



# Coalition for Green Capital

To: Committee on Ways & Means, United States House of Representatives

From: Coalition for Green Capital [CGC]

Date: April 28, 2010

**Subject: Coalition for Green Capital Recommendations re: Tax Provisions to Encourage Investment in Clean, Efficient Energy Production and Consumption**

---

Thank you again for the opportunity to testify.

In the Coalition for Green Capital's ("CGC") testimony, we put forward a solution of offering utilities, energy service companies, and building owners a combination of tax benefits and long-term, low cost loans that will create adequate incentives to engage in retrofits and expand clean electricity production.

Below we identify tax provisions that if enacted in conjunction with the Green Bank would further accelerate and expand the deployment of clean efficient energy.

These provisions work toward providing cheaper, cleaner energy for American consumers, creating jobs in communities, and ensuring economic security by saving and producing local energy. In the long run, these provisions will work to deploy clean, efficient energy and bring about the economies of scale necessary to further reduce the price of electricity and decrease the need for tax subsidies.

The CGC believes that these changes in tax policy would provide additional strength to the benefits of a Green Bank, and make low cost capital more widely available to encourage the creation of new jobs as well as the deployment of renewable energy systems.

Thanks and best regards,

Coalition for Green Capital Tax Policy Team

## **Contributors to CGC Recommendations re: Tax Provisions to Encourage Investment in Clean, Efficient Energy**

---

We would like to acknowledge all those who contributed to the preparation of this memo. Some individuals have chosen to provide their contributions anonymously.

### **CBC Tax Policy Committee Leads:**

- Kenneth Berlin, Partner, Skadden, Arps, Slate, Meagher & Flom LLP
- Sarah Davidson, Coalition for Green Capital
- Armando Gomez, Partner, Skadden, Arps, Slate, Meagher & Flom LLP
- Andrew Grossman, Associate, Skadden, Arps, Slate, Meagher & Flom LLP
- Monty Humble, Treasurer, Coalition for Green Capital (*Co-coordinator*)
- Reed Hundt, CEO, Coalition for Green Capital
- Alex Kragie, Coalition for Green Capital
- Genevieve Nowicki, Director of Gov. Rel., Solar Power Partners (*Co-coordinator*)
- Sean Shimamoto, Partner, Skadden, Arps, Slate, Meagher & Flom LLP

### **Contributors (partial list):**

- Scott Brown CEO, New Energy Capital LLC & Managing Director, NEC Energy Resources LLC
- Reid Detchon, Energy Future Coalition on behalf of the Rebuilding America Initiative
- Chris Dornfeld, President & CEO, Dornfeld Management Group
- Armando Gomez, Partner, Skadden, Arps, Slate, Meagher & Flom LLP
- Andrew Grossman, Associate, Skadden, Arps, Slate, Meagher & Flom LLP
- Kristian Hanelt, VP Project Finance, Tioga Energy
- Monty Humble, Treasurer, Coalition for Green Capital
- David Kunhardt, VP Structured Finance, Solar Power Partners
- Janice Lin, California Energy Storage Alliance
- Uri Neren, President and CEO, Generate Companies
- David Nemptzow, Nemptzow and Associates & Ice Energy, Inc.
- Genevieve Nowicki, Director of Gov. Rel., Solar Power Partners
- Jack Oswald, CEO, SynGest, Inc.
- Kurt Shickman, Director of Research, Energy Future Coalition
- Sean Shimamoto, Partner, Skadden, Arps, Slate, Meagher & Flom LLP

## INTRODUCTION

This memo represents recommendations for green tax policy compiled by the CGC from our network of business leaders and investors in the clean tech, renewable energy, energy efficiency, and green business sectors nationwide.

Our discussion focuses primarily on the following areas:

- |   |       |
|---|-------|
| I. Lower the Cost of Capital by Expanding States' Existing Bonding Authority                                  | p. 7  |
| II. Enhance Current Provisions and Extend Expiring Tax Provisions to Encourage Investment In Renewable Energy | p. 8  |
| III. Storage and Energy Efficiency Provisions   | p. 12 |
| IV. Technical Fixes for Current Tax Provisions  | p. 17 |
| V. Low-Income Programs  | p. 19 |

These comments and recommendations represent aggregated feedback from our network. They do not necessarily represent a consensus view but merely the collective input of over two-dozen clean tech and green business professionals. If there is interest, we would be pleased to develop these ideas (or a subset of them) further.

## EXECUTIVE SUMMARY

### **I. LOWER THE COST OF CAPITAL BY EXPANDING STATES' TAX EXEMPT BOND AUTHORITY**

#### **A. Provide Tax Exempt Bond Financing for Clean Energy Projects**

States are struggling to encourage development of green jobs and to create projects during times of very tight budgets. Allowing states and local governments to issue tax-exempt bonds to finance certain private activities for publicly beneficial clean efficient energy projects and exempting these from the statewide volume cap would expand the amount of low cost capital available for clean energy projects and hasten their development. The bonds would be repaid by the clean energy projects and would lower the cost of energy and/or efficiency measures for the citizens.

#### **B. Renewable Energy For Schools and Local Governments**

Under current law, only a municipal utility can issue tax-exempt bonds to prepay for gas or electricity. Allowing schools and local government to enter into prepaid renewable power purchase agreements for on-site renewable energy and to finance the prepayment with tax-exempt bonds, would allow them to use low cost financing to prepay the cost of renewables and reduce the cost of these projects.

## **II. ENHANCE CURRENT PROVISIONS AND EXTEND EXPIRING TAX PROVISIONS TO ENCOURAGE INVESTMENT IN RENEWABLE ENERGY**

### **A. Allow Master Limited Partnership Structures To Be Used For Renewable Power Generation**

The master limited partnership market currently represents well over \$100 billion of capital and is a highly liquid market. Currently, fossil fuels can use this structure and renewable energy cannot. Amending section 7704(d) of the Internal Revenue Code (the “Code”) to expand the definition of qualifying income to include revenues arising from the generation and sale of electricity produced from renewable resources, would not only increase the capital available for renewable projects, but also permit more favorable capital structures to be employed and allow such projects to obtain cheaper equity financing, all of which could substantially reduce the overall cost of capital for renewable energy projects. Master limited partnerships have traditionally been a significant source of financing for the fossil fuel industry. This amendment to the Code would help to level the playing field between renewable energy and fossil fuels.

### **B. Grant in Lieu of the Tax Credit**

Last year Congress recognized that recent market conditions have significantly undermined the effectiveness of federal tax subsidies. Unfortunately, the economic circumstances that led Congress to establish the grant program continue to persist. By extending the grant program under section 1603 of the American Recovery and Reinvestment Act of 2009 (“ARRA”) for two years, through the end of 2012, this proposal would enable developers to obtain the requisite capital to build renewable energy projects which otherwise may not be able to proceed because they are not ready to begin construction by the end of 2010.

### **C. Expand Credit for Advanced Energy Manufacturing Projects**

One of the most important new credits intended to promote renewable energy projects is the advanced energy manufacturing projects under section 48C of the Code. Unfortunately, the funding for this credit was limited to \$2.3 billion and only one-third of the qualifying applicants received an allocation of such credits. Another \$5 billion in funding would stimulate investment in the development of renewable energy manufacturing facilities in the United States.

### **D. Revise Investment Tax Credit Treatment for Offshore Wind Facilities**

Creating a new category for offshore wind facilities within the existing investment tax credit provisions, such as treating offshore wind facilities like solar energy facilities would help offshore overcome the hurdles of development.

### **E. Provide Tax Benefits for Community Based Solar Projects**

Amending section 25D(d)(2) of the Code to allow residential customers owning renewable energy property in community energy projects and other off-site ventures to receive tax benefits would help deploy community based renewable energy projects.

### **III. STORAGE & ENERGY EFFICIENCY PROVISIONS**

#### **A. Create an ITC for Energy Storage Comparable to other Renewable and Alternative Energy**

Amending section 48 of the Code to provide investment tax credits (“ITCs”) for energy storage, on a technology-neutral basis, as provided in S. 1091 and H.R. 4210, would create jobs and will move us closer to the realization of the smart electricity grid of the future, characterized by the full integration of renewable energy, better reliability, and more demand response and emissions control capabilities.

#### **B. Creating Incentives for Whole Building Retrofits**

Increasing the energy efficient commercial buildings deduction from \$1.80 per square foot to \$3.00 per square foot would provide greater incentive for building owners to make incremental investments to improve the energy efficiency of their buildings. Additional provisions would make efficient homes and buildings more achievable by increasing and extending the new energy-efficient home tax credit, increase consumer energy awareness by establishing a tax credit for home energy ratings for the first time ever, and grow the green job market by providing financial assistance for home-performance auditor, training and certification.

#### **C. Accelerate Depreciation of HVACR Equipment**

Currently the Code treats commercial heating, ventilation, air conditioning, or commercial refrigeration (“HVACR”) equipment as a fixed asset, depreciable over 39 years. Amending the Code to provide a shorter recovery period for the depreciation of mechanical HVACR systems installed in nonresidential real property or residential rental property would encourage building owners to more readily invest in upgrades to their HVAC systems.

#### **D. Incentives for Mechanical Insulation Installation and Maintenance**

Current energy efficiency provisions in the Code do not provide an incentive for mechanical insulation maintenance, retrofits, or installation beyond current minimum requirements. A targeted tax provision that allows businesses to increase their deduction for mechanical insulation expenses (such as H.R. 4296) will generate increased manufacturing, distribution, installation, maintenance, and retrofitting—all of which will create jobs, save energy and reduce carbon emissions.

#### **E. Incentives for High Efficiency CHP and Chillers**

Currently, there are no direct tax incentives for industrial energy efficiency, despite the significant energy, economic, and environmental benefits of reduced industrial energy use. This could be changed by expanding the existing combined-heat-and-power systems incentive, establish a credit for efficient motors, incentivize the replacement of CFC-based chillers, and create a credit for equipment that facilitates the reuse of water and greater water efficiency in industrial processes (as in H.R. 4455).

#### **IV. TECHNICAL FIXES TO CURRENT TAX PROVISIONS**

##### **A. Create Parity Between the Grant Under Section 1603 of the ARRA and the ITC**

###### **1. Change the Recapture Rules in the ITC**

Amend section 50 of the Code to state recapture only occurs if, during the recapture period, the investment credit property or an interest therein is sold to a person that would be ineligible to receive an ITC (such as a tax-exempt organization or a foreign taxpayer) or such property ceases to be specified energy property.

###### **2. Amend Section 1603(g), to Clarify that Certain Tax-Exempt Organizations are Eligible Grant Recipients**

Amend section 1603(g) of the ARRA, which prohibits payments for specified energy property owned by certain non-taxpayers, to clarify that tax-exempt organizations subject to the unrelated business income tax are not prohibited from receiving grants.

###### **3. Amend section 1603(g), to Provide for a Proportionate Disallowance of Grant Payments Due to Ineligible Ownership**

Amend section 1603(g) of the ARRA, which prohibits payments for specified energy property owned by certain nontaxpayers, so as to provide that such payments would be disallowed on a proportionate basis equal to the proportionate ownership interest of such nontaxpayer ownership.

#### **V. LOW-INCOME PROGRAMS**

##### **A. LIHEAP Fuels Switching Tax Credit**

Create a tax credit for participants in the Low Income Heating Assistance Program (LIHEAP) to replace oil furnaces with other heating systems. Qualifying replacement technologies, which provide lower heating costs, lower GHG impact and use local and/or renewable fuels would be purchased with a fully refundable tax credit.

## **I. LOWER THE COST OF CAPITAL BY EXPANDING STATES' TAX EXEMPT BOND AUTHORITY**

### **A. Provide Tax Exempt Bond Financing for Clean Energy Projects**

#### ***i. Suggested Tax Change***

Amend the Code to add an additional category of tax exempt private activity bonds for renewable energy, energy efficiency, demand side management, energy storage, electric transmission, smart grid, zero emission vehicles, water efficiency and water conservation projects, as proposed in H.R.3525.

#### ***ii. Current Problem***

States are struggling to encourage development of green jobs creating projects during times of very tight budgets. Many states want to create green banks to provide low cost capital that would permit conversion to the clean energy economy without increasing consumer electricity rates thereby discouraging businesses from locating or expanding facilities within the state. However, the current recession has stretched state budgets, leaving little room for programs requiring new capital.

#### ***iii. Proposed Solution***

Current law permits state and local governments to issue tax-exempt bonds to finance certain publicly beneficial private activities ranging from airport facilities to solid waste facilities. This proposal would expand that authority to include tax exempt bond financing for renewable energy, energy efficiency, demand side management, energy storage, electric transmission, smart grid, manufacturing for zero emission vehicles and smart grid components, water efficiency and water conservation projects. The proposal would amend section 142(a) of the Code to: add an additional category of tax exempt private activity bonds for renewable energy, energy efficiency, demand side management, energy storage, electric transmission, smart grid, manufacturing for zero emission vehicles and smart grid components, water efficiency and water conservation projects and facilities incidental, subordinate or related thereto; allow private companies to utilize both tax exempt bonds and federal tax credits for new categories; and, exclude these new categories of tax-exempt bonds from the statewide volume cap (just like other tax exempt bonds for airports, ports, and non-profit universities and hospitals).<sup>1</sup>

---

<sup>1</sup> Related amendments would: (i) add to section 146(g)(3) the appropriate reference to clean energy bonds; (ii) add at the end of section 168(g)(5)(C) “or any property that is part of a clean energy project within the meaning of Section 142(a)”, (iii) add to section 149(b)(3)(A) a new clause (iv) “any guarantee by the [Green Bank]”, (iv) add to section 48(a)(4) a new paragraph (D) “solely for purposes of this section, a clean energy bond described in section 142(a) shall not be a private activity bond”, (v) amend section 265(b)(3)(B)(i) of the Code to provide that tax exempt bonds described in section 142(a) of the Code that are issued to finance a clean energy project are “qualified tax-exempt obligations”, and (vi) add to section 57(c)(5)(ii) at the end of the sentence “or any clean energy bond described in section 142(a)”.

Authorizing states to issue tax exempt clean energy bonds that would be repaid by the clean energy project and would provide lower cost capital to clean energy projects without putting an additional strain on state budgets. This would further expand the amount of low cost capital available for clean energy projects and reduce the amount of additional federal guarantees required to finance the conversion to a green energy economy.

## **B. Renewable Energy For Schools and Local Governments**

### *i. Suggested Tax Change*

Allow state and local government entities with tax exempt bonding authority to enter into prepaid power purchase agreements and use their bonding authority to purchase renewable energy without running afoul of anti-arbitrage tax provisions, as proposed in H.R. 4967.

### *ii. Current Problem*

Under current law, only a municipal utility can issue tax-exempt bonds to prepay for gas or electricity. However, many cities, schools and other governmental users of electricity, cannot use their tax-exempt bonding authority to enter into pre-paid service agreements, and are therefore unable to benefit from the reduced costs and predictability associated with these transactions.

### *iii. Proposed Solution*

Amend section 148(b) of the Code to add a new paragraph (5) to allow state and local units of government to enter into prepaid renewable power purchase agreements for on-site renewable energy and to finance the prepayment with tax-exempt bonds. This legislation would allow state and local governments, including schools, to use low cost financing to prepay the cost of renewable energy power purchase agreements.

## **II. ENHANCE CURRENT PROVISIONS AND EXTEND EXPIRING TAX PROVISIONS TO ENCOURAGE INVESTMENT IN RENEWABLE ENERGY**

### **A. Allow Master Limited Partnership Structures To Be Used For Renewable Power Generation**

In general, a master limited partnership is a limited partnership or other entity treated as a partnership for federal tax purposes, the interests of which are traded on an established securities market or regularly traded on a secondary market. Potential investors in master limited partnerships include institutional investors and individuals.

Generally, income that allows the master limited partnership to be treated as a flow-thru entity is “passive income” (such as interest and dividends). However, qualifying income also includes income that is derived from the exploitation of certain natural resources. Thus, the master limited partnership is a popular choice of form among certain fossil energy ventures, as it provides investors with a marketable interest in an entity not subject to corporate-level taxes.

### ***i. Suggested Tax Change***

Amend section 7704(d) of the Code to expand the definition of qualifying income to include revenues arising from the generation and sale of electricity produced from renewable resources. In addition, amend sections 465 and 49 of the Code to provide an exception to the “at-risk” limitations for losses and credits derived from renewable energy projects owned by master limited partnerships. Also, amend section 469 of the Code to add credits under sections 45 or 48 of the Code to the list of credits that investors in master limited partnerships can use to offset other income and the taxes attributable to other income.

### ***ii. Current Problem***

Federal tax subsidies (in the form of tax credits and accelerated depreciation deductions) represent a substantial portion of value derived from capital investments in certain renewable energy projects. Most developers of renewable energy projects do not currently have sufficient tax capacity to utilize such incentives and, thus, have monetized such incentives by partnering with large financial institutions that do have the requisite tax capacity. The recent economic downturn has significantly reduced the pool of such potential investors.

### ***iii. Proposed Solution***

By making renewable energy projects eligible for the favorable flow-thru treatment for master limited partnerships, this proposal would aid significantly in the capital formation process for renewable projects by expanding the pool of potential investors in such projects. Opening the market for ownership of renewable projects to individual investors through the more tax-efficient ownership structure of a master limited partnership would provide developers of renewable energy projects access to an enormous new source of capital. The master limited partnership market currently represents well over \$100 billion of capital and is a highly liquid market. Access to master limited partnership capital would not only increase the capital available for renewable projects, but also permit more favorable capital structures to be employed and allow such projects to obtain cheaper equity financing, all of which could substantially reduce the overall cost of capital for renewable energy projects.

This amendment to the Code would help to level the playing field between renewable energy and fossil fuels. As noted above, master limited partnerships have traditionally been a significant source of financing for the fossil fuel industry. Opening the master limited partnership market to renewable energy projects would give these projects access to a significant source of cost-effective financing that historically has been primarily limited to the fossil fuel industry.

In order for a revision of the master limited partnership rules to have the maximum impact, however, additional changes would need to be made to the “at-risk” limitations on partnership losses and credits. Under the at-risk limitations under sections 465 and 49 of the Code, losses and credits that result from most income producing activities are subject to limitations, based on the partner’s contribution to the partnership. Both accelerated depreciation and ITCs are important economic benefits accruing to investors in renewable energy projects. If the at-risk rules under sections 465 and 49 of the Code are not modified so as to provide an exception for investors in master limited partnerships whose income is derived from renewable resources, such investors would not be able to fully utilize such incentives.

## **B. Grant in Lieu of the Tax Credit**

### ***i. Suggested Tax Change***

Extend the grant program established under section 1603 of the ARRA to include specified energy property placed in service or the construction of which began during 2011 or 2012.

### ***ii. Current Problem***

Federal tax subsidies (in the form of tax credits and accelerated depreciation deductions) are a critical consideration to investors in and developers of renewable energy projects. However, many such investors and developers do not have sufficient tax capacity to currently utilize such incentives. Last year Congress recognized that recent market conditions have significantly undermined the effectiveness of federal tax subsidies. Under section 1603 of the ARRA, the United States Department of the Treasury ("Treasury") was authorized to make cash payments to eligible persons who place "specified energy property" in service during 2009 or 2010 or begin construction of such property during 2009 or 2010. Unfortunately, the economic circumstances that led Congress to establish the grant program continue to persist. Although the grant program has been extraordinarily successful in encouraging investment in renewable energy projects, proposed renewable energy projects are currently having difficulty raising the necessary capital unless they are able to assure potential investors that such projects will be able to begin construction by year-end so as to qualify for the grant program.

### ***iii. Proposed Solution***

By extending the grant program under section 1603 of the ARRA for two years, through the end of 2012, this proposal would enable developers to obtain the requisite capital to build renewable energy projects which otherwise may not be able to proceed because they are not ready to begin construction by the end of 2010.

## **C. Expand Credit for Advanced Energy Manufacturing Projects**

### ***i. Suggested Tax Change***

Amend section 48C of the Code to authorize an additional \$5 billion of tax credits to be allocated for qualifying advanced energy manufacturing projects.

### ***ii. Current Problem***

One of the most important new credits intended to promote renewable energy projects the advanced energy manufacturing projects under section 48C of the Code. This credit is equal to 30% of the qualifying capital investment, and is allocated by the Department of Energy. The credit is available for investments in certified qualified advanced energy manufacturing projects that reequip, expand or establish manufacturing facilities for the production of various property designed to produce energy from renewable resources, reduce greenhouse gas emissions or conserve energy. By encouraging investments in such advanced energy manufacturing projects, this program is designed to build a long-term renewable energy industry in the United States that will not be dependent on foreign suppliers. Unfortunately, the funding for this credit was limited to \$2.3 billion and only one-third of the qualifying applicants received an allocation of such credits.

### ***iii. Proposed Solution***

The resounding success of this credit has led the Obama Administration to propose another \$5 billion in funding. By authorizing additional advanced energy manufacturing credits under section 48C, this proposal would stimulate investment in the development of renewable energy manufacturing facilities in the United States.

## **D. Revise Investment Tax Credit Treatment for Offshore Wind Facilities**

### ***i. Suggested Tax Change***

Modify the ITC so that offshore wind facilities are treated like solar facilities and would qualify for the ITC so long as they are placed in service by 2016.

### ***ii. Current Problem***

A January 2010 report, "Eastern Wind Integration and Transmission Study," prepared for the National Renewable Energy Laboratory, analyzed several scenarios for reaching a 20% renewable energy goal by 2024. Offshore wind was projected to provide 16 GW to 64 GW of generating capacity under these scenarios. However, like solar facilities, the permitting regime and installation methodology is very different for offshore wind than onshore wind farms. The development timeline is substantially longer, and construction may take place over two years due to limited summer installation windows in the offshore environment. Few, if any, offshore wind farms are likely to be placed in service before 2012, the current expiration date for the investment tax credit for wind facilities. By enabling offshore wind farms slated for completion between 2012 and 2016 to qualify for the ITC, Congress will take a step towards creating the necessary incentives to sustain ongoing development activities and take a major step towards developing a significant new source of renewable energy for the U.S.

### ***iii. Proposed Solution***

Create a new category for offshore wind facilities within the existing ITC provisions to treat offshore wind facilities like solar energy facilities. Senators Carper, Snowe, Brown and Collins have introduced legislation (S.3062) to such effect.

## **E. Provide Tax Benefits for Community Based Solar Projects**

### ***i. Suggested Tax Change***

Amend section 25D(d)(2) of the Code to allow residential customers owning renewable energy property in community energy projects and other off-site ventures to receive tax benefits, as proposed in S.3137.

### ***ii. Current Problem***

There are many emerging businesses that work with utilities to offer community owned solar farms, hydroelectric generators and wind turbines. These operations enable utility customers to fractionally own part of a clean generation source. Currently these customers are not able to receive the ITC.

### **III. STORAGE & ENERGY EFFICIENCY PROVISIONS**

#### **A. Create an ITC for Energy Storage Comparable to other Renewable and Alternative Energy**

Electricity is the only product that is treated as a market commodity but has historically had virtually no method of being stored or stockpiled; additionally it is essentially on an as-demanded “24/7” basis. The normal fluctuations in supply and demand pose an array of challenges for the electricity generation, transmission, and distribution system, resulting in very significant price and resource inefficiencies, and pose obstacles to the integration of renewable energy sources onto the grid. Thus the need for grid-connected energy storage – including advanced batteries, thermal energy storage, flywheels, compressed air, pumped hydro and other technologies – is expected to grow rapidly in coming years due to the confluence of multiple factors, including the deployment of large amounts of clean-but-intermittent renewable energy sources (such as wind and solar), the decreasing load factors of power system assets, and the increasing cost and difficulty in siting and building power plants and transmission lines.

##### ***i. Suggested Tax Change***

Amend section 48 of the Code to provide ITCs for energy storage, on a technology-neutral basis, as provided in S. 1091 and H.R. 4210.

##### ***ii. Current Problem***

The current and quickly growing need to deploy the various energy storage technologies is not currently being met in the marketplace due to several marketplace impediments. These include: the lack of visibility for the great majority of US electricity consumers of cost-based, time-sensitive electric rates, the newness of many storage technologies, the conservative nature of the utility industry, the lack of comparable tax treatment to other energy sources, and the failure to fully plan for the infrastructure needed for the impending explosion in deployment in intermittent renewable energy sources.

##### ***iii. Proposed Solution***

Tax incentives are needed to accelerate and expand the deployment of energy storage and compensate for existing market barriers. The “Storage Technology of Renewable and Green Energy (STORAGE) Act” (S. 1091, Wyden, and H.R. 4210, Mike Thompson) amends section 48 of the Code to provide ITCs for energy storage, on a technology-neutral basis. Qualifying storage systems that are large (at least 2 megawatthour capacity) and are connected to the power grid would be provided a 20 percent ITC (per section 48(a)(2)). For qualifying medium-sized (at least 20 kilowatthour capacity) energy storage systems used onsite, the STORAGE Act would provide a 30 percent ITC (per section 48(c)). Qualifying residential energy storage would be provided a 30 percent credit (per section 25C(a)). Additionally, section 54 would be amended to authorize the use of Clean Renewable Energy Bonds (CREBs) to finance storage projects that are deployed by publicly owned utilities that do not pay taxes.

A recent comprehensive analysis to evaluate potential job creation found that approximately 114,000 incremental jobs would be created by 2020 if investors received the ITC proposed in the Wyden-Thompson STORAGE Act. (“Assessment of Jobs Benefits from Storage Legislation” KEMA, Inc. with the Electricity Storage Association, March 2010; Executive Summary [available here](#))

(<http://www.kema.com/services/consulting/utility-future/energy-storage/storage-policy.aspx>.) The analysis found that “By accelerating the market adoption of advanced energy storage technologies, the energy storage legislation will create jobs and will move us closer to the realization of the smart electricity grid of the future, characterized by the full integration of renewable energy, better reliability, and more demand response and emissions control capabilities.” The analysis categorized storage markets and respective job creation as follows:

- renewable energy integration (26,000 jobs)
- onsite commercial & industrial sector storage applications (26,000 jobs)
- onsite residential storage application for the residential sector (2,000 jobs)
- ancillary services or frequency regulation/spinning reserve (8,000 jobs)
- community energy storage (52,000 jobs)
- Total: 114,000 incremental jobs created by 2020

Additionally, the study found that increasing the provisions of the STORAGE Act by 10% (e.g. the ITCs listed above would be 30%, 40% and 40% respectively for large, onsite and residential storage systems) would more than double the job creation impact, to 250,000 jobs created; decreasing the provisions by 10% (e.g. 10%, 20%, 20%, respectively) would cut job creation to 44,000 jobs.

## **B. Creating Incentives for Whole Building Retrofits**

### ***i. Suggested Tax Change***

H.R. 4226, The Expanding Building Efficiency Incentives Act of 2009 (Rep. Reichert) would increase the energy efficient commercial buildings deduction (section 179D) from \$1.80 per square foot to \$3.00 per square foot for energy efficient building systems in new or existing buildings. The bill also would amend the Code to: increase and extend through 2015 the new energy efficient home tax credit; increase to \$5,000 the limit on the tax credit for non-business energy property expenditures and extend such credit through 2015; allow a \$200 tax credit through 2011 for the cost of a home energy rating; and allow a \$500 tax credit for the cost of training and certifying home performance auditors to conduct home energy ratings.

### ***ii. Current Problem***

Building owners must demonstrate energy and power cost savings of at least 50 percent to earn the existing energy efficient commercial buildings deduction. Achieving that level of energy efficiency necessitates, in most cases, an expensive, whole-building retrofit that will take a building out of service for a period of months. The existing tax deduction of \$1.80 is not sufficient to spur a building owner to make the additional expenditures in equipment, time, and materials to qualify. As a result, very few buildings have used the tax incentive.

### ***iii. Proposed Solution***

H.R. 4226 increases the energy efficient commercial buildings deduction from \$1.80 per square foot to \$3.00 per square foot. The increase will provide greater incentive for building owners to make incremental investments to improve the energy efficiency of their buildings.

The bill would also make efficient homes and buildings more achievable by increasing and extending the new energy-efficient home tax credit, increase consumer energy awareness by

establishing a tax credit for home energy ratings for the first time ever, and grow the green job market by providing financial assistance for home-performance auditor training and certification.

### **C. Accelerate Depreciation of HVACR Equipment**

#### ***i. Suggested Tax Change***

Amend the Code to provide a shorter recovery period for the depreciation of high efficiency mechanical heating, ventilation, air conditioning, or commercial refrigeration (“HVACR”) systems installed in nonresidential real property or residential rental property.

#### ***ii. Current Problem***

Currently the Code treats commercial HVACR equipment as a fixed asset, depreciable over 39 years. However, the average lifespan of a properly maintained system is less than half that. The disparity between the depreciation schedule and the actual lifespan of the equipment creates a disincentive for building owners to invest in high efficiency mechanical HVACR equipment that would reduce energy use, save money, and make buildings more comfortable.

#### ***iii. Proposed Solution***

H.R. 2198 (Rep. Bean) accelerates depreciation for energy-efficient mechanical HVACR systems from 39 years to 20 or 25 years. Reducing the depreciation period from the current 39 years to 20 or 25 years will encourage building owners to more readily invest in upgrades to their HVAC systems. This investment will have economic benefits that span the construction industry and beyond. Consulting engineers, contractors, and manufacturers would see increased demand and a commensurate increase in job opportunities. Additionally, the resulting energy cost savings can be further invested to provide additional benefit to the economy. Lowering the depreciation period would encourage building owners to invest in new systems, save small businesses money, and create business for American manufacturers and contractors.

In addition to the economic benefits, the replacement of older, less efficient systems with new more efficient systems will result in decreased energy use and a resulting reduction in greenhouse gas emissions. Some of the systems that will be replaced still use chlorofluorocarbon (CFC) refrigerants, which contribute to depletion of the ozone layer.

Promoting a more sensible depreciation schedule would save building owners \$4 billion in energy costs per year. It would allow small businesses to better manage indoor air quality, providing healthier indoor environments, leading leads to less worker absenteeism and greater productivity.

## **D. Incentives for Mechanical Insulation Installation and Maintenance**

### ***i. Suggested Tax Change***

H.R. 4296, the Mechanical Insulation Incentive Act of 2009 (Rep. Halvorson) provides a tax deduction for installing mechanical insulation above ASHRAE 2007 guidelines and maintaining mechanical insulation in commercial and industrial applications.

### ***ii. Current Problem***

Current energy efficiency provisions in the Code do not provide an incentive for mechanical insulation maintenance, retrofits, or installation beyond current minimum requirements. Many company decision-makers fail to see the incentive to invest in this technology because it is silent and hidden; the process continues to operate regardless of the condition or absence of insulation; it is not a new technology nor generating publicity; and it is viewed as a direct sunken cost in maintenance budgets rather than treated as an expense that provides a return on investment. A targeted tax provision that allows businesses to increase their deduction for mechanical insulation expenses will generate increased manufacturing, distribution, installation, maintenance, and retrofitting—all of which will create jobs, save energy and reduce carbon emissions.

### ***iii. Proposed Solution***

H.R. 4296 would allow businesses to increase or accelerate the depreciation deduction for the incremental insulation cost based on the percentage of energy saved above the minimum ASHRAE requirements, up to a maximum of 30%. The legislation provides for an incremental portion of the increased cost for going beyond the minimums to be accelerated as a depreciation expense.

This proposal would allow businesses to increase their maintenance deductible expense up to a maximum of 30% of the energy saved in comparison to the heat loss from the insulation system that was originally installed versus no insulation value. The tax incentive (increased deduction) would apply to the installed insulation system cost.

The accelerated depreciation will reduce the time it takes for the energy cost savings to pay for the initial investment. Furthermore, the bill would support the development of more than 89,000 sustainable jobs for skilled craft personnel to install and maintain the mechanical insulation systems, in addition to technical/ engineering, manufacturing, sales, administrative and supporting craft jobs. It would also save an estimated \$47 billion in energy costs and avoid 366 million metric tons of CO<sub>2</sub> emissions over a five-year implementation period.

## **E. Incentives for High Efficiency CHP and Chillers**

### ***i. Suggested Tax Change***

H.R. 4455, Expanding Industrial Energy Efficiency Incentives Act of 2009 (Rep. Thompson) would expand the existing combined-heat-and-power systems incentive, establish a credit for efficient motors, incentivize the replacement of CFC-based chillers, and create a credit for equipment that facilitates the reuse of water and greater water efficiency in industrial processes.

## ***ii. Current Problem***

Currently, there are no direct tax incentives for industrial energy efficiency, despite the significant energy, economic, and environmental benefits of reduced industrial energy use. Such tax incentives are needed to help American industry to reduce fuel dependency, cut costs, reduce greenhouse gas emissions, add jobs and enhance global competitiveness.

Large, water-cooled chillers are the "engines" of the air conditioning systems for almost all large buildings. Prior to 1993, CFCs were the refrigerants used in chillers. Use of CFCs in new systems was banned under the Montreal Protocol due to their contribution to ozone depletion, but AHRI estimates that as many as 30,000 CFC-based chillers remain in operation in public and private buildings across the country. This is largely due to the significant cost associated with the removal of old systems and the purchase of newer, more efficient ones.

## ***iii. Proposed Solution***

H.R. 4455 proposes a number of new or expanded tax incentives. It expands the existing megawatt and horsepower capacity eligible for the combined heat and power tax credit and removes the ceiling on the size of an applicable CHP system.

The bill establishes a credit of \$120 per horsepower for efficient motors utilizing variable speed operation and certain other advanced technologies installed through 2013, up to a maximum of \$2 million per taxpayer. It would create a credit of \$150 per ton for the replacement of a CFC-based chiller system manufactured between 1980 and 1993. An additional \$100 credit would be available to the taxpayer for each ton by which the new unit was downsized relative to the one being replaced, if the new unit also uses variable frequency drives and meets certain efficiency standards. The building would have to receive an energy audit to identify ways in which energy consumption generally and cooling load specifically could be reduced.

The bill would also create a credit to encourage greater efficiency in water use, up to \$10 million per site. Eligible projects require the reduction of process water withdrawals by not less than 20% and discharge by not less than 10%—or water withdrawals by no less than 10% and water discharge by no less than 20%.

Replacing the existing stock of old CFC chillers with the more efficient units available today would save approximately 35 terawatt hours of electricity, which is equivalent to the amount of energy consumed by approximately 3 million homes annually. This would help reduce the amount of CFC refrigerants in circulation, as chillers are among the last pieces of equipment using this potent ozone depleting substance and greenhouse gas. Replacing the CFC chillers would create American jobs to manufacture, install, and maintain the new chillers. Approximately 90 percent of the chillers sold in the U.S. are also manufactured here.

## **IV. TECHNICAL FIXES TO CURRENT TAX PROVISIONS**

### **A. Create Parity Between the Grant Under Section 1603 of the ARRA and the ITC**

The ITC is administered under rules and regulations that are more than 20 years old. When the grant program under section 1603 of the ARRA was enacted last year, although it was intended to mimic the ITC, Treasury had the opportunity to take a fresh look at those rules, and exercised its judgment to make some changes.

#### **1. Change the Recapture Rules in the ITC**

##### ***i. Suggested Tax Change***

Amend section 50 of the Code so that recapture only occurs if, during the recapture period, the investment credit property or an interest therein is sold to a person that would be ineligible to receive an ITC (such as a tax-exempt organization or a foreign taxpayer) or such property ceases to be specified energy property.

##### ***ii. Current Problem***

Under section 50(a)(1)(A) of the Code, all or a portion of the ITC allowed with respect to property is recaptured if, before the end of the five-year recapture period, the property is disposed of or otherwise ceases to be investment credit property with respect to the taxpayer.

Conversely, the guidance with respect to the grant program under section 1603 of the ARRA generally provides that recapture only occurs if, during the five-year recapture period, an interest in the property is sold to a person that would be ineligible to be an applicant (such as a tax-exempt organization or a foreign taxpayer) or such property ceases to be specified energy property.

##### ***iii. Proposed Solution***

By conforming the recapture rules applicable to the ITC to those applicable to the grant program under section 1603 of the ARRA, this proposal would eliminate the disparities between the two regimes and, thus enable taxpayers to choose between such incentives based upon factors other than complicated arbitrary technical differences that may be applicable in the event of a future disposition. Conformity of the two regimes would also serve to eliminate unnecessary traps for the unwary.

#### **2. Amend Section 1603(g), to Clarify that Certain Tax-Exempt Organizations are Eligible Grant Recipients**

##### ***i. Suggested Tax Change***

Amend section 1603(g) of the ARRA, which prohibits payments for specified energy property owned by certain non-taxpayers, to clarify that tax-exempt organizations subject to the unrelated business income tax are not prohibited from receiving grants.

##### ***ii. Current Problem***

Under section 1603(g) of the ARRA, Treasury is prohibited from making a grant to certain tax-exempt organizations. However, this prohibition was drafted overly broad so as to deny grants under section 1603 of the ARRA to tax-exempt organizations even if such entities are otherwise

subject to the unrelated business income tax. This is not consistent with the rules applicable to the ITC and unnecessarily precludes certain investors from investing in renewable energy projects that would otherwise be eligible for the grant program under section 1603 of the ARRA.

### ***iii. Proposed Solution***

By amending section 1603(g) of the ARRA to provide that the prohibition on making grants to tax-exempt entities does not apply to the extent that the grants are made with respect to unrelated trade or business property, this proposal would conform the ARRA with rules under the ITC and broaden the potential investor base for such renewable energy projects. This modification has been proposed in the Tax Technical Corrections Act of 2009.

## **3. Amend Section 1603(g), to Provide for a Proportionate Disallowance of Grant Payments Due to Ineligible Ownership**

### ***i. Suggested Tax Change***

Amend section 1603(g) of the ARRA, which prohibits payments for specified energy property owned by certain nontaxpayers, so as to provide that such payments would be disallowed on a proportionate basis equal to the proportionate ownership interest of such nontaxpayer ownership.

### ***ii. Current Problem***

Section 1603(g) of the ARRA provides that Treasury is not to make grants to specified types of exempt and governmental entities. Among the list of included entities are any partnership or other pass-thru entity any partner (or other holder of an equity or profits interest) of which is one of the other precluded entities. Treasury has determined in its program guidance that a partnership or other pass-thru entity is ineligible to receive a grant if any direct or indirect partner (or other holder of an equity or profits interest) of the applicant is one of the precluded entities. This prohibition is absolute, such that even a de minimis amount of tax-exempt ownership precludes the receipt of any payments for specified energy property. This is an impediment for investments in renewable energy projects by private equity funds, of which almost invariably some portion of the investor base is comprised of tax-exempts. This is not consistent with the ITC rules, which pass the credit through to the ultimate investors and, thus, effectively the benefit of the ITC is only lost on a proportionate basis. Thus, for example, if a private equity fund with respect to which 10% of its investors are tax-exempts were to invest in a renewable energy project that was otherwise eligible for either an ITC or a grant under section 1603 of the ARRA, although the project would effectively be eligible for 90% of the ITC, the project would be precluded from any grant payment under section 1603 of the ARRA.

### ***iii. Proposed Solution***

Amending section 1603(g) so as to reduce grant payments as a result of tax-exempt ownership only on a proportionate basis (as opposed to a complete prohibition for even de minimis ownership), would create parity with the ITC rules, and would open up additional sources of funding for renewable energy projects (such as private equity firms) which may not have sufficient tax capacity to currently utilize the ITC.

## **V. LOW-INCOME PROGRAMS**

### **A. LIHEAP Fuels Switching Tax Credit**

#### ***i. Suggested Tax Change***

Create a tax credit for participants in the Low Income Heating Assistance Program (LIHEAP) to replace oil furnaces with other heating systems.

#### ***ii. Current Problem***

LIHEAP has been subsidizing oil heating since the oil shocks in the 1970's. The humane and needed purpose is to prevent low income, especially fixed income elderly from turning the heat down to unsafe levels because of financial constraints. Originally intended as a stopgap measure, the program has cost a substantial amount for a generation. The imperative to prevent low-income citizens from freezing remains, but the time has come to do so without incurring ongoing costs and without transferring US tax dollars to foreign countries. Any reduction in the use of oil for heating is good for energy security and GHG mitigation.

#### ***iii. Proposed Solution***

Qualifying replacement technologies, which provide lower heating costs, lower GHG impact and use local and/or renewable fuels would be purchased with a fully refundable tax credit. In order to qualify, the replacement systems would need to be reasonably expected to remove the need for fuel subsidy. The costs of avoided LIHEAP payments over the ten-year budget window would need to pay for the credit. Owner occupied buildings would obviously qualify and rental units could be addressed in qualified low-income housing. Several technologies should satisfy these criteria given winter heating oil prices based that exceed \$100/barrel oil. Switching to gas or preferably ground source heat pump, heat pump and wood could potentially be scored as a savings in the ten-year budget window. Even supplementing with solar thermal absorbers could suffice. Clearly many jobs in local building trades would be created.