The Aemetis Biorefinery
Upgrading Biofuels Plants to Produce Cellulosic Advanced Fuels
(NASDAQ: AMTX)

Eric McAfee – Chairman/CEO

April 2017 – San Francisco
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 conversion of first-generation ethanol and biodiesel plants into advanced biorefineries.
Aemetis Overview

- Founded in 2006 by biofuels industry veteran (co-founder Pacific Ethanol and EPM)
- $147 million revenue in 2015; 110 million gallons per year biofuels capacity
- Own/operate 60 million gallon ethanol plant in California
  - Largest biofuels refinery in California
- Own/operate 50 million gallon Distilled Biodiesel and Glycerin refinery in India
- Building Cellulosic Ethanol upgrade to CA ethanol plant
- Enzymatic Biodiesel and Renewable Chemical upgrades to biodiesel plant
Management and Board of Directors

**Board of Directors**

- **Harold Sorgenti** - Former President/CEO of ARCO Chemical Company (12 years including IPO)
- **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 Hucheson** - 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)
- Founding shareholder 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
Biofuels Industry Policies
The Increasing Renewable Fuel Standard Mandate

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

- “Conventional Biofuels” must reduce greenhouse gas emissions by 20% relative to gasoline or diesel and “Advanced Biofuels” must reduce greenhouse gas emissions by 50%.
- 15 billion gallons per year (BGY) of ethanol mandated in 2017, with current capacity of 16 BGY.
- Termination of excess RIN’s, higher ethanol blends (E15 and E85) and export markets to drive supply/demand into balance in 2017/2018.

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<th>Year</th>
<th>Mandated Starch Ethanol Demand 2017</th>
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Legend:
- **Biomass-based Diesel**
- **Non-cellulosic Advanced**
- **Cellulosic Advanced**
- **Conventional Biofuels**

- **Billions of Gallons**
Low Carbon Fuel Standard – Biofuels Lead Carbon Reduction in California

California LCFS Carbon Credit Generation by Fuel Type, 2011-2015

- Ethanol: 51%
- Renewable Diesel: 17%
- Biodiesel: 17%
- Fossil CNG: 5%
- Electricity: 4%
- Bio-CNG: 3%
- Bio-LNG: 2%
- Fossil LNG: 1%
- Other: 0%

Renewable Fuels Association
Low Carbon Advanced Fuels Upgrade to Existing Ethanol Plants
Waste Biomass Feedstocks: Renewable and Non-Renewable Sources

**Industrial Waste Gases**

- Gas Fermentation
- Industrial Waste Gases
- CO

**Biogas**

- Reforming
- CO + H₂

**Solid Waste**

- Gasification
- CO₂ + H₂

**Ag/Forest Wastes/Crops**

- Renewable CO₂
- Ag/Forest Wastes/Crops
- CO + H₂ + CO₂

**Biorefinery Waste CO₂**

- Gas Fermentation
LanzaTech Technology: Biomass to Syngas to Cellulosic Ethanol

**Feedstock**
- Orchard/Vineyard Wood Waste
- Orchard Byproducts
- Forest Waste

**Gasification**
- Feedstock
- Electricity
- Byproduct

**Syngas**

**LanzaTech Fermentation**
- Proprietary Microbe
- Compression
- Fermentation

**Ethanol Plant Integration**
- Recovery
- Product Tank

**Founded in 2005, Lanzatech has raised more than $200 million**
- 250 patents pending
- Six pilot plants worldwide
- Building steel mill waste gas-to-ethanol plants in Europe and Asia
- **Aemetis first biomass-to-ethanol plant using Lanzatech process**
Lanzatech Facilities

40,000 combined hours on stream
Multiple runs exceeding 2000 hours

- **Freedom Pines**
  - Soperton, GA
  - S/U: 2013

- **Baosteel**
  - Shanghai, China
  - S/U: Q1 2012

- **MSW**
  - Asia
  - S/U: Q4 2014

- **Caofeidian, China**
  - S/U: Q1 2013

- **Shanghai, China**
  - S/U: Q1 2012

- **Kaoshiung, Taiwan**
  - S/U: Q1 2014

- **Glenbrook Pilot**
  - Auckland, NZ
  - S/U: 2008

**Multiple plants at various scales all demonstrating different key aspects of LT process**

- 40,000 combined hours on stream
- Multiple runs exceeding 2000 hours
210 US Ethanol Plants with Local Waste Feedstocks

- 210 ethanol plants located near local renewable, low carbon feedstocks
- Aemetis strategy is to upgrade existing biofuels plants to use local ag waste, forest waste and other feedstocks to supply advanced biofuels markets
California Cellulosic Feedstock: Biomass to Electricity Plants Closing

Biomass-to-Energy Plants Closing in California
- Inability to compete with 30% Investment Tax Credit subsidies for solar and wind
- Spreading orchard wood waste on farmland introduces pests into soils
- Spraying chemicals to kill pests in orchard wood is often illegal and damaging to land

Current Solution: Orchard wood is being burned to avoid future orchard damage
- Creates air pollution
- Damages human health
- Returning California to the polluted air before biomass-to-energy plants were built
California Cellulosic Feedstock: Ag Wastes, Forest Waste and Energy Crops

About 1 million acres of almond and walnut orchards in CA
- 20-25 year almond tree life = about 40,000 acres per year removed
- About 50 tons per acre of orchard wood each year

Existing CA ethanol plants can produce 120+ million cellulosic ethanol gallons per year
- The 4 existing ethanol plants each could produce about 32 million cellulosic gallons per year
- At 80 gallons per ton of waste feedstock, requires 1.6 million tons of biomass per year
  - Almond/pistachio/walnut/vineyard wood waste = 2+ million tons per year available
  - Forest/Construction & Demolition wood waste
Low Carbon, Cellulosic Biofuels in CA to Achieve LCFS Goals

Aemetis California Biorefinery Expansion to Produce Cellulosic Ethanol
- Phase I is 8 million gallons per year – Expansion to 32 mgy
- Carbon Intensity score estimated to be less than 30 CI
- Creates 1,900 direct/indirect jobs in Central Valley
- Eliminates methane and other emissions from biomass in landfills
- Eliminates pollution from orchard and forest wood burning

Funding for Aemetis $120 million Low Carbon Fuels Project
- USDA Federal Phase I Approval Received Q4 2016: $96 million guaranteed loan
- CA CEC funding from AB 118 $100 million annual vehicle tax for carbon reduction: ?
- CA CARB Cap and Trade funding for carbon emission reduction: ?