

Matching Grant Fund
Detail as of 06/30/10

Proposal #	Department	Research Topic	Total Research Funds	Outside Granting Agency Funds	SER Obligation	SER Payments	Remaining Obligation
2007							
07-001	Chemical Engineering	Model Development Fischer-Topsch Synthesis & Product Refining	\$ 220,000	\$ 170,000	\$ 50,000	\$ (50,000)	\$ -
07-002	Geology	Shapes, Scales & Spacing of Channel-belt Sand Bodies in Avulsion-dominated Alluvial Basins	\$ 200,000	\$ 150,000	\$ 50,000	\$ (50,000)	\$ -
07-006	Chemical Engineering	Three-Phase Relative Permeabilities for Enhanced Oil Recover Schemes	\$ 560,000	\$ 480,000	\$ 80,000	\$ (80,000)	\$ -
07-007	Physics	Investigation of Nanospheres for general lighting application	\$ 220,000	\$ 170,000	\$ 50,000	\$ (50,000)	\$ -
07-008	Plant Sciences	Plant pathogen threat to oilseed biodiesel crop development in Wyoming	\$ 48,000	\$ 32,000	\$ 16,000	\$ (16,000)	\$ -
07-009	Chemical Engineering	Integration of a Structural Water Gas Shift Catalyst with a Vanadium Alloy Hydrogen Transport Device	\$ 300,000	\$ 200,000	\$ 100,000	\$ (100,000)	\$ -
07-010	Geology	Fault Seal on Low-Angle Normal Faults	\$ 45,000	\$ 30,000	\$ 15,000	\$ (15,000)	\$ -
07-011	Chemical Engineering	Nonthermal Plasma Reactors for the Decomposition of Hydrogen Sulfide	\$ 75,000	\$ 50,000	\$ 25,000	\$ (25,000)	\$ -
07-015	Chemical Engineering	Recoverable Enzyme Nanoparticles Systems for Cellulose Hydrolysis	\$ 387,800	\$ 336,200	\$ 51,600	\$ (51,600)	\$ -
07-016	Mechanical Engineering	Improved Accuracy in Nuclear Reactor Core Simulations	\$ 445,200	\$ 372,600	\$ 72,600	\$ (72,600)	\$ -
Totals			\$ 2,501,000	\$ 1,990,800	\$ 510,200		
Leverage Factor 2007			5:1				

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2008							
08-000	Mechanical Engineering	Aerodynamics & Control of Wind Turbines	\$ 715,520	\$ 615,520	\$ 100,000	\$ (100,000)	\$ -
08-009	Chemical Engineering	Mercury Removal form Flue Gas Derived from Oxygen Combustion of Coal	\$ 75,000	\$ 50,000	\$ 25,000	\$ (25,000)	\$ -
08-012	Renewable Resources	Identifying Disturbance Mechanisms Influencing Habitat Selection by Elk in Natural gas Development Fields	\$ 396,402	\$ 336,402	\$ 60,000	\$ (60,000)	\$ -
08-019	Geology	Evaluation of Model Uncertainty in CO2 Sequestration in Deep Aquifers	\$ 247,350	\$ 164,900	\$ 82,450	\$ (82,450)	\$ -
08-030	Chemical Engineering	Energy from Organic Waste degradation Using Biological Fuel Cells	\$ 350,000	\$ 250,000	\$ 100,000	\$ (100,000)	\$ -
08-031	Geology	Pilot study to assess the utility of Pb isotope analyses for improved monitoring of aquifer interactions in the in- situ U mining industry	\$ 15,000	\$ 10,000	\$ 5,000	\$ (5,000)	\$ -
08-038	Chemistry	Highly Oxidizing Ligand-to-metal Charge Transfer Excited States for Solar Energy Conversion	\$ 521,000	\$ 433,000	\$ 88,000	\$ (88,000)	\$ -
08-040	Wyoming Coop	Identifying Mule deer Migration routes to and from the Pinedale Anticline Project Area	\$ 190,440	\$ 133,720	\$ 56,720	\$ (56,720)	\$ -
08-042	Atmospheric Science	Upper Green River Basin Ozone Monitoring Study	\$ 293,856	\$ 195,904	\$ 97,952	\$ (97,952)	\$ -
08-047	WRI/Chemical Engineering	Capture and Control of Emissions in Combustion and Gasification environments	\$ 1,619,103	\$ 1,519,103	\$ 100,000	\$ (100,000)	\$ -
08-051	Renewable Resources	Effects of Natural Gas Well Development & Reclamation Activities on Topsoils Properties	\$ 221,700	\$ 147,800	\$ 73,900	\$ (73,900)	\$ -
08-056	Renewable Resources	Populations Persistence within the Atlantic Rim, Wyoming Coalbed Methane Field	\$ 230,000	\$ 190,000	\$ 40,000	\$ (40,000)	\$ -
Totals			\$ 4,875,371	\$ 4,046,349	\$ 829,022		
Leverage Factor 2008			5:1				

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2009							
09-001	Chemistry	Optimizing Cu ₂ ZnSnS ₄ -based Photovoltaic Devices: An Approach to Inexpensive and Scalable Thin Films and fundamental Studies of Semiconducting Properties	\$ 125,000	\$ 100,000	\$ 25,000	\$ (25,000)	\$ -
09-005	Cooperative Extension Service	Off-the-Grid Home Energy Demonstration project	\$ 82,420	\$ 58,280	\$ 24,140	\$ (24,140)	\$ -
09-008	Mechanical Engineering	Achieving Petaflops Level Parallelism for Simulation- Based Engineering Problems in Fluid Dynamics	\$ 492,448	\$ 393,082	\$ 99,366	\$ (99,366)	\$ -
09-015	Wyoming Geographic Information Systems	Multi-agency Collaborative Effort to Model Salt Loading in Energy Development Areas	\$ 222,840	\$ 132,840	\$ 90,000	\$ (90,000)	\$ -
09-026	Economics	Subsidies and Taxes in the markets for enhanced Oil Recovery and Carbon Capture Storage	\$ 400,162	\$ 366,466	\$ 33,696	\$ (33,696)	\$ -
09-028	Management & Marketing	Drivers of electrical Energy Demand in the Rocky Region	\$ 318,672	\$ 250,672	\$ 68,000	\$ (68,000)	\$ -
09-029	Atmospheric Science	Novel approaches to improving air pollution emission information for oil and gas development	\$ 696,763	\$ 598,013	\$ 98,750	\$ (98,750)	\$ -
09-040	Chemistry	Supports on the Properties and Performance for Ceria- based Metal Catalysts	\$ 661,965	\$ 561,965	\$ 100,000	\$	\$ 100,000
Totals			\$ 3,000,270	\$ 2,461,318	\$ 538,952	\$	\$ 100,000
Leverage Factor 2009			5:1				

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Proposal #	Department	Research Topic	Total Research Funds	Outside Granting Agency Funds	SER Obligation	SER Payments	Remaining Obligation
2010							
10-001	Civil Engineering	Enhanced Production of Biogenic Natural gas From Coal	\$ 574,855	\$ 522,055	\$ 52,800	\$	\$ 52,800
10-003	Geology	A Geochemical and experimental Evaluation of Geologic co2-so2 Co-Sequestration	\$ 300,000	\$ 200,000	\$ 100,000	\$ (100,000)	\$ -
10-004	Physics	Quantum Dot Sensitized Solar Cells Based on Ternary Oxide Nanowired for Space Energy Applications	\$ 1,854,596	\$ 1,679,596	\$ 175,000	\$ -	\$ 175,000
10-009	Chemical Engineering	Cost-effective Gasification of Wyoming Coal With the help of Nano-Dispersion Catalysts	\$ 400,000	\$ 300,000	\$ 100,000	\$ (100,000)	\$ -
10-010	Economics	Understanding the determinants of Energy Investment under the Clean Development Mechanism	\$ 284,322	\$ 190,606	\$ 93,716	\$	\$ 93,716
10-017	Physics & Astronomy	Novel Thermoelectric materials for energy conversion and harvesting	\$ 940,502	\$ 752,269	\$ 188,233	\$	\$ 188,233
10-018	Civil	Using a Novel Pervaporation-Based Irrigation Technology	\$ 613,421	\$ 515,326	\$ 98,095	\$	\$ 98,095
10-019	Chemistry	A Microchip based portable Fuel for Actuating Microfluidic Devices	\$ 659,724	\$ 559,724	\$ 100,000	\$	\$ 100,000
10-021	Renewable	Habitat and Population Evaluation for Greater Sage-Grouse in the Simpson Ridge Winde Resources Area, Wy	\$ 40,000	\$ 27,500	\$ 12,500	\$ (12,500)	\$ -
10-023	Physics	Quantum Dot Sensitized Solar Cells Based on Ternary Oxide Nanowired for Space Energy Applications	\$ 949,706	\$ 849,706	\$ 100,000	\$	\$ 100,000
10-025	Geology	Co-Optimization of CO2 Storage & Brine Disposal for Commercial-scale Carbon Capture & Storage in a Deep Saline Aquifer	\$ 181,663	\$ 129,563	\$ 52,100	\$	\$ 52,100
10-027	Math	Sturcultural Integrity of Slaine Aquifers Subject to Co2 Injection Coupled to Geomechanical deformation	\$ 731,229	\$ 609,853	\$ 121,376	\$	\$ 121,376
10-028	Chemistry	Polmers & quatun Confined Systems into Semiconduction Oxide Single Crystals	\$ 1,141,254	\$ 953,464	\$ 187,790	\$	\$ 187,790
10-029	Geology	Fracture characterization of the south central Seminoe Mountains, WY	\$ 9,000	\$ 6,000	\$ 3,000	\$ (3,000)	\$ -
10-030	Plant Sciences	Developing weed management strategies to improve desirable species establishment in reclamation of disturbed lands	\$ 260,000	\$ 175,000	\$ 85,000	\$	\$ 85,000

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10-036	Chemical Engineering	Electroautotrophic conversion of CO2 into energy dense liquid fuels via engineered cyanobacteria	\$ 300,000	\$ 200,000	\$ 100,000	\$	100,000
10-037	Chemical Engineering	Modeling of improved recovery of heavy oils by down hole electromagnetic heating	\$ 89,640	\$ 67,320	\$ 22,320	\$	22,320
10-038	Plant Sciences	A facility for study of photosynthetic carbon sequestration & flue gas remediation at Mountain Cement Corporation	\$ 90,000	\$ 60,000	\$ 30,000	\$	30,000
10-045	Wyoming Geographic Information Systems	Research & Development of a GIS-Based Wildlife Resource Management & Mitigation Decision Support System Tool	\$ 302,952	\$ 226,476	\$ 76,476	\$	76,476
10-048	Mechanical Engineering	Synthesis & Characterization of Novel Nanostructured Polymeric Membranes for the Management of Produced & Hydraulic Fracturing Waters	\$ 545,129	\$ 448,868	\$ 96,261	\$	96,261
10-051	Pharmacy	Wyoming Energy & Extractive Industries Health Care Education & Research Project	\$ 300,000	\$ 200,000	\$ 100,000	\$	100,000
10-052	Geology	An open-Access 3D Seismic Survey of a Methane Gas System on the Cascadia Margin	\$ 724,018	\$ 628,710	\$ 95,308	\$	95,308
10-054	Geology	Time-lapse monitoring of carbon sequestered deep saline aquifers using passive seismic data	\$ 1,797,883	\$ 1,595,085	\$ 202,798	\$	202,798
Totals			\$ 13,089,894	\$ 10,897,121	\$ 2,192,773	\$	1,977,273
Leverage Factor 2010			5:1				
\$	-						
Total Research Funds Sought - All Years							23,466,535
Total Remaining Commitments - All Years							\$ 2,077,273
Total Captured Research Dollars to Date							\$ 9,031,967
Total available Research Dollars							\$ 23,466,535
Uncaptured Research Dollars							\$ 14,434,568