability
- No preventable service interruptions to date

Procurement Overview

Firm's Transit Experience

- GCRTA, Akron Metro, Massachusetts Bay Transportation Authority, Miami-Dade Transit, New York City Transit, PACE, and Los Angeles Department of Transportation, among others.

Procurement Overview

Historical Pricing (Dollars per DGE)

| Gallons per Month (DGE) | Original Contract | | | Proposed Contract | | |
|---|------------------------------------|----------------------------------|----------------------------------|--|-----------------------------------|-----------------------------------|
| | Year 1: Inception to 1/31/23 | *Year 2: 2/1/23 to 1/31/24 | *Year 3: 2/1/24 to 1/31/25 | **Year 1: 2/1/25 to 1/31/26 | **Year 2: 2/1/26 to 1/31/27 | **Year 3: 2/1/27 to 1/31/28 |
| Up to 70,000 | \$ 0.28400 | \$ 0.32484 | \$ 0.33509 | <i>**Proposed rates to match current contracted rates with an annual CPI adjustment.</i> | | |
| 70,001 to 95,000 | \$ 0.22800 | \$ 0.26079 | \$ 0.26901 | | | |
| 95,001 to 120,000 | \$ 0.19500 | \$ 0.22304 | \$ 0.23008 | | | |
| 120,001 and above | \$ 0.19000 | \$ 0.21733 | \$ 0.22418 | | | |
| <i>*Rates include a CPI adjustment from February 2021</i> | | | | | | |

Procurement Overview

Recommendation

- Staff requests that the Organizational, Services & Performance Monitoring Committee recommend an award to Trillium Transportation Fuels, LLC dba Trillium CNG to provide Triskett CNG operations and maintenance services in an amount not to exceed \$1,080,000.00 for the three-year term.

Questions

Greater Cleveland Regional Transit Authority

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