

**Exhibit B
Category Budget**

Budget Category Item	PIER Cost Share	DOE Funds	Match Share	Total Cost (\$)
Personnel:				
Direct Labor	\$ -	\$ 99,965	\$ 21,250	\$ 121,215
Fringe Benefits	\$ -	\$ 37,987	\$ 8,075	\$ 46,062
Total Personal Services	\$ -	\$ 137,952	\$ 29,325	\$ 167,277
Operating Expenses:				
Travel		\$ 9,000		\$ 9,000
Equipment				\$ -
Materials / Supplies			\$ 362,000	\$ 362,000
Contractual	\$ 250,000	\$ 1,082,141	\$ 56,875	\$ 1,389,016
Miscellaneous	\$ -	\$ -	\$ -	\$ -
Total Operating Expenses	\$ 250,000	\$ 1,091,141	\$ 418,875	\$ 1,760,016
Overhead:				
Overhead	\$ -	\$ 21,772	\$ 4,675	\$ 26,447
Total Overhead	\$ -	\$ 21,772	\$ 4,675	\$ 26,447
Total	\$ 250,000	\$ 1,250,865	\$ 452,875	\$ 1,953,740

Exhibit B Budget Details

Direct Labor, Unloaded Hourly Rates

Name / Title / Job Classification	Maximum Rate to be Billed* (\$ / Hr)	Number of Hours	PIER Cost Share	DOE Funds	Match Share	Total Cost
Michael Martin / VP Alt Energy / PI	\$ 75.00	1,216		\$ 74,965	\$ 16,250	\$ 91,215
Elliot Salmon / Project Manager	\$ 55.00	545		\$ 25,000	\$ 5,000	\$ 30,000
Total Direct Labor			\$ -	\$ 99,965	\$ 21,250	\$ 121,215

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

Fringe Benefits

Name / Title / Job Classification	Maximum % Rate to be Billed*	Base (Typically Total Direct Labor)	PIER Cost Share	DOE Funds	Match Share	Total Cost
Michael Martin / VP Alt Energy / PI	38%	Direct Labor		\$ 28,487	\$ 6,175	\$ 34,662
Elliot Salmon / Project Manager	38%	Direct Labor		\$ 9,500	\$ 1,900	\$ 11,400
Total Fringe Benefits			\$ -	\$ 37,987	\$ 8,075	\$ 46,062

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

Travel**

From and To Destination	Trip Purpose	Number of Trips	Who (Name all)	PIER Cost Share	DOE Funds	Match Share	Total Cost
EMTEC Travel: Dayton, Ohio to CA	Program Management	5 to 8	Mike Martin and/or Elliot Salmon AR	\$ -	\$ 9,000	\$ -	\$ 9,000
Total Travel				\$ -	\$ 9,000	\$ -	\$ 9,000

* 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 - Description	Quantity	Unit Cost	PIER Cost Share	DOE Funds	Match Share	Total Cost
Total Equipment			\$ -	\$ -	\$ -	\$ -

Materials, Supplies

Item - Description	Quantity	Unit Cost	PIER Cost Share	DOE Funds	Match Share	Total Cost
Intel provided CPUs					\$ 362,000	\$ 362,000
Total Materials and Supplies			\$ -	\$ -	\$ 362,000	\$ 362,000

Contractual

Subcontractor Name / Address	Purpose	PIER Cost Share	DOE Funds	Match Share	Total Cost
Clustered Systems	CPU board design, procurement, fabrication and test	\$ 250,000	\$ 854,641		\$ 1,104,641
Cooligy	Rack design, fabrication and test		\$ 227,500	\$ 56,875	\$ 284,375
Total Contractual		\$ 250,000	\$ 1,082,141	\$ 56,875	\$ 1,389,016

Exhibit B Budget Details

Miscellaneous

Item - Description	Purpose	PIER Cost Share	DOE Funds	Match Share	Total Cost
Total Miscellaneous		\$ -		\$ -	\$ -

Overhead

Name of Overhead	Overhead Base*	Maximum % Rate to be Billed**	Base Cost	PIER Cost Share	DOE Funds	Match Share	Total Cost
G&A	Total Dir Labor	5%	\$ -	\$ -	\$ 16,824	\$ 3,613	\$ 20,437
Indirect	Total Dir Labor	17%	\$ -	\$ -	\$ 4,948	\$ 1,063	\$ 6,011
Total Overhead				\$ -	\$ 21,772	\$ 4,675	\$ 26,447

* 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

Task #	Task Name	PIER Cost Share (\$)	DOE Funds (\$)	Match Funding (\$)	Total (\$)
1.1	Attend Kick-off Meeting	\$0	\$0	\$0	\$0
1.2	Critical Project Review Meetings	\$0	\$0	\$0	\$0
1.3	Final Meeting	\$0	\$3,380	\$0	\$3,380
1.4	Quarterly Progress Reports	\$0	\$127,000	\$17,800	\$144,800
1.5	Final Report	\$0	\$38,344	\$16,200	\$54,544
1.6	Identify & Obtain Matching Funds	\$0	\$0	\$0	\$0
1.7	Identify & Obtain Required Permits	\$0	\$0	\$0	\$0
Task 2	Develop Detailed Specification of the System and its Components	\$0			
Task 3	Design, Build and Test Compute Module	\$0			
Task 4	Design, Build and Test a Single Blade and Deflection Mechanism	\$0			
Task 5	Design and Build Heat Risers	\$0			
Task 6	Design and Build Cooling Crate and Housing, Test With Heat Source	\$0			
Task 7	Design and Build Rack With Integrated Refrigerant Distribution System	\$0			
Task 8	Build 12 Shelves and Integrate With Rack, Test With Standard Liebert XDP Pump and Heat Exchanger System Connected to a Chiller	\$0			
Task 9	Test System with Full Complement of Blades	\$250,000	\$682,141	\$396,040	\$1,328,181
Task 10	Test System with Chillerless System	\$0	\$400,000	\$22,835	\$422,835
		\$250,000	\$1,250,865	\$452,875	\$1,953,740

Exhibit B PIER Cost Share by Task

PIER Funding (\$)		100	38%						17%	5%	
		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
Task	Project Administration Activities										
1.1	Attend Kick-off Meeting										\$0
1.2	Critical Project Review Meetings										\$0
1.3	Final Meeting										\$0
1.4	Quarterly Progress Reports										\$0
1.5	Final Report										\$0
1.6	Identify and Obtain Matching Funds										\$0
1.7	Identify and Obtain Required Permits										\$0
1.8	Establish the PAC (optional)										\$0
1.9	Conduct PAC Meetings (optional)										\$0
	Administration Activities Subtotals	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Task	Project Technical Activities										
Task 2	Develop Detailed Specification of the System and its Components										
Task 3	Design, Build and Test Compute Module										
Task 4	Design, Build and Test a Single Blade and Deflection Mechanism										
Task 5	Design and Build Heat Risers										
Task 6	Design and Build Cooling Crate and Housing, Test With Heat Source										
Task 7	Design and Build Rack With Integrated Refrigerant Distribution System										\$0

Exhibit B PIER Cost Share by Task

PIER Funding (\$)		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
Task 8	Build 12 Shelves and Integrate With Rack, Test With Standard Liebert XDP Pump and Heat Exchanger System Connected to a Chiller										
Task 9	Test System with Full Complement of Blades						250,000				\$250,000
Task 10	Test System Without Chiller										
Technical Activities Subtotals		\$0	\$0	\$0	\$0	\$0	\$250,000	\$0	\$0	\$0	\$250,000

	Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
PIER Reimbursable Totals	\$0	\$0	\$0	\$0	\$0	\$250,000	\$0	\$0	\$0	\$250,000
Percent of the Total	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%

* These are tasks that received prior funding from DOE and other match sources

Exhibit B DOE Funds

DOE Funding (\$)		38%					17%		5%		
		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
1.2	Critical Project Review Meetings										\$0
1.3	Final Meeting	1,000	380	2,000							\$3,380
1.4	Quarterly Progress Reports	75,000	28,500	7,000					12,750	3,750	\$127,000
1.5	Final Report	23,965	9,107						4,074	1,198	\$38,344
1.6	Identify & Obtain Matching Funds										\$0
1.7	Identify & Obtain Required Permits										\$0
	Administration Activities Subtotals	\$99,965	\$37,987	\$9,000	\$0	\$0	\$0	\$0	\$16,824	\$4,948	\$168,724
Task	Project Technical Activities										
Task 2	Develop Detailed Specification of the System and its Components										
Task 3	Design, Build and Test Compute Module										
Task 4	Design, Build and Test a Single Blade and Deflection Mechanism										
Task 5	Design and Build Heat Risers										
Task 6	Design and Build Cooling Crate and Housing, Test With Heat Source										
Task 7	Design and Build Rack With Integrated Refrigerant Distribution System										
Task 8	Build 12 Shelves and Integrate With Rack, Test With Standard Liebert XDP Pump and Heat Exchanger System Connected to a Chiller										
Task 9	Test System with Full Complement of Blades						682,141				\$682,141
Task 10	Test System with Chillerless System						400,000				\$400,000
	Technical Activities Subtotals	\$0	\$0	\$0	\$0	\$0	\$1,082,141	\$0	\$0	\$0	\$1,082,141

**Exhibit B
DOE Funds**

	Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
DOE Funds Totals	\$99,965	\$37,987	\$9,000	\$0	\$0	\$1,082,141	\$0	\$16,824	\$4,948	\$1,250,865
Percentage of the Total	8%	3%	1%	0%	0%	87%	0%	1%	0%	100%

Exhibit B Match Funding

Match Funding (\$)		38%						17%		5%	
		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
1.2	Critical Project Review Meetings										\$0
1.3	Final Meeting										\$0
1.4	Quarterly Progress Reports	11,250	4,075						1,913	563	\$17,800
1.5	Final Report	10,000	4,000						1,700	500	\$16,200
1.6	Identify & Obtain Matching Funds										\$0
1.7	Identify & Obtain Required Permits										\$0
Administration Activities Subtotals		\$21,250	\$8,075	\$0	\$0	\$0	\$0	\$0	\$3,613	\$1,063	\$34,000
Task	Project Technical Activities										
Task 2	Develop Detailed Specification of the System and its Components										
Task 3	Design, Build and Test Compute Module										
Task 4	Design, Build and Test a Single Blade and Deflection Mechanism										
Task 5	Design and Build Heat Risers										
Task 6	Design and Build Cooling Crate and Housing, Test With Heat Source										
Task 7	Design and Build Rack With Integrated Refrigerant Distribution System										\$0
Task 8	Build 12 Shelves and Integrate With Rack, Test With Standard Liebert XDP										
Task 9	Test System with Full Complement of Blades					362,000	34,040				\$396,040
Task 10	Test System with Chillerless System						22,835				\$22,835
Technical Activities Subtotals		\$21,250	\$8,075	\$0	\$0	\$362,000	\$56,875	\$0	\$3,613	\$1,063	\$452,875
		Direct Labor	Fringe Benefits	Travel	Equipment	Materials	Contractual	Misc	Indirect Overhead	G&A	Total
Match Funds Totals		\$21,250	\$8,075	\$0	\$0	\$362,000	\$56,875	\$0	\$3,613	\$1,063	\$452,875
Percentage of the Total		5%	2%	0%	0%	80%	13%	0%	1%	0%	100%

* These are tasks that received prior funding from DOE and other match sources