PHOENIX ENERGY™

Turning Biomass into Energy since 2011

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Who we are

- Phoenix Energy is “private label” power
- We are local[3]
- Building plants since 2011
- We believe modularity & continuous processing to keep quality up & costs low
- And we are no longer just an energy company…

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Calistoga Electric Company

CONFIDENTIAL

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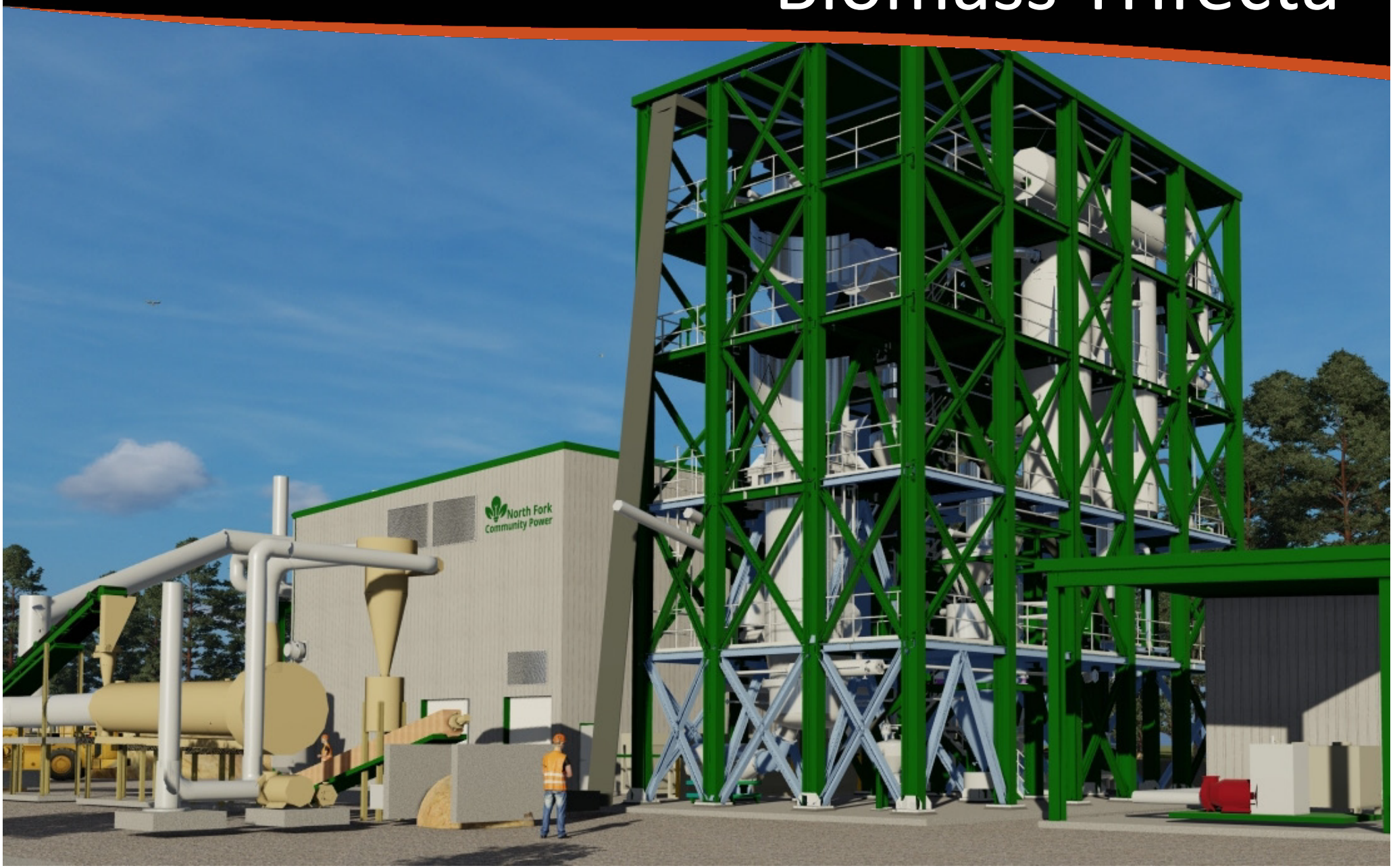
Biomass Trifecta



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Investment project

1 MW Biomass Gasification Facility at Clover Flat

- UVDS will own and operate a 1 MW biomass plant at Clover Flat Landfill
- UVDS will sell electricity to PGE under a **20yr**. BioMAT contractat **12.772¢/kWh** and biochar, a co-product.
- The plant will consume approximately **8,600 tons of wood per year** (@10%mc) and produce **867 tons of biochar**
- The project is entitled **to receive an "Investment Tax Credit" currently worth 30% of eligible CAPEX, if it spends 5% of the budget in 2021**
- Embedded options of carbon off-set credits for biochar, and on-site heat sales offer future growth potential plus **MACRS 5** depreciation.

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Why now?

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Why now?

Santa Rosa, 2017

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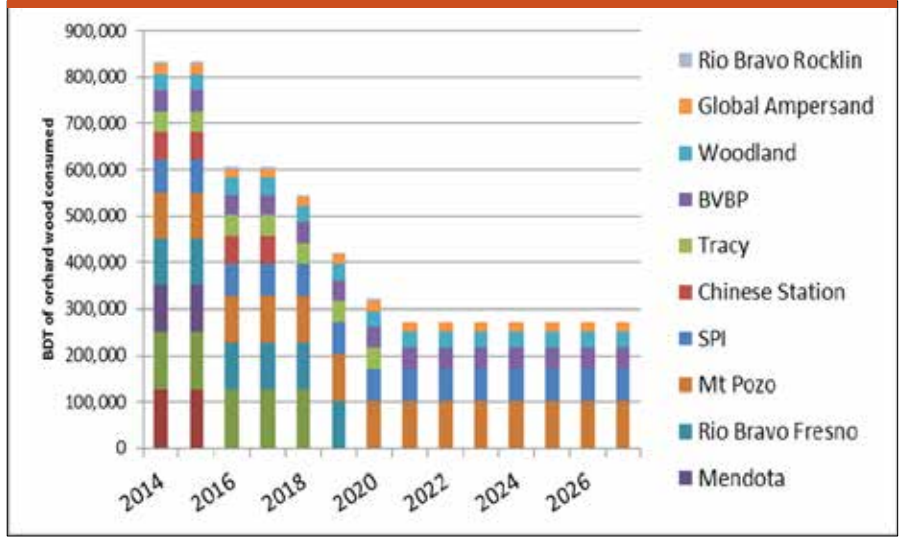
Why now?

Perfect policy storm

- 250MW mandate <3MW
- Diminishing alternatives:
  - Organics diversion law but CA creates massive amounts
  - No ag burning law
  - large biomass plants shuttered & dying off
  - Tree mortality/forest fire emergency
  - National Sword
  - Urgent need to reduce fire danger
- High retail elec 20-30¢/kWh
- Potential of carbon
  - Biochar
  - Carbon sequestration

The twilight of large biomass means no alternative



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Gasification simplified

- Tech from late 1800s (Gasworks Park, Sac, Gas lamp district in SD)
- Rural electrification – 2 moving parts
- Bake it don't burn it!
- Leaves the carbon behind, solid not in the air
- Sell the carbon to save water, grow more fruit, filter water

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Carbon Negative Now - NFCP

Organic Energy Co.	Status Quo	Net Impact
Organics management **none**	Organics management 15,295 BDT x 1.87 MTCO2e/BDT = **28,564 MTCO2e/year**	**-28,564 MTCO2e/year**
Emissions from generation 0.006 MTCO2e/BDT x 15,295 BDT = **92 MTCO2e/year**	Emissions from generation 0.419 MTCO2e/MWh x 15,000 MWh/year **6,284 MTCO2e/year**	**-6,192 MTCO2e/year**
Carbon Sequestration **-4,519 MTCO2e/year**	Carbon Sequestration **none**	**-4,519 MTCO2e/year**
-4,427 MTCO2e/year	**34,848 MTCO2e/year**	**-39,275 MTCO2e/year**

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The biochar opportunity

- By product of gasification is biochar, a product that is about 90% Carbon with about 12,000 BTUs per pound.
- Current prices at Phoenix plant is 79¢/lb ($1,580/ton) for sale as specialty ag mineral useful in minimizing water/fertilizer usage.
- Additional processing with steam turns biochar into activated carbon. Activated carbon sells at $1.49/lb ($2,980/ton).
- While the market for biochar is new it has the potential to eclipse electricity as a main revenue driver.
- Current customers are Napa Valley wine growers, Central Valley citrus & avocados CalTrans, LA County