



# **Biofuels in Minnesota: A Success Story**

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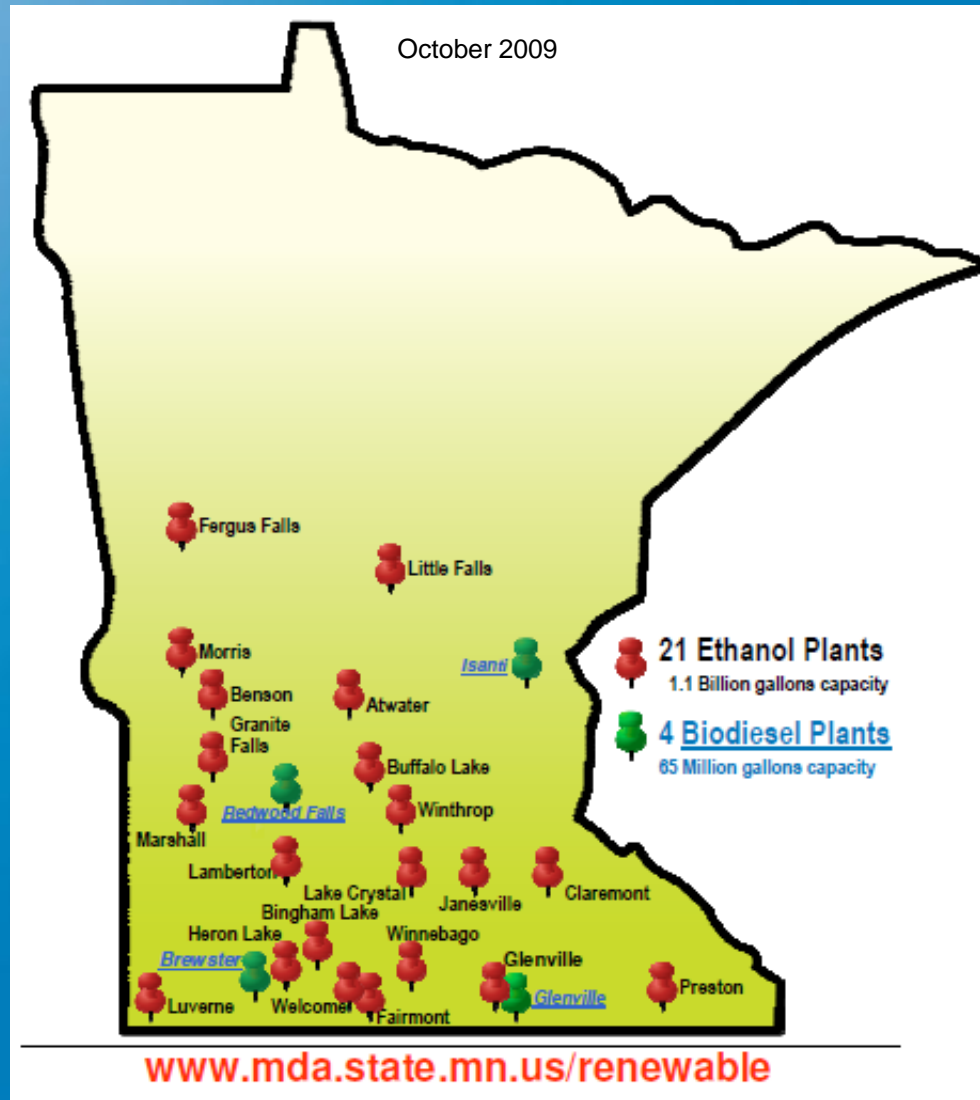
# Necessity - Mother of Invention

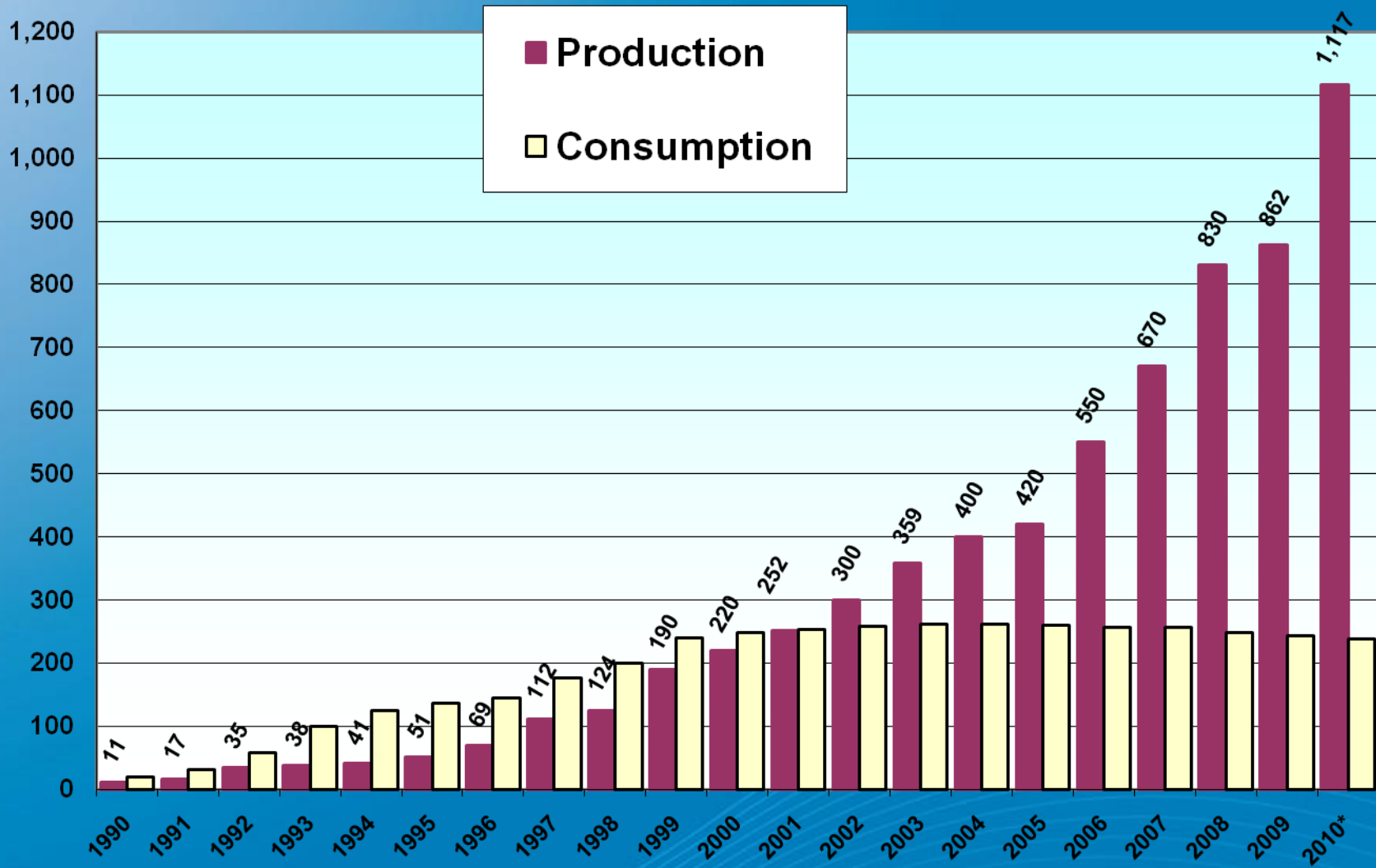
- 1980s set the stage
  - MN had low corn and high gas prices
  - Rural decline & many farm foreclosures
  - Less than 2 MM Gal. ethanol production
  - Memory of gas lines and price hikes of 70s
  - OPEC flexing muscles
  - Pollution is growing concern

# State Action

- 1980 -MN gas tax credit for ethanol blends
- '86 -production incentive for MN plants
- '87 -MDA charged to improve market & increase production. \$100,000 annually
- '89 -Removed pump label for ethanol
- '92 -EPA oxy-fuel mandate (statewide '97)
- '95 - Statutory goal to reach 200 MM gal
- Loan programs for ethanol plant projects

# Ethanol and Biodiesel Plants in MN





\*Projected. Source: MDA, AMS

# Minnesota Ethanol Production and Economic Impact

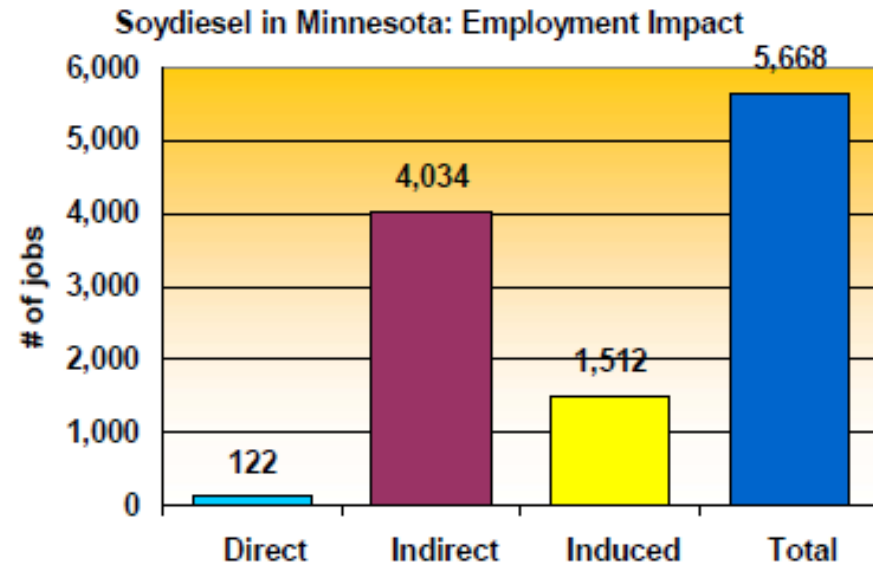
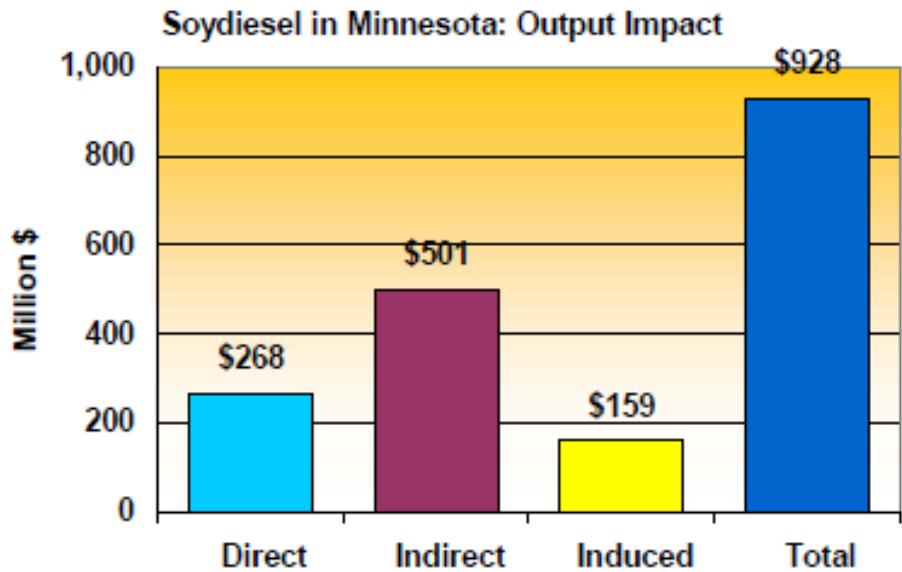
Year	Production (Million Gallons)	Output Impact (\$ million)	Employment Impact (# of Jobs)
2000	220	\$486	1,330
2001	252	\$600	1,642
2002	300	\$566	1,549
2003	359	\$807	2,209
2004	400	\$1,109	3,035
2005	420	\$1,175	3,214
2006	550	\$2,069	5,660
2007	670	\$2,217	6,066
2008	830	\$3,146	8,607
2009	862	\$2,506	6,854
2010*	1,117	\$3,069	8,395

\*Projected

Source: MDA, AMS



# Minnesota Biodiesel Production and Economic Impact



# Bridge to the Future

- Secure proven production technology
- Address investor concerns on profitability
- Build & maintain public support
- Address consumer/industry concerns about safety, performance, feasibility
- Establish market share

-----NEXT-----

- Identify next generation of alternatives
- Address issues above for each alternative



# NextGen Energy Initiative

- Energy Savings Goals
- Community-Based Energy Development
- Climate Change and GHG Reduction
- 25x25 Renewable Electricity Requirements
- Next Generation Bioenergy and Biofuels

# NextGen Initiative

## NextGen Energy Board

### MS §41A.105, subd. 3

*“The board shall research and report to the commissioner of agriculture and to the legislature recommendations as to how the state can invest its resources to most efficiently achieve energy independence, agricultural and natural resources sustainability, and rural economic vitality.”*

# NextGen Energy Initiative

## NextGen Energy Board MS §41A.105, subd. 3

The board shall:

- (1) examine the future of fuels, such as synthetic gases, biobutanol, hydrogen, methanol, biodiesel, and ethanol within Minnesota;
- (2) develop equity grant programs to assist locally owned facilities;
- (3) study the proper role of the state in creating financing and investing and providing incentives;
- (4) evaluate how state and federal programs, including the Farm Bill, can best work together and leverage resources;
- (5) work with other entities and committees to develop a clean energy program; and
- (6) report to the legislature before February 1 each year with recommendations as to appropriations and results of past actions and projects.

# NextGen Energy Initiative

~\$3M in NextGen Energy Grants

- Central Minnesota Ethanol Partnership, Little Falls
- Chippewa Valley Ethanol Company, Benson
- Rick Neuvirth Farm, Elkton
- Northern Excellence Seed, Williams
- Minnesota Valley Alfalfa Producers, Raymond
- University of Minnesota Dept of Forestry, St. Paul
- Central Lakes College Ag Center, Wadena
- University of Minnesota, Morris





# Green Enterprise Assistance

## MS §116J.43

*“...a multiagency project to advise, promote, market, and coordinate state agency collaboration on green enterprise and green economy projects...The objective of the project is to utilize existing state resources to expedite the delivery of grants, licenses, permits, and other state authorizations and approvals for green economy projects.”*

# Green Enterprise Assistance

- MN Departments of Employment and Economic Development (lead); Commerce; Natural Resources; Agriculture; and MN Pollution Control Agency.
- Monthly meetings to discuss/hear from new bioenergy companies and provide assistance with:
  - Technical/market readiness assessment
  - Permitting
  - Business planning
  - State and federal regulations
  - Funding opportunities
  - Contacts/”synergies”
- Online submission form and other resources at:  
[www.positivelyminnesota.com/Business/Green\\_Business\\_Assistance/index.aspx](http://www.positivelyminnesota.com/Business/Green_Business_Assistance/index.aspx)



# Minnesota's Biofuels "To-Do" List

- Continue pursuit of alternative fuel feedstocks
- Commercialize cellulose-to-ethanol and bio- and renewable diesel technology
- Continue to educate the public about renewable fuels
- Obtain approval from EPA for general use of E12, E15 and eventually E20
- Support more FFV production
- Promote more E85 and blender pumps
- Promote more biodiesel & renewable diesel consumption
- Commercialize gasification, thermo-chemical and fermentation technology



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**Thank You!**

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