CLEAN ENERGY FINANCING:

7 Policy Solutions for State Legislators

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Executive Summary

America has an abundant supply of clean, renewable energy that can help meet the nation's energy demands of today and tomorrow. The technology exists to rapidly bring renewable energy and energy efficiency to scale in every corner of the country, but one obstacle has continued to confound both the public and private sector – financing.

Government alone cannot, and should not, be responsible for bringing clean energy to scale. It requires private investment paired with government action to spur new investment. That is why local, state and federal governments need to take action to create markets for renewable energy and energy efficiency. Government should serve as a catalyst in the clean energy economy by stepping forward in a variety of areas.

As with any sizeable infrastructure project, clean energy investment begins with upfront costs that must be addressed. A blend of public and private financing can significantly reduce the initial hurdles associated with investment and allow for sustainable energy cost savings in the long term.

Many successful financing programs have minimized public investment by creating revolving loan funds. These types of funding mechanisms using ratepayer dollars, reserve backed bonds, and other sources of funding provide a shield against long-term public investment that grants and rebate programs cannot. Furthermore, by using a revolving loan fund approach governments at all levels can ensure long-term sustainability and replenishment of the funding source.[1]

Taking the forefront in this strategy, states across the nation have made significant advances with the financing of clean energy projects. Last year, Connecticut passed legislation creating a "green bank", which uses ratepayer dollars to assist in the financing of clean energy. Oregon has a long standing State Energy Loan Program (SELP) that has formed the core of its efforts to create new policies that bring low cost capital to projects. Using a combination of ratepayer dollars, reserve backed bonding, and lottery money, SELP provides funding for numerous energy efficiency and renewable energy loan programs. These are just two examples of how states are implementing innovative strategies to build the clean energy economy.

As with any type of policy solution, there is no one size fits all solution that can be employed in every jurisdiction. Each state faces a unique set of circumstances with varying markets, as well as different renewable energy resources; however, there are certain aspects that can be incorporated into any successful program.

These varying features encompass a number of crucial aspects of an efficient and effective clean energy financing program. NCEL, in consultation with our legislative members, has identified seven potential tools that states can implement to maximize clean energy investments:

1. Provide an ongoing source of loan funds sufficient to meet demand;

2. Creation of an enhancement fund that catalyzes certain projects;
3. Utilizing Public-Private Partnerships;
4. An authority that manages the public financing of efficiency and renewable energy projects;
5. On-bill financing for residential energy projects;
6. Linking private investment repayment to property taxes or Property Assessed Clean Energy ; and
7. Creation of statewide metrics for tracking progress and prioritizing investments in efficiency and renewable energy.

Investments in clean energy, both renewables and efficiency, are infrastructure investments that add value to the state. Whether it is retrofitting of government buildings, financing solar power on commercial buildings or larger scale partnerships with utilities these projects serve to reduce long-term costs and strengthen the electric grid.

These are wise investments in that the loan monies put forward by public and private entities can be paid back through energy savings or power produced. The role of the loan is to provide additional capital and additional leverage for the marketplace, in turn creating the space for additional projects to be developed.[1]

Thirty-five states have implemented some or all of these programs in different forms. This report seeks to provide a snapshot of current clean energy programs in the states, as well as provide legislators with a potential suite of options available for their states. Most importantly, we hope to show legislators some of the obstacles and opportunities that exist if they choose to carry this type of legislation.

State	State Loan Program	Sufficient Funding	Link to Private Capital	Loan Management Entity	On-bill Repayment	PACE	Metrics Tracking Progress
Alabama							
Alaska	X		X	X			X
Arizona							
Arkansas							
California	X	X	X	X		X	X
Colorado	X	X		X		X	X
Connecticut	X	X	X	X	X	X	X
Delaware							
Florida						X	
Georgia						X	
Hawaii	X			X	X	X	
Idaho							
Illinois						X	
Indiana							
Iowa	X		X	X			X
Kansas							
Kentucky							
Louisiana						X	
Maine						X	
Maryland	X			X			X
Massachusetts						X	
Michigan	X	X				X	X
Minnesota	X					X	X
Mississippi	X						
Missouri	X		X			X	X
Montana	X			X			X

State	State Loan Program	Sufficient Funding	Link to Private Capital	Loan Management Entity	On-bill Repayment	PACE	Metrics Tracking Progress
Nebraska							
Nevada	X					X	X
New Hampshire	X			X		X	
New Jersey	X		X	X		X	X
New Mexico						X	
New York	X				X	X	X
North Carolina							
North Dakota							
Ohio	X					X	X
Oklahoma						X	
Oregon	X	X	X	X	X	X	X
Pennsylvania	X			X			X
Rhode Island	X			X			X
South Carolina							
South Dakota							
Tennessee							
Texas	X			X		X	X
Utah	X						X
Vermont	X	X	X	X		X	X
Virginia	x					X	X
Washington	X		X	X			X
West Virginia							
Wisconsin	X		X	X		X	X
Wyoming						X	

State Checklist for Clean Energy Finance Programs

An ongoing source of loan funds for clean energy

As with any infrastructure project access to capital can be the determining factor of whether or not a project gets off the ground. The first step to achieving a successful clean energy and energy efficiency loan program is to ensure adequate access to needed capital. Investments should be sufficient to provide enough loan capacity to meet demand for multiple projects, allow for the ability to assess and evaluate projects of many different types, and ensure interest rates that are lower than what is available on the open market.

Funds placed into this loan program can be treated like other Revolving Loan Funds. The financing entity grants a loan, the principal is paid back with interest and then the entity is able to grant additional loans. The interest assists in paying for the administration of the financing authority, and the principal can be loaned out on an ongoing basis. This continual loop of funding is necessary to minimize public investment in the program and increase sustainability of the program as a whole.

In creating a successful loan program, there are five central principles that insure overall sustainability and productivity of a program.

- Sufficient and continuous funding: Many of these programs never use state general fund resources. States have dedicated funding from surplus dollars, lottery programs, reserved-backed bonding, among other options. For those states that choose to invest operating funds in "green banks" or other loan programs the success of repayment, interest and administrative fees can lessen the burden on the state in the future.
- Public-Private Partnerships: Using public capital to leverage private investment allows for loan funds to be maximized and ensures that public investments garner a larger return on investment.
- Loan Administration and Authority: Successful loan programs require accountability and transparency. Establishing a state financing authority that reports to the Executive and Legislative branches on an annual basis can achieve these goals. If incorporating new loan authority into an existing state structure it is critical that staff have the technical knowledge needed to oversee the program.
- Streamlining the Consumer Process: Whether the program is financing residential energy efficiency upgrades, or a large industrial facility it is important to streamline the application process. Furthermore, there should be a clearly defined process for auditing and ensuring that public dollars were properly invested.[2]

Well-funded loan programs have proven successful in many states. With low interest rates and sufficient capital, these loan programs have been able to finance and increase clean energy development and energy efficiency implementation across these states. Two examples of this program are:

- Oregon's State Energy Loan Program (SELP) works to provide low interest loans to projects carried out by individuals, businesses, schools, cities, counties, state and federal agencies, public corporations, and non-profits to promote energy conservation and renewable energy resource development. SELP has been in place since the late 1970s, and over its lifetime has saved Oregonians more than 2,690 Gigawatts of electricity. This is the equivalent of taking 363,779 passenger vehicles off the road.[3]

  The SELP program recently provided funding for a project at the University of Oregon's Lillis Business Complex to decrease its energy usage through energy efficiency upgrades and a 44kW solar power array. To fund these projects and programs such as Cool Schools, Clean Energy Works Oregon, and the Energy Efficiency and Sustainable Technology Loan Program, Oregon uses SELP and a combination of rate payer dollars, reserve backed bonding, and lottery money without using state funds that would otherwise be allocated within the budget.[4]

- Connecticut established the Clean Energy Finance and Investment Authority in 2011. This "Green Bank" has already begun investing in numerous projects ranging from residential solar installations to large-scale industrial and commercial renewable energy projects. The bank is allowed to finance up to 80% of the cost of developing and deploying a renewable energy project and 100% of the cost of financing an energy efficiency project.

  The bank itself receives funding of at least $30 million each year from sources such as federal funds and private capital in the form of contracts entered with investors, a one mil per kilowatt-hour surcharge paid for by electric ratepayers, and state bonds but does not use state general funds. [5]

Creation of a State Enhancement Fund for Clean Energy

For some projects, the initial funds associated with a "green bank" or state financing authority may not be enough to leverage the private investment needed to successfully kick start a project. When this occurs, a credit enhancement fund can inject money into the current system and work to lower interest rates and/or project cost, increasing demand and catalyzing more viable projects. This allows for example, larger projects to be funded by the loan program while continuing to provide other loans, further increasing and diversifying the number and types of projects financed.

Such a fund could have an additional supply of funds for economic development or energy development. This could be, for example, appropriated money used to accelerate projects but could also be from an on-going source of dollars, such as from a public benefits charge.

The use of enhancement funds can vastly expand the capacity to finance projects. Two states that have used enhancement funds for there financing programs:

- California's Commercial Building Energy Retrofit Financing Act creates a separate fund that is credited with private dollars. This secondary supply of funds allows for the enhancement of loans to qualified projects and can work to further expand the loaning capacity.[6]

- Created as an addition to the SELP loan corpus, The Loan Offset Grant fund, initiated under HB 2626 (2009), works to provide funding for energy efficiency upgrades and renewable energy installations that would otherwise be too costly for an applicant after energy, financing, and repayment cost are considered. The provided funds work to enhance loans by reducing these associated costs, allowing for a reduction in cost for the applicant and subsequent increase in monthly overall cost savings.[7]

Utilizing Public Private Partnerships

When considering energy as a form of infrastructure it becomes easy to understand the need for utilizing public-private partnerships in the financing of new projects. Like construction of roads and bridges, partnering with private developers and investors in energy creates greater leverage for both public and private dollars. Unlike traditional public-private partnerships, the cost-savings associated with energy efficiency and renewable energy upgrades come with long-term savings in energy usage and lower maintenance costs meaning states can see a return on investment with these projects in the short-term.

Incorporating private capital into the financing entity can be crucial in allowing this entity to diversify its loan services. Private capital can come from a number of sources including institutional investors, pension funds, or any other kind of low cost, patient capital. Once these funds are linked to a loan fund, investors need to be reassured by data gathered from projects that the risk profile is measurable, known, and competitive.

When merging private capital with public investment, there are three recommended principles that allow for a successful partnership to develop.

- Open Systems: Transparency across the entirety of a loan program is crucial to creating a strong and lasting partnership with private investors, and assuring public support. This means being able to disclose investment risk as well as loan amounts and purposes.

- Reporting: In creating transparency, extensive reporting of all fund allocations, project types, and loan information can demonstrate a successful program to private investors, increasing investor confidence. This information can in turn be used to track progress and find where investments worked the best

.

- Minimal Risk: Decreasing the upfront risk of investment can also be an important way to encourage investment and promote strong partnerships. This can be done by creating a loan loss reserve account in the case of major defaults or creating

ways for larger projects to enter into power purchase agreements with power companies to ensure future profits.

The blending of public and private capital into these financing institutions has proved to be very successful in a number of states around the country.

- California's Commercial Building Energy Retrofit Financing Act of 2012 will work to enable private commercial building owners to invest in energy efficiency retrofits or renewable energy upgrades. To allow greater loan capacity, the authority is able to develop a request for proposals to contract with one or more financial institutions to secure short-term, revolving credit. The credit can then be used in loans and purchasing secondary market loans from financial institutions to provide further funding.[6]

- In 1996, Iowa created the Alternate Energy Revolving Loan Program. The fund links individuals and organizations that seek to build renewable energy production facilities in Iowa. To fund this loan entity, Iowa originally only used collections from the state's investor-owned utilities but in 2009 and 2010, additional funds from the sale of state bonds were added to the loan program.[8]

These financing entities have demonstrated that instead of adversely impacting financial security in the blending of these funds, they have actually helped connect private dollars to projects that could have not been funded without the blending public and private investment.

Management Authority for Public Financing Dollars

Many states have existing resource authorities which assist localities in the financing of infrastructure projects. In the area of energy financing, states have benefited from having such an authority working to administer and promote the existence of funding for these projects. These management authorities have been successful as either stand-alone entities or folded into the state's existing infrastructure bank.

Projects can be diverse, spanning from clean energy installations on commercial buildings to energy efficiency upgrades on residential homes, and can encompass varying technologies. This requires the management entity to have technical expertise and to be able to work for large and small projects that encompass all types of renewable energy, from solar, wind, home weatherization, efficient heating units, etc. to ensure job quality.

In creating a management authority, there are two considerations that can help create a successful managing body.

- Efficiency and Continuity: A financing authority should be able to administer loans in an efficient and sustainable manner. This means understanding the

amount of available funding and using those funds to their upmost potential to spur the creation of large and small renewable energy and energy efficiency projects.

- Transparency: Successful financing authorities have a set timeline for prospective partners to apply for funds. This levels the playing field for all applicants. The funding process and procedure should be advertised to the public. Without advertising, customers would be unaware of the potential cost saving assistance loaning entities can provide. A financing authority should be able to provide a comprehensive report of loaning capacity, loans made, and cost and energy savings produced by these loans. This can further support the creation of the loan program itself and can demonstrate the efficient and sustainable use of funds.

Creating a management entity that can work in this varying market has shown to be an important part of a state's clean energy and energy efficiency financing program. Examples of states that have energy financing authorities are:

- The California Alternative Energy and Advanced Transportation Financing Authority, created under Chapter 908, Statutes of 1980, works to provide financing for customers seeking to install alternative energy or energy efficiency upgrades as well as facilities needed to develop advanced transportation technologies that reduce transportation's environmental impacts. The members of the Authority include the State Treasurer, State Controller, Director of Finance, Chairperson of the Energy Commission, and President of the Public Utilities Commission. The Authority oversees a number of financing programs, deciding which projects to assist based on direction given from the statute and whether the qualified project reduces greenhouse gas emissions and brings jobs to California.[9]

- Similar to other states, New Hampshire has given the authority to administer one of its renewable energy and financing funds to the New Hampshire Business Finance Authority. The authority has been given the ability to administer the Business Energy Conservation Revolving Loan Fund. This fund works to provide funding to businesses that are working to install energy efficiency upgrades.[10]

On-bill repayment

On-bill financing provides consumers with a method to repay investments in clean energy and energy efficiency on an ongoing basis. This type of program allows the ratepayer to plan upfront for the additional cost on the monthly utility bill. One of the benefits that consumers have experienced is, due to decreased energy consumption, the monthly utility bill is sometimes equal to previous bills and will eventually decrease.

The model can be tailored to industrial, commercial, and residential customers and allows all customers to use the savings that they have incurred as a result of the energy retrofit to pay back part or all of the cost associated with the upgrade.

Several factors can help create a successful on-bill repayment system:

- Funding Sources: Many on-bill financing systems take advantage of existing sources of loan funds. This allows ratepayers, who otherwise would be unable to afford larger retrofits or energy systems, to maximize their investment. As with other programs the strongest sources are established as revolving loan fund to encourage future investments.

- Targeting: Though all programs should be as open as possible, programs can focus in on specific sectors of the building sector. Understanding what the targeted audience is for an on-bill financing program is important in creating a program that meets the needs of the consumer. For example, an on-bill financing program that targets small businesses could implement these aspects: simple for small businesses, linked to credibility of a utility measurement and verification program that fulfills its promises of energy savings, and upgrades offer immediate financial benefits.[11]

On-bill repayment can be an efficient mechanism for financing energy efficiency upgrades and renewable energy installations. Two states that are in the processes of implementing or have already implemented on-bill repayment:

- In accordance with Act 204, Hawaii's Public Utilities Commission (PUC) is to investigate the viability of an on-bill financing program that would allow electric utility customers to finance energy efficiency upgrades or renewable energy installations through their utility bills. Currently, the PUC is still investigating whether this is a viable option and when the investigation is complete, the PUC will update the Hawaii Administrative Rules (HAR) to allow this to occur.[12]

- Connecticut's Senate Bill 451(2012) instructed electric distribution companies in the state to administer a residential customer heating furnace and boiler replacement program that works to reduce energy cost to residents. Eligible residents finance this upgrade by paying a monthly charge on their electric bill. The charge includes the principal payment and the interest associated with the loan. The expense of any loan default is included in the repayment.[13]

On bill financing is a practical way for utilities to promote the expansion of renewable energy installations and energy efficiency upgrades. Most utilities prefer to own the equipment producing power on the electric grid and on-bill financing allows utilities to effectively lease a clean energy installation to the consumers. If on-bill financing is being used for energy efficiency upgrades, it makes the utilities argument stronger before

a Public Utilities Commission that the utility should get credit for residential energy efficiency improvements.

On bill financing programs have also been found to have significantly low default rates. In a study of a number of specific on-bill repayment programs there were default rates as low as 0%, demonstrating the strength of this financing program.[10]

Property Assessed Clean Energy Enabling Legislation

Property Assessed Clean Energy, or PACE, allows for customers to finance a renewable energy project or energy efficiency retrofit on their property taxes, allowing the customer to pay no up-front cost. Through the creation of a special assessment district, customers can opt into financing upgrades through this program. Funding can be provided through municipal revenue bond issuance or through other loaning entities, which charge a nominal fee to the customer for administering the program. The principal should not exceed 10% of assessed value of property and payment can be completed over a 20 year time period. Since the payment is attached to the property tax, the payment is transferable between owners who are continuously paying as they save on energy cost.[14]

Contrary to what many people may believe, PACE is a viable option for today's marketplace. While most residential programs are currently barred by Freddie Mac, Fannie Mae and the Federal Housing Administration due to tax lien status, commercial PACE is up and running across the country. As legislators consider policy in this area inclusion of residential, non-profit and religious properties could all benefit in the future from PACE.

Several factors should be considered when adopting a PACE program:

- Voluntary: PACE statutes need not include a mandate but instead can be structured as enabling legislation allowing local governments to adopt PACE programs at the local level providing flexibility for regulators, assessors and consumers. Further, the program for individual property owners should be voluntary as well.

- Utility Engagement: PACE programs should engage with the local utility, and maximize upfront rebates or other utility mechanisms. An energy audit or other energy investigation should be required as well. This will ensure the most cost-effective efficiency measures be included with any renewable energy installment.

- Credit Eligibility: PACE should establish a basic floor of eligibility for individual property owners, without making the statutory requirements so onerous as to restrict the program from reaching scale. For instance, Minnesota (Section 216C.435 and .436) required that property owners be current on any outstanding mortgages and property taxes, and required all partners in a property sign the application form.

- Flexibility: Programs should be able to finance both renewable and efficiency projects provided that renewable projects are not utility scale programs. Programs are encouraged to include "checklist" eligible energy improvements, as well as custom measures that will achieve deep energy savings. Custom measures should be required to gain third party approval before inclusion in a loan.

- Lender Partnership: Properties with existing mortgages should involve the current mortgage lender. Noteholders need to consent to the proposed property tax assessment taking a primary position in the unlikely case of a foreclosure. Requiring noteholders to sign an acknowledgement that the imposition of a voluntary special assessment does not constitute a default on the existing mortgage is also important.

- Financing: Programs should allow for both single project, single bond sale financing by local governments, as well as funding of multiple projects from one bond sale. Asking an investor to fund a large loan capital fund, without having the project demand to cycle the money out to property owners in a timely manner, would either require that investors leave their money in a local government's loan fund without earning interest on the funds or would require local governments to pay a return to bondholders without having the additional revenue from the property taxes to pay the debt service.

PACE, similarly to on-bill repayment, has turned out to be very successful in allowing customers to not incur up-front cost. States that have successfully passed such legislation are:

- In May 2008, HB 1350 amended Colorado counties' and cities' existing authority to create improvement districts to allow a city or country board to propose improvement district for renewable energy installations or energy efficiency upgrades. Boulder County in November of 2008 became the first county to take full advantage of this new financing option and has gone through numerous rounds of successful residential renewable energy and energy efficiency upgrade funding.[16]

- In May 2010, HB 7179 granted Florida's local governments the ability to levy non-ad valorem assessments to fund energy efficiency, conservation improvements, renewable energy improvements, and wind resistance improvements. Qualification differ for each locality that has implemented this financing program but general requirements include currently paying property taxes with no delinquencies for the past three years and the total assessment cannot be for an amount greater than 20% of the assessed value of the property. Currently there are five of districts comprising of one to six counties working to provide PACE financing to qualified residents.[17]

PACE has been found to be the only assessments that improve a homeowner's cash flow through energy cost savings. These savings can assist homeowners in meeting mortgage payments. In sum, the affect on the current fragile mortgage industry is actually positive and this has been proven in a number of PACE programs that have seen lower defaults and delinquency rates. PACE exposure to mortgage lenders that results from the senior lien status is actually only about $100 per participating home.[15]

PACE programs have also been found to increase home value as a home becomes more energy efficient or energy producing. Studies have found that with a $1 decrease in annual fuel bills there is an increase of $21 in selling price.

Establishing Statewide Metrics and Tracking Progress

When establishing a clean energy financing program, or any other type of energy investment, states are wise to create a series of metrics by which progress can be measured. A transparent process of informing the public and private partners of successes and challenges can create added credibility for clean energy programs. Moreover, this can ensure policy makers and the public that the program is being wisely administered insulating clean energy financing programs from the political winds of a given election season.

When establishing metrics, and tracking progress, states have been successful by considering the following:

- Demonstrating Results: It is important to determine the number of megawatts produced from clean energy installations and the number of megawatts saved from energy efficiency improvements. Successful programs have also been able to account for the positive net benefit these investments are having on electrical reliability in the state and on the regional transmission grid.

- Tracking: In order to allow for proper investments and efficiency in all programs, tracking measures must be in place to allow for progress evaluations and to prioritize investments. Tracking can be completed through energy performance scores, regular evaluations, and ongoing monitoring and verification and can be completed by private entities, non-profit entities, public bodies, or public private partnerships.

- Transparency: To maximize public confidence the reports should be published and shared in a public forum.

Most states that have passed renewable energy or energy efficiency financing legislation have included statewide metrics for tracking progress and prioritizing investment. Examples of these tracking programs are:

    - Montana's Alternative Energy Revolving Loan Program, which was created in 2001, works to provide financing options to homeowners, small

businesses, non-profits and government entities to install alternative energy systems. In 2011, the program was amended so that the Department of Environmental Quality must develop outcome measures by which the program is assessed on an annual basis. The specification to the report includes a loan loss ratio of under 5%, the types of alternative energy systems that worked the best for residences and for small businesses, and the amount of energy that was produced because of program participation.[18]

- The Virginia Voluntary Solar Resource Development Fund, created in 2011, provides loans to customers installing solar energy devices. The program is funded by voluntary contributions from customers and is administered by the Department of Mines, Minerals and Energy. Beginning in 2013, the Department must provide annual reports to the Governor and Chairmen of the House and Senate Committees of Commerce and Labor describing the status of the revolving loan program, the number of loans provided, the amount of each loan, the recipient of the loan, the loan's repayment status, and the nature of the project for which the loan was provided.[19]

Appendix 1 – State Clean Energy Loan Funds

Oregon: Senate Bill No. 611 1976

Section 2. (1) Any individual, small business, nonprofit cooperative or corporation, or municipal corporation may file with the department an application to obtain loan funds for a small scale local energy project as provided in this Act.
(2) Applications to obtain funds for a small scale local energy project shall be made in writing on
a form prescribed by the department. Applications submitted to the department shall:
(a) Describe the nature and purpose of the proposed small scale local energy project.
(b) State whether any purposes other than energy production, but consistent therewith, will be served by the proposed small scale local energy project, and the nature of such other purposes, if any.
(c) Include an evaluation of the potential of the small scale local energy project to meet local community energy needs.
(d) Include an evaluation of the potential environmental impacts of the small scale local energy project.
(e) State whether any moneys other than those in the loan fund are proposed to be used for the development of the proposed small scale local energy project, and whether any other moneys are available or have been sought for the project.
(f) Describe the source of funds for repayment of the loan applied for.
(3) The department shall charge and collect from the applicant at the time the application is filed, a fee of $100 or one percent of the amount of the loan applied for, whichever is less. In addition, the department shall charge the applicant the amount required to reimburse the department for costs that exceed the application fee incurred in connection with the application. Moneys referred to in this subsection shall be paid into the sinking fund.

Connecticut: Senate Bill No. 1243

§ 99 — NEW CLEAN ENERGY FINANCE AUTHORITY

The bill (1) renames the Renewable Energy Fund the Clean Energy Fund (which is what it is already called in practice), (2) creates a quasipublic authority to replace the board that is responsible for developing the plan on how money in the fund is spent and grants the authority a broad range of powers and duties, (3) places the fund under the authority rather than Connecticut Innovations, Inc. (CII) (4) allows the authority to receive specified revenues, and (5) expands how the fund can be used. The bill specifies that the authority is the successor agency to CII for the purposes of administrating the clean energy fund and is in CII for administrative purposes only.

Board of Directors

Under current law, the Renewable Energy Investments Board is responsible for developing the plan for spending money in the fund, which is subject to approval by DPUC, and related functions.

The bill creates the Clean Energy Finance and Investment Authority as the successor to the board. The authority is subject to the ethics and auditing laws, among others, that apply to other quasi-public authorities. The bill establishes a board of directors consisting of 11 voting and two nonvoting members to oversee the authority. Table 1 compares the membership of the current board and the authority's board.

Appointing Authority	Current Board	Authority Board *(term of appointment)*
Governor	- Renewable energy expert - Labor - Low-income or residential consumer	- 2 people with clean energy finance experience (2 years) - Labor (4 years) - Research and Development expert (unspecified)
Senate President	- Regional environmental representative	- Renewable energy finance (4 years)
Speaker of the House	- Renewable energy expert	- Low-income or residential consumer (4 years)
Senate Majority Leader	- Statewide business association, manufacturing association or Chamber	
House Majority Leader	- Commercial Investment	
Senate Minority Leader	- Statewide business association, manufacturing association or Chamber	- Renewable energy finance (4 years)
House Minority Leader	- Commercial Investment	- Investment Fund Management (3 years)
CII Board Chair	- Two Commercial Investment	- One CII Board Member
Ex-Officio	- Four members from state agencies	- Two Economic Development - State Treasurer - Loan Authority

The president of the authority and a member of the CII board appointed by the chairperson of the corporation must serve on the board in an ex-officio, nonvoting capacity. The governor must appoint the chairperson of the board. The board may establish committees and subcommittees needed to conduct its business.

Authority Responsibilities

The bill requires the authority to (1) develop separate programs to finance and otherwise support clean energy investment in residential, municipal, small business, and larger commercial projects, and other projects as it determines; (2) stimulate demand for clean energy and the deployment of clean energy sources in the state that serve endues customers here; and
(3) support financing or other expenditures that promote investment in clean energy sources in accordance with a comprehensive plan it develops to foster the growth, development and commercialization of clean energy sources and related enterprises.

Under current law, the Renewable Energy Investments Board is responsible for developing a comprehensive plan and the expenditure of the money in the fund. The plan is subject DPUC review and approval.

Financing Projects

The bill allows the authority to provide financing support to clean energy projects if it determines that the amount to be financed by the authority and other non-equity financing sources do not exceed 80% of the cost to develop and deploy a project, or for an energy efficiency project, up to 100% of the cost. The bill allows the authority to assess reasonable fees
on its financing activities to cover its reasonable costs and expenses, as determined by the board.

Before making any loan or other form of financing or risk management for a project, the authority must develop standards to govern its administration through rules, policies, and procedures that specify borrower eligibility, terms and conditions of support, and other relevant criteria, standards, or procedures.

The bill allows the authority to enter into contracts with private funding sources to raise debt or equity from private sources. Its board must set the average rate of return on such capital.

Authority Powers

The bill grants the authority the privileges, immunities, tax exemptions, and other exemptions that CII has under current law. The authority is subject to suit and liability solely from its assets, revenues, and resources without recourse to CII's general funds, revenues, resources or other assets.

The authority may assume or take title to any real property, convey or dispose of its assets and pledge its revenues to secure any borrowing and to develop, acquire, construct, refinance, rehabilitate or improve its assets.

Each such borrowing or mortgage, unless otherwise provided by the board or the authority, is a special obligation of the authority. The obligation may be in the form of bonds, bond anticipation notes, or other obligations. The obligations can be used to fund, refinance and refund the same and provide for the rights of their holders, and to secure the same by pledge of revenues, notes, and mortgages of others. The obligations are payable solely from the authority's assets, revenues and other resources and may not be secured by a special capital reserve fund of any kind which is in any way contributed to by the state.

The authority may seek to qualify as a Community Development Financial Institution under federal law. If approved, the authority must be treated as such for federal tax purposes.

No authority director, officer, employee, or agent is personally liable for exercising or carrying out any of the authority's purposes or powers, so long as he or she is acting within the scope of his or her authority.

Funding Sources

Under current law, the fund is supported by a 0.1 cent per kilowatt-hour charge on electric bills. The bill allows the authority to receive funds repurposed from existing programs providing financing support for clean energy projects, provided (1) any transfer of funds from
such existing programs must be approved by the legislature and (2) the funds must be used for financing, grants, and loans. The bill also allows the authority to receive;

1. charitable gifts, grants, and loans;

2. any federal funds that can be used for its purposes;

3. contributions and loans from individuals, corporations, university endowments and philanthropic foundations;

4. earnings and interest from financing support activities for clean energy projects backed by the authority; and

5. to the extent that the authority qualifies as a federal Community Development Financing Institution, funding from the Community Development Financing Institution Fund administered by the United States Treasury Department, as well as loans from and investments by depository institutions.

Uses of the Fund

By law, the fund can support a wide range of renewable energy projects. The bill additionally allows it to:

1. finance energy efficiency projects;

2. support projects that seek to deploy electric, electric hybrid, natural gas, or alternative fuel vehicles and associated infrastructure and any related storage, transmission, distribution, manufacturing technologies or facilities; and

3. provide low cost financing for the above projects and clean energy technologies.

The bill allows the fund to be used to provide low-cost financing and credit enhancement mechanisms for clean energy projects and technologies reimbursement.

Under current law, the fund can be used to reimburse CII for its expenses as administrator of the fund, including a management fee. The bill instead allows the fund to pay for operating expenses, including administrative expenses incurred by the authority and CII, and capital costs incurred by the authority in connection with the operation of the fund, the implementation of the renewable energy plan, or other permitted activities of the authority.

Audits and Related Provisions

The bill requires the fund to be audited annually. The audits must be conducted using generally accepted auditing standards by independent certified public accountants (who can be a CII accountant) certified by the Connecticut Board of Accountancy.

In addition, any entity that receives financing for a project from the fund must provide the board with an annual financial statement of the project. The statement must describe all sources and uses of funds in the detail the authority requires. The recipient's chief financial officer must certify that the statement is correct. The authority must maintain such audits for at least five years. Residential projects for one to four dwelling unit buildings are exempt from all annual auditing requirements, but the projects may be required to grant their utility companies' permission to release their usage data to the authority.

The bill requires the authority to make information regarding the rates, terms, and conditions for all of its financing support transactions available to the public for inspection. These must include formal annual reviews by both a private auditor and the comptroller, and providing details to the public on the Internet. But the authority cannot disclose, pursuant to the Freedom of Information Act, patentable ideas, trade secrets, proprietary or confidential commercial or financial information, when disclosure may cause commercial harm to a nongovernmental recipient of such financing support. In

doing this (1) the authority must include formal annual reviews by a private auditor and the comptroller and (2) provide details to the public on the Internet.

The bill eliminates a requirement that the current Clean Energy Fund board report to the Energy and Technology and Commerce committees every five years.

Appendix 2 – State Enhancement Funds

California: Senate Bill No. 1130 (Amended August 7, 2012)

(f) Develop a request for proposal to contract with one or more financial institutions to secure a short-term, revolving credit facility (warehouse line of credit) for the purpose of creating an interim financing mechanism for the loans that would be aggregated for the purposes of issuance of a revenue bond pursuant to Section 26242. The warehouse line of credit shall be drawn by the authority, based on adherence to predetermined underwriting criteria and standards of credit-worthiness established by the authority, to fund either of the following:
(1) Origination of direct loans to qualified applicants.
(2) Purchase or acquisition of secondary market loans from financial institutions.
(g) To facilitate the management of the program and the use of the warehouse line of credit, the authority shall develop a request for proposal to contract with an outside program administrator that will work with the authority and private financial institutions in identifying the appropriate underwriting criteria, loan processing procedures, loan servicing and monitoring guidelines, and bond financing parameters.

Oregon: House Bill No. 2626

SECTION 16. (1) The Loan Offset Grant Fund is established in the State Treasury, separate and distinct from the General Fund. Interest earned by the Loan Offset Grant Fund shall be credited to the Loan Offset Grant Fund. Moneys in the fund are continuously appropriated to the State Department of Energy for use as provided in this section.
(2) The fund shall consist of any moneys directed by law, gift, grant or donation to the fund.
(3) The department shall use fund moneys:
(a) To promote energy efficiency, renewable energy and energy conservation projects that would otherwise result in a marginally higher overall cost to the applicant when energy costs and the financing and repayment costs for the project are considered, by using the fund moneys to help produce a monthly cost savings for the applicant; or
(b) To transfer to an appropriate fund for carrying out any purpose under this chapter specified as a condition of a gift, grant or donation.

Appendix 3 – Public-Private Partnerships

California: Senate Bill No. 1130 (Amended August 7, 2012)

(f) Develop a request for proposal to contract with one or more financial institutions to secure a short-term, revolving credit facility (warehouse line of credit) for the purpose of creating an interim financing mechanism for the loans that would be aggregated for the purposes of issuance of a revenue bond pursuant to Section 26242. The warehouse line of credit shall be drawn by the authority, based on adherence to predetermined underwriting criteria and standards of credit-worthiness established by the authority, to fund either of the following:
(1) Origination of direct loans to qualified applicants.
(2) Purchase or acquisition of secondary market loans from financial institutions.
(g) To facilitate the management of the program and the use of the warehouse line of credit, the authority shall develop a request for proposal to contract with an outside program administrator that will work with the authority and private financial institutions in identifying the appropriate underwriting criteria, loan processing procedures, loan servicing and monitoring guidelines, and bond financing parameters.

Appendix 4 – Management Authority

California: Assembly Bill No. 2324

This bill would create the California Alternative Energy Source Financing Authority and would specify its organization and its powers and duties, The authority would be authorized to issue up to $200,000,000 in revenue bonds and bond anticipation notes for financing projects utilizing alternative sources, as defined, of energy. It would provide that the Legislature may, by statute, authorize the authority to issue bonds in excess of such an amount. This bill would authorize the authority to contract with a participating party, as defined, for the construction of a project utilizing alternative sources of energy. The bill would appropriate $200,000 to the authority from the State Energy Resources Conservation and Development Special Account for purposes of carrying out designated provisions of the bill.

New Hampshire: Chapter 125

II. Fund moneys shall be used to support energy efficiency, conservation, and demand response programs to reduce greenhouse gas emissions generated within the state, which may include programs proposed and administered by private entities, as well as by the department, the commission, and other state and local governmental agencies. Such programs may include, but not be limited to, improving the electrical and thermal energy efficiency of New Hampshire's residential housing and commercial building stock via weatherization, energy auditing, energy efficiency related work force training and development, revolving loan funds for efficiency related investment, related industrial process and control systems, integration of passive solar heating and ventilation systems, and efforts to increase adherence to energy related building and electrical codes. These funds shall not be transferred or used for any other purpose.

Appendix 5 – On-bill Repayment

Hawaii: Act 204

" **§269 - On-bill financing for energy efficiency and renewable energy.** (a) The public utilities commission shall investigate an on-bill financing program that would allow an electric utility company customer to purchase or otherwise acquire a renewable energy system or energy efficient device, as determined by the public utilities commission, by providing for billing and payment of such a system or device through an assessment on the electric utility company customer's electricity bill.

(b) In investigating an on-bill financing program, the public utilities commission may consider:

(1) The costs and benefits associated with the establishment and administration of the program;

(2) The ability of the program to effectively provide lifecycle cost savings to participating electric utility company customers;

(3) The ability of the program to make renewable energy and energy efficiency more accessible to the rental market and other underserved markets;

(4) Methods to structure the program to ensure that any public benefits fee funds are spent cost-effectively and in compliance with applicable statutes;

(5) The use of non-ratepayer funds or private capital to provide financing for renewable energy systems or energy efficient devices acquired through the program;

(6) Reasonable penalties, which may include fines and disconnection of utility services, for nonpayment of on-bill financing costs;

(7) The ability of an electric utility company to recover costs incurred due to the program; and

(8) Other issues the public utilities commission deems appropriate.

(c) If on-bill financing is determined by the public utilities commission to be viable, the public utilities commission may implement an on-bill financing program by decision and order or by rules pursuant to chapter 91.

Connecticut: Senate Bill No. 451

SUMMARY:

This bill requires each electric company, by June 1, 2012, to establish and administer a loan program to help residential customers finance furnace or boiler replacements. The costs of the loans (principal, interest, and the expense for loan defaults) must be recovered on the participating customer's electric bill. The electric company's cost for administering the program must be recovered through the systems benefits charge (SBC) on the bills of all customers. The loan repayments must be credited to the SBC.

The bill allows tenants to participate in the program if (1) they meet the program's requirements and (2) the owner or landlord of the building where the customer lives pays

at least 20% of the total cost of the replacement furnace or boiler and any additional amount required to meet the program requirements. It is unclear how this provision would work in light of the fact that tenants generally do not own or control the heating system in their building.

The loan (1) attaches to the participant's residential electric account for the premises where the replacement furnace or boiler is located and (2) can be transferred to subsequent account holders for the premises. Each electric company may act as needed to secure the loan, such as by attaching liens and requiring filings to be made on applicable land records or as otherwise needed or required.

Each customer who participates in the program who defaults on any program loan is subject to termination of electric service by the company administering the program. Presumably this is subject to restrictions under current law which, among other things, bars residential terminations on weekends and holidays.

For full bill text: SB 451

Appendix 6 – Property Assessed Clean Energy

Colorado: House Bill No. 08-1350 Summary by H. Lawrence Hoyt, Boulder County Attorney

"House Bill 08-1350 has been introduced to create state law authority, in part, for counties and other local governments to provide below-market financing and superior repayment terms and methodologies to enable residents and business owners to install renewable energy systems and/or improved energy efficiency capital improvements on their properties. The following components are included in this authorization:

1. Private Activity Bond Financing: Federal law currently permits states and local governments to issue tax-exempt bonds to provide for lower-cost financing for capital improvements to residences and commercial structures for renewable energy systems and/or energy efficiency installations. State law has never been amended to expressly adopt that provision of federal law, although state law permits private activity bonds to be used to finance many other private capital improvements, generally for economic development or affordable housing purposes.

This amendment in Section 4 of the bill would add the federal language and permit local governments to utilize some or all of their federally-authorized and state "pass-through" volume cap allocation to issue bonds to create a fund for providing loans for private renewable energy systems and energy efficiency installations.

2. County and Municipal Financing Authority: Sections 5 and 19 of the bill authorize counties and statutory cities/towns to provide certain funding from their annual budgets in support of programs that fund capital improvements to residences and commercial structures for renewable energy systems and/or energy efficiency installations. This will allow funding of staff positions to oversee these programs as well as any gap financing that may be necessary for the programs to succeed.
3. Local Improvement District and Street Improvement District (LID/SID) Financing: Counties, as well as cities and towns, are statutorily-authorized to create local improvement districts and street improvement districts to provide a funding mechanism for improvements which specially benefit properties within the district. Current law generally anticipates that these improvements will be local street, street lighting, drainage, or underground utilities improvements for specific properties/neighborhoods, which needn't be contiguous to each other.

This bill, in Sections 7 through 18, and Sections 20 through 32, provides authority for counties, and cities and towns, to utilize local improvement districts as a means of financing capital improvements to residences and commercial structures for renewable energy systems and/or energy efficiency installations. A significance difference in the local improvement district structure when utilized for this purpose is that this creates a voluntary "opt-in" type of district, whereby only those property owners who choose to utilize LID financing to fund these improvements on their properties will be responsible for the repayment assessments necessary to repay the financing.

Generally, the county, or city or town, will utilize LID bond financing authority to issue bonds for the purpose of creating the fund necessary to pay for the costs of these improvements upfront. In order to obtain this financing, the property owner will agree to be a part of the district and to repay via special assessments the costs of the improvements over a period of years (generally 15 to 20 years.) The great advantage of this financing for property owners will be that the assessments are paid via the annual property tax bill, and the repayment obligation remains with the property, even if the property is sold to new owners. This allows the repayment burden to remain with the property that is receiving the energy savings advantage, and permits the property to pursue these improvements and this financing even if the property owner will not remain the owner of the property for the remainder of the financing term, without having to worry that they will be able to cover the improvements' cost in the resale price."

For full text: HB 08-1350

Florida: House Bill No. 7179 Summary

An act relating to qualifying improvements to real 2 property; creating s. 163.08, F.S.; providing legislative 3 purposes and findings and intent; providing definitions; 4 authorizing a local government to levy non-ad valorem 5 assessments to fund certain improvements; authorizing a 6 property owner to apply for funding and enter into a 7 financing agreement with a local government to finance 8 certain improvements; authorizing a local government to 9 collect moneys for such purposes through non-ad valorem 10 assessments; providing collection requirements; 11 authorizing local governments to partner with other local 12 governments to provide and finance certain improvements; 13 authorizing a qualifying improvement program to be 14 administered by a for-profit entity or not-for-profit 15 organization under certain circumstances; authorizing a 16 local government to incur debt payable from revenues 17 received from the improved property; providing a financing 18 restriction for local governments; requiring a financial 19 agreement to be recorded in a county's public records 20 within 5 days after execution of the agreement; specifying 21 responsibilities for local governments before entering 22 into financing agreements; requiring qualifying 23 improvements to be affixed to a building or facility on 24 the property and be performed by a properly certified or 25 registered contractor; excluding certain projects from financing agreement coverage; limiting the amount of the 27 non-ad valorem assessment to a percentage of the just value of the property; providing exceptions; specifying 29 information provision requirements for property owners 30 before entering into financing agreements; prohibiting 31 acceleration of a mortgage under certain circumstances; 32 providing assessment disclosure requirements; specifying 33 unenforceability of certain agreement provisions; 34 providing construction preserving a local government's 35 home rule authority; amending ss. 288.9602 and 288.9603, 36 F.S.; revising legislative findings and declarations and 37 definitions for purposes of the Florida Development 38 Finance Corporation Act; amending s. 288.9604, F.S.; 39 revising requirements for the establishment and 40 organization of the Florida Development Finance 41 Corporation; amending s. 288.9605, F.S.; revising the 42 powers of the corporation; amending s.

288.9606, F.S.; 43 revising requirements for the corporation's issuance of 44 revenue bonds; amending s. 288.9607, F.S.; limiting the 45 corporation's approval of guaranties for debt service for 46 bonds or other indebtedness for any one capital project; 47 deleting provisions for the corporation's investment of 48 certain funds in the State Transportation Trust Fund; authorizing guarantees to be used in conjunction with 50 federal guaranty programs; amending s. 288.9608, F.S.; 51 creating the Energy, Technology, and Economic Development 52 Guaranty Fund; providing for the deposit and use of 53 certain moneys in the fund; deleting requirements for the 54 corporation's debt service reserve account and Revenue 55 Bond Guaranty Reserve Account; amending ss. 288.9609, 288.9610, 206.46, 215.47, 339.08, and 339.135, F.S.; 57 conforming provisions to changes made by the act; 58 providing legislative findings; requiring the Department 59 of Community Affairs and the Office of Tourism, Trade, and 60 Economic Development, in consultation with the Florida 61 Energy and Climate Commission, to submit recommendations 62 to the Governor and Legislature relating to the Energy 63 Economic Zone Pilot Program; requiring coordination with 64 the pilot communities and clean technology industries in 65 identifying certain incentives and strategies; amending s. 66 366.91, F.S.; revising the definition of the term 67 "renewable energy"; providing an effective date.

For full text: HB 7179

Appendix 7 - Metrics

Montana: House Bill No. 571

Section 3. Section 75-25-103, MCA, is amended to read:
"75- 25- 103. Outcome measures. The department of environmental quality natural resources and conservation shall develop reasonable outcome measures by which the success of the alternative energy system loan program provided for in this part must be measured on an annual basis. Minimal outcome that must be measured includes:

(1) a loan loss ratio of under 5%;

(2) the types of alternative energy systems that provided the best overall results for residences and those for small businesses; and

(3) a determination of the amount of energy that was produced because of participation in the program."

Virginia: House Bill No. 2191

§ 67-1305. Reports.
The Department shall provide annual reports to the Governor and Chairmen of the House and Senate Committees on Commerce and Labor, on or before June 1 of each year, beginning in 2013, describing the status of the revolving loan program, the number of loans provided, the amount of each loan, the recipient of the loan, the loan's repayment status, and the nature of the project for which the loan was provided. The Department shall make the reports available to any person upon request.

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