The Public Interest of Private Benefits: How Tax Free Energy Benefits Can Change How We Think About Efficiency

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ABSTRACT

Despite decades of work to support comprehensive home energy efficiency improvements, these programs have not been able to achieve results at scale, and are reaching only a small subset of the population. The key barriers are effective engagement and individual financial resources (including accessible, low-interest financing) to support these investments. Employer-supported, tax-advantaged energy savings accounts could be a solution to this problem. Tax-advantaged employer benefits and savings accounts have grown considerably in the past twenty years, and they represent an opportunity to enable individuals to save for and invest in efficiency and renewable energy improvements to their homes. For example, in 1981, only 4.6 million U.S. employees were enrolled in a 401(k) plan. Today, the count is approaching 70 million, with sixty percent of large employers automatically enrolling employees in a dedicated savings plan. Such accounts have also been used for health and child care expenses. Employers can also provide tax-free transportation benefits to their employees. There are factors driving this trend – including recognition of rising costs and the desire to enable individuals to make these important investments. These reasons hold true for energy efficiency and renewable energy investments, as overall energy costs are projected to rise and we see the environmental imperative of encouraging investment in these areas. Additionally, such investments support local job growth and increased discretionary income by decreasing monthly expenditures on energy. This paper will investigate the origins of tax-advantaged savings accounts, and propose how a tax-free energy savings account could be designed and integrated into traditional benefits packages, informed by experience with creating and implementing energy benefits programs in multiple states.

Background

Origins of Employee Benefits

Looking back over the last century, there were a number of motivations behind employers introducing new benefits in the workplace. The examples cited below reveal a multitude of driving factors—from a desire to recruit and retain the best talent to the recognized societal benefits of supporting the long-term health and financial well-being of individuals.

- In the early 1940s, when war-induced wage freezes pushed industries to find new means of attracting employees, only five million people in the U.S. had health insurance. By 1960, that number was 140 million. Today, nine out of ten large employers offer a major medical policy to employees (Buchmueller and Monheit 2009).
- Employer-sponsored retirement savings accounts (Individual Retirement Accounts (IRAs) and 401(k)s), have grown significantly since their introduction in the early 1980s.
These savings accounts are credited as the largest source of growth of retirement savings between 1981 and the end of the century (The National Bureau of Economic Research 2014).

- In 1950, the $10 billion collectively spent on employee benefits represented 5.6% of total compensation. In 2010, the $1.6 trillion spent represented 19.6% (Employee Benefit Research Institute 2011).

- According to a recent survey conducted by AFLAC (American Family Life Insurance Company of Columbus), 58% of large-business employees said they were “more likely to accept a job with slightly lower compensation and better benefits,” than a job in which the inverse was true (Aflac 2013). In a separate survey by Towers Watson, only 25% of CEOs disagreed with the statement that “trying or considering new benefits (would be) a wise response to the recession” (Towers Watson 2009).

These facts coupled with the growing awareness of human impact on the environment lead us to conclude that there is an opportunity to significantly increase support for high-impact investments in energy efficiency and renewable energy through employer-supported tax free savings accounts.

**Origins of Energy Efficiency and Renewable Energy Programs**

Energy efficiency and renewable energy programs have been in place in the U.S. for almost 40 years. They were brought about largely due to the 1973 oil crisis and steep increases in fuel costs, and over time have been recognized by states and utilities as important tools to manage price volatility, promote sustainable use of limited natural resources, and reduce environmental harm. On an individual household basis, energy efficiency investments decrease utility bills and increase discretionary income. One of the first of such programs was the federal Weatherization Assistance Program, which provides energy efficiency upgrades to low-income households at no cost, enables households that typically cannot make these types of “optional” investments to benefit from the reduced cost of operating their home.

Over the last several decades, investment in energy efficiency by utility programs has grown dramatically; however, those programs are still only reaching a small subset of the population, especially when considering more expensive investments such as thermal and HVAC improvements. A national survey conducted by E Source showed that only 12% of the population was significantly engaged in utility sponsored efficiency programs (i.e., have participated in more than one utility program) (Behringer 2010).

One of the most widely recognized barriers to energy efficiency and renewable energy investments is the first-cost barrier to whole home energy assessments, which may range from $100-$600, and the subsequent installation of measures, which may cost many thousands of dollars (Zimring et al. 2011). While some innovative financing approaches have emerged to help alleviate this issue, and program designs have been identified which allow for less costly incremental approaches to improving home efficiency, they are far from widespread, and do not address the mindset of many middle-income households in the wake of the recession that are focused on paying off debts and trying to rebuild savings rather than borrowing for non-emergency energy upgrades (Zimring et al. 2011).
The Opportunity: Energy Efficiency and Renewable Energy Benefits

Since employee benefits have demonstrated the ability to bring programs to scale, particularly tax-advantaged benefits, we believe that supporting energy efficiency and renewable energy investments would result in a significant shift—both in the amount invested, as well as in the way households think about and plan for these investments. Furthermore, scaling energy efficiency and renewable investments in this way could pave a path for additional opportunities in the lending market to address any remaining gaps between account maximums and costs to complete the improvements. But first, let us consider the current approaches to employer-supported energy benefits and how a tax-free energy benefit could bolster and grow such activities.

Energy Benefits: Current Approaches

There has been an increased focus in recent years on efforts to drive energy efficiency, in homes and in the workplace. In the last ten years, over half of the states have adopted energy efficiency resource standards (EERS) (Downs and Cui, 2014). The increased adoption of EERS has been coupled with increased investment in utility demand side management (DSM) approaches, which is expected to continue to raise the bar for energy savings opportunities at the regulatory level (Lacey 2013).

Non-governmental organizations are also doing their part to heighten awareness and instigate change through research and advocacy for energy efficiency. The growth of organizations like the U.S. Green Building Council (USGBC) is a signal of the broader recognition of energy issues. The USGBC was founded in 1993, and their work not only heightens awareness of resource depletion, but also compels businesses and individuals to take immediate, voluntary action to limit human impact on the environment (U.S. Green Building Council 2014).

Picking up on this momentum, multiple organizations have developed voluntary protocols for the commercial, industrial and institutional sectors to provide guidance to measure and predict outcomes as a result of these aggregated efforts. These sectors are motivated to take action because of proven bottom-line benefits, including but not limited to; cost savings, favorable public relations, and deep concern about climate change impacts on industry.

In addition to the USGBC, some examples of the leading organizations whose missions include corporate sustainability are the World Resource Institute (WRI), the International Standardization Organization (ISO)\(^1\), and the Global Reporting Initiative (GRI). These non-profit organizations are all trying to bring focus to corporate sustainability, energy efficiency in particular, in an effort to scale up climate change mitigation. What is largely missing in all of these corporate sustainability protocols is the connection between their business models for sustainability in the workplace and the actions of their employees outside of work, since employees have an equal amount of impact collectively when they leave the workplace.

There are some groundbreaking employers, who are beginning to grasp that their same enlightenment about triple-bottom-line opportunities in the workplace should be extended to the

\(^1\) ISO promotes the voluntary energy management framework, ISO 50001, for organizations to improve their energy performance.
employees who work for them\textsuperscript{2}. In fact, these progressive employers are providing innovative benefits that introduce energy efficiency opportunities to their employees that are very similar to the motivations employers had with war-induced wage freezes in the 1940s. Today, in a post-recession era when raises are minimal, if at all, employers view offering an energy benefit as leveraging paychecks further for a fraction of the cost of raises. For example, in the Clinton Climate Initiative’s HEAL program (described in the next section), the average utility bill savings of an Arkansas Children’s Hospital employee is projected to be $447 annually for a one-time cost to the employer of $500. Since energy savings from the installed measures persist for years, the $447 in estimated energy savings is equivalent to an average salary increase of 1.44%. To achieve the same impact through a pay increase, additional after-tax income of $447 would cost the hospital $644.33 annually (including the employer paid tax contributions and benefits) compared to HEAL’s the one-time cost of $500 (Home Energy Affordability Loan Program 2014).

The following examples will dive deeper into employer motivations, how these new benefits are taking steps to create scale for residential energy retrofits through the workplace, and how the interest in these benefits set the stage for a tax-advantaged energy benefit.

The Clinton Climate Initiative’s HEAL Program

In 2008, the owners of a small shoe factory in Wynne, Arkansas were faced with restarting a failing business when the US economy was lagging. They were struggling to find new means of attracting and retaining employees. They decided, as did their forebears during the Second World War, to think outside the box. After undertaking a modest commercial energy retrofit, the owners loaned their energy savings to their employees, who (through the HEAL concierge delivery process) used the funds to retrofit their own homes, retiring the debt through payroll deduction. The result was a timely benefit program, the first in the nation to be targeted at home energy conservation.

That program, called HEAL (Home Energy Affordability Loan), is one of several initiatives run today by the Clinton Climate Initiative (CCI). Its director is Martha Jane Murray, a former architect and LEED pioneer, who also happens to be one of the owners of the shoe factory mentioned above (the other is her husband, Neil Munro). Today, HEAL is hoping to follow the same trajectory as did health insurance and 401(k) plans in the past century, and the organization now has active programs in the states of Arkansas, Vermont, Michigan, Wisconsin, North Carolina, California, and will soon offer a statewide program in Rhode Island. With successful employer participants such as L’Oreal USA, University of Arkansas Medical Sciences, and Johnson Controls, Inc., CCI sees a clear and growing interest in providing employees with energy efficiency resources as a wise response to economic recovery from the recent recession, as well as an effective way to help combat climate change.

A focus on the employee’s financial returns from energy efficiency improvements—along with an obligation, as a benefit provider, to facilitate and verify each retrofit—are key elements of the HEAL benefit. The model aims to remove market barriers that prevent residential customers from participating, such as difficulty navigating energy efficiency

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\textsuperscript{2} The Vermont Energy Investment Corporation offers a Sustainable Energy Investment (SEI) benefit to its employees, and employers offering the Clinton Climate Initiative’s HEAL program, such as the University of Arkansas Medical Sciences and Johnson Controls, are examples of employers who offer energy benefits to their employees. The VEIC and HEAL programs are described further in this paper.
program pathways, contractor vetting and pricing agreements, and making financing available to complete projects. CCI has been able to deliver an aggregate return-on-investment of 22% to its employee-participants, a rate that the DOW Industrial Average has bested only nine times in the past thirty-five years, and they attribute this success to focusing on the employee’s pocketbook, and holding contractors to a tight bidding protocol.

Vermont Energy Investment Corporation Case Study

Vermont Energy Investment Corporation (VEIC), a non-profit dedicated to reducing the environmental and economic costs of energy, has provided its employees with a Sustainable Energy Investment (SEI) benefit for the past several years. VEIC does this because it believes in the importance of “walking the talk”, and has established aggressive corporate goals for per employee greenhouse gas reductions, so it provides this benefit as a means to help them achieve those goals.3

VEIC’s SEI benefit provides employees with a household-specific emissions profile generated by an annual greenhouse gas survey that benchmarks employees against other VEIC households, Vermont households, and the average U.S. household in the areas of commuting and other travel, household energy consumption, food, and waste disposal. VEIC also provides employees with financial incentives towards approved energy efficiency and renewable energy investments. Between 2007 and 2013, that amount was $300 per employee per year, plus a one-time reimbursement for a home performance energy audit of up to $500.4 In 2014, VEIC gave employees the choice of adding another $750 to their SEI benefit5, bringing the total possible amount to $1,050 per year, and this amount can be accrued for up to five years in order to support higher cost projects. VEIC determines eligible expense categories and percentages of the investments that are reimbursable. For example, expenses tied to a home performance upgrade are 100% reimbursable, purchases of ENERGY STAR products and appliances are reimbursable up to 50%, and purchases of new or used efficient vehicles (minimum 31.2 MPG) are reimbursable up to 25%.

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3 VEIC’s goal is to reduce the average per-employee greenhouse gas footprint by 50% compared to the 2007 per-employee average (www.veic.org/company/our-story).
4 The energy audit benefit is paid upon completion of home performance work (i.e., insulation, air sealing and HVAC improvements).
5 Employees can choose annually whether to apply the additional $750 to the SEI, education, or wellness benefits.
Other Vermont employers offer their own sets of “home grown” sustainability benefits to their employees. In May, 2013, VEIC participated in a panel discussion of such benefits and panelists included a wide range of Vermont based businesses – from a local solar energy company to a national financial services company.6

**VEIC & HEAL Results**

As of the end of 2013, VEIC’s SEI benefit has helped to reduce per-employee emissions by 20% against a 2007 baseline, and 2013 per-employee emissions were 13.5% below 2012 emissions (Pollack 2014). In 2013, 83% of VEIC employees participated in the greenhouse gas survey and 50 employees, or approximately 17% of staff, were reimbursed for SEI-eligible expenses (Nichols 2014). At this time, VEIC’s method of measuring and tracking employee emissions reductions is solely through the greenhouse gas survey, although they are beginning to develop a system that would track the impacts and returns of the SEI benefit at the employee and company level.7

Working with multiple employers, CCI has documented a varying range of results over the five years of active HEAL pilot programs in Arkansas, and programs in six additional states around the U.S. CCI’s experiences attest to the complications of providing an equitable energy benefit at the place of employment when employees live in areas served by multiple utilities—including investor owned utilities, municipally-owned utilities and electric cooperatives—that have a wide range of energy incentives, or none at all. For example, at a single company, one employee’s utility service provider may offer financial assistance towards an energy audit, while another employee who lives in a different utility service territory may get no assistance. This is a barrier that can adversely impact participation rates. Likewise, when examining the same two employees’ experiences, the cost for the upgrade will be higher for the employee whose utility doesn’t provide incentives, and therefore the pay back will be longer.8

Depending on the influence of the factors identified above, CCI has found that 30-80% of employees who complete the energy assessment go on to install comprehensive home energy improvements, with the higher participation rates occurring in cases where assessments are provided at no upfront cost, employees have the most lenient underwriting for loans, loans are offered through payroll deductions, and/or in areas that have robust utility incentives (Home Energy Affordability Loan Program 2013).

The HEAL program in Arkansas is focused on the energy measures listed in Table 1 below, with outcomes also detailed from participating employers, the city of Little Rock and the University of Arkansas Medical Sciences in 2011-12.

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6 Vermont Businesses for Social Responsibility’s 2013 Spring Conference, May 14, 2013, University of Vermont, Burlington, VT.

7 Co-author, Nicholas Lange, supports the design and administration of VEIC’s SEI benefit and provided this information for the paper.

8 Co-author, Martha Jane Murray, is CCI’s HEAL Program Manager and provided this information for the paper.
Table 1. Average costs, incentives, and savings of Arkansas HEAL programs 2011-2012

<table>
<thead>
<tr>
<th></th>
<th>Average Improvement Cost</th>
<th>Average Electric Incentive ($)</th>
<th>Average Gas Incentive ($)</th>
<th>Average Annual Energy Savings (MBtu)</th>
<th>Average Annual Savings ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Seal</td>
<td>$ 722</td>
<td>$ 203</td>
<td>$ 256</td>
<td>6.25</td>
<td>$ 99</td>
</tr>
<tr>
<td>Duct Seal</td>
<td>$ 842</td>
<td>$ 460</td>
<td>$ 104</td>
<td>5.25</td>
<td>$ 131</td>
</tr>
<tr>
<td>Insulation</td>
<td>$ 1,366</td>
<td>$ 356</td>
<td>$ 451</td>
<td>11.87</td>
<td>$ 205</td>
</tr>
<tr>
<td>All Core</td>
<td>$ 2,930</td>
<td>$ 1,019</td>
<td>$ 811</td>
<td>23.37</td>
<td>$ 435</td>
</tr>
</tbody>
</table>

Source: Home Energy Affordability Loan Program 2013

Companies that offer the HEAL program, as well as VEIC, and all other companies that provide benefits to their employees aimed at helping them increase their sustainability through energy efficiency and renewable energy investments, do so without any special tax advantages to the company or the employees. The impact of these employer provided benefits could be much greater, both in the number of participating employers and the level to which employees participate, if a new class of tax-advantaged fringe benefits was allowed to support these activities.

The Energy Savings Account

Precedent and Design

Engaging and enabling employees to invest in energy efficiency and renewable energy through tax-free savings plans could help to scale such investments, just as the benefits framework has helped to scale investments in retirement planning and health care expenses, as discussed above. The model we propose is derived from Flexible Spending Accounts (FSAs). There are currently two types of FSAs – a health care FSA and a dependent care FSA. Each of these types of tax free accounts allow employees to deduct an amount from their pay without any tax withholdings, and place it into an account to pay for qualifying health and dependent care expenses. Employers may also contribute to their employees’ accounts and that amount is also not included in the employee’s taxable wages. In addition to the tax benefits of such accounts, they encourage individuals to thoughtfully plan for the necessary expenses of maintaining one’s health and caring for dependents. And when they are used for necessary expenses, they save participants money. A presentation by the Society for Human Resource Management shows sample scenarios of individuals in two different tax brackets with equivalent bi-weekly spending on health and dependent care expenses, and the take home pay in both scenarios was at least $100 greater with the pre-tax deduction than paying those expenses after taxes (Society for Human Resource Management 2013).

We propose that adding sustainable energy investments as a class of tax free benefits would encourage more individuals to see energy efficiency and renewable energy investments as necessary and important investments, just like health and child care. The argument for supporting revisions to the tax code to allow these investments to be made on a tax free basis is straightforward: like health and child care, efficiency and renewable energy investments provide economic and societal benefits, such as lower costs of energy, increased discretionary income, job creation and environmental benefits.

Many of the systems needed to support tax free energy efficiency and renewable energy investments already exist. An Energy Savings Account (ESA) could be administered in a similar way to HSAs and FSAs, even by the same companies employers hire to manage these programs, by identifying a list of energy efficiency and renewable energy expenses that qualify for...
reimbursement through the account. As with health expense reimbursements, these lists would need to be updated annually to accommodate the changing energy efficiency and renewable energy landscape. And the lists should be created and maintained by energy efficiency and renewable energy experts, and include climate zone-specific eligible expenses. Experts at the Department of Energy or the National Labs would be well suited to developing and maintaining these eligible measure lists. The ESA design should enable the greatest amount of flexibility in updating eligible expenses by these established experts, and incorporating this into tax code should alleviate the need for “an act of Congress” to change specific qualifying measures, which would be unwieldy in today’s ever-changing efficiency and renewable energy market. Other elements which should be considered in the design of an ESA are:

- Account maximums should be set to accommodate the average costs of energy improvements in homes. While some households may only purchase an efficient appliance one year, they may decide to air seal and insulate their home the next, upgrade their HVAC system the next, and install solar panels the next! Enabling on-going incremental investment in energy efficiency and renewable energy is showing great promise as it meets individuals where they are, but supports them in going the extra step of incorporating efficiency and renewables into their home improvement plans.
- Allow carryover of unused balances so long as the account balance does not exceed the maximum. FSAs are traditionally “use it or lose it” plans, but some HSAs allow for rollover of unused balances (Internal Revenue Service 2013). As stated above, energy improvements can cost many thousands of dollars, and so first-cost barriers are dominant for many households. Allowing carryover of unused balances supports on-going investment in energy improvements, as well as supporting loan repayments on eligible expenses. We could imagine a much more robust market for energy lending growing out of federal support for tax free ESAs.9

There will be costs to providing a new tax free savings account, but they could largely be offset by a number of factors. First, tax credits for energy efficiency and renewables could be streamlined, and participants in an ESA would have to reduce the amount of qualifying expenses reported on their tax return by however much their ESA contributed. Precedent for this exists with dependent care expenses reimbursed through FSAs and the amount of eligible dependent care expenses a household can claim on their federal taxes (Internal Revenue Service 2011).

Second, such costs can be counterbalanced by the overall economic and societal benefits of supporting energy improvements. Investing in energy efficiency and renewable energy provides a host of non-energy benefits that would mitigate the cost of ESAs. For example, it is widely accepted that efficiency and renewables investments benefit local economies (Mackres 2012). While some energy improvement products may be made overseas, the purchase and installation of these materials primarily happens locally, supporting local business and economic growth. There are also other non-energy benefits that lead to reduced costs, such as improved health and pollution mitigation. Though not addressed in this report, we suspect that a comprehensive review of the costs and benefits of providing tax free ESAs would weigh heavily in favor of the benefits.

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9 As mentioned above, there are companies that specialize in managing these types of benefits (HSAs and FSAs) for employers, and they are necessary to reduce the complexity both for employers offering the benefit as well as for employees taking advantage of it.
Additional Precedent

In addition to HSAs and FSAs there are a number of other tax free investments that serve as precedent for our proposal. These examples lay a strong foundation for ESA consideration:

- **Educational Investments**: 529 plans encourage saving for future higher education expenses. Operated by state offices or non-profit organizations, plans offer a variety of investment allocation options that grow tax-free for qualified disbursement at a later date (26 U.S. Code § 529).
- **Retirement**: Retirement Savings Accounts (e.g. 401k) permit tax-free individual and employer contributions to savings accounts. Interest earned is also tax-free and account balances may only be drawn upon without penalty after retirement age is reached (26 U.S. Code § 401).
- **Transportation**: Employers may provide a certain amount of tax free transportation benefits to their employees for things such as mass transit passes, qualified parking expenses, and qualified bicycle commuting reimbursement (26 U.S. Code § 132).

Support for sustainability investments has also been implemented through the federal tax code in the form of tax credits. But these policies may not be as effective as tax free savings accounts in changing the way people incorporate sustainability investments in their long-term planning because they are time-bound by the legislation. Furthermore, the savings associated with tax credits aren’t realized until the individual files their taxes and claims the credit, which may make such investments less appealing some households. Finally, it seems likely that utilizing an employer-sponsored benefit model could better complement existing utility and weatherization programs by providing more robust channels for engagement compared to the federal tax credits model.

Conclusions

Much like buying health insurance and saving for retirement and higher education, the personal and social economics of energy efficiency and renewable energy investments are strong; however, the rate of participation in these programs has been relatively low. Our research, and the successes shown in the HEAL and VEIC case studies, indicate that employee benefits programs can successfully stimulate a large proportion of employees to make investments into sustainable energy. The returns from these types of investments are significant and well-established for both the individual, by lowering costs and improving energy services, and also to society, through economic activity, and environmental and health benefits.

The examples we’ve researched illustrate the potential for a new approach to tax policy support for energy investments that could build on the same employer-employee benefit relationship that has successfully driven mainstream participation in individual health and retirement plans. By extending the familiar and well-established mechanisms of tax-advantaged individual spending accounts into energy efficiency and renewable energy investments, a market for sustainability benefits programs could grow and serve businesses of all sizes, across the

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10 For example, the American Recovery and Reinvestment Act of 2009 contained several provisions for tax credits on qualifying energy efficiency and renewable energy home improvements, but those tax credits have expiration dates and Congress must approve extensions of them.
country. And utility-sponsored energy efficiency and renewable energy programs would have a new channel through which to reach their customers and engage them to participate.

A comprehensive review of the net economic and societal impacts is required to advance more effective and enduring policies that support tax free energy efficiency and renewable energy investments. Making the case for ESAs will require a thorough review and evaluation of the full costs and benefits of different policy scenarios. Given the opportunity for catalyzing more effective and enduring mainstream investments in energy efficiency and renewable energy that we have identified in this paper, we strongly encourage key energy-policy stakeholders to consider research into the feasibility and impact of creating a new class of tax free savings accounts for energy efficiency and renewable energy investments.

Assuming such an analysis demonstrates that the benefits of such an approach would clearly outweigh the costs, the next step would be to develop and implement revisions to the tax code enabling ESAs. The design of ESAs should recognize the costs associated with energy improvements and support appropriate investments according to climate zone. Like updates to eligible health expenses, allowable expenses for ESAs should be developed by national experts and updated regularly to account for changing technologies and best practices.

Providing employees with the tools and resources necessary to invest in energy efficiency and renewable energy through tax-free savings plans could help to scale such investments, with tremendous benefits to the economy and society. Using the precedent set by the creation of tax-advantaged status for retirement, health, education and transportation benefits, policies that allow for tax-free saving plans for energy efficiency and renewable energy should be developed because they also support the economic and societal goals of the country. The framework for ESAs that we propose in this paper would provide a long-term, market-based foundation for individuals to invest in sustainable energy, and would help overcome the many barriers that currently exist to such individual action.

References

26 U.S. Code § 132 (Cornell University Law School)
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26 U.S. Code § 401 (Cornell University Law School)
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http://www.law.cornell.edu/uscode/text/26/529


