

2005 Kansas Energy Report

Presentation to the joint meeting of the
House and Senate Utilities Committees
January 13, 2005

by

Lee Allison

Chair

Kansas Energy Council

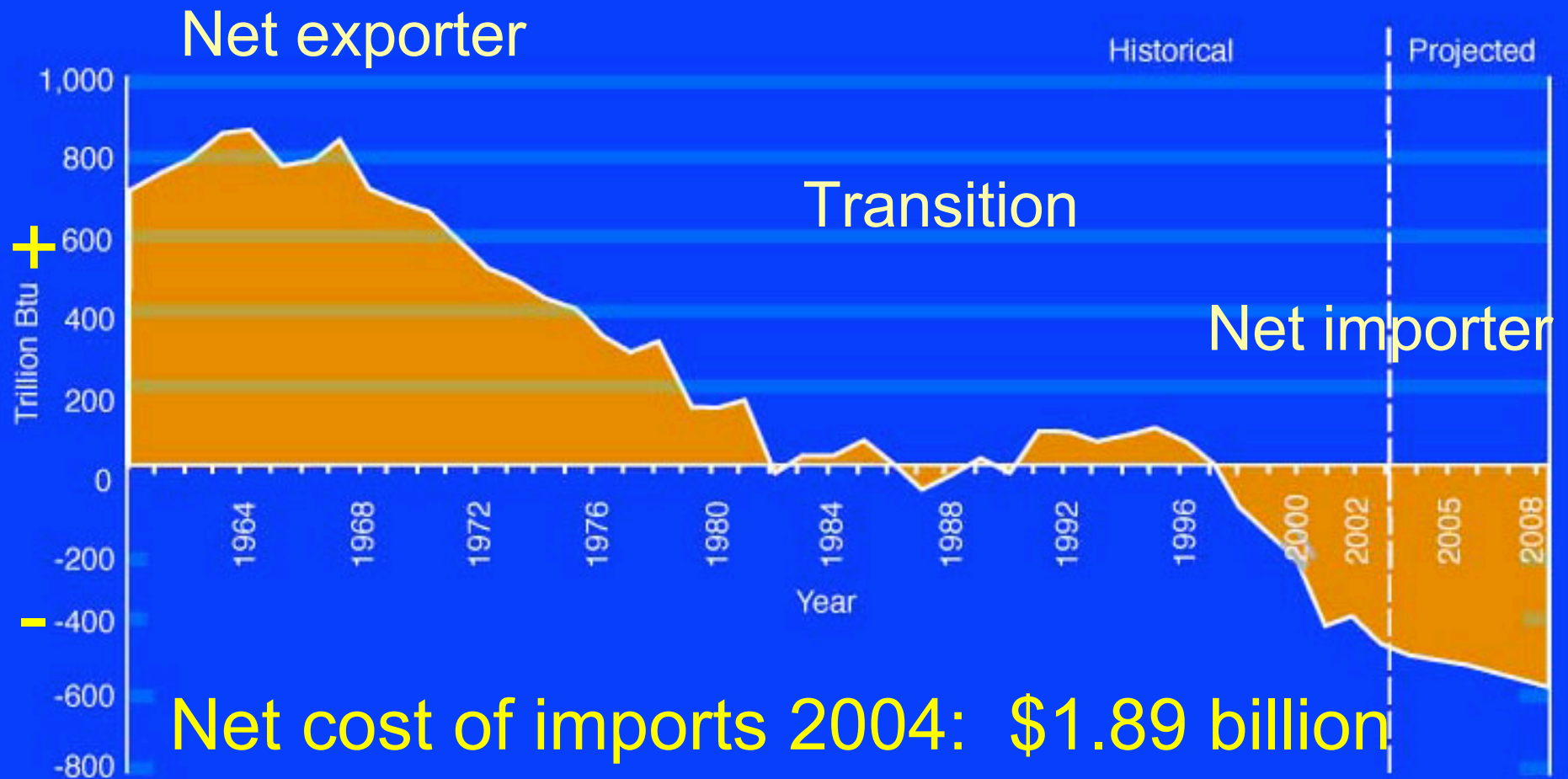


Kansas Energy

Kansas Energy Council



Kansas net energy balance 1960 – 2008



Kansas Energy Council Goals

- Energy self-reliance
- Restore Kansas energy exports
- Low-cost, reliable, sustainable energy produced in Kansas where possible

Kansas Energy Council

KEC: state energy policy

A balanced approach:

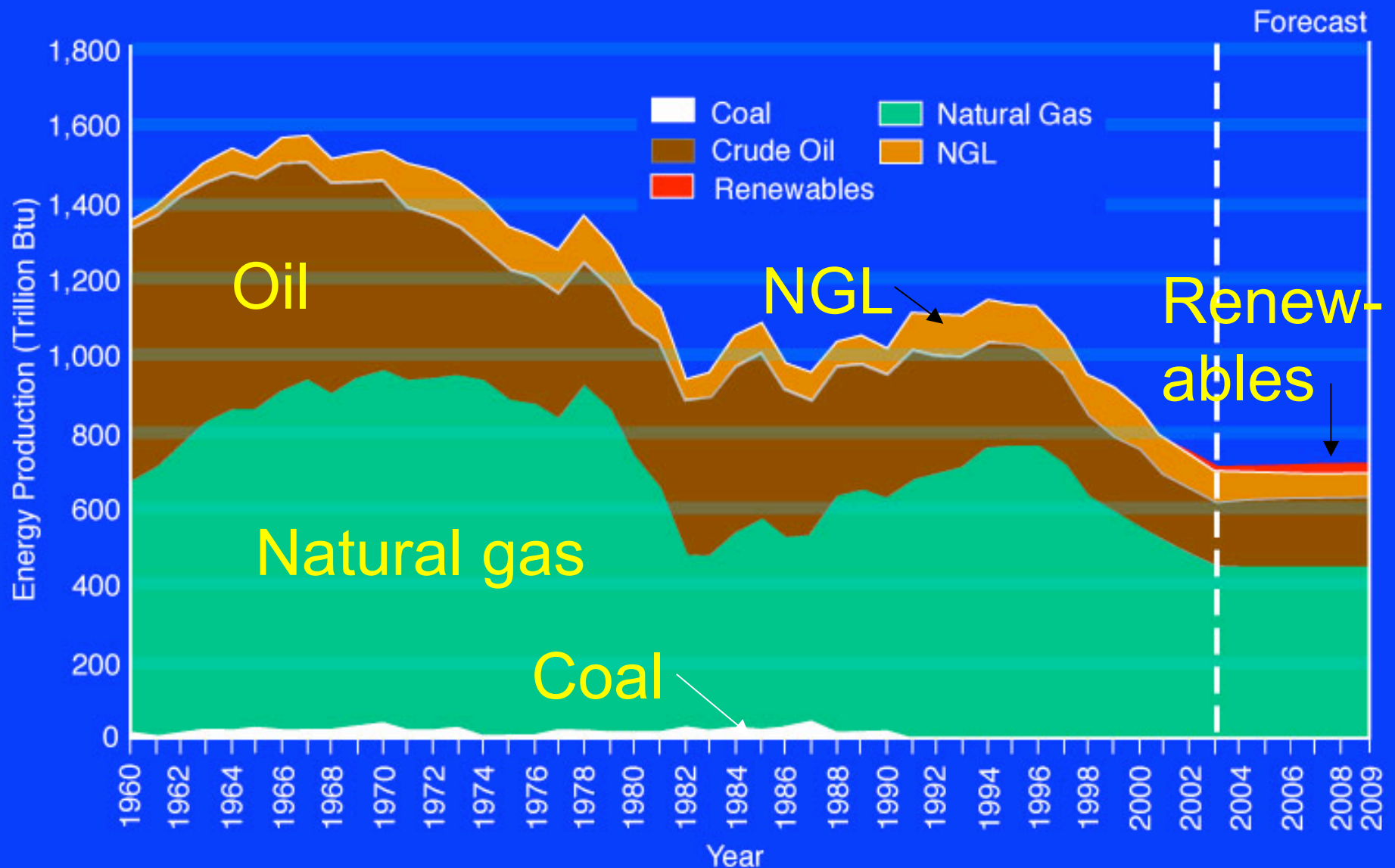
REDUCE DEMAND - increased conservation and efficiency

INCREASE SUPPLY - Extend the life of existing energy sources (oil and gas fields)

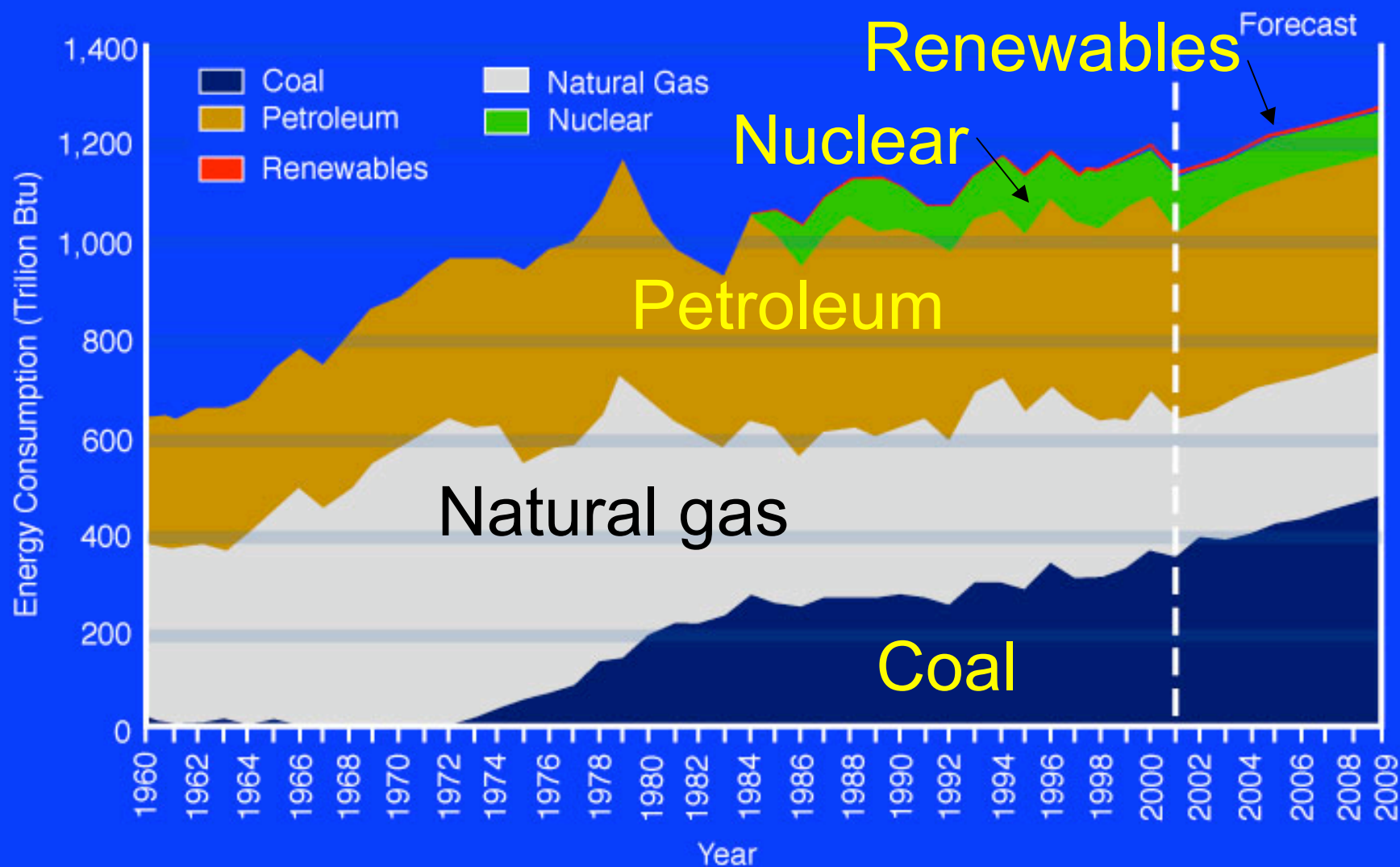
INCREASE SUPPLY - Develop new energy sources (e.g. wind, ethanol, coalbed methane)

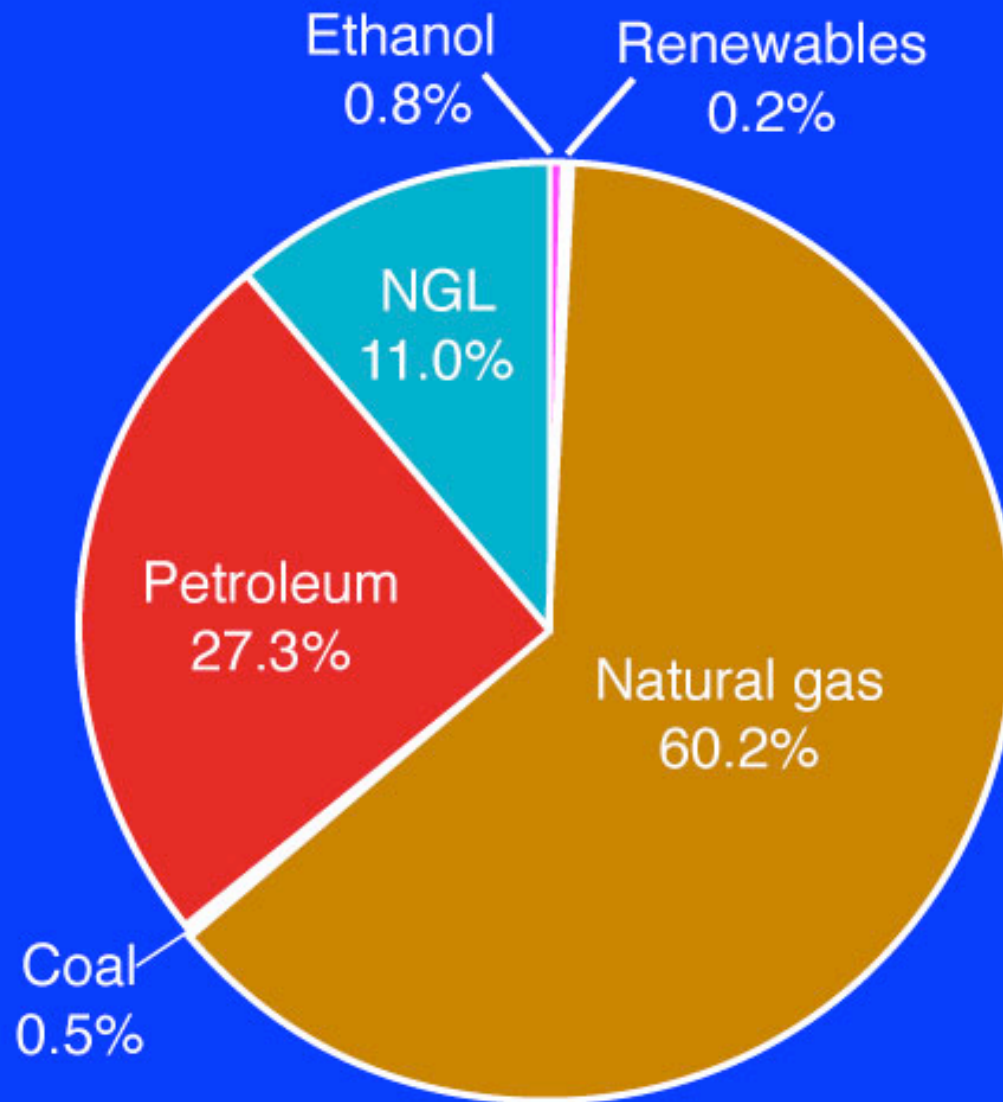


Kansas energy production by fuel

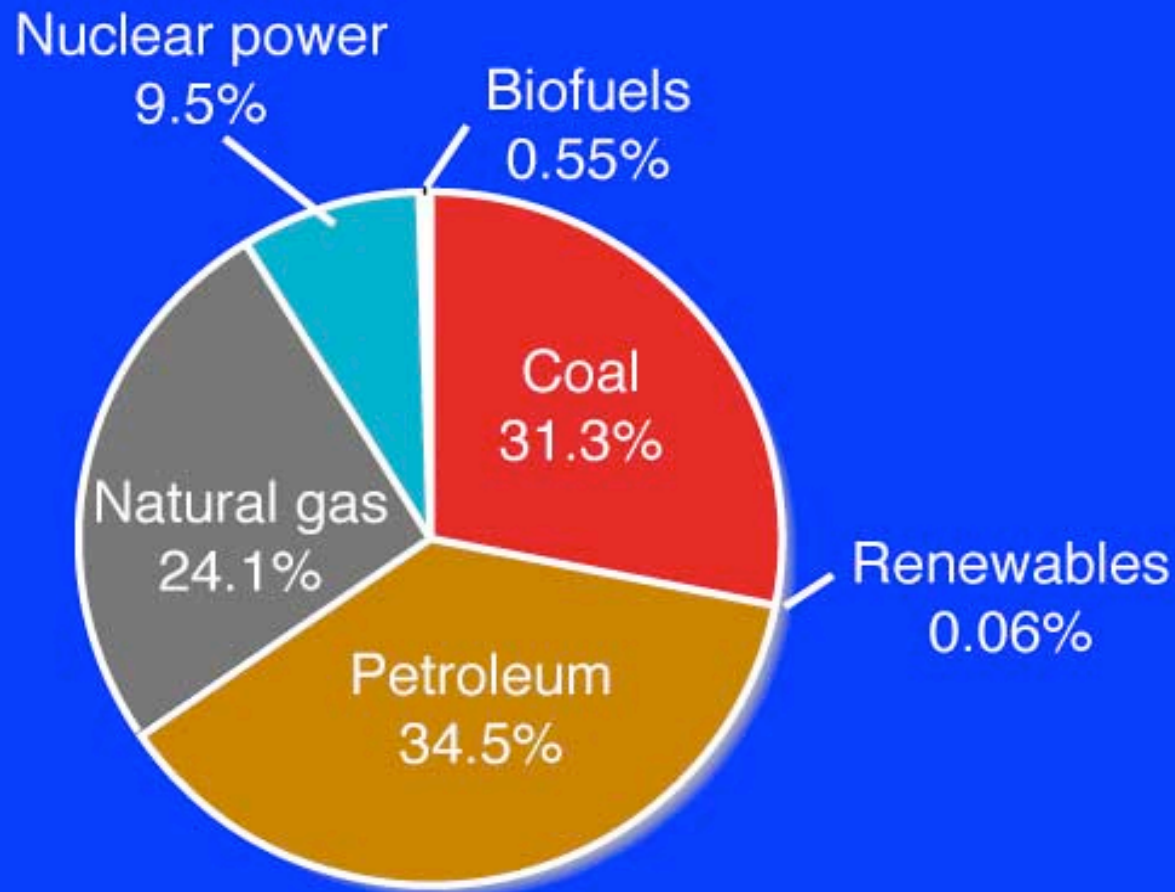


Kansas Energy Consumption 1960-2009



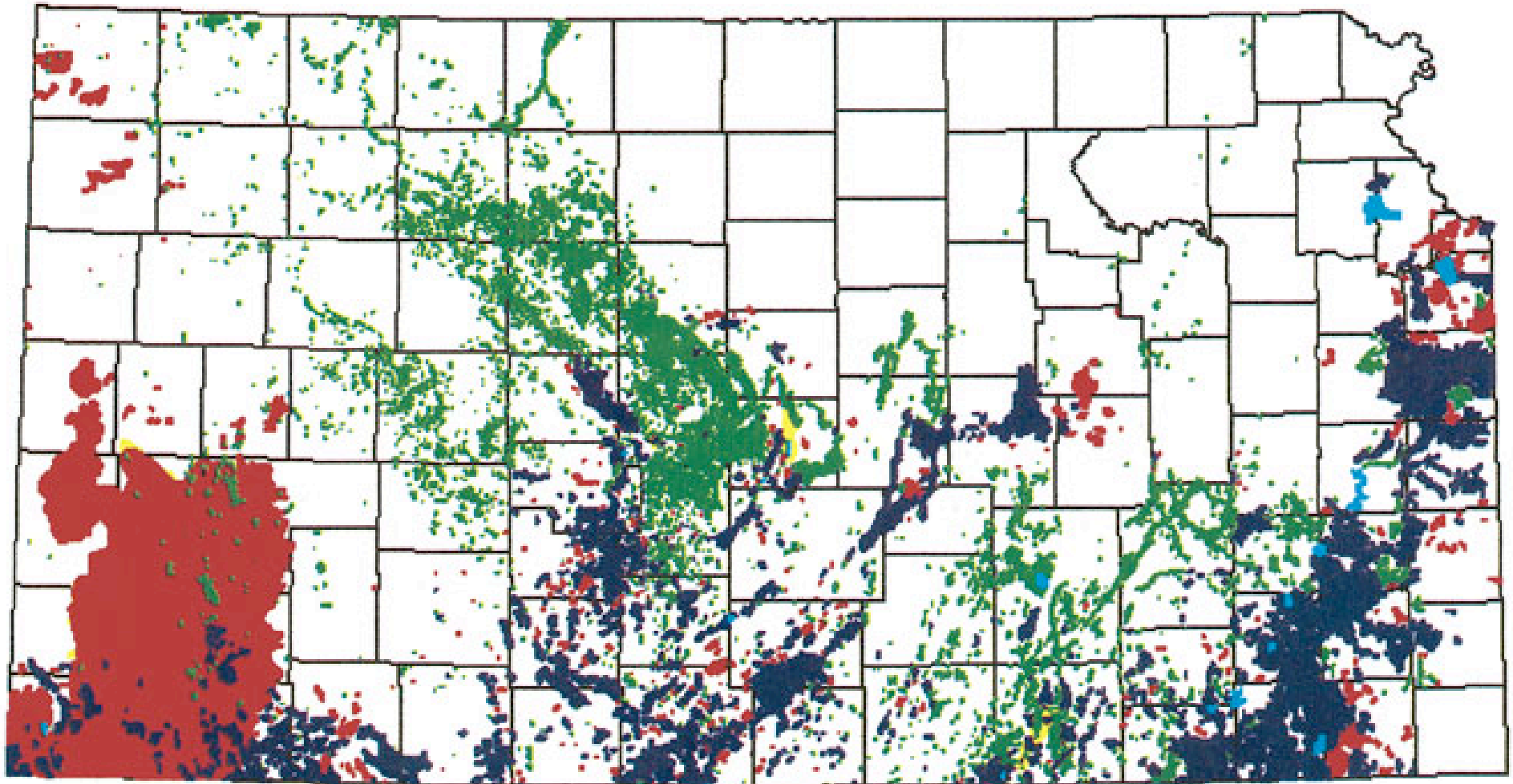
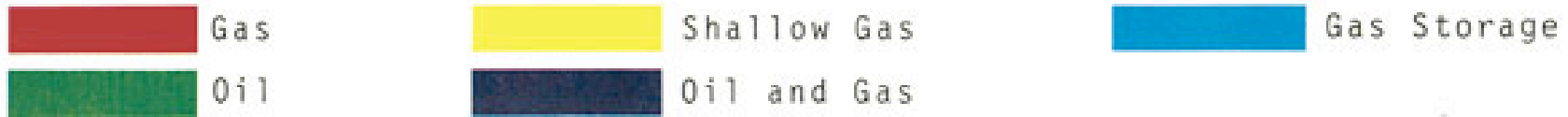


Kansas Primary Energy Production, 2003



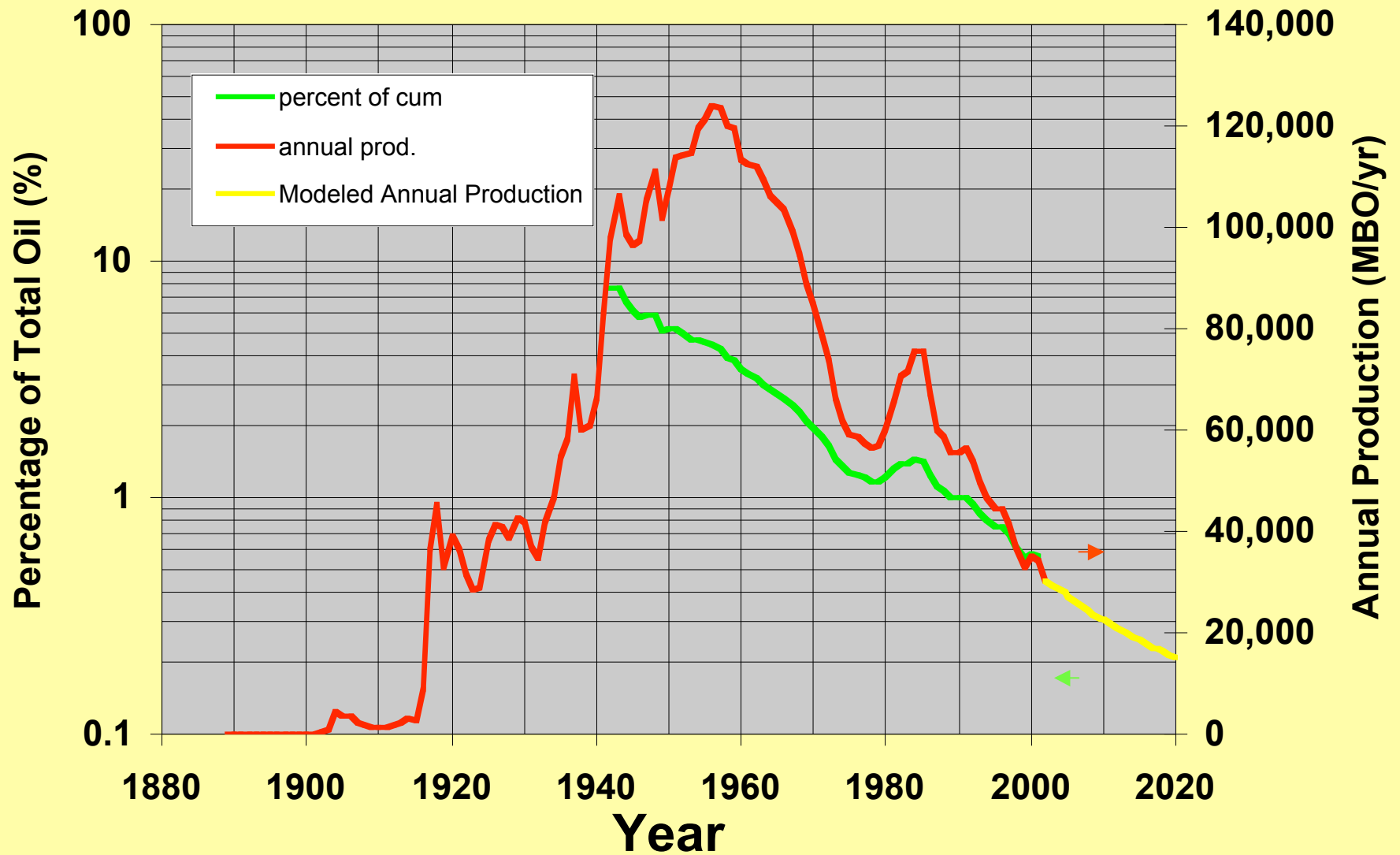
Kansas Primary Energy Consumption by Fuel Source, 2001

Kansas oil & gas fields



0 50 mi

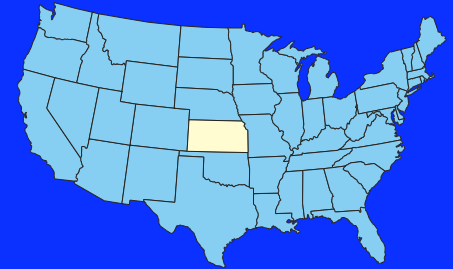
Kansas Oil Production History



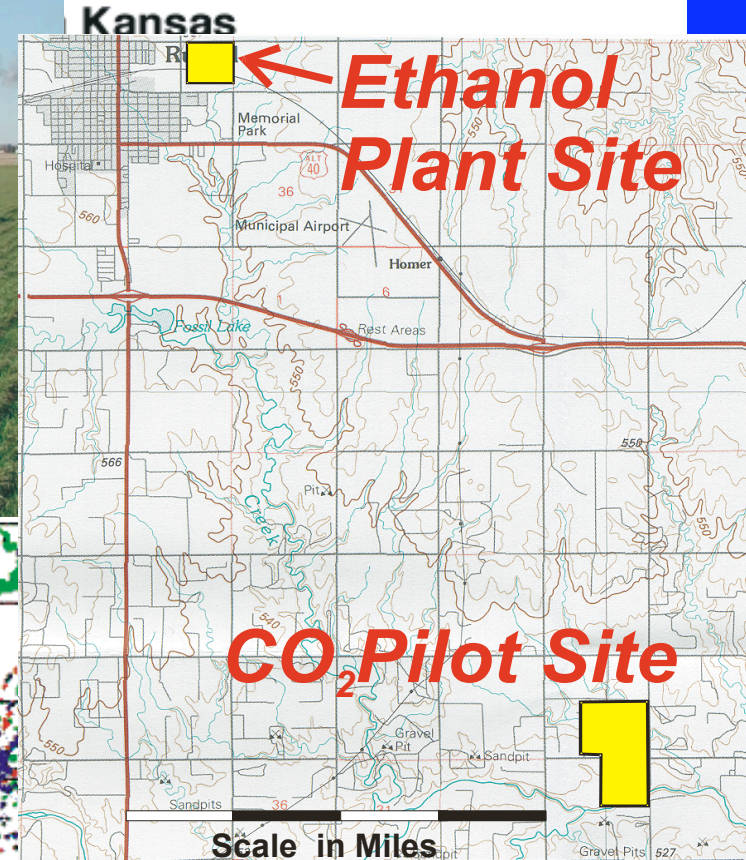
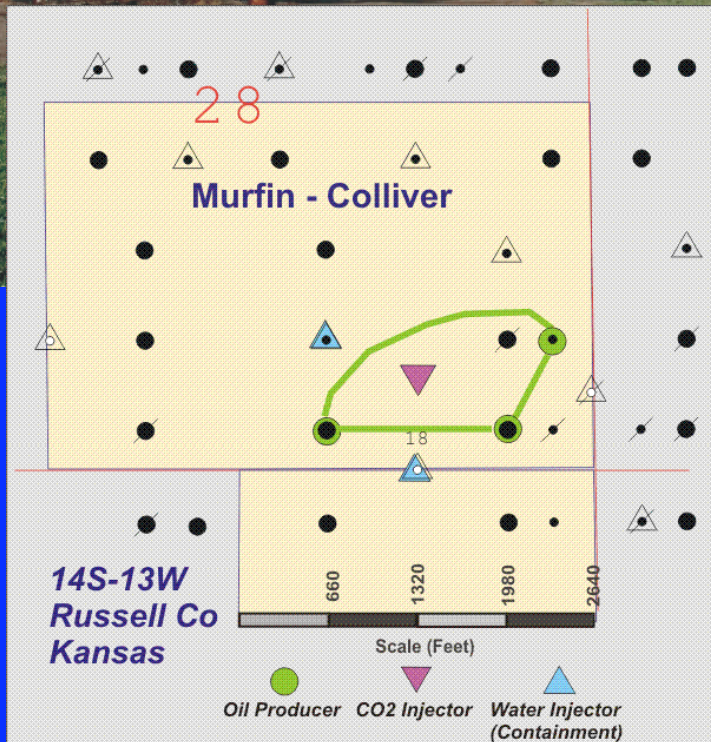
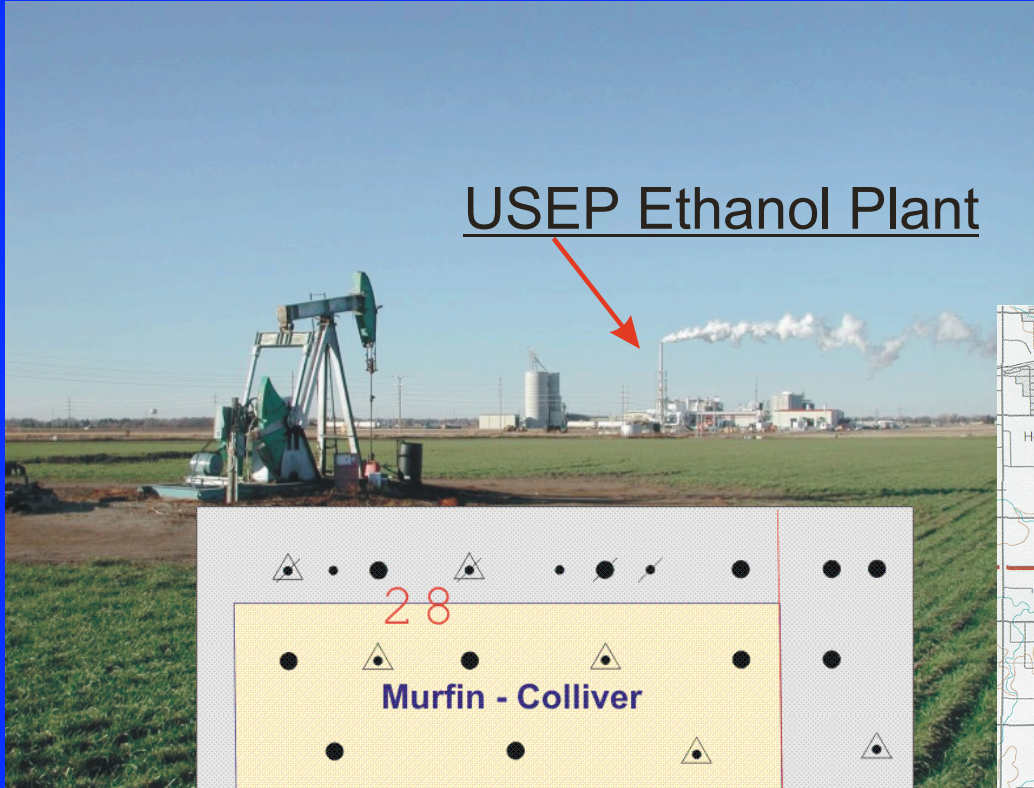
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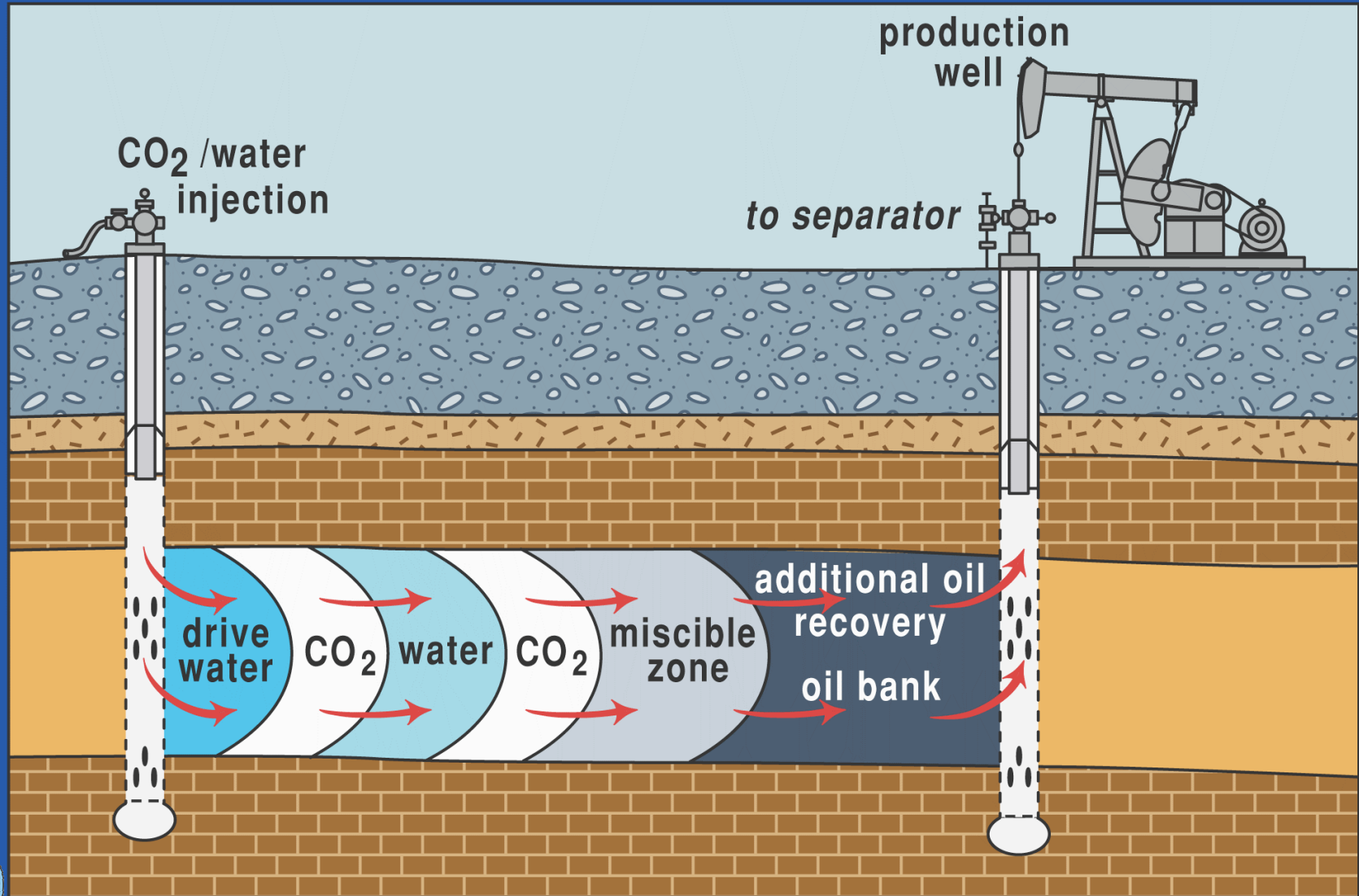
Russell EOR Project



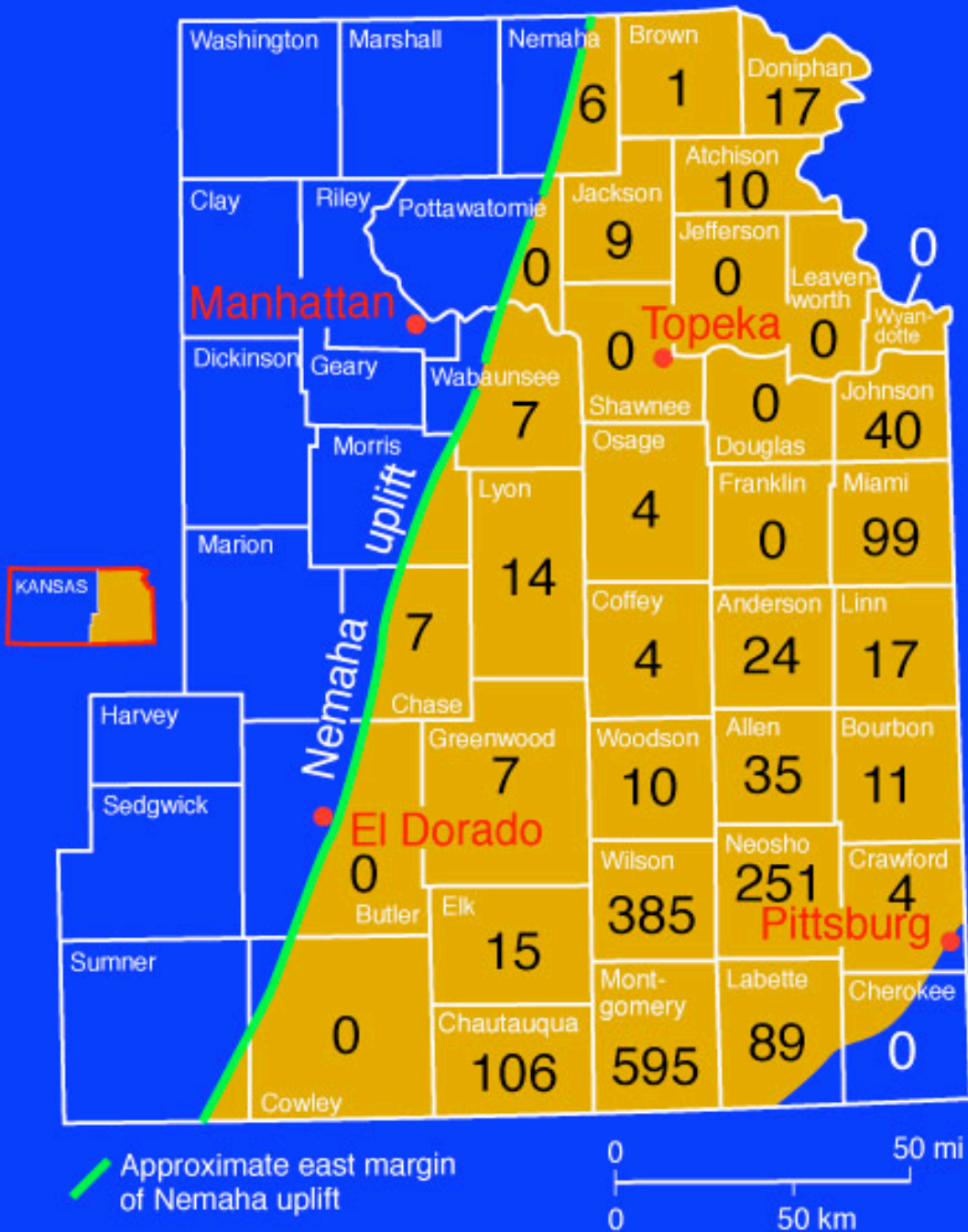
USEP Ethanol Plant



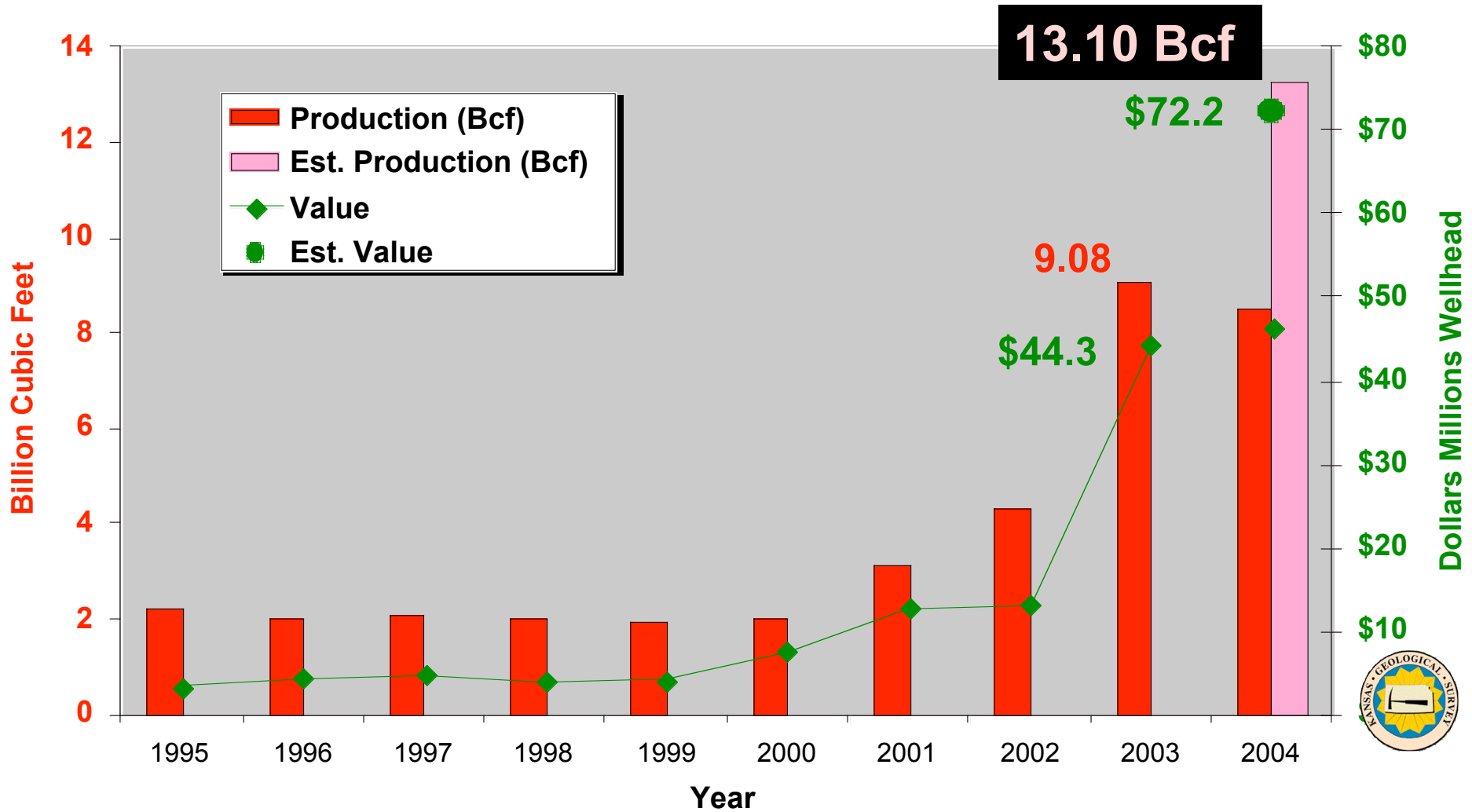
Carbon Dioxide Flooding



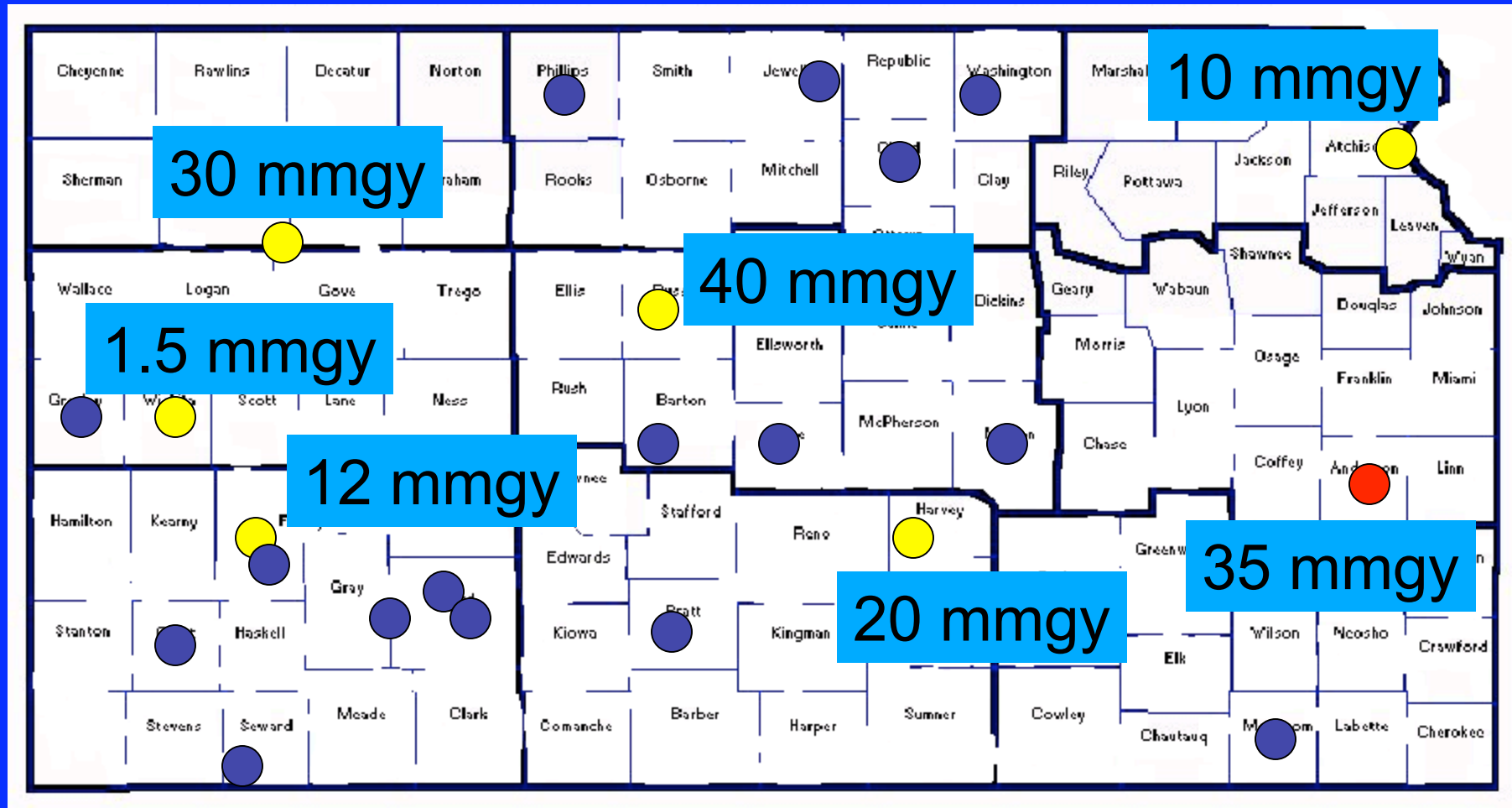
Coalbed Methane Wells in Kansas



SE Kansas CBM Production



Kansas Ethanol Production

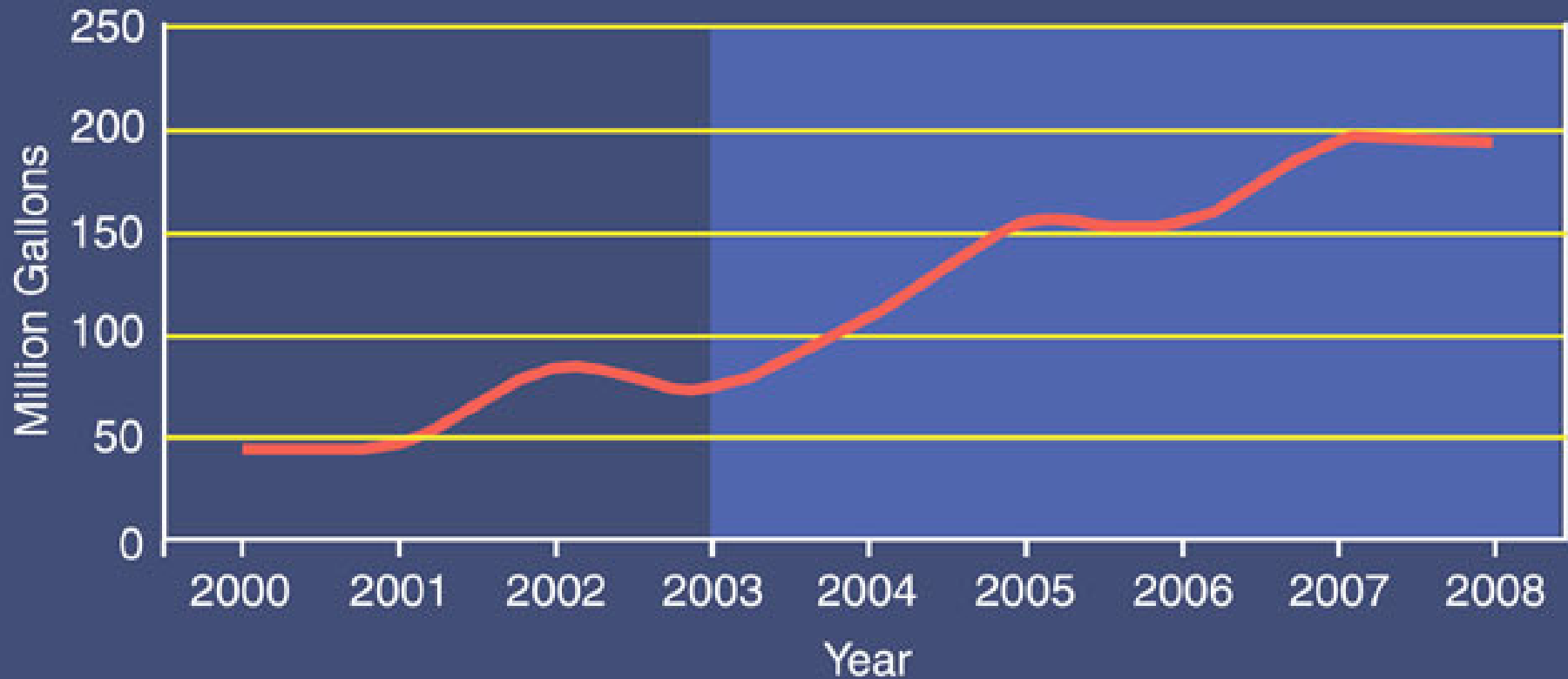


- - Proposed Plants
- - Existing Plants
- - Under Construction

Ethanol is Good For the Economy and Kansas Agriculture

- Six ethanol plants in KS employ 208
- Capital investment over \$130 million – more on the way
- Uses more than 48 million bushels of Kansas grains a year
- Ethanol is the 3rd largest user of feedgrains - behind only livestock feeding operations and export markets

Kansas Ethanol Capacity, 2000–2008



Potential Ethanol Plants in Kansas

- Garnett, 35MGPY - East Kansas Agri Energy

- Pratt, 50MGPY – Ethanol Pratt

- Phillipsburg, 40MGPY – Prairie Horizon Agri Energy

- Lyons, 30MGPY – Renewable Fuel

- Washington, 30MGPY – Producers

- Ensign, 30MGPY

- Tribune, 5MGPY

- Scandia, 10MGPY - Nesika Energy, LLC

- Liberal, 40MGPY – Panhandle Energies

- Ulysses, 30MGPY – Grant County EcoDevo

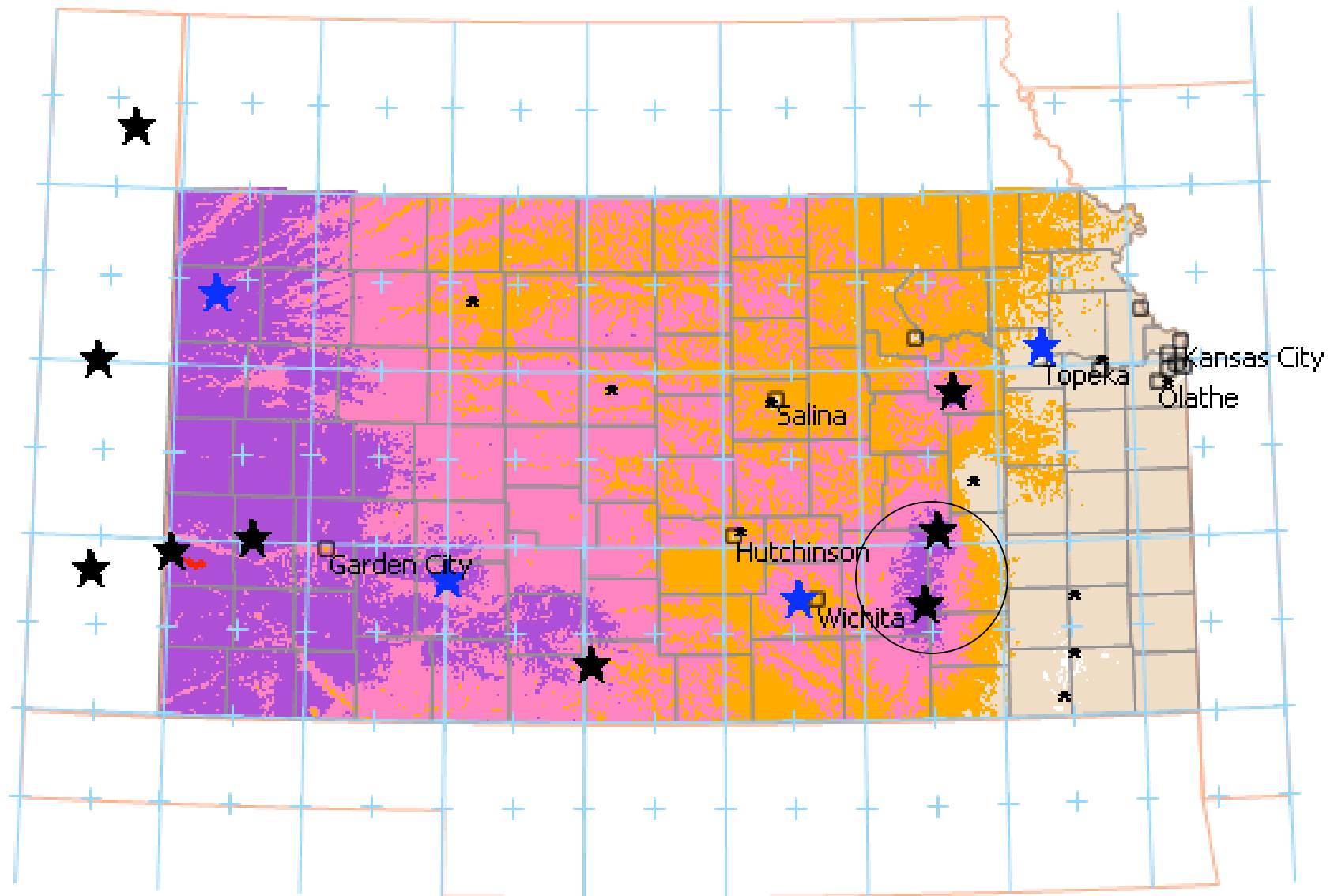
- Carbondale, 40MGPY – Renewable Fuels of Carbondale

- Garden City, ??MGPY – Wind River Grain

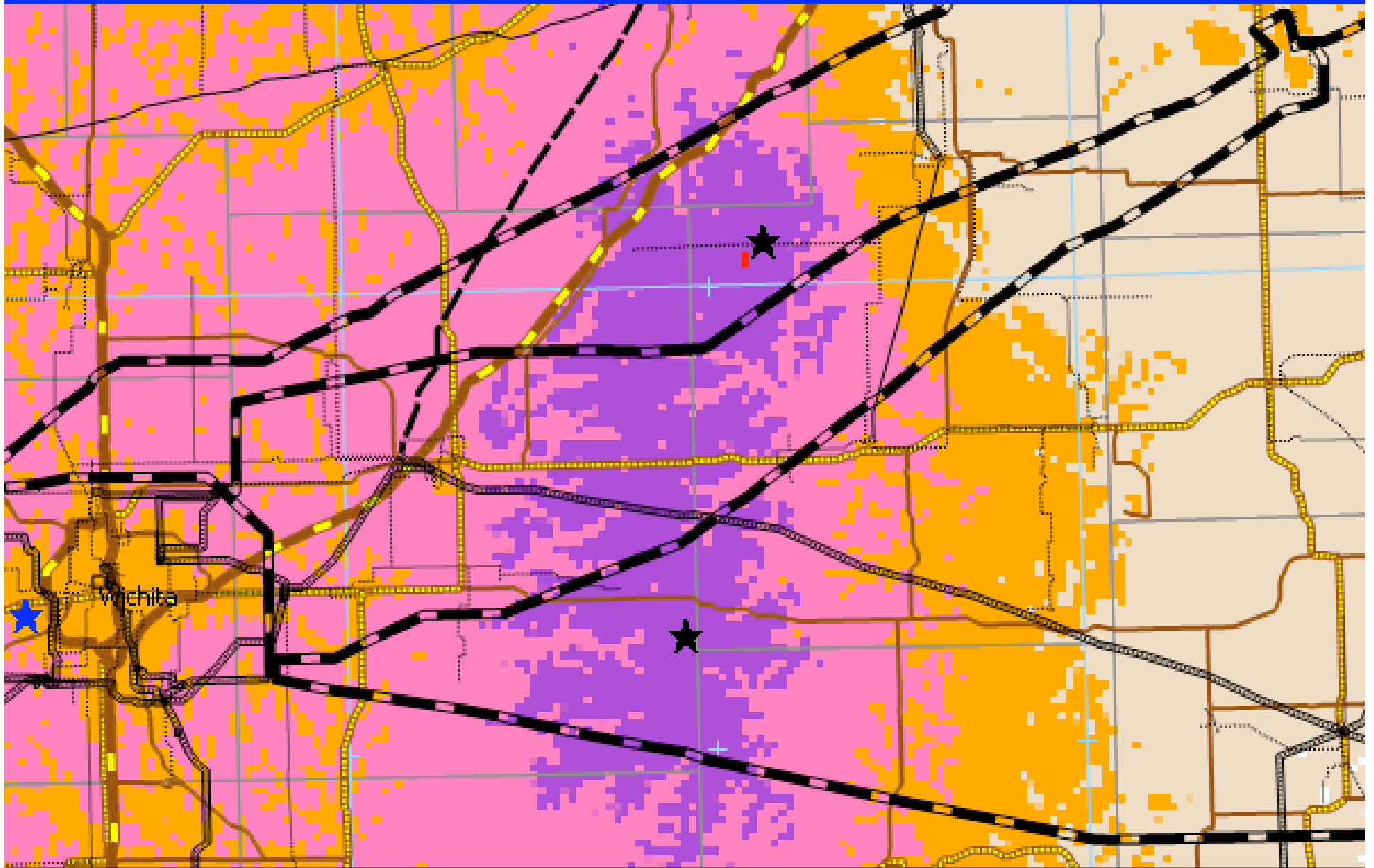
- 2 in Dodge City, Marion, Hutchinson, etc.

**New potential
300+ MGPY**

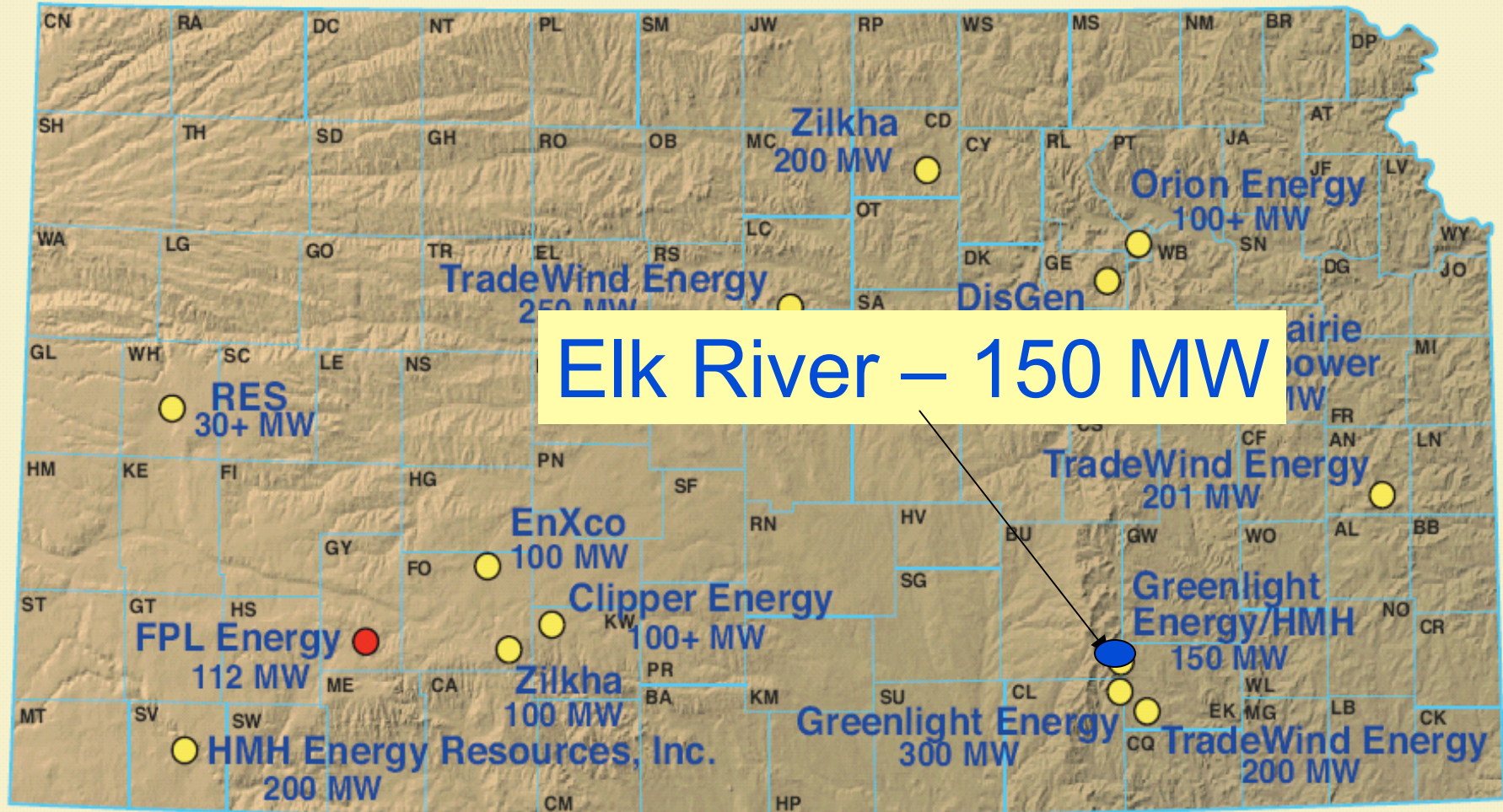
Kansas Wind Resources



Wind Resources - Southern Flint Hills



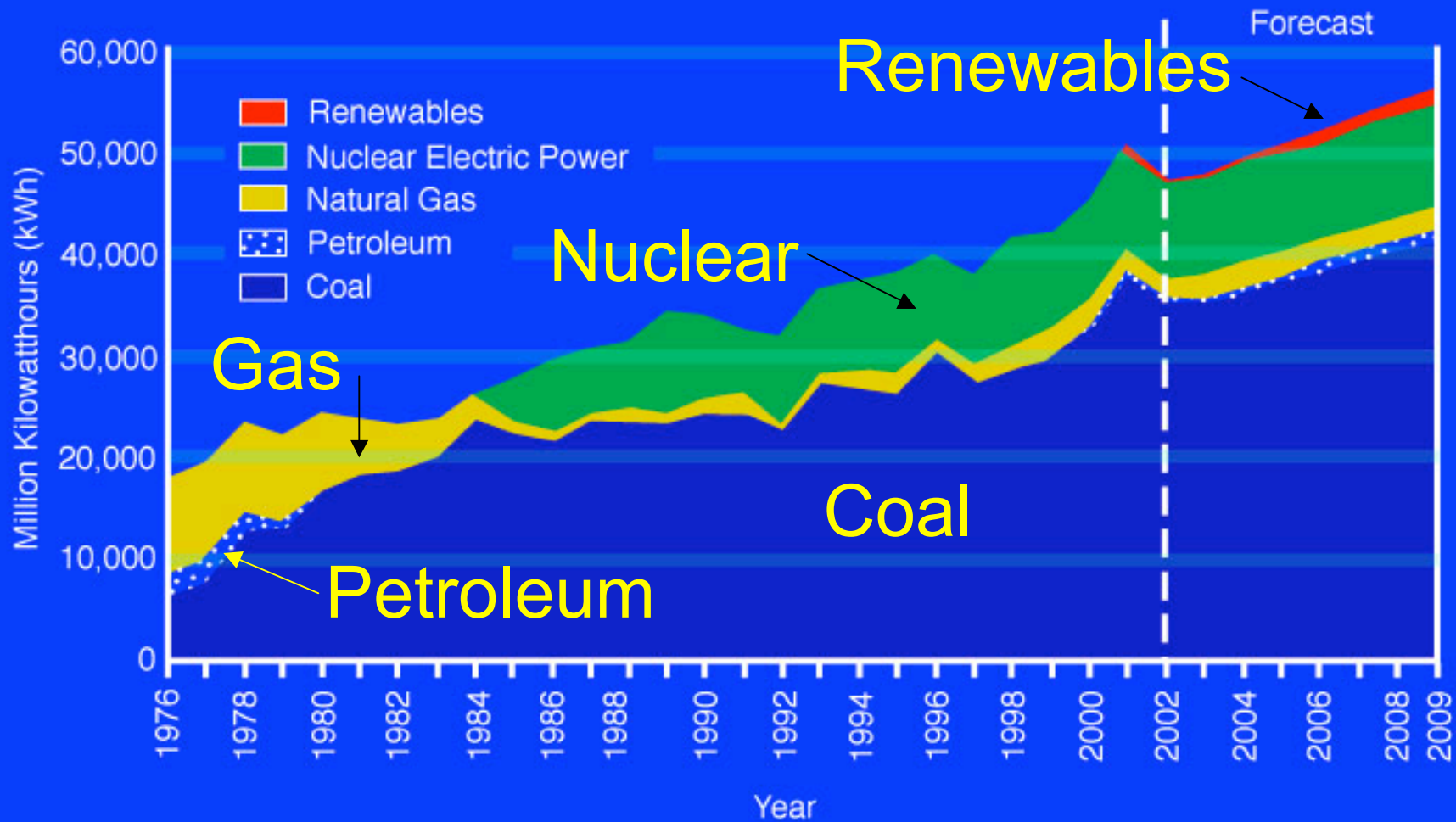
Existing and Proposed Wind Energy Projects in Kansas



- Proposed Wind Energy Site (approx. locations)
- Existing Wind Energy Site (approx. locations)

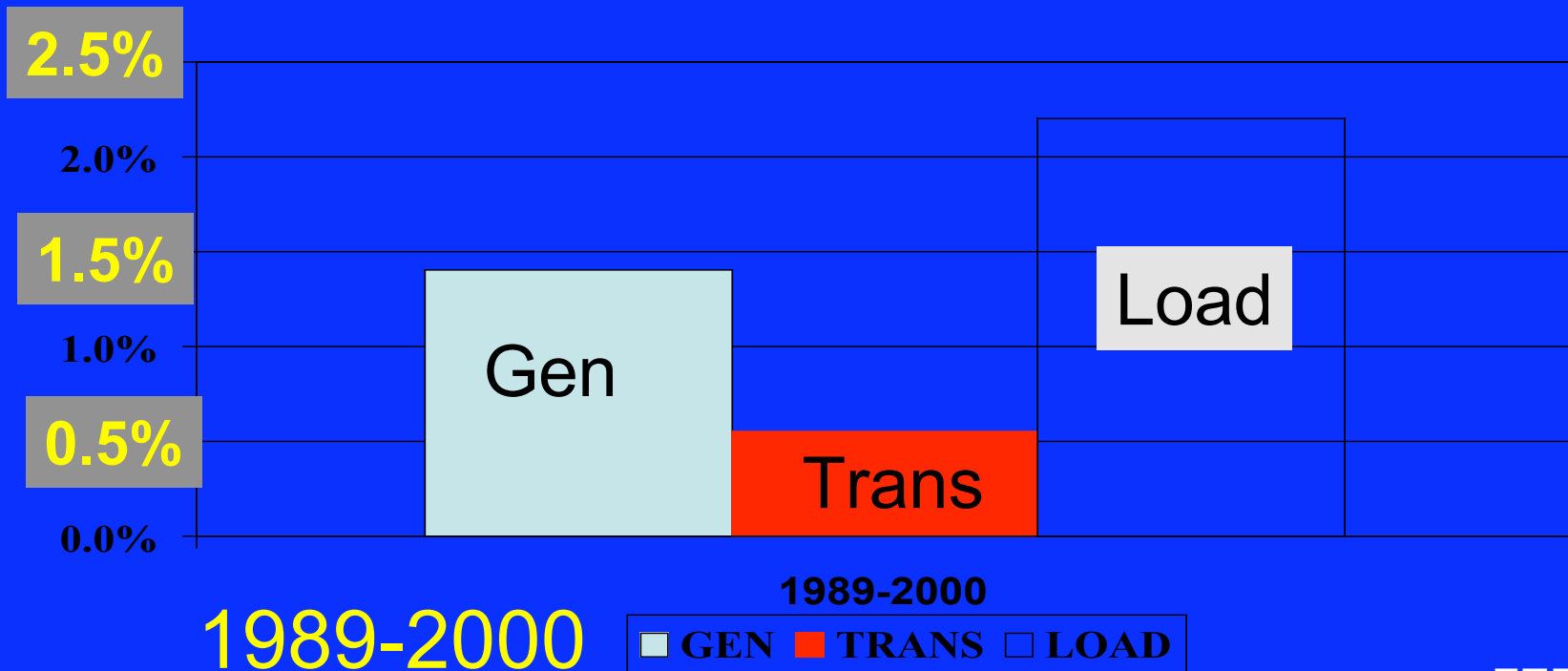
1,900 MW of wind energy proposed

Kansas electric generation by fuel 1976 - 2009



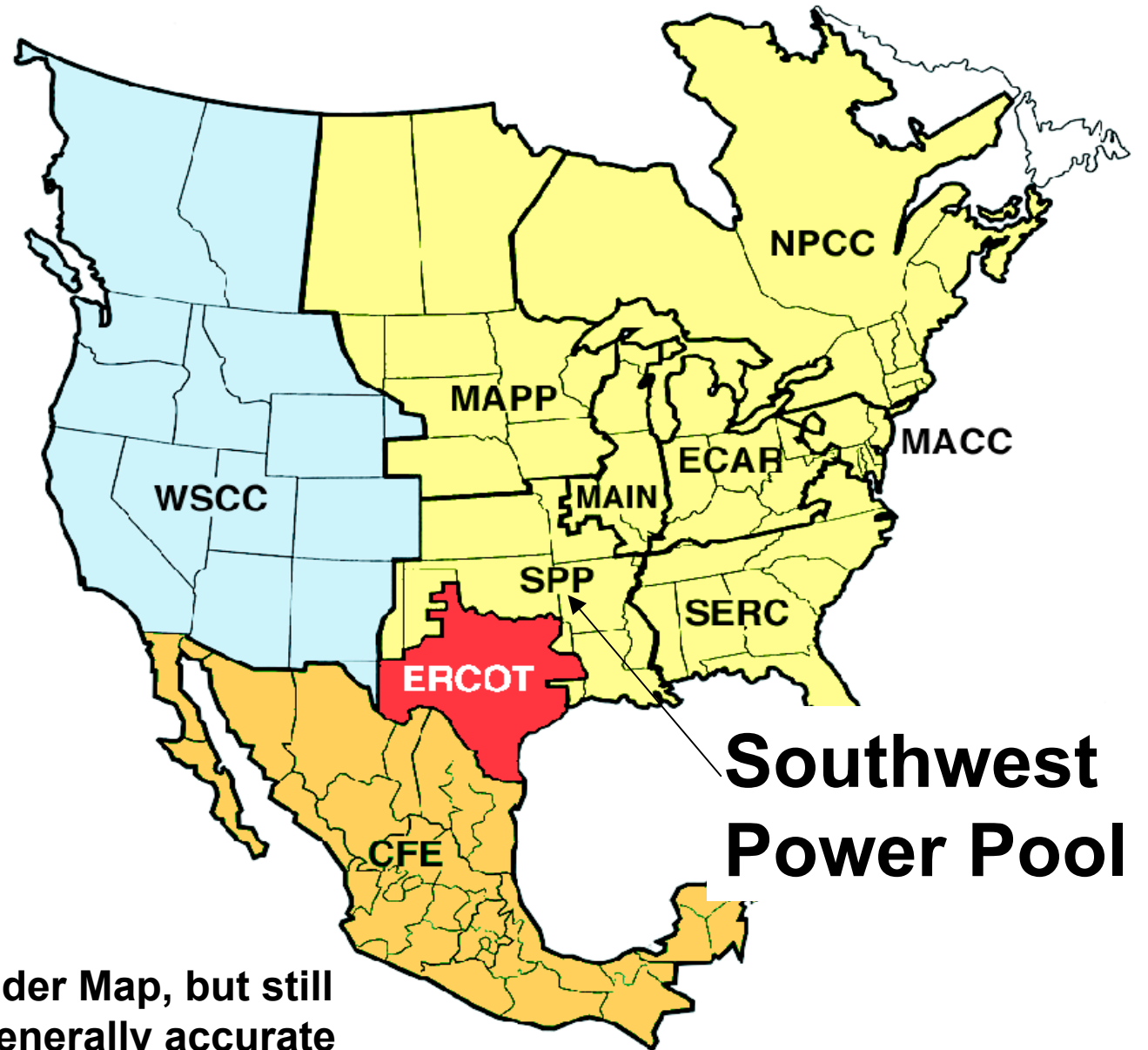
Lagging Transmission Investment

- Half as much annual investment in 2000 as in 1975
- Annual growth rates in Gen, Trans, Load



The Electric Power Grids of North America

Regional
Transmission
Authorities –
“RTOs”



Older Map, but still
generally accurate

Interconnection Request Queue

Total Generation Requests

SPP Requests – 7,330 MW

KS Requests – 2,843 MW

Wind Generation Requests

SPP Requests – 4,331 MW

KS Requests – 1,943 MW

FutureGen

What

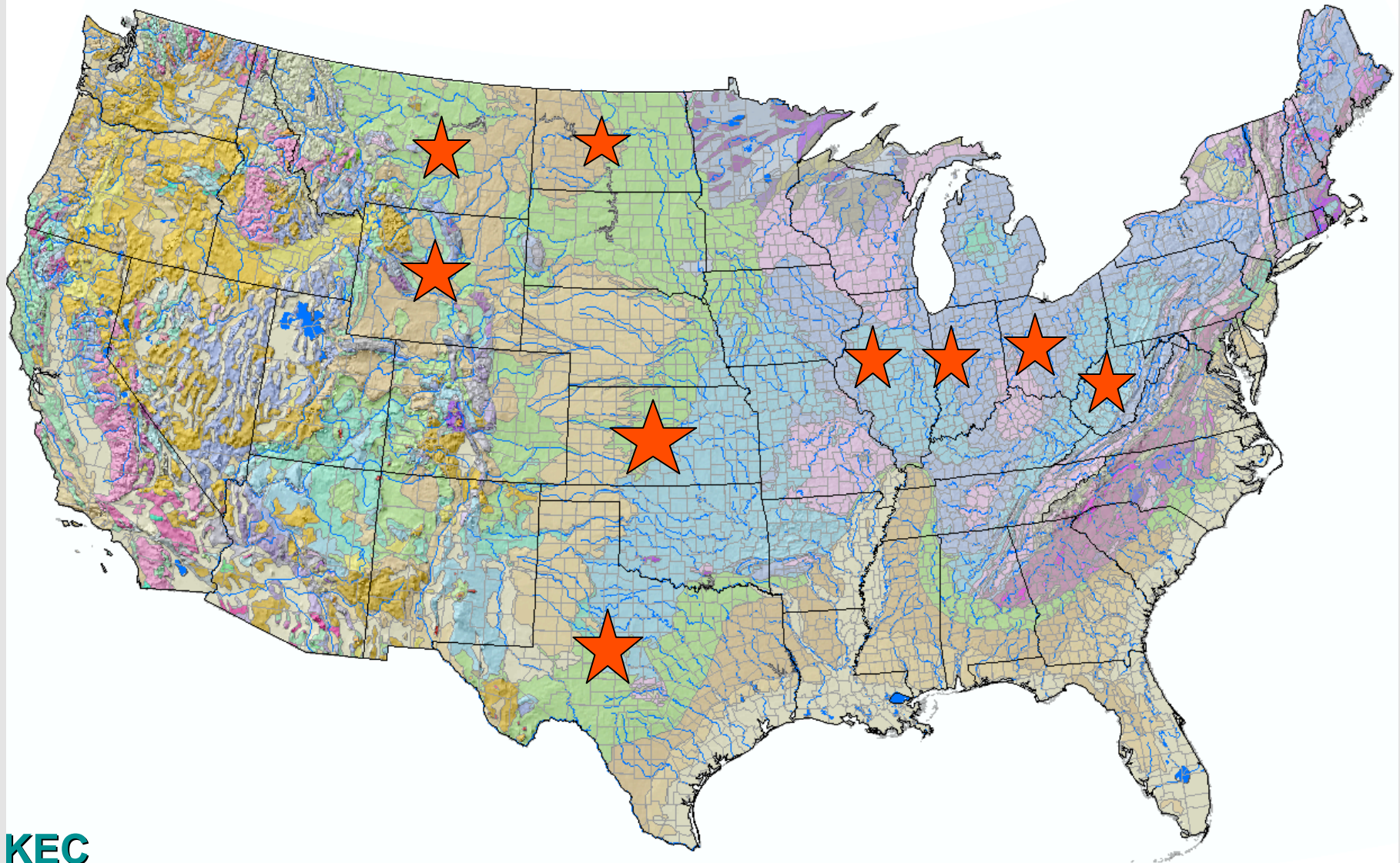


One billion dollar, 10-year project to create the world's first, coal-based, zero-emission electricity and hydrogen plant with sequestration

Site Selection Issues

- ▶ Interest from numerous states
- ▶ Selection to be made by Industry Alliance, with DOE agreement
- ▶ Process and site-selection criteria to be developed following US DOE's selection of Alliance
- ▶ Possible criteria:
 - Technical – Geology, transmission, water. . .
 - Economic – Power purchase agreements, creative rate structures, cash
 - Political / regulatory – Multi-state collaboration, accelerated permitting, liability, public support / outreach . . .
- ▶ Expect a slow, methodical, and open process with complex political overtones

FutureGen competition



FutureGen Industrial Alliance

► Membership:

- American Electric Power
- Cinergy Corp.
- CONSOL Energy Inc.
- Kennecott Energy Company
- PacifiCorp/ScottishPower
- Peabody Energy
- RAG American Coal Holding, Inc.
- Southern Co.
- The North American Coal Company
- TXU

► Characteristics:

- >45% of U.S. Coal Production
- >20% Coal-Fueled Electricity Production
- Operations in >30 States
- Represent all major coal types

► Open membership policy with an active recruiting effort



FutureGen in Kansas



Centrally located – easy access to
western & eastern coals

Property tax exemption

KDFA revenue bonds

CO2 sequestration leadership

Many good sites, strong support

KEC Action Items

- Study a statewide Renewable Energy Portfolio with tradable energy and environmental credits.
- Study a Public Benefit Fund to support strategic energy activities in Kansas, and options to fund it.
- Develop a comprehensive, long-range strategic energy planning process
- Develop an energy efficiency and conservation agenda and determine how it should be implemented.

Executive Branch Recommendations

- Study changing the severance tax exemption on natural gas from a dollar-based to a volume-based exemption level.
- Encourage KDFA to assist refiners and utilities in obtaining financing for modifications in compliance with EPA requirements.
- Encourage an MOU with EPA to resolve conflicts with the “downstream” parts of the petroleum industry (i.e., refining and marketing).

KEC Legislative Recommendations

- Enact state Production Tax Credit of \$.005 per kWh for renewable energy, with transparent, tradable credits.
- Restore a priority creditor status for sellers of oil and gas production when a purchaser is in bankruptcy.
- Authorize Kansas Development Finance Authority (KDFA) to offer bonds to finance Kansas energy projects.
- Remove mandatory labeling for 10% ethanol mixtures at the gas pump.
- Clarify legality of negotiations for voluntary payments for wind projects.

Kansas Energy Council



www.kansasenergy.org

