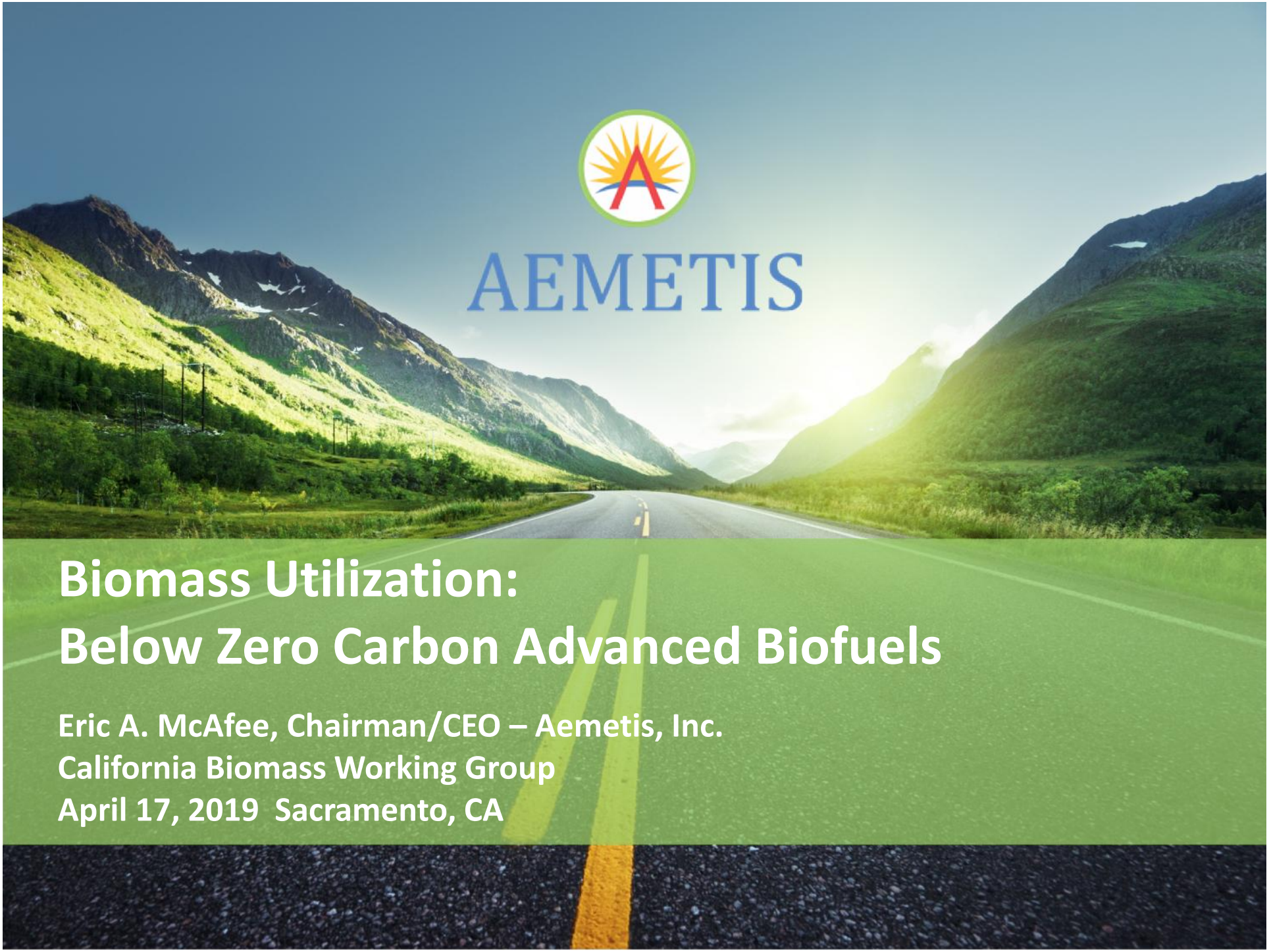


Biomass Utilization:
Below Zero Carbon Advanced Biofuels

Eric A. McAfee, Chairman/CEO – Aemetis, Inc.

California Biomass Working Group

April 17, 2019 Sacramento, CA

Disclaimer

Certain of the statements contained herein may be statements of future expectations and other forward-looking statements that are based on management's current views and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in such statements. In addition to statements which are forward-looking by reason of context, the words "may, will, should, expects, plans, intends, anticipates, believes, estimates, predicts, potential, or continue" and similar expressions identify forward-looking statements.

Actual results, performance or events may differ materially from those projected in such statements due to, without limitation: (i) general economic conditions, (ii) ethanol and gasoline prices, (iii) commodity prices, (iv) distillers grain markets, (v) supply and demand factors, (vi) transportation rates for rail/trucks, (vii) interest rate levels, (viii) ethanol imports, (ix) changing levels of competition, (x) changes in laws and regulations, including govt. support/incentives for biofuels, (xi) changes in process technologies, (xii) the impact of acquisitions, including related integration issues, (xiii) reorganization measures and (xiv) general competitive factors on a local, regional, national and/or global basis, (xv) natural gas prices, and (xvi) chemicals and enzyme prices.

The matters discussed herein may also involve risks and uncertainties described from time to time in the company's annual reports and/or auditors' financial statements. The company assumes no obligation to update any forward-looking information contained herein, and assumes no liability for the accuracy of any of the information presented herein as of a future date.

Non-GAAP Financial Information

We have provided non-GAAP measures as a supplement to financial results based on GAAP. A reconciliation of the non-GAAP measures to the most directly comparable GAAP measures is included in the accompanying supplemental data. Adjusted EBITDA is defined as net income/(loss) plus (to the extent deducted in calculating such net income) interest expense, loss on extinguishment, income tax expense, intangible and other amortization expense, depreciation expense, and share-based compensation expense.

Adjusted EBITDA is not calculated in accordance with GAAP and should not be considered as an alternative to net income/(loss), operating income or any other performance measures derived in accordance with GAAP or to cash flows from operating, investing or financing activities as an indicator of cash flows or as a measure of liquidity. Adjusted EBITDA is presented solely as a supplemental disclosure because management believes that it is a useful performance measure that is widely used within the industry in which we operate. In addition, management uses Adjusted EBITDA for reviewing financial results and for budgeting and planning purposes. EBITDA measures are not calculated in the same manner by all companies and, accordingly, may not be an appropriate measure for comparison.

Aemetis Mission

Aemetis is an international renewable fuels and biochemicals company using patented industrial biotechnology for the construction and operation of advanced biorefineries.

Traditional Corn Ethanol and Vegetable Oil Biodiesel	Advanced Biofuels (Purpose-Grown Feedstocks)	Low Carbon, Low Land Use (Waste Orchard/Forest/Oils)
PAST	PRESENT	FUTURE
		
G1	G2	G3

Aemetis Overview

- **Founded in 2006 by biofuels veteran (co-founder of Pacific Ethanol; EPM)**
- **$170 million revenue in 2018; 110 million gallons per year biofuels capacity**
  - Own/operate 60+ million gallon ethanol plant in California
  - Own/operate 50 million gallon capacity Biodiesel and Glycerin refinery in India
  - Building $50 million Dairy Biogas digester, pipeline and cleanup system
  - Developing $175 million Cellulosic Ethanol plant (waste orchard wood feedstock)

Management and Board of Directors

Board of Directors

John Block - Former Secretary of Agriculture from 1981-86 under President Reagan
Fran Barton - Former CFO of five high tech companies with revenues above $1 billion
Dr. Steven Hutcheson - Molecular genetics founder of Zymetis, acquired in 2011 by Aemetis
Lydia Beebe – Former 20-year Chevron corporate officer (38 years at Chevron)

Eric McAfee - Chairman and CEO

- Founder of *Aemetis (NASDAQ: AMTX)* and co-founder of *Pacific Ethanol (NASDAQ: PEIX)*
- Founder of oil production company *Evolution Petroleum (NYSE: EPM)*
- Founded seven public companies and funded twenty-five private companies as principal investor

Todd Waltz - EVP and CFO

- Joined Aemetis in 2007
- Served in senior financial management roles with Apple, Inc. for 12 years
- Ernst & Young CPA

Andy Foster - EVP and President, Aemetis Advanced Fuels

- Joined Aemetis in 2006
- Senior executive at three Silicon Valley tech companies
- Served in the George H.W. Bush White House (1989-1992) as Associate Director - Office of Political Affairs and as Deputy Chief of Staff for Illinois Governor Edgar for five years

Sanjeev Gupta - EVP and President, Aemetis International

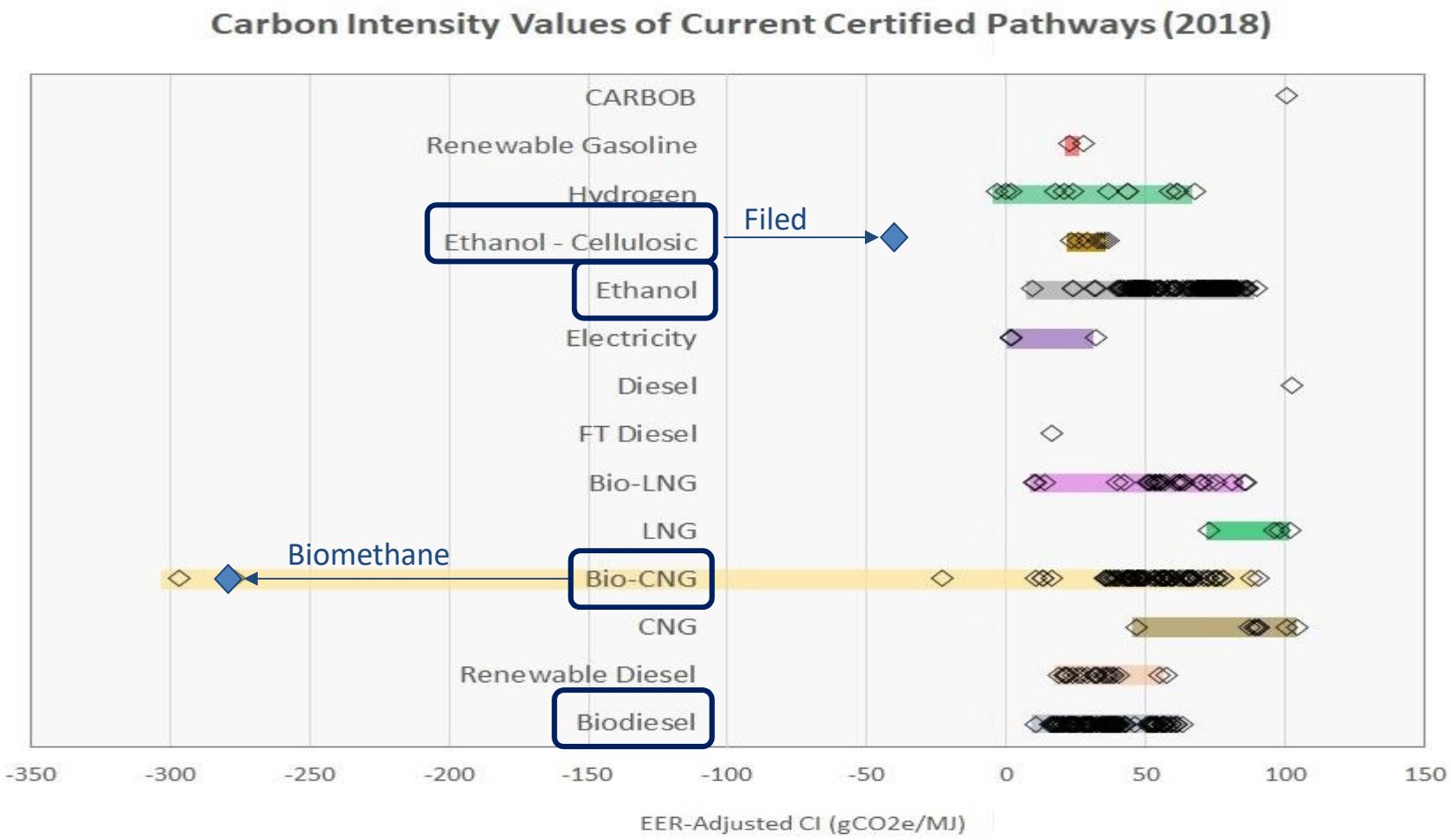
- Joined Aemetis in 2007
- Manages India biodiesel and glycerin business
- Previously head of petrochemical trading company with about $250 million revenues and offices on several continents

Unique Attribute of Biofuels: "Below Zero" Carbon Emissions

Solar, Wind, Hydro and Nuclear electricity reduce emissions of new greenhouse gases compared to coal and petroleum, but **do not consume CO2** from the atmosphere.

Renewable fuels and biogas from plant materials **consume CO2** and **can help reverse Climate Change** by the use of waste biomass and renewable oil feedstocks to produce biofuels.

California LCFS Carbon Intensity Values: Aemetis Products

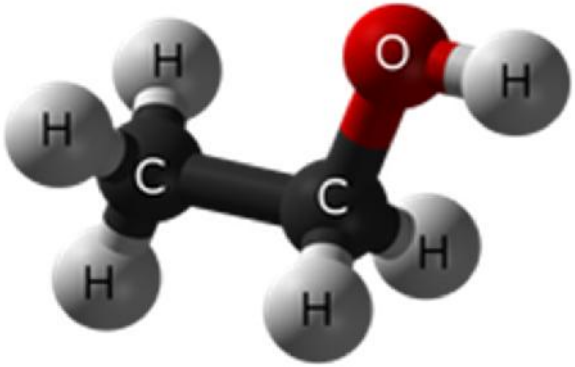


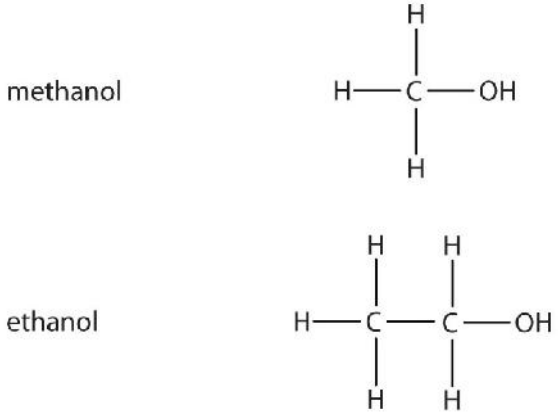
Source: California Air Resources Board - October 2018

Ethanol Molecule: High Octane, High Oxygen, Replace BTEX

Unique Properties of Ethanol Molecule

- **Ethanol is 114 octane = prevents pre-ignition of fuel and lost power under high compression**
  - **Higher octane = higher compression engines = better fuel efficiency**
  - **Replace benzene and other harmful BTEX additives in gasoline**
- **Ethanol is 34% oxygen by weight**
  - **Cleaner burning gasoline**
  - **Reduce air pollution**

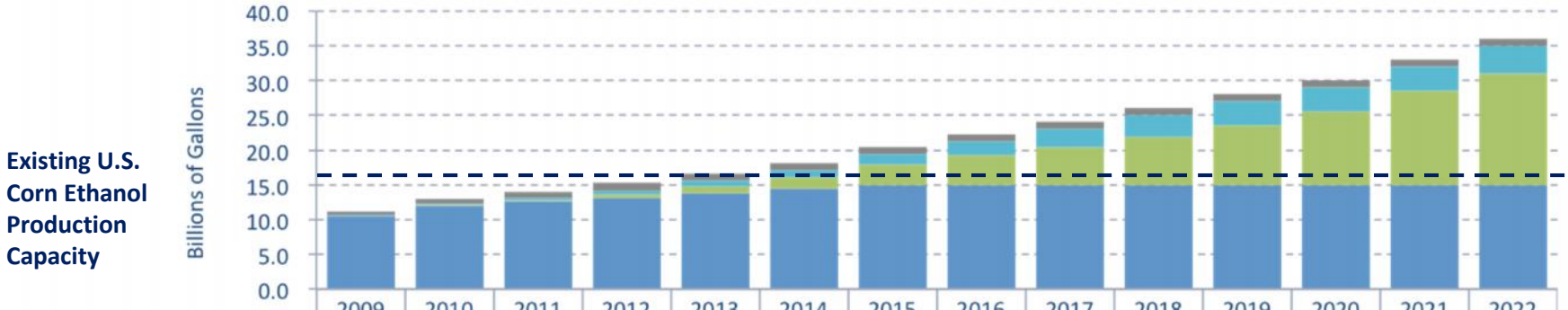




Federal Renewable Fuel Standard Mandate Expands by Law

In order to meet the federal Renewable Fuel Standard, obligated parties are required to blend biofuels in increasing quantities each year

- "Conventional Biofuels" reduce greenhouse gas emissions by 20% relative to gasoline/diesel
- "Advanced Biofuels" reduce greenhouse gas emissions by 50% relative to gasoline/diesel
- Higher ethanol blends (E15 and E85), recent ASTM approval of 100 octane gasoline and expanding export markets expected to drive favorable supply/demand for biofuels



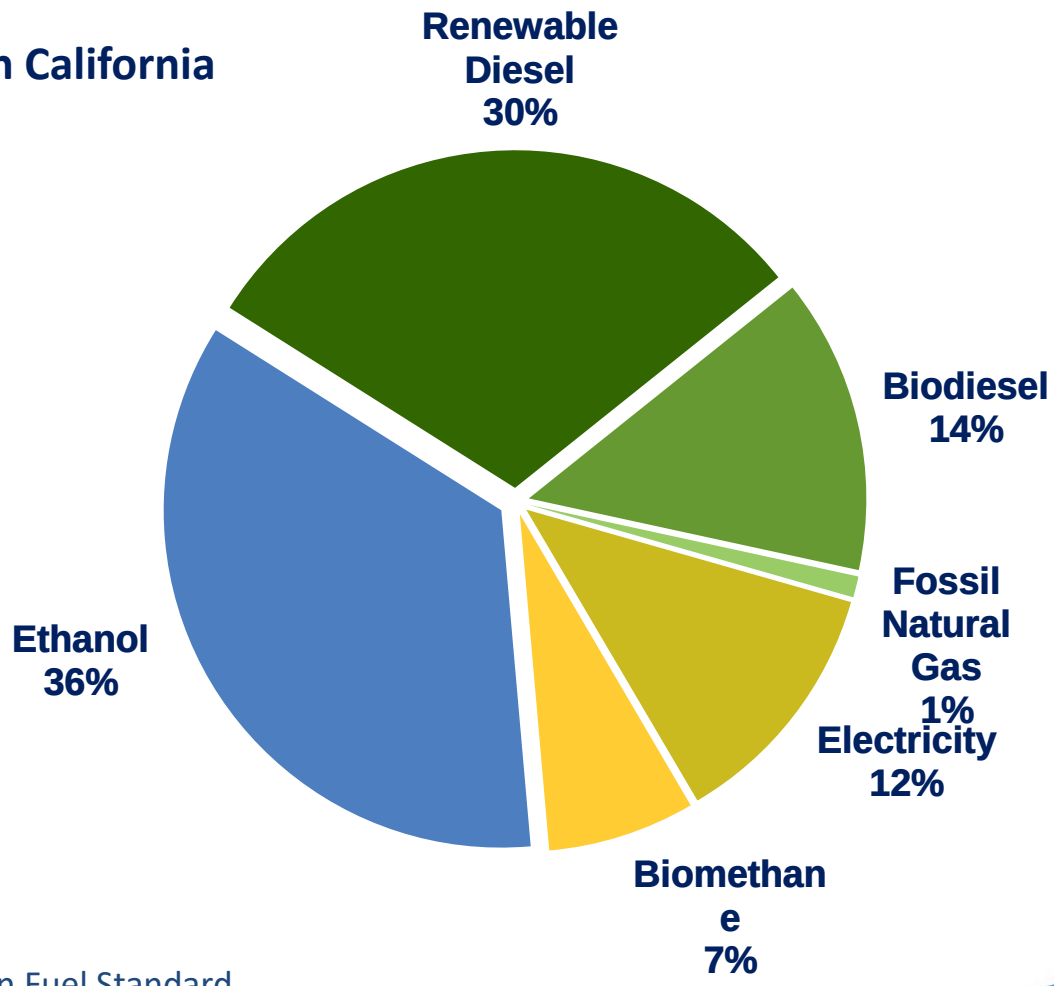
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Biomass-based Diesel	0.5	0.7	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Non-cellulosic Advanced	0.1	0.2	0.3	0.5	0.8	1.0	1.5	2.0	2.5	3.0	3.5	3.5	3.5	4.0
Cellulosic Advanced	0.0	0.1	0.3	0.5	1.0	1.8	3.0	4.3	5.5	7.0	8.5	10.5	13.5	16.0
Conventional Biofuels	10.5	12.0	12.6	13.2	13.8	14.4	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0

California LCFS Carbon Reduction

Biofuels Lead Carbon Reduction in California

California LCFS Carbon Credit Generation by Fuel Type - 2017

- Ethanol
- Renewable Diesel
- Biodiesel
- Fossil Natural Gas
- Electricity
- Biomethane

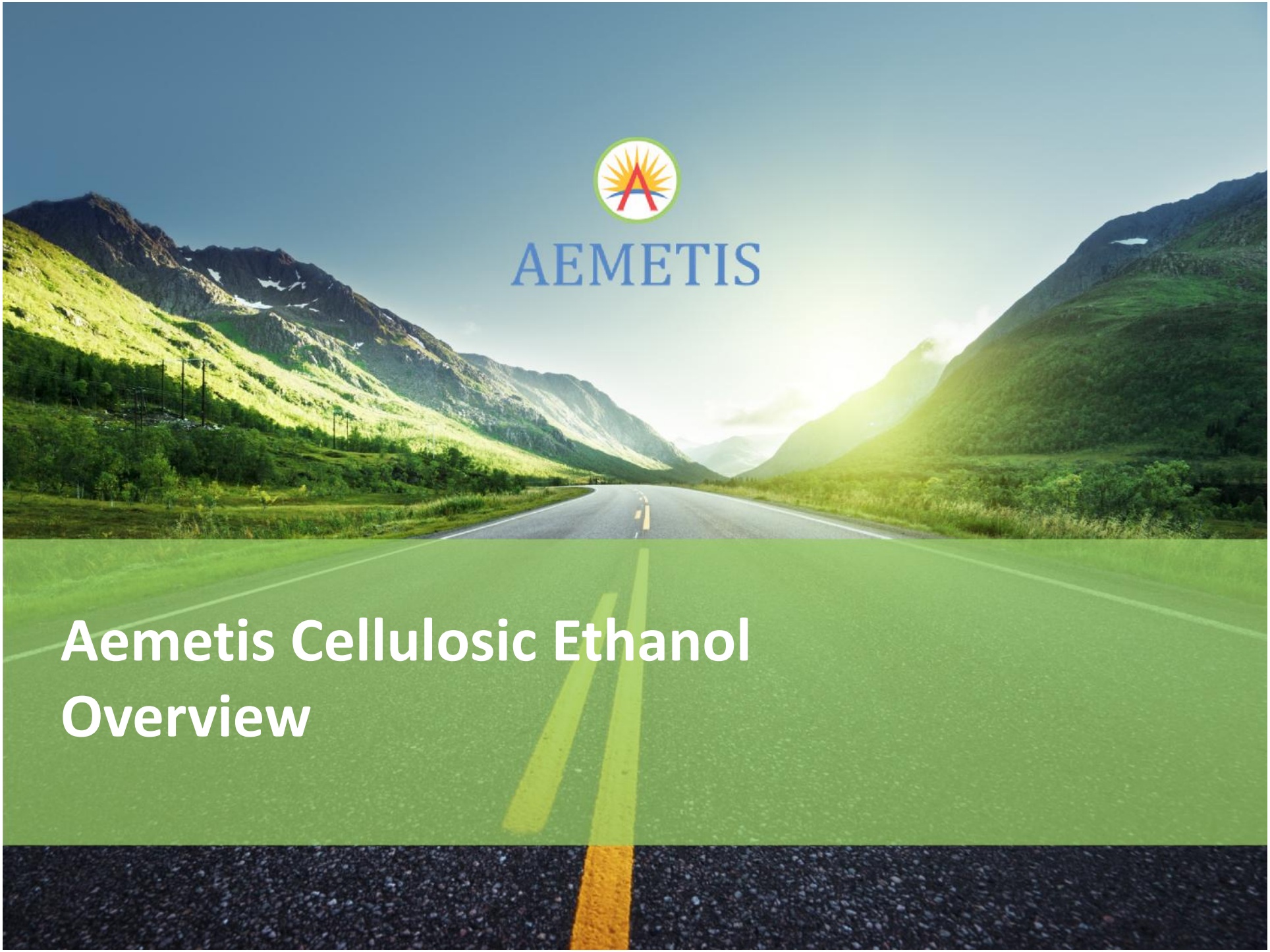


California Air Resources Board: "Low Carbon Fuel Standard Re-Adoption: Fuel Availability" - April 25, 2018

California LCFS: Favorable and Enforced Regulatory Environment

California Low Carbon Fuel Standard (LCFS)

- The Low Carbon Fuel Standard (LCFS) is administered by the **California Air Resources Board**
- The LCFS **"Cap and Trade"** system was established in 2007 and **extended in 2017 to year 2030** to offset emissions from petroleum fuels
- Petroleum importers, refiners and wholesalers can either develop their own low carbon fuel products or **buy LCFS credits** from other companies that develop and sell low carbon alternative fuels, such as biofuels plants
- LCFS credits traded $62 in July 2017, but **LCFS credits are now $195**
- **California LCFS credits are now used for project financing due to stability of policies**
  - **Federal D6 RINs are not usable by investors or lenders for project financing**
    - **D6 RIN price fell to only 7 cents due to deliberate biofuels waivers issued to highly profitable major oil companies by the EPA**



Aemetis Cellulosic Ethanol Overview

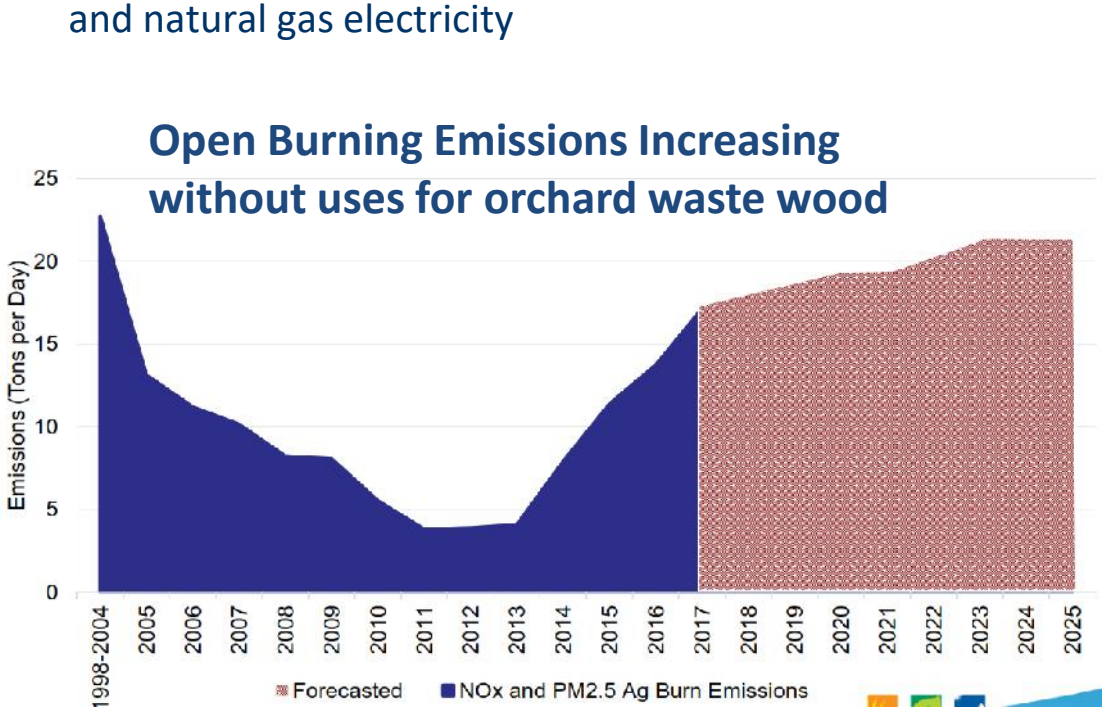
Problem: California Orchard Waste Wood Burning

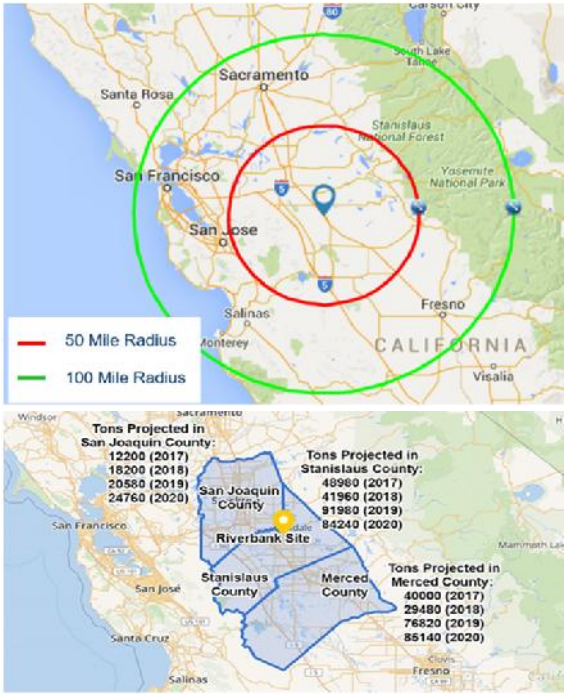
Biomass-to-Energy Plants Closing in California

- More than 40% of biomass-to-electricity plants have shut down in California
- Lack of ability to compete with low-cost solar, wind and natural gas electricity

About 1.5 million acres of almond and walnut orchards in Central California

- 2+ million tons/year of Ag Waste

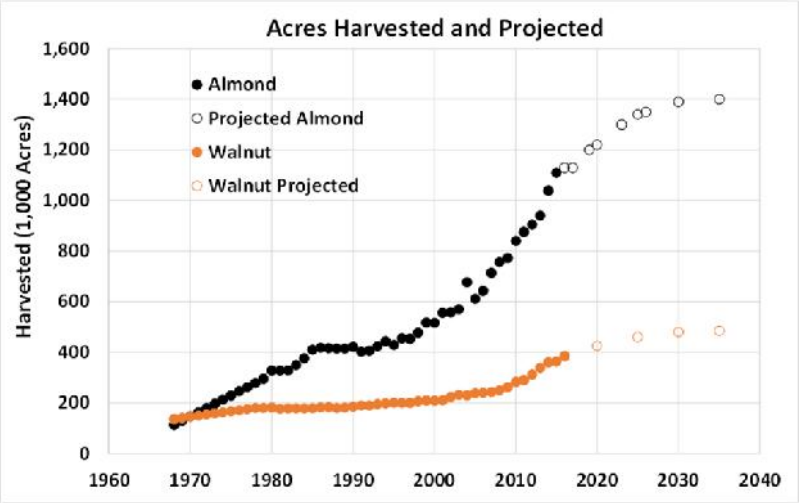




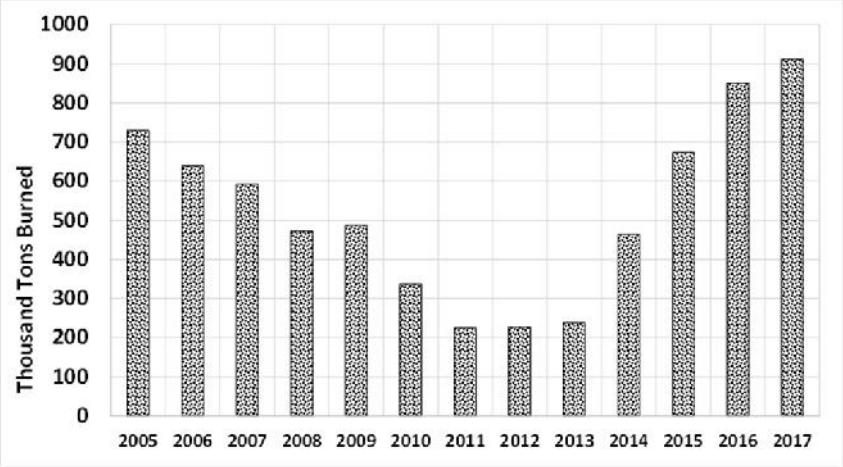
Source: San Joaquin Valley Air Control District Emergency Meeting on Open Burning November 2017

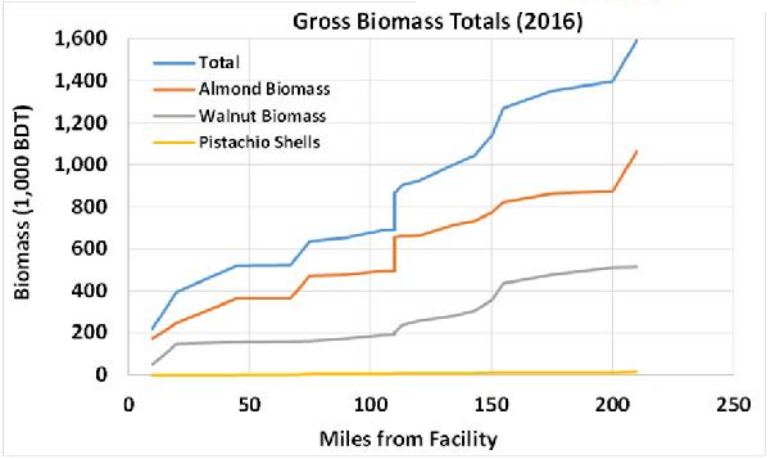
UC Davis Feedstock Study Results

Increase in Waste Wood



Increase in Burning





UC Davis Study Conclusions:

- Confirmed air emissions assumptions for carbon intensity score under LCFS
- Confirmed biomass growth and availability tonnage
- Confirms feedstock pricing and feedstock projected cost for 20 years
- Expanding supply due to lifecycle of trees

Solution: Convert Orchard Wood Waste to Low Carbon Ethanol

About 1.5 million acres of almond and walnut orchards in CA

- 20 year almond tree life = remove about 40,000 acres per year
  - Up to 40 tons per acre for each orchard removed
  - Orchard/vineyard wood waste = 2+ million tons per year
- Pistachio shells and hulls have limited uses

California orchard waste can produce 160+ million cellulosic ethanol gallons per year

- At 80 gallons per ton of waste feedstock, requires 1.6 million tons of wood biomass per year
  - Also available Forest, Construction & Demolition wood waste
- Creates 30,000 direct/indirect jobs in Central Valley
- Attracts $1.6 billion of new capital investment to California
- Eliminates air pollution from orchard, vineyard and forest wood burning

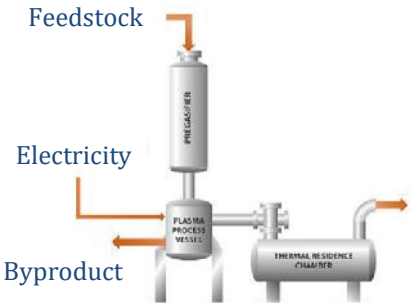
Biomass to Cellulosic Ethanol

1

Feedstock

Biomass

- Orchard Wood Waste
- Ag Byproducts
- Forest Wastes



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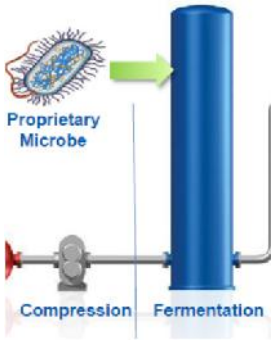
Thermal Transformation

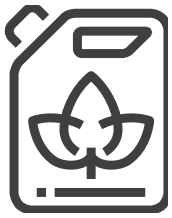


3

LanzaTech Fermentation

4

Ethanol Plant Integration



Aemetis is implementing the first **biomass-to-biofuels** plant using the LanzaTech process

LanzaTech Facilities

12 million gallon commercial plant operating in China on steel mill gas
Demo Plants: 100,000 combined operating hours
Multiple operating runs exceeding 2,000 hours

Multiple plants at various scales demonstrated key aspects of process

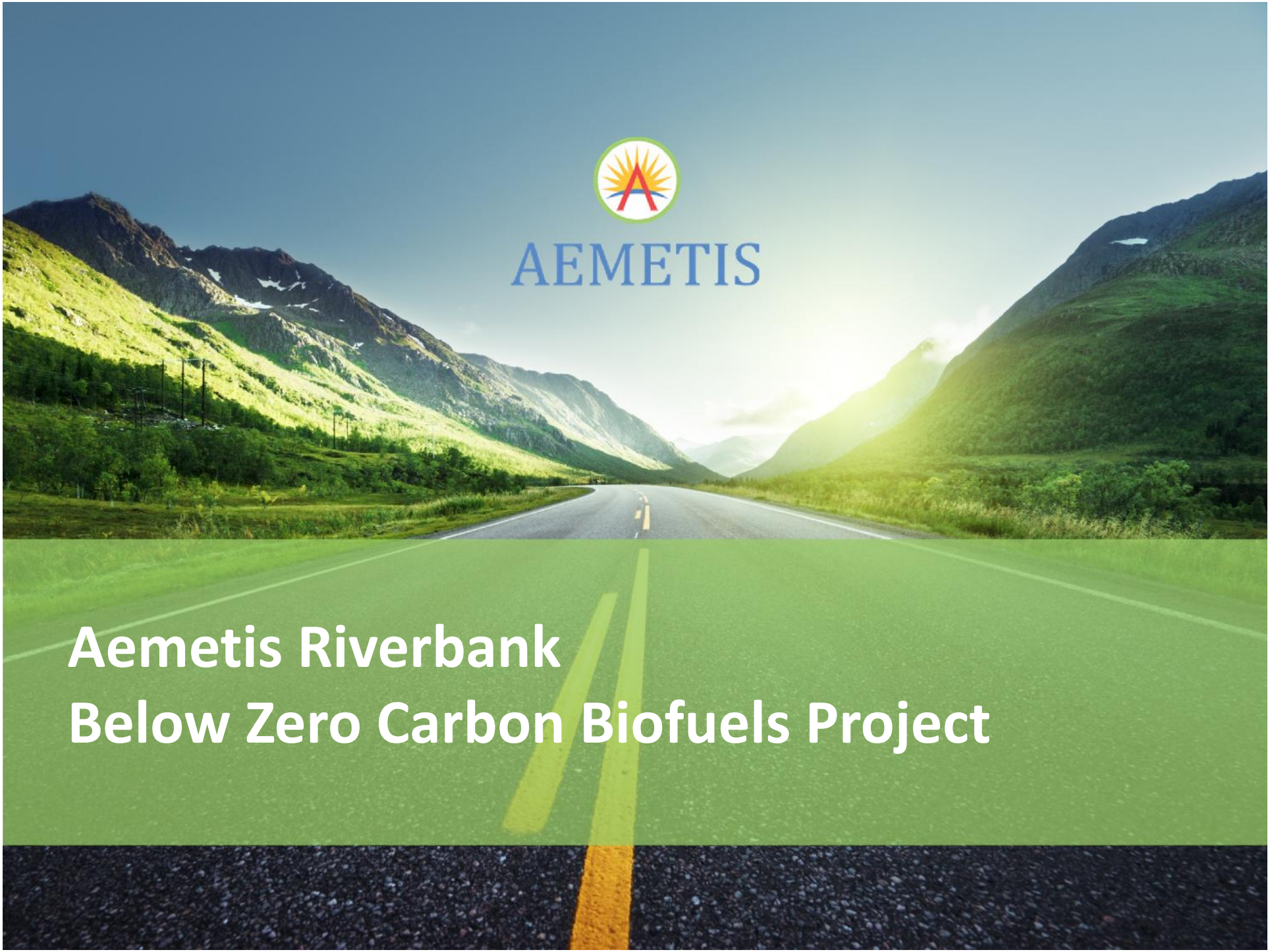
Solution: Convert Forest Biomass to Cellulosic Ethanol

Support and Fund Forest Thinning and Forest Waste Wood Transport to Processing Plants

- Make the waste wood feedstock available to all processing plants at the same price
  - A reliable supply of waste wood feedstock to all industries will generate a sustainable, long-term solution by attracting investment
- Reduce biomass burning throughout the state
  - Carbon emissions from burning biomass are significant, ranging between 20 to 40 percent of the carbon emissions from fossil fuels (Intergovernmental Panel on Climate Change)
  - The Aemetis solution is carbon-negative

Avoid Picking Winners and Losers

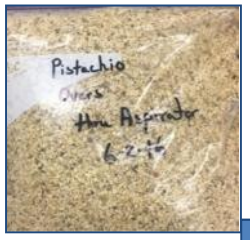
- California government should avoid choosing “winners” by singling out one industry or end user
- A level playing field will allow for the best uses of the forest biomass to prevail
- Prior evidence suggests that when the state favors one technology over another, unintended consequences usually follow, including loss of investment and job growth from new technologies



Aemetis Riverbank
Below Zero Carbon Biofuels Project

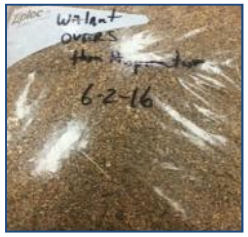
Aemetis Integrated Demonstration Unit Completed

Walnut Wood



Pistachio Shell

Almond Wood



Walnut Shell

InEnTec

Gasification

AEMETIS

Gas Cleaning

LanzaTech

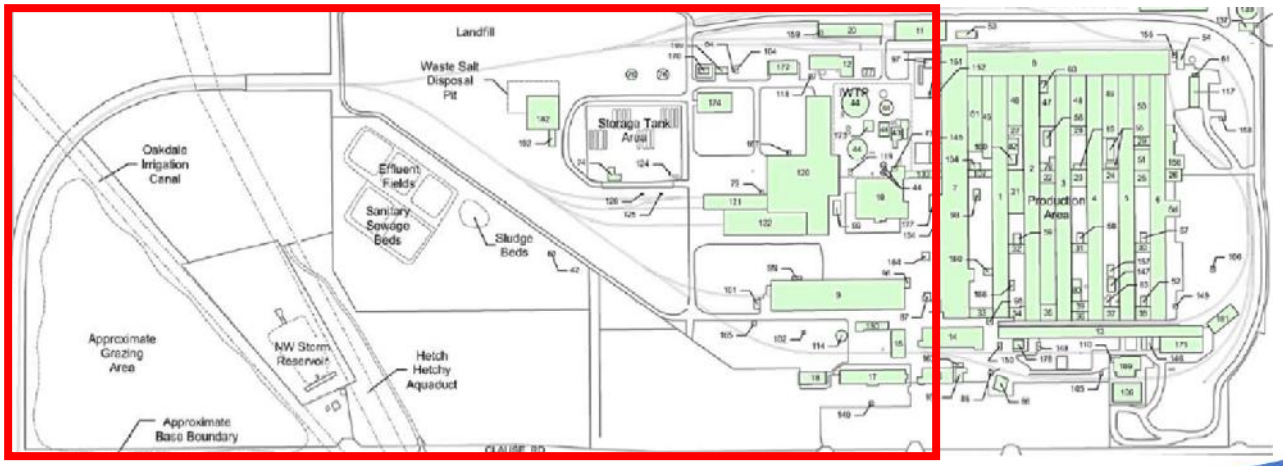
Fermentation

Riverbank Site: 55 Year Lease Signed

- Former US Army Ammunition Production Plant near Modesto, CA
- Additional space for expansion
- Existing Power and Building Infrastructure
- 100% Hydroelectric Power
- Rail spur in place
- Feedstock storage areas adjacent to plant

Site Status:

- Site Layout Complete
- Site Permitting Complete



20-Year Feedstock Contract Signed

- Signed 130,000 ton for $15 BDT fixed price
- Price escalator increases price by $1-2/BDT per year
- 20 year agreement, 10 year initial term with renewal for an additional 10 years
- No obligation to purchase feedstock
- Specific feedstock composition and logistics negotiated

Aemetis Feedstock Purchase Agreement

This Feedstock Purchase Agreement (the "**Agreement**") is made and entered into as of July 27, 2017 ("**Effective Date**"), by and between
("Seller"), to sell and deliver, and Aemetis Advanced Products Keyes, Inc., a Delaware corporation having a place of business at 20400 Stevens Creek Boulevard, Suite 700, Cupertino, California 95014 ("Buyer") to purchase and receive Feedstock under the following terms and conditions. The Seller and the Buyer are the parties to this Agreement (the "Parties").

The Parties hereby agree as follows:

1. Feedstock: "Feedstock" has the meaning set forth in Exhibit A and as more fully described in Exhibit C hereto. The Seller hereby agrees to deliver to Buyer ten thousand Bone Dry Tons (10,000 BDT) monthly during the duration of this Agreement (the "Feedstock Tons"). Buyer shall provide thirty (30) days prior written notice to Seller before the first delivery of Feedstock by Seller to Buyer. Buyer shall thereafter have the right to increase or decrease the daily deliveries of Feedstock at any time upon five (5) days prior written notice, not to exceed the Feedstock Tons per month and not to be less than 2,000 Bone Dry Tons per month. At the election of Buyer, Feedstock deliveries shall be to facilities in or near five (5) miles from Modesto, California.

2. Price: The base price ("Base Price") for Feedstock shall be fifteen dollars per Bone Dry Ton ($15.00/BDT) delivered FOB Buyer's plant. Buyer shall pay for the delivered Feedstock by the 25th day of the month after the month of delivery.

3. Delivery: Seller shall deliver to Buyer the Feedstock as defined in Exhibit A attached to this Agreement. Buyer shall receive Feedstock deliveries Monday through Saturday between 6:00 AM and 6:00 PM, but reserves the right to modify delivery hours as it deems necessary. Feedstock shall be delivered to Aemetis Advanced Products Keyes, Inc. at 5300 Claus Road, Riverbank, California 95357 or another facility within five (5) miles of Modesto, California, as directed by the Buyer.

4. Term: The Term of this Agreement ("Term") is for twenty (20) years from the date of first delivery of Feedstock, as described in and subject to the attached Exhibit B - Terms & Conditions which are hereby made a part of this Agreement as if fully set forth herein.

5. Title and Warranty: Seller warrants and represents that it shall have legal title to all Feedstock sold to Buyer hereunder, and that the Feedstock shall be produced and transported in accordance with all applicable laws and regulations. Buyer reserves the right to reject any Feedstock delivery which does not meet the Feedstock specifications in Exhibit A of this Agreement or is deemed unsafe for unloading ("Unacceptable Feedstock")

    a. Insurance: Seller shall maintain workers' compensation, property damage, and liability insurance, and shall cause its transportation contractor(s) to maintain truck insurance, as required by law.

    b. Title: Title and risk of loss of Feedstock shall pass to Buyer upon delivery F.O.B. Buyers facilities.

Permits: Finding of No Significant Impact (FONSI) Completed

- USDA Office of General Counsel Review Complete
- NEPA and FONSI newspaper postings complete
- Public comment period and responses accepted by OGC complete

The Modesto Bee
modbee.com
Vida

AFFIDAVIT OF PUBLICATION

Account #	Ad Number	Identification	PO	Days	Lines
814522	0003269693	FONSI PUBLIC NOTICE JEFF WELCH	FONSI NOTICE JEFF WELCH	1	90

Attention:

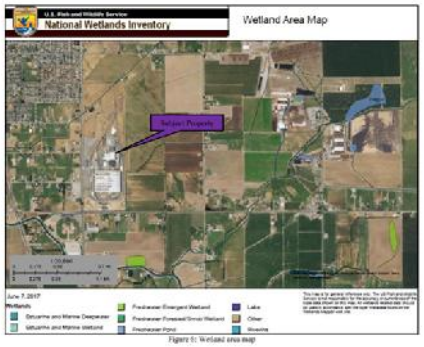
AEMETIS INC.
20400 STEVENS CREEK BLVD
SANTA CLARA, CA 95051

Declaration of Publication
C.C.P. S2015.5

STATE OF CALIFORNIA)
) ss.

4.6.4 **No-Action Alternative**

Under the no-action alternative, there appears to be no significant difference from the preferred alternative of implementing the proposed project.



USDA

United States Department of Agriculture
Rural Development

FINDING OF NO SIGNIFICANT IMPACT

Multi-Feedstock Ethanol Production Facility
Aemetis Advanced Products Keyes, Inc.
Riverbank, California

Rural Business-Cooperative Service
U.S. Department of Agriculture

Prepared by:
Peggy Wade
Program Support Staff
Rural Housing Service

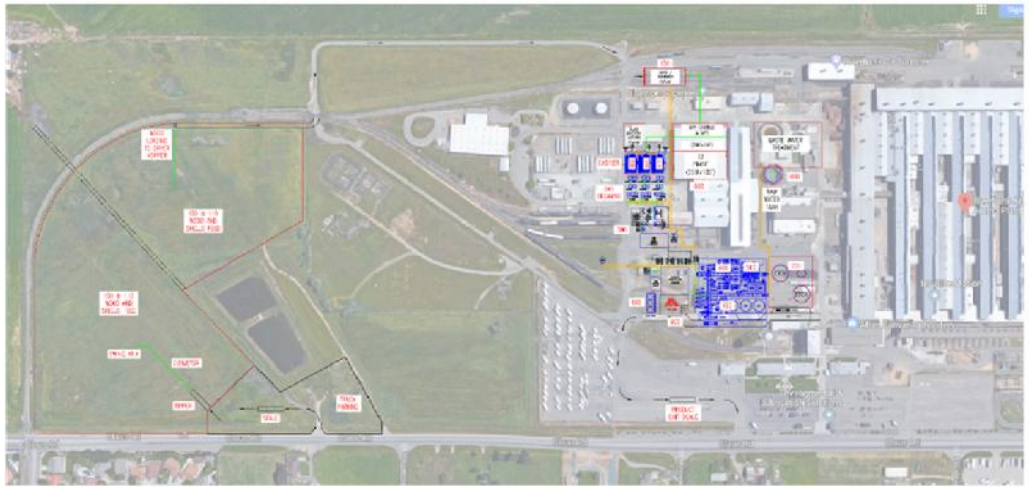
September 2017

1400 Independence Ave, S.W. Washington, DC 20250-0700
Web: http://www.rurdev.usda.gov

Committed to the future of rural communities.

"USDA is an equal opportunity provider, employer and lender."
To file a complaint of discrimination write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, DC 20250-9410 or call (800)795-3272 (voice) or (202) 720-6382 (TDD).

EB-5 Approved Exemplar by USCIS for $50 million



- USDA “National Interest” EB-5 project support letter received
- Aemetis advanced biofuels project converts former Army ammunition plant
- Creates 2,000 new direct, indirect and induced jobs
- Aemetis completed $35 million EB-5 raise for Keyes ethanol plant
- 3% interest rate, subordinated funding, no conversion into stock
- No equity dilution to Aemetis

Job Creation

	2019	2020	2021	2022	2023
Revenues	$63,381,000	$92,125,000	$94,718,000	$95,135,000	$95,353,000
Total Jobs	836	1,127	1,424	1,720	2,014

USDA 9003 Loan Guarantee Approved for $125 million Loan

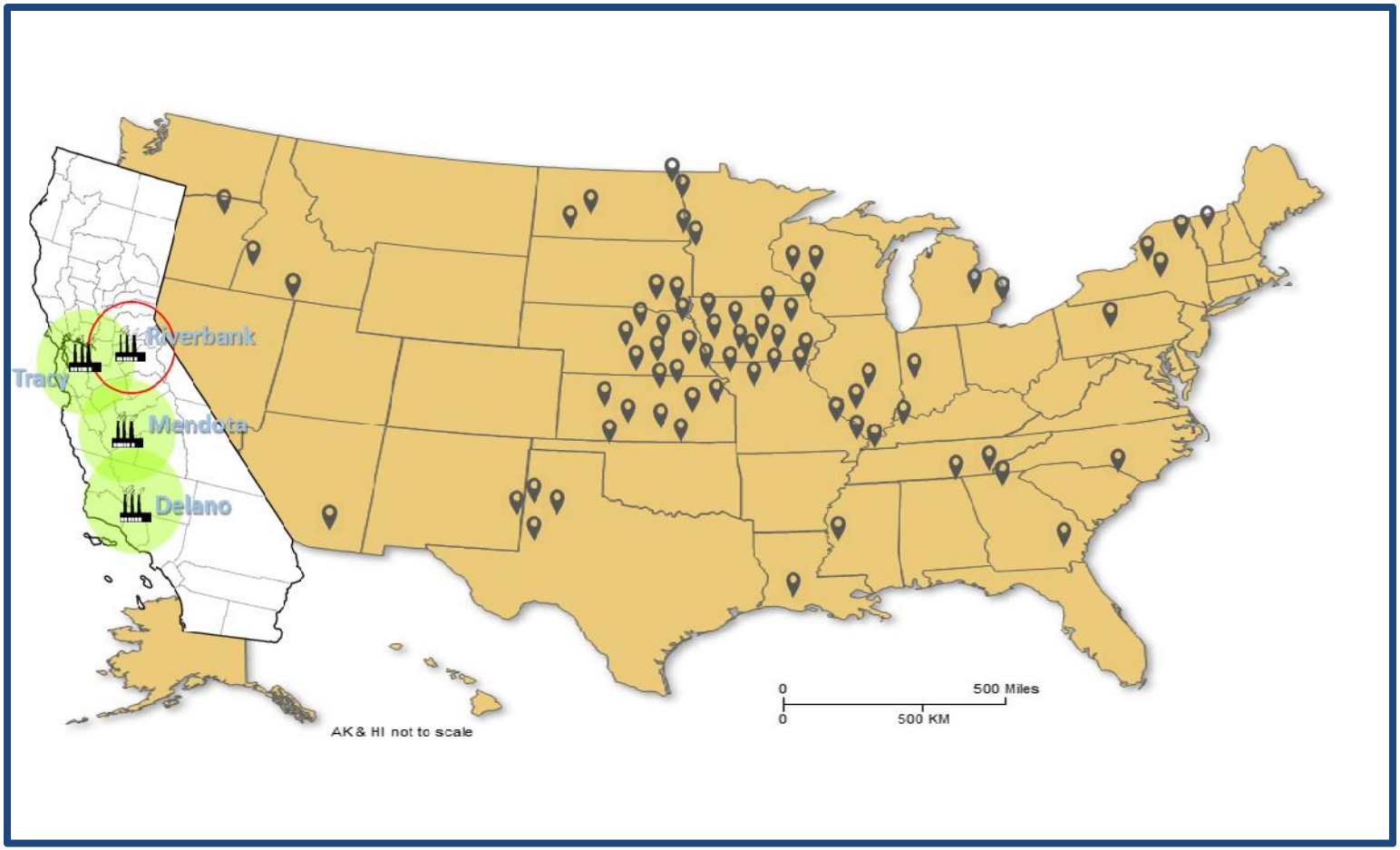
Loan Overview

- USDA 9003 Biorefinery Assistance Program
- $125 million, 20 year bank syndicated loan with 80% USDA Loan Guarantee
- Aemetis has invested $10+ million in project to date

Milestones Achieved

- Environmental Assessment Completed
- 20 year Feedstock Contracts Completed
- Ethanol Off-Take Contracts Completed
- Integrated Demonstration Unit operated for 120 days
- Bank Approved Financial Model Complete
- Technical Report Completed
- Preliminary Engineering

Future Expansion in California: 160 million gallons at 4 plants




AEMETIS
www.aemetis.com