Developing Ethanol Markets Around The World

Experiences Of The U.S. Ethanol Industry

Tim Tierney,
Director of Strategic Marketing/ Ethanol - North Asia
Worldwide Trade in Ethanol in 2018 Rises To 2.6 Billion Gallons

U.S. is top exporter as share of world exports expands to 61% -- up from 9% in a decade

Source: GTIS/USGC Analysis; (*) denotes forecast
U.S. Ethanol Exports Reach 1.62 Billion Gallons in 2017/18
For 2018/19, no change expected as lower exports to Brazil and China offset broad-based growth to other markets
Cost Savings Provided by Ethanol Blending Spur Export Growth and Create Economic Potential for Southeast Asia

Source: S&P Platts and USGC Analysis
Improving Corn Yields Drive Efficiency Gains in US Ethanol Economics
More Than 60 Countries Have Biofuels Policies In Place
Since 2017, 10 have announced new policies or with significant expansions to their policies

Expanding global use

- Bolivia – E25 by 2025
- Brazil – RenovaBio, 3.7 billion gallons new demand by 2030
- China – E10 by 2020 or 4.6 billion gallons total demand
- Canada – Federal: Clean Fuel Standard (CFS); Also, Ontario: E10 by 2020; Other provinces may boost blending, too.
- Ireland – E10, 2019
- EU – maintains role of 1st gen feedstocks, not reduce further
- India – new feedstocks
- Japan – new suppliers
- Philippines – E10 to potentially higher blends
- Vietnam – E5 to E10, 2020
Benefits of Biofuels Policies That Embrace A Role For Trade

• **Bio-refineries are expensive and can be risky energy investments.** With CAPEX of $100 million or more per bio-refinery, volatile global energy prices, and deep pocketed fossil fuel competitors, biofuels policies MUST be stable and enforced to lower CAPEX investment risk.

• **Allowing a role for imports demonstrates commitment to policy and blend goals to investors.** If imports are allowed, blend goals can be met every year. Import restrictions and high ethanol tariffs (20% or more) inflate fuel prices to consumers and discourages use.

• Petroleum and fossil fuel tariffs (gasoline and octane enhancers) are considerably lower in most countries which slows adoption of biofuels.

• **Bioethanol feedstocks come from agricultural production (sugarcane juice, molasses, corn, cassava) which are subject to weather variability more than fossil fuels.** Imports backstop local ethanol production that suffer from feedstock production shortfalls.
Market Potential Over the Next Decade

- **Heavy emphasis on Asia Pacific region.** Ethanol usage is low, fuel consumption growth is the fastest in the world, and air quality problems impacting human health are widespread and worsening, especially in China and India. USGC and its partners have active programs throughout the region.

- However, Latin America is also a major priority. **Central American and South American countries** look promising and could benefit from the U.S. ethanol industry’s technical and policy expertise – if they decide to proceed. More collaboration coming between US and Brazil in helping other nations.

- **Mitigating GHG emissions** has become increasingly important after COP-21 in Paris. This creates new opportunities for fuel ethanol, which reduces GHG emissions and can be credited towards Paris Agreement commitments. GHG-reduction benefits increase as the blend rate rises.

- **Octane advantages of ethanol blending.** Gasoline refiners and blenders could benefit if they fully understood ethanol’s benefits. Widespread MTBE usage offers 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 as blend rates rise.

- **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.
U.S. Efforts To Build A Global Ethanol Market Expands to 40 Countries This Year

**Priority Markets**
- Brazil
- Canada
- China
- India
- Japan
- Mexico
- Indonesia

**Tier-Two Markets**
- Colombia
- Korea
- Philippines
- Vietnam
- Peru

**New 2018/19 Focus**
- North/SSA Africa
- Transshipment markets
- Malaysia
- Chile
- Global BioEthanol Alliance
- Alternative Uses (bioeconomy)
Multilateral U.S. Ethanol Industry Engagements

Current Multilateral Engagements:
- Asia Pacific Economic Cooperation (APEC) – Case Study & Roadmap
- GBEP participation/sponsorship
- COP 24/25/26
- Regional/Global Ethanol Summits
  - Ethanol Summit of the Americas
  - Ethanol Summit of the Asia-Pacific
  - Global Ethanol Summit (Oct 2019 in Washington, DC)

Potential Collaborators:
- Food and Agricultural Organization (FAO)
- International Renewable Energy Agency (IRENA)
- World Health Organization (WHO)
- International Energy Agency
- Intergovernmental Panel on Climate Change (IPCC)
- Below50
- Sustainable Energy 4 All