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Electric Program Investment Charge 2026–2030 (EPIC 5) Research Concept Proposal Form

Regenerative Forest Solutions (RFS) proposes the addition of investment in infrastructure that supports scalable solutions to decarbonize the built environment while advancing climate adaptation. This can be accomplished through wood campus sites that transform excess wildfire-hazardous woody biomass into low-carbon, durable building materials and other off take products (e.g. biochar, biocrete, etc.).

Additional submitted attachment is included below.







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Electric Program Investment Charge 2026–2030 (EPIC 5) Research Concept Proposal Form

The California Energy Commission (CEC) is currently soliciting research concept ideas and other input for the Electric Program Investment Charge 2026–2030 (EPIC 5) Investment Plan. For those who would like to submit an idea for consideration, please complete this form and submit it to the CEC by August 8, 2025. More information about EPIC 5 is available below.

To submit the form, please visit the e-commenting link: https://efiling.energy.ca.gov/EComment/ECommentSelectProceeding.aspx and select the Docket 25-EPIC-01. Enter your contact information and then use the "choose file" button at the bottom of the page to upload and submit the completed form. Thank you in advance for your input.

1. Please provide the name, email, and phone number of the best person to contact should the CEC have additional questions regarding the research concept:

Temra Costa, Director (707) 787-6345 temra@regenerativeforestsolutions.org

2. Please provide the name of the contact person's organization or affiliation:

Regenerative Forest Solutions (RFS) – a 501(c)(3) nonprofit dedicated to advancing regenerative stewardship of California's forests and working landscapes.

3. Please provide a brief description of the proposed concept that you would like the CEC to consider as part of the EPIC 5 Investment Plan. What is the purpose of the concept, and what would it seek to do? Why are EPIC funds needed to support the concept?

Regenerative Forest Solutions (RFS) proposes the addition of investment in infrastructure that supports scalable solutions to decarbonize the built environment while advancing climate adaptation. This can be accomplished through wood campus sites that transform excess

wildfire-hazardous woody biomass into low-carbon, durable building materials and other off take products (e.g. biochar, biocrete, etc.).

RFS is presently working to implement such a project in Sonoma County at the historic Berry's Sawmill site, designed as a public-private partnership. The goals of this project are to:

- Recover and utilize small-diameter and non-merchantable logs from forest restoration and wildfire resilience projects.
- Manufacture mass timber (nail-laminated timber panels), dimensional lumber, and carbon-storing building products.
- Circular utilization of residual biomass for biochar, compost inputs, and back of the meter energy to offsite the facilities energy demands.

Purpose:

- Increase forest health and wildfire resilience treatments to improve community and ecosystem resilience.
- Increase the in-state supply of sustainable wood products to reduce reliance on more carbon-intensive options such as imported lumber, steel and concrete.
- Create climate adaptation co-benefits, including wildfire risk reduction, workforce development, and rural economic resilience.

Why EPIC funds are needed:

California currently lacks sufficient investment in processing infrastructure to handle the volume of hazardous fuels and generate scalable building products. EPIC support is needed to de-risk these facilities, validate cost/performance metrics, and prove replicability of the wood campus model for statewide deployment.

4. In accordance with Senate Bill 96¹, please describe how the proposed concept will "lead to technological advancement and breakthroughs to overcome barriers that prevent the achievement of the state's statutory energy goals." For example, what technical and/or market barriers or customer pain points would the proposed concept address that would lead to increased adoption of clean energy technology or innovation? Where possible, please provide specific cost and performance targets that need to be met for increased industry and consumer acceptance. For scientific analysis

¹ See section (a) (1) of Public Resources Code 25711.5 at: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC§ionNum=25711.5.

and tools, provide more information on what data and information gaps the proposed concept would help fill, and which specific parties or end users would benefit from the results, and for what purpose(s)?

This concept addresses critical market and technical barriers:

- Barrier: Lack of infrastructure to convert restoration byproducts into carbon-beneficial building materials.
 - o Breakthrough: Timbershed demonstrates modular, replicable wood campus infrastructure. After proof of concept is established, the project will work to support other regions implement facilities, equipment and infrastructure to build a more robust, statewide bioeconomy solution.
- Barrier: High embodied carbon of current building materials.
 - o *Breakthrough:* Nail-laminated timber (NLT) panels produced from small-diameter Douglas-fir can support building decarbonization when compared to concrete/steel.
- Barrier: Limited data on avoided wildfire emissions and carbon storage in wood products.
 - Breakthrough: Timbershed will work to generate Environmental Product Declarations (EPDs), wildfire-emissions accounting, and life-cycle assessments to fill critical data gaps for architects, developers, and policymakers.

Cost/Performance Targets:

- Mass timber panels priced within 10–15% parity of imported products.
- Processing capacity of 6M board feet/year, offsetting ~39–50% of restoration costs (CAL FIRE, 2025).
- Carbon benefit: 1.8 tons CO₂e avoided/sequestered per m³ of product.

End users benefiting: Ratepayers, architects, developers, municipalities, school districts, State and local agencies, wildfire-resilience planners, and bioeconomy sector businesses and workforce.

5. Please describe the anticipated outcomes if this research concept is successful, either fully or partially. For example, to what extent would the research reduce technology or ratepayer costs and/or increase performance to improve the overall value proposition of the technology? What is the potential of the innovation at scale? How

will the innovation lead to ratepayer benefits in alignment with EPIC's guiding principles to improve safety,² reliability,³ affordability,⁴ environmental sustainability,⁵ and equity?⁶

If successful, Timbershed will:

- Reduce technology/ratepayer costs: Demonstrate regional infrastructure that lowers treatment costs, provides local supply, and decreases transportation, built environment, and wildfire related emissions.
- Increase performance: Establish low-carbon, sequestering building materials with performance standards for structural safety.
- Potential at scale: Replication across Northern California could process tens of millions of board feet annually, unlocking hundreds of skilled jobs and major wildfire-risk reduction.
- Ratepayer benefits:
 - o Safety: Reduced catastrophic wildfire risk.
 - Reliability: Local material supply chains less vulnerable to global disruption.
 - Affordability: Offset forest treatment costs to expand implementation, help de-risk insurance industry, improve local access to community rebuilding materials and restoration.
 - o Sustainability: Embedded carbon storage in buildings and avoided wildfire emissions.
 - Equity: Workforce development in rural/disadvantaged communities.

² EPIC innovations should improve the safety of operation of California's electric system in the face of climate change, wildfire, and emerging challenges.

³ EPIC innovations should increase the reliability of California's electric system while continuing to decarbonize California's electric power supply.

⁴ EPIC innovations should fund electric sector technologies and approaches that lower California electric rates and ratepayer costs and help enable the equitable adoption of clean energy technologies.

⁵ EPIC innovations should continue to reduce greenhouse house gas emissions, criteria pollutant emissions, and the overall environmental impacts of California's electric system, including land and water use.

⁶ EPIC innovations should increasingly support, benefit, and engage disadvantaged vulnerable California communities (DVC). (D.20-08-046, Ordering Paragraph 1.) DVCs consist of communities in the 25 percent highest scoring census tracts according to the most recent version of the California Communities Environmental Health Screening Tool (CalEnviroScreen), as well as all California tribal lands, census tracts with median household incomes less than 60 percent of state median income, and census tracts that score in the highest 5 percent of Pollution Burden within CalEnviroScreen, but do not receive an overall CalEnviroScreen score due to unreliable public health and socioeconomic data.

6. Describe what quantitative or qualitative metrics or indicators would be used to evaluate the impacts of the proposed research concept.

Quantitative:

- Tons of CO₂e sequestered/avoided per year.
- Acres of hazardous fuels treated.
- Board feet of lumber and cubic meters of NLT produced.
- Jobs created and sustained (skilled labor in forestry/manufacturing).
- · Cost per ton of wildfire-emissions avoided.

Qualitative:

- Community workforce training outcomes.
- Adoption of products by architects/contractors.
- Inclusion of carbon accounting in municipal/state procurement.
- 7. Please provide references to any information provided in the form that supports the research concept's merits. This can include references to cost targets, technical potential, market barriers, equity benefits, etc.

RFS has conducted an extension study funded by the Governor's Office of Land Use and Climate Innovation titled, Assessing the Viability of Wood Recovery & Utilization in Sonoma County. This report is available here with full citations and inclusion of benefits to vulnerable populations.

- 8. The EPIC 5 Investment Plan must support at least one of five Strategic Goals:⁷
 - a. Transportation Electrification
 - b. Distributed Energy Resource Integration
 - c. Building Decarbonization
 - d. Achieving 100 Percent Net-Zero Carbon Emissions and the Coordinated Role of Gas
 - e. Climate Adaptation

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⁷ In 2024 the CPUC adopted five Strategic Goals to guide development of the EPIC 5 Investment Plan. A description of the goals can be seen in Appendix A of CPUC Decision 24-03-007 available at:

Please describe in as much detail as possible how your proposed concept would support these goals.

Primary Goals Supported:

- Building Decarbonization: Substitutes wood for carbon-intensive materials; validates EPDs for procurement.
- Climate Adaptation: Reduces wildfire hazard, builds rural economic resilience, and ensures critical infrastructure.

Secondary Linkages:

 Achieving Net-Zero: Scalable carbon storage in durable wood products contributes directly to statutory climate goals.