Octane, carbon and cost benefits of ethanol driving market growth
Regulations support long-term increasing demand for renewable fuels
E15 now available year round, generating incremental demand starting summer of 2019 and material growth longer term
Growing export environment supports demand for domestic ethanol
Brazil and Canada remained top customers for the 4th straight year, accounting for 1/2 all U.S. ethanol exports

Pure-play ethanol company with nine strategically located bio-refineries in the U.S.
Diversified product portfolio with co-product production capacity of three million tons per year and EPA approved cellulosic ethanol production capabilities
Positioned to access 48 states and export markets with fuel ethanol and industrial-grade alcohol production and marketing
Seasoned management team with proven track record of operational expertise in the ethanol, fuel and energy industries

Continued Long-term Demand for Ethanol

Quarterly Net Sales & Total Gallons Sold
Exports Create Long-term Opportunity

- U.S. ethanol exports reached a record 1.7 billion gallons in 2018, a 24% increase over 2017
- Demand is growing as global markets incorporate environmental and performance benefits
- Approximately 30 countries have renewable fuel standards or targets
- U.S. ethanol producers supply the world with lower cost ethanol than competing sugar-based Brazilian ethanol

Company History

- Pacific Ethanol founded by Nell Koehler and Bill Jones
- Madere, CA facility begins production in Q4
- Magic Valley facility in Burley, ID begins production in Q2
- Stockton, CA facility begins production in Q3
- Completed key facility improvements including corn oil and fine grind
- Pacific Ethanol completes restructuring on original western plants
- Pacific Ethanol begins reconsolidating ownership in original western plants
- Entered into technology license agreement to implement industrial scale membrane system for Madere facility as part of ongoing plant improvement initiatives
- Acquired Aventine Renewable Energy to strengthen presence in Midwestern market
- Pacific Ethanol completes restructuring on original western plants
- Acquired Illinois Corn Processing (ICP) in Q3 to diversify products and access additional distribution channels

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