

Smart Policy for Job Creation in the New Energy Economy

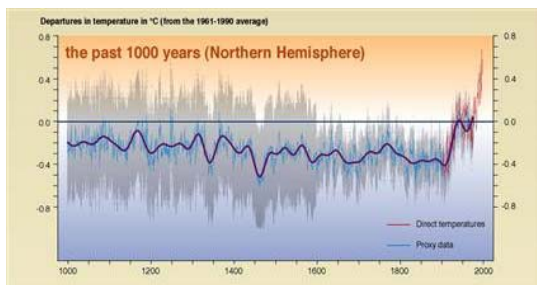


Cleveland, Oct. 23 2007

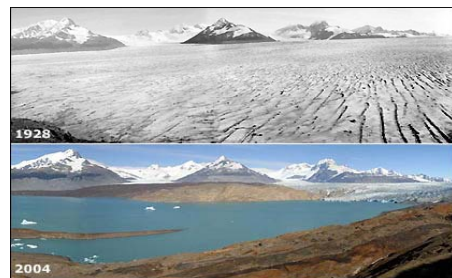
The Problem...

Global Warming

Earth is the hottest it has been in at least 400 years

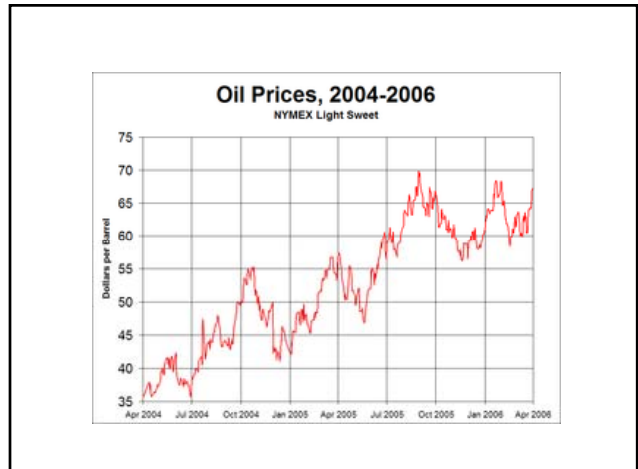


Upsala Glacier, Argentina



Impacts of Climate Change on Labor Force

- **Agriculture** - dwindling water supply & rise in temperature = devastating losses for agricultural sector.
- **Commercial fishing** - changing sea temperatures could have devastating effects on fish populations.
- **Firefighting** - loss of soil moisture content will decrease 30%, wildfires expected to double in next 50 years.
- **Public health** - more smog = more asthma; increased pest populations; increase malaria, Lyme; heat related illnesses.
- **Tourism & airline** - weather patterns would disrupt scheduling; tourist destinations threatened.



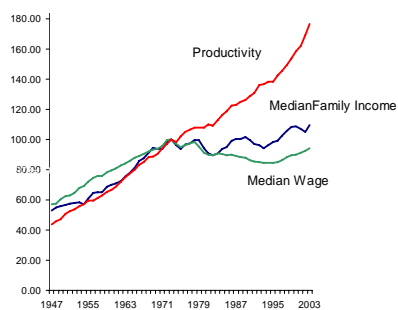
Disruptions in Oil Supply

- Hurricanes in the Gulf Coast
- Turbulence in the Middle East
- Strikes & political unrest in Venezuela & Nigeria
- Potential sanctions against Iraq
- Explosions in the United Kingdom
- Increased global demand - India & China



At the same time...

The end of shared prosperity



A nation of sub-minimum wages?

- Minimum wage today is \$5.85, down from its 1968 value of \$8.85 (2005\$)
- Since 1968, productivity has increased 110 percent. A productivity-corrected minimum would be \$18.50 – almost 30 percent higher than today's median wage of \$14.33
- The upshot: The vast majority of American workers today are below the historic (productivity-normed) minimum wage

One Solution...



The Apollo Alliance

- **23 Major Labor Unions**
AFL-CIO, AFSCME, SEIU, IBEW, Unite HERE, UAW representing over 10 Million Working Men and Women
- **Environmental Groups**
Sierra Club, Union of Concerned Scientists, Greenpeace, National Wildlife Federation, Natural Resources Defense Council, and League of Conservation Voters
- **Social Justice Groups**
AGENDA, Green for All, Ella Baker Center for Human Rights, ACORN, and Urban Agenda
- **Business Leaders**
American Council On Renewable Energy (ACORE), Energy Innovations, Conservation Services Group, Pacific Ethanol, Sharp Solar

Why Do We Call it *Apollo*?

We choose to go to the moon in this decade . . . not because [it is] easy, but because [it is] hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win



A New Apollo Project

- Reinvest in our nation's energy resources and infrastructure
- Unify labor, environmental, civil rights and economic justice advocates
- Create 3.3million new jobs through investment in clean energy



New Energy for America



A Ten-Point Plan FOR AMERICA'S ENERGY INDEPENDENCE BY 2015

- 1 Promote Advanced Technology & Hybrid Cars:** Encourage the emerging, emerging, and existing technologies for energy efficiency, renewable energy, and hybrid vehicles, including smart grids and smart buildings, to reduce energy consumption and increase energy efficiency.
- 2 Invest in More Efficient Factories:** Make investments in energy efficiency and green buildings, including smart grids and smart buildings, to reduce energy consumption and increase energy efficiency.
- 3 Encourage High Performance Building:** Encourage high performance buildings, including smart grids and smart buildings, to reduce energy consumption and increase energy efficiency.
- 4 Increase Use of Energy Efficient Appliances:** Encourage the use of energy efficient appliances, including smart grids and smart buildings, to reduce energy consumption and increase energy efficiency.
- 5 Modernize Electrical Infrastructure:** Upgrade the nation's electrical infrastructure, including smart grids and smart buildings, to reduce energy consumption and increase energy efficiency.
- 6 Expand Renewable Energy Development:** Encourage the development of renewable energy sources, including wind, solar, and hydro, to reduce energy consumption and increase energy efficiency.
- 7 Improve Transportation Options:** Encourage the development of alternative transportation options, including public transit, carpooling, and biking, to reduce energy consumption and increase energy efficiency.
- 8 Reinvest in Smart Urban Growth:** Encourage the development of smart urban growth, including smart grids and smart buildings, to reduce energy consumption and increase energy efficiency.
- 9 Plan for A Hydrogen Future:** Encourage the development of a hydrogen economy, including smart grids and smart buildings, to reduce energy consumption and increase energy efficiency.
- 10 Preserve Regulatory Protections:** Encourage the preservation of regulatory protections, including smart grids and smart buildings, to reduce energy consumption and increase energy efficiency.

New Energy for America
The Apollo Jobs Report:
Good Jobs & Energy Independence



A Ten-Point Plan FOR AMERICA'S ENERGY INDEPENDENCE BY 2015

- 1 Promote Advanced Technology & Hybrid Cars**
- 6 Expand Renewable Energy Development**
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- 9 Plan For A Hydrogen Future**
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www.apolloalliance.org

What will the plan do for the economy?

\$300 billion investment over 10 years creates:

- 3.3 million new jobs
- \$1.4 trillion in new GDP
- \$306.8 billion in increased federal tax revenue from increased earnings for first 10 years; more benefits thereafter
- \$953 billion in Personal Income and \$323.9 billion in Retail Sales
- \$284 billion in net energy cost savings
- 22.3% annual rate of return

Jobs and Opportunity in the Growing New Energy Economy

- Wind
- Solar
- Energy Efficiency
- Alternative Fuels



Renewable Energy Jobs

Manufacturing
Construction
Operation and maintenance

Renewable energy production is labor intensive
– 4 times more jobs/megawatt than natural gas
– 40% more jobs per dollar of investment than coal

Jobs in Wind Power

Jobs created for 1 MW wind power: about 9500 hours of labor (4 person-years).

240 MW Iowa wind farm = 200
6-month long construction jobs; 40
Permanent M&O at \$16/hour



Jobs in Solar

Jobs created per 1 MW PV power: 69,650 hours of labor, or about 35.5 years.

Major jobs include:

- Module assembly (20,950 hrs)
- System integration (11,750 hrs)
- Installation (10,500 hrs)
 - Roofers, electricians, sheet-metal workers
- O&M (5000 hrs)
- Potential for in-state manufacturing



Jobs in Bio-Fuels

Minnesota ethanol requirement

(2.7% in 1997, 10% in 2003, 20% by 2013)

- 12 new ethanol production facilities, most locally owned
- New plants
 - \$588M economic activity/yr
 - 2,564 new jobs.
- 5% bio-diesel requirement
 - \$515M in economic activity,
 - 2,431 new jobs



Energy Efficiency Jobs

More jobs for factory workers, builders, and operation and maintenance personnel

- Efficiency creates 21.5 jobs for every \$1 million investment
- Natural gas produces 11.5 jobs for every \$1 million investment

Benefits to the Midwest



Creates jobs at existing manufacturing firms...

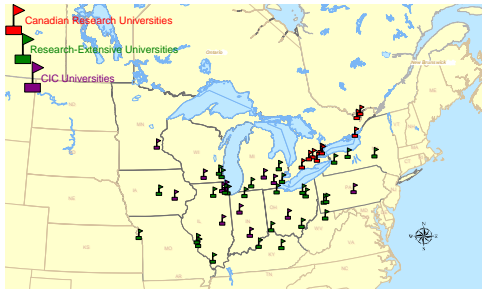
Location	# Firms	New Jobs Wind	New Jobs Solar	New Jobs Geothermal	New Jobs Biomass	TOTAL New Jobs
California	4,658	14,147	24,288	3,320	2,848	44,602
Texas	2,795	10,000	12,299	1,841	3,261	27,401
Illinois	1,981	11,303	8,472	1,455	1,715	22,946
Ohio	2,156	13,215	5,957	1,896	1,854	22,922
Pennsylvania	1,839	3,029	8,119	1,538	1,632	20,517
New York	1,605	7,876	6,318	3,136	2,683	20,013
Indiana	1,154	1,186	3,834	1,410	1,524	17,954
Wisconsin	1,123	11,335	2,193	845	1,844	16,216
Michigan	1,817	10,369	2,457	587	1,021	14,435
N. Carolina	940	4,897	4,722	1,350	2,006	12,976
Missouri	662	4,346	3,992	1,398	888	10,624
Massachusetts	1,089	3,635	5,538	481	549	10,203
Florida	1,359	3,693	4,332	454	549	9,028
Tennessee	744	4,214	2,894	478	1,031	8,617
S. Carolina	419	4,194	2,427	927	623	8,171
New Jersey	1,157	3,283	3,530	512	608	7,934
Georgia	747	3,587	3,068	462	589	7,706
Minnesota	929	3,970	1,820	621	967	7,377
Virginia	530	4,096	1,547	421	449	6,513
Alabama	551	4,287	872	497	548	6,204
U.S. TOTAL	36,474	174,308	140,847	29,469	37,053	381,677

Keeps Energy Local...

Great Lakes Bloc Energy Leakages (costs in \$1,000s)						
Fuel Type	Unit	Estimated Regional Consumption	Estimated Regional Production	Estimated Regional Imports	Estimated 2004 Region Cost	Projected 2006 Region Cost
Petroleum Products	millions of gallons	42,335	1,058	41,277	\$ 51,595,869	\$ 74,298,051
Natural Gas	thousands of cubic feet (MCF)	3,692,663	364,647	3,328,016	\$ 29,502,186	\$ 44,253,279
Coal	millions of short tons	253	90	163	\$ 4,222,121	\$ 4,222,121
Total					\$ 85,320,175	\$ 122,773,450

Source: MMTCA analysis of EIA data

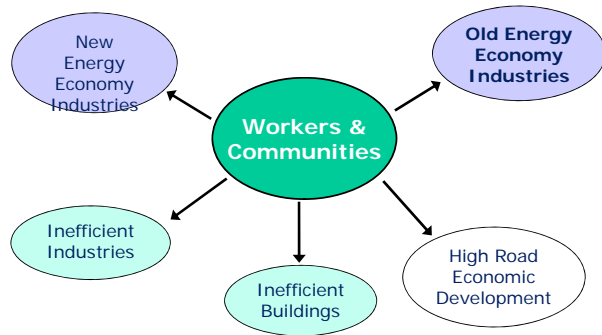
And takes advantage of existing research institutions.



So how do we get there?

Build Coalitions
Pass Smart Policies, and
KEEP WORKERS CENTRAL

Workers and Communities:
Central to Apollo's Vision



New Energy Economy Industries

Goal: Organize into supply chains for renewable/efficiency industries .

New product lines will create NEW JOBS

Strategies:

- Connect to supply chains
- Build new markets
- Educate: learn from existing industry
- Retool existing plants
- Retrain incumbent workers

Old Energy Economy Industries

Goal: Retool into relevant component mfg plants; Retrofit to make more competitive/productive

Either save or create JOBS

Strategies:

- Retool/retrain
- Retrofit to make more efficient/lean – learn from workers
- Build links to new and emerging markets

Inefficient Industries

Goal: Retrofit to make more competitive/productive

Work + Savings creates local jobs

Strategies:

- Educate (business to business)
- Promote policy (\$ for retrofitting, permitting or other incentives for efficiency gains; focus on lean mfg)

Inefficient Buildings

Goal: Retrofit residential/commercial buildings to make more efficient

Work + Savings creates local jobs

Strategies:

- Organize stakeholders to create financing models (to capture savings)
- Promote policy (\$ for retrofitting, incentives for participation)

High Road Economic Development

Goal: Build market for high-road clean energy/energy efficiency industry.

Create local JOBS

Strategies:

- Promote new markets
- Link ED money to job quality, renewable energy, efficiency
- bring high road perspective to new industry development plans

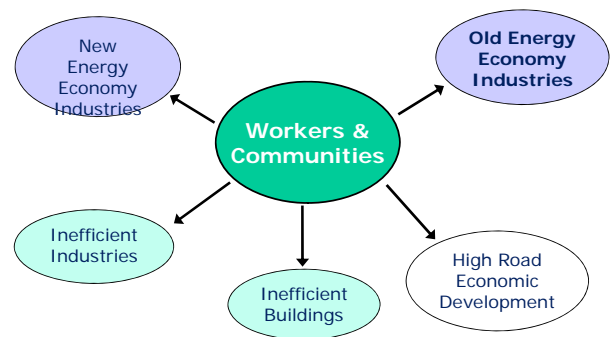
Workers (Incumbent/Dislocated/Unskilled) Communities (Urban and Rural)

Goal: Ensure the benefits of the new energy economy are equitably shared.

Strategies and Resources:

- Educate (research, surveys)
- Work with industry, labor on incumbent worker training
- Use investments from federal programs (TAA, WIA) for dislocated worker training
- Work with community organizations, job centers, labor to bring unskilled workers into pipeline
- Work to create opportunities for community ownership, ESOPs
- **Invest in jobs and community at every policy level** (Green Jobs Act, Clean Energy Corps, Green Jobs Corps)

Smart Policy Connects Workers to Industries



Remember: Worker Benefits are NOT Automatic

- Federal & state government has to encourage and support firms in this effort
 - Invest in new industry, retooling, and retrofiting through policy measures like Industrial Development Bonds, Manufacturing Tax Credits, PTCs
 - Build market (RPS)
 - Target investments to worker training for all types of workers: incumbent, dislocated, and unskilled
- Firms have to take advantage of this opportunity
 - Embrace new technology
 - Become more efficient (“go lean”)

And most important...

- Labor has to be at the table now to emphasize **GOOD JOBS** and **STRONG COMMUNITIES**.



For more information...



Kate Gordon, Program Director
gordon@apolloalliance.org

Dan Seligman, National Director
seligman@apolloalliance.org

Carla Din, Western Regional Field
Director
din@apolloalliance.org