



County of Santa Cruz

0087

GENERAL SERVICES DEPARTMENT

701 OCEAN STREET, SUITE 330, SANTA CRUZ, CA 950604073

(831) 454-2210 FAX: (831) 454-2710 TDD: (831) 454-2123

ROY HOLMBERG, DIRECTOR

October 4, 1999

AGENDA: October 19, 1999

Board of Supervisors
County of Santa Cruz
701 Ocean Street
Santa Cruz, California 95060

Re: CONTRACT FOR ENGINEERING ANALYSIS (MODIFICATION OF CO-GENERATION SYSTEM) Q 170 12

Members of the Board:

Since 1987, the Water Street Jail has utilized a cogeneration system to provide electricity and to produce usable hot water (thermal energy) for the facility. Although the system remains a valuable asset for the County, efficiency measures and operational changes over the years have resulted in lower electricity demands and excess thermal energy being available. Facilities staff indicate that system modifications are available to both increase the overall efficiency and to utilize the available thermal energy for other facility purposes, including potential air conditioning loads.

General Services Facility staff is confident that the Water & Energy Management Co. Inc. can complete the analysis to the County's satisfaction based on their familiarity with the co-generation hardware presently in use by the Water Street Main Jail.

We are requesting that the Board authorize General Services Department to execute the award of an engineering consultant contract with Water & Energy Management Co. Inc., of Danville, for a not-to-exceed amount of \$19,000.00. The project was approved in the final 1999/2000 Plant Budget under- Engineering Study Chiller/Cogen-Water Street Main Jail. Sufficient funds are available in Index 191120/ Q 17012, Sub Object 6610.

Contract for Engineering Analysis (Modification of Co-generation System) Q 170 12
October 19,1999
page 2 of 2

It is therefore RECOMMENDED that your Board:

1. Approve the attached Independent Contractor Agreement With Water & Energy Management Co. Inc. to produce the engineering analysis needed to optimize modifications of the co-generation system for a not-to-exceed amount of \$19,000; and
2. Authorize the General Services Director to execute the agreement.

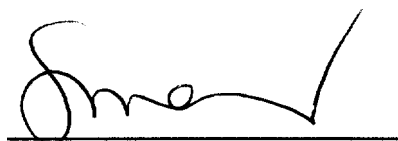
Sincerely,



for
ROY K. HOLMBERG
Director

RH:Bd.

RECOMMENDED:



Susan Mauriello
County Administrative Officer

Attachment: ADM29 with agreement

cc: County Administrative Office
County Counsel
Auditor Controller
General Services Department
Water & Management Co. Inc.

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Contract No. _____

INDEPENDENT CONTRACTOR AGREEMENT

THIS CONTRACT is entered into this o day of _____ 1999, by and between the COUNTY OF SANTA CRUZ, hereinafter called COUNTY, and WATER & ENERGY MANAGEMENT CO., hereinafter called CONTRACTOR. The parties agree as follows:

1. DUTIES. CONTRACTOR agrees to exercise special skill to accomplish the following results: Examine in detail the existing conditions of the cogeneration system at the jail and recommend how to improve the economics of the system, including using the absorption chillers from 701 Ocean to cool the jail at Santa Cruz, for County of Santa Cruz General Services Department.

2. COMPENSATION. In consideration for CONTRACTOR accomplishing said result, COUNTY agrees to pay CONTRACTOR as follows: Payment not to exceed \$19,000, processed for payment in full after project completion, receipt of invoice, and approval of project manager.

3. TERM. The term of this contract shall be: Board approval to ninety (90) days after construction contract completion.

4. EARLY TERMINATION. Either party hereto may terminate this contract at any time by giving thirty (30) days written notice to the other party.

5. INDEMNIFICATION FOR DAMAGES, TAXES AND CONTRIBUTIONS. CONTRACTOR shall exonerate, indemnify, defend, and hold harmless COUNTY (which for the purpose of paragraphs 5 and 6 shall include, without limitation, its officers, agents, employees and volunteers) from and against:

A. Any and all claims, demands, losses, damages, defense costs, or liability of any kind or nature wick COUNTY may sustain or incur or which may be imposed upon it for injury to or death of persons, or damage to property as a result of, arising out of, or in any manner connected with the CONTRACTOR'S performance under the terms of this Agreement, excepting any liability arising out of the sole negligence of the COUNTY. Such indemnification includes any damage to the person(s), or property(ies) of CONTRACTOR and third persons.

B. Any and all Federal, State and Local taxes, charges, fees, or contributions required to be paid with respect to CONTRACTOR and CONTRACTOR'S officers, employees and agents engaged in the performance of this Agreement (including, without limitation, unemployment insurance, social security and payroll tax withholding).

6. INSURANCE. CONTRACTOR, at its sole cost and expense, for the full term of this Agreement (and any extensions thereof), shall obtain and maintain at minimum compliance with all of the following insurance coverage(s) and requirements. Such insurance coverage shall be primary coverage as respects COUNTY and any insurance or self-insurance maintained by COUNTY shall be excess of CONTRACTOR'S insurance coverage and shall not contribute to it.

If CONTRACTOR utilizes one or more subcontractors in the performance of this Agreement, CONTRACTOR shall obtain and maintain Independent Contractor's Insurance as to each subcontractor or otherwise provide evidence of insurance coverage from each subcontractor equivalent to that required of CONTRACTOR in this Agreement, unless CONTRACTOR and COUNTY both initial here ____ / ____

A. Types of Insurance and Minimum Limits

(1) Worker's Compensation in the minimum statutorily required coverage amounts. This insurance coverage shall not be required if the CONTRACTOR has no employees and certifies to this fact by initialing here _____

(2) Automobile Liability Insurance for each of CONTRACTOR'S vehicles used in the performance of this Agreement, including owned, non-owned (e.g. owned by CONTRACTOR'S employees), leased or hired vehicles, in the minimum amount of \$500,000 combined single limit per occurrence for bodily injury and property damage. This insurance coverage shall not be required if vehicle use by the CONTRACTOR is not a material part of performance of this Agreement and CONTRACTOR and COUNTY both certify to this fact by initialing here ____ / ____.

(3) Comprehensive or Commercial General Liability Insurance coverage in the minimum amount of \$1,000,000 combined single limit, including coverage for: (a) bodily injury, (b) personal injury, (c) broad form property damage, (d) contractual liability, and (e) cross-liability.

(4) Professional Liability Insurance in the minimum amount of \$_____ combined single limit, if, and only if, this Subparagraph is initialed by CONTRACTOR and COUNTY ____ / - -

B. Other Insurance Provisions

(1) If any insurance coverage required in this Agreement is provided on a "Claims Made" rather than "Occurrence" form, CONTRACTOR agrees to maintain the required coverage for a period of three (3) years after the expiration of this Agreement (hereinafter "post agreement coverage") and any extensions thereof. CONTRACTOR may maintain the required post agreement coverage by renewal or purchase of prior acts or tail coverage. This provision is contingent upon post agreement coverage being both available and reasonably affordable in

relation to the coverage provided during the term of this Agreement. For purposes of interpreting this requirement, a cost not exceeding 100% of the last annual policy premium during the term of this Agreement in order to purchase prior acts or tail coverage for post agreement coverage shall be deemed to be reasonable.

(2) All required Automobile and Comprehensive or Commercial General Liability Insurance shall be endorsed to contain the following clause:

“The County of Santa Cruz, its officials, employees, agents and volunteers are added as an additional insured as respects the operations and activities of, or on behalf of, the named insured performed under Agreement with the County of Santa Cruz.”

(3) All required insurance policies shall be endorsed to contain the following clause:

“This insurance shall not be canceled until after thirty (30) days prior written notice has been given to:

Santa Cruz County
General Services Department
Attn: Mary M. Carroll - Cogeneration System
701 Ocean Street, Room 330
Santa Cruz, CA 95060

(4) CONTRACTOR agrees to provide its insurance broker(s) with a full copy of these insurance provisions and provide COUNTY on or before the effective date of this Agreement with Certificates of Insurance for all required coverages. All Certificates of Insurance shall be delivered or sent to:

Santa Cruz County
General Services Department
Attn: Mary M. Carroll
701 Ocean Street, Room 330
Santa Cruz, CA 95060

7. EQUAL EMPLOYMENT OPPORTUNITY a t i o n t o t h e performance of this Agreement, CONTRACTOR agrees as follows:

A. The CONTRACTOR shall not discriminate against any employee or applicant for employment because of race, color, religion, national origin, ancestry, physical or mental disability, medical condition (cancer related), marital status, sexual orientation, age (over 18), veteran status, gender, pregnancy, or any other non-merit factor unrelated to job duties. Such action shall include, but not be limited to, the following: recruitment; advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training (including apprenticeship), employment, upgrading, demotion, or transfer. The CONTRACTOR agrees to

post in conspicuous places, available to employees and applicants for employment, notice setting forth the provisions of this non-discrimination clause.

B. If this Agreement provides compensation in excess of \$50,000 to CONTRACTOR and if CONTRACTOR employees fifteen (15) or more employees, the following requirements shall apply:

(1) The CONTRACTOR shall, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, ancestry, physical or mental disability, medical condition (cancer related), marital status, sexual orientation, age (over 18), veteran status, gender, pregnancy, or any other non-merit factor unrelated to job duties. Such action shall include, but not be limited to, the following: recruitment; advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training (including apprenticeship), employment, upgrading, demotion, or transfer. In addition, the CONTRACTOR shall make a good faith effort to consider Minority/Women/Disabled Owned Business Enterprises in CONTRACTOR's solicitation of goods and services, Definitions for Minority/Women/Disabled Business Enterprises are available from the COUNTY General Services Purchasing Division.

(2) The CONTRACTOR shall furnish COUNTY Affirmative Action Office information and reports in the prescribed reporting format (PER 4012) identifying the sex, race, physical or mental disability, and job classification of its employees and the names, dates and methods of advertisement and direct solicitation efforts made to subcontract with Minority/Women/Disabled Business Enterprises.

(3) In the event of the CONTRACTOR's non-compliance with the non-discrimination clauses of this Agreement or with any of the said rules, regulations, or orders said CONTRACTOR may be declared ineligible for further agreements with the COUNTY.

(4) The CONTRACTOR shall cause the foregoing provisions of this Subparagraph 7B. To be inserted in all subcontracts for any work covered under this Agreement by a subcontractor compensated more than \$50,000 and employing more than fifteen (15) employees, provided that the foregoing provisions shall not apply to contracts or subcontracts for standard commercial supplies or raw materials.

8. INDEPENDENT CONTRACTOR STATUS. CONTRACTOR and COUNTY have reviewed and considered the principal test and secondary factors below and agree that CONTRACTOR is an independent contractor and not an employee of COUNTY. CONTRACTOR is responsible for all insurance (workers compensation, unemployment, etc.) and all payroll related taxes. CONTRACTOR is not entitled to any employee benefits. COUNTY agrees that CONTRACTOR shall have the right to control the manner and means of accomplishing the result contracted for herein.

PRINCIPAL TEST: The CONTRACTOR rather than COUNTY has the right to control the manner and means of accomplishing the result contracted for.

SECONDARY FACTORS: (a) The extent of control which, by agreement, COUNTY may exercise over the details of the work is slight rather than substantial; (b) CONTRACTOR is engaged in a distinct occupation or business; (c) In the locality, the work to be done by CONTRACTOR is usually done by a specialist without supervision, rather than under the direction of an employer; (d) The skill required in the particular occupation is substantial rather than slight; (e) The CONTRACTOR rather than the COUNTY supplies the instrumentalities, tools and work place; (f) The length of time for which CONTRACTOR is engaged is of limited duration rather than indefinite; (g) The method of payment of CONTRACTOR is by the job rather than by the time; (h) The work is part of a special or permissive activity, program, or project, rather than part of the regular business of COUNTY; (i) CONTRACTOR and COUNTY believe they are creating an independent contractor relationship rather than an employer-employee relationship; and (j) The COUNTY conducts public business.

It is recognized that it is not necessary that all secondary factors support creation of an independent contractor relationship, but rather that overall there are significant secondary factors which indicate that CONTRACTOR is an independent contractor.

By their signatures to this Agreement, each of the undersigned certifies that it is his or her considered judgment that the CONTRACTOR engaged under this Agreement is in fact an independent contractor.

9. NONASSIGNMENT. CONTRACTOR shall not assign the Agreement without the prior written consent of the COUNTY.

10. RETENTION AND AUDIT OF RECORDS. CONTRACTOR shall retain records pertinent to this Agreement for a period of not less than five (5) years after final payment under this Agreement or until a final audit report is accepted by COUNTY, whichever occurs first. CONTRACTOR hereby agrees to be subject to the examination and audit by the Santa Cruz County Auditor-Controller, the Auditor General of the State of California, or the designee of either for a period of five (5) years after final payment under this Agreement.

11. PRESENTATION OF CLAIMS. Presentation and processing of any or all claims arising out of or related to this Agreement shall be made in accordance with the provisions contained in Chapter 1.05 of the Santa Cruz County Code, which by this reference is incorporated herein.

12. ATTACHMENTS. This Agreement includes the following attachments: ATTACHMENTS RE: COGENERATION AND ABSORPTION EQUIPMENT.

IN WITNESS WHEREOF, the parties hereto have set their hands the day and year first above written.

1. WATER & ENERGY MANAGEMENT CO. 4. COUNTY OF SANTA CRUZ

By: _____

By: _____

Address: 79 Hillmont Place
Danville, CA 94526

Telephone: (925) 820-6603

2. APPROVED AS TO INSURANCE:

Janet McKinley 10-7-99
Risk Management

3. APPROVED AS TO FORM:

Marie Costa
County Counsel

DISTRIBUTION: County Administrative Office
Auditor-Controller
County Counsel
Risk Management
Water & Energy Management Co.

ATTACHMENTS TO ICA

RE: COGENERATION AND ABSORPTION EQUIPMENT

The following materials address the scope of work as we understand it regarding the cogeneration units at the Santa Cruz jail and County Building.

BACKGROUND:

COUNTY BUILDING

About 17 years ago, the County engaged Impell Corp. to design the installation of two 60 kw cogeneration (cogen) units to provide electricity and hot/cold water at the County Building. This involved installing four 10 ton Yazaki lithium-bromide absorption chillers to convert the hot water from the cogen units into chilled water to be used in cooling the County Building. This installation probably cost over \$300,000 and although this combination of equipment has already been proven to work effectively, this particular installation was not cost effective due to the operating costs of the oversized pumps and cooling tower chosen to operate with it (a 350 ton cooling tower was in existence on the site and was selected to work with this 40 ton absorption unit). A 40 or 50 ton tower would have been the right choice.

Meanwhile, the cogen units were operating to provide electricity and hot water to the building. The problem was the very limited number of run hours that this hot water was required during the year due to the normal five day per week activity of the staff. The units are currently mothballed.

CITY JAIL

Three 60 kw cogen units were installed on the roof of the City Jail to provide hot water for space heating and domestic water (DHW) purposes. This system is still in operation at this time although not all of the units are on line all of the time. Nearly continuous running of the units is necessary to achieve the payback normally intended. When the need for hot water is low, one or more units shuts down or has the hot water generated released (dumped) to the atmosphere. This results in a loss of useful energy that might be put to work under more ideal circumstances.

Since it is known that the existing boilers still operate, it is then apparent that the DHW from the cogen units could have been used instead of the boiler firing. This is caused by cogen heat being available when it's not needed and not available when it is needed. Hot water for showers are a prime example.

WHAT IS PROPOSED :

Water & Energy Management Co, Inc. proposes to perform the following specific tasks to satisfy the directions presented in the agenda by the County on September 16, 1999. We believe this tasks address Agenda Items 1, 2 and 3 in their entirety.

TASKS RE: AGENDA ITEM 1--EVALUATE EXISTING COGEN SYSTEM AT JAIL

Task 1.1 --Review in detail the initial studies, correspondence and design details created by Impell1 to establish the basis for their design and to create a point of departure for this analysis.

Task 1.2--Review historical run hours of the equipment to create an ecomic basis for comparison, Use this, and new data to profile the hours when DHW is needed under current operations.

Task 1.3--Identify mechanical modifications that could improve the operating efficiency and economic benefits of cogeneration. Examine such options as more hot water storage, etc.

Task 1.4--Examine what operational changes the jail administration might consider to improve the operating efficiency of the cogen units. Prepare a report detailing how to maximize savings.

TASKS RE: AGENDA ITEM 2--EVALUATE FEASIBILITY OF USING EXISTING COGEN SYSTEM TO PROVIDE COOLING AT THE JAIL

Task 2.1--Perform analysis to compute the cooling load based on USAF weather data. Compare that data to that estimated by the engineers who installed the existing system Profile the load per hour.

Task 2.2--Estimate what portion of the load (see 2.1 above) could be satisfied by the hot water being made during cogeneration using absorption chillers such as at the County Building.

Task 2.3--Evaluate the impact of removing or replacing the 25 ton DX unit. Submit a list of options.

TASKS RE: AGENDA ITEM 2--EVALUATE FEASIBILITY OF USING EXISTING ABSORBERS FROM COUNTY BUILDING TO PROVIDE COOLING AT THE JAIL

Task 3.1--Consult with Yazaki technicians regarding readiness of existing absorption units at County Building and estimate the cost to relocate them to the roof of the jail for use with the existing cogen units. Also estimate the likely economic benefits from more run hrs and a new cooling source for portions of the jail with no current source. Include cost of cooling tower.

Task 3.2--Verify there are no technical reasons why Task 3.1 could not be done.

Task 3.3--Prepare a detailed report and estimate of probable total cost and submit it to Mr. Jansen.

DETAILS OF COST ESTIMATE

At the request of the County, this is a "not to exceed" proposal based on the following estimates:

LABOR:

1. Mr. Spitzka is expected to perform all of the work except for clerical. His normal billing rate is \$140 per hour. It is estimated he will spend 120 hrs for a total of \$16,800.
2. Clerical expense for such services is estimated at 30 hrs at \$60 per hr for \$1,800,

Total labor = \$18,600

OTHER EXPENSES:

1. Travel expenses will be at \$.31/mile and 144 miles per visit. Two visits are expected. If overnight stay is done, the direct expense for accomodation and meals will be charged.
2. Reproduction, mail, xeroxing, telephone and similar costs will be as **encurred**.

Estimated other costs = \$400

Estimated "not to exceed" cost = \$19,000

COUNTY OF SANTA CRUZ
REQUEST FOR APPROVAL OF AGREEMENT

20

TO: Board of Supervisors
County Administrative Officer
County Counsel
Auditor-Controller

FROM: General Services (Dept.)
[Signature] (Signature) _____ (Date)

The Board of Supervisors is hereby requested to approve the attached agreement and authorize the execution of the same.

1. Said agreement is between the County of Santa Cruz (Agency)
and Water & Energy Management Co., Inc., 79 Hillmont Place, Danville, CA 94526 (Name & Address)

2. The agreement will provide Engineering Analysis of the co-generation used at the Water Street medium security jail to optimize the modifications needed to increase economic benefit.

3. The agreement is needed as work can be completed more expediently by contract.

4. Period of the agreement is from Board approval to June 30, 2000

5. Anticipated cost is \$ 19,000 (Fixed amount; Monthly rate; Not to exceed)

6. Remarks: _____

7. Appropriations are budgeted in 191120 Q17012 (Index#) 6610 (Subobject)

FD 40/100/120 NOTE: IF APPROPRIATIONS ARE INSUFFICIENT, ATTACH COMPLETED FORM AUD-74

Appropriations are available and have been encumbered. a Contract No. C091955 e 10/1
are not will be

GARY A. KNUTSON, Auditor - Controller
By Linda Chou Deputy.

Proposal reviewed and approved. It is recommended that the Board of Supervisors approve the agreement and authorize the _____ to execute the same on behalf of the _____ (Agency).

Remarks: _____ (Analyst) By [Signature] County Administrative Officer Date 10-7-99

Agreement approved as to form. Date _____

- Distribution:
Bd. of Supv. • White
Auditor-Controller • Blue
County Counsel • Green *
Co. Admin. Officer • Canary
Auditor-Controller • Pink
Originating Dept. • Goldenrod
*To Orig. Dept. if rejected.

State of California)
County of Santa Cruz) ss
I _____ ex-officio Clerk of the Board of Supervisors of the County of Santa Cruz,
State of California, do hereby certify that the foregoing request for approval of agreement was approved by
said Board of Supervisors as recommended by the County Administrative Officer by an order duly entered
in the minutes of said Board on _____ County Administrative Officer
_____ 19 _____ By _____ Deputy Clerk