

# ACE ANNUAL CONFERENCE

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CEO & Director

Lakeview Energy LLC

# LAKEVIEW ENERGY

- Operations across 6 US States- IA, OH, MO, IL, SD and TN
  - 3 bio-refineries operating in IA, OH and MO
  - Corn merchandising business in OH
  - Commodities Trading business in IL and TN
- Inputs
  - 1mm tons of corn
  - 40,000 tons of soy oil/corn oil/animal fats
- Outputs
  - 500m liters ethanol; 45 million liters biodiesel;
  - 300,000 tons animal feed
  - 11m liters corn oil
  - 75,000 tons syrup
  - 4,000 tons glycerin



# LAKEVIEW ENERGY INITIATIVES

- Over 50% of ethanol production in 2016 was exported by Lakeview Energy to a variety of destinations across the globe
- Investment in Plant expansions resulted in a 15% to 25% increase in output at our facilities
- Significant investment undertaken by the group on infrastructure and compliance
- Lakeview Nutrition established to research ways of improving the value of our co-products

# THE BIOFUELS INDUSTRY TODAY

- 2016 set a new record with US ethanol production exceeding 15bn gallons for the first time
- Domestic demand exceeded 14.2bn gallons with demand increasing by over 2% YOY.
- Exports exceeded 1 billion gallons in 2016, the second highest on record.
- US ethanol continues to be the cheapest octane worldwide today
- US is the worlds leading producer of biofuels with 60% of global ethanol production
- Largest exporter of biofuels worldwide commanding 45% of global exports in 2016 to 50 different countries.

# TOP 5 BUYERS OF US ETHANOL IN 2016

Country	2014	Country	2015	Country	2016
Canada	336M	Canada	248M	Canada	232M
Brazil	112M	Brazil	116M	Brazil	224M
UAE	68M	Philippines	71M	China	180M
Philippines	68M	China	70M	India	81M
India	41M	S. Korea	59M	Philippines	50M
% of Total	75%		68%		80%

## 2017 THE STORY SO FAR

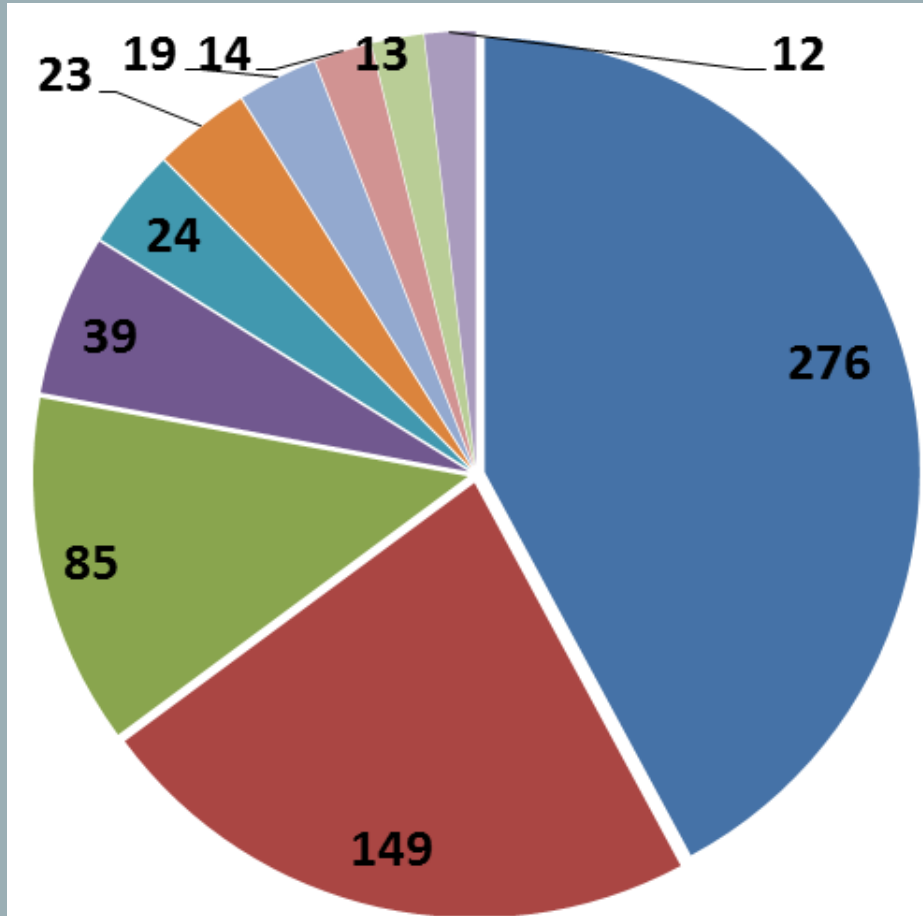
- Production 15.6bn - 15.8bn gals....300m - 500m gal ↑ YOY
- Domestic consumption 14.3bn - 14.5bn gals..100m - 300m gals  
↑YOY
- Gas demand -2.3% YTD
- Ethanol Blended + 1.6% YTD.
- EIA predicts blend rate at 10.1% in 2017
- Draft RVO announcement leaves mandate at 15bn gals for 2018
- 11% blend rate equates to circa 15.8bn gallon domestic demand
- E15 now in over 900 stations in 29 states.

# ETHANOL EXPORTS 2017

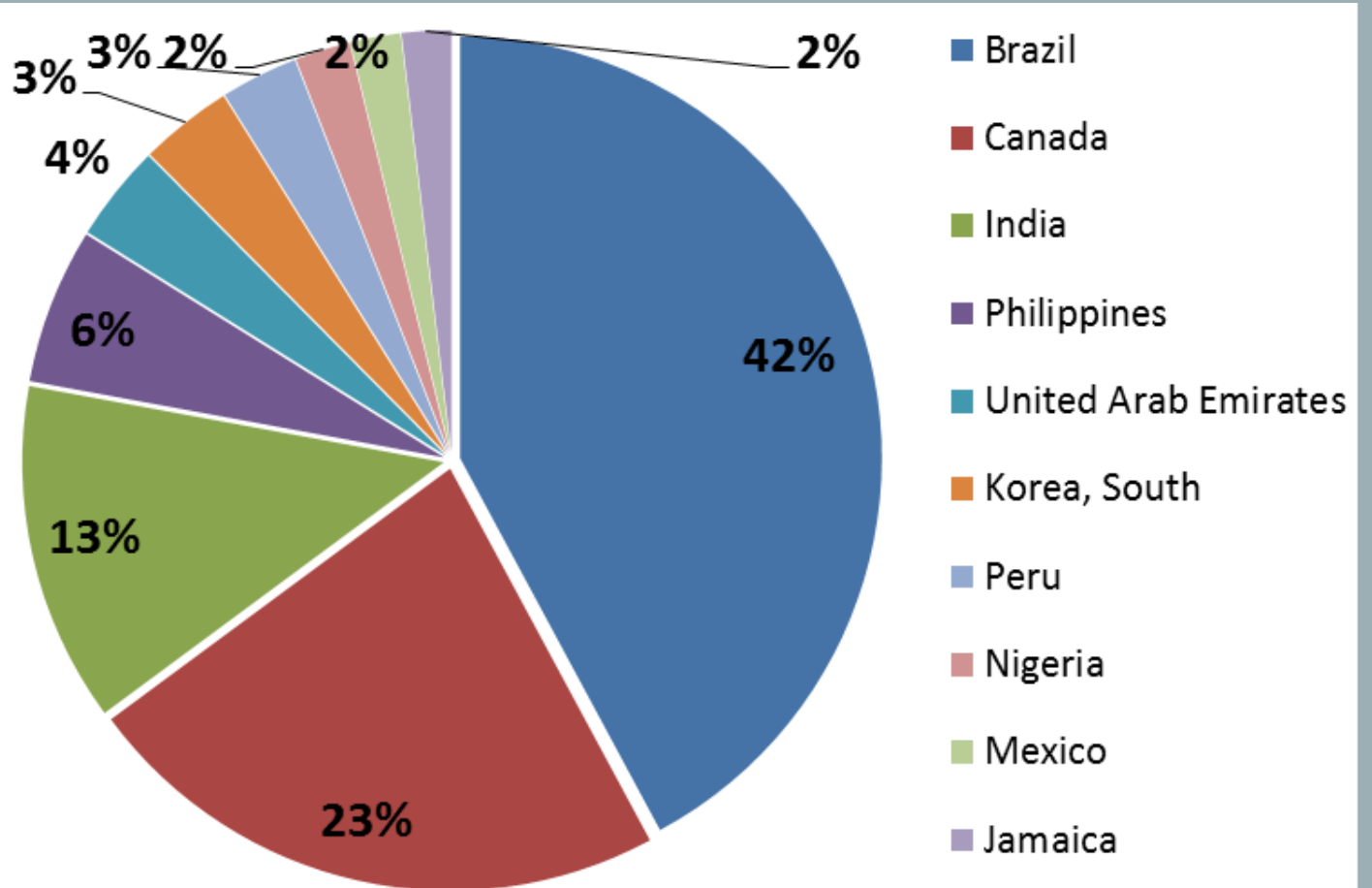
- 687m gals of ethanol exported to end of June 2017
- Exports 53% ahead of Last Year.
- Projections are 1.2 to 1.3bn gals of exports... 100m – 200m gal ↑  
YOY
- 75% of exports to 3 countries; Brazil, Canada, India
- China 50k gals Vs 179m gals YTD last year

# 2017 Top US Ethanol Export Destinations

In Million Gallons



As Percentage of Total



- Brazil
- Canada
- India
- Philippines
- United Arab Emirates
- Korea, South
- Peru
- Nigeria
- Mexico
- Jamaica



# KEY INDUSTRY INITIATIVES

- Developing sustained export markets critical to continued expansion and growth of biofuels industry here in the US
- Only 7% of US ethanol production goes to exports today
- Requires a single co-operative effort from the industry
- Ethanol Exports Steering Committee set up involving, USGC, Growth Energy, RFA, FAS, Corn States
- Multi-million dollar budget in place to fund export expansion plans
- Target is for 2.3bn gallons of exports by 2026

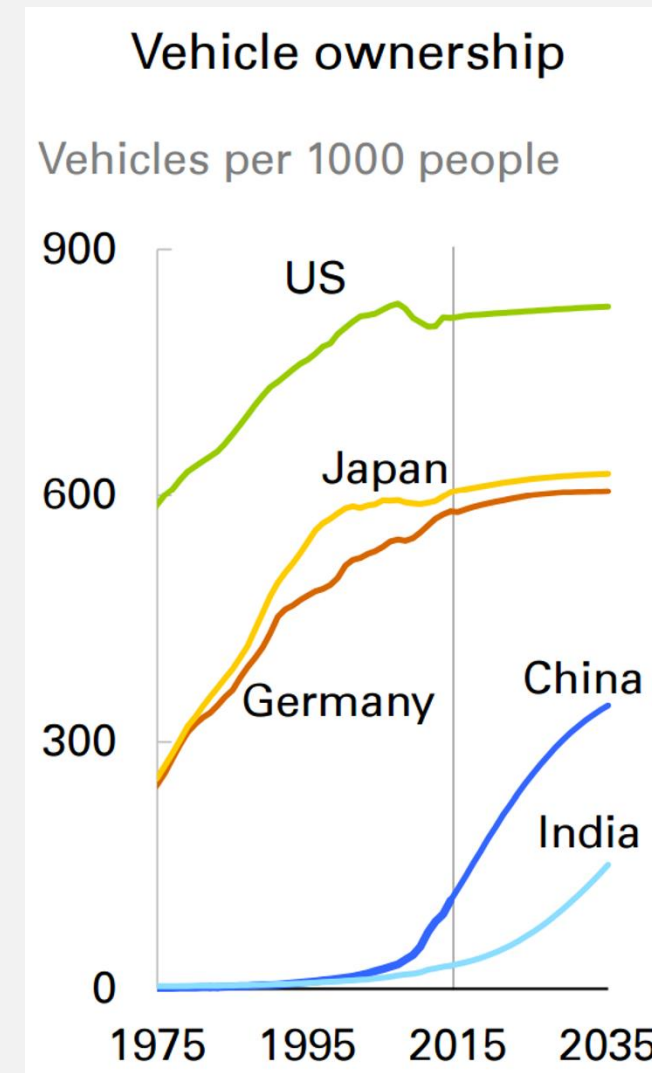
## THE FOCUS OF OUR MARKET DEVELOPMENT EFFORTS *BUILDING NEW DEMAND*

- The U.S. ethanol industry will work with interested countries to learn from our experiences and quickly and dramatically boost global blend rates of ethanol.
  - **Focus is on working with other countries (industry and government)** to develop proven policy supports, including enforced blending mandates and/or tax incentives.
  - **Highlight the benefits to society** that result from biofuels blending – GHG emissions reductions, air quality improvements, improved engine performance (octane advantages), and energy diversification. Also, rural economic development for those countries with competitively priced feedstock.
  - **The positive role of trade** – imports can help reach blending targets if domestic production lags or does not exist.
  - *Assistance offered through joint bilateral B2B working groups, trade missions, reverse trade missions, and technical and policy workshops*
- **The main idea is to develop global biofuels alliances, not adversaries.**

# WHAT DOES THE FUTURE HOLD FOR ENERGY DEMAND, CARBON EMISSIONS, AND BIOFUELS?

## VEHICLE OWNERSHIP SET TO SURGE BOOSTING FUEL DEMAND & GHG EMISSIONS

- **Global demand for energy will continue to rise, especially transportation fuel.**
  - Rising middle class households in emerging markets over next decade will sharply boost car ownership rates and kilometers driven
- **The mix of energy sources will change significantly**
  - Renewables will increase (for transportation fuel and electricity generation), and oil and gas combined will hold steady
- **Growth rate of carbon emissions will slow sharply**
  - But not by enough ... without further policy changes.
  - Biofuels role in lowering carbon-intensity of transportation fuels SHOULD be greatly expanded ... worldwide



# POTENTIAL NEW MARKETS OVER 10 YEARS

- Focus is on Asia Pacific region. Ethanol usage is low, fuel consumption growth is the fastest in the world, and air quality problems are widespread and worsening, especially in China and India. USGC and its partners have active programs here.
- Mitigating GHG emissions has become increasingly important after COP-21 in Paris. This creates new opportunities for fuel ethanol, which reduces GHG emissions. However, many are concerned about the GHG profile of corn ethanol. New LCA from US Department of Agriculture shows big improvements in GHG profile of corn ethanol in past decade. Will exceed 50% reduction vs gasoline within five years.
- Octane advantages of ethanol blending. Gasoline refiners and blenders could benefit if they fully understood ethanol's benefits. Widespread MTBE usage offers us opportunities to make inroads in oxygenate market if countries understood the threat to groundwater supplies. Displacing aromatics, which comprise 25-40% of gasoline, offers even bigger gains.
- Strong global growth potential for gasoline/ethanol blending over the next 5-10 years – with right policies in place that focus on usage – with a vital role for trade to stabilize supply.

# BEST PROSPECTS FOR NEW DEMAND IS IN THE ASIA-PACIFIC (APEC) REGION

## 6 Strategic Priorities

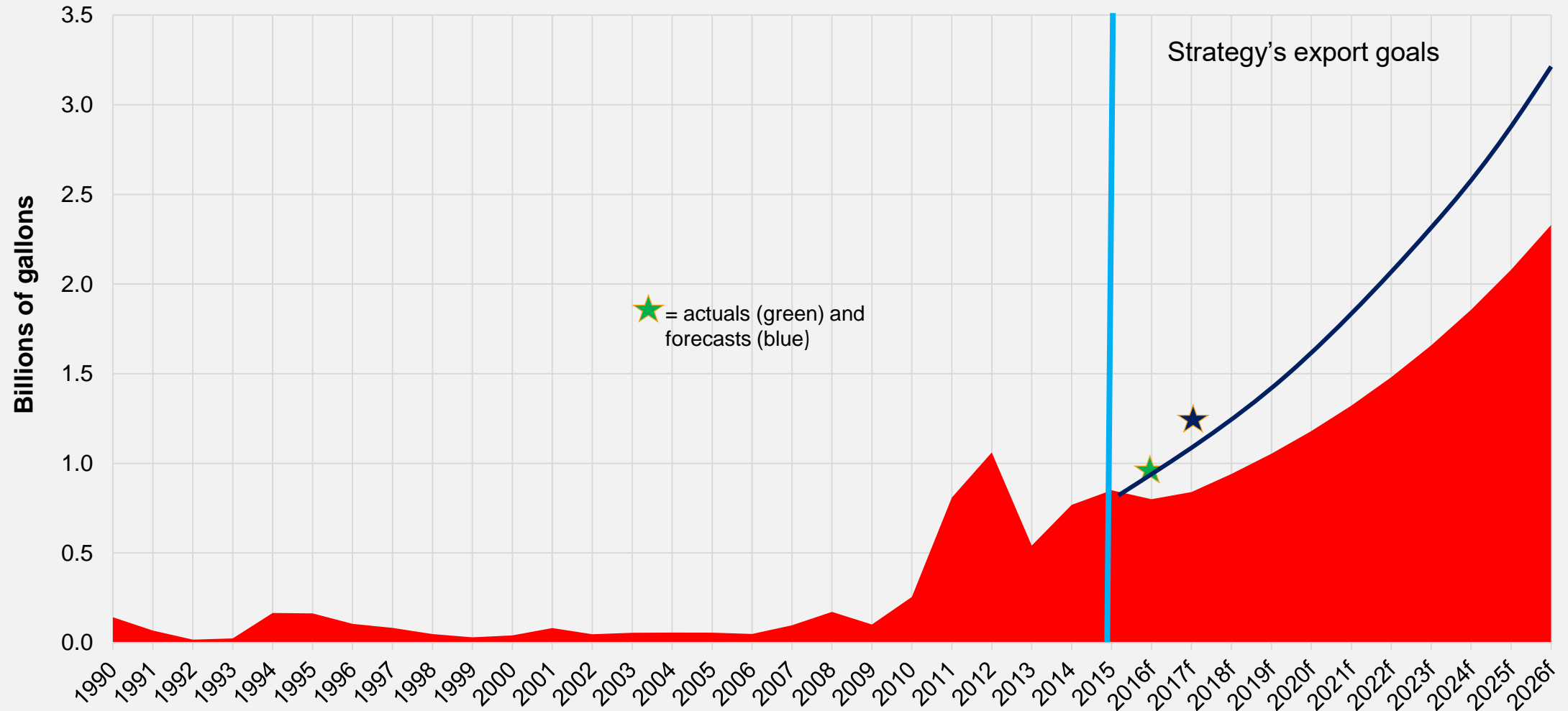
- Brazil
- Canada
- China
- India
- Japan
- Mexico

## Other Markets

- Philippines
- Korea
- Taiwan
- Peru
- Colombia



# AGGRESSIVE STRATEGY NEEDED TO REACH ~~2.3~~ 3.2 BILLION GALLONS BY 2025/26



Source: Global Agricultural Trade System – historical data, U.S. Grains Council – forecast (f)

# HEADWINDS

- Disruptive Trade Policies
  - Brazil
  - Peru
  - Columbia
- Re-negotiation of Trade Deals worldwide – NAFTA, TPP
- Changes to Government Policies-
  - EU reviewing its biofuels policy on Gen 1 biofuels use
  - Columbia considering introducing a 60% reduction in GHG emissions
- Electric Vehicles – BUT can also be an opportunity
  - 275 million vehicles using gasoline each day.
  - 90k electric cars sold in H1 2017 Vs 8.4m total vehicle sales
  - Electric cars expected to grow from 1.3m cars to 150 million cars by 2040 – still only 8% of fuel fleet

# TAILWINDS

- Mexico recently announced moving to an E-10 blend but excludes 3 major cities currently
- Japan due to announce revised Energy Policy allowing US sourced ethanol to be used for ETBE use
- Brazil considering expansion of its ethanol industry through Renovo Bio Policy
- Canada assessing moving to a full E10 blend
- China reviewing its Clean Air Policies and developing a 5 year plan
- Car manufacturers looking at E25 to E30 blends to boost engine performance and reduce emissions



# CLOSING COMMENTS

- 60 countries across the globe have blend mandates
  - Equivalent to 30% of world trade
- Ethanol share in gasoline has increased from 1.4% to 6.9% in last 16 years
  - Equivalent to 12.7% growth pa Vs 1.2% growth in gasoline
- 11% of ethanol produced in the world is traded Vs 27% for oil
- China will need to increase its ethanol volumes by circa 300 million gals to maintain its current ethanol share of 2.3% in gasoline by 2020.
- Use of aromatics across the globe is 40% with China accounting for 40% of global MTBE market
- India 12% growth in gas demand

# CLOSING COMMENTS

- Tremendous Potential to grow exports market but must be in a measured way as we need to develop global biofuels alliances
- Establishment of Ethanol Exports Steering Committee has created momentum but needs broader industry support
- Industry has made tremendous improvements on enhancing the GHG profile of US ethanol. Needs to continue to ensure we make US ethanol available to all global markets
- We need Government as a strong ally in our efforts to expand global exports markets