



REPORT TO THE CITY COUNCIL

AGENDA ITEM NO.	1A
COUNCIL MEETING	03-31-11
APPROVED BY	
DEPARTMENT DIRECTOR	<i>[Signature]</i>
CITY MANAGER	<i>[Signature]</i>

DATE: March 31, 2011

FROM: KENNETH HAMM
Director of Transportation

SUBJECT: AUTHORIZE THE DIRECTOR OF TRANSPORTATION TO ENTER INTO AN AGREEMENT TO RECEIVE \$140,000 IN GRANT FUNDING FROM THE SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT TECHNOLOGY ADVANCEMENT PROGRAM

RECOMMENDATION

Staff recommends that the City Council authorize the Director of Transportation to enter into an agreement to receive \$140,000 in grant funding from the San Joaquin Valley Air Pollution Control District Technology Advancement Program for the hybrid retrofit for two LNG powered refuse trucks.

EXECUTIVE SUMMARY

The Department of Transportation plans to perform a pilot demonstration of two hydraulic assist hybrid systems retrofitted onto two current side loading LNG powered refuse trucks. The trucks are used by Solid Waste Management Division in the City of Fresno Public Utilities Department. They will demonstrate whether the use of this hybrid technology is feasible and cost-effective for residential refuse collection in the San Joaquin Valley. The Air District will fund 100% of the total cost for the two retrofits at the sum of \$140,000.00. The San Joaquin Valley Air Pollution Control District Technology has provided a draft agreement awaiting approval from the City of Fresno. Once authorization by the City Council is complete, the "Air Board" will proceed with the formal agreement.

BACKGROUND

The continuous improvement of hybrid vehicle technology is now entering the pilot production stage in the medium and heavy duty truck market. The goal to continue to reduce green house gas emissions, improve fuel efficiency, and reduce maintenance costs is being pioneered by a number of vehicle manufacturers. Our current supplier of automated side loading refuse trucks, American La France, has partnered with Rexroth Bosch Group to provide a hydraulic "assist" hybrid feature. The hybrid addition will capture energy in the form of stored pressurized hydraulic fluid as the truck is slowing or braking. When the truck accelerates or moves from a stop, the stored energy will be released to assist the LNG powered engine. The "assist" is expected to result in less fuel usage, less engine wear, less exhaust emissions, increased brake life, and a quieter operation. Reduced fuel costs of up to 20% are estimated.

The Air District is interested in accruing fuel consumption and emission savings data for this type technology in the refuse truck market. The City of Fresno Fleet Management Division has proposed to the Air District that Fleet install systems on two refuse trucks and collect data to determine the effectiveness of them. The City of Fresno has a commitment of support and quotation for the retrofits from the local dealer, vehicle manufacturer, and retrofit company (Fresno Truck Center, American La France, and the Rexroth Bosch group). The Air District has committed 100% of funding the total cost for the two retrofits in the amount of \$140,000.00.

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AUTHORIZE THE RECEIPT OF GRANT FUNDS FROM THE SJVAPCD
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FISCAL IMPACT OF RECOMMENDATIONS

No Fiscal Impact. Funding has been budgeted under the Fleet Management Division's special projects account #58004. Upon completion of the retrofits, the Air District will reimburse the City for the cost of the systems.

Attachments: Exhibit A - San Joaquin Valley Unified Air Pollution Control District Agreement #C-4325

w:\dir\kh858-2 Hydraulic Hybrid Systems Retrofits-CC Mtg Mar 31, 2011-03-17-11.docx

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
AGREEMENT

This Agreement is made and entered into this _____ day of _____, 2011, by and between the SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, a unified air pollution control district formed pursuant to California Health and Safety Code section 40150 et seq. (District), and **City of Fresno** (Contractor).

WITNESSETH:

WHEREAS, despite major reductions in emissions and corresponding improvements in air quality, San Joaquin Valley continues to face difficult challenges in meeting the federal ambient air quality standards; and

WHEREAS, on March 18, 2010 the District's Governing Board adopted the Technology Advancement Program; and

WHEREAS, on June 30, 2010 the District issued Request for Proposal TAP10-01 seeking proposals for projects demonstrating new and innovative emission reduction technologies that have the potential for broad applicability in the San Joaquin Valley, and will assist the District in meeting its air quality goals; and

WHEREAS, the United States Environmental Protection Agency (EPA) has awarded the District a West Coast Collaborative Innovations in Clean Diesel grant with agreement number XA-98997801-0 to fund demonstrations for new diesel emission reduction technologies; and

WHEREAS, EPA has amended the District's West Coast Collaborative Innovations in Clean Diesel grant with agreement number XA-98997801-1; and

WHEREAS, EPA has amended the District's West Coast Collaborative Innovations in Clean Diesel grant with agreement number XA-98997801-2; and

WHEREAS, Contractor has proposed a project that meets the eligibility criteria of District that has been approved by District for funding; and

1 **WHEREAS**, Contractor represents that it is willing and able to perform
2 the activities set forth herein.

3 **NOW, THEREFORE**, based on their mutual promises, covenants, and
4 conditions, the parties hereby agree as follows:

5 **1. PROJECT**

6 Through this cooperative agreement the San Joaquin Valley Unified Air
7 Pollution Control District will fund the demonstration of two (2) hydraulic hybrid systems
8 retrofitted on side loading LNG powered refuse. This project hopes to demonstrate that
9 use of this technology is feasible and cost-effective for residential refuse collection in
10 the San Joaquin Valley.

11 Contractor shall install hydraulic hybrid systems as set forth in the
12 Statement of Work attached hereto and incorporated herein as Exhibit A, the project
13 proposal submitted as a response to the Technology Advancement Program request
14 for proposals number TAP10-01 attached hereto and incorporated herein as Exhibit
15 B, and the District's EPA Award Agreement XA-98997801-0 and amendments XA-
16 98997801-1, and XA-98997801-2, which are attached hereto and incorporated herein
17 as Exhibit C. Contractor agrees to furnish all labor, materials, equipment, licenses,
18 permits, fees, and other incidentals necessary to perform and complete, per schedule,
19 in a professional manner, the services described herein. Contractor represents that
20 Contractor has the expertise necessary to adequately perform the project specified in
21 Exhibit A, Exhibit B, and Exhibit C.

22 In the event of any conflict between or among the terms and conditions
23 of this Agreement, the exhibits incorporated herein, and the documents referred to
24 and incorporated herein, such conflict shall be resolved by giving precedence in the
25 following order of priority:

- 26 1. To the text of this Agreement
27 2. Exhibit A to this Agreement
28 3. Exhibit B to this Agreement

1 4. Exhibit C to this Agreement

2 **2. FLOW-DOWN PROVISIONS**

3 Contractor shall comply with the requirements of all lower-tier
4 subcontracts entered into under EPA funding agreements, as stated in District's
5 agreement with EPA and amendments, including but not limited to Administrative
6 Conditions identified in Exhibit C.

7 **3. PERIOD OF PERFORMANCE/TIMETABLE**

8 Contractor shall commence performance of work and produce all work
9 products in accordance with the work schedule and deadlines for performance
10 identified in Exhibit A to this Agreement, unless this Agreement is terminated sooner
11 as provided for elsewhere in this Agreement.

12 If requested by District, Contractor shall submit regular progress reports,
13 at intervals determined by District, detailing the work performed during the current
14 reporting period; work planned for the next reporting period; problems identified,
15 solved, and/or unresolved; and the percentage of each task completed.

16 **4. COMPENSATION**

17 The total obligation of District under this Agreement shall not exceed
18 **one hundred forty thousand dollars (\$140,000.00).**

19 Contractor shall obtain through other sources sufficient additional
20 monies to fund the total cost of the project as outlined in Exhibit B. Satisfactory
21 written evidence of such funding commitments shall be provided to District prior to the
22 release by District of any funds under this Agreement. In the event funding from other
23 sources for the total cost of the project as outlined in Exhibit B is not received by
24 Contractor, District reserves the right to terminate or re-negotiate this Agreement. In
25 that event, if requested by District, Contractor shall return any District funds disbursed.

26 **A. Payments:** Advance payments shall not be permitted.
27 Payments will be permitted only at which time equivalent services have been
28 satisfactorily rendered. District shall reimburse Contractor after receipt and

1 verification of a properly supported financial claim and inspection by District staff.
2 Claims and all supporting documentation shall be submitted to San Joaquin Valley
3 Unified Air Pollution Control District, Emission Reduction Incentive Program.

4 Payment shall be made to Contractor by District upon submission and
5 evaluation of Contractor's invoice or claim that shall set forth the work completed
6 pursuant to this Agreement, and as set forth in the section of Exhibit A entitled
7 Payment Schedule.

8 District will issue payment to Contractor within sixty (60) calendar days
9 of receipt of proper documentation and verification that Contractor has satisfactorily
10 completed the work for which compensation is sought.

11 The amount to be paid to Contractor under this Agreement includes all
12 sales and use taxes incurred pursuant to this Agreement, if any, including any such
13 taxes due on equipment purchased by Contractor. Contractor shall not receive
14 additional compensation for reimbursement of such taxes and shall not decrease work
15 to compensate therefore.

16 Concurrently with the submission of any claim for payment, Contractor
17 shall certify (through copies of invoices issued, checks, receipts, and the like) that
18 complete payment has been made to any and all subcontractors as provided.

19 **B. Surplus Funds:** Any compensation, which is not expended by
20 Contractor pursuant to the terms and conditions of this Agreement by the project
21 completion date, shall automatically revert to District. Only expenditures incurred by
22 Contractor in the direct performance of this Agreement will be reimbursed by District.
23 Allowable expenditures under this Agreement are specifically established and
24 included in Exhibit A attached hereto and incorporated herein

25 **C. Closeout Period:** Contractor shall submit all final claims within
26 sixty (60) days following the final month of activities for which payment is claimed. No
27 action will be taken by District on claims submitted beyond the 60-day closeout period.

28 **5. NON-ALLOCATION OF FUNDS**

1 The terms of this Agreement and the services to be provided thereunder
2 are contingent on the approval and receipt of funds by the appropriating government
3 agency. Should sufficient funds not be allocated, the services provided may be
4 modified or this Agreement terminated at any time by giving Contractor thirty (30)
5 days' prior written notice.

6 **6. INDEPENDENT CONTRACTOR**

7 In performance of the work, duties, and obligations assumed by
8 Contractor under this Agreement, it is mutually understood and agreed that
9 Contractor, including any and all of Contractor's officers, agents, and employees, will
10 at all times be acting and performing as an independent contractor and shall act in an
11 independent capacity and not as an officer, agent, servant, employee, joint venture,
12 partner, or associate of District. Furthermore, District shall have no right to control or
13 supervise or direct the manner or method by which Contractor shall perform its work
14 and function. However, District shall retain the right to administer this Agreement so
15 as to verify that Contractor is performing its obligations in accordance with the terms
16 and conditions thereof. Contractor and District shall comply with all applicable
17 provisions of law and the rules and regulations, if any, of governmental authorities
18 having jurisdiction over matters the subject thereof.

19 Because of its status as an independent contractor, Contractor shall
20 have absolutely no right to employment rights and benefits available to District
21 employees. Contractor shall be solely liable and responsible for providing to, or on
22 behalf of, itself all legally required employee benefits. In addition, Contractor shall be
23 solely responsible and save District harmless from all matters relating to payment of
24 Contractor's employees, including compliance with social security, withholding, and all
25 other regulations governing such matters. It is acknowledged that during the term of
26 this Agreement, Contractor may be providing services to others unrelated to District or
27 to this Agreement.

28 **7. TERMINATION**

1 **A. Breach of Agreement:** District may immediately suspend or
2 terminate this Agreement, in whole or in part, where in the determination of District
3 there is:

- 4 1. An illegal or improper use of funds;
- 5 2. A failure to comply with any term of this Agreement;
- 6 3. A substantially incorrect or incomplete report submitted to District; or
- 7 4. Improperly performed services.

8 In no event shall any payment by District constitute a waiver by District
9 of any breach of this Agreement or any default, which may then exist on the part of
10 Contractor. Neither shall such payment impair or prejudice any remedy available to
11 District with respect to the breach or default. District shall have the right to demand of
12 Contractor the repayment to District of any funds disbursed to Contractor under this
13 Agreement which in the judgment of District were not expended in accordance with
14 the terms of this Agreement. Contractor shall promptly refund any such funds upon
15 demand.

16 In addition to immediate suspension or termination, District may impose
17 any other remedies available at law, in equity, or otherwise specified in this
18 Agreement.

19 **B. Without Cause:** Either party may terminate this Agreement at
20 any time upon giving the other party at least thirty (30) days' advance written notice of
21 intention to terminate. In such case, Contractor shall, subject to paragraph 3, be paid
22 the reasonable value of all services satisfactorily rendered and actual, reasonable
23 costs incurred up to the time of the termination. Upon such termination, all the work
24 produced by Contractor shall be promptly delivered to District.

25 **8. USE OF FUNDS RESTRICTION**

26 Contractor agrees that funds under this award cannot be used for
27 emissions reductions that are mandated under Federal, State or local law. This refers to
28 specific compliance dates within the mandate, not when the mandate is passed.

1 Voluntary or elective emissions reductions measures shall not be considered to be
2 "mandated", regardless of whether the reductions are included in the State
3 implementation plan of a State.

4 **9. AUDITS AND INSPECTIONS**

5 Contractor shall at any time during regular business hours, and as often
6 as District may deem necessary, make available to District for examination all of its
7 records and data with respect to the matters covered in this Agreement. Contractor
8 shall, upon request by District, permit District to audit and inspect all such records and
9 data necessary to ensure Contractor's compliance with the terms of this Agreement.

10 Contractor shall be subject to an audit by District or its authorized
11 representative to determine if the revenues received by Contractor were spent for the
12 reduction of pollution and to determine whether said funds were utilized as provided
13 by law and this Agreement. If, after audit District makes a determination that funds
14 provided Contractor pursuant to this Agreement were not spent in conformance with
15 this Agreement or any other applicable provisions of law, Contractor agrees to
16 immediately reimburse District all funds determined to have been expended not in
17 conformance with said provisions.

18 Contractor shall retain all records and data for activities performed under
19 this Agreement for at least two (2) years from the date of final payment under this
20 Agreement or until all state and federal audits are completed for that fiscal year,
21 whichever is later.

22 Contractor shall be subject to the examination and audit of the auditor
23 general for a period of two (2) years after final payment under contract (Government
24 Code § 8546.7).

25 **10. FALSE CLAIM**

26 Contractor is advised that providing false, fictitious or misleading
27 information with respect to the receipt and disbursement of EPA grant funds may
28 result in criminal, civil or administrative fines and/or penalties. Contractor, and its sub-

1 grantees must promptly refer to EPA's inspector General any credible evidence that a
2 principal, employee, agent, sub-grantee contractor, subcontractor, loan recipient, or
3 other person has submitted a false claim under the False Claims Act or has
4 committed a criminal or civil violation of laws pertaining to fraud, conflict of interest,
5 bribery, gratuity, or similar misconduct involving funds provided under this grant or
6 sub-grants awarded by the District.

7 **11. CONFLICT OF INTEREST**

8 No officer, employee, or agent of District who exercises any function or
9 responsibility for planning and carrying out the services provided under this
10 Agreement shall have any direct or indirect personal financial interest in this
11 Agreement. Contractor shall comply with all federal and state conflict of interest laws,
12 statutes, and regulations, which shall be applicable to all parties and beneficiaries
13 under this Agreement and any officer, agent, or employee of District.

14 **12. GOVERNING LAW**

15 This Agreement shall be governed in all respects by the laws of the
16 State of California. Venue for any action arising out of this Agreement shall only be in
17 Fresno County, California.

18 **13. COMPLIANCE WITH LAWS**

19 Contractor shall comply will all federal and state laws, statutes,
20 regulations, rules, and guidelines which apply to its performance under this
21 Agreement, including California driving eligibility and financial liability laws.

22 **14. MODIFICATION**

23 Any matters of this Agreement may be modified from time to time by the
24 written consent of all the parties without in any way affecting the remainder.

25 **15. NON-ASSIGNMENT**

26 Neither party shall assign, transfer, or subcontract this Agreement, nor
27 their rights or duties under this Agreement, without the prior express, written consent
28 of the other party.

1 **16. INDEMNIFICATION**

2 Contractor agrees to indemnify, save, hold harmless, and at District's
3 request, defend District, its boards, committees, representatives, officers, agents, and
4 employees from and against any and all costs and expenses (including reasonable
5 attorneys' fees and litigation costs), damages, liabilities, claims, and losses (whether
6 in contract, tort, or strict liability, including, but not limited to, personal injury, death,
7 and property damage) occurring or resulting to District which arises from any negligent
8 or wrongful acts or omissions of Contractor, its officers, agents, subcontractors, or
9 employees in their performance of this Agreement.

10 **17. INSURANCE**

11 **A.** Without limiting District's right to obtain indemnification from
12 Contractor or any third parties, Contractor, at its sole expense, shall maintain in full
13 force and effect the following insurance policies throughout the term of this
14 Agreement:

15 **1)** Commercial general liability insurance with
16 minimum limits of coverage in the amount of One Million Dollars (\$1,000,000) per
17 occurrence;

18 **2)** Commercial automobile liability insurance which
19 covers bodily injury and property damage with a combined single limit with minimum
20 limits of coverage in the amount of One Million Dollars (\$1,000,000) per occurrence.

21 **3)** Workers' compensation insurance in accordance
22 with California law.

23 **B.** This insurance shall not be canceled or changed without a
24 minimum of thirty (30) days' advance, written notice given to District.

25 **C.** Prior to the commencement of performing its obligations under
26 this Agreement, Contractor shall provide certifications of insurance on the foregoing
27 policy, as required herein, to District, stating that such insurance coverages have
28 been obtained and are in full force; that District, its officers, agents, and employees

1 will not be responsible for any premiums on the policy. This insurance shall not be
2 canceled or changed without a minimum of thirty (30) days' advance, written notice
3 given to District.

4 **D.** In the event Contractor fails to keep in effect at all times
5 insurance coverage as herein provide, District may, in addition to other remedies it
6 may have, suspend or terminate this Agreement upon the occurrence of such event.

7 **E.** If Contractor is a government entity, then it may self-insure such
8 of those risks identified in paragraph 10.A.1 of this Agreement, provided, however,
9 that:

10 **1)** Such self-insurance plans shall be reasonably
11 satisfactory to District; and

12 **2)** All those provisions identified in subparagraph 10.C
13 of this Agreement concerning the relationship of Contractor's primary and District's
14 excess insurance to each other, the requirement of Contractor delivering a certificate
15 of insurance or other suitable evidence to District, and the cancellation/change of
16 insurance requirements shall apply to such self-insurance plans.

17 **18. NOTICES**

18 The persons and their addresses having authority to give and receive
19 notices under this Agreement are as follows:

20 **CONTRACTOR**

21 **Jim Schaad**
22 **Fleet Manager**
23 **City of Fresno**
2101 G Street, Building F
Fresno, CA 93706

DISTRICT

Seyed Sadredin
Executive Director/APCO
San Joaquin Valley Unified APCD
1990 East Gettysburg Avenue
Fresno, CA 93726

24 Any and all notices between District and Contractor provided for or
25 permitted under this Agreement or by law shall be in writing and shall be deemed duly
26 served when personally delivered to one of the parties, or in lieu of such personal
27 service, when deposited in the United States mail, postage prepared, addressed to
28 such party.

1 **19. BINDING ON SUCCESSORS**

2 This Agreement, including all covenants and conditions contained
3 herein, shall be binding upon and inure to the benefit of the parties, including their
4 respective successors-in-interest, assigns, and legal representatives.

5 **20. TIME IS OF THE ESSENCE**

6 It is understood that for Contractor's performance under this Agreement,
7 time is of the essence. The parties reasonably anticipate that Contractor will, to the
8 reasonable satisfaction of District, complete all activities provided herein within the
9 time schedule outlined in Exhibit A to this Agreement, provided that Contractor is not
10 caused unreasonable delay in such performance.

11 **21. NO THIRD-PARTY BENEFICIARIES**

12 Notwithstanding anything else stated to the contrary herein, it is
13 understood that Contractor's services and activities under this Agreement are being
14 rendered only for the benefit of District, and no other person, firm, corporation, or
15 entity shall be deemed an intended third-party beneficiary of this Agreement.

16 **22. SEVERABILITY**

17 In the event that any one or more of the provisions contained in this
18 Agreement shall for any reason be held to be unenforceable in any respect by a court
19 of competent jurisdiction, such holding shall not affect any other provisions of this
20 Agreement, and the Agreement shall then be construed as if such unenforceable
21 provisions are not a part hereof.

22 **23. ENTIRE AGREEMENT**

23 This Agreement constitutes the entire agreement between Contractor
24 and District with respect to the subject matter hereof and supersedes all previous
25 negotiations, proposals, commitments, writings, advertisements, publications, and
26 understandings of any nature whatsoever unless expressly included in this
27 Agreement.

28 ///

1 **IN WITNESS WHEREOF**, the parties hereto have caused this Vendor Agreement to be
2 executed as of the day and year first hereinabove written.

3 **Contractor**
4 **City of Fresno**

DISTRICT
San Joaquin Valley Unified Air
Pollution Control District

5 _____
6 Jim Schaad
7 Fleet Manager

J. Steven Worthley
Governing Board Chair

8 ***Recommended for approval:***
9 San Joaquin Valley Unified Air Pollution
10 Control District

11 _____
12 Seyed Sadredin
13 Executive Director/APCO

14 ***Approved as to legal form:***
15 San Joaquin Valley Unified Air Pollution
16 Control District

17 _____
18 Philip M. Jay
19 District Counsel

20 ***Approved as to accounting form:***
21 San Joaquin Valley Unified Air Pollution
22 Control District

23 _____
24 Cindi Hamm
25 Director of Administrative Services

26 ***For accounting use only:***

27 Program: _____

28 Accounting No.: _____

**EXHIBIT A
STATEMENT OF WORK FOR
PROJECT C-4235**

As part of the 2007 Ozone Plan adopted by the San Joaquin Valley Air Pollution Control District (District) the District committed to a "black box" strategy to develop and demonstrate long-term measures for reduction of NO_x in the valley. One potential for reduction of NO_x is replacing a vehicle's standard drive train with a hybrid drive train to reduce the load on the engine and reduce emissions.

In this project Contractor will work with its partners, including Fresno Truck Center, American LaFrance, Bosch-Rexroth, and Cummins West to develop and demonstrate a hybrid hydraulic drive train for use in the San Joaquin Valley. Contractor will complete the design, fabrication, test, retrofit, and real world use of two Rexroth Parallel Hydraulic Hybrid systems on two LNG powered side loading refuse trucks. The refuse trucks will be placed into real world service the City of Fresno for a period of approximately two years starting in «MONTH» 2011.

The Contractor shall perform the following tasks:

Task 1 – Order Systems

- 1.1 Contractor will order systems necessary to complete installation of hydraulic hybrid systems to two (2) refuse trucks.

Task 2 – Install Hybrid Systems

- 2.1 Contractor with its project partners will complete installation of hydraulic hybrid systems in two (2) refuse trucks.

Task 3 – Installation of Telemetry for data collection

- 2.2 Contractor with its project partners will complete installation of telemetry systems for data collection purposes in two (2) refuse trucks.

Task 4 – Place Refuse Trucks in Service

- 4.1 Contractor shall complete testing and debugging of hydraulic hybrid systems, and place the two (2) retrofitted refuse trucks into service.

Task 5 – Data Collection

- 5.1 Contractor shall collect data on vehicle use, duty cycle, and engine use for the purposes of quantifying fuel benefits, and estimation of emission reductions.

Task 6 – Chassis Dynamometer Testing

- 6.1 If possible, Contractor with its project partners, including District, shall develop a plan to provide dynamometer testing of the system to determine quantitative NO_x emission reductions.

Task 7 – Final report

- 7.1 Contractor shall prepare a draft final report documenting results and conclusions of the project and submit to the District and host facility for review and comment.
- 7.2 Contractor shall create the final report after receipt of comments.

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Deliverables

In addition to any deliverables set forth in the above-referenced statement of work, Contractor shall supply the following reports to the District under this Contract. Each submitted report shall be stapled, not bound, printed in black ink, double-sided type, on an 8-1/2 by 11 inch page. Additionally each report will be submitted as an electronic copy in a standard document format such as Portable Document Format (PDF).

1. Quarterly progress or status reports due by the 10th day of each month following the reporting period. Each progress report shall include, but not be limited to, the following:

- a. Reference to District contract number and title of project.
- b. Reporting time period (months, year).
- c. Brief, overall project description.
- d. Description of work completed during the reporting period, including a discussion of problems encountered and how those problems were resolved; and other relevant activities.
- e. Discussion of work planned for the next reporting period.
- f. Discussion of project status with respect to time schedule and steps being taken to resolve any delays.
- g. Cost-to-date status with respect to budget and tasks completed to date, and description of any major overruns.

2. A draft final report for review, comment, and approval shall be submitted not later than **«DATE»**. This document shall be considered in the public domain, in conformance with the California Public Records Act (Government Code Section 6250 et seq.). Any trade secret information may be submitted to District in a separate report in which the trade secret information is specifically identified. District agrees to treat such trade secret information in accordance with its Rule 1030 relating to confidential information. District shall complete its review of the draft final report within four weeks of its receipt from Contractor. The draft final report shall include, but not be limited to, the following:

- a. Reference to District contract number and title of project.
- b. Project background and objectives.
- c. An executive summary up to three pages in length to include a short, definitive statement of the problem/project; objective of the project, including emission control objectives or goals and reference to District Rules, if applicable; subject of the project including the technology demonstration site, participants, dates, etc.; conclusions (potential emissions impact, cost implications, and other factors); recommendations (design changes/optimization, other applications of the technology, and commercialization paths); and acknowledgment of all project sponsors.
- d. A detailed description of the scope of work.
- e. Findings or results of each task.
- f. Summary of all emission testing and analyses.
- g. Costs – Summary displaying actual cost versus budgeted costs by task.

h. Problems – a discussion of significant problems encountered during the contract and how they were resolved.

3. Contractor shall submit the final report, incorporating comments, to District no later than «DATE». This document shall be considered in the public domain, in conformance with the California Public Records Act (Government Code Section 6250 et seq.). Any trade secret information may be submitted to District in a separate report in which the trade secret information is specifically identified. District agrees to treat trade secret information in accordance with its Rule 1030 relating to confidential information.

4. Contractor shall submit a two-page project synopsis, along with the final report. In addition to a hard copy of this synopsis, contractor shall provide the synopsis in an electronic version, using Microsoft WORD 2003 or a compatible version.

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Time Schedule

Task No.	Description of Task	Estimated Completion Date
1	Order Systems	«DATE»
2	Install Hybrid systems	«DATE»
3	Installation of telemetry for data collection	«DATE»
4	Place Refuse Trucks in Service	«DATE»
	Quarterly Report #1	«DATE»
	Quarterly Report #2	«DATE»
	Quarterly Report #3	«DATE»
	Quarterly Report #4	«DATE»
	Quarterly Report #5	«DATE»
	Quarterly Report #6	«DATE»
	Quarterly Report #7	«DATE»
	Quarterly Report #8	«DATE»
6	Chassis Dynamometer Testing	«DATE»
7	Final report	«DATE»

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Payment Schedule

The total project budget is \$140,000. The City of Fresno is committing any additional funding and in-kind contributions necessary to complete the balance of the project excluding dynamometer testing as cost-share. The dynamometer testing portion of the project shall be completed if funding for testing can be obtained. The District will support this demonstration Hydraulic Hybrid technology in an amount not to exceed \$140,000.

Description of Task	Amount	Estimated Date
Task 4— Place Refuse Trucks in Service	\$140,000	«DATE»

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