

JOBS PLATFORM

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MIDWESTERN GOVERNORS ASSOCIATION

Jobs+
Energy
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MGA



Biofuels—*first example of New Energy jobs premise*

Keystones of this premise

- » Midwest has unique assets in alternative energy;
- » These assets need to be surrounded with the right strategy, policy, programs and funding;
- » This combination of assets and opportunity will result in a disproportionate market share for the Midwest in wealth and job creation from the sector.
- » Deflection points come along rarely, we must take advantage.

Goal: Replace 1.2 million lost manufacturing jobs with new energy jobs



Gen One Biofuels—*New Energy jobs case study*

First Generation biofuels a unique Midwestern example

- » Corn ethanol a bottom-up phenomenon
 - » Farmer-owned co-ops built first refineries
 - » Feedstock driven, not technology driven
 - » Policy driven by farm-state politics
- » In spite of boom-bust-recovery cycle, jobs and wealth were disproportionately created in Midwest
 - » 3 out of 4 major engineering firms
 - » 133 out of 169 of total U.S. bio-refineries
 - » Approximately 2/3 of supply chain to include service providers



Biofuels—*what will the future bring?*

Will second generation biofuels be as good to the Midwest?

» Pluses (+):

- » Component technology and experience base still in Midwest
- » Some key companies and research still in Midwest
 - » Great Lakes Bio-energy Research Center
 - » Virent, Koskota, Poet, others
- » Midwest still has multi-faceted cellulosic feedstock base

» Minuses (-):

- » Many top projects and research funded by Coastal money and located elsewhere
- » Cellulosic feedstocks not limited to Midwest

Midwest will have a strong presence but will loose share

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Alternative Energy—*how strong the Midwest?*

What assets do we have to leverage in the New Energy sector?

» Intellectual capital

- » Big 10 and related schools, strongest tech research in world
 - » Ag/Forestry/biotech programs
 - » Chemistry/engineering/materials science/nanotech

» Natural resources

- » Ag and forestry base
- » World's greatest fresh water resource
- » Strong wind corridor
- » Coal and carbon capture

» Human capital, historical strengths

- » Workforce
- » Manufacturing base



Where Should Our Concentration Be?

Conservation is a given but what energy areas are most promising?

	Solar	Biomass	Wind
NE	--	+	+++
MW	+	+++	+++
S	+++	--	--
SW	+++	--	--
W	++	++	+++

How Do We Win—will our ideas be enough?

Will money trump basic resources in New Energy job creation?

20% of the Capital
vs.
175% of the Opportunity

Comparable NIH Funding

\$3.2B



California

\$5.6B



Midwest

\$s Invested in Life Science Cos.

\$4.3B



California

\$831M



Midwest

Ideas flow to money, it will take more than ideas.

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How Do We Win—*are strong MGA goals enough?*

What about MGA goals, are they good enough?

- » Energy Security and Climate Stewardship Platform
 - » Necessary but not (quite) sufficient
 - » Achievement puts Midwest ahead of most regions (CA the exception)
- » Policy and programs must be differentiated if MW to achieve disproportionate success
 - » We must drive faster adoption of green technologies in order to win in the jobs and wealth creation race
 - » Do more than other regions
 - » Focus on resource areas where we excel (wind, biomass)
 - » Policy and programs must be both creative and aggressive



How Do We Win—*are strong MGA goals enough?*

Can we take share in the face of California's goals?

- » California: $\frac{1}{2}$ the ideas = 5x equity \$s
- » It will take more than our goals set to take share
- » Ideas alone are not enough
- » Goals alone are not enough
- » We must combine other assets with goals and ideas

Goals render a marginal advantage, it will take more than goals.



How We Win— *strategically combine assets and policy*

What assets do we have to leverage in the New Energy sector?

- » Need a combination of attributes and assets:
 - » Local money plus a differentiated attribute or asset
 - » Gen 1 bio-fuels (\$s from co-ops + corn)
 - » Wind corridor + RES + project finance + energy market
 - » Intellectual Capital plus local money
 - » CHP technology + project finance + policy incentives
 - » Intellectual Capital plus a differentiated attribute or asset
 - » Gen 2 bio-fuels technology + feedstock aggregation



How We Win—*policy first and then programs*

How do we take a disproportionate share in the New Energy sector?

- » Use policy to drive adoption of New Energy tech
 - » Policy first, then programs
 - » Programs are essential but not as strong
- » Policy changes can attract projects quickly
 - » Wind
 - » RES have driven wind adoption in MW
 - » Supply chain strengths keep purchases in MW
 - » Job training provides longer term advantage
 - » Biomass (where creativity and aggression is needed)
 - » Change the inflection point of biomass to power investment
 - » ARTs, thermal credits and ITCs drive CHP
- » The best biomass supply chain leads to power apps, leads to Gen 2 bio-fuel apps, leads to biomaterials apps



How We Win— *assets* → *policy* → *programs*

Winning relies on strategy, policy and programs working together

- » Asset base shapes strategy
- » Aggressive policy drives adoption
- » Programs support the industries thus created
 - » Strong programs (jobs platform) secures share and builds for future
 - » Programs create a sustainable competitive advantage
- » Job retention as well as creation
- » Explicit investment strategy (public and private)

Deflection points are rare, we must not let this one get by.



MGA Goals, Strategies, Programs

Energy goals, energy and jobs platforms and regional cooperation

- » Governors' energy goals, bold first step
- » MGA task forces provide programmatic details and policy recommendations
- » Cooperative regional initiatives: call to action as a region

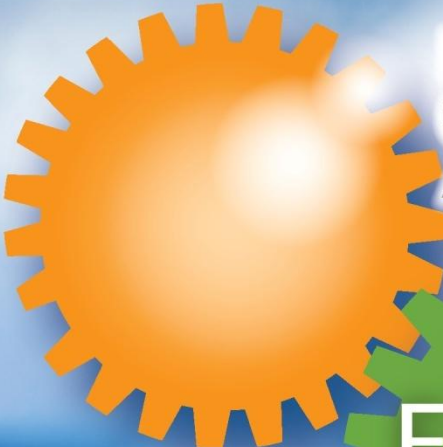
Total package creates a 'take share' environment that builds on Midwestern assets. Strategies and programs build on the policy/asset foundation.



Are We Ready to Move Again?

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