

Community Issues and the Bioeconomy Transition:

Moving Independence from Imported Oil and Climate Change Up the Local Policy Agenda

Dr. Mark A. Edelman

Community Vitality Center Director

Professor of Economics & Extension Economist

Iowa State University

National Transition to a Bioeconomy Conference

Little Rock, Arkansas

July 1, 2009

What if anything, should our Community do to reduce the dependence on oil imports?

- **Fuel was major factor in WWII outcome**
- **History: Imported oil served a fraction of US demand**
- **Today: Oil imports make up 60% of US demand**
- **What about Tomorrow? Much of our oil revenues go to states prone to terrorism, so we may be financing both sides in war on terror. Who's buying our debt & assets?**
- **With Growth in China, India, and other nations, U.S. cannot rely on energy prices and availability of supplies enjoyed in past**

What if anything should our Community do to reduce climate change emissions?

- **Scientific & policy arena consensus on man's contributions to global warming and potential for long term impacts**
- **US initially refused Kyoto, but now plans to participate in December Copenhagen Summit**
- **Almost all human activity creates carbon and GHG emissions**
- **Alternative proposals impose costs on high GHG emission technologies and provide incentives low carbon technologies & sequestration**
- **Still some uncertainty about longer term consequences, effectiveness of proposed policy alternatives, & costs, competitiveness and global development**

Opportunities for Rural America are Wide Open

- **Ag provides 7% of emissions but more than 20% of potential offsets**
- **Corn ethanol tapped out first 15bgy of RFS, but cellulosic & advanced biofuels get us to 30bgy RFS**
- **Opportunity to create new engines of economic growth in rural America or stand pat as policy debate passes by**
- **Response will vary by community:**
 - early adopters don't take no for answer & provide lessons learned
 - late adopters
 - those who continue status quo

A Policy Framework for Community Decisions on Energy Independence & Climate Change

Approach I. Assessment & Education

- Identify sources & measure current mix of transportation fuels from imported oil & climate change emissions generated (directly and indirectly) by community
- Identify alternative opportunities reducing dependence imported oil & for reducing Carbon/GHG footprint
- Conduct Educational program to share findings with leaders & citizens


A Policy Framework for Community Decisions on Energy Independence & Climate Change

Approach II. Local Incentives

- Provide encouragement for citizens and private sector to make decisions (households, businesses, nonprofits)
- Provide incentive grants, fee discounts, tax credits, reimbursements, etc.
- **Energy:** Cost sharing grants for blender pumps;
Reduced fees for Flexfuel Vehicles
- **Climate:** Cost sharing grants for adoption of low-GHG Emission Technologies by local employers, low-interest loans on geothermal system installations

A Policy Framework for Community Decisions on Energy Independence & Climate Change

Approach III. Community Enterprise Initiatives

- Identify & organize government-led or public-private partnership groups to examine feasibility, conduct due diligence, and develop plans for government sponsored and/or community-wide enterprise initiatives
- 
- **Energy:** Implement policy for local government to purchase flexfuel vehicles and renewable fuels.
 - **Climate:** Examine feasibility of community-owned wind turbines & piping biogas from landfills and/or community digesters to co-fire power generators during power gaps for wind turbines or during peak power demand.

A Policy Framework for Community Decisions on Energy Independence & Climate Change

Approach IV. External Decision Strategies

- Identify local leaders with expertise & build linkages to external regional entities or higher governments to inform and influence them regarding decisions that will harm or benefit the community
- **Energy:** Participate in initiatives to encourage state and national policymakers and external fuel and vehicle distribution systems to provide greater fuel choice
- **Climate:** Participate in initiatives to encourage regional utilities to invest in low carbon power generation technologies and sequestration, as well as incentives to encourage local customers to do the same

A Policy Framework for Community Decisions on Energy Independence & Climate Change

Approach V. Continue Status Quo

- Typical response until sufficient rationale for change



- **Energy:** If federal incentives are adopted, local citizens may experience higher costs
- **Climate:** If federal incentives are adopted, local citizens may experience higher costs

A Policy Framework for Community Decisions on Energy Independence & Climate Change

Approach VI. Combination of Alternatives

- First 4 approaches are not mutually exclusive
 - Assessment & Education
 - Local Incentives
 - Community Enterprise Initiatives
 - External Strategies to Benefit Community

A Policy Framework for Community Decisions on Energy Independence & Climate Change

Overall Framework Observations

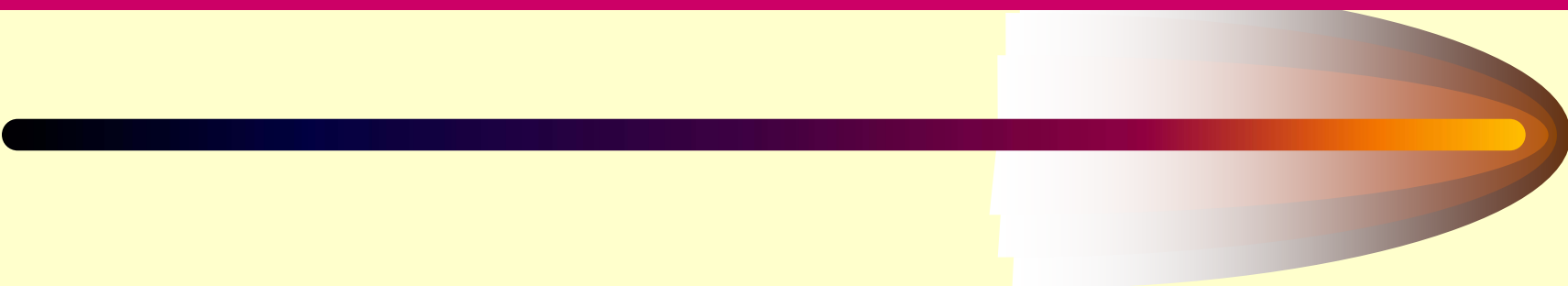
- Success stories & awards provide signals of
 - Inspiration
 - Legitimization 
 - Providing examples for others to follow
 - \$1 million competition for best in state
- National and international policy deliberations inform local deliberation & local deliberations inform the national and international deliberations

A Policy Framework for Community Decisions on Energy Independence & Climate Change

Role of Extension

- Multitude of “Green” & “Smart” trade show consultants
- Always role for disinterested 3-party institution in providing applied research-based information
- Household, private sector & community decisions
- Informed decisions to maximize opportunities and to avoid waste and unintended consequences
- Too big for one person, discipline, or institution, but national initiative with resources could have an impact

Community Vitality Center

- 
- Dr. Mark A. Edelman, Director
 - Phone: 515-294-3000
 - E-mail: cvc@iastate.edu
 - Website: www.cvcia.org