

Aloha Carbon: Diverting Waste from Landfills and Recycling Into Fuel



**Joelle Simonpietri
Simonpietri Enterprises LLC
February 28th, 2022**

One problem we are tackling:
>2000 tons of C&D waste landfilled each day on O`ahu



- ❑ Nearly the same amount as the waste combusted to make electricity at H-Power
- ❑ Landfill is deeply unpopular, located near Hawaiian Homestead areas in Nanakuli
- ❑ Act 74 bans waste landfilling within ½ mile of residences effective 15 Sep 2020
- ❑ Oahu needs a safe alternative for disposal, or illegal dumping goes up 8-10X

Another problem we are addressing:

The United Nations' International Civil Aviation Organization Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) requires

**carbon-neutral growth in
international civil aviation**

beginning in 2021

Including for flights to/from Hawai`i





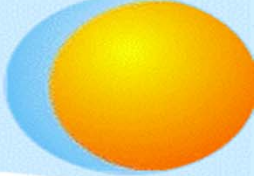
Need to address
Climate,
Waste,
AND community issues

This pile is just one day of the C&D waste
wood landfilled on Oahu daily.

It needs to be properly handled and
recycled/disposed somewhere.
We could divert approximately 40% to make
fuel, and reduce the impact of the waste
hauling and disposal on the Nanakuli and
Waianae coast communities communities.



What we do:
Recycle waste into low-greenhouse gas jet fuel and hydrogen



Separate



Gasify

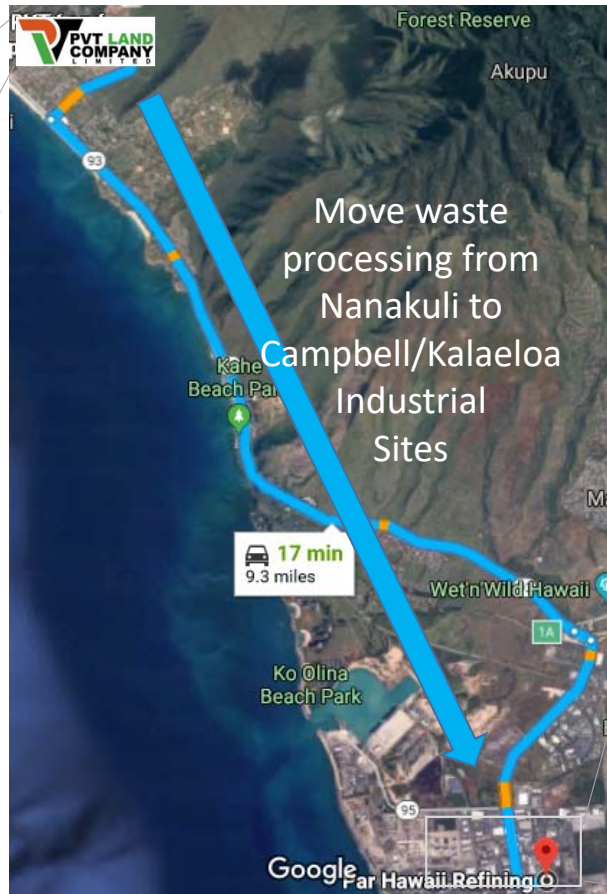


Refine



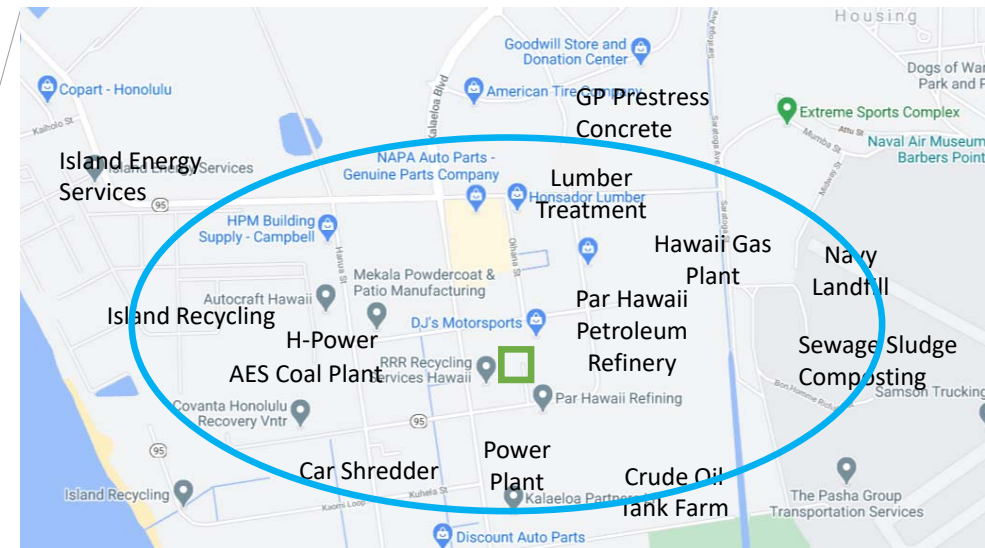
Use

Goal: Divert and remove C&D waste from landfill and residential neighborhoods on Waianae Coast and shift to industrial park

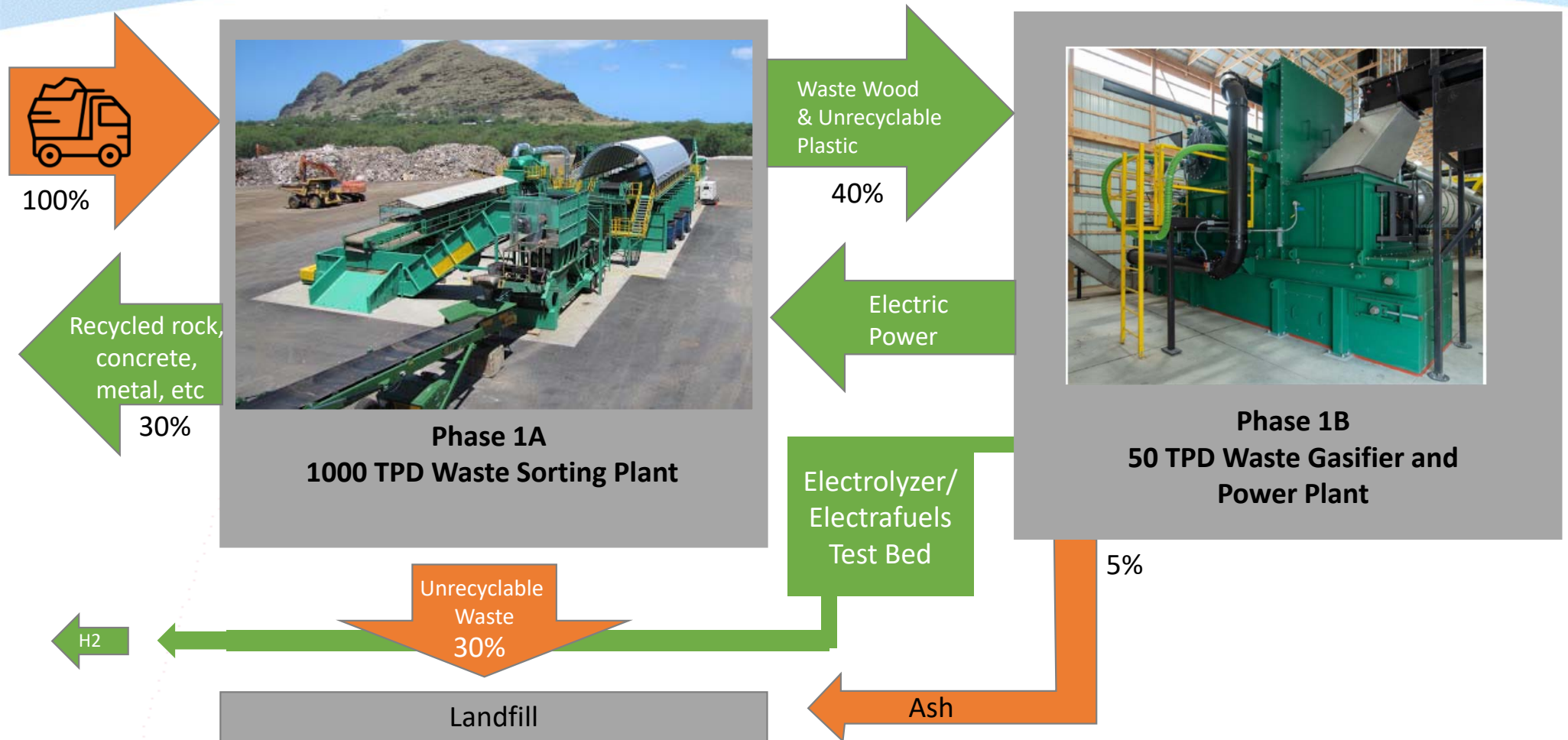
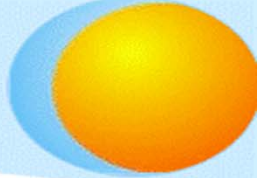


Desired relocation site:

- Within Campbell / Kalaeloa Heavy Industrial area
- Project Footprint: ~5 acres (shown to scale below)



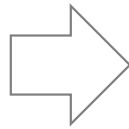
Part 1: Self-Powered Sustainable Materials Recovery Facility (SMRF)



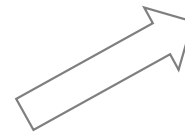
Aloha Carbon Products and Services



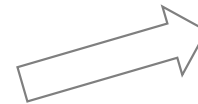
Waste receipt
recycling and
disposal



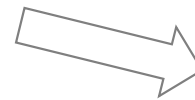
Waste conversion service



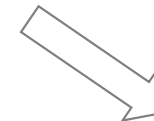
Sustainable Aviation Fuel



Renewable Natural Gas
& Green Hydrogen



Certifiable carbon credits



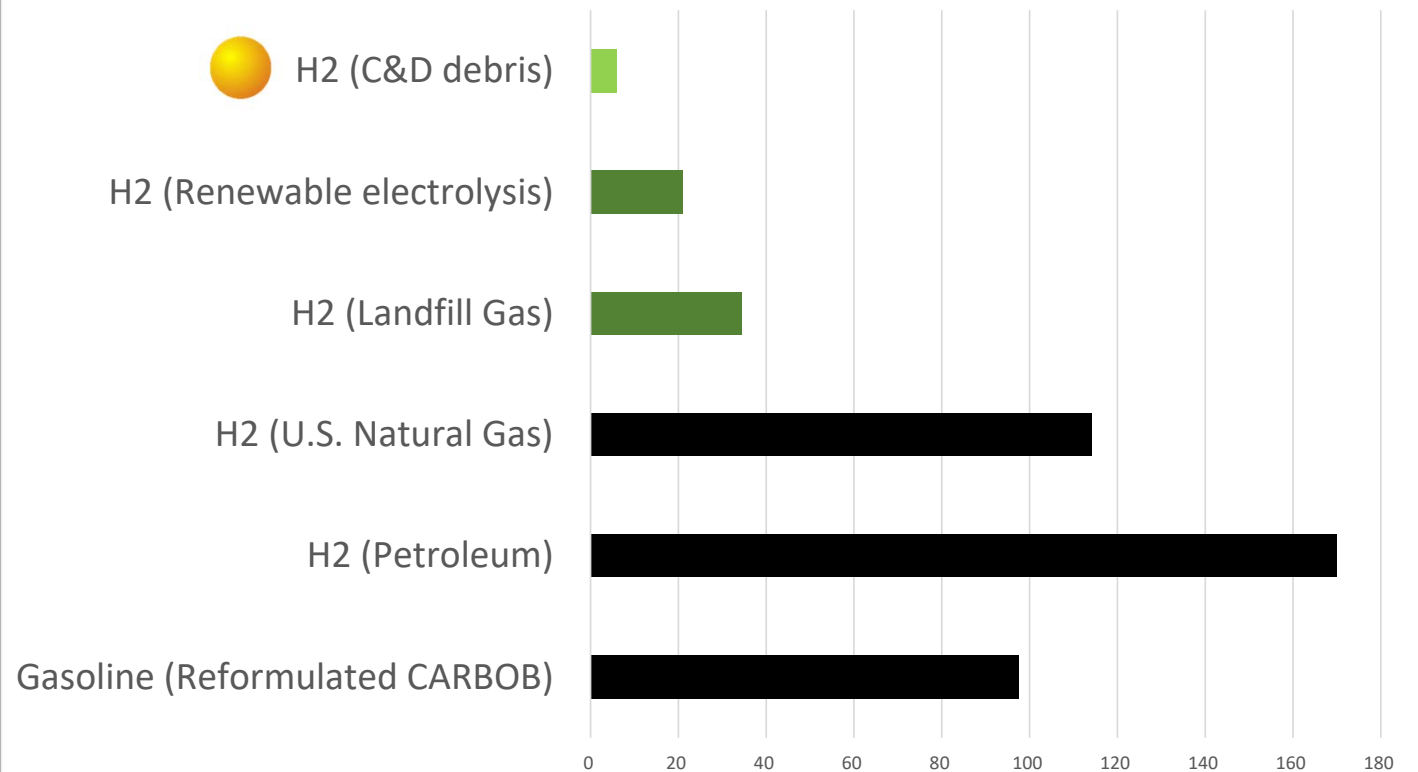
Low-GHG concrete materials

Competitive Niche: Greenhouse Gas Reduction

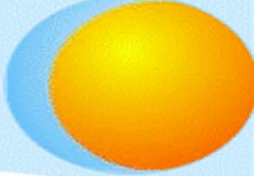
*The Hawaii project would displace **100,000 tonnes of CO₂ per year...** “This emission reduction from one C&D wood-to-fuel conversion project is equivalent to the carbon stored by **70,000 – 165,000 acres of U.S. forests per year”***

SCSglobal
SERVICES
Setting the standard for sustainability™

Greenhouse Gas Intensity of Transportation Fuels
(US EPA and California ARB certified values in gCO₂e/MJ)



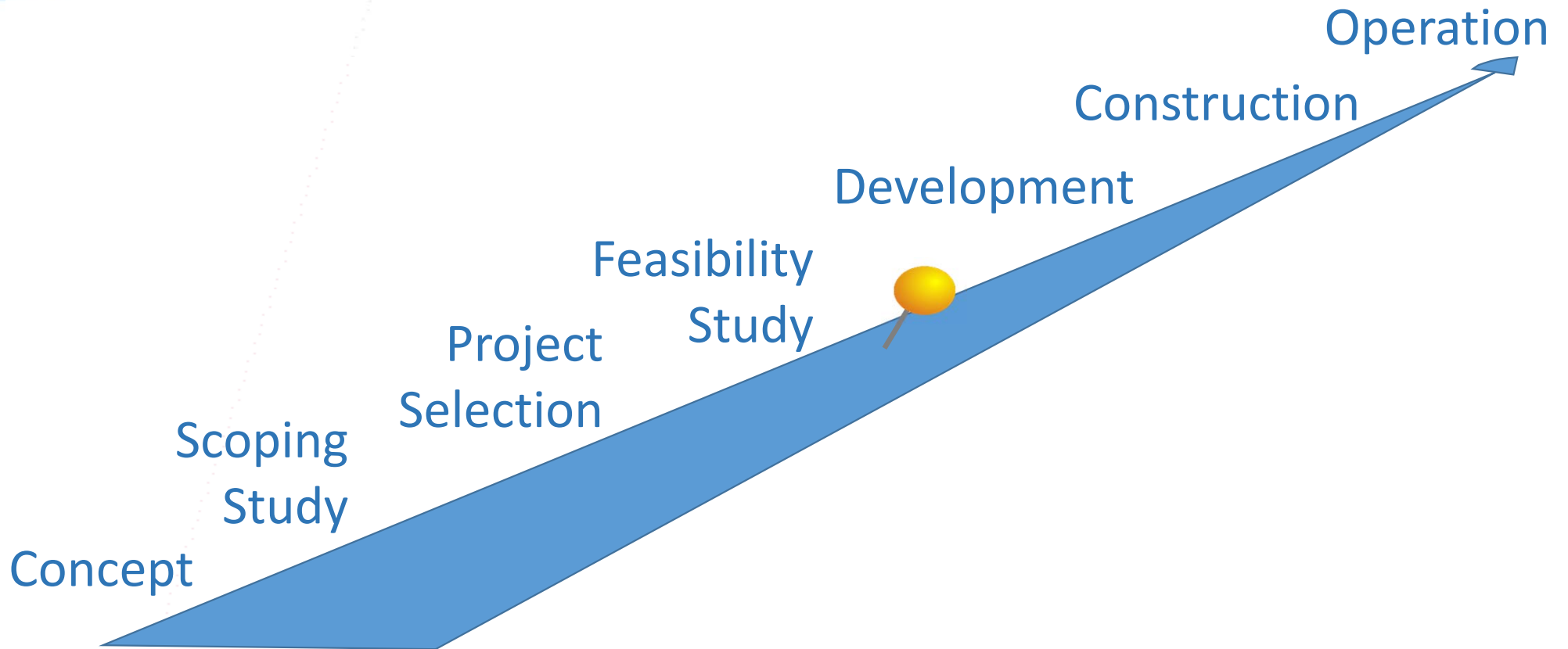
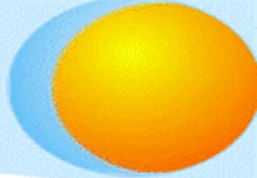
Cost competitive with petroleum



< \$60



Project Development Stage



Team



Joelle Simonpietri
President & Founder
Duke B.S., Dartmouth MBA
Experience: Par Hawaii
Refining, Waste Management,
U.S. Defense Dept biofuels



Aaron Ellis
Finance
B.S., MBA
Experience: Pono Pacific, Ulupono
Investments, Green Island Capital



Mike Turina
Project Engineering
BS, Licensed Civil Engineer
Experience: Par Pacific (PARR),
Tesoro, Transworld Oil, BHP

Simonpietri Enterprises Team



Andrew Kramer
Director, Chemical
Engineering
SunGas Renewables, Gas
Technology Institute



Ajay Chawhani
Senior Process Engineer
John Wood Group PLC,
AMEC Foster Wheeler



Mike Swanson
Principal Engineer, Fuels
Conversion
University of North Dakota
Energy & Environment
Research Center



Contracted Technical Team

Founder projects that led to this point



Refinery renewable integration



Renewable fuel cogeneration



Waste to fuel gasification



JP8 Jet fuel from algae



Wood waste to green marine fuel

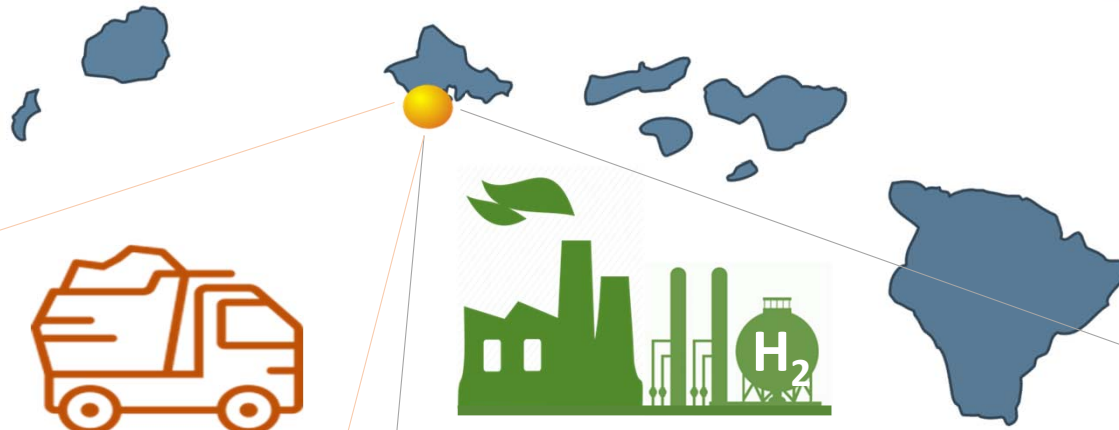
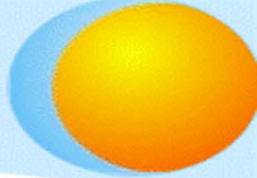


Great Green Fleet demonstration

... and much more...

Aloha Carbon:

Community-informed project to divert waste from landfill and recycle into fuel



Problems we are tackling:

>560 million tons of C&D waste landfilled each year in the U.S.A.



- ❑ More than 2X the municipal solid waste generated annually
- ❑ Contaminated with treatment chemicals, paint, and glue
- ❑ Difficult to re-use in power plants, mulch, or compost

Solutions we are developing:

Green hydrogen & jet fuel from C&D waste



- ✓ 3 project design spirals with community input
- ✓ Local and Hawaiian voices are central to the conversation
- ✓ 97% lower greenhouse gas lifecycle emissions than petroleum

Questions?

Where we can use help:
Please help with our
survey!



Joelle Simonpietri
Simonpietri Enterprises LLC
Joelle@simonpietri.com
808-341-7984
www.simonpietri.com