

The



Blue Skyways **COLLABORATIVE**

The Central Corridor of Innovation!





WORK PLAN REPORT

ENERGY SUBCOMMITTEE





BACKGROUND

- **Goal of the Energy Subcommittee: to facilitate timely implementation of energy efficiency, energy conservation, and renewable energy projects in the ten-State collaborative region, plus adjoining areas of Canada and Mexico**
- **21 people have participated in the 8 Subcommittee conference calls, with 10 persons thus far being core contributors.**
- **The Subcommittee agreed that helping States, Locals, Tribes, and the private sector (e.g., farmers/ranchers and small businesses) implement already planned energy efficiency and renewable energy projects is a major priority. Close cooperation with these partners is essential.**





BACKGROUND

- **A major emphasis is on quantifying results. It identified three basic measures of success for its projects:**
 - **tons per year of particulate matter (PM), nitrogen oxides (Nox), and greenhouse gas (GHG) emissions that are reduced or avoided as a result of sponsored projects**
 - **amount of funds leveraged for projects championed by the Subcommittee and**
 - **number of projects championed that support current State, Local, and Tribal energy-air quality programs.**



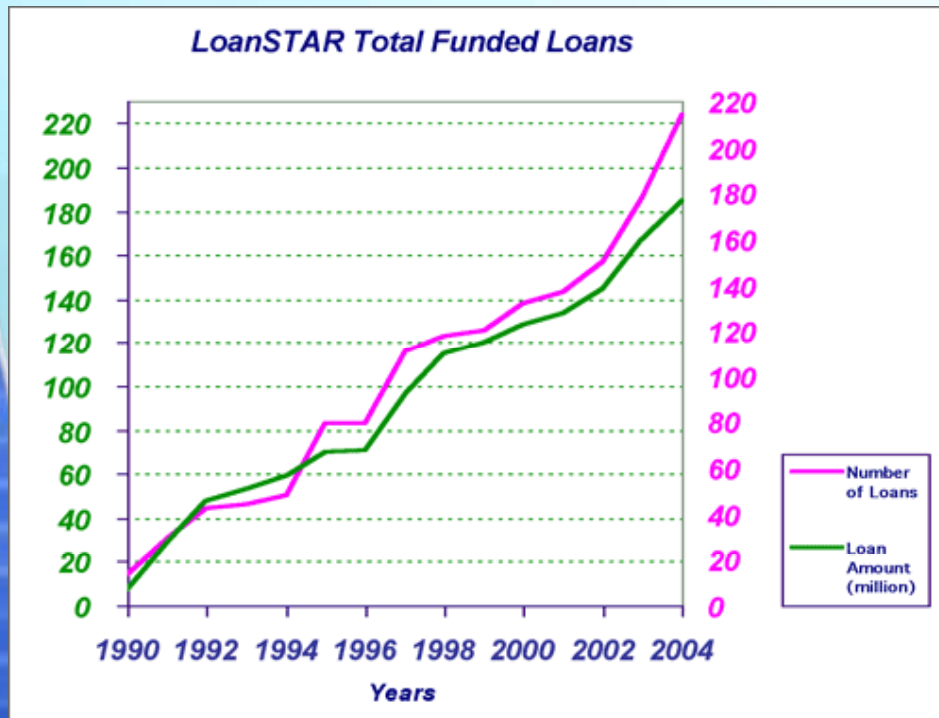


BACKGROUND

- **After discussion and prioritization, the Subcommittee agreed to an ambitious portfolio of projects:**
 - **Funding to State energy efficiency loan programs**
 - **Effect small-scale and community windfarms**
 - **Facilitate landfill/biomass/CAFO methane capture projects**
 - **Install renewable energy in truck stop electrification/E-85 sites**
 - **Facilitate SEPs for ground source heat pumps and solar hot water heaters**
 - **Facilitate development of GIS-based renewable energy data base**
 - **Capitalize on developing opportunities**



Direct Funding to Existing State Energy Efficiency Loan Program



State energy efficiency loans to municipalities in Texas

• Tasks/Milestones

- Discuss with States, CenSARA -- by 7/15
- Identify specific projects - - by 8/1
- Identify funds to apply – ongoing
- Work with States to apply for funds – beginning 8/1



Effect Community and Small-scale Windfarms



The MinWind energy farm
in southwest Minnesota

- **Tasks/Milestones**

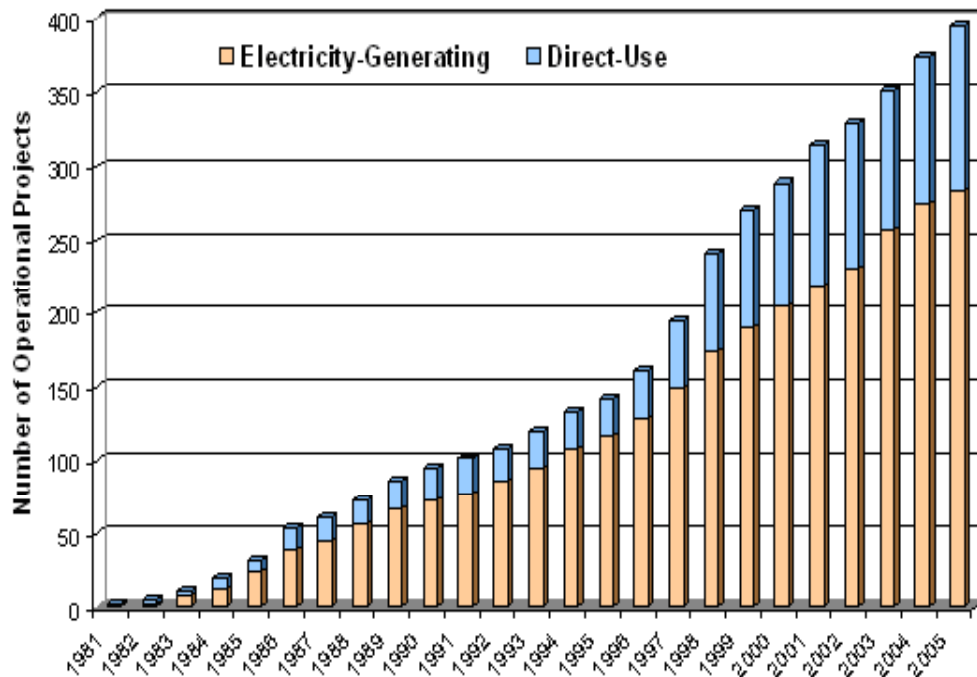
- **Get NREL hours, pinpoint best locations – by 8/15**
- **Evaluate use of tribal grant money and DOD, GSA purchase of wind power from small windfarms – by 9/15**
- **Hold workshops with partners, applicants and interested parties, facilitate funding – by 12/31**
- **Develop SEP templates for windfarms – by 3/31/07**
- **Track and advise on projects – ongoing**



Effect Landfill/CAFO/Biomass Methane Projects

• Tasks / Milestones

- With partners, start discussion to identify best locations – by 7/31
- Develop 1-page info. sheets for outreach – by 8/15
- With partners, prioritize projects, select Champions and Champions prepare SOWs– by 9/30
- Identify funding sources – beginning 10/31
- Applicants make applications, receive funding, start projects by 4/30/07



Number of landfill methane capture projects in U.S.



Install Renewable Energy in TSE/E-85 Stations



• Tasks/Milestones

- Meet with on-road and fuels subcommittees to determine power requirements and costs – by 7/15
- Identify utilities that will support purchase of power from these renewable sites – by 8/15
- Champions draft business plan for funding– by 9/15
- Identify potential funding sources – by 10/30
- Conduct outreach to identify best sites – by 11/30
- Champions apply for funding, track projects and provide guidance -- Ongoing



Templates for Ground Source Heat Pumps and Solar Hot Water Heaters



Onamia Elementary School, Onamia, Minnesota

78,000 sq. ft. school heated and cooled by ground source heat pumps

• Tasks/Milestones

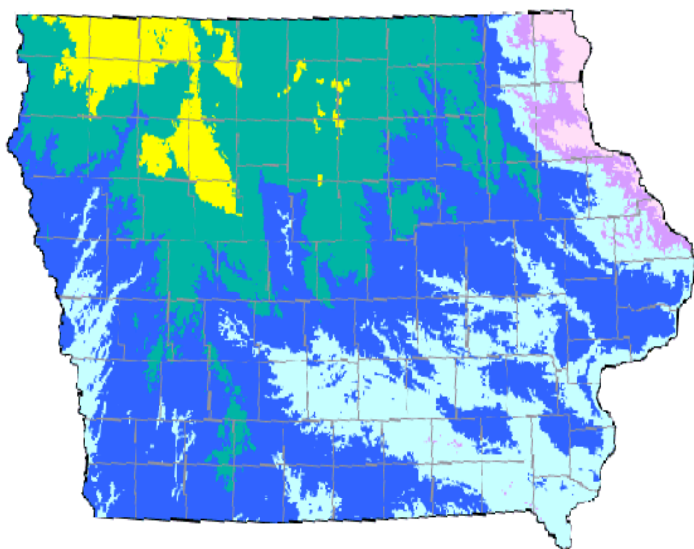
- Write proposal for funding and circulate – completed 5/31
- Secure funding – as soon as possible
- Select contractor and contact States for applications – by 10/1
- Contractor finishes templates – by 1/1/07
- Templates shared with enforcement personnel for SEPs – by 1/31/07



Development of GIS-based Wind Resources and Renewables Maps

Estimated Average Annual Wind Speeds

Typical average wind speeds on well exposed sites at 50 m above ground



MPH	m/s
>19.0	>8.5
17.9-19.0	8.0-8.5
16.8-17.9	7.5-8.0
15.7-16.8	7.0-7.5
14.5-15.7	6.5-7.0
13.4-14.5	6.0-6.5
12.3-13.4	5.5-6.0
<12.3	<5.5

Iowa Energy Center

This map was generated from data collected by the Iowa Wind Energy Institute under Iowa Energy Center Grant No. 93-04-02. The map was created using a model developed by Brover & Company, Andover, MA.

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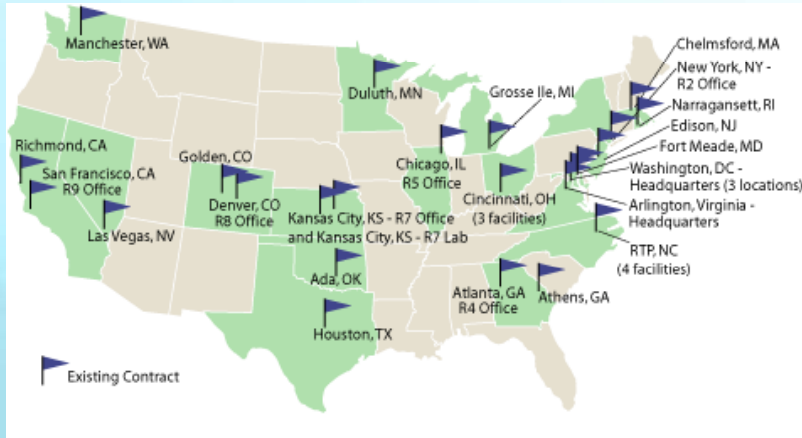
Iowa Energy Center, 2621 Elwood Drive, Suite 124, Ames, IA 50010-8203 Phone: (515)294-8819 Fax: (515)294-9912

• Tasks/Milestones:

- Hold initial calls – completed 4/11
- Discuss with States about data being GIS-compatible – by 7/15
- Decide on high-priority data for data bases – by 8/15
- Discuss with OAQPS, NREL potential roles – by 9/15
- Demonstrate EPA-R6 WTE tool – by 9/15
- If WTE tool desirable, choose next demonstration area – by 10/15
- If positive on GIS system, pursue funding mechanisms with partners – by 10/31
- Apply for funding, secure funding, begin effort – beginning 1/31/07



Capitalize on Developing Opportunities



88% of EPA is green-powered



H2 fuel cell

• Tasks/Milestones:

- Sponsor international energy finance workshop in El Paso – completed 5/24
- Contact GSA about partnering in green power purchases for federal facilities, including workshops – by 9/1
- Get results from SECO/HARC small-scale fuel cell applications and share for SEPs– by 11/15
- Hold workshops with partners to combine public financing with private financing for ee/re programs – by 4/15/07





How You Can Help



- **Supply technical assistance**
- **Offer funding support to partners or serve as pilot application**
- **For specific projects you can work on now, see Tab 17 in your notebooks entitled “Blue Skyways Collaborative Project Opportunities”**

