



Memorandum

MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

Reviewed by LMM Date 11/14/08
General Manager

DATE: November 13, 2008
TO: General Manager
FROM: Information Systems Manager
SUBJECT: LFG Power Sales Contracts

RECOMMENDATION: That the Board authorize staff to prepare documents to amend a Power Sales Agreement (PSA) with PG&E, to sell power at the California Public Utilities Commission (CPUC) Market Price Referent (MPR) 2009 Delivery Price of \$0.0998 per kilowatt-hour, for a term of ten years, and place item on December 19, 2008 meeting agenda for adoption.

DISCUSSION

The District entered into a 30 year Power Sales Agreement with PG&E in 1983, for the sale of power from two 650 kW Waukesha engine generator units. As additional and replacement engines have been installed, the original agreement has undergone several revisions. When the price of natural gas spiked in 2000, PG&E was forced into bankruptcy and was not permitted to enter into any new agreements. This forced the District to find another buyer for the power from the 1 megawatt (MW) Jenbacher 320 unit installed in 2002. Beginning in December 2004, the District began selling power to 3Phase Inc., an Energy Service Provider. PG&E contract restrictions led to the District also selling the Caterpillar 3520 power to 3Phase in 2006. With the retirement of the old Unit 4 Jenbacher, the District is transferring the Unit 2 Jenbacher into the PG&E contact. The District's current two PSAs are summarized in the following table.

| Unit | Engine | Maximum Production | Power Purchaser | Price (1) | Contract Expiration |
|------|-------------------------|--------------------|--|--|---------------------|
| 1 | Caterpillar 3520 - 2006 | 1.6 MW | 3Phase | \$63/MW | 12/31/2008 |
| 2 | Jenbacher 320 - 2002 | 1.0 MW | PG&E (2) less power used by the District | Approximately \$79/MW for the first 1.3 MW then \$55/MW for power above 1.3 MW | 2/25/2014 |
| 3 | Jenbacher 320 - 1998 | 1.0 MW | | | |
| 4 | Jenbacher 420 - 2008 | 1.4 MW | None | Unit Being Installed 11/08 | |

Notes:

- 1) The price listed is an approximate summary of specific agreements price terms.
- 2) The power used by the District comes from engine units 2 and 3. PG&E receives approximately 1.5 MWs. During FY 2007/08, District operations consumed 2,470,000 kW-hr of electricity thereby avoiding \$325,000 in power purchases (at \$0.13/kW-hr).

The pending expiration of the agreement with 3Phase coincides with the installation of a new Unit 4 Jenbacher 420. Staff has been discussing the future sale of the 3 MWs of power from Units 1 and 4 with several potential buyers.

Options:

- 1) Continue selling power to 3Phase. Staff discussions thus far with 3Phase on price and terms make this option less attractive than options 2 or 3 below.
- 2) Sell the power from Units 1 and 4 to PG&E under the new CPUC Standard Offer Contract. To encourage more small renewable energy production, the CPUC has developed an agreement with very favorable terms. The CPUC is requiring the state's three major utilities to commit a certain amount of power to be purchased under this agreement.

PG&E's share for landfill gas power is 104.6 MW. These agreements are limited to small 1.5 MW engines running on renewable fuels such as digester biogas or landfill gas. Our 1.6 MW engine will qualify by way of meter or engine restrictions. The pricing model for these agreements is called the Market Price Referent (MPR). The CPUC hired a consultant to develop this pricing model for the market value of renewable power. This analysis is updated annually and a draft of the latest update has just been released. The Draft 2008 MPR is attached. Although a draft, District and PG&E staffs feel the figures are not likely to change. Selling the power for 10 years with delivery beginning as early as January 2009 would pay the District \$99.80/MW for Units 1 and 4. Units 2 and 3 would be sold under a new contract when their existing contract expires in 2014.

- 3) Sell the power from all four engines to PG&E for a term of 10 years. District staff has begun discussions with PG&E staff on a 10-year agreement of \$99.80/MW for all four engines. PG&E would retire our existing agreement and replace it with a new agreement similar to the CPUC agreement. Because this would exceed the 1.5 MW production restrictions, CPUC approval would be required. PG&E staff is confident that approval can be obtained. Administratively, selling all the power to PG&E in one agreement is much better for PG&E. That benefit, along with securing the entire 5 MW plant through 2018 is why PG&E is favoring this option. This option would increase the District's annual power sales revenue from \$2.2 million to \$3.2 million, an increase of 45%. Discussions will continue, with District Board concurrence.
- 4) Sell the power to another energy service provider similar to 3Phase or directly to an end user. After looking at several options in coordination with a consultant, staff has not found a situation that is as economically, operationally, and administrative attractive as selling to PG&E.
- 5) Sell power to Monterey Regional Water Pollution Control Agency (MRWPCA) in a partnership with them on the upgrade of their power plant facility. District staff believes this option has a lot of potential for both agencies to combine resources for mutual benefit. However, this is a future project separate from the existing power plant and the District's existing 5 MWs of power production.

Sell the Power to a Regional Water Project (Desalinization Plant)

In order to support a regional water project with electricity and take advantage of the excellent price being offered by PG&E for our existing power, staff is studying the option of building a separate power plant with four new engine generators. This option also addresses the District's need for a new power plant to process the continuously increasing volume of landfill gas being generated. Because the District's landfill will not initially produce enough landfill gas to run all four engines, the engines would run on a mix of 20% landfill gas and 80% natural gas. The natural gas would be purchased from the major gas transmission line that crosses the District's property. While not initially a 100% "green power" project, the General Manager of the Marina Coast Water District (MCWD) is supportive of the concept. As the volume of landfill gas generated increases with increased tonnages of waste being landfilled, the amount of natural gas purchased will decrease.

District staff is working out the details of this concept and thus far have not reached a road block. Staff at the local Air District is supportive because the engines will be using some landfill gas and will ultimately run on all landfill gas. With no major obstacles at this point, the final issue will be price, and staff is developing a pro forma on the cost to produce and supply this electricity. Even with the cost of purchasing natural gas, the price for this electricity could be cheaper than PG&E electricity for the water project, because the project would not need to pay PG&E's standby charges. Standby charges are for PG&E to have the maximum amount of power needed available at all times and they can be significant. The project's consulting engineers, RMC, has already stated that paying PG&E standby charges may make the project unfeasible.

CONCLUSION

Within a month District staff anticipates completing its initial analysis of selling power to the water project from a new power plant and concluding its discussions with PG&E on the options for our existing power. Staff feels the best alternative is option 3 with continuing development of the possible installation of a new large power plant to support the Regional Water Project.



Don Prescott

Attachment

Draft

To be finalized at CPUC Dec 4 meeting

| Adopted 2008 Market Price Referents (Nominal - dollars/kWh) | | | | |
|---|----------------|----------------|----------------|----------------|
| Resource Type | 10-Year | 15-Year | 20-Year | 25-Year |
| 2009 Baseload MPR | 0.09980 | 0.10509 | 0.11119 | 0.11624 |
| 2010 Baseload MPR | 0.10103 | 0.10716 | 0.11380 | 0.11905 |
| 2011 Baseload MPR | 0.10318 | 0.11008 | 0.11716 | 0.12253 |
| 2012 Baseload MPR | 0.10607 | 0.11362 | 0.12107 | 0.12652 |
| 2013 Baseload MPR | 0.10949 | 0.11767 | 0.12539 | 0.13088 |
| 2014 Baseload MPR | 0.11287 | 0.12159 | 0.12950 | 0.13502 |
| 2015 Baseload MPR | 0.11663 | 0.12580 | 0.13378 | 0.13934 |
| 2016 Baseload MPR | 0.12061 | 0.13018 | 0.13817 | 0.14377 |
| 2017 Baseload MPR | 0.12463 | 0.13460 | 0.14259 | 0.14819 |
| 2018 Baseload MPR | 0.12904 | 0.13927 | 0.14723 | 0.15276 |
| 2019 Baseload MPR | 0.13381 | 0.14417 | 0.15207 | 0.15744 |
| 2020 Baseload MPR | 0.13894 | 0.14923 | 0.15710 | 0.16223 |

\$.09980/kWh = \$99.80/MW