						Expenditures Energy					
order	Project Title	Location	Туре	Cost	Description	\$ Year 1	\$ Year 2	Y/N	Green?*	Project Status	Notes
											Project replaces old ARCNET
	Campus wide - Energy control										system with the new TCP/IP
1	upgrades	UM - Missoula	Energy	\$500,000	Replace obsolete and failing equipment	\$500,000		Υ	n/a		protocol system
					Installation of Geothermal Heating system						
	Natural Resources Building				on new Natural Resources Building -						
1	Geothermal Heating	Tech	Energy	\$550,000	includes drilling	\$550,000		Υ	3	Ready to Award	
											Additional funding for current
	Main Hall Renovation - Earthquake										construction project. Critical
1	Stabilization	UMW	Modernization	\$534,000	Seismic stabilization	\$534,000			3	Ready to Award	unfunded issue.
					Project includes renovations & repairs to						
					UMHCOT airport facility to upgrade &						This item provides energy
					renovate classroom & Lab facilities						efficiency enhancements,
					including equipment, HVAC, energy						instructional presentation
					retrofits, building system replacements						enhancements, and addresses
1	Airport Renovation Project	UM-HCOT	Renovation	\$1,557,500	and other safety items	\$1,557,500		Υ		Ready to Award	safety and ADA issues.
					Replace failed steam traps which waste					Energy study	
2	Campus wide - Replace steam traps	UM - Missoula	Energy	\$300,000		\$300,000		Υ	2	completed	3 year payback
					To complete mechanical upgrades in two						
					oldest sections of Main Hall instead of just						Additional funding for current
_	Main Hall Renovation - Complete			4	doing two of four floors. Cost saving to do				_		construction project. Critical
2	Phase One Mechanical upgrades	UMW	Energy	\$459,000	at same time.	\$459,000		Υ	3	Ready to Award	unfunded issue.
2	Health Sciences Building Renovation	Tools	Mandannination	64 200 000	Installation of IDVAC ourters	ć4 200 000		.,		la Diagramina Dhan	1
2	Stage 2	Tech	Modernization	\$1,200,000	Installation of HVAC system	\$1,200,000		Υ	3	In Planning Phase	
					Convert old shop space with sloped drain						1
	l				floors and two story ceilings into flat						l
2	Donaldson Ronovation Project	IIM HCOT	Ponovation	ĆEO OCO	floored classroom space with drop downed	ĆEO OOO		N1		Need to bid	l
2	Donaldson Renovation Project	UM-HCOT	Renovation	\$50,000	ceilings.	\$50,000		N Y	-		
3	Replace Library Chillers	UM - Missoula	Energy	\$485,000		\$485,000		Ý	2	Ready to Award	
											Danis at any day to publish any of the disco
											Project ready to rebid once funding is available. State providing
3	Block Hall - HVAC Controls	UMW	Enormy	¢150,000	VAV Dual Dust Terminal Hagrade w/ DDC	\$150,000		Υ	2	Dondu to Award	\$200,000 asbestos money.
3	BIOCK Hall - HVAC COILLIOIS	CIVIVV	Energy	\$150,000	VAV Dual Duct Terminal Upgrade w/ DDC Replace worn out classroom and student	\$150,000		1		Ready to Award	\$200,000 aspestos money.
3	Donaldson Renovation Project	им-нсот	Danavation	¢22 E00	center flooring	\$32,500		N		Ready to Award	
3	Parking Lot Repaying - Main Campus	UIVI-HCU1	Renovation	\$32,500	Parking lot repairs and repaving on Main	\$32,500		IN		Ready to Award	
3	& COT	Tech	Renovation	\$450,000		\$450,000				Ready to Award	
3	& CO1	recii	Renovation	\$450,000	campus and cor campus	\$450,000				Energy study	
4	Specific building Lighting upgrades	UM - Missoula	Energy	¢EOO OOO	As identified by energy audit, 9 buildings	\$590,000		Υ	n/a	completed	15 year payback
4	Specific building Lighting upgrades	OIVI - IVIISSOUIA	chergy	\$590,000	Provide the tools and supplies to respond	\$590,000		1	II/d	completed	13 year payback
					to campus emergencies including 2-way						
					radios, AED's and other first response						
4	Emergency Response Kits	им-нсот	Modernization	\$10,000		\$10,000		N		Ready to Award	
4	Emergency response kits	OW-TICOT	Wiodernization	\$10,000	items.	310,000		IN		neady to Award	Additional funding for current
					Current project does not include required						construction project. Critical issue
	IT Woods - HVAC & Classroom				ventilation to second floor classrooms.						for Montana Youth Challenge
4	Renovations	UMW	Renovation	\$85,000	Additional funding.	\$85,000		Υ	3	Ready to Award	classrooms.
7	nenovations	CIVIV	ICHOVACION	203,000	To extend the main steam system to the	303,000		-	,	neady to Award	Steam HX installation \$92,400 for
	Convert Student Union Building to				SUB to take advantage of the wood-fired					In Design from Energy	payback amount. Rest is tunnel
5	Steam Heat	UMW	Energy	\$225,000			\$225,000	Y	2	Audit	not on energy audit.
,	Campus Water Distribution Back-	CIVIV	Lifeigy	Ş223,000	Construct back-flow devices @ water inlets		Ş223,000	-		Preliminary study	To comply with enhanced potable
5	flow Prevention	UM - Missoula	Modernization	\$1,500,000			\$1,500,000	N	n/a	completed	water health standards
3		OW WIISSOULD	Modernization	\$1,500,000			<b>\$1,500,000</b>		, 0	In Design from Energy	
6	Library HVAC & envelope upgrades	UMW	Energy	\$197,000	Replaces pumps & chiller & converts VAV		\$197,000	Υ	2	Audit	
-	Roof replacement on Auxiliary		~ 01	+157,000	The state of the s		+=37,000				Project replaces the roof and adds
6	Services buildings	UM - Missoula	Renovation	\$310.000	Aber, Jesse & Lommasson Center	\$310,000		Υ	n/a		insulation
						,			,-		
7	Kitchen Renovation in dining hall	UM - Missoula	Renovation	\$325,000	HVAC upgrade in kitchen and dining hall		\$325,000	у	n/a		l
	j						,				Equipment at the end of its useful
8	PARTV Heat Pump Replacement	UM - Missoula	Energy	\$500,000			\$500,000	N	3		life
	l				Separate computer AC from building					Energy study	l
9	Todd Building HVAC upgrades	UM - Missoula	Energy	\$45,000	system, add ventilation control, setbacks	\$45,000		Υ	2	completed	3 year payback
					Install new controls and replace failing					Energy study	
10	Fine Arts - Controls and steam traps	UM - Missoula	Energy	\$160,000		\$160,000		Υ	n/a	completed	33 year payback
	Boiler #3 Upgrade Controls and				Replace pneumatic controls and replace						
11	Economizer	UM - Missoula	Energy	\$600,000	failed pre-heat economizer	\$100,000	\$500,000	Υ	n/a		<u> </u>
					Install new building controls on basement					Energy study	
12	Liberal Arts - Install building controls	UM - Missoula	Energy	\$60,000		\$60,000		Υ	n/a	completed	22 year payback
	Replace entrance doors on Auxiliary										
13	Services buildings	UM - Missoula	Energy	\$80,000		\$80,000		Υ	n/a		<u> </u>
					Add mechanical insulation and install DDC					Energy study	
	Education HVAC upgrades	UM - Missoula	Energy	\$45,000	building controls	\$45,000		Υ	n/a	completed	25 year payback
		Total		\$11,000,000		\$7,753,000	\$3,247,000				

\* Green Qualifiers 1 = LEED Certified - major renovations 2 = ECM-like  $w/Payback \le 10$  yrs 3 = One or More LEED elements satisfied

Target Amounts \$5,500,000 \$2,200,000 \$1,650,000 \$1,650,000 \$11,000,000 Missoula Butte Dillon Helena