

CAL FIRE Business and Workforce Development Grant Applications -- 2023 Q1					Disclaimer: This roster includes all eligible and ineligible project proposals.
Project Type	Applicant	Project Name	County	Requested Funds	Project Description
Biomass Transportation Subsidy	Sierra Institute for Community and Environment	Biomass Transport Subsidy for Community-Scale Wood Utilization	Plumas Shasta Yuba	\$ 4,999,988	Sierra Institute for Community and Environment proposes to use biomass transportation funds to support regional collaborative groups--the South Lassen Watersheds Group (SLWG), Burney-Hat Creek Community Forest and Watershed Group (BHC), Camptonville Community Partnership (CCP), and others--in connecting forest restoration projects to community-scale wood utilization infrastructure. Collaborative groups are planning and implementing high-priority, large-scale, multi-jurisdiction projects to improve forest and watershed health and reduce wildfire risk. Collaboratives will connect these projects to existing and developing community-scale wood utilization infrastructure and campuses. Sierra Institute will provide project management support and work with collaborative groups through the Sierra to California All Lands Enhancement (SCALE) project, to transport forest products to processing facilities, supporting hazardous fuels reduction, reforestation, and community-scale wood utilization.
Biomass Transportation Subsidy	Collins Pine	Collins Almanor Forest Biomass Removal Transportation Project	Plumas Tehama	\$ 4,994,800	With funding from this grant, Collins will remove biomass (chips) from 3,000 acres of land burned in the Dixie Fire. This grant will cover the cost of transporting the biomass to Honey Lake Power to be used as fuel. Removal of this biomass will allow Collins to prep the land for reforestation.
Biomass Transportation Subsidy	Community Renewable Energy Services, Inc.	Dinuba Energy Biomass Power Plant Transportation Subsidy Program	Tulare	\$ 4,232,960	The Dinuba Energy Power Plant Transportation Subsidy Program will support resuming operation of an idled 11.5MW facility and implementing a co-located landscape mulch operation by November 2023. Business Transportation Subsidy funds will bridge the gap between the actual costs to transport forest-based cull and submerchantable logs to the facility and what the facility can support given start-up costs and projected income and expenses. The proposed project will result in the purchase of 50,000 BDT/yr of forest-sourced logs, restoration of 4,500 acres/yr, 12 indirect jobs, and manufacture of 26,000 BDT/yr of mulch for wholesale distribution. This project will quickly expand the wood infrastructure servicing the Southern Sierra Nevada, and catalyze the region's fire recovery and forest health efforts.

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Biomass Transportation Subsidy	Hat Creek Bioenergy LLC	Hat Creek Bioenergy Biomass Transportation	Shasta Sonoma Yolo	\$ 5,000,000	Hat Creek Bioenergy LLC, in partnership with West Biofuels and Peterson Timber Inc., is seeking funding to subsidize the transportation of woody biomass from forest restoration operations in the Shasta-Trinity National Forest and other public and private timberlands to their gasifier in Burney, California. The project will show how transportation subsidies can support restoration efforts and incentivize the creation of new bioenergy facilities and the expansion of existing ones in areas where feedstock supply exceeds demand. In alignment with the program goals, the project will increase the acreage of forest currently treated by helping create new markets for residual biomass, and use 35,000 bone dry tons of low-value biomass that would otherwise be piled and burned to generate energy annually.
Biomass Transportation Subsidy	Lignum Support LLC	Lignum Support California Biomass Transportation Subsidy	Statewide	\$ 5,000,000	The project will aim to utilize transport subsidy monies to recover scalable volumes of biomass feedstock from forest health and wildfire resiliency projects as well as roadside hazard reduction projects on state, federal, and private forest lands. The subsidy will directly enable projects to execute and move biomass from locations otherwise not capable due to cost of transport to Lignum new markets and where applicable existing markets, further allowing support off take volumes for the execution of projects on the ground supporting the 1 million acres treated goal for forest health and wildfire resiliency.
Biomass Transportation Subsidy	Pacific Ultrapower Chinese Station	Pacific Ultrapower Chinese Station Transportation Grant Application	Tuolumne	\$ 5,000,000	The grant funding would be utilized to load and transport biomass from the origination of the hazardous wood fuels to Pacific Ultrapower Chinese Station (PUCS) for the purpose of producing renewable electricity. PUCS would pay up to \$45 dollars per bone dry ton for the cost of processing as well as a portion of the loading and transportation with the grant covering the additional cost of loading and transporting.
Biomass Transportation Subsidy	Scotts Valley Band of Pomo Indians	Scotts Valley Regional/Equitable Forest Biomass Incentive Program	Lake Mendocino	\$ 1,200,199	Scotts Valley Band of Pomo Indians (SVBPI) proposes a 4-year incentive program that will provide tonnage level incentive payments to support and rapidly advance the transport of forest derived biomass across Lake County and portions of Mendocino County, California. Targeting high priority regions, the project will help to alleviate historic buildup of excessive fuel in our region's forests. Moreover, SVBPI will leverage the proposed funding to help drive additional outputs and end use markets for forest derived biomass in the target region. The proposed incentive program will alleviate a critical existing bottleneck that currently dampens our region's ability to make forest fuels reduction efforts economically viable, while supporting bioenergy development, local jobs, and equitable Tribal participation in forest management.

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Biomass Transportation Subsidy	Shasta-Sustainable Resource Management	Shasta-Sustainable Resource Management Biomass Transportation Subsidy	Shasta Siskiyou Tehama	\$ 5,000,000	Shasta-Sustainable Resource Management (SRM) is a 50 MW biomass facility with over 30 years of stable operations in Anderson, CA. Rising costs have made it difficult for SRM to procure sufficient volumes of forest-derived biomass at a financially viable price. SRM proposes to use CalFire's Biomass Transportation Subsidy to contract a variety of biomass procurement projects that, together, will prepare post-fire lands for reforestation, remove residual piles from completed forestry projects, support the continued operation of SRM, and create a more viable opportunity for the expansion of biomass utilization at SRM. These projects are located throughout Northern California and will generate approximately 90,928 BDT of biomass for conversion to renewable energy at SRM, while facilitating forest treatment of 12,507 acres.
Biomass Transportation Subsidy	Woodland Biomass Power, LLC	Woodland Biomass Transportation Expansion Project	Yolo	\$ 2,540,853	Woodland Biomass Power, LLC, a 28 MW wood fired power plant located in Woodland, CA, is applying for the biomass transportation subsidy to support the movement of 55,000 BDT from tier 1 and tier 2 priority landscape areas and Sustainable National Forest areas to the power plant. WBPL has identified four suppliers who have high hazard material available, but for which the transportation charges to move the material to the power plant are cost prohibitive. Much of this material would otherwise be disposed of by burning in the forest. WBPL offers a more controlled, lower emission alternative to this disposal method.
Business Development	Alpenglow Timber LLC	Alpenglow Timber Log Sorter Project	Nevada	\$ 637,030	There is a severe lack of wood product infrastructure in the Lake Tahoe-Truckee region to take material generated by forest health and hazardous fuel reduction projects. Without an outlet, management activities have slowed, jeopardizing forest health, wildfire risk and the forest economy. Alpenglow Timber LLC will address this need by establishing a new 5.4 MMBF sawmill and associated wood energy system that will produce kiln-dried lumber and firewood and provide district heating to commercial and residential units. The requested funding will support a portion of the automated log sort system that will increase log handling and processing efficiencies by 20%, for a gain of 0.9 MMBF lumber produced (3,450 BDT).

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Business Development	High Desert Lumber LLC	Alturas Lumber and Dowel Mill	Modoc	\$ 500,000	High Desert Lumber LLC proposes the expansion of a minimally operational mill site as a blended lumber/dowel operation, resulting in full utilization of logs and extraction of maximum value from a tree, therefore allowing the mill to pay a per load price that supports forest restoration. The mill's ability to take wood as small as 3.0" diameter creates a local market for small trees and tops removed from nearby overstocked timber stands. This request would support the upgrade of a deficient sprinkler system in the mill. There are no sawmills currently operating in Modoc County. Thousands of nearby acres are overstocked and the dowering operation will create a viable market for the material where now virtually no market opportunity exists.
Business Development	Biogas Energy	Biogas Energy Upscale Thermochemical Conversion Business Development	Placer	\$ 350,000	Biogas Energy will re-design its thermochemical conversion technology to increase throughput from 20 tons/day to 200 tons/day, converting biomass into bio-oil or hydrogen. Using this re-design, Biogas Energy will develop a forest-biomass-to-fuel project in Placer County as the first of a network of facilities throughout California.
Business Development	Carbon C2, LLC	Biomass Removal Plant, funded by C2 Forest Conservation Fund	Alpine El Dorado Humboldt Mendocino Modoc Nevada Placer Shasta Sierra Stanislaus Trinity Tuolumne Yuba	\$ 500,000	Our innovative financial model creates a direct pathway for corporations to finance forest conservation and resilience. We combine finance with technology to create projects that accelerate large-scale improvements in hazardous fuels removals that protect brownfield communities from wildfire and restore forests. Our efficient, movable biomass plants enable forest best-practices that eliminate pile-burning and leave-in-forest pollution. We attract private investments and bring corporations into conservation finance by leveraging climate-change value of captured biomass carbon, eliminating transportation costs, and generating renewable energy. We facilitate financing of commercially-proven, USA-made, modular biomass plants that increment capacity in 100K units, located near thinning and hazard projects, where forest stewardship partners need them. Together, we minimize transportation and maximize contributions from credit markets to fund removals.

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Business Development	Mote, Inc.	Business Development 2023 Q1 - Mote KC1	Fresno Inyo Kern Los Angeles Madera San Bernadino Tulare Ventura	\$ 2,000,000	Mote is seeking funding to assist in business development of its uniquely integrated biomass gasification facility in located in Kern County California to utilize forest wood waste for the production of carbon-negative hydrogen with geologic Carbon Dioxide (CO2) sequestration. Mote's facility will support feedstock businesses located in Kern,, Tulare, Fresno, Madera, Inyo, San Bernadino, Los Angeles, and Ventura counties, many of which are considered high priority disadvantaged/low income areas by and reduce wildfire risk to forest ecosystem services. CalFire. The project focuses on the progression of activities to support legal services required to execute agreements, subcontract and completion of the gasification Process Design Package, site specific pre-FEED, and activities and complete all permitting applications required for this innovative bioenergy facility.
Business Development	Earthworks Biochar LLC	Business Plan Preparation for Earthworks Biochar LLC	Madera	\$ 103,271	This request is for funding to create a business plan for Earthworks Biochar, a subsidiary of Phoenix Energy. The plan would be the basis for a future Business Development grant application under this program. We are requesting funds for a 6-month period to define markets, hire technical assistance to develop several potential markets (water filtration, roadbed composition, etc.), and to write a detailed and comprehensive business plan for the biochar market. Phoenix Energy's first community-scale biomass gasification plant is scheduled to go online in June 2023. It will produce ~2,000 metric tons of biochar each year. These quantities will require expanded, well-defined agricultural and other markets and applications for this valuable material be utilized. This business plan will provide that.
Business Development	Cascade Custom Cutting	Cascade Forest Health Business Development	Modoc Shasta Siskiyou Trinity	\$ 90,000	Cascade Custom Cutting will purchase a used tracked bulldozer (Caterpillar D6N XL or equivalent) which would increase safety, accessibility, and productivity of forest health projects throughout Siskiyou, Shasta, Trinity, and Modoc counties. Purchasing this equipment will allow for road improvement and construction for biomass chipping operations in locations that were once inaccessible. This equipment will also provide the necessary state and federal fire safety requirements for onsite fire equipment, allowing hot saw operations to continue later into the fire season. Finally, equipment will create skid trails to areas inaccessible to track-type feller bunchers and rubber tire skidders, allowing thinning treatments to occur in locations that would otherwise be left untreated.

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Business Development	Left Coast Land Clearing	Chipper and Chip Truck	Tuolumne	\$ 60,000	Left Coast Land Clearing is looking to expand its capacity by purchasing a chipper and chip truck to augment implementation of its forest fuel reduction workload, present and future. The Company's primary method of fuel-reduction is mastication, and the addition of a chipper will help lower costs and increase efficiency when it comes to terrain that is inaccessible by tracked equipment. The Company currently has over 2,000 acres of fuel-reduction projects under contract, with the largest contract (~1,000 acres) being one that will employ this new equipment to see an important roadside fuelbreak completed more quickly, safely, and effectively than if a traditional hand crew were to be required in areas inoperable by company masticators.
Business Development	Hago Energetics Benefit Corporation	Clearing the Forest using a Novel Method to Generate Hydrogen	Butte Madera Ventura	\$ 499,950	This project is about clearing the forest using a novel technique for utilizing residual forest wood. We plan on converting residual wood or even partially burned wood into biochar and subsequently use this biochar to convert biomethane to biohydrogen. This project is about bringing new jobs to the forest sector and tying different industries which are presently disconnected. Our project is a business development project that will be utilizing waste forest material from two sites: one near Paradise and another near Chowchilla . This project is a feasibility study which will demonstrate hydrogen production from wood products and will lay to groundwork for significant scaling of this approach to eventually clear thousands of tons of residual wood materials.
Business Development	Kodama Systems	Commercially Viable and Climate Positive Residue Utilization via Wood Vaults	Mono	\$ 409,961	Kodama is requesting funding to demonstrate its wood vault carbon storage technology, a near-term solution for removing the surplus of residual piles from completed forestry projects and generating value for premium carbon dioxide removal (CDR). Kodama will construct a pilot wood vault, monitor carbon storage, and generate premium CDR credits using 4500 green tons of residues removed from the Dry Creeks Thinning Project near Mammoth Lakes, CA. By the end of the pilot project (Q4 2025), Kodama will demonstrate a pathway to commercially viable residue removal via wood vault CDR, for which we already have a \$250K purchase option contract from Frontier Climate. At this time, Kodama will be ready to scale up to service thinning projects on Priority Landscapes.

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Business Development	Caribou Biofuels	Deployment, Optimization, and Validation of the Caribou Mobile Biorefinery Platform	Sacramento San Joaquin Shasta Stanislaus	\$ 500,000	This project is a R&D Business Development grant. We will conduct R&D and related optimization efforts to demonstrate that the CARIBOU mobile platform is a viable technology ready for deployment in CA and validate that the biofuels generated can serve as drop-in renewable blendstocks suitable for use in diesel engines. This project will catalyze future sales of the CARIBOU mobile biorefinery platform and will increase both its marketplace impact and environmental benefit to CA. We will also obtain ASTM certification through SWRI for the biofuels generated and determine if they can be used as a drop-in diesel fuel blendstock that can be used in equipment that uses the 300HP diesel engines, such as the FTX300 forestry mulching tractor.
Business Development	Arbor Energy and Resources Corporation	Detailed engineering for the construction of a 3MW biomass gasification facility in Placer County, CA	Placer	\$ 2,000,000	Arbor will coordinate the detailed engineering of a novel 3MW biomass gasification facility in Placer County, CA, focused on value-added opportunities for utilization of woody biomass generated as a byproduct of sustainable forestry management operations. We leverage torrefaction, compact entrained flow gasification, oxy-fuel combustion, and high-pressure turbo-expansion to create a first-of-its-kind biomass plant that will convert heterogeneous waste into carbon-negative power, capturing the associated carbon for sequestration. Our system can drastically change the economics of waste biomass utilization through monetizing carbon credits. Our final design will be an ultra-compact, modular unit that can be deployed in the region to reduce fuel loading, finance forest restoration, utilize the local workforce, and allow for energy resources to be harnessed by the community.
Business Development	Shasta Biofuels LLC	Development of a Commercial Scale Waste Woody Biomass to SAF Biorefinery in Anderson, California	Shasta	\$ 1,999,450	California is facing significant challenges on two important and interrelated issues: wildfires and greenhouse gas ("GHG") emissions. Both have major impacts on climate change. Wildfires in California have grown in size and severity over the past several decades and are damaging forest health and human health and safety, while also serving as a major GHG emissions source. In California transportation is the largest source of GHG emissions, accounting for 41% of total emissions. Shasta Biofuels LLC and its project partners propose to develop a 40 million gallon-per-year biorefinery in Anderson, CA to convert waste woody biomass, including post-fire charred residues, from non-federal forests into cellulosic, low-carbon sustainable aviation fuel and renewable LPG via gasification, Fischer-Tropsch refining, and upgrading technologies.

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Business Development	Fellow Farmers Environmental Consulting	Dinsmore Biomass Sorting and Transfer Station Phase 1	Humboldt	\$ 137,450	This proposed project would facilitate the removal, transportation and processing of biomass from fire-damaged public forest lands for the public good. The community will enjoy the dual benefits of job creation and ecological restoration, in addition to wildfire prevention associated with the fuels reduction. The R+D Business Development grant we are applying for will facilitate the conduction of a feasibility study, business planning and design for the revival of an old Mill Site to sort and/or process materials from the lands burned by the August Complex to be transferred to other facilities processing those materials, the community at large, and/or statewide wholesalers of milled woody products.
Business Development	Community Renewable Energy Services, Inc.	Dinuba Energy Biomass Power Plant Restart	Tulare	\$ 801,232	The Dinuba Energy Biomass Power Plant Restart Project will advance resuming operation of an idled 11.5 MW facility and implementing a co-located landscaping mulch operation. Business Development grant funds are requested for a new electric horizontal whole log grinder and spare parts to process cull and submerchantable forest-sourced logs. The proposed project will nearly double the existing grinding efficiency and support utilization of 50,000 BDT/yr of wildfire salvage and fuel reduction materials, restoration of 4,500 acres/yr, four new jobs and the manufacture of 26,000 BDT/yr of mulch for wholesale distribution. This project will enable Dinuba Energy to efficiently and safely process forest-sourced whole logs and support the rapid expansion of wood infrastructure servicing the Southern Sierra Nevada.
Business Development	Poly Shells LLC	Efficient, Economical and Elegant Timber Shells: Creating Fire Resistant and Seismically Resilient Structures	San Luis Obispo	\$ 455,500	We have created a robust workflow for the design of efficient and elegant plywood architectural structures, the likes of which have not been seen before. We foresee that our products will gain immediate recognition and consequently, this would increase the demand for plywood products, leading to increased sales for forest-sector businesses. Our structure are very special, they are curved in three dimensional space such that no bending and no tension develops anywhere on our structures. These structures are formed from regular polygons. One worker can easily manipulate a single polygon. This allows for rapid construction of beautiful and efficient plywood shell structures that have no nails, no glue, no clamps. Our structures are stiff, light, seismically resilient and fire resistant.

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Business Development	Eastside Iron Co.	Expanding capacity for forest and fuels management through business development, expansion, and organizational connectivity in the Eastern Sierra	Inyo Mono	\$ 1,139,900	Eastside Iron Co. proposes activities that are designed to support the launch of new business services. The proposed objectives are: (1) Build Eastside Iron Co.'s productive capacity for sustainable forest management for reducing wildfire risks with a particular focus on the Eastern Sierra; (2) Expand business agreements between Eastside Iron Co. and surrounding forest-industry businesses, state and federal institutions, and non-profit organizations to contribute to a robust local forest sector in the Eastern Sierra; and (3) Build capacity and diversify new and existing staff skills to create unique, well-paid employment opportunities in the region in sustainable forest management and wildfire prevention. Through this project, Eastside Iron Co. will create new jobs, build capacity, and contribute to a more resilient landscape.
Business Development	Left Coast Land Clearing	Feller-Buncher w Masticator	Tuolumne	\$ 744,767	Left Coast Land Clearing would like to purchase a feller-buncher with mastication head to add to the 3 masticators they already have. This machine will be equipped with a tethering hitch so The Company can eventually add steep-slope capabilities to the equipment lineup. The Company already has a felling head that can mate to a Timberpro for added capability. The Company recognizes the need to increase the pace and scale of landscape restoration efforts and is increasing capacity to help meet that need. With 2,000+ acres under contract, the need to expand operations is crucial and the company hopes to partner with CalFire on expansion.
Business Development	Taylor Energy	Forest Biomass Conversion to Hydrogen: Pilot Scale Techno-Economic Research and Development	Riverside	\$ 500,000	Pilot scale testing, development, and demonstration of an improved forest biomass gasification technology at 2-ton/day scale at UC Riverside, designed for conversion of biomass residues into renewable hydrogen for emerging transportation and pipeline uses. The advanced biomass gasification process is intensified by using pulse detonation derived acoustic power inputs at 30-Hz to improve the thermo-catalytic conversion process, enabling low-cost production of carbon negative hydrogen.
Business Development	Forestreet Collective	Forestreet Collective: Vertical Integration of Small Diameter Timber Manufacturing	Sonoma	\$ 40,000	Forestreet Collective utilizes small-diameter feedstock from forest restoration and fuel load reduction projects in Sonoma County to create primary and secondary wood products. We revitalized the shuttered G&S Sawmill and plan to franchise other locations in the future. We use the latest in milling and fabrication technology to maximize efficiency and profits to transform small-diameter timber into value-added products. Since 2021 we have built capacity to become vertically integrated - from forest to consumer. This grant will help us purchase a compact telehandler, which will enable us to move the large volumes of logs and lumber required to meet our projections. The grant will also help augment our marketing and outreach campaign to increase consumer demand for small-diameter wood products.

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Business Development	G.C. Forest Products, Inc.	G.C. Forest Products, Inc. Project	Mono	\$ 470,000	G.C. Forest Products, Inc. is a logging timber operator based in Mammoth Lakes, Mono County with more than 50 years of experience. The company requests grant funds to expand their in-woods fuel reduction operations to include a feller buncher. This equipment will significantly improve GCFP's capacity to harvest material, increase the pace and scale of restoration, and support their future pellet mill operations and the region's other emerging wood and biomass utilization facilities. The feller buncher will increase harvest volumes by up to 5 MMBF per year, improve worker safety, create two new jobs, and advance treatment of an additional 400 acres annually.
Business Development	Plumas Wood Fiber LLC	Horticultural Wood Fiber Production-Marketing and Technical Research	Plumas	\$ 19,608	This project will obtain needed marketing and technical information for creation of a new biomass processing facility in Plumas County Ca. The planned facility will produce horticultural wood fiber to replace peat moss. This project funds attendance at key agricultural events to locate buyers of the end product, to ensure a waiting market for the product once it becomes available. It also funds hands-on experience with the machinery that will produce the wood fiber, by visiting an operating facility. This project works in tandem with a feasibility study currently proposed to CalFire, titled Horticultural Wood Fiber Production- Research and Feasibility Study. This project begins the process of contacting contractual partners and determining the best equipment needed to supply their needs.
Business Development	Plumas Wood Fiber LLC	Horticultural Wood Fiber Production-Research and Feasibility Study	Plumas	\$ 145,622	The project is to complete scientific research and an economic feasibility study for development of a manufacturing facility in Plumas County to produce horticultural wood fiber from forest biomass, to be sold to the California horticultural industry as a replacement for peat moss. The facility would take chips from forest thinning and other forest management projects and process the chips into a fibrous material to substitute for peat moss in commercial nursery/greenhouse operations that require potting mix on a large scale. Science research will demonstrate that western wood species are compatible with the use, and an economic feasibility study will detail specifics of feedstock supply, operational costs, and marketability of the end product.

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Business Development	Kodama Systems, Inc.	Increased Labor Productivity via Semi-Autonomous Skidding	Tuolumne	\$ 431,615	Kodama Systems (Kodama) sees opportunity to improve labor productivity by automating low-complexity tasks (such as material transport), which enables skilled operators to focus on high-value tasks such as tree selection and merchandising. Kodama has already developed a skidder capable of remote operation and GPS waypoint following on open ground and is requesting funding to now develop skidder autonomy on remote forest management sites. Funding for this project will be used to develop software that enables a skidder to autonomously navigate skid trails without the need for a full-time operator and test these maneuvers at thinning sites. Anticipated impacts of this technology are improved labor productivity, lower cost of operation for logging companies, and greater scalability of thinning operations across forests.
Business Development	Kodama Systems, Inc.	In-Woods Connectivity: Operational Efficiency and Safety Improvements on Thinning Sites	Tuolumne	\$ 300,582	Kodama Systems (Kodama) is requesting funding to develop high-speed site connectivity and telemetry on remote forest management sites. Funding for this project will be used to develop software and hardware that enables machines to relay operational information to a landing site control center and establish communications redundancy for improved safety. Information such as machine locations will be shared between crew members and metrics such as acres treated will be reported to a web interface accessible by Cal Fire. Anticipated project impacts include increased thinning productivity and operational efficiencies that can scale across the industry. Additional impacts of these innovations include reduced costs for forest management contractors and economic development in nearby communities.
Business Development	Green Diamond Recourse Company	Korbel Nursery Capacity Upgrade 2023	Humboldt	\$ 500,000	Our California Timberlands Division manages the 400,000 acres of forestland in northwestern California with offices in Korbel, CA. The Korbel Nursery was built in 1974 and currently produces approximately 650,000 coast redwoods annually, supplying the Company's reforestation demands. The Korbel Nursery Capacity Upgrade grant request will go directly to projects designed at increasing the facilities potential seedling production to approximately 800,000, native conifer seedlings. A portion of the increased capacity will be made available for California landowners needing nursery space for wildfire restoration/reforestation efforts. The upgrades include replacing the original irrigation system, repair segments of the greenhouse steel framing, replace the greenhouse roofs and sides, install fans and heaters for better environmental calibration and repair worn pavement.

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Business Development	Earth Force Technologies	Lightweight Machinery to Support Hand Crews and Woody Biomass Extraction	Los Angeles San Bernadino Ventura Statewide	\$ 182,016	Earth Force will deploy three lightweight, remote operated "Iron Horse" machines to assist Forestry and Fire Recruitment Program (FFRP) field crews on fuels reduction and forest health projects on priority landscapes in Southern California. These machines will accelerate hand piling activities, the transportation of heavy supplies, and importantly, the economic viability of woody biomass extraction from remote and varied terrains. By using Iron Horse machines to extract woody biomass from remote sites, the Project will help increase commercial access to woody biomass for utilization, reduce industry-wide treatment costs, and reduce the number of open-air burns and subsequent emissions. Learnings from the Iron Horse demonstrations will be compiled into an FFRP training program, increasing FFRP's professional development offerings.
Business Development	Krempf Consulting	Market Analysis of Fuels Reduction Treatments in the Sierra Nevada	Statewide	\$ 157,320	Forest health treatments (fuels reduction, fuel break installation and maintenance, reforestation, herbicide, etc) treatments are becoming increasingly commonly executed by local nonprofits, RCDs, firesafe councils, and counties. There are many bottlenecks to implementing these treatments-- from NEPA and CEQA requirements to project planning and design, to solicitation and award of projects. This Market Analysis is designed to collect region, entity, and project specific data (bid and award prices) for each forest health treatment and provide quantitative and qualitative analysis of treatment costs by region over time. This Analysis will occur across 24 counties and will result in the creation of a Market Report that will be provided free-of-charge to grant funders, grant applicants, and implementation partners alike.
Business Development	The Cali Dozer Co.	Merlo to increase pace & scale of HHZ fuels removal in WUI	Butte	\$ 348,896	The WUI accounts for millions of acres of California Forest. Overlooked as a resource by industrial timber companies and generally not cost effective for biomass power generation, there is a lag in fuels removal compared to tree mortality. Through actual use and demonstration of equipment that is common on the east coast and midwest America we can help small scale LTO's work safer, reduce their costs, increase their volume of hazardous fuel removal all while opening up opportunities to sign feedstock and log agreements. This commercially available and scalable equipment will bring cost savings to land owners and stewards, resulting in more acres treated for every \$ spent on forestry in the California WUI.

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Business Development	MOXY OI COMPOSITES USA INC.	MOXY OI - Research & Development Application	Humboldt	\$ 479,333	MOXY is the first R&D group globally to invent a way to use mineralization in manufacturing which molecularly changes natural fibers and binds them into a super-material, without glue or cement. Moxy's proprietary and low energy manufacturing process utilizes low value lignocellulosic wood or agricultural plant fibers to produce materials which can be engineered into a wide variety of building products, such as home siding, roofing tiles, or sheathing. Moxy's new mineralized material has superior characteristics: it is fire-, mold-, water- & termite-resistant & costs less than comparables. The mineralization sequesters the plants' carbon permanently, lending to a CO2-negative process. Moxy has already built a successful pilot line and is now ready for commercialization.
Business Development	Phoenix Biomass Energy, Inc.	North Fork Community Power Biomass Plant Operations Launch	Madera	\$ 964,478	The North Fork Community Power facility will commence operations in August of 2023. This is a community-scale forest bioenergy facility located in North Fork, CA that will generate renewable energy and biochar derived from forest biomass. Grant funds will support hiring and training the staff required to begin plant operations. Beginning in Q2 2023 we will recruit, hire, and train 13-15 staff for multiple positions in preparation for the facility's initial launch. They will require regulatory and compliance training and training on specialized plant equipment and operations and maintenance. The plant will be staffed with an 8-person operations group, plus two control room operators, two O&M technicians, and a Plant Manager (in place).
Business Development	University of California, Davis	Pinpointing forest ecosystem co- benefits to support bioproduct supply chain development in California	Butte Tuolumne Yuba	\$ 139,489	There is growing policymaker and industry interest in research that quantifies and values these ecosystem co-benefits, particularly when identified at project-specific scales. New data which quantifies and values these benefits can help both policymakers and private sector stakeholder beneficiaries such as water utilities identify win-win opportunities for investment, leveraging additional funding for the sector. Our one-year feasibility study would work with several industrial partners who are in relatively advanced stages of project development, integrating their expected biomass supply chain into our state-of-the-science ecosystem models, to pinpoint and value co-benefit delivery. The new data generated will be used to engage with stakeholder beneficiaries. We will engage with policymakers to support understanding of the design of policies which appropriately support the sector.

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Business Development	Rath Industries, Inc.	Rath Industries, Inc. Sawmill Project	Shasta	\$ 351,054	Rath Industries, Inc. (Rath) is an existing 2.88 MMBF/year lumber and custom milling facility in Redding, Shasta County, that provides an outlet in Northern California for salvage logs, including logs that are large diameter, fire salvage, blue stain and wormwood logs. The mill is well positioned to accept logs from the N. Coast Range and the Sierra Nevada and plans to: 1) Fabricate the existing mill and add equipment to increase manufacturing efficiencies and production yield and to expand Rath's product line while using large-diameter logs and lower value salvage wood; and 2) Install 3-phase electricity from the existing City utility, avoiding shutdowns associated with generator maintenance and reliance on fossil fuels. The project will increase consumption to 5.02 MMBF/year.
Business Development	Mote, Inc.	Research and Business Development 2023 Q1 - Mote Fines Processing Technology INL	El Dorado Kern	\$ 500,000	The goal of this research and development project is to develop an oxygen-fired boiler for biomass fines with CO2 capture and storage (or "Oxy-Fuel Fines Boiler", OFFB) for use at carbon-negative biofuels production facilities. The OFFB is an improvement to current and proposed biofuels facilities that has three primary benefits: (1) increases energy efficiency by cogenerating electricity, (2) lowers carbon intensity of the fuel by capturing more CO2 for storage, and (3) manages an otherwise challenging, low-value waste stream. Mote engineers will partner with scientists from Idaho National Lab will accomplish experimental measurement of feedstock properties, assessment of feedstock handling and treatment strategies, market assessment, process simulation, and mechanical design to develop a conceptual design for a prototype deployment.
Business Development	Mote, Inc.	Research and Business Development 2023 Q1 - Mote MS1	Amador Butte El Dorado Mariposa Nevada Placer Plumas Sierra Stanislaus Tuolumne Yuba	\$ 500,000	Mote is seeking funding to assist in research and development of its uniquely integrated biomass gasification facility El Dorado County to utilize wood waste from the Sierra Nevada region for the production of carbon-negative hydrogen with geologic Carbon Dioxide (CO2) sequestration. Mote's facility will support feedstock businesses sources from El Dorado, Stanislaus, Tuolumne, Amador, Mariposa Placer, Nevada, Plumas, Butte, and Yuba counties, many of which are considered high priority disadvantaged/low income and wildfire risk to forest ecosystem services areas by CalFire. The proposed project scope of work focuses on research and development activities to further engineering, permitting, site evaluation and feedstock feasibility studies.

CAL FIRE Business and Workforce Development Grant Applications -- 2023 Q1					Disclaimer: This roster includes all eligible and ineligible project proposals.
Project Type	Applicant	Project Name	County	Requested Funds	Project Description
Business Development	Revival Millworks	Revival Timber Project	Alameda Contra Costa Marin Napa San Francisco San Mateo Santa Clara Solano Sonoma	\$ 499,630	The Revival Timber project will research and develop diverse finished architectural wood products sourced from forest salvaged timber including forest fire mitigation sources. The Revival Timber project is an initiative of Revival Millworks, an architectural millworking company seeking to better strengthen in-state markets for sustainable and locally sourced lumber inputs. When successful, the Revival Timber project will produce industry leading product examples highlighting a multitude of salvaged wood sources, including traditionally undesirable species, and showcase their architectural usages in the modern construction and development industry. This project will create publicly available material information, explore new product designs, and process 10,000 board feet of salvaged wood and establish an end-to-end chain of custody for the processing of forest savaged materials.
Business Development	Cal Forest Nurseries	Scaling California Cone Collection & Seed Processing	Statewide	\$ 967,472	The emerging regime of severe and frequent fires threatens California conifer seed supply as mature trees die in fire and thus impacting downstream seedling availability. For this project, Cal Forest Nurseries and Mast Reforestation propose to build a robust seed supply by collecting 5,000 bushels of cones and processing upwards of 30,000 bushels for customers, over the next four years that would yield over 23,000 pounds of seeds. The seeds processed by Cal Forest will be made available to other federal, state and tribal entities, and private landowners, and grown into seedlings that will replace the fire-impacted forest stands.
Business Development	American Wood Fibers, Inc. [dba-California Wood Shavings]-Jamestown, CA	Shavings Plant Expansion with New Innovative Technology- Jamestown, CA	Tuolumne	\$ 1,891,000	American Wood Fibers [AWF] project is to increase the shaving capacity at Jamestown by installing an additional shaver which includes new innovative technology prototyped and approved at AWF's Kentucky and Wisconsin wood fiber processing facilities. The new technology increases efficiency and throughput while reducing maintenance costs, and will increase Jamestown's overall production capacity by 40%. The new system will be able to better process burned and/or diseased timber which comprises over 95% of the facilities raw material intake. This project will directly result in reduction of hazardous fuels and improvement of forest health through sourcing an additional 16,000 tons of logs annually and the capacity to supply finished feedstock to AWF's Marysville, CA operation.

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Project Type	Applicant	Project Name	County	Requested Funds	Project Description
Business Development	H2AO LLC dba Oilar Land Management, Oilar General Engineering	Steep Grade Mastication and Wood Handling Equipment Request	Lassen Modoc Shasta Siskiyou Tehama Trinity	\$ 499,960	We are looking to expand our business capacity in steep grade fuels treatments through the purchase, with matching grant funds of a Menzi Muck M545x steep grade masticating, and wood handling machine. Capable of working at 80%-100% grades with minimal environmental impacts, this machine would enable Oilar Land Management and General Engineering to greatly enhance its ability to complete steep grade fuels reduction in areas that are currently being left untreated. Included in our matching funds request we want to purchase the transport truck and trailer to deploy the Menzi Muck machine. As part of the development of steep grade fuel treatment capacity, we plan on training local workforce participants in fuels treatment and the operation of related activities.
Business Development	Tubit Enterprises, Inc.	Tubit Sawmill Project	Shasta	\$ 2,000,000	The Tubit Sawmill Project in Burney, Shasta County, will increase forestry operations and enhance sawmill productivity. Tubit is developing a 11.2 MMBF sawmill concurrently with a 5 MW bioenergy facility, which will supply electricity and thermal energy to the sawmill and kilns. Grant funds are requested to procure and install four dry kilns. The sawmill will produce and dry specialty products using logs supplied by Tubit and logs and cut lumber supplied by Shasta Green Inc. enabling use of sugar pine and logs that exceed Shasta Green's diameter limits and accommodating maintenance shutdowns. This project will establish a forward-thinking model that can be replicated in other regions. It will facilitate forest treatments on 4,600 acres annually and create 18.5 jobs.
Business Development	DTE Materials Incorporated	Utilization of Pulp Chips in Construction Materials	Fresno	\$ 499,769	DTE Materials has developed a patented process that converts pulp chips into bio-aggregates for a variety of construction materials (US#11,512,427 & WO2021168115A1) . The process, called Clearwash, is designed to make anatomical modifications to pulp chips that make them higher performing and compatible with cementitious binders. These engineered bio-aggregates are deployed as insulating, fireproof cement blocks and panels under the product name Stonefiber. The precast concrete partners assisting in manufacturing, sales, and distribution of Stonefiber products are Old Castle and Basalite. The purpose of this Cal Fire Wood Products Grant is to conduct a FEL3 study that will produce the final set of engineering documentation required to begin construction on a fully scaled Clearwash processing plant.

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Project Type	Applicant	Project Name	County	Requested Funds	Project Description
Business Development	West Biofuels LLC	West Biofuels Mariposa Business Development	Mariposa	\$ 300,000	West Biofuels proposes to develop and subsequently deploy a forest biomass to energy facility proposed for its site located in Mariposa, California. West Biofuels will complete the initial permitting, design, and pre-construction development needed for the future, shovel-ready deployment of a new 3 MW forest bioenergy production facility. When fully operational, the facility will validate economic operation of forest biomass to bioenergy conversion, while providing revenues to support needed forest biomass capture and transport. Thus the project will kickstart local and regional forest management practices and jobs markets, and help the region to take the initial steps needed to develop a thriving and sustainable forest management industry that minimizes future catastrophic wildfire hazards, provides local jobs, and benefits underserved communities.
Business Development	Woodland Biomass Power, LLC	Woodland Expanded Grinding Project	Yolo	\$ 933,333	Woodland Biomass Power, LLC is seeking to expand its current onsite grinding capabilities by installing a new electric grinder (including electrical upgrades required to support the grinder and additional mobile equipment to move logs). The expansion of onsite grinding will allow the company to process additional cull logs from priority areas. This ground wood will then be used as fuel to generate electricity instead of being disposed by burning in the forest. The total cost of the grinder expansion is expected to be approximately \$2,800,000, which will be funded 2/3 by revenue from the existing power purchase agreement and investment from Woodland's parent company. The Company is seeking 1/3 of the funding from a development grant.
Workforce Development	Black Oak Mine Unified School District	Building Today's Forestry and Fire Workforce with an Award-Winning CTE Program	El Dorado	\$ 434,050	The Black Oak Mine Unified School District is committed to expanding our current slate of Career and Technical Education programs with the Building Today's Forestry and Fire Workforce with an Award Winning CTE Program. Our project seeks to create a Forest Product Utilization and Innovation CTE program in two phases: In Phase One, BOMUSD will restart courses based on its 40-yr construction program, and partner with industry leaders and regional Community Colleges to develop an expanded curriculum for implementation in Phase Two. During Phase Two, new courses will be offered expected to include an arborist/line clearing certificate program, an Energy Efficiency course, Advanced Construction with hands-on sawmill training, and a Class B Heavy Equipment License course, among others.

CAL FIRE Business and Workforce Development Grant Applications -- 2023 Q1					Disclaimer: This roster includes all eligible and ineligible project proposals.
Project Type	Applicant	Project Name	County	Requested Funds	Project Description
Workforce Development	California Forestry Association	California Forestry Sector Jobs Initiative	Statewide	\$ 545,500	Calforests and Mozaic Media & Communications, in partnership with its media partners, Ethnic Media Services and California Black Media, will work together to achieve the following goals of the California Forestry Sector Jobs Initiative: 1) Educate the public, especially K-12 students and potential workers, about the forestry sector; 2) Promote training, jobs, and careers available in the sector by partnering with community based organizations that serve underrepresented communities; and 3) Create a centralized, online hub that informs those interested about existing vocational and professional training and educational programs, as well as all forestry sector jobs opportunities, which pay a solid living wage.
Workforce Development	Community Forests Council	Community Forests Workforce Development Grant	Orange	\$ 403,640	Arborists and landscapers can reduce the volume of biomass created on commercial properties with the right training. I want to leverage my industry clout, experience and education to elevate how my fellow arborists and landscape professionals interact with and manage private tree populations on commercial campuses and properties. I firmly believe that if we can operate from a more ecological perspective, we will begin to foster the ecosystem benefits that a commercial landscape can offer: dirt will be viewed as soil, clients will be approached as stakeholders, and the collective landscape and trees will be treated as a living community forest, with a net contribution to environmental benefits.
Workforce Development	Cal Poly Corporation	Geospatial and data science workforce to advance landscape-scale forest	San Luis Obispo	\$ 1,286,290	Coordinating treatments across a one-million-acre annual footprint depends on a workforce capable of using advanced remote sensing, geospatial analysis, and extensive environmental datasets. We propose to establish an applied geospatial and environmental data science training program to train forestry professionals skilled in applied data and geospatial science. Goals include: 1) Expanding existing core GIS courses to support forest management 2) Building applied GIS and environmental data science modules into existing major classes such as Silviculture 3) Developing new courses to support advanced geospatial and data science training 4) Creating applied geospatial and environmental data minors and emphasis areas and 5) Developing a culminating industry-linked capstone internship applying GIS and data science to address industry goals.

CAL FIRE Business and Workforce Development Grant Applications -- 2023 Q1					Disclaimer: This roster includes all eligible and ineligible project proposals.
Project Type	Applicant	Project Name	County	Requested Funds	Project Description
Workforce Development	Future Fire Academy	Justice Involved and Underserved Communities Workforce Development Project	Amador El Dorado Placer Sacramento	\$ 1,276,370	Future Fire Academy is dedicated to creating opportunities for veterans, underserved communities and justice-involved individuals who desire a career in the forestry and fire service. This is accomplished through job specific training, education, community service, and character development. Funding from CAL FIRE will support our workforce development efforts to train and place 60 people per year in forestry and fire prevention and suppression opportunities. This is accomplished through our Wildland academies - 3 per year. The Fuels Reduction Division helps support fire prevention in El Dorado and surrounding counties by assisting multi-acre private property owners, HOA's and fire safe councils with their defensible space, fire mitigation and storm cleanup, as well as provides hands on training to cadets.
Workforce Development	California Association of Resource Conservation Districts	RCD Workforce Development Project	Statewide	\$ 1,288,137	The RCD Workforce Development Project enhances Resource Conservation District (RCD) forestry capacity by increasing and creating new licensed experts. As special districts that combine public agency accountability, non-profit funding, and non-regulatory approaches, RCDs have a unique ability to bring together various partners in environmental resilience initiatives. RCDs are increasingly relied upon to undertake California's critical forestry and fire resilience projects, and skilled workforce shortages pose a significant bottleneck. While project implementation funding is more readily available, funds for workforce development are scarce, limiting RCDs' ability to fulfill the need. The project aims to support 15 RCDs, provide resources for 140 individuals, to collectively pursue 316 forestry-related certificates that will better prepare them to execute more and higher quality forestry work.
Workforce Development	California Department of Parks and Recreation	State Parks Fuels Reduction and Firewood Program	San Luis Obispo	\$ 73,584	Project establishes "burn it where you buy it" fire wood program located at Morro Bay State Park Campground. This program will generate firewood from fuel reduction projects on land owned by California State Parks. The project will add 3 employees to the forestry work force and provide prescribed fire and fuels reduction training through NWCG certifications and field experience.

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Project Type	Applicant	Project Name	County	Requested Funds	Project Description
Workforce Development	County of Tuolumne	Tuolumne County Heavy Equipment Logging Operations (HELO)	Tuolumne	\$ 4,724,482	This project will create a Heavy Equipment Logging Operations (HELO) and Maintenance training program (through work-based learning and certification) to help with workforce development for HELO. By contracting with Columbia College to provide Contract Training, this will develop an industry recognized certificate. Work-based learning will be held at the worksites of current and ongoing fuel reduction projects through the County. This will be "next level" in the career path for the Greater Sierra Forestry Corps graduates that have initial HELO training provided and decide to advance their careers through continued work-based learning in HELO positions. For workers who didn't go through the corps and already have Forestry experience, they can go straight into HELO, and can take the full course.
			Total Requested	\$74,550,541	