

Summary: Tax-exempt status for bonds used to finance energy efficiency related retrofits (efficiency and small renewable) will result in:

- **More net tax dollars for the US Treasury**
- **Meaningful job creation**
- **Progress towards energy independence for our nation**
- **A material reduction in greenhouse gas emissions**

Cost Benefit Summary:

	Year 1	Year 5
Reduced tax revenues from tax-exempt Bonds	\$1.2 million p.a.	\$12 million p.a.
Increase in tax revenues from job creation	\$175 million p.a.	\$1.75 billion p.a.
Jobs created	20,000 total	200,000 total
Energy savings	\$200 million p.a.	\$2 billion p.a.
Greenhouse gas reduction (estimate)	20%	20% (could equal 30+ coal plants taken off line)

Government Action: Recognition in the IRC that energy efficiency and renewable energy improvement loans (“PACE bonds”) fit the definition of a governmental purpose, and therefore should receive Federal Tax-exempt status and be exempt from individual loan amount caps and household income limits. See <http://pacenow.org/> website for more on PACE.

Government Purpose: PACE bonds are issued by special municipal districts and the proceeds are used to finance energy retrofits by homeowners and other property owners. The benefits serve major public purposes in the forms of reduced energy bills, increased energy independence and a reduction in greenhouse gas emissions. The bond issues also lead to major job creation. Given the above benefits, PACE bonds should be receive Federal tax-exempt status even though they can be considered Private Activity Bonds (“PAB”s). The ultimate cost to the U.S. government is very low, see below, and the benefits are very large.



Cost/Benefit Analysis:

1. **Cost:** Currently the PACE bond market (less than \$20 million in issuance) is nascent so that there is virtually no cost going from taxable to tax-exempt. The PACE market, however, with proper incentives such as tax exemption could grow to initially be \$1 billion plus in annual issuance and over time could reach \$10 billion per year if the market truly developed. The cost of lost taxes to the US Treasury would be on the low end virtually zero because one could argue that unless the bonds are tax-exempt the issuances will not happen. On the high end, we assume that of the PACE bonds that are issued only 1/10th of them replace a taxable bond issuance. In essence, we assume the tax-exempt status grows the appetite for these bonds ten fold (Note: The tax-exempt muni bond market is more than twenty times the size of the tax-exempt market but we are using ten times for conservatism).

Reduced Tax Revenues to US Treasury from PACE Tax-Exempt Status

<u>Low End</u>	<u>High End (1)</u>
De minimis	\$1 billion in annual issuance year 1: \$1.2 million lost tax revenue per year \$10 billion in annual issuance year 5: \$12 million lost tax revenue per year (assumes 5 years to scale to this size)

2. **Benefits:**
- a. Job creation: 20,000 new jobs in year 1 growing to 200,000 jobs created by year 5 (2)
 - b. Tax revenue from job creation: \$175 million in year 1 growing to \$1.75 billion by year 5 (3)
 - c. Energy savings & Energy independence - \$200 million in energy savings in year 1 growing to \$2 billion per year by year 5 (4)
 - d. Reduction in greenhouse gas emissions – Based upon national average building fuel mixes and electricity emission factors, the greenhouse gases avoided as a result of this program would reach 142 million metric tons of carbon dioxide – the equivalent of 31 coal-fired power plants (5)

Footnotes:

1. Assumptions: Year 1 - \$1 billion issuance x 4% bond interest rate x 30% federal tax rate = \$12 million x 10% (tax-exempt bonds that replace taxables) = \$1.2 million.
 Year 5 - \$10 billion issuance x 4% bond interest rate x 30% federal tax rate = \$120 million x 10% (tax-exempt bonds that replace taxables) = \$12 million.
2. Assumptions: Based upon estimate that every million dollars of energy efficiency investments results in 5 direct, 5 indirect and 10 induced jobs (source: construction industry economic multipliers generated by the Regional Input-Output Modeling system (RIMS) from the Bureau of Economic Analysis, a bureau of the US Department of Commerce.
3. Assumptions: 70% of annual bond issuance is salaries and average federal tax rate is 25%.
4. Assumptions: 5 year average payback for efficiency investments.
5. Source: Johnson Controls analysis prepared for PACE working group meeting, May 2009.