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A Winning Formula: State Clean Energy Funds + The Right Policies

Business of Clean Energy in Alaska
Anchorage, AK

May 19, 2009
Charlie Kubert
Clean Energy Group
Clean Energy States Alliance

CleanEnergy States Alliance



About Clean Energy Group

- **CEG - Vermont-based NGO working to accelerate commercialization of clean energy technologies**

- **Manages Clean Energy States Alliance (CESA)**
  - Coalition of 20 public clean energy funds & programs

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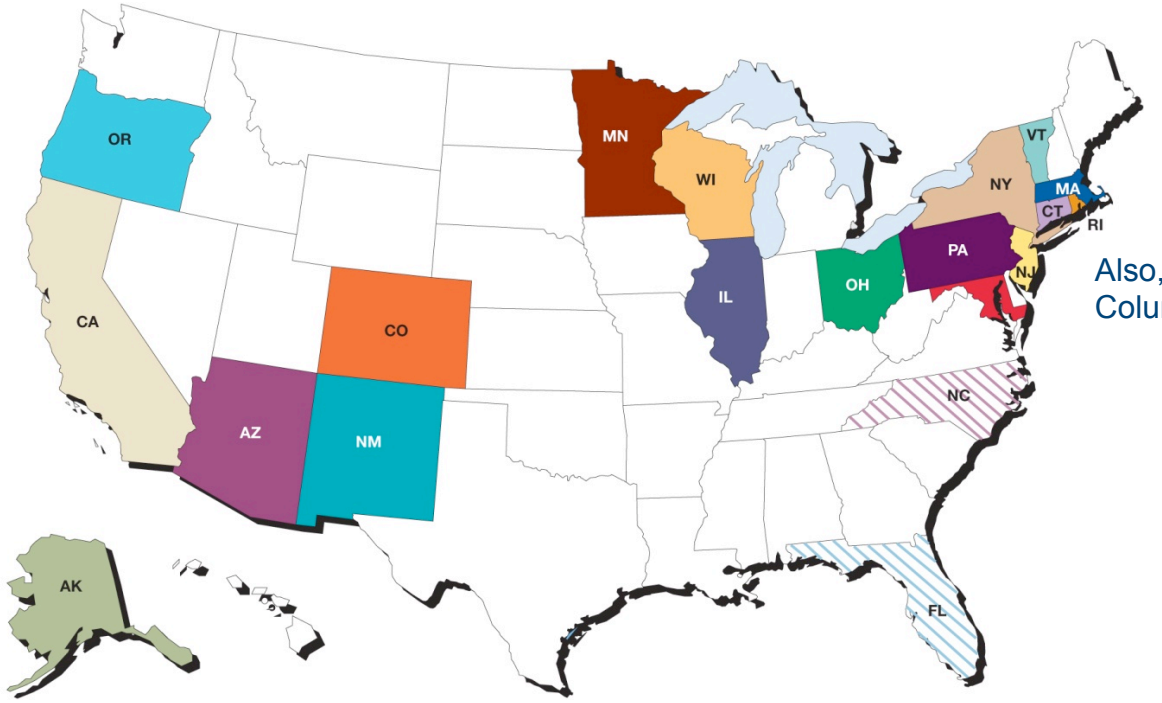
Public Benefit Funds

- Outgrowth of utility restructuring
- Funded through small utility bill charge
- Administered by state energy office or independent entity
- Support both efficiency and renewable energy projects
- Collectively, billions per year to support efficiency and renewables



CESA Member States



Also, District of Columbia

www.cleanenergystates.org

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Clean Energy Funds are a Major Driver of Renewable Energy Investment

- Supporting more than 50,000 projects in last decade
- Both Utility-scale and Distributed-scale Projects
- Majority of installed solar pv projects have received CESA member support
- $1.5 billion in public funds leveraging $2.6 billion in private capital
  - Leverage improving due to federal tax credit changes



Funds Leveraging Private Capital

FIGURE 2 **Investment in State Fund Supported Renewable Energy Projects 1998–2007**

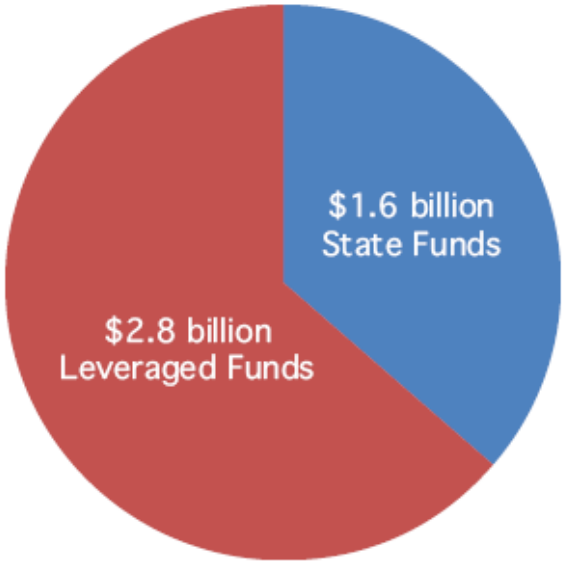
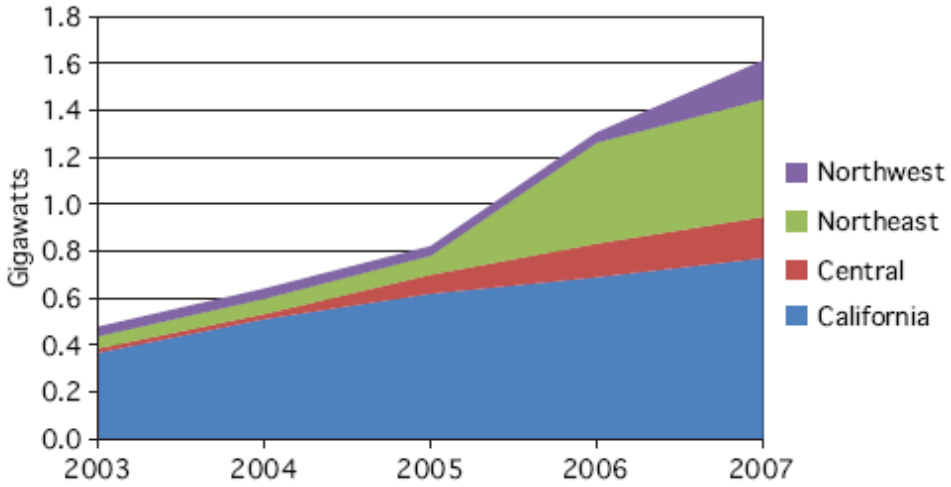


FIGURE 3 **Cumulative Generating Capacity by Region 2003–2007**



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Funds Using a Variety of Incentives

- Rebates (technology-specific based on system size)
- Grants
- Performance-based Incentives
- RPS Carve-outs
- Loans/Interest Rate Buydowns



Effective Funds Provide More than Incentives

- Education and Outreach
- Technical Project Assistance
- Installer Certification and Quality Assurance
- Demonstration Projects
- Research and Development
- Policy and Advocacy



Why Clean Energy Funds Drive Clean Energy Markets

- Help to overcome high first-cost barriers
- Create sustained markets to support dealers and installers
- Help to reduce technology failures
- Create technology and project visibility



Why Funds Aren't Enough

Need supportive regulatory and utility environment

- Interconnection,Net Metering
- Uniform Zoning, Permitting
- Renewable Portfolio Standards

Need private capital!



Clean Energy Fund Challenges

- Rebate and Grant Dependency
  - When is the market "transformed"
- Offering "Smart Subsidies"
  - More loans, fewer grants
- Protecting against Funding Raids



Where Does Alaska Stand

- Tremendous renewable resource potential but currently 49th out of 50 states in non-hydro renewable energy.
- Highest per capita energy use but among lowest per capita electricity use (no A/C, high rates)
  - California: 6.7 MWh/person/year
  - Alaska: 8.5
  - Indiana: 16.5
- Distributed population and high energy costs make both efficiency and renewables winning options



AEA, REAP and ACEP are Demonstrating Clean Energy Vision

- Renewable Energy Atlas
- Leading edge research (battery storage, lakebed methane, tidal, wind to hydrogen)
- Alaska Community Energy Models
  - Wind turbines in every village
- AEA grants putting projects in the ground



What's Missing

- "Smart Subsidies"
  - Providing the support the market needs
  - More loans, fewer grants
- Ownership models that utilize federal tax credits
  - Need private developers to step in
- Project replication



Clean Energy Business Opportunities in Alaska

Need to recognize geographic limitations, play to strengths

- No wind turbine assembly but…
  - High-efficiency manufactured housing?
  - Clean energy service industry
  - Distributed generation knowledge export
- Reduced energy costs = increased local economic activity and jobs



The "Roadmap"

Near Term: Weatherization, energy efficiency, distributed renewables

Longer Term: Develop and export next-generation clean energy technologies

-marine energy, wind-to-H2/NH3



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