



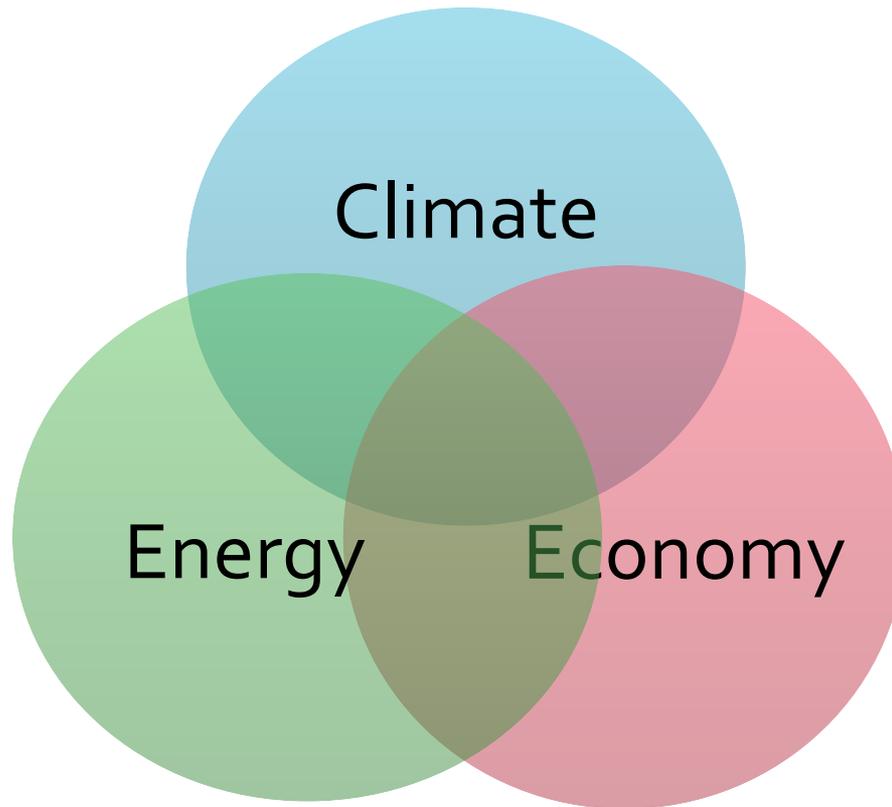
# The Second U.S.-China Energy Efficiency Forum



Lawrence Berkeley National Laboratory

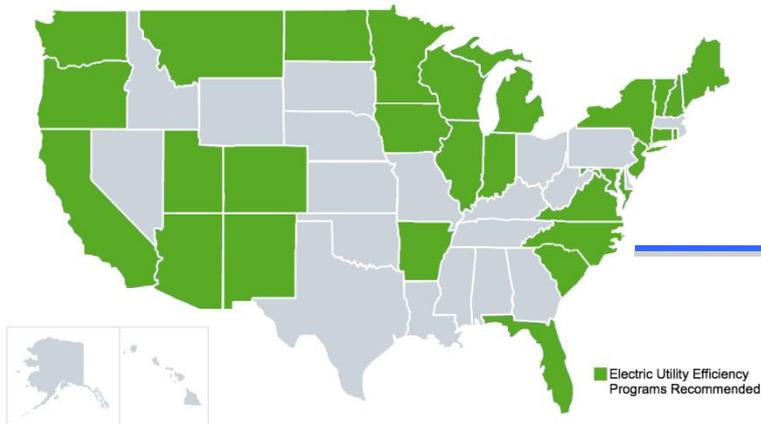
# Energy Efficiency Financing

# Objectives



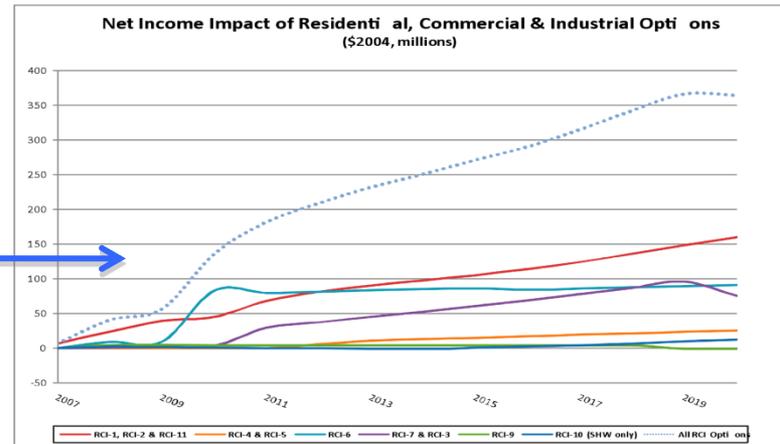
# State EE Programs

## STATE CLIMATE PLANS



State Climate Action Plans Include DSM, Building Codes, Appliance Standards, and Other EE Programs

## JOBS, INCOME, GSP



North Carolina Macroeconomic (Income) Impact Analysis of Residential, Commercial and Industrial EE Options

# Maryland EE/RE Financing

- Community Energy Loan Program
- State Agency Loan Program (SALP)
- Maryland Strategic Energy Investment Fund
- Green Building Income Tax Credit
- Change a Light program
- Home Performance with ENERGY STAR
- Weatherization Program low income energy efficiency improvements
- Property Assessed Clean Energy (PACE) financing
- Renewable Energy Production Tax Credit
- Corporate Tax Credit for Renewables
- Property Tax Exemption for residential solar and wind
- Sales Tax Exemption for all wood or refuse-derived fuel
- Sales Tax Exemption for residential wind energy equipment
- Windswept Small Wind Energy Grants
- Clean Energy Loan Program
- Ethanol and biodiesel production tax credits
- Green Power Purchasing

# New York EE/RE Financing

- Biofuel Station Initiative Program
- Cash incentive to build ENERGY STAR Homes
- Clean Energy Growth and Development program
- Competitive contracts for PV, funded by Stimulus Bill (ARRA)
- Funds to state and local transit agencies
- Gas-to-Electricity Program incentive payments
- Green Building Tax Credit
- Green Jobs Green New York Act
- Green Residential Building Program
- Incentives for fuel cell systems used for electricity production
- Incentives for small wind systems and photovoltaic systems
- Incentives for Solar Thermal Application
- Incentives for energy efficient lighting
- Low-interest loans for renovation or construction
- New York's Great Appliance Swap Out
- PACE Financing/Loans
- Property Tax Exemption for solar and wind
- Property Tax Exemptions for energy conservation improvements
- Public Benefits Fund/System Benefits Charge (New York Energy smartSM)
- Renewable Portfolio Standard (RPS)
- Sales Tax Exemption for residential solar
- State Green Power Purchasing
- Subsidies to low-income homeowners
- Tax Credit for production of biofuels
- Tax credit for clean fuel vehicle fueling
- Transportation Research Program
- Voluntary green power sales purchases

# National EE/RE Stimulus

- Funding by American Recovery Act
- Administration by U.S. DOE/ORNL
- Implementation by States, Locals, Tribes
- Technical Assistance by Third Parties
- Product Focus
  - Loan Loss Reserve
  - Revolving Loan Funds
  - Qualified Energy Conservation Bonds

# Sectors & Actions

Heat & Power

- Renewable and Low Emitting Sources

Residential & Commercial

- Efficiency and Conservation

Industrial

- Efficiency and Process Improvements

Transportation

- Efficiency, Low Emitting Fuels

Agriculture & Forestry

- Land Protection and Management

Waste

- Conservation and Reuse

# Portfolio Development

Sectors/Mechanisms	Codes & Standards	Financial Assistance	Technical Assistance	Contracts & Agreements	Fees & Pricing	Trading	Information & Education	Reporting & Disclosure	Pilots & Demos	R & D
Heat & Power										
Residential & Commercial										
Industrial										
Transportation & Land Use										
Agriculture & Forestry										
Waste Management										

# Implementation



# Financing Methods

Type	Examples
<b>Agreements</b>	Voluntary, Negotiated, Settlements, Purchase Agreements, Revenue Sharing
<b>Asset Sales</b>	Permits, Allowances, Facilities, Resources, Licenses
<b>Bonds</b>	Municipal Bonds, Performance Bonds, Qualified Energy Conservation Bonds
<b>Contracts</b>	Performance, Service, Shared Savings
<b>Debt</b>	Loan Loss Guarantees, Property Assessments, Blended Debt/Equity Instruments
<b>Disclosure</b>	Labeling, Performance Disclosure, Performance Reporting
<b>Donations</b>	Grants, Matches, Intellectual Property, Technology, Equipment, Funds, Assistance, R&D
<b>Equity</b>	Venture Capital, Revenue Sharing
<b>Fees</b>	Access Fees, User Fees
<b>Grants</b>	Competitive Awards, Performance Rewards, Matching Funds, Philanthropy
<b>Market Structure</b>	Market Formation, Aggregation, Integration, Procurement, Public/Private Enterprise Formation
<b>Pricing</b>	Pricing Guarantees, Pricing Incentives and Disincentives
<b>Purchases</b>	Procurement, Buyouts, Leases
<b>Rates</b>	On Bill Purchase Options, Rate Adjustments, Surcharges, System Benefit Charges
<b>Standards</b>	Performance Standards, Credits and Tags, Product Standards, Penalties, Settlements, Permits
<b>Swaps</b>	Technology Swaps, Equipment Swaps, Debt or Equity Swaps
<b>Taxes</b>	Rate Levels, Performance Targets, Credits, Deductions, Exemptions, Holidays
<b>Transfers</b>	Subsidies, Reimbursements, Low Income Assistance

# Critical Issues

- Fit Between Sources/Uses
- Program Feasibility
- Leveraging Potential
- Long Term Commercialization