



Board Report

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REVISED
REGULAR BOARD MEETING
MAY 25, 2017

SUBJECT: BIOMETHANE PROVIDER

ACTION: AWARD BIOMETHANE SUPPLIER CONTRACT

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to:

A. AWARD five (5) year, Indefinite Delivery/Indefinite Quantity Contract No. OP7396000 for a **Biomethane Gas Provider to Clean Energy Renewables**, the lowest responsive and responsible bidder for a not-to-exceed amount of \$1,240,520 for the base year (for one bus division as a pilot) and a not-to-exceed amount of \$54,808,110 for a four (4) year option, for a total contract amount of \$56,048,630 (for all bus divisions if the pilot is successful), subject to resolution of protest(s), if any; and

B. EXECUTE individual Task Orders (Transaction Confirmations) and changes within the Board approved contract amount.

ISSUE

Metro became the largest compressed natural gas bus fleet in the nation after retiring its last diesel bus in 2011. However, the transit industry is already looking ahead to new technologies and cleaner fuel sources that offer improved efficiency and environmental benefits. Metro’s long-term plan to achieve California’s ambitious air quality and greenhouse gas (GHG) goals is to explore and procure for Zero Emission Buses (ZEBs). The recent ZEB procurement and testing continue to be used by our agency to gain first-hand experience through the rapidly growing space of electric vehicle and battery technology. While this occurs, our agency’s immediate term strategy includes the use of Low Nitrogen Nitrogen Oxides (NOx) “Near Zero” CNG engines and procuring for renewable natural gas (i.e., biomethane). Based on our modeling efforts, this short-term strategy yields significant regional air quality benefits and greenhouse gas emissions reductions in a timely and cost-effective manner.

DISCUSSION

Biomethane is natural gas derived from landfills, dairies, and wastewater treatment plants rather than being extracted or mined from the ground. Therefore, biomethane has a much lower carbon intensity

(CI) when compared to traditional forms of natural gas (i.e., “fossil natural gas”). The CI of a fuel is a measure of its GHG emissions over the lifecycle of that fuel’s production, including extraction, refinement, transportation, and consumption. Regardless of extraction or production, natural gas is already considered a lower carbon fuel than diesel or gasoline. Alternative sourcing, such as those associated with biomethane, reduce natural gas’ carbon intensity with improved greenhouse gas benefits.

In June 2013, the Board adopted the Biomethane Implementation Plan (Attachment C). This is staff’s comprehensive analysis of the technical, environmental, and financial merits of transitioning to a renewable source of natural gas for Metro’s bus fleet. In May 2014, the Board approved a staff recommendation to pursue Pathway 2 of the Biomethane Implementation Plan whereby Metro would contract with an energy provider as a means of achieving a transition to biomethane. In the same report, staff demonstrated that the use of biomethane in our CNG buses would not need any new fueling infrastructure or fleet retrofits.

As a fuel, biomethane will be delivered in the same quality and grade for immediate use by our fleet. Biomethane suppliers will deliver the fuel to Metro bus divisions using existing natural gas pipelines. Metro’s current natural gas provider, Southern California Gas Company (Gas Company) allows for Core Aggregation Transportation (CAT) services whereby Core Transport Agents (CTAs) provide procurement services to Gas Company Customers such as Metro. In this arrangement, CTAs are responsible for balancing natural gas delivery and quality meeting stringent California Public Utilities Commission (CPUC) guidelines. Many transit agencies are already using biomethane under this or similar models including Santa Monica’s Big Blue Bus (BBB), Orange County Transportation Authority (OCTA), San Diego Metropolitan Transportation System (MTS), and Torrance Transit.

Transitioning to biomethane provides enormous GHG emissions reduction benefits for Metro’s bus emissions and overall carbon footprint. Reducing greenhouse gas emissions is not only an important goal for Metro but a substantial component of California’s climate change policies. Pending ZEB rules from the California Air Resources Board (CARB) will mandate a shift in bus technology in coming years. The attached report (Attachment D) from Ramboll/Environ outlines different fleet technology options for Metro including high-level cost assessments and emissions impacts for electric buses, fuel cell buses, and Low NOx CNG with biomethane. Highlights of the report particularly relevant to this document include:

- Low NOx CNG engines fueled with biomethane reduces fleet emissions by two-thirds when compared to the current baseline over the next 40 years; and
- Compared with the Electric Buses scenarios, Low NOx CNG with biomethane achieves approximately 39% greater reductions in GHG emissions at half the cost.

In addition to improving the agency’s sustainability performance, a biomethane short-term strategy is an excellent example of exercising fiscal discipline in the area of energy supply. According to Metro’s

2016 Energy and Resource Report, the agency spends over \$22M each year on natural gas for its bus fleet. While this expense is susceptible to price volatility outside of the agency’s control, there are measures Metro can take in order to reduce risk and manage future costs. One such measure is to procure for a long-term supply contract for natural gas under The Gas Company’s CAT service. Under such a contract, Metro can secure a competitive rate tied to a natural gas index. Tying natural gas prices to the natural gas index provides rate transparency for Metro’s natural gas hedging initiatives.

Finally, Metro’s use of biomethane makes our agency eligible for accumulating additional carbon credits under state and federal programs. These credits can be sold in open credit markets. Revenues from these sales have already funded additional cost-saving and value creating projects under our sustainability capital program, providing additional value to our agency.

DETERMINATION OF SAFETY IMPACT

This Board action will not have an adverse impact on safety standards for Metro.

FINANCIAL IMPACT

If Contract no. OP84203485 is awarded, Metro will realize two distinct financial benefits summarized in the table below. It should be noted that these figures utilize current (March 2017) projections for natural gas pricing and consumption, environmental commodity pricing, and credit generation rates.

Case	Natural Gas Costs	Environmental Commodities
Business-As-Usual (BAU)	\$64,325,174	\$7,044,474
OP84203485	\$56,048,630 (1)	\$29,436,460 (2)
<i>Value Added</i>	\$8,276,544	\$22,391,985
	Total Value Added	\$30,668,529

Notes:

- (1) Cost savings for shifting to natural gas index vs. Gas Company average cost of gas pricing
- (2) Additional carbon credits available due to shift to less carbon intensive natural gas product

Natural Gas Cost Savings

Moving away from The Gas Company’s procurement services affords a number of financial benefits to Metro. In addition to securing a competitive rate, Metro requires under the new award that the price the agency pays for natural gas is tied to a natural gas index rather than The Gas Company’s average cost of gas. Further, this move provides for additional savings and transparency for Metro’s natural gas hedging program. In total, Metro is projected to realize over \$8M in reduced costs for natural gas over the term of the contract.

Optimized Environmental Commodities

Under CARB’s Low Carbon Fuel Standard (LCFS) program, Metro is currently generating credits through the dispensing of natural gas for bus fueling and use of electricity for light and heavy rail propulsion. Natural gas that comes from renewable sources have substantially lower CI value compared to fossil natural gas, and our use of biomethane provides us with the opportunity to get many more credits than those from fossil natural gas use. Our agency will get a competitive share of these credits for our part in the transaction as a transportation fuel end-user. Additional credits will also be generated under the federal Renewable Fuel Standard (RFS) program. In total, these credits have been valued at over \$29M over the term of the contract, if awarded.

These environmental commodities can be sold in respective credit markets. Our agency has been participating in the LCFS credit market since 2014, selling over 290,000 credits bringing in nearly \$28M in revenue used in value-creating and cost-saving projects. Part of our optimization plan for these credits is a key performance indicator (KPI) to monitor the success of the carbon credits program:

Key Performance Indicator	Metric	Current Performance	Goal
Portfolio-wide average	\$/credits sold	\$96.54	Above Market Average (\$81)

The FY17 adopted budget includes \$19,329,625 for the purchase of compressed natural gas under Project 306002 Bus Operations Maintenance, cost center 3365, and Account 50402 Fuel CNG - Revenue Equipment. Since this is a multi-year contract, the Project Manager and Cost Center Manager will be responsible for budgeting in future fiscal years. Upon approval of Recommendation A, future gas costs will be budgeted against this project. Anticipated natural gas cost savings of \$8,276,544 are based on the natural gas index pricing at the time of bid.

Impact to Budget

Metro will realize a reduction in annual natural gas costs over the duration of this Contract. Based on index projections, these savings will total over \$8M over the term of the Contract. Further, Metro will generate additional environmental commodities valued at over \$22M over the term of the contract. Together, the execution of Contract No. OP84203485 will add over \$30M in value for our agency.

This contract will be funded by project number 306002 - Bus Operations, which is funded by Operations eligible sources such as Prop C40%, Measure R 20%, TDA 4, STA and other local sources. No other funding sources were considered.

ALTERNATIVES CONSIDERED

If Contract No. OP84203485 is not awarded, Metro will continue to receive natural gas procurement services from The Gas Company. As a result, Metro will not have the opportunity to get a competitive rate for natural gas nor choose the source of its natural gas until The Gas Company offers their own biomethane service. We do not anticipate The Gas Company to offer a biomethane service any time soon. If not awarded, we will also not realize the short-term greenhouse gas gains we anticipate from a Low NOx and biomethane strategy. This is key to our continued clean air success during a possible transition towards a zero emissions fleet.

NEXT STEPS

After the recommended Board Action is approved, staff will execute the contract and commence biomethane delivery at one bus division. Staff will evaluate the performance of the contract over the next year and determine whether to exercise the four-year option.

ATTACHMENTS

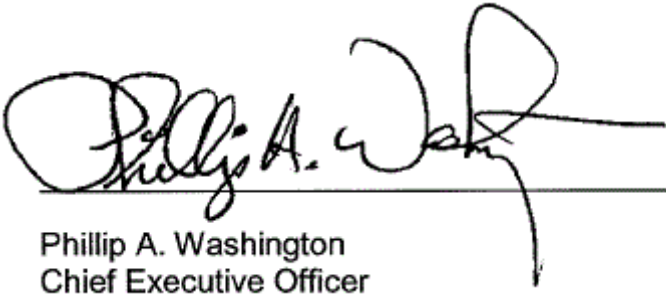
Attachment A - Procurement Summary
Attachment B - DEOD Summary
Attachment C - Biomethane Implementation Plan April 2013
Attachment D - Ramboll Environ Report September 29, 2016

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