

**Exhibit B
Match Budget**

Match Funding (\$)		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
Task 1 Project Administration Activities											
1.1	Attend Kick-off Meeting	\$450	\$23	1,000	0	0	\$300	0	0	0	\$1,773
1.2	Critical Project Review Meetings	\$1,350	\$68	0	0	0	\$600	0	0	0	\$2,018
1.3	Final Meeting	\$300	\$15	1,000	0	0	\$300	0	0	0	\$1,615
1.4	Monthly Progress Reports	\$2,250	\$113	0	0	0	\$1,250	0	0	0	\$3,613
1.5	Final Report	\$7,500	\$375	1,000	0	0	\$1,500	0	0	0	\$10,375
1.6	Identify & Obtain Matching Funds	\$0	\$0	0	0	0	\$0	0	0	0	\$0
1.7	Identify & Obtain Required Permits	\$0	\$0	0	0	0	\$0	0	0	0	\$0
1.8	Establish the PAC (optional)	\$1,200	\$60	0	0	0	\$0	0	0	0	\$1,260
1.9	Conduct PAC Meetings (optional)	\$1,200	\$60	0	0	0	\$0	0	0	0	\$1,260
	Administration Activities Subtotals	\$14,250	\$713	\$3,000	\$0	\$0	\$3,950	\$0	\$0	\$0	\$21,913
Project Technical Activities											
2.0	Test Plan	\$5,000	\$250	0	0	0	\$2,500	0	0	0	\$7,750
3.0	Pipeline Setup	\$3,000	\$150	2,000	0	0	\$0	0	0	0	\$5,150
4.0	Configure and Tune Pipeline Software Model	\$5,000	\$250	0	0	0	\$2,500	0	0	0	\$7,750
5.0	Install Measurement and Verification Testing Equipment	\$900	\$45	0	0	0	\$0	0	0	0	\$945
6.0	Baseline Performance Measurement of Pipeline Operations	\$3,000	\$150	0	0	0	\$2,500	0	0	0	\$5,650
7.0	Optimization of Pipeline Operations	\$12,000	\$600	1,000	0	\$25,000	\$20,000	0	0	0	\$58,600
8.0	Savings Analysis	\$7,500	\$375	0	0	0	\$2,500	0	0	0	\$10,375
9.0	Technology Transfer Activities	\$1,500	\$75	1,000	0	0	\$1,000	0	0	0	\$3,575
10.0	Product Readiness Plan	\$1,500	\$75	0	0	0	\$1,000	0	0	0	\$2,575
	Technical Activities Subtotals	\$39,400	\$1,970	\$4,000	\$0	\$25,000	\$32,000	\$0	\$0	\$0	\$102,370
		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
Match Funds Totals		\$53,650	\$2,683	\$7,000	\$0	\$25,000	\$35,950	\$0	\$0	\$0	\$124,283
Percentage of the Total		43%	2%	6%	0%	20%	29%	0%	0%	0%	100%

**Exhibit B
Category Budget**

Budget Category Item	PIER Share (\$)	Match Share (\$)	Total Cost (\$)
Personnel:			
Direct Labor	\$ 107,300	\$ 53,650	\$ 160,950
Fringe Benefits	\$ 5,365	\$ 2,683	\$ 8,048
Total Personal Services	\$ 112,665	\$ 56,333	\$ 168,998
Operating Expenses:			
Travel	\$ 9,500	\$ 7,000	\$ 16,500
Equipment	\$ -	\$ -	\$ -
Materials/Supplies	\$ 10,239	\$ 25,000	\$ 35,239
Contractual	\$ 266,900	\$ 35,950	\$ 302,850
Miscellaneous	\$ 250	\$ -	\$ 250
Total Operating Expenses	\$ 286,889	\$ 67,950	\$ 354,839
Overhead:			
Overhead	\$ -	\$ -	\$ -
Total Overhead	\$ -	\$ -	\$ -
Total	\$ 399,554	\$ 124,283	\$ 523,837

**Exhibit B
Budget Details**

Direct Labor, Unloaded Hourly Rates

Title / Job Classification	Maximum Rate to be Billed* (\$ / Hr)	Number of Hours	PIER Share	Match Share	Total Cost
Project Director / Michael Short	\$ 150	640	\$ 64,000	\$ 32,000	\$ 96,000
Software Technical Support / Mike Griffin	\$ 110	480	\$ 35,200	\$ 17,600	\$ 52,800
Administrative Support / Erika Putinsky	\$ 60	202.5	\$ 8,100	\$ 4,050	\$ 12,150
Total Direct Labor			\$ 107,300	\$ 53,650	\$ 160,950

* 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
Project Director / Michael Short	5%	\$ 96,000	\$ 3,200	\$ 1,600	\$ 4,800
Software Technical Support / Mike Griffin	5%	\$ 52,800	\$ 1,760	\$ 880	\$ 2,640
Administrative Support / Erika Putinsky	5%	\$ 12,150	\$ 405	\$ 203	\$ 607
Total Fringe Benefits			\$ 5,365	\$ 2,683	\$ 8,047

* 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
CEC / Sacramento	Administrative Meetings	5	3	\$ 3,500	\$ 3,000	\$ 6,500
Line 200 / various	Pipeline setup	4	2	\$ 3,000	\$ 2,000	\$ 5,000
Control Center / Ponca City, OK	Software install / operations	3	1	\$ 2,000	\$ 1,000	\$ 3,000
PG&E, San Francisco Office	PAC / Technology Transfer	2	2	\$ 1,000	\$ 1,000	\$ 2,000
Total Travel				\$ 9,500	\$ 7,000	\$ 16,500

* 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.

**Exhibit B
Budget Details**

Equipment

Item	Quantity	Unit Cost	PIER Share	Match Share	Total Cost
N/A					
Total Equipment			\$ -	\$ -	\$ -

Materials, Supplies

Item	Quantity	Unit Cost	PIER Share	Match Share	Total Cost
Drag Reducing Agent (DRA)	825 Gallons	\$ 25,000	\$ -	\$ 25,000	\$ 25,000
P.U.M.P. Optimization Server	1	\$ 4,999	\$ 4,999	\$ -	\$ 5,000
P.U.M.P. Optimizer Server Related installation and maintenance supplies: Including but not limited to cables, spare parts, as well as media for data storage and archiving.	1	\$ 4,990	\$ 4,990	\$ -	\$ 4,990
PAC / Technology Transfer	1	\$ 250	\$ 250	\$ -	\$ 250
Total Materials and Supplies			\$ 10,239	\$ 25,000	\$ 35,240

Contractual

Subcontractor Name	Purpose	PIER Share	Match Share	Total Cost
Kevin Kostuik	PAC Assistance / Project Management Assistance	\$ 26,900	\$ 11,950	\$ 38,850
CPPL	Provider of test site, site and project coordination	\$ 200,000	\$ -	\$ 200,000
Thomas Baeck	Advanced Optimization Theory	\$ 20,000	\$ 12,000	\$ 32,000
Nejat Karabakal	Advanced Optimization Theory	\$ 20,000	\$ 12,000	\$ 32,000
Total Contractual		\$ 266,900	\$ 35,950	\$ 302,850

Miscellaneous

Item	Purpose	PIER Share	Match Share	Total Cost
Meeting Equipment (Including but not limited to copies, binders, pamphlets, brochures)	1	\$ 250	\$ -	\$ 250
Total Miscellaneous		\$ 250	\$ -	\$ 250

Overhead

Name of Overhead	Overhead Base*	Maximum % Rate to be Billed**	Base Cost	PIER Share	Match Share	Total Cost
N/A		0%	\$ -	\$ -	\$ -	\$ -
Total Overhead				\$ -	\$ -	\$ -

* 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
Budget Summary by Task**

Task #	Task Name	PIER Funding (\$)	Match Funding (\$)	Total (\$)
1.1	Attend Kick-off Meeting	\$2,045	\$1,773	\$3,818
1.2	Critical Project Review Meetings	\$6,035	\$2,018	\$8,053
1.3	Final Meeting	\$1,730	\$1,615	\$3,345
1.4	Monthly Progress Reports	\$7,225	\$3,613	\$10,838
1.5	Final Report	\$18,750	\$10,375	\$29,125
1.6	Identify & Obtain Matching Funds	\$0	\$0	\$0
1.7	Identify & Obtain Required Permits	\$0	\$0	\$0
1.8	Establish the PAC (optional)	\$2,520	\$1,260	\$3,780
1.9	Conduct PAC Meetings (optional)	\$3,531	\$1,260	\$4,791
2.0	Test Plan	\$15,500	\$7,750	\$23,250
3.0	Pipeline Setup	\$134,300	\$5,150	\$139,450
4.0	Configure and Tune Pipeline Software Model	\$25,489	\$7,750	\$33,239
5.0	Install Measurement and Verification Testing Equipment	\$1,890	\$945	\$2,835
6.0	Baseline Performance Measurement of Pipeline Operations	\$11,300	\$5,650	\$16,950
7.0	Optimization of Pipeline Operations	\$137,200	\$58,600	\$195,800
8.0	Savings Analysis	\$20,750	\$10,375	\$31,125
9.0	Technology Transfer Activities	\$6,150	\$3,575	\$9,725
10.0	Product Readiness Plan	\$5,150	\$2,575	\$7,725
	Total	\$399,565	\$124,283	\$523,848

**Exhibit B
PIER Funding By Task**

PIER Funding (\$)		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
Task 1	Project Administration Activities										
1.1	Attend Kick-off Meeting	900	45	500	0	0	600	0	0	0	\$2,045
1.2	Critical Project Review Meetings	2,700	135	2,000	0	0	1,200	0	0	0	\$6,035
1.3	Final Meeting	600	30	500	0	0	600	0	0	0	\$1,730
1.4	Monthly Progress Reports	4,500	225	0	0	0	2,500	0	0	0	\$7,225
1.5	Final Report	15,000	750	0	0	0	3,000	0	0	0	\$18,750
1.6	Identify and Obtain Matching Funds	0	0	0	0	0	0	0	0	0	\$0
1.7	Identify and Obtain Required Permits	0	0	0	0	0	0	0	0	0	\$0
1.8	Establish the PAC (optional)	2,400	120	0	0	0	0	0	0	0	\$2,520
1.9	Conduct PAC Meetings (optional)	2,400	120	500		250	0	261	0	0	\$3,531
	Administration Activities Subtotals	\$28,500	\$1,425	\$3,500	\$0	\$250	\$7,900	\$261	\$0	\$0	\$41,836
Task #	Project Technical Activities										
2	Test Plan	10,000	500	0	0	0	5,000	0	0	0	\$15,500
3	Pipeline Setup	6,000	300	3,000	0	0	125,000	0	0	0	\$134,300
4	Configure and Tune Pipeline Software Model	10,000	500	0	4,999	4,990	5,000	0	0	0	\$25,489
5	Install Measurement and Verification Testing Equipment	1,800	90	0	0	0		0	0	0	\$1,890
6	Baseline Performance Measurement of Pipeline Operations	6,000	300	0	0	0	5,000	0	0	0	\$11,300
7	Optimization of Pipeline Operations	24,000	1,200	2,000	0	0	110,000	0	0	0	\$137,200
8	Savings Analysis	15,000	750	0	0	0	5,000	0	0	0	\$20,750
9	Technology Transfer Activities	3,000	150	1,000	0	0	2,000	0	0	0	\$6,150
10	Product Readiness Plan	3,000	150	0	0	0	2,000	0	0	0	\$5,150
	Technical Activities Subtotals	\$78,800	\$3,940	\$6,000	\$4,999	\$4,990	\$259,000	\$0	\$0	\$0	\$357,729
		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
	PIER Reimbursable Totals	\$107,300	\$5,365	\$9,500	\$4,999	\$5,240	\$266,900	\$261	\$0	\$0	\$399,565
	Percent of the Total	27%	1%	2%	1%	1%	67%	0%	0%	0%	100%