



# **Developing an Effective State Clean Energy Program: A Blueprint for Success**

## **State Clean Energy Program: An Overview of Best Practices**

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# Clean Energy States Alliance

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- Multi-state coalition of clean energy programs that work together to advance clean energy technologies through:
  - Information Exchange
  - Partnership Development
  - Joint Projects
- Nonpartisan, collaborative network of states pooling information and fostering best practices

[www.cleanenergystates.org](http://www.cleanenergystates.org)



# Clean Energy Funds

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- What:
  - Fund collected typically through surcharge on electricity rates
  - New federal SEP resources now available to seed new state clean energy programs
  - Priority of SEP resources: for **both** energy efficiency and renewable energy project deployment
  - Not to supplant existing state clean energy funding
- Why Renewable Energy focus?
  - High upfront costs
  - Serious market barriers
  - Utilities lack incentives to promote RE

# Advantages of Funds

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- Multiple sources of funding (federal stimulus dollars, surcharges on electric rates, pollution tax)
- Maximum flexibility in use of funds to target unique opportunities
- Cost can be fixed and known in advance
- BUT does not eliminate need for other complementary energy policies

# State Funds: Comprehensive Support for Clean Energy Technologies

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- Solar
- Wind
- Fuel Cells
- Biomass
- Distributed Generation
- Energy Efficiency
- Green Buildings
- Small Hydropower
- Ocean Energy

# Setting Duration of the Fund

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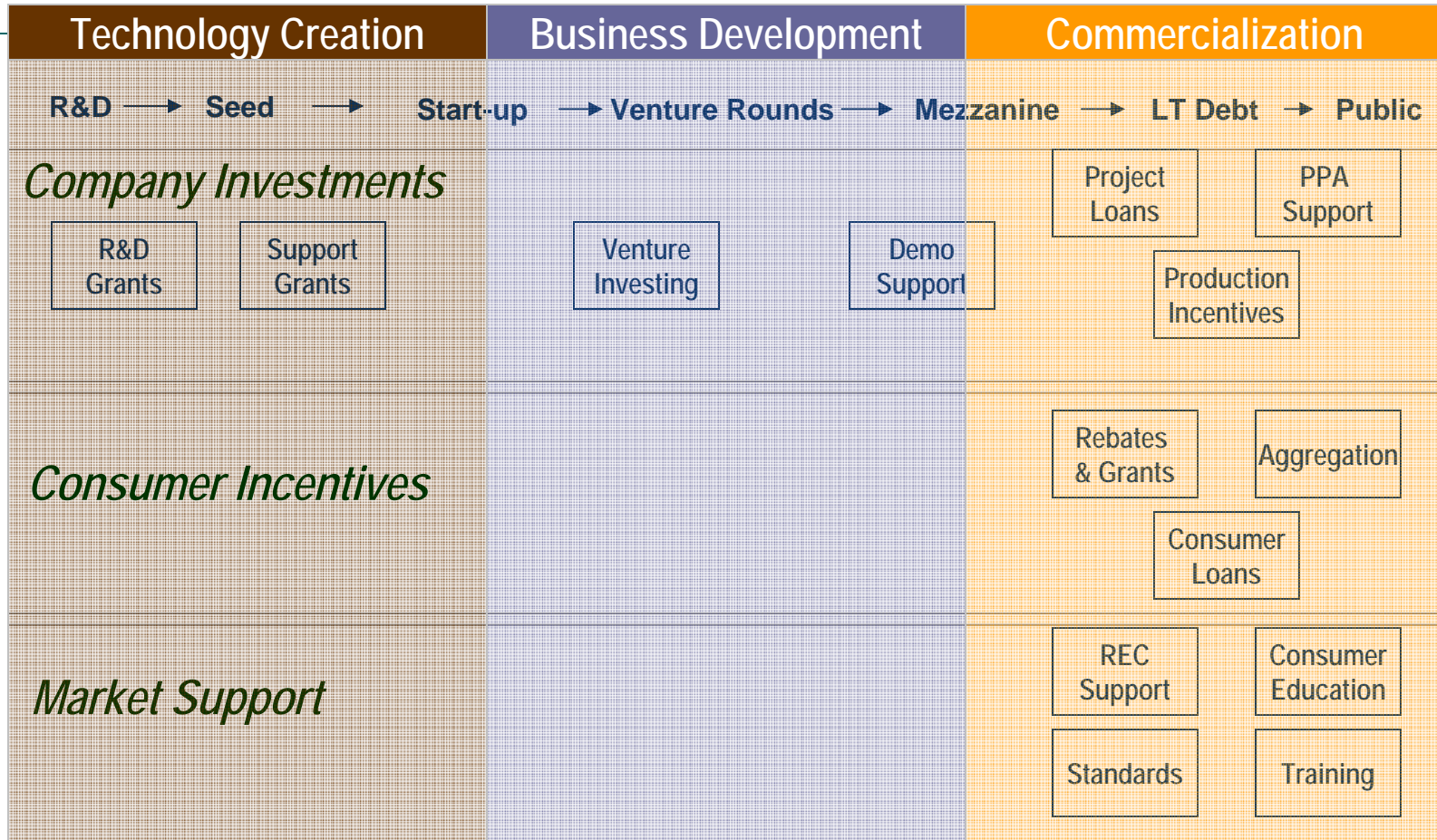
- RE markets only transformed with significant efforts
- Programs generally established with lengthy duration
- No defined end-date or 5-10 years
- Use one-time federal ARRA funding to create sustainable, long-term programs
  - Revolving loans, investments
- Creating successful, long-term state programs will attract future federal dollars from climate programs, national RPS, etc.

# State Fund Strategic Models

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- Project Development Model:
  - Incentives & grants to directly subsidize project installation (California, New Jersey)
- Investment Model:
  - Loans & equity investment in companies & projects (Connecticut, Pennsylvania)
- Industry Development Model:
  - Business development grants, marketing support, technical assistance & education to build industry infrastructure (Wisconsin, New York)
- Research & Development Model:
  - California & New York, in part; Minnesota
- Combination of approaches (Massachusetts)

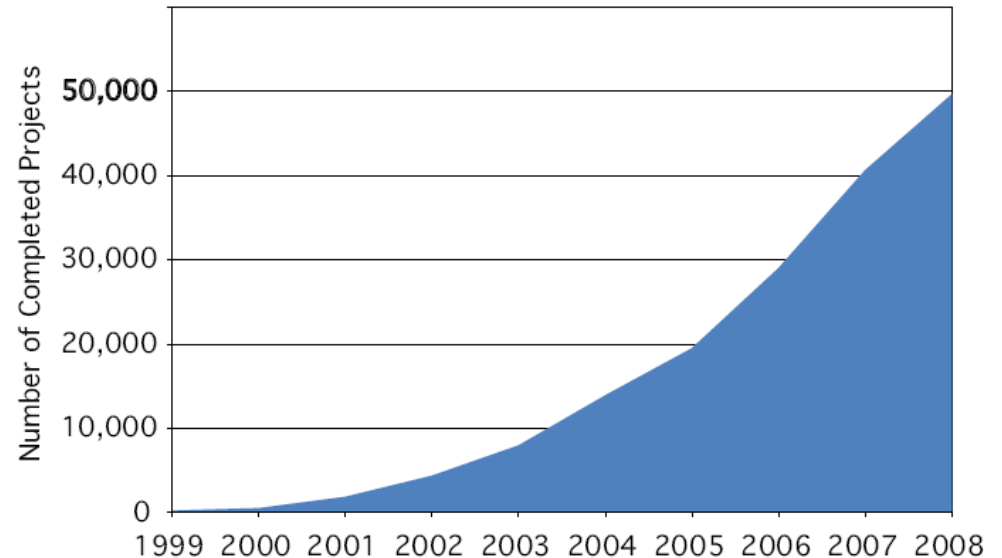
# Individual State Fund Investing Activities



# Results that Matter: CESA RE Database:

- States with dedicated funds to finance clean energy projects
  - Invested \$1.5 billion in last 10 years
  - Investment leverage: more than \$2.5 billion in other investment
  - Over 50,000 RE projects
  - 1.7 GW clean energy capacity installed
  - Primary driver for grid-connected PV; in 2007, more than 75% of installed systems were installed in states with funds
  - \$6 billion state funding for next 10 years plus new federal stimulus funding (\$3 billion for State Energy Programs)

FIGURE 1B Cumulative Number of State Clean Energy Fund Projects



Source: CESA

# Program Types

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- Rebates
- Competitive grants
- Production incentives
- Low-interest loans
- Venture capital investments
- Infrastructure building grants (training programs, installer certification, resource assessment studies)
- Information & education
- Research & development



# Disbursement Options

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- Competitive solicitations
  - Focus fund activities
  - Encourage competition
  - Open, less politically sensitive selection process
- First-come
  - Useful for large number of smaller awards (solar PV program)
  - Standard technology applications
  - Reduce administrative burden
- Bilateral Negotiation
  - Negotiate as proposals come in

# Effective Administration

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- Fundamentals:
  - Program design guided by clear public policy goals
  - Comprehensive knowledge of RE markets
  - Minimize transaction costs
  - Able to adapt quickly and flexibly to opportunities
  - Consensus of key stakeholders on goals, structure, program design
- Options:
  - Government administration (state energy office)
  - Independent, non-governmental organization or public benefit corporation (Energy Trust of Oregon, NYSERDA)

# Administrative Costs & Staffing

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- Dedicated staff required for success (planning, program development, contract management, etc.)
- Costs increase in relation to number and complexity of programs
- Costs decrease with clear funding guidelines, application procedures, and evaluation mechanisms upfront
- Minimum of 5-10% of funds may be needed to cover administrative costs

# Program Evaluation

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- Essential element for successful program
- Timely to allow for program design changes
- Results need to be linked to program goals and measurable (not necessarily quantitative): kWh produced, CO2 reductions
- Results unbiased, relevant, easy to use

# Program Findings

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- **No Single Program is Optimal:** Use multiple program designs and be willing to experiment
- **Goals Should Drive Program Design:** Link program design & fund allocation to strategic plan goals (MA, PA, and OR Funds guided by strategic & business plans)
- **Discretion & Flexibility Can Enhance Success:** Capitalize on rapid learning about how best to support clean energy markets
- **Markets for Smaller, Distributed Projects are More Difficult to Build**
- **Work Closely with Utilities**

# Technology-Specific Support: Wind

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- Common Programs for Wind Projects
  - Production incentives for large wind projects (most funds)
  - Technical and permitting assistance (MA, OR, NY)
  - Rebates for small residential wind (CA, MA, WI, NY, OR)
  - Assistance to host communities (MA, NY)
  - Wind R&D – offshore wind studies; wind integration studies (MA, NJ, MN)



# Technology-Specific Support: Solar

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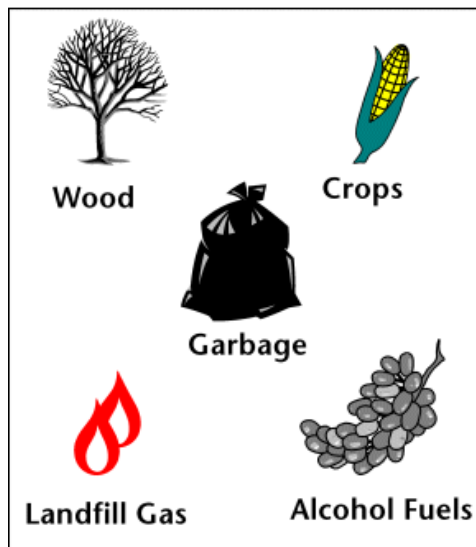


- ④ Rebate programs (most states)
- ④ Low interest loans (NJ, OR)
- ④ Technical support (WI, NY)
- ④ Installer training & certification (NY)
- ④ High-value PV installations (NY)
- ④ Low income housing (MA, CA, NJ)
- ④ Funding of PV manufacturers (MA)
- ④ Marketing (CA)

# Technology-Specific Support: Biomass

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## Types of Biomass



- Programs for Biomass
  - Incentives & buy-down grants for biogas projects on dairies (OR, WI, CA)
  - Outreach, technical assistance & feasibility studies (WI)
  - Business & marketing grants (WI)
  - Overcoming regulatory barriers such as streamlining interconnection process (OR)

# Contact Information

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