

DOCKETED

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President of RREDCO

Jeremy Hayward

Redding Rancheria's Biomass to Hydrogen

Redding Rancheria's Story



What are we trying to do?

- Reduce fuels on the forest floor
- Reduce chances of wildfires
- Reduce CO₂ emissions
- Provide clean energy



Why are we trying to do this?

- Fires are more prevalent
- Communities are being destroyed
- Looking forward to the next seven generations
- Energy availability



Tribe's culture of being stewards of the land
Seventh Generation Mindset

Why Biomass to Hydrogen



Large Wildfires Destroying Communities

Carr Fire, August Fire, Dixi Fire, Park Fire, Camp Fire, Palisades Fire and many more

Utilize dead, downed, and diseased trees



Fuel Building up on the Forest Floors

Tribes have not been involved for a long time



Energy Sovereignty

Taking control of our energy production



Job Creation

Creates permanent jobs in rural communities



Limited Power Available

Electric vehicles, data centers, etc.

Produce our own electricity for the plant

Our Project



Pyrolysis system operating in an oxygen free environment



Thermochemical decomposition of organic material into a syngas



Self-powered by our syngas and microgrid



Hydrogen purification by pressure swing adsorption



2" minus is the size of chips we will run as our feedstock

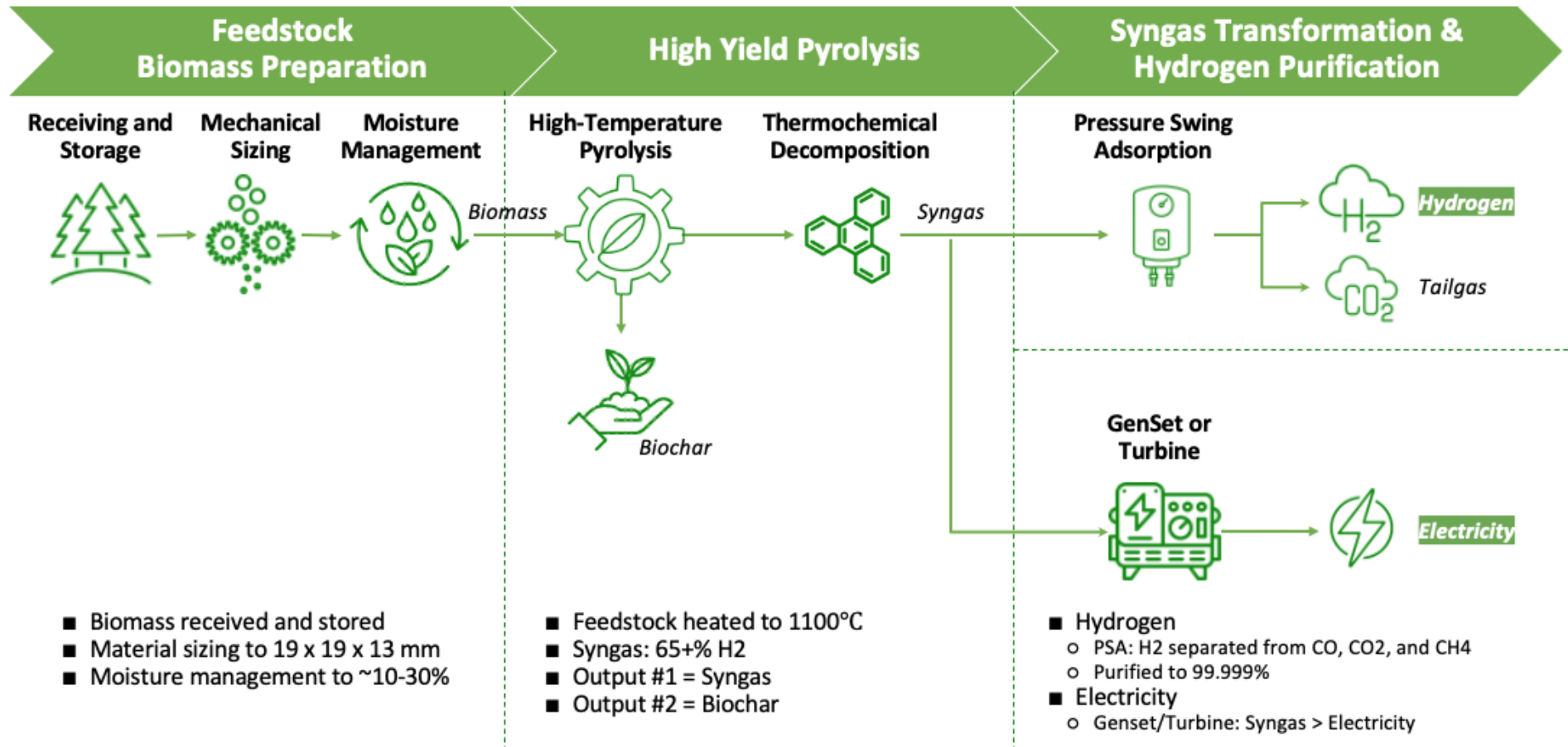


99.999% green hydrogen



Carbon neutral

The Process



Biochar Benefits

Water
Retention

Enhanced
Nutrient
Availability

Improved Soil
Structure

Increased
Crop Yields

Carbon
Sequestration

Reduces Soil
Acidity

Absorbs
Pollutants

Additive for
Livestock Feed

Renewable and Sustainable



Renewable – 54 million dry tons
of biomass available annually

Biomass from multiple sources:

Agg waist

MSW

Tires



Sustainable – Economically viable
and operationally predictable

Competitively priced with other energy sources

Green hydrogen production without high energy costs

Uses less water and energy than other methods

Benefits of our Project



Carbon Capture



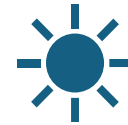
Permanent Job
Creation in Rural
California



Reduction in Fuels
for Forest Fires



Less Smoke from
Fires



Green Energy or
Gas



Safer Communities



Seventh Generation
Mindset

EVM- Forest Management



Three Very Experienced Partners



Master Stewardship Agreements



TEK



Caltrans Contracts



Vinyard Maintenance



Bio-Char Utilization for Reforestation



Save Our Forests Act



Rate Increases
Related to Fires

Challenges with this Project



Restrictions on Funding for use of Biomass Sourced from Federal Lands

57% of California's forested
land is owned by The Federal
Government

MSA's do not help



Infrastructure is Not Ready Yet

Fewer hydrogen pumps
available now than when we
started this project



Cost of Transportation of Biomass to the facility

Hazardous Fuels
Transportation Assistance
Program.



Funding Uncertainty

New administration with
different goals



Interconnection Agreement Challenges

Capital Stack

Department of Conservation \$500,000 predevelopment

CEC \$300,000 predevelopment

Tribe has spent over 1.5 million

DOE direct loan program specific to Tribes

Leveraging the ITC if still available

Looking for additional grant funding



Questions