

Importance of Energy Policy

“Georgia Bioenergy Conference”

Thompson, Hoffman & Company

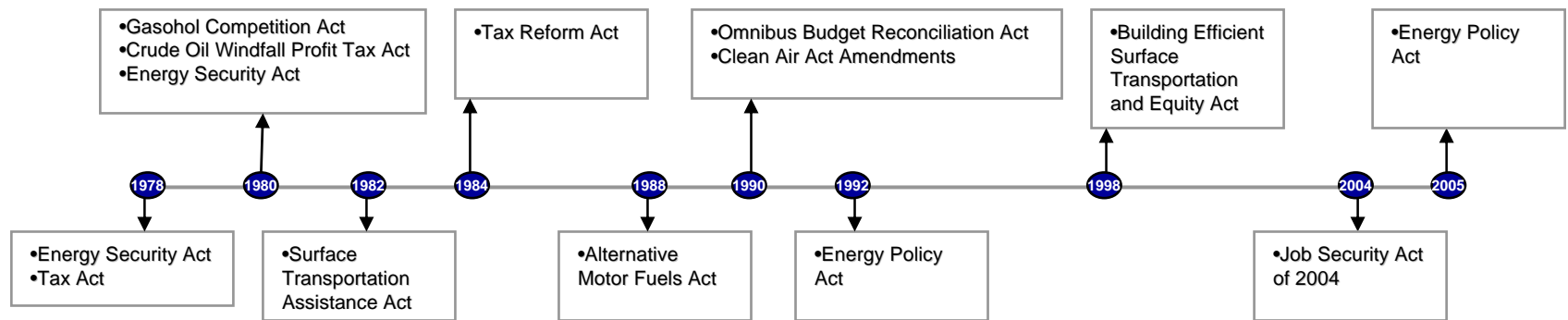
August 1, 2006

Presentation Purpose:

- ❑ Historical Perspective
- ❑ Policy Impact
- ❑ Short Term Policy Drivers
- ❑ Long Term Policy Drivers

U.S. Ethanol Policy Overview

Policy Development Timeline



Ethanol Policy Results

Current Domestic Production

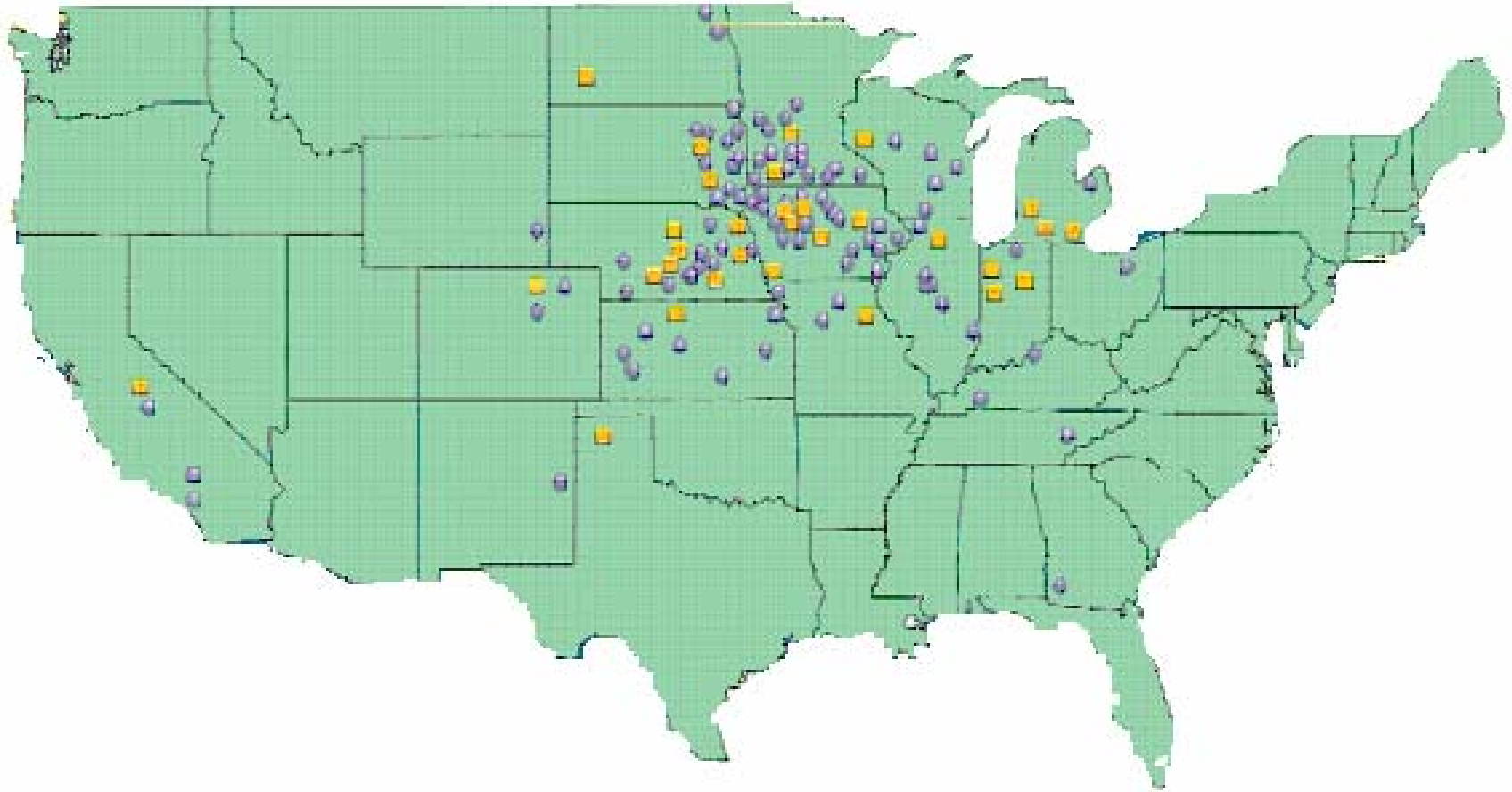
- 101 Production Facilities
- ~4.8 Billion Gallons of Production (7/06)
- ~2.4 Billion Gallons under Construction
- Virtually all is made from corn.

Biodiesel Policy Results

Current Domestic Production (4/06)

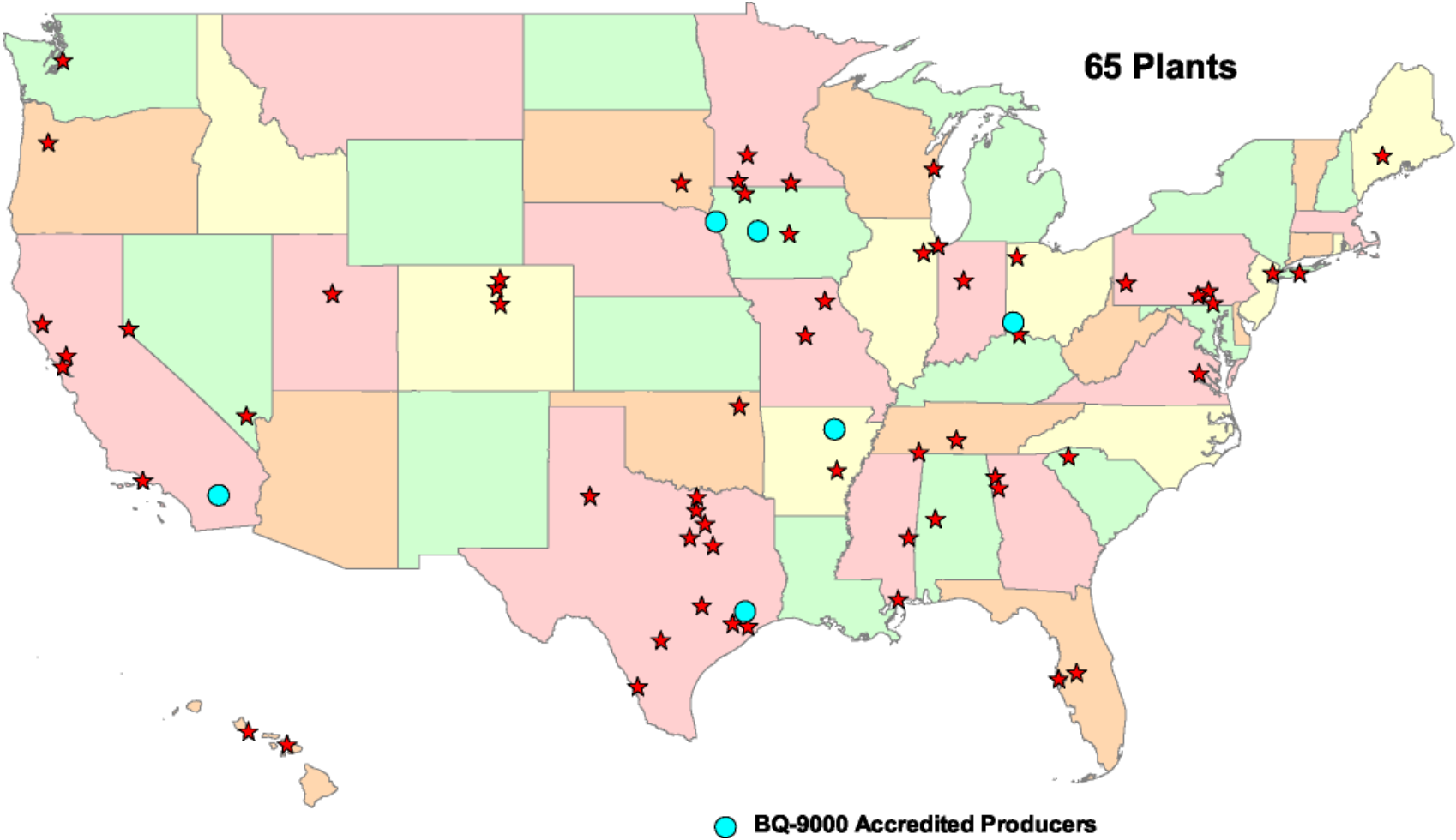
- 65 Production Facilities
- ~75 Million Gallons of Production (1/06)
- ~714 Million Gallons under Production
- Predominately made from oil

Ethanol Production Facilities



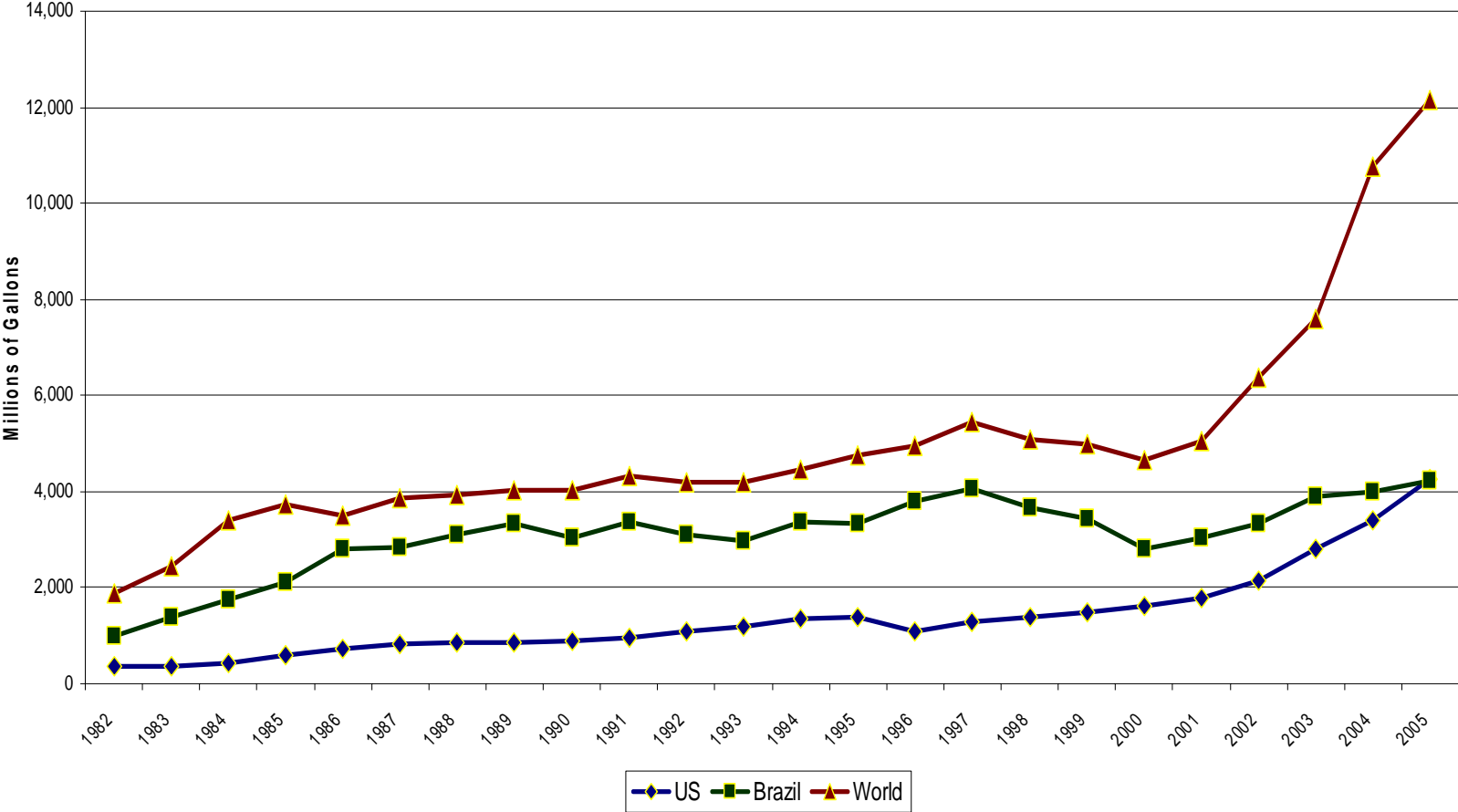
Source: Renewable Fuels Association

Biodiesel Production Facilities



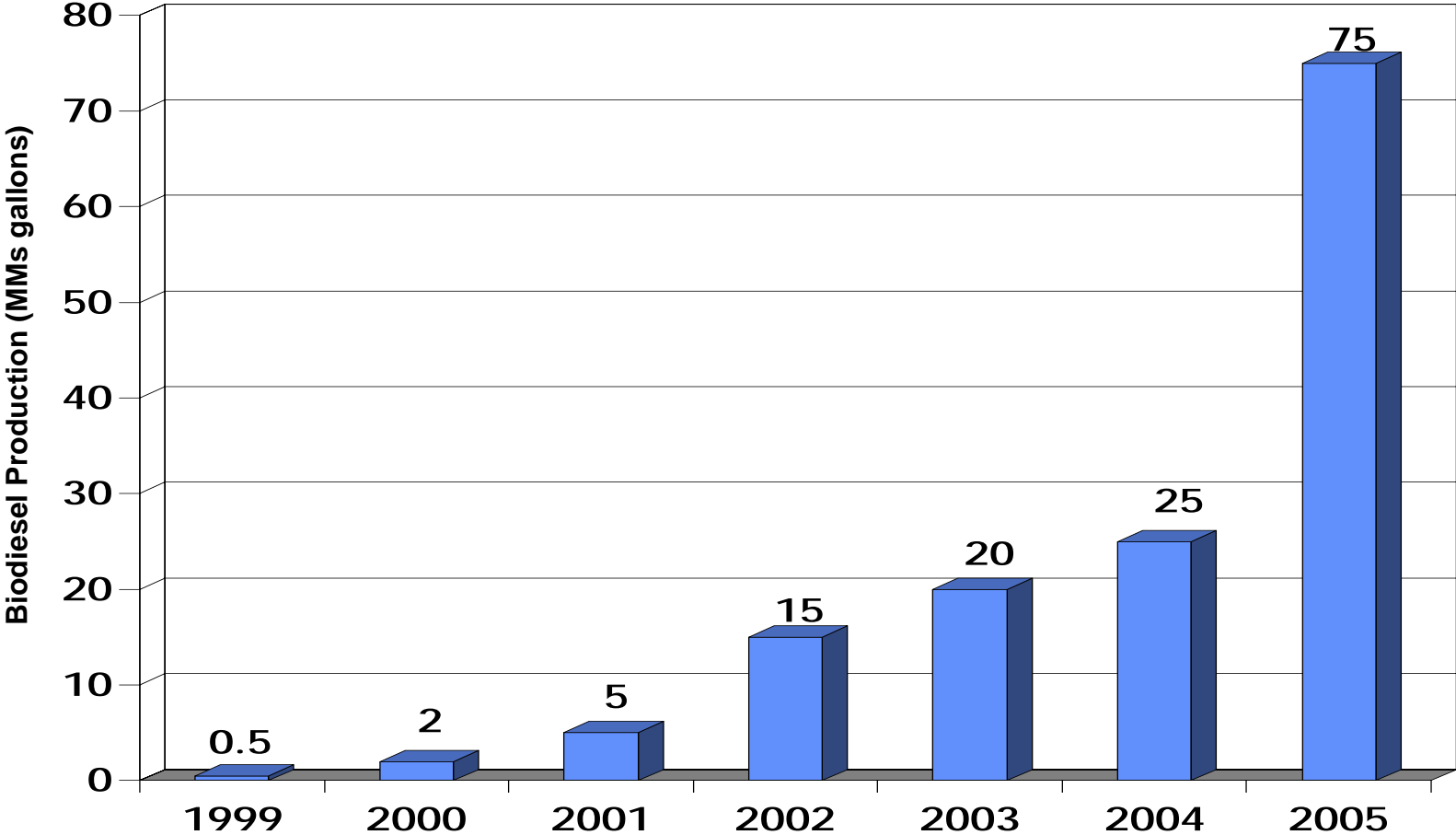
Source: National Biodiesel Board

Historical Ethanol Production



Source: Earth Policy Institute & Renewable Fuels Association

Biodiesel Production

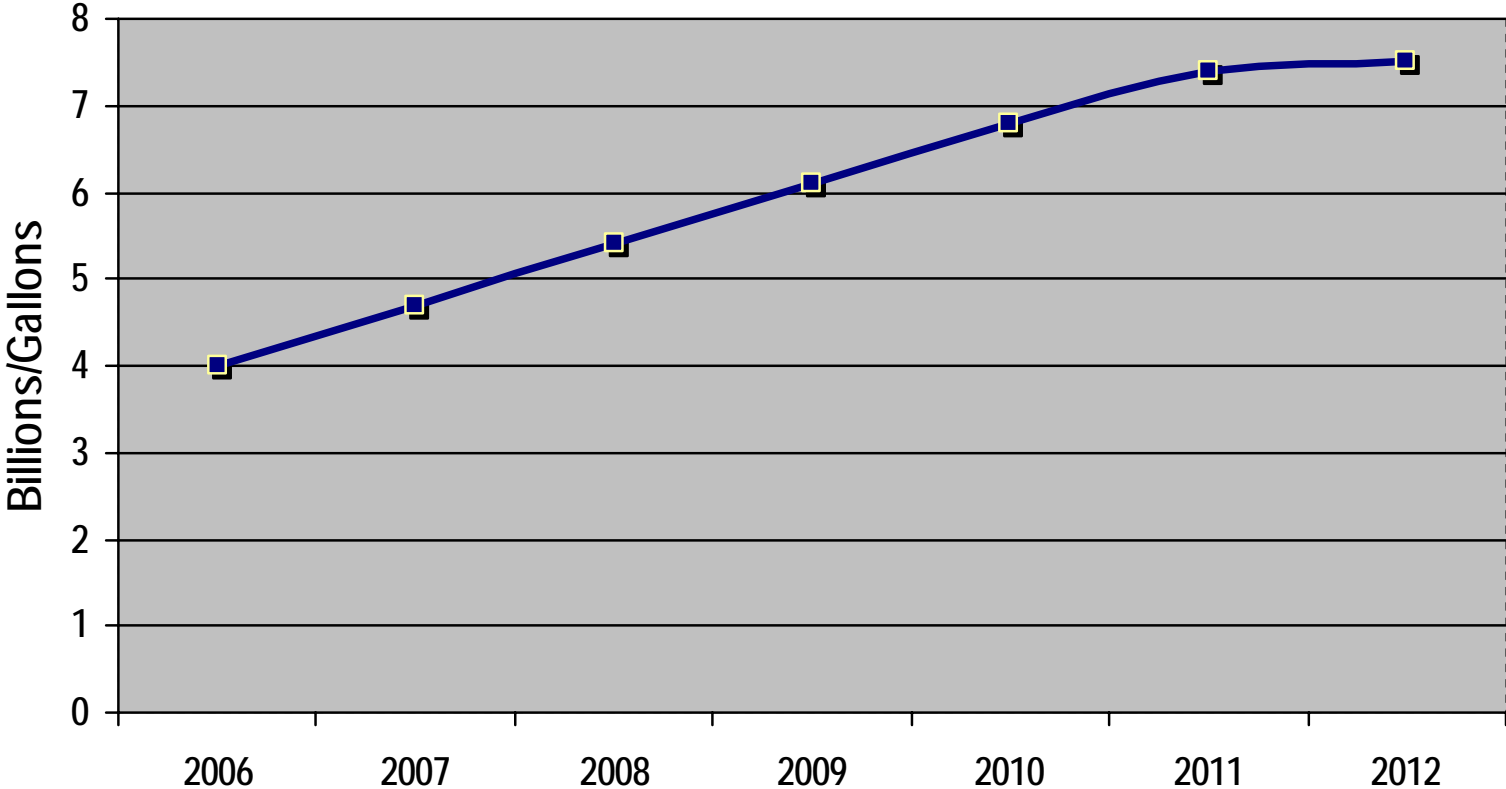


Source: National Biodiesel Board

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Projected Renewable Motor Fuels Use

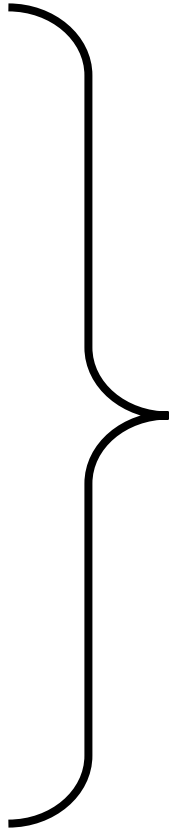


- ❑ Reduce Crude Oil Imports by 2 Billion Barrels and Reduce U.S. Dollar Outflows by \$64 Billion.
- ❑ Create 234,840 New Jobs
- ❑ Increase U.S. Household Income by \$43 Billion.
- ❑ Add \$200 Billion to GDP.
- ❑ Create \$6 Billion in New Investment in Production Facilities.
- ❑ Create \$8 Billion on Goods and Services and \$43 Billion on Feedstock Purchases.

Source: LECG, LLC, May 2005

Policy tools:

- Producer Payments
- Oxygen Fuel Standard



Goals in 1992:

- New Market for Largest Crop
- Create Local Ethanol Production
- Establish New Generation Cooperatives
- Replace 10% of Petroleum Supply
- Assist Twin Cities in Meeting Air Standards

Supplemental Accomplishments:

- Annual Economic Impact of \$580MM/Year
- Created Over 2500 New Jobs

Source: MN Corn Growers Association

Local Impact of a 40MM Gallon Plant

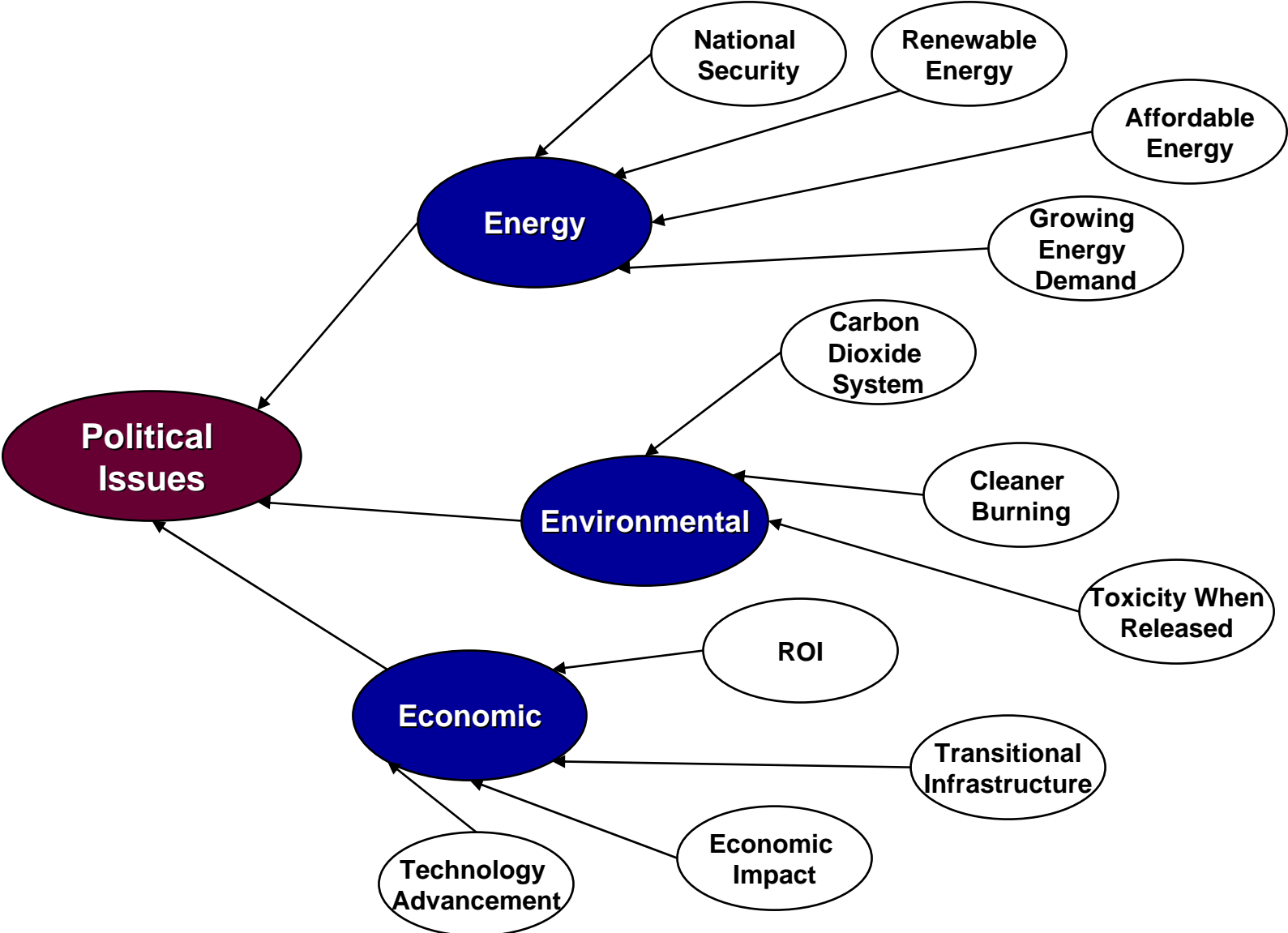
- ❑ One Time Boost to Local Economy of \$140MM During Construction.
- ❑ Expand the Local Economy Base by \$110MM By Direct Spending.
- ❑ Create 41 Direct Jobs and 694 Indirect Jobs.
- ❑ Increase the local corn basis.
- ❑ Increase Household Income by \$19MM
- ❑ Provide Annual Increase of \$1.2MM to Tax Base

Source: "Ethanol and the Local Community,"
AUS Consultants and SJH & Company, June 2002

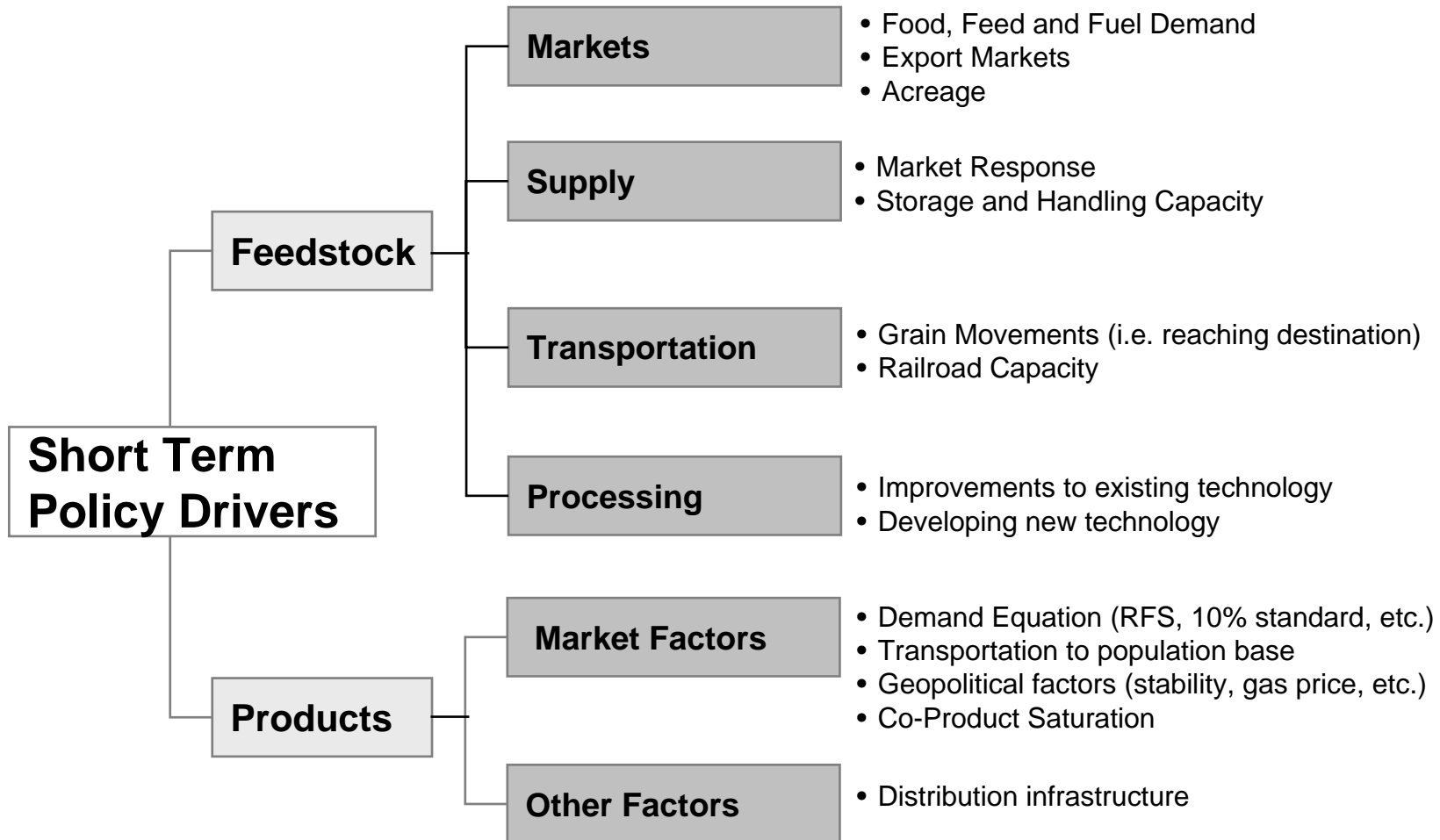
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Political Issues



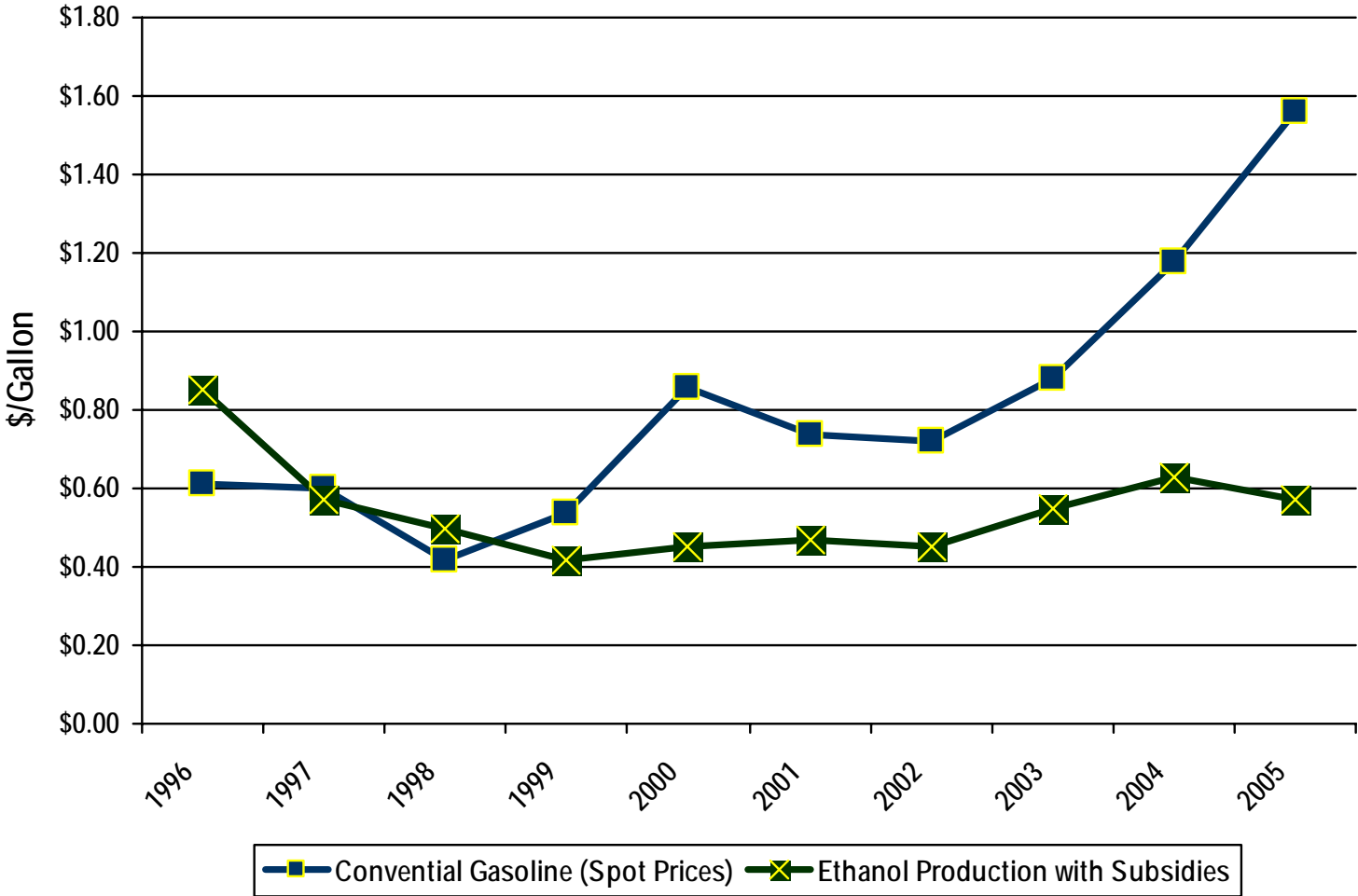
Short Term Policy Drivers



Presentation Purpose:

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Ethanol Production Costs with Subsidies

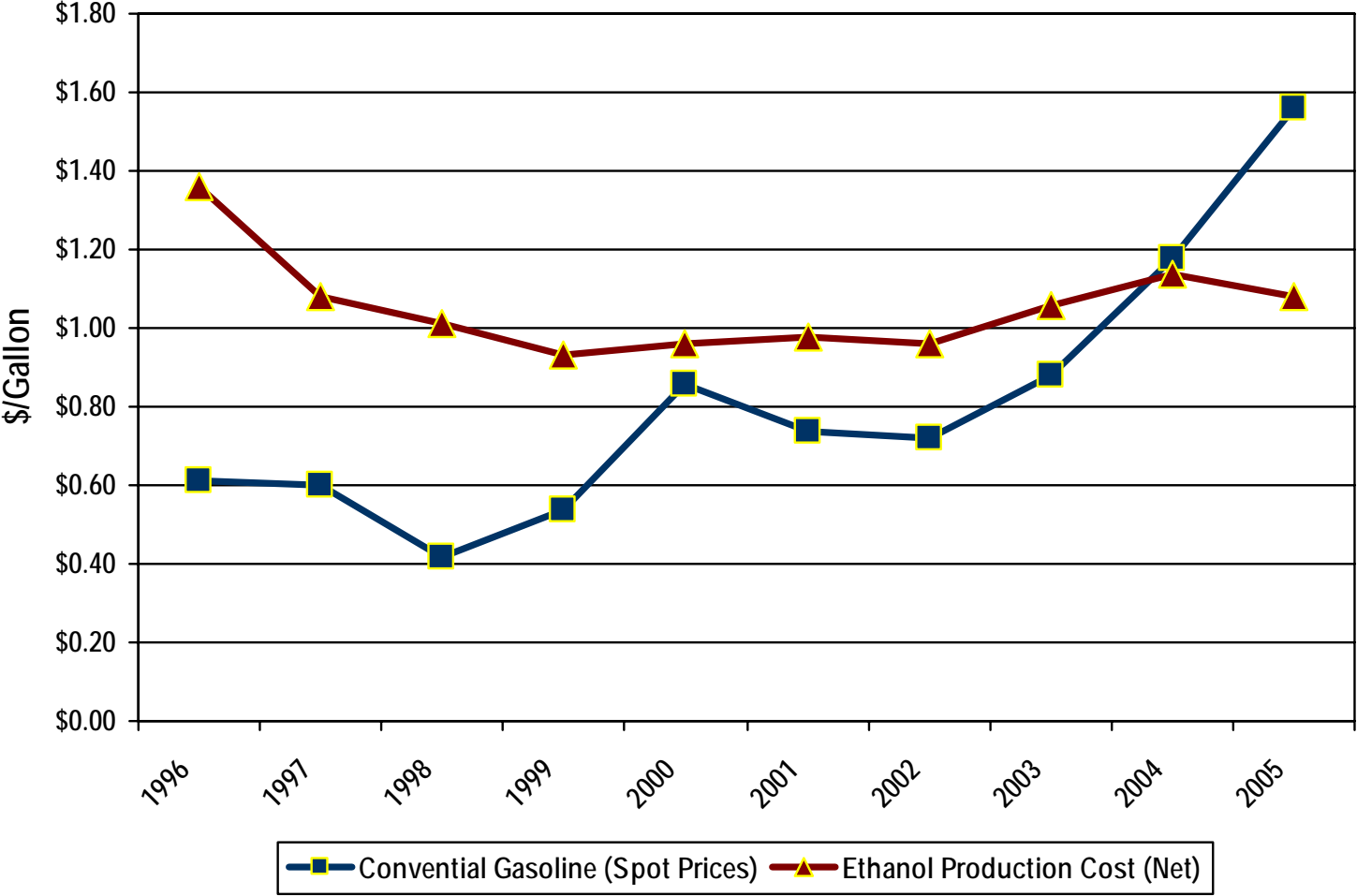


Source: Energy Information Administration & USDA Economic Research Service

Notes:

*Ethanol Production Cost = Total Production Cost – co-product revenues

Ethanol Production Cost vs. Conventional Gasoline Spot Prices



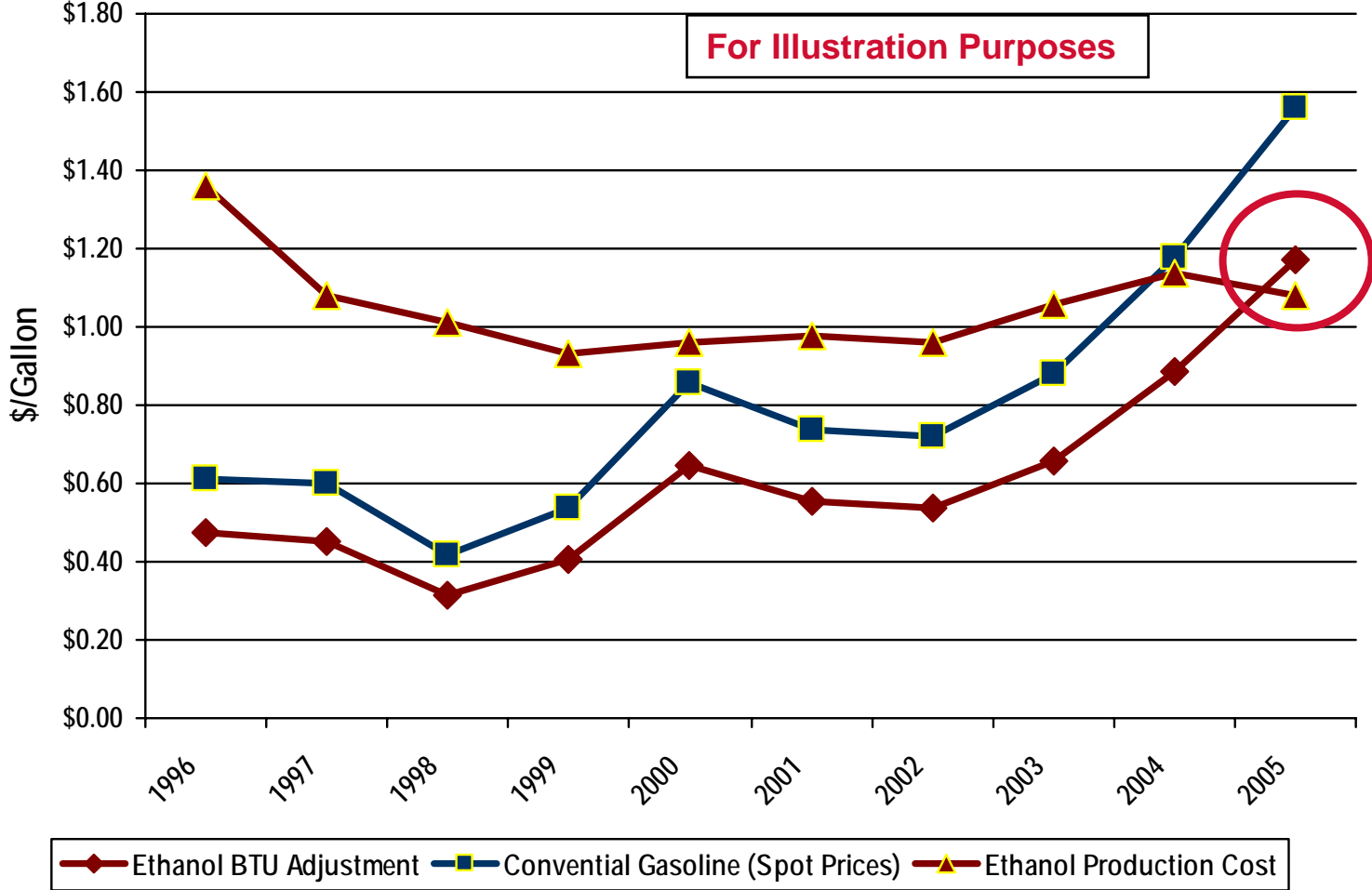
Source: Energy Information Administration & USDA Economic Research Service

Notes:

*Ethanol Production Cost = Total Production Cost – co-product revenues

*Federal Subsidies are not included in the production costs above

Ethanol Energy Value



Source: Energy Information Administration & USDA Economic Research Service