



24 members

Bi-partisan

Public, Private, Institutions

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Minnesota Policy

- RES: 25% Renewable Electricity by 2020
- Efficiency: 1.5% Annual Energy Savings of Electricity and Natural Gas
- Greenhouse Gas Reduction: 30% Reduction of GHG emissions from 2005 levels by 2025 and 80% reduction by 2050
- Clean Water Legacy: Protect, Preserve and Restore Quality of Minnesota's Surface Waters
- Next Generation Biofuels: 25% of Minnesota's Energy from Biofuels by 2025



Green Jobs Definition for Action Plan

The definition of “green jobs” adopted by the Task Force solely for purposes of the Action Plan was:

“Green jobs are the employment and entrepreneurial opportunities that are part of the green economy, as defined in Minnesota statute 116.437J, including the four industry sectors of green products, renewable energy, green services and environmental conservation. Minnesota’s green jobs policies, strategies and investments need to lead to high quality jobs with good wages and benefits, meeting current wage and labor laws”



Task Force Guiding Principles

Accessibility: Creating access and advancement opportunities for all tiers of education and employment, including pathways out of poverty.

Accountability: Creating measurable results with effective and fiscally responsible strategies consistent with these Guiding Principles.

Adaptability: Awareness of on going developments and conditions within and beyond Minnesota to enhance state competitiveness and responsiveness to new and changing green economic opportunities.

Advocacy/Alignment: Promoting and leveraging Minnesota's strategic opportunities at the federal level where State's priorities, activities and resources exist.

Connectedness: Breaking barriers among regions, agencies, institutions, companies, unions and governmental entities.

Inclusiveness: Assuring opportunity and active participation by all Minnesotan's including economically vulnerable, at risk and disadvantaged populations.



Three Sub Committees

Attracting Green Jobs

Job Retention and Expansion

Workforce Education and Training

Total Meetings: 6 (3 Metro & 3 Greater MN)

Total Attendees: 280 Minnesotans

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Attracting Green Jobs

- Using a format of “lessons learned” the subcommittee heard from businesses who were asked to share what programs/initiatives/incentives in Minnesota are helpful in establishing businesses as well as identifying significant barriers to promoting new green businesses.
- **Challenges for Task Force Consideration**
 - There is a commercialization time before cost competitive
 - Enabling funding for “leading edge” is lacking
 - Infrastructure dollars often needed to create market (ie hydrogen fueling stations before consumers can effectively operate hydrogen vehicles)



Retaining and Creating Green Jobs

- Focused on retaining jobs in wind, ethanol, biodiesel, mining, forestry and the window manufacturing industry sectors by examining the specific industry challenges as well as the individual steps businesses have taken to remain competitive with a focus on conservation, energy efficiency, sustainable practices and use of renewable energy.
- **Challenges for Task Force Consideration**
 - Assure Timely Permitting
 - Match a company with university funding to support product development
 - Streamline or add flexibility to grant programs so dollars are truly available



Workforce Training and Education

- Targeting both an urban and rural setting, the workforce training sub-committee examined issues of green job goals, training and access throughout Minnesota.
- **Challenges for Task Force Consideration**
 - Investing solidly in workforce development.
 - Assuring equitable proportion of green job programs for low income and minority populations.



Findings From Task Force Sub-Committee Meetings

Needs that Reach Across All Areas of Opportunity:

- Public Sector Marketing for Greater Visibility
- Target Job Training and Job Opportunities to Disadvantaged Communities
- Green Jobs Resource Connector
- Streamlined Permitting and Grant Processes
- Venture Capital Support
- Greening Public Procurement
- Expand Renewable Energy markets through Policy & Public Investment

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Market Analysis Performed by GSP Consulting

Minnesota's current strengths in the green economy:

- Minnesota's renewable energy policies and regulations may position Minnesota to grow and attract green jobs.
- Minnesota's green product support provides good positioning for growth in the green services sectors.
- Minnesota has a highly regarded quality of life and an exceedingly skilled work force which further strengthens its position to attract, retain and expand green jobs.
- Growth in the environmental conservation sector has been aided by the passage of Minnesota's various environmental regulations.

Market Analysis can be found at www.MNGreenJobs.com



GSP Consulting's Market Analysis of MN's Renewable Energy Sector

- Current green job estimate is approx. 9,477
 - Predicted to grow by 2020 to between 12,238 to 18,458
- Overall strong concentration of firms and demonstrated growth over the past 5 years
- RPS and growing demand will continue to drive investment and growth
- Wind is most significant near-term opportunity
 - Minnesota ranks 3rd in Wind Capacity installed
- Solar , biofuel, cogeneration opportunities will continue to develop
- Patent and Research activity can support the sector but more is needed

GSP Consulting's Market Analysis of MN's Green Products Sector

- Current green job estimate is approx. 9,541
 - Predicted to grow by 2020 to between 10,340 and 12,640
- Growth in green jobs will come from both new and retained jobs
- Green Building Products and Transportation (i.e. transit) are best near term opportunities
- Products include both:
 - products that enable green buildings (i.e. LEED certified/GreenStar) and
 - Products that enhance a buildings energy performance
- The Transportation sector demonstrated a 21% (2,000) job increase in past five years

GSP Consulting's Market Analysis of MN's Green Services Sector

- Current green job estimate is approx. 22,441
 - Predicted to grow by 2020 to between 24,841 and 29,337
- Services covers a broad section of firms such as:
 - Energy Audit companies
 - Recycling and Waste Management
 - Building Energy Infrastructure
- Services can both drive a market or serve it
- Overall sector is much smaller than benchmark states
- Professional, Scientific and Technical sector is strong (architectural, chemistry, engineering)

GSP Consulting's Market Analysis of MN's Environmental Conservation Sector

- Current green job estimate is approx. 11,367
 - Predicted to grow by 2020 to between 11,514 and 12,032
- Environmental Conservation include industries related to air, water and land conservation including:
 - Air emissions controls, monitoring and compliance
 - Water treatment, conservation and wastewater treatment
 - Land management, natural pesticides, natural fertilizers and aquaculture.
- Within the region Minnesota ranks only behind Michigan, Illinois and Ohio in this sector

Task Force Recommendations

Renewable Energy

- Support state revenue bonds for interest free or interest deferred loans for renewable energy projects
- Explore funding for biofuel demonstration project
- Explore support for scaling up biomass plants to ensure commercial viability.
- Require an agency to focus on and report to the legislature on the utilization of the Farm Bill programming dollars for biomass establishment costs
- Remove barriers to cost effective transmission and distribution for renewable electricity.
- Expand policies and financing for emerging solar technology
- Provide support to establish solar energy certification lab
- Provide bonding for public buildings where cost effective and technically feasible to utilize renewable energy including but not limited to wind and solar.

Task Force Recommendations

Green Products Sector

- Explore strategies for increased electric automobile infrastructure and manufacturing
- Modify Minnesota's building code to include utilization of energy efficiency requirements
- Enact requirement to aggregate purchasing power to purchase green products for state agencies
- Continue funding Select Committee on Recycling and Environment (SCORE) programming.
- Support counting in Utilities' Conservation Improvement Programs all energy saved, either kWh or BTUs from a given energy conservation project.
- Work with IREE, MnSCU, AURI, Institute for Agriculture and Trade Policy and other interested stakeholders to prepare a study of food production sector, including organics, local, conventional, natural, traditional, and urban farming, to define the size of the employment base and identify opportunities to increase the number of green jobs in these segments.

Task Force Recommendations

Environmental Conservation Sector

- Incent businesses and utilities resulting in increased waste heat recovery and cogeneration.
- Align funding from Natural Resource and Cultural Heritage program with Task Force's environmental conservation and water treatment goals.
- Target existing funding sources for energy efficient technology for wastewater treatment plants.
- Identify training needs for workforce that would support new models of water conservation and reuse.
- Remove barriers and incent water recycling by industry.

Task Force Recommendations

Green Services Sector

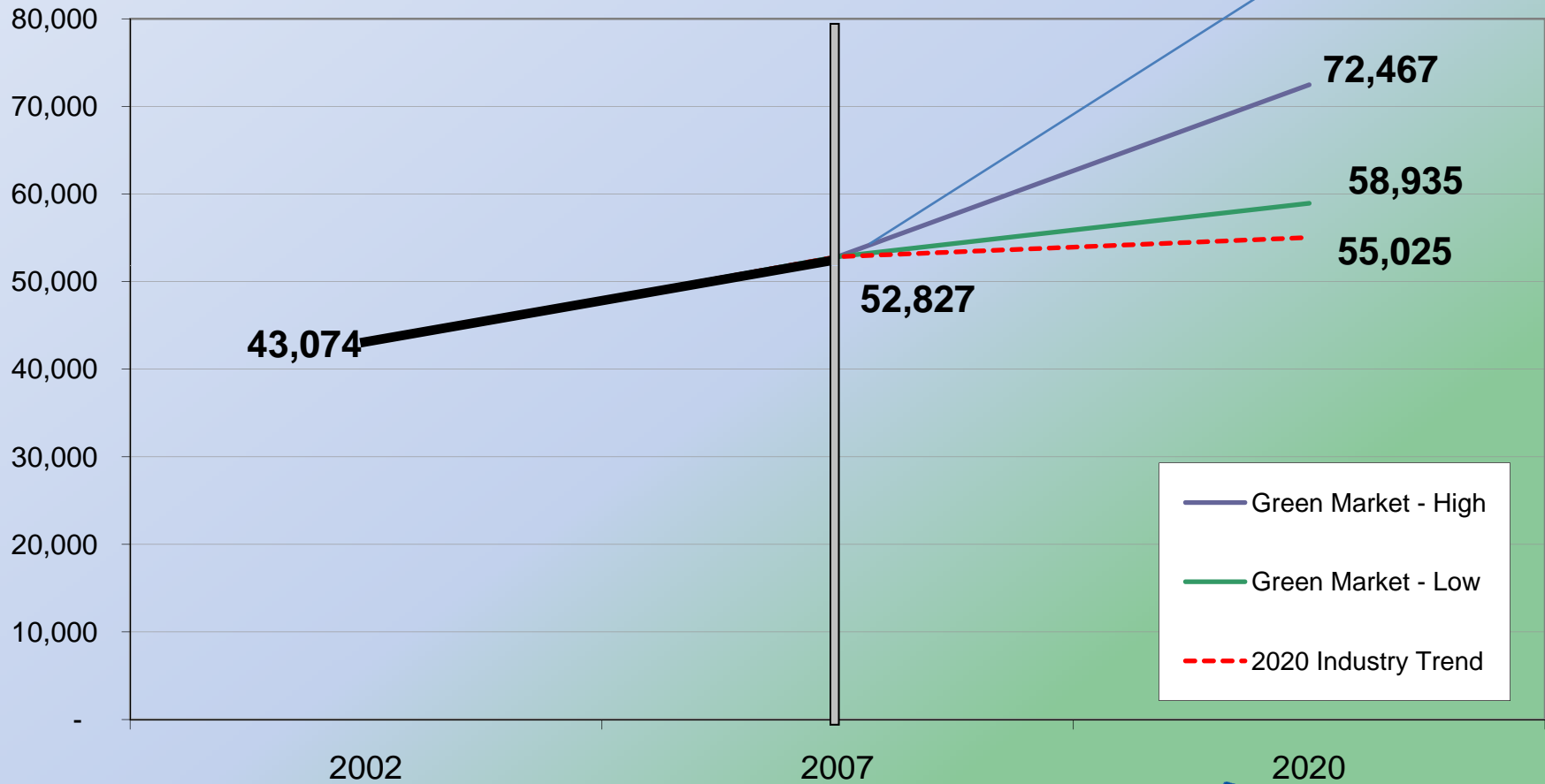
- Provide State revenue bonding package to renovate the most energy inefficient public buildings
- Develop innovative, cost effective financing mechanisms to stimulate more residential energy efficiency retrofits, including foreclosed and foreclosure threatened properties.
- Require all public bond and grant programs to analyze and implement cost-effective energy efficiency improvements and retrofits where practicable.
- Provide all appropriate funding and loan guarantees for commercial/industrial energy efficiency improvements and green renewable energy loan programs, including but not limited to programs that include collaboration with the local utility.
- Provide to EDA's across the State all appropriate federal and state brownfield grant and financing tools to redevelop and remediate land which will generate jobs and development ready sites.
- Provide State bonding for public infrastructure funding of green industrial parks to reuse brownfields or old infrastructure near transit and workforce to minimize carbon emissions, to create a green business cluster and to establish carbon neutral bio-business parks in Greater Minnesota.

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MN Green Jobs: 2020

Green Jobs Action Plan
will generate Additional
Green Jobs for the State



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Questions?

