

Announcing: Aloha Carbon

*Re-making Waste
into
Low-Greenhouse Gas Solutions*



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About Us

Innovation, technology, and sustainability consulting for heavy industrial firms

- Waste to fuel conversion
- Renewable hydrogen production
- Sustainable aviation fuel experts
- Industrially informed
- Hawaii-based
- Globally focused

Committed to circular economy innovations to reduce human impact



The kinds of things we do

Past



Renewable integration

Present



Renewable fuel switching

Future



Waste to fuel



Algae business model



Sewage & paper waste to biocrude



Ash re-use

>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

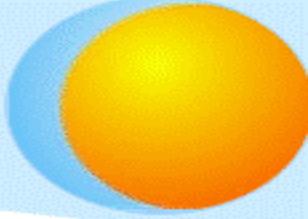
U.S. Environmental Protection Agency

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**



Solution: Convert C&D Waste Into Hydrogen for Fuel Refining



Separate



Gasify

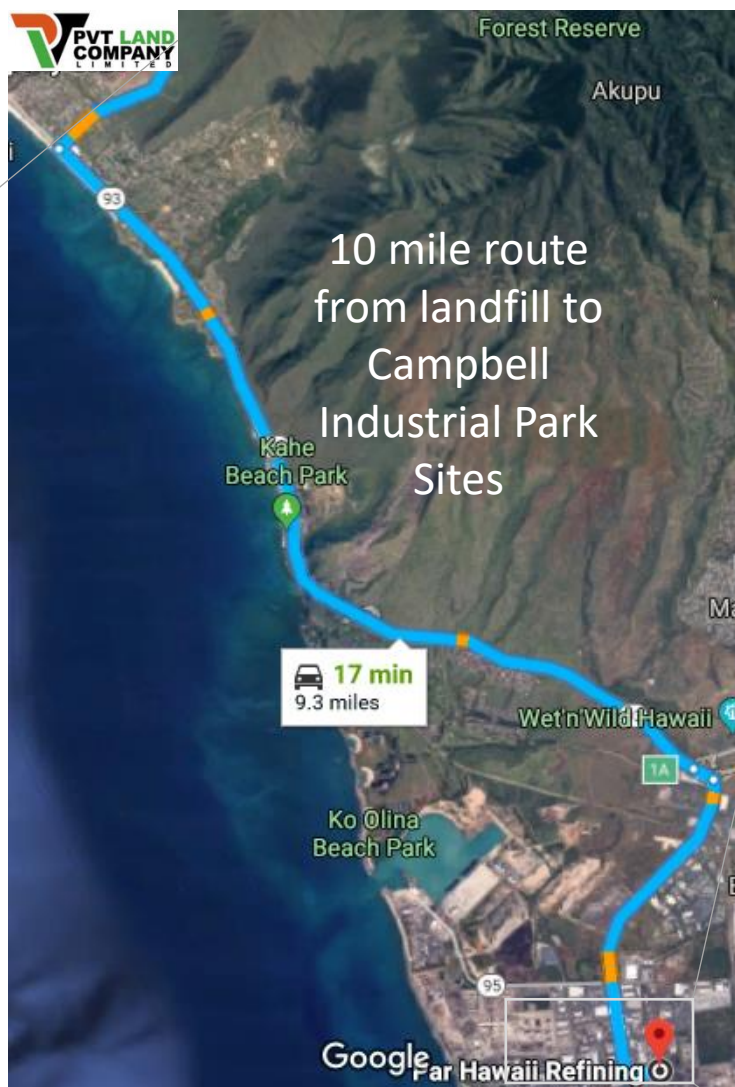
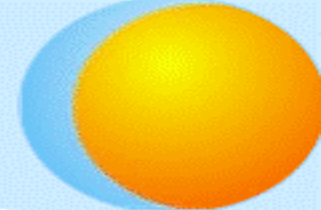


Refine



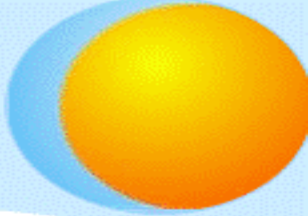
Use

Goal: Divert and remove waste from landfill



Confidential – Shared under Non-Disclosure Agreement

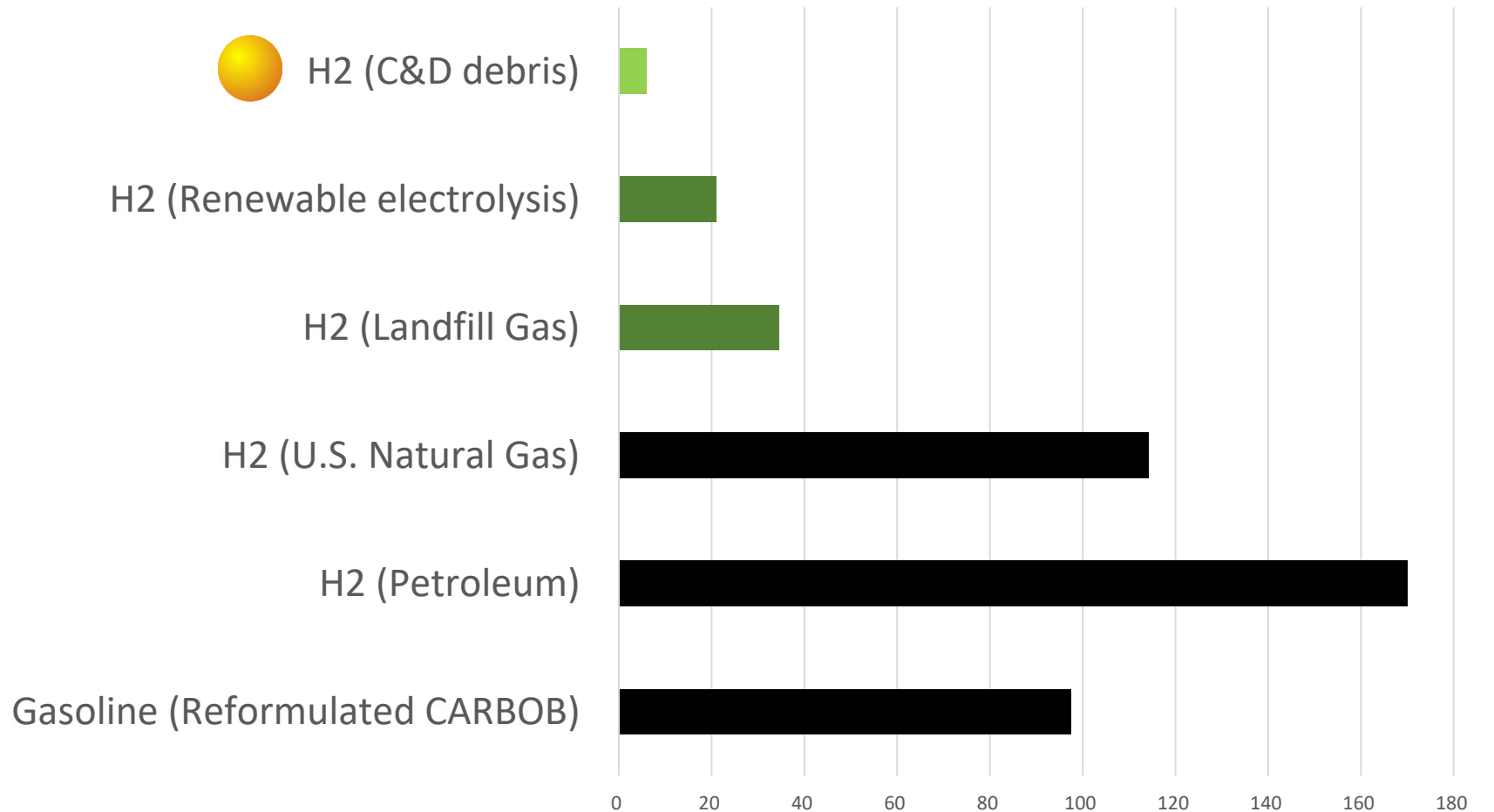
Announcing! Greenhouse Gas Analysis Results



***The Hawaii project
will 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”***



Greenhouse Gas Intensity of Transportation Fuels (US EPA and California ARB certified values in gCO₂e/MJ 2019)



Business Model

- 1) Renewable Projects: Partner to build, own, & operate
 - A. Renewable Hydrogen sales to refinery for sustainable aviation fuel production for airlines
 - B. Renewable Natural Gas sales to gas utility/industry customers
 - C. Carbon credit sales to voluntary or obligated market buyers
- 2) Licenses and technical support

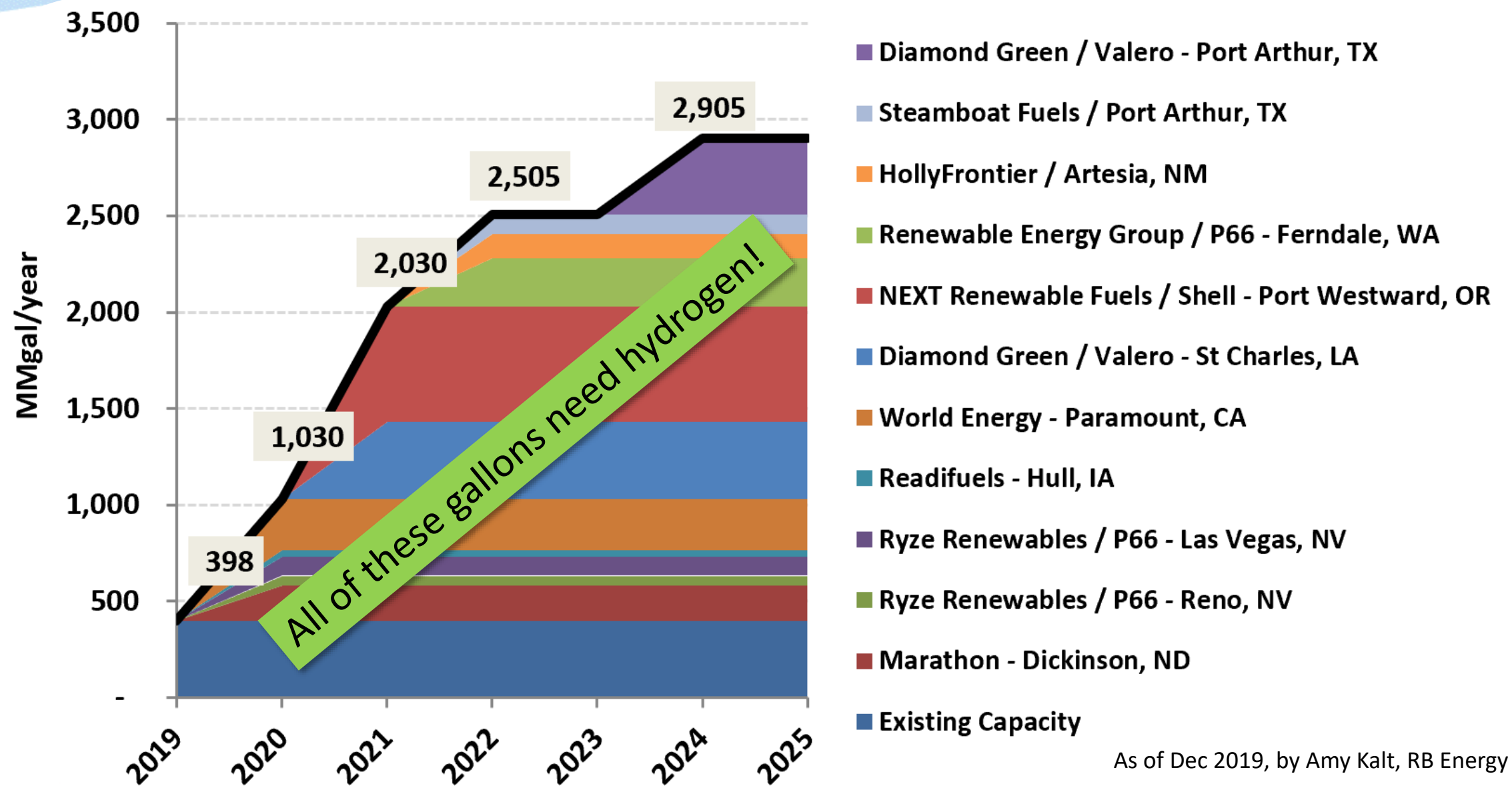
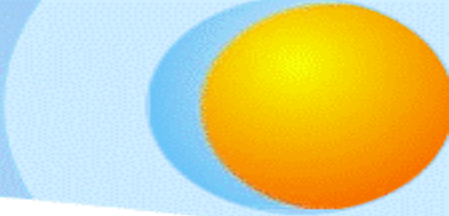
Partners & Contractors:



T. R. Miles Technical Consultants, Inc.

HALDOR TOPSØE 

Market Growth: Renewable Diesel (on the Mainland)



Value Proposition

Under California's Low Carbon Fuel Standard,
Each unit of RH_2



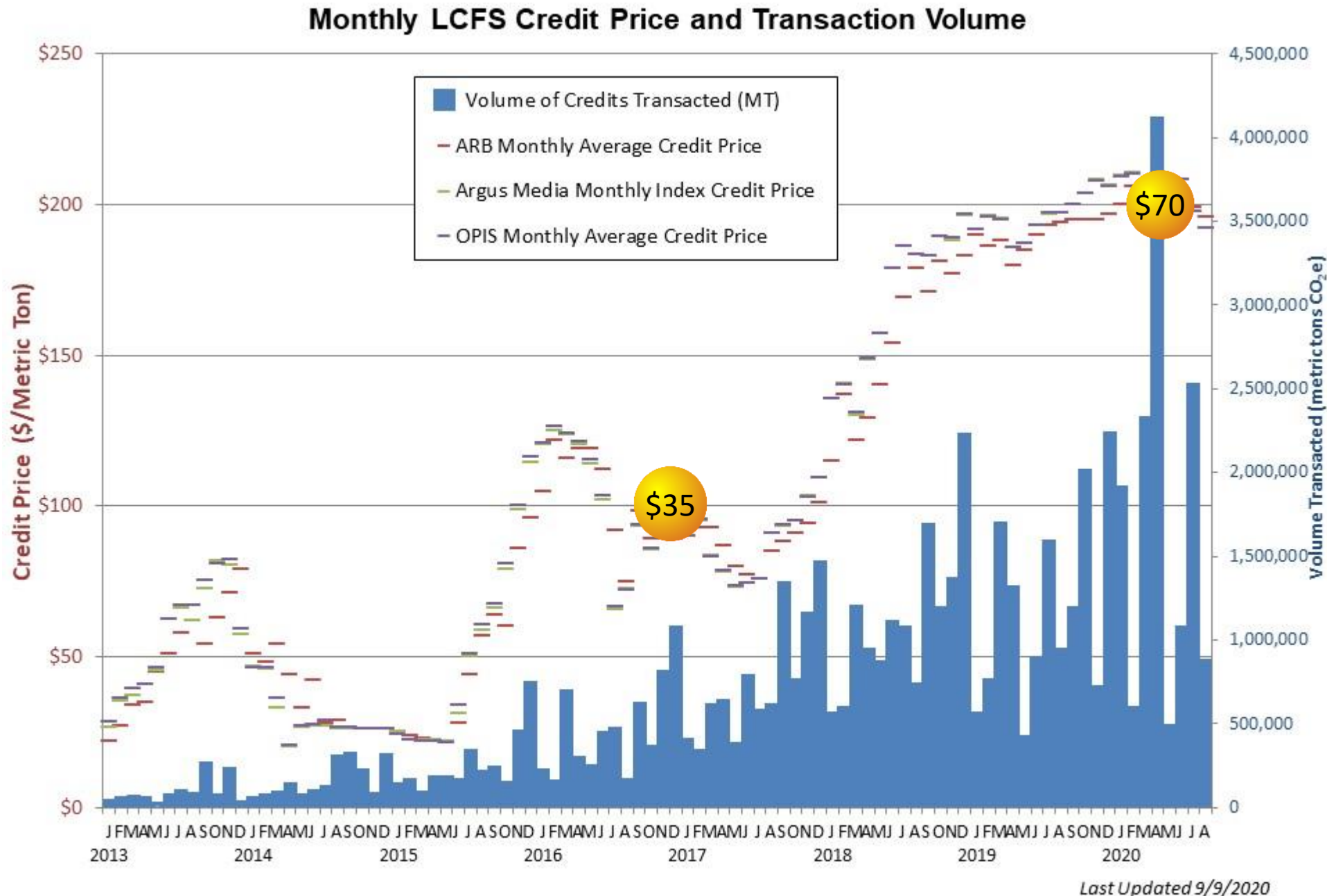
is worth

~\$35.00 / barrel
at \$100/MT CO_2e

and

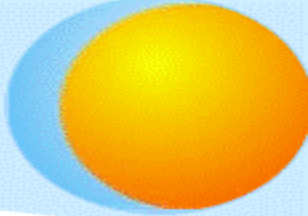
~\$70.00 / barrel
at \$200/MT CO_2e

*In GHG reduction
credits alone,
before fuel value*



This chart tracks credit prices and transaction volumes over time. Monthly average credit prices reported by Argus Media and OPIS [used with permission] are shown along with CARB monthly average price. Data source: California Air Resources Board

Where we can use help



- \$\$ for these complex, integrated system projects
 - Unexecuted CARES Act funds to small business for feasibility studies & employees
(Hint: Maryland and Tennessee figured it out!)
 - Restore HTDC's Manufacturing Extension Partnership funding
- Advocacy support
Bioeconomy projects are hard to execute! Consider the cost of *not* improving sustainability
- Permitting facilitation
 - Build on HSEO's permitting wizard for PV and wind
- Market-based measures
 - Opt into California's Low Carbon Fuel Standard?

Contact Information



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