



Department of Commerce

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State Energy Program (ARRA Formula Grants)

Round 1 and 2 Competitive Awards

Round 3 Reallocations

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Round One Awards with Successfully Negotiated Agreements (October 2009)

Nineteen projects were awarded funds from among 121 applicants. Six recipients have chosen to not accept their awards. Successfully negotiated agreements include:

- **Barr-Tech, LLC**
Project: Anaerobic digester
Award: \$2,000,000 (\$1,500,000 loan / \$500,000 grant)
(Lincoln County) Project involves and anaerobic digester for processing local food waste. Estimating 117 permanent and 41 temporary jobs, and leveraging \$9.7 million in additional funding.
- **Cedar Grove Composting**
Project: Food and yard waste anaerobic digester
Award: \$1,000,000 grant
(King County) Project involves food and yard waste anaerobic digester. Estimating four permanent jobs and 24 temporary jobs, and leveraging \$8 million in additional funding. Largest single dedicated yard waste composting facility in the U.S.
- **Farm Power Lynden, LLC**
Project: Manure digester to produce electricity
Award: \$1,063,000 grant
(Skagit County) Project involves developing a manure digester to produce electricity and excess hot water for use in on-site greenhouse. Estimating 24 permanent and 44 temporary jobs, and leveraging \$3.5 million in additional funding.
- **Federal Way, City of**
Project: Energy efficiency project
Award: \$223,000 loan
(King County) Project involves the City Hall energy efficiency project. Estimating one permanent and ten temporary jobs, and leveraging \$323,000 in additional funding.



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- **General Biodiesel**
Project: Biodiesel plant expansion
Award: \$1,000,000 loan
(King County) Project involves general plant expansion. Estimating 60 permanent and nine temporary jobs, and leveraging \$10 million in additional funding.
- **GR Silicate Nanofibers and Carbonates**
Project: Nanomaterials to reduce greenhouse gas emissions
Award: \$1,400,000 million loan
(King County) Project involves use of nanomaterials to reduce greenhouse gas emissions by capturing CO₂ gas from Grays Harbor Paper flue gas and converting to calcium carbonate for use in paper. Estimating fifteen permanent and 280 temporary jobs, and leveraging \$5 million in additional funding.
- **Green Energy Today, LLC**
Project: Columbia Basin Renewable Energy Project
Award: \$898,000 grant
(Franklin County) Project involves Columbia Basin Renewable Energy project that will utilize an irrigation canal for hydropower. Estimating 33 permanent and 14 temporary jobs, and leveraging \$3.5 million in additional funding.
- **MacDonald-Miller Facility Solutions**
Project: Utility-based energy efficiency project development and finance program
Award: \$1,500,000 loan
(King County) Project involves the Seattle Steam Company's utility-based energy efficiency project development and finance program. Estimating six permanent and 22 temporary jobs, and leveraging \$12 million in additional funding.
- **NCS Power, Inc.**
Project: LED manufacturing
Award: \$2,000,000 loan
(Clark County) Project involves relocating LED manufacturing. Estimating 290 permanent and 90 temporary jobs, and leveraging \$6.9 million in additional funding.
- **Port Townsend Paper Corporation**
Project: Biomass cogeneration plant
Award: \$2,000,000 grant
(Jefferson County) Project involves a biomass cogeneration plant that will generate energy from solid organic fuels such as wood waste and logging debris. Estimating 290 permanent and 108 temporary jobs, and leveraging \$53 million in additional funding.



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- **Renewal Energy Composite Solutions, LLC**

Project: Repurpose boat manufacturing plant for small wind turbine production

Award: \$1,000,000 grant

(Clark County) Project involves repurposing a portion of a boat manufacturing plant for small wind turbine production. Estimating 101 permanent and 99 temporary jobs, and leveraging \$5 million in additional funding.

- **Seafreeze, Inc.**

Project: Energy efficiency upgrades

Award: \$561,862 loan

(King County) Project involves energy efficiency upgrades for a cold storage facility. Estimating three temporary jobs, and leveraging \$1.1 million in additional funding.

- **SGL**

Project: Energy efficiency project

Award: \$2,000,000 grant

(Grant County) Project involves an energy efficiency project. Estimating 80 jobs and leveraging \$100 million in additional funding.

- **Sirti**

Project: Clean technology growth funding

Award: \$250,000 loan

(Spokane County) Project involves clean technology growth funding. Estimating 186 permanent and 106 temporary jobs, and leveraging \$2 million in additional funding.

- **Venoil, LLC**

Project: Biorefinery in Anacortes

Award: \$500,000 loan

(Skagit County) Project involves creating a biorefinery in Anacortes. Estimating 18 permanent and 19 temporary jobs, and leveraging \$900,000 in additional funding.

Round Two Awards with Successfully Negotiated Agreements (March 2010)

Thirteen projects were awarded funds from among 47 applicants. Three recipients have chosen to not accept their awards. Successfully negotiated agreements include:

- **AltAir Fuels, LLC**

Project: Advanced biofuels refinery

Award: \$2,000,000 grant



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(Office in King County, production in Skagit County, and feedstock from Eastern Washington) Alt Air Fuels LLC plans to produce biofuels for airplanes from Camelina oil. The production will be at the Tesoro refinery in Anacortes and connect into the main northwest fuel pipeline. This project will create 350 engineering and construction jobs, 20 permanent jobs in operations and maintenance, and 107 permanent and seasonal agricultural jobs.

- **Borgford Bioenergy**

Project: Kulzer BioEnergy Park

Award: \$771,406 (\$539,984 loan / \$231,422 grant)

(Stevens County) Gasification of wood waste for biopower. Also produces soil amendment ("biochar") to enhance wheat production in northeast counties. Creates or retains 27 jobs.

- **Center for Advanced Manufacturing Puget Sound (CAMPS)**

Project: Supply and manufacturing retool

Award: \$1,000,000 grant

(Office in King County, support for members in other counties) CAMPS is an organization of traditional suppliers to the aerospace, marine, and transportation industries. This project will provide support to enable members to collaboratively retool and diversify to advance innovation in the wind and solar markets. This will increase the local production of parts. This project will provide an estimated 212 jobs during the three-year life of the contract.

- **Clark Public Utilities**

Project: WaferTech free cooling for process cooling water

Award: \$402,000 (\$282,000 loan / \$120,000 grant)

(Clark County) Project will install a new process water cooling system that incorporates evaporative cooling via newly installed cooling towers. Project will cut energy consumption for process water cooling in half, resulting in more than 5 million kWh per year savings and estimated \$250,000 per year. This will be the single largest energy conservation project in Clark County. Estimating that 900 jobs will be retained at WaferTech.

- **Demand Energy Networks**

Project: Distributed electricity storage devices and network management software

Award: \$1,500,000 grant

(Spokane County) Demand Energy Networks has developed electricity storage devices that are monitored, managed and controlled by network management software. The project will accelerate commercialization and deployment of the storage units and commercialize the software for large scale applications. Estimating that 93 jobs will be created or retained.

- **FPE Renewables, LLC**

Project: Vander Haak anaerobic digester

Award: \$320,000 (\$224,000 loan / \$96,000 grant)



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- (Whatcom County) Enhances the capacity and performance of an existing digester, doubling power output to provide clean energy to an additional 200 homes. Other partners include Northwest Farm Credit Services, USDA Rural Development and WSU. Estimating that three new jobs will be created.
- **Gen-X Energy Group, Inc.**
Project: Phoenix advanced biofuels refinery project
Award: \$720,000 grant
(Franklin County) Supports construction of the first unit of a biodiesel refinery in Richland. The grant will fund the manufacture and installation of a new technology biodiesel module. The new technology significantly reduces costs through process simplification and heat integration; simplifies permitting and reduces emissions. Also allows access to the technical-grade glycerol market for the refinery byproduct (glycerol). Estimating that ten permanent jobs will be created.
 - **LeMay Enterprises**
Project: Natural gas refuse truck deployment
Award: \$931,422 (\$700,000 loan / \$231,422 grant)
(Pierce County) LeMay will purchase new diesel waste collection trucks and convert them to compressed natural gas, and install a compressed natural gas refueling station for their fleet. Funding will help cover the incremental cost of truck conversions and help with part of the refueling station cost. Project will enable LeMay to take first step in their strategy of converting most of their 100-truck fleet to compressed natural gas. Project could save about one million gallons of petroleum diesel over the lifetime of 10 trucks, while achieving significant reductions in greenhouse gas emissions. Supports 35 jobs during the conversion phase and retain 18 permanent jobs.
 - **Nippon Paper Industries**
Project: Port Angeles co-generation biomass boiler
Award: \$2,000,000 (\$1,400,000 loan / \$600,000 grant)
(Clallam County) This project replaces an existing process steam boiler with a new biomass boiler and adds a 20 MW condensing turbine-generator. The new generator is expected to operate at 90% of capacity 355 days a year. It allows increased use of forest byproducts as fuel qualifying the project as a biomass combined heat and power generator under most western renewable portfolio standards. The Washington State Department of Natural Resources is expected to be a major supplier of forest waste products for the new plant. The addition of generation capacity in this part of the state will provide an additional resource in a capacity constrained portion of the grid. Estimating that 234 jobs will be retained at the mill and ten jobs will be added during the conversion phase.
 - **Rainier Biogas, LLC**
Project: Anaerobic digester
Award: \$1,392,500 (\$974,750 loan / \$417,750 grant)



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(King County) This project will install an anaerobic digester that will process dairy manure from over 1,000 cows at three dairy farms on Enumclaw Plateau. The digester will produce 3,582 MWh biopower, enough to serve over 300 area homes. Four jobs created during implementation phase, and four permanent jobs. This project will provide a model for addressing long-standing King County concerns about water quality in east county watersheds.

Round 3 Reallocation (August 2010)

Funding awarded to grantees that opted out in rounds one and two was reallocated to 12 highly qualified projects in a non-competitive third round. Negotiations continue, and all contracts are expected to be fully executed by September 2010. Projects include:

- **Cascade Community Wind**

Project: Community Wind Turbines

Award: \$1,000,000 (\$700,000 loan / \$300,000 grant)

(Kittitas and Whatcom Counties) CCWC plans to install eight mid-scale wind turbines funded by, and financially supporting, communities in Kittitas and Whatcom counties. They are working with utilities, agencies, lenders, vendors, service providers and the public to remove barriers to development of community-supported wind, a replicable model found throughout Europe and several Midwestern states. CCWC has nine wind leases on land capable of supporting more than 16 turbines. All eight turbines included in this project already have power purchase agreements with Puget Sound Energy.

- **EnerG2**

Project: Ultracapacitors for Electric Vehicles

Award: \$1,800,000 (\$1,260,000 loan / \$540,000 grant)

(King and Franklin Counties) Grant will support Phase 3 of EnerG2's aggressive growth plan. The company's technical foundation rests on proprietary synthesis of carbon-based nanomaterials that radically improve the performance of energy storage devices, specifically, vehicular ultracapacitors. Phase I was fueled by investment of venture capital, DOD SBIR funds, and WA Technology Center sponsorship. The results convinced DOE in 2009 to fund 2/3 of a new nano-carbon manufacturing plant to be built by September 2011. The project plan will (1) develop an ultracapacitor electrode optimized for EnerG2's unique nanostructured carbon and large format storage devices, and (2) design and specify the product to be mass manufactured in a new plant tentatively sited in Pasco, WA. This product will be a large format can-shaped high-performance ultracapacitor that will fit into future electric drive vehicle power modules. Its development will require build-out of a \$1.17M pilot-scale ultracapacitor assembly line in Seattle.

- **Inland Empire Oilseeds**

Project: Biodiesel Production Expansion

Award: \$460,000 loan



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(Lincoln County) Based in Odessa, IEO is the state's most successful oilseed-based biodiesel producer. Owned by two cooperatives representing 1,400 farm families, they are in the midst of repaying a \$3.5 million Energy Freedom loan from WSDA. Their present production capacity is only 1 million gallons/year due to three bottlenecks in their production line. Resolving these will increase production to 8 million gallons/year. They are confident the Washington and Oregon markets will readily absorb the increased volume. This loan would add oil bleaching to remove residual soap in their degumming system, expand their glycerin filtration capacity and modify their methanol recovery process.

- **Kadlec Regional Medical Center**

Project: Medical Center Efficiency Retrofit

Award: \$200,000 (\$1,400,000 loan / \$600,000 grant)

(Franklin County) The project would implement a number of energy efficiency and renewable energy production components, including solar thermal hot water, a 20 kW solar PV array, a 5 kW wind turbine, and various energy system optimization upgrades. Given the facility's high visibility in the community, it provides a strong opportunity for outreach and education about clean energy solutions.

- **Sirti Foundation**

Project: Clean Energy Innovation Fund

Award: \$500,000 loan / \$750,000 grant

(Spokane County) Project involves clean technology growth funding.

- **Snohomish County Public Utilities District**

Project: Water System Microhydro

Award: \$153,600 grant

(Snohomish County) The PUD seeks to modify a pressure-reducing valve in their water distribution system to produce hydroelectric power, and make the project design replicable for other water system managers. The project is projected to generate 220 kW, enough to power 170 average homes, and have an exceptionally long lifespan (50-100 years).

- **Van Dyk Dairy**

Project: Anaerobic Digester

Award: \$731,000 loan / \$313,000 grant

(Whatcom County) DariTech, a major service provider for the dairy industry based in Lynden, has long sought to enter the digester business. This project would bring state-of-the-art technology to the region, and potentially offer a less expensive approach to manure management and biogas production. The gen set would produce 450 kW of power. Their proposal was the first below the cut-off line in the second round Waste-to-Energy category.



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- **Washington State Department of General Administration**

Award: \$1,034,496 grant

(Thurston County) The Department of General Administration will coordinate energy efficiency work in state buildings. The first building update will be the old capital building in Olympia, currently housing the Office of the Superintendent of Public Instruction.

- **Washington State Department of Transportation**

Project: Interstate Electric Vehicle Infrastructure Project, I-5 and I-90

Award: \$1,320,000 grant

(Thurston County) This project will deploy ten grid-enabled vehicle (GEV) charging stations along I-5 and I-90: two high-speed chargers between Seattle and the Oregon border, one between Seattle and the Canadian border, and one in central Washington. Two medium-speed chargers will be installed at gateway rest areas on I-5. Four other chargers will be installed in locations determined by a UW analysis of GEV driver experiences. WSDOT is expected to contribute \$500,000 to \$650,000 in federal funding. This funding supports the vehicle electrification goals of HB 1481.

- **Washington State University Bio Systems Engineering**

Project: Commercialization of Nutrient Recovery from Anaerobic Digestion

Award: \$500,000 grant

(Whatcom and Yakima Counties) WSU's Center for Bioprocessing and Bioproducts Engineering is commercializing nitrogen and phosphorus recovery technology for anaerobic digestion. They've been working with research and industrial collaborators for the last seven years, and have developed patents and licensing agreements of international significance. This grant would serve as match funding for a \$1.5 million Natural Resources Conservation Service (NCRS) Conservation Innovation Grant proposal to incorporate the technology into the two most established digesters in the state: Vander Haak (Whatcom) and DeRuyter (Yakima). The result will be Class A biosolids using only waste engine heat, removal of 80% of phosphorus in solid form, and removal of 60% of total nitrogen (primarily ammonia) as biofertilizer slurry. These co-products displace mined or petroleum-based fertilizers that have significant imbedded energy costs. The process also scrubs H₂S, reducing corrosion on biogas turbines, all at a cost substantially less than competing Danish technology.

- **Washington State University Extension Energy Program**

Project: Blower Door Training and Equipment

Award: \$170,000 grant

(Thurston County) The newly adopted version of the Washington State Energy Code requires that all new homes be tested for air leakage control. To ensure successful code implementation, builders and subcontractors need access to blower door equipment and operational training. Through a competitive process, 40 geographically distributed candidates will be selected to participate. Candidates who pass a proficiency test will be granted blower door test equipment, which may be sourced from a Washington State manufacturer (RetroTech, Everson). This project



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will also help participants take an active role in the proposed federal HomeStar program. We expect most of the equipment and training to be directed to rural and smaller code jurisdictions. With the delay in implementation of the energy code adding the training and tools for local jurisdictions may be even more valuable as a way to ensure the code is rapidly and cost-effectively implemented when it comes into force.

- **Whole Energy Fuels**

Project: Biodiesel Refueling Infrastructure

Award: \$165,000 loan

(Skagit County) Whole Energy provides biodiesel-blended fuel to the Anacortes market, including the contractor responsible for delivering fuel to Washington State Ferries. Whole Energy submitted a second round SEP request for in-line blending equipment, but it was not ranked because the request was too modest. This loan will increase availability of biodiesel blended to state fuel procurement contract specifications, increase the market for locally produced biodiesel, and reduce the cost of providing biodiesel to ferries.