

**Exhibit B
Category Budget**

Budget Category Item	PIER Share (\$)	Match Share (\$)	Total Cost (\$)
Personnel:			
Direct Labor	\$ 78,300	\$ -	\$ 78,300
Fringe Benefits	\$ 19,575	\$ -	\$ 19,575
Total Personal Services	\$ 97,875	\$ -	\$ 97,875
Operating Expenses:			
Travel	\$ 17,261	\$ 6,841	\$ 24,102
Equipment	\$ 9,001	\$ 1,250,000	\$ 1,259,001
Materials/Supplies	\$ 8,942	\$ 200	\$ 9,142
Contractual	\$ 216,498	\$ 1,236,350	\$ 1,452,848
Miscellaneous	\$ 500		\$ 500
Total Operating Expenses	\$ 252,202	\$ 2,493,391	\$ 2,745,593
Overhead:			
Overhead	\$ 49,923	\$ 6,609	\$ 56,532
Total Overhead	\$ 49,923	\$ 6,609	\$ 56,532
Total	\$ 400,000	\$ 2,500,000	\$ 2,900,000

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 Manager - Charles R. Toca	\$ 90.00	870	\$ 78,300	\$ -	\$ 78,300
Total Direct Labor			\$ 78,300	\$ -	\$ 78,300

* 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 Manager - Charles R. Toca	25%	78,300	\$ 19,575	\$ -	\$ 19,575
Total Fringe Benefits			\$ 19,575	\$ -	\$ 19,575

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

Travel**

Location	Number of Trips	People per Trip	PIER Share*	Match Share	Total Cost
Santa Ana to Sacramento	1	4	\$ 2,293	\$ 820	\$ 3,113
Santa Ana to Sacramento	5	2	\$ 5,734	\$ 4,365	\$ 10,099
Santa Ana to San Francisco Bay Area	3	3	\$ 3,000	\$ -	\$ 3,000
Santa Ana to Dublin/San Ramon	3	3	\$ 6,234	\$ 1,656	\$ 7,890
Total Travel			\$ 17,261	\$ 6,841	\$ 24,102

* 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	Unit Cost	PIER Share	Match Share	Total Cost
Data Logger (power quality) Rental	\$ 9,001.00	\$ 9,001		\$ 9,000
VRFB Energy Storage System	\$ 1,250,000.00	\$ -	\$ 1,250,000	\$ 1,250,000
Total Equipment		\$ 9,001	\$ 1,250,000	\$ 1,259,000

Materials, Supplies

Item	Quantity	Unit Cost	PIER Share	Match Share	Total Cost
Project-related supplies - Data Logger	1	\$ 4,999.00	\$ 4,999	\$ -	\$ 4,999
Printing and binding reports			\$ 3,943	\$ 200	\$ 4,143
Total Materials and Supplies			\$ 8,942	\$ 200	\$ 9,142

Exhibit B Budget Details

Contractual

Subcontractor Name	Purpose	PIER Share	Match Share	Total Cost
PI - Scott Samuelsen, Ph.D UCI	Tasks 2,5,6 and 7		\$ 12,468	\$ 12,468
Sr. Researcher - Richard Hack UCI	Tasks 2,5,6 and 7	\$ 40,188		\$ 40,188
Sr. Researcher - Dr. Fabian Mueller	Tasks 2,5,6 and 7	\$ 9,714		\$ 9,714
Principal Engineer - Dan Donaldson	Tasks 1,2,3,4,5,7,8 and 9	\$ 166,596		\$ 166,596
TBD	Task 3	\$ -	\$ 736,941	\$ 736,941
TBD	Task 3	\$ -	\$ 486,941	\$ 486,941
Total Contractual		\$ 216,498	\$ 1,236,350	\$ 1,452,848

Miscellaneous

Item	Purpose	PIER Share	Match Share	Total Cost
Analytical Computer Recharge	Rental of computer facilities	\$ 500	\$ -	\$ 500
Total Miscellaneous		\$ 500	\$ -	\$ 500

Overhead

Name of Overhead	Maximum % Rate to be Billed**	Base Cost	PIER Share	Match Share	Total Cost
Modified Total Direct Cost for UCI	53%	\$ 49,873	\$ 26,433	\$ 6,609	\$ 33,042
General and Administrative	30%	\$ 23,490	\$ 23,490	\$ -	\$ 23,490
Total Overhead		\$ 49,923	\$ 49,923	\$ 6,609	\$ 56,532

** 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	\$15,121	\$820	\$15,941
1.2	Critical Project Review Meetings	\$17,685	\$3,274	\$20,959
1.3	Final Meeting	\$11,811	\$1,091	\$12,903
1.4	Monthly Progress Reports	\$7,172	\$0	\$7,172
1.5	Final Report	\$5,691	\$0	\$5,691
1.6	Identify & Obtain Matching Funds	\$2,692	\$0	\$2,692
1.7	Identify & Obtain Required Permits	\$5,691	\$0	\$5,691
1.8	Establish the PAC	\$2,227	\$0	\$2,227
1.9	Conduct PAC Meetings	\$6,496	\$0	\$6,496
2.0	VRFB / Fuel Cell Integration Test Preparation	\$22,715	\$0	\$22,715
3.0	VRFB Energy Storage Equipment Installation	\$30,582	\$2,473,882	\$2,504,464
4.0	VRFB / Fuel Cell Integration Test Implementation	\$41,466	\$0	\$41,466
5.0	VRFB / Fuel Cell Integration Performance Analysis	\$42,891	\$20,733	\$63,624
6.0	Dynamic Energy Storage Modeling	\$55,560	\$0	\$55,560
7.0	Economic Benefits Assessment	\$36,680	\$200	\$36,880
8.0	Technology Transfer Activities	\$63,190	\$0	\$63,190
9.0	Production Readiness Plan	\$32,332	\$0	\$32,332
	Total	\$400,000	\$2,500,000	\$2,900,000

Exhibit B PIER Funding By Task

PIER Funding (\$)		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
Task	Project Administration Activities										
1.1	Attend Kick-off Meeting	2,349	587	2,293	0	447	8,857	0	0	587	\$15,121
1.2	Critical Project Review Meetings	2,349	587	3,823	0	894	8,857	0	0	1,175	\$17,685
1.3	Final Meeting	2,349	587	1,911	0	894	5,482	0	0	587	\$11,811
1.4	Monthly Progress Reports	1,175	294	0	0	1,788	2,741	0	0	1,175	\$7,172
1.5	Final Report	1,175	294	0	0	894	2,741	0	0	587	\$5,691
1.6	Identify and Obtain Matching Funds	587	147	0	0	0	1,371	0	0	587	\$2,692
1.7	Identify and Obtain Required Permits	1,175	294	0	0	894	2,741	0	0	587	\$5,691
1.8	Establish the PAC	294	73				685			1,175	\$2,227
1.9	Conduct PAC Meetings	294	73			894	4,060			1,175	\$6,496
	Administration Activities Subtotals	\$11,745	\$2,936	\$8,027	\$0	\$6,707	\$37,537	\$0	\$0	\$7,634	\$74,586
Task	Project Technical Activities										
2.0	VRFB / Fuel Cell Integration Test Preparation	3,915	979	2,078			12,512		2,643	587	\$22,715
3.0	VRFB Energy Storage Equipment Installation	3,915	979	3,000	9,001		12,512			1,175	\$30,582
4.0	VRFB / Fuel Cell Integration Test Implementation	7,830	1,958	4,156			21,650			5,873	\$41,466
5.0	VRFB / Fuel Cell Integration Performance Analysis	7,830	1,958				21,650		7,930	3,524	\$42,891
6.0	Dynamic Energy Storage Modeling	11,745	2,936				27,412	250	13,217		\$55,560
7.0	Economic Benefits Assessment	7,830	1,958				21,650	250	2,643	2,349	\$36,680
8.0	Technology Transfer Activities	15,660	3,915			1,341	39,925			2,349	\$63,190
9.0	Production Readiness Plan	7,830	1,958			894	21,650				\$32,332
	Technical Activities Subtotals	\$66,555	\$16,639	\$9,234	\$9,001	\$2,236	\$178,961	\$500	\$26,433	\$15,856	\$325,414
		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
	PIER Reimbursable Totals	\$78,300	\$19,575	\$17,261	\$9,001	\$8,942	\$216,498	\$500	\$26,433	\$23,490	\$400,000
	Percent of the Total	20%	5%	4%	2%	2%	54%	0%	7%	6%	100%

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	0	0	820	0	0	0	0	0	0	\$820
1.2	Critical Project Review Meetings	0	0	3,274	0	0	0	0	0	0	\$3,274
1.3	Final Meeting	0	0	1,091	0	0	0	0	0	0	\$1,091
1.4	Monthly Progress Reports	0	0	0	0	0	0	0	0	0	\$0
1.5	Final Report	0	0	0	0	0	0	0	0	0	\$0
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	0	0	0	0	0	0	0	0	0	\$0
1.9	Conduct PAC Meetings	0	0	0	0	0	0	0	0	0	\$0
	Administration Activities Subtotals	\$0	\$0	\$5,185	\$0	\$0	\$0	\$0	\$0	\$0	\$5,185
	Project Technical Activities										
2	VRFB / Fuel Cell Integration Test Preparation	0	0	0	0	0	0	0	0	0	\$0
3	VRFB Energy Storage Equipment Installation	0	0	0	1,250,000	0	1,223,882	0	0	0	\$2,473,882
4	VRFB / Fuel Cell Integration Test Implementation	0	0	0	0	0	0	0	0	0	\$0
5	VRFB / Fuel Cell Integration Performance Analysis	0	0	1,656	0	0	12,468	0	6,609	0	\$20,733
6	Dynamic Energy Storage Modeling	0	0	0	0	0	0	0	0	0	\$0
7	Economic Benefits Assessment	0	0	0	0	200	0	0	0	0	\$200
8	Technology Transfer Activities	0	0	0	0	0	0	0	0	0	\$0
9	Production Readiness Plan	0	0	0	0	0	0	0		0	\$0
	Technical Activities Subtotals	\$0	\$0	\$1,656	\$1,250,000	\$200	\$1,236,350	\$0	\$6,609	\$0	\$2,494,815
		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
	Match Funds Totals	\$0	\$0	\$6,841	\$1,250,000	\$200	\$1,236,350	\$0	\$6,609	\$0	\$2,500,000
	Percentage of the Total	0%	0%	0%	50%	0%	49%	0%	0%	0%	100%