

GRANTS/CONTINGENT AWARD REQUEST



To: Grants and Loans Office

Date: 1/04/2013

Project Manager: Heather Bird

Phone Number: 916-327-1473

Office: Energy Efficiency Research Office

Division: Energy Research and Development

MS- 51

Project Title: Demonstration of i50 Decentralized Wastewater Treatment/Water Recycling

Type of Request: (check one)

Form for New Agreement with fields for Program, Solicitation Name, Recipient Name, Address, Project Officer, and Dates.

Form for Amendment with checkboxes for Term Extension, Work Statement Revision, Budget Revision, Change of Scope, and Other.

ITEMS TO ATTACH WITH REQUEST:

- List of items to attach: A. Work Statement, B. Budget, C. Recipient Resolution, D. Special Conditions, E. CEQA Compliance Form, F. Other Documents.

California Environmental Quality Act (CEQA)

Form for CEQA compliance with checkboxes for CEC finds, project exempt, environmental document, and CEQA finding.

Funding Information:

Form for funding information with fields for Source #1, #2, #3, Amount, Statute, FY, and Budget List #.

If federally funded, specify federal agreement number:

\* Source Examples include ERPA, PIER-E, PIER-NG, FED, GRDA, ARFVT, OTHER.

Business Meeting Approval: (refer to Business Meeting Schedule)

Form for business meeting approval with fields for Date, Participant, and Time Needed, plus Consent/Discussion checkboxes.

Agenda Notice Statement: (state purpose in layperson terms)

Possible approval of a Grant / Contingent Award to... Possible approval of Amendment 1 to grant agreement PIR-11-011 with Great Circle Industries, Inc. for a budget reallocation.

**Exhibit B  
Category Budget**

February 13, 2013

<b>Budget Category Item</b>	<b>PIER Share (\$)</b>	<b>Match Share (\$)</b>	<b>Total Cost (\$)</b>
<b>Personnel:</b>			
Direct Labor	\$ 240,100	\$ -	\$ 240,100
Fringe Benefits	\$ -	\$ -	\$ -
<b>Total Personal Services</b>	<b>\$ 240,100</b>	<b>\$ -</b>	<b>\$ 240,100</b>
<b>Operating Expenses:</b>			
Travel	\$ -	\$ 6,070	\$ 6,070
Equipment	\$ -		\$ -
Materials / Supplies	\$ 22,934	\$ 243,930	\$ 266,864
Contractual	\$ 411,603	\$ -	\$ 411,603
Miscellaneous	\$ -	\$ -	\$ -
<b>Total Operating Expenses</b>	<b>\$ 434,537</b>	<b>\$ 250,000</b>	<b>\$ 684,537</b>
<b>Overhead:</b>			
Overhead	\$ 75,363	\$ -	\$ 75,363
<b>Total Overhead</b>	<b>\$ 75,363</b>	<b>\$ -</b>	<b>\$ 75,363</b>
<b>Total</b>	<b>\$ 749,999</b>	<b>\$ 250,000</b>	<b>\$ 999,999</b>

Title / Job Classification	Maximum Rate to be Billed* (\$ / Hr)	Number of Hours	PIER Share	Match Share	Total Cost
Steven Mullerheim, Project Manager, CTO GCI	\$ 100.00	1,309	\$ 130,900	\$ -	\$ 130,900
David Peterson, Agreement Administrator, CEO GCI	\$ 100.00	1,092	\$ 109,200	\$ -	\$ 109,200
<b>Total Direct Labor</b>			<b>\$ 240,100</b>	<b>\$ -</b>	<b>\$ 240,100</b>

\* Maximum salary rates are caps: PIER will not reimburse at a higher rate over the term of the project.

**Fringe Benefits**

Title / Job Classification	Maximum % Rate to be Billed*	Base (Typically Total Direct Labor)	PIER Share	Match Share	Total Cost
	0%		\$ -	\$ -	\$ -
<b>Total Fringe Benefits</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

\* Maximum fringe benefit rates are caps: PIER will not reimburse at a higher rate over the term of the project.

**Travel\*\***

Location	Purpose	Number of Trips	People per Trip	PIER Share*	Match Share	Total Cost
Los Angeles to Oakland CA	Mandatory Administrative meetings with CEC, airfare	2	1	\$ -	\$ 800	\$ 800
Oakland to Sacramento CA	Mandatory Administrative meetings with CEC, car fare	2	1	\$ -	\$ 1,000	\$ 1,000
San Jose to Pleasanton CA	Set up Demonstration Site, car fare	2	1	\$ -	\$ 310	\$ 310
Oakland to Pleasanton CA	Secure Beta Site, car fare	6	1	\$ -	\$ 900	\$ 900
Los Angeles to Pleasanton CA	Secure Beta Site, air and car fare	1	1	\$ -	\$ 410	\$ 410
Boston, MA to San Francisco	Consultant visits to Calif. Dept. of Public Health, air fare	2	1	\$ -	\$ 1,200	\$ 1,200
Oakhurst, CA to Pleasanton CA	Consultant visits to test site, car fare	12	1	\$ -	\$ 600	\$ 600
Berkeley to Pleasanton CA	Consultant visits to test site, car fare	17	1	\$ -	\$ 850	\$ 850
<b>Total Travel</b>				<b>\$ -</b>	<b>\$ 6,070</b>	<b>\$ 6,070</b>

\* PIER Share: Travel is reimbursed at State rates. Higher travel costs can count as Match Share.

\*\* Trips listed as "to be determined (TBD)" require advanced written approval from Commission Project Manager.

**Equipment**

Item	Quantity	Unit Cost	PIER Share	Match Share	Total Cost
NONE		\$ -	\$ -	\$ -	\$ -
<b>Total Equipment</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

**Materials, Supplies**

Item	Quantity	Unit Cost	PIER Share	Match Share	Total Cost
Printing (paper, ink, photocopies, binding, printing)	6,500	\$ 0.35	\$ 2,275	\$ -	\$ 2,275
Irrigation demonstration supplies - Cinder blocks, sand, Bobcat & operator, plants, hoses		\$ -	\$ 900	\$ -	\$ 900
Coagulant - Floccin	75	\$ 10.00	\$ 750	\$ -	\$ 750
Postal Supplies (shipping lab samples)	20	\$ 49.75	\$ 995	\$ -	\$ 995
Dismantling, moving & disposing of equipment to prepare site for installation of the i50 product prototype			\$ 1,200	\$ -	\$ 1,200
Upgrade wet well access	1	\$ 120.00	\$ 120	\$ -	\$ 120
Installation equipment	1	\$ 1,994.00	\$ 1,994	\$ -	\$ 1,994
Tank (6' diameter, 7' high)	1	\$ 4,500.00	\$ 4,500	\$ -	\$ 4,500
Cover balls	1	\$ 200.00	\$ 200	\$ -	\$ 200
Cage with Limestone Rock	1	\$ 1,000.00	\$ 1,000	\$ -	\$ 1,000
Subsurface air diffuser	1	\$ 750.00	\$ 750	\$ -	\$ 750
Air compressor	1	\$ 800.00	\$ 800	\$ -	\$ 800
Solid state relay	1	\$ 100.00	\$ 100	\$ -	\$ 100

Air Hose	1	\$ 100.00	\$ 100	\$ -	\$ 100
Piping & Fittings	1	\$ 100.00	\$ 100	\$ -	\$ 100
Metering Pump	1	\$ 1,500.00	\$ 1,500	\$ -	\$ 1,500
Coagulant Pump	1	\$ 500.00	\$ 500	\$ -	\$ 500
UV Lamps	2	\$ 375.00	\$ 750	\$ -	\$ 750
Irrigation test bed and plot - EPIC subsurface irrigation system & installation	1	\$ 1,600.00	\$ 1,600	\$ -	\$ 1,600
Dose response testing equipment	1	\$ 800.00	\$ 800	\$ -	\$ 800
Great Circle Industries i50 Unit	1			\$ 243,930	\$ 243,930
<b>Total Materials and Supplies</b>			<b>\$ 22,934</b>	<b>\$ 243,930</b>	<b>\$ 266,864</b>

16,439 \$ 16,814

**Contractual**

Subcontractor Name	Purpose	PIER Share	Match Share	Total Cost	Original Budget
Carollo Engineers, Engineering Consulting Firm, Walnut Creek, CA	Developing testing plan, preliminary and formal testing, report preparation	\$ 188,717	\$ -	\$ 188,717	\$ 168,444
Integrated Engineers, Wastewater Engineering Consulting, Oakhurst, CA	Prepare test site, design Beta site, production readiness planning	\$ 25,504	\$ -	\$ 25,504	\$ 27,259
Glenn Dombeck P.E., Wastewater Engineering Consultant, San Rafael, CA	Developing testing plan, prepare test site, CEQA permitting, report preparation	\$ 25,961	\$ -	\$ 25,961	\$ 36,464
James Crook PhD, Water Reuse Consulting Engineer, Boston, MA	Developing testing plan, negotiating with Calif. Dept of Health, obtaining Title 22 approval, obtaining approval for Beta site	\$ -	\$ -	\$ -	\$ 34,654
Spa 1 Repair, Contracted Technical Services, Patterson CA	Preparing test site, preliminary and formal testing, dismantling test site	\$ 106,443	\$ -	\$ 106,443	\$ 106,443
John Nourse, Industrial Controls Consultant, San Jose, CA	Preparing test site	\$ 17,503	\$ -	\$ 17,503	\$ 38,348
<u>Alpha Analytical Laboratory, Dublin, CA</u>	<b>Formal Testing</b>	\$ 24,044	\$ -	\$ 24,044	\$ -
<u>Dublin San Ramon Services District, Pleasanton, CA</u>	<b>Formal Testing</b>	\$ 23,431	\$ -	\$ 23,431	\$ -
<b>Total Contractual</b>		<b>\$ 411,603</b>	<b>\$ -</b>	<b>\$ 411,603</b>	<b>\$ 411,603</b>

**Miscellaneous**

Item	Purpose	PIER Share	Match Share	Total Cost
NONE		\$ -	\$ -	\$ -
<b>Total Miscellaneous</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

**Overhead**

Name of Overhead	Overhead Base*	Original Maximum % Rate to be Billed**	Amendment I Maximum % Rate to be Billed**	Original Base Cost	Amendment I Base Cost	PIER Share	Match Share	Total Cost	Original Budget
G&A - Payroll Expenses	Total Direct Cost of Payroll Expenses, including payroll taxes, workers comp insurance, payroll services	40%	31%	\$ 75,363	\$ 240,100.00	\$ 75,363	\$ -	\$ 75,363	\$ 75,363
<b>Total Overhead</b>						<b>\$ 75,363</b>	<b>\$ -</b>	<b>\$ 75,363</b>	<b>\$ 75,363</b>

\* Base: Define cost categories used to charge Overhead rate, e.g., Total Labor, Total Direct Cost, Materials, Subcontracts, etc.

\*\* Maximum Indirect Overhead rates are caps: PIER will not reimburse at higher rates over the term of the project.

**Exhibit B  
Summary Budget by Task**

February 13, 2013

<b>Task #</b>	<b>Task Name</b>	<b>PIER Funding (\$)</b>	<b>Match Funding (\$)</b>	<b>Total (\$)</b>
1.0	Administration			
1.1	Attend Kick-off Meeting	\$2,080	\$600	\$2,680
1.2	Critical Project Review Meetings	\$6,240	\$0	\$6,240
1.3	Final Meeting	\$2,080	\$600	\$2,680
1.4	Monthly Progress Reports	\$44,396	\$0	\$44,396
1.5	Final Report	\$8,107	\$0	\$8,107
1.6	Identify & Obtain Matching Funds	\$2,680	\$0	\$2,680
1.7	Identify & Obtain Required Permits	\$1,580	\$0	\$1,580
1.8	Establish the PAC	\$2,600	\$0	\$2,600
1.9	Conduct PAC Meetings	\$2,000	\$0	\$2,000
2	Build/Ship i50 Test Unit (Match Contribution)	\$0	\$243,930	\$243,930
3	Obtain Title 22 Regulatory Approval	<b>\$594,411</b>	\$2,110	\$596,416
4	Plan Beta Field Site Installation	\$47,966	\$1,360	\$49,326
5	Technology Transfer Activities	<b>\$20,020</b>	\$1,400	\$21,525
6	Production Readiness Plan	\$15,840	\$0	\$15,840
		<b>\$750,000</b>	<b>\$250,000</b>	<b>\$1,000,000</b>

**Exhibit B  
PIER Funding by Task**

February 13, 2013

PIER Funding (\$)		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
<b>Task</b>	<b>Project Administration Activities</b>										
<b>1</b>	Administration										
<b>1.1</b>	Attend Kick-off Meeting	1,600	0	0	0	0	0	0	0	480	<b>\$2,080</b>
<b>1.2</b>	Critical Project Review Meetings	4,800	0	0	0	0	0	0	0	1,440	<b>\$6,240</b>
<b>1.3</b>	Final Meeting	1,600	0	0	0	0	0	0	0	480	<b>\$2,080</b>
<b>1.4</b>	Monthly Progress Reports	33,951	0	0	0	200	0	0	0	10,245	<b>\$44,396</b>
<b>1.5</b>	Final Report	3,250	0	0	0	120	2,866	0	0	1,871	<b>\$8,107</b>
<b>1.6</b>	Identify and Obtain Matching Funds	2,062	0	0	0	0	0	0	0	618	<b>\$2,680</b>
<b>1.7</b>	Identify and Obtain Required Permits	1,215	0	0	0	0	0	0	0	365	<b>\$1,580</b>
<b>1.8</b>	Establish the PAC	2,000	0	0	0	0	0	0	0	600	<b>\$2,600</b>
<b>1.9</b>	Conduct PAC Meetings	1,538	0	0	0	0	0	0	0	462	<b>\$2,000</b>
	<b>Administration Activities Subtotals</b>	<b>\$52,016</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$320</b>	<b>\$2,866</b>	<b>\$0</b>	<b>\$0</b>	<b>\$16,561</b>	<b>\$71,763</b>
<b>Task</b>	<b>Project Technical Activities</b>										
<b>2</b>	Build/Ship i50 Test Unit (Match Contribution)	0	0	0	0	0	0	0	0	0	<b>\$0</b>
<b>3</b>	Obtain Title 22 Regulatory Approval	137,664	0	0	0	18,514	<u>394,557</u>	0	0	43,676	<b><u>\$594,411</u></b>
<b>4</b>	Plan Beta Field Site Installation	25,066	0	0	0	1,200	14,180	0	0	7,520	<b>\$47,966</b>
<b>5</b>	Technology Transfer Activities	13,169	0	0	0	2,900	<u>0</u>	0	0	3,951	<b><u>\$20,020</u></b>
<b>6</b>	Production Readiness Plan	12,185	0	0	0	0	0	0	0	3,655	<b>\$15,840</b>
	<b>PIER Reimbursable Totals</b>	Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
	<b>Percent of the Total</b>	<b>\$240,100</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$22,934</b>	<b>\$411,603</b>	<b>\$0</b>	<b>\$0</b>	<b>\$75,363</b>	<b>\$750,000</b>
		32%	0%	0%	0%	3%	55%	0%	0%	10%	100%

**Exhibit B  
Major Sub #1**

February 13, 2013

<b>PIER Funding (\$)</b>		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
<b>Task</b>	<b>Project Administration Activities</b>										
<b>1</b>	Administration										
<b>1.1</b>	Attend Kick-off Meeting										<b>\$0</b>
<b>1.2</b>	Critical Project Review Meetings										<b>\$0</b>
<b>1.3</b>	Final Meeting										<b>\$0</b>
<b>1.4</b>	Monthly Progress Reports										<b>\$0</b>
<b>1.5</b>	Final Report										<b>\$0</b>
<b>1.6</b>	Identify and Obtain Matching Funds										<b>\$0</b>
<b>1.7</b>	Identify and Obtain Required Permits										<b>\$0</b>
<b>1.8</b>	Establish the PAC										<b>\$0</b>
<b>1.9</b>	Conduct PAC Meetings										<b>\$0</b>
	<b>Administration Activities Subtotals</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Task</b>	<b>Project Technical Activities</b>										
<b>2</b>	Build/Ship i50 Test Unit (Match Contribution)										<b>0</b>
<b>3</b>	Obtain Title 22 Regulatory Approval										<b>0</b>
<b>4</b>	Plan Beta Field Site Installation										<b>0</b>
<b>5</b>	Technology Transfer Activities										<b>0</b>
<b>6</b>	Production Readiness Plan										<b>0</b>
	<b>PIER Reimbursable Totals</b>	Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
	<b>Percent of the Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
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**Exhibit B  
Major Sub #2**

February 13, 2013

<b>PIER Funding (\$)</b>		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
<b>Task</b>	<b>Project Administration Activities</b>										
<b>1</b>	Administration										
<b>1.1</b>	Attend Kick-off Meeting										<b>\$0</b>
<b>1.2</b>	Critical Project Review Meetings										<b>\$0</b>
<b>1.3</b>	Final Meeting										<b>\$0</b>
<b>1.4</b>	Monthly Progress Reports										<b>\$0</b>
<b>1.5</b>	Final Report										<b>\$0</b>
<b>1.6</b>	Identify and Obtain Matching Funds										<b>\$0</b>
<b>1.7</b>	Identify and Obtain Required Permits										<b>\$0</b>
<b>1.8</b>	Establish the PAC										<b>\$0</b>
<b>1.9</b>	Conduct PAC Meetings										<b>\$0</b>
	<b>Administration Activities Subtotals</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Task</b>	<b>Project Technical Activities</b>										
<b>2</b>	Build/Ship i50 Test Unit (Match Contribution)										<b>0</b>
<b>3</b>	Obtain Title 22 Regulatory Approval										<b>0</b>
<b>4</b>	Plan Beta Field Site Installation										<b>0</b>
<b>5</b>	Technology Transfer Activities										<b>0</b>
<b>6</b>	Production Readiness Plan										<b>0</b>
	<b>PIER Reimbursable Totals</b>	Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
	<b>Percent of the Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
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**Exhibit B  
Match Funding by Task**

February 13, 2013

<b>Match Funding (\$)</b>		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
<b>Task 1 Project Administration Activities</b>											
<b>1</b>	<b>Administration</b>										
1.1	Attend Kick-off Meeting	\$ -	\$ -	\$ 600.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$600
1.2	Critical Project Review Meetings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
1.3	Final Meeting	\$ -	\$ -	\$ 600.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$600
1.4	Monthly Progress Reports	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
1.5	Final Report	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
1.6	Identify & Obtain Matching Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
1.7	Identify & Obtain Required Permits	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
1.8	Establish the PAC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
1.9	Conduct PAC Meetings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
	<b>Administration Activities Subtotals</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,200</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,200</b>
<b>Task Project Technical Activities</b>											
<b>2</b>	Build/Ship i50 Test Unit (Match Contribution)	\$ -	\$ -	\$ -	243,930	\$ -	\$ -	\$ -	\$ -	\$ -	\$243,930
3	Obtain Title 22 Regulatory Approval	\$ -	\$ -	\$ 2,110.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$2,110
4	Plan Beta Field Site Installation	\$ -	\$ -	\$ 1,360.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$1,360
5	Technology Transfer Activities	\$ -	\$ -	\$ 1,400.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$1,400
6	Production Readiness Plan	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$0
	<b>Technical Activities Subtotals</b>	<b>\$0</b>	<b>\$0</b>	<b>\$4,870</b>	<b>\$243,930</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$248,800</b>
		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
	<b>Match Funds Totals</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,070</b>	<b>\$243,930</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$250,000</b>
	<b>Percentage of the Total</b>	0%	0%	2%	98%	0%	0%	0%	0%	0%	100%