

# Applying Clean Tax Cuts to Green Bonds

*Charrette Design Workshop: March 6, 2017*

**Hosted by:**

*Grace Richardson Foundation*

*Sabin Center for Climate Change Law, Columbia University*

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**The Grace Richardson Fund**  
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## Table of Contents

<b>Executive Summary – Clean Tax Cuts and Green Bonds</b> .....	<b>3</b>
<b>Clean Tax Cuts Development Process So Far</b> .....	<b>3</b>
<b>Defining Clean Tax Cuts</b> .....	<b>4</b>
1.    CLEAN: measurement and impact.....	4
2.    TAX: regulatory framework and targets for reduction.....	5
3.    CUTS: implementing mechanism and logistics.....	5
<b>Applying CTC Methods to Green Bonds</b> .....	<b>6</b>
<b>Specific Green Bond Charrette Questions</b> .....	<b>7</b>
1.    CLEAN: measurement and impact.....	7
2.    TAX: regulatory framework and targets for reduction.....	8
3.    CUTS: implementing mechanism and logistics.....	8
<b>Charrette Goals and Outcomes</b> .....	<b>10</b>
<b>Annex I: Straw proposals, variations and suggestions for discussion</b> .....	<b>11</b>
<b>Annex II: Supporting Articles</b> .....	<b>13</b>
<b>Annex III: Relevant organizations and standards</b> .....	<b>14</b>
<b>Annex IV: Clean Tax Cuts and the GOP “Better Way” Blueprint</b> .....	<b>15</b>
Implications for Clean Tax Cuts.....	16
<b>References</b> .....	<b>18</b>

## Executive Summary – Clean Tax Cuts and Green Bonds

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Clean Tax Cuts (CTCs) is a new class of policy proposal designed to stimulate investment in clean technologies and solutions by reducing taxes on initiatives that deploy them. It provides a framework to align conservative and progressive interests on energy, environmental protection, and economic growth. CTC has the potential to encourage significant investment in clean technologies and solutions by shifting away from the current emphasis on clean technology tax credit subsidies to reduced taxes on capital returns.

This paper provides the technical background for a design charrette that will apply CTC principles to green bonds. Green bonds are an emerging class of financial tools intended to encourage investment in clean solutions and technologies. Although the standards and definitions are still being established, this designation helps reduce the costs of matching interested buyer and sellers and improves the likelihood that investments will occur.

CTC tools for green bonds will target taxes paid on investment income of these bonds, thereby reducing the cost of financial capital vital to clean technology investments. The goal of the upcoming design charrette will be to bring together leading thinkers in the fields of CTCs and green bonds to explore policy design with the highest likelihood of success and impact.

## Clean Tax Cuts Development Process So Far

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In September 2016, 35 non-partisan experts in economics, public policy, climate and finance convened at the invitation of Grace Richardson Fund (GRF), Rocky Mountain Institute, and the Sabin Center for Climate Change Law at Columbia University. The group explored the general feasibility and potential impact of clean tax cuts (CTC), and identified target sectors for follow-up charrettes. Details can be found in the [GRF Clean Tax Cuts Charrette Report](#).

The CTC Green Bond Charrette at Columbia on March 6, 2017, is one of seven sector-specific charrettes proceeding across the country leading up to Earth Day 2017. So far, twelve organizations in the CTC working group have stepped forward to co-convene seven new sector-specific CTC charrettes in March and April. The goal of each sector charrette is to identify the simplest and best opportunities to apply CTC for the most impact in each sector, and design practical implementation plans accordingly. The results will be presented at Earth Day Texas and the Smithsonian simultaneously in April, 2017, in discussion with federal legislators and policymakers.

The sectors selected are: green bonds, power, transportation, clean tech, real estate, oil & gas, and agriculture/forestry/land-use. Dates, locations and sponsors are listed below.

- **Green bonds.** Columbia University CTC Working Group: Energy & Environment, SIPA; Sabin Center for Climate Change Law, *New York - March 6*.
- **Commercial real estate.** The American Council for an Energy Efficient Economy, *Washington, DC - March 23*
- **Agriculture, forestry and other land use.** The Nature Conservancy, Rodale Institute, *Washington, DC - April 3*
- **Transportation.** R Street Institute, *Washington, DC - April 4 (subject to change)*

- **Oil & gas.** One Step In Foundation, Getches-Wilkinson Center for Natural Resources, Energy, and the Environment at the University of Colorado School of Law, *Boulder, CO - April 8 - 9*
- **Power Sector.** American Renewable Energy Institute (AREI), *Aspen, CO - March 21*
- **Clean technology.** Arizona State University (ASU), LightWorks, Center for Negative Carbon Emissions - *Arizona, date TBD*

## Defining Clean Tax Cuts

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As originally formulated, “clean tax cuts” has a four guiding principles:

- (1) The objective is to reduce waste, inefficiency, and negative externalities impacting public health and the environment, whether arising from government policy or business practice, by accelerating clean solutions in the most efficient, profitable possible way.
- (2) The proposed mechanism is adoption of simple tax rate cuts on capital returns from investment in clean solutions, in lieu of current tax credit price support mechanisms and other inefficient policies rooted in the outdated assumption that clean solutions must be unprofitable. Other taxes may be considered if they offer a point of leverage.
- (3) The approach focuses on harnessing positive, rather than negative, feedback loops — rewarding good behavior instead of punishing bad behavior.
- (4) CTC picks metrics, not winners and losers. Selection and reporting criteria should rely on simple metrics that are technologically neutral, broadly applicable, and translate to maximum impact.

Designing effective sector-specific CTC interventions or policy programs requires additional precision on each of the components, including: 1) CLEAN: what defines cleanliness for the purpose of qualification in each sector? 2) TAX: which taxes will be specifically targeted in that sector? 3) CUTS: how the targeted taxes will be cut, by how much, using what yardstick(s) to reward impact? Each of the three components is discussed in general terms below.

### 1. CLEAN: measurement and impact

The “clean” in “clean tax cuts” means: “Free of, or significantly reducing, waste, inefficiency and negative externalities harming health, environment and general wellbeing.” The metrics used to evaluate levels of clean have not been defined yet; this will be a key challenge for CTC charrette participants. [SASB analyst David Parham suggests using industry-specific metrics](#) to keep disclosure material, cost effective, and decision-useful for companies and investors.

For instance, SASB finds: GHG emissions data is material to 23 of 79 industries; energy management is likely to be material for 37 of the 79 industries; and fuel management is likely to be material for 15 of the 79 industries for which Sustainability Accounting Standards were developed. Other sectors, such as agriculture, may find metrics like biodiversity conservation, water quality and efficiency better measure and reflect performance. The [SASB Materiality Map](#)<sup>TM</sup> gives a good overview of issues that are likely to be material by sector.

There are already several reporting mechanisms, performance metrics, and standards tailored to sectors, which should be considered and leveraged where appropriate. Credible resources have been developed by groups that include SASB, CICERO, WRI, CERES, SustainAbility, Climate Bonds Initiative, CDP, Science-Based Targets, Energy Star and LEED. Currently, over 5,600 companies, 533 cities and 827 investors, together worth USD \$100 trillion, voluntarily report their GHG accounting data to a publicly available database maintained by CDP, formerly the Carbon Disclosure Project. In the building sector, the EPA's internationally adopted Energy Star Program, or alternatively, the U.S. Green Business Council's widely used LEED Certification ratings, measure efficiency and sustainability for homes, buildings, industrial plants and consumer products. Moody's and S&P Global's Trucost offer green bond ratings or impact analysis.

## *2. TAX: regulatory framework and targets for reduction*

Although there are several ways to frame the approach, which include income taxes, labor taxes, and investment taxes, among others, targeting the taxes that investors pay on debt and equity may offer the most promising route. Reducing the taxes paid on capital gains promises to accelerate investment in clean solutions by driving down both cost of capital and cost of output, thereby simultaneously increasing both supply and demand for clean solutions. These taxes offer an attractive policy arbitrage opportunity: by replacing policies that have dynamic loss characteristics with policies that have dynamic growth characteristics — the investments can help pay for themselves.

Investment taxes also offer a more consistent impact channel, less subject to the wide array of tax breaks that make corporate and individual income tax rates vary widely from one taxpayer to another. In some sectors, it may well be that clean tax cuts could target other more impactful taxes, such as property, payroll or other income taxes, but the effects on cost of capital, economic growth, and acceleration of targeted clean solutions would vary and will need to be closely analyzed to insure that cutting these tax rates delivers the desired impact cost effectively.

This begs the question: If capital tax rate cuts give the best dynamic growth effects, why cut other tax rates instead? It may be that in some sectors, key stakeholders do not pay significant capital taxes. Farmers, for instance, frequently do not show a profit. So to reward sustainable agricultural practice, CTC developers must either look for taxes that farmers do pay (i.e. property taxes) or look for other influential stakeholders who do make a profit (banks, agribusiness suppliers and equipment manufacturers).

## *3. CUTS: implementing mechanism and logistics*

Finally, how the targeted taxes should be cut is a key operational consideration and will play a role in the effectiveness of any program. This includes the mechanism by which the tax benefits accrue to the people or entities involved in the clean technology deployment decision, as well as the specific mechanism for determining when the tax reduction is due and the verification that the threshold has been met. CTC developers must also consider how the proposal will be paid for and at what level – city, state, or federal — as well as how to handle potential barriers.

## Applying CTC Methods to Green Bonds

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Why Green Bonds. Green bonds have already proven to be an effective investment instrument for channeling investor funds into clean technologies. They represent a burgeoning market that has seen dramatic growth in since their debut in 2007. Climate Bonds Initiative reported a total issuance of \$2-3 billion in 2012.<sup>i</sup> By contrast, the global value of green bonds issued last year rose to a record \$93 billion, up over 120 percent from 2015's \$41.8 Billion. Moody's Investor Services suggests that green bond issues could more than double again in 2017, to \$206 billion.<sup>ii</sup>

Applying CTC to Green Bonds will have three interrelated impacts:

1. it will lower the cost of capital for green bonds, thereby increasing ROI, and increasing issuance and flow of capital;
2. by lowering weighted average cost of capital (WACC) by a modest amount, the levelized cost of delivering the output of that asset falls. This means that the investors are not only getting tax abatement, but they are creating the conditions that drive down the cost of clean solutions directly.
3. Therefore, CTC increases the supply of clean solution investment opportunities and the demand for them simultaneously. The increased flow of capital to green bonds will translate into accelerated deployment of clean technologies and lower overall emissions.

Using strategies similar to municipal bond tax abatement for interest and dividend income from approved investments, CTC for green bonds will lower the cost of capital for investors. Because the target technologies and initiatives are typically capital intensive, lowering the cost of capital significantly lowers the levelized cost of production, be it electricity, lumber, water, or fish. Lowering cost of capital for renewable energy is important because an estimated 50-70% of costs of electricity generation are in the financial cost of capital.<sup>iii</sup> Cheaper solutions will open up larger potential investor markets, and hasten progress towards emissions reductions commitments and environmental impact. Simultaneously, lower taxes and energy prices will stimulate overall economic growth.

How Green Bonds work. Green bonds are like regular bonds with an added commitment to funding products, assets, or business activities that are considered good for society and/or the environment. They are fixed income financial instruments used to raise capital from the debt capital market that emerged as a self-labeled voluntary market in 2007. By 2015, the "climate bond market" was valued at USD \$600 billion and an ecosystem of standards, assurance providers, and 3rd party verifiers emerged.

In 2014, a group of financial institutions called the International Capital Market Association wrote the "Green Bond Principles" to provide a basic framework and taxonomy for the emerging market. In 2015, Ceres issued a Statement of Investor Expectations for Green Bonds to provide additional clarity around project eligibility, transparency and disclosure from an investor perspective. Also in 2015, the Center for International Climate Research (CICERO) induced a grading scale for green bond frameworks, called Shades of Green. The grading scale was designed to give investors a clear impact signal: long-term climate solutions that contribute to a low-carbon future are marked dark green; light green represents short-term improvement.

The green bond market is still a voluntary one that does not require application of or adherence to these or any standards or certifications. The lack of standards is a concern for market

stakeholders because it potentially threatens the integrity of the market and invites green washing. However, stakeholders fear that requiring – and enforcing – compliance with standards may slow the rapid pace of growth of the market. Many existing bonds could potentially qualify as “green” but have not been voluntarily labeled; HSCB estimates that of \$30.3 billion in municipal bonds issued between 2014 and 2016 that met its green standard, only \$10.9 billion-worth were labeled green.<sup>iv</sup> CTC application to Green Bonds would encourage issuers of the other two thirds to label qualifying bonds as green.

## Specific Green Bond Charrette Questions

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In contrast to many of the CTC Charrettes that are technology or sector specific, the application of CTC to green bonds is more flexible and open to accommodate many facets of clean solution deployment. Using this cross-sector applicability as an opportunity to establish a common foundation of what is meant by “clean” will be helpful. What is more constrained in applying CTCs to green bonds is the range of taxes that can reasonably be targeted – specifically only those appropriate to investment of financial capital for developing or deploying clean solutions, such as investment income taxes.

### *1. CLEAN: measurement and impact*

The following questions can be used to guide discussions and structuring proposals for evaluation criteria and metrics.

- How is “clean” defined for qualification of CTC? Will qualification be linked to emissions? Are there other metrics?
- If “clean” qualification is limited to emissions, will the metric used be performance-based or a threshold? And will the metric used be at the application stage or post-implementation, or both?
  - If a threshold, how will it be set and by whom? Will the threshold increase over time to challenge issuers to increase performance?
  - If performance based, will it be compared against its own baseline over time, against industry peers or indices, against city or corporate targets for emissions reduction, or against science-based targets?
- Will the reporting emissions metric represent current or expect life emissions of the funded project or initiative? Which scopes will be included (1, 2, and/or 3)?
- Verification of green bonds can be a qualitative process that includes a subjective assessment of whether the bond falls into one of 4-8 categories and whether it provides an environmental or social good; will CTC require this external verification?
- CTC for green bonds may encourage issuers to label bonds that qualify as green; however, there is a risk that issuers may label bonds that do not qualify as green to gain the tax benefit (i.e. “green washing”). How should the CTC be administered to encourage issuance of green bonds without compromising the integrity of the market? Should new governance structures be considered?

- There are several standards for green bonds: will CTC endorse or require adherence to one (e.g. the Green Bond Principles) over others?
- The question of additionality remains unanswered for the green bond market; will CTC seek to reward additionality at a higher rate?
- Do the current market participants' methods for external verification (Moody's, Trucost and S&P ratings, CICERO's "Second Opinions" or SASB Standards, etc.,) accurately measure and score what is clean, green and sustainable? Are any inadequate?
- How might we qualify green bonds so they impact-fully earn CTC rate reduction, using existing market participant analysis and verification?

## *2. TAX: regulatory framework and targets for reduction*

As mentioned above, the range of taxes that CTCs can target with respect to green bonds is limited to the taxes incurred in their use. These are largely, though perhaps not exclusively, taxes related to the investment income of green bonds. Such taxes are most likely those that accrue to the gains on investments in the form of interest payments, dividends, or possibly capital gains.

Analogues to these programs do exist, however. One such analogue is tax-exempt municipal bonds, where the investment income on these specially-designated bonds is exempt from federal (and in some cases state) income taxes for investors. The size of this market is over \$450 billion and is estimated to provide 80% of net new US infrastructure investment each year.<sup>v</sup> Mirroring this success, and understanding potential impact, would help to ease the rollout of CTCs for green bonds.

- What economic and environmental impact can we expect from cutting these taxes for green bonds? Can we model this?
- Should we consider state and local as well as federal taxes? International taxes? What would it take to make green bonds triple-tax-free (or triple-tax-reduced)?
- Should we consider GOP "Better Way" tax proposals, as a guide to what relevant capital taxes may look like in the near future, in order to better align CTC with these plans? Does "Better Way" contain any economic modeling assumptions that we can use in modeling CTC, that will have inherent credibility with GOP legislators? (Thanks to Bert Hunter for this suggestion!)
- If we can reliably qualify green bonds for CTC tax rate reduction, can we use green bond qualification to also qualify the equity side of these investments for the same degree of capital tax rate reduction?

## *3. CUTS: implementing mechanism and logistics*

First, a designated reduction in the anticipated tax must be established, as well as a legislative authority. The legislative authority will determine the scope of taxes affected, who is allowed to use the CTCs, and the degree to which taxes will be reduced – which could range from negligible to a complete tax abatement on the affected taxes. (Proposals theoretically could even qualify for credits beyond the taxable value of bonds, if so desired. These would then be transferrable to reduce other tax liability.)



Second, the method of determining whether investments qualify for CTCs must be specified.

Third, approaches for financing the cost of CTC's must be determined so as not to increase federal or state deficits. Harvard professor Greg Mankiw suggests that a capital tax cut could be half self-financing from new growth by specifying a maximum affordable cut for fiscal balance and drawing from spending cuts to subsidies and regulation. For more exploratory financing proposals, see Annex I and the [GRF CTC White Paper](#) and [Charrette Report](#).

The following questions should prompt charrette workshop discussions:

- Who are the leading green bond assurance providers and verifiers?
- How can transaction costs for green bond verification – currently estimated at 4.5% - be reduced?
- Will CTC apply to all six types of green bonds (corporate, project, asset-backed, supranational/subsovereign/agency, municipal, and financial sector)?
- Will CTC apply to green bonds for international projects? If so, will there be conflicts between host-country tax codes and CTC?
- How might we qualify green bonds so they impact-fully earn CTC rate reduction, using existing market participant analysis and verification?

## Charrette Goals and Outcomes

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Feedback from these events will inform the drafting of final charrette reports in May and June. Impact modeling of CTC plans will begin during this time. Final charrette reports and ongoing research will be presented at the American Renewable Energy Institute conference in June, on the one year anniversary of the first public presentation of the CTC concept.

The goal of the CTC Green Bond charrette is to identify the low hanging fruit, the simplest and best opportunities to apply CTC for the most impact in that market, and design practical implementation plans accordingly. Plans should be specific enough so that they can be modeled for economic and environmental impact.

A successful charrette integrates a diverse range of expertise and perspectives to promote joint ownership of solutions. The general objectives of this, as with all the seven sector-specific CTC design charrettes going forward currently, is to take traditional charrette best practices and adapt them to policy design. Each charrette will accomplish the following:

- Convene CTC sector stakeholders – including finance, economics, policy, climate, and technology experts - for a 1-2 day design workshop
- Build a baseline understanding of Clean Tax Cuts
- Define what qualifies as “clean” for the sector, including details on metrics and methods used for measurement, reporting, and evaluation
- Identify the target taxes and sector investments that present the most effective low hanging fruit
- Identify barriers, opportunities, or knowledge gaps and propose solutions or follow up
- Compile conclusions into a set of draft, actionable, practical policy proposals and next steps, in the form of a sector charrette report.

The conclusions and recommendations from this and subsequent charrette workshops will be distilled into a preliminary charrette report, to be presented at the Clean Capitalism Forum and ED50/Future 500 Conference at Earth Day Texas and the Earth Optimism Forum at the Smithsonian. All charrette participants are invited to participate in either the Smithsonian or Earth Day Texas events. These events will serve as a continuation of the charrette process, an opportunity to work with participants from other charrettes to compare and integrate findings and proposals, and to collect comments and suggestions from both the concerned public and high level policy makers.

## Annex I: Straw proposals, variations and suggestions for discussion

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The following straw proposals and variations thereon are included to facilitate discussion and brainstorming. They are meant to act as a rough starting point design options for CTC implementation plans, capable of accelerating high impact investment in green bonds.

- Follow the transparency and self-reporting strategy outlined in Green Bond Principles (GBP), using a process similar to regular tax reporting and auditing. Each issuer describes the impact goals (which might trigger tax rate reduction), use of proceeds, metrics and methods used to measure results as the project progresses. Sustainability auditors sign off on the issuance and conduct subsequent annual audits of the project, which is reported to the public, the IRS and any other agency required, any of whom can challenge the audit, which must then be verified by a second mutually agreeable auditor to maintain tax favored status.
- CTC-qualified green bonds might need independent certification or rating. In this case, an independent rating agency, like Moody's or S&P Global gives a green bond rating, updated annually, which must verify stated impact goals. Top rating must be maintained to keep tax reduction. Agency should probably be compensated by the bond exchange to insure impartiality. GBP also recommends other forms of external review: consultant review, like CICERO's "second opinions"; the Climate Bonds Initiative provides climate bonds certification.
- Combining these two features, it is possible to imagine green bonds with different tax rates according to levels of both impact and external verification. For instance, bonds funding the most carbon negative energy source or technology might have a zero percent tax rate, while bonds for zero emission technologies have a tax rate half the normal tax rate. Emission associated with natural gas would have a no rate reduction. Emissions in between these points would receive proportional tax reduction. External verification might increase rate reduction.
- **Phillip Henderson, NRDC on residential real estate:** Something like 15% of new homes are Energy Star. Fannie Mae currently offers a "green bond" backed by loans secured by multifamily Energy Star properties (with no tax advantages), which could be applied to single family RMBS, and 45L offered builders a credit for building Energy Star homes.
- **Bert Hunter, CIO of CT Green Bank:** Any proposal for "Clean Tax Cuts" should dovetail with the GOP "Better Way" blueprint for tax reform. The Blueprint would allow investors to deduct half of their gains, dividends as well as interest income. Offsetting taxable income in this way effectively reduces the top rate on that income to 50% of the Blueprint's proposed individual tax brackets – so either 6%, 12.5% or 16.5%..." Bert then proposes: "...as the Blueprint would allow investors to deduct half of their gains, dividends as well as interest income, specifically permit investors in clean energy and resiliency (including obligations or other securities issued by Green Banks) to deduct an additional x% (10%, 15%...). This would apply to "Green Bonds" as well as investments in eligible "green businesses" or "green projects" where no more than (say) 10% of revenues come from non-green/resiliency activities." See Annex IV for full text.
- **Todd Cort, Yale School of Management and Yale School of Forestry and Environmental Studies on the question of 'what might qualify' for a potential tax incentive:** My argument

is for a 'middle ground' on qualification – specifically speaking about the Use of Proceeds. Our current system of second party sign off on appropriate Use of Proceeds based on taxonomy of project has not led to a great deal of confidence in the market, has not led to comparability between investible products and seems open to 'cheating'. But of course, a data-heavy method to measure potential green impact would likely chill the market due to costs. So, I think we need to move toward a data-driven approach, but a light version. I support the efforts of Moody's and S&P in applying estimates of environmental impact based on project types, but am advocating for a few key modifications/evolutions:

- Estimating net environmental impact across multiple impact areas (for example, to assess the green impact of a hydroelectric facility based on climate impacts as well as natural lands impact)
- Applying a regional filter – with the understanding that the location of a project is critical to understanding its green impact.
- Applying a value chain probability that would reduce the 'green impact' the farther the investible product is from creating the green benefit (for example a wind prediction software is several steps up the value chain from a wind turbine in place and creating clean energy)
- The [GRF CTC White Paper](#) suggests CTC's might pay for themselves, taking advantage of an attractive policy arbitrage opportunity by replacing policies that have dynamic loss characteristics with policies that have dynamic growth characteristics:
  - For fiscal balance, CTC&D specifies a maximum affordable cut limited by Harvard Prof. Greg Mankiw's suggestion that a capital tax cut is half self-financing from new growth. The other half most beneficially should come from spending cuts to subsidies and regulations. If Prof. Mankiw's back of the envelope assumptions are correct, we can afford up to \$2 clean tax cuts for every \$1 of subsidies cut, and still be self-financing from growth, with potentially 10X more new decarbonization investment. However, even if we did a very cautious ratio of \$1 tax cuts to \$1 subsidy and regulation spending cuts, we would still have a highly beneficial effect on both GDP and new decarbonization investment (potential 5X increase), with net positive revenue. So we can take a very fiscally cautious approach, matching tax cuts to spending cuts, still get a powerful GDP and CO2 benefit, and possibly even reduce the deficit.
- [GRF CTC Charrette Report](#) offers another financing option, using a carbon tax:
  - The calculation method proposed by the impact group suggested that a \$20/ton carbon tax paired with CTC plus energy subsidy elimination could have a total static impact of \$60/ton, or dynamic impact of \$80/ton (3X-4X the impact of CTC or carbon tax alone). That is so because, on a static basis, the \$20/ton carbon tax pays for \$20/ton of clean tax cuts (so that a combined \$40/ton impact), and then \$100 billion of energy subsidy cuts pays for another \$20/ton of CTC, for a total of \$60/ton static impact. On a dynamic basis, as suggested by Mankiw, the subsidy cuts allow 2X the amount of offsetting CTCs, or \$40/ton, which raises the total to \$80/ton. And note that this combination still delivers a result where there is a net reduction in taxes, spending and the size of government, so it will have appeal for some conservatives as a government reducing, growth inducing tax cut. Certainly, it would be politically easier than a straight \$80/ton carbon tax.

### *Green Bonds*

- [HSBC Green Bond Framework](#)
- CICERO: [Second Opinion on HSBC's Green Bond Framework](#)
- World Bank: [What are Green Bonds?](#)
- [CICERO: Green Bonds and Environmental Integrity – Insights from CICERO Second Opinions](#)
- [CICERO: Business as Unusual – the implications of fossil divestment and Green Bonds for financial flows, economic growth, and energy market](#)
- [CICERO: Grading Second Opinions with Shades of Green](#)
- [S&P: Green Bonds Fizz as Investors Decarbonize Portfolios](#) (video)
  - Depending on what happens in China, corporate Green Bonds could hit \$30 billion. Other factors include emerging interest from US utilities, strong investor demand, and increasing disclosure requirements. Market pricing is evolving and environmental credentials could contribute to pricing over the long term.
- [S&P: Green Bond Market Fizzes As the Global Economy Decarbonizes](#) (write up of the above)
- S&P: [Updated Proposal For A Green Bond Evaluation](#)
- [What's Next for U.S. Municipal Green Bonds?](#)
- [Green City Bonds: How to Issue a Green Muni Bond](#)

## Annex III: Relevant organizations and standards

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- [Climate Bonds Initiative](#): promotes investment in projects and assets necessary for a rapid transition to a low-carbon and climate resilient economy.
- [US Green Business Council](#): manages the LEED – or leadership in energy and environmental design – certification program for buildings and communities that guides their design, construction, operations, and maintenance toward sustainability.
- [UN Principles for Responsible Investing](#): works to understand the investment implications of environmental, social, and governance factors and to support its international network of investor signatories in incorporating these factors into their investment and ownership decisions.
- [Sustainable Accounting Standards Board](#): an independent non-profit that helps develop and disseminate sustainability accounting standards that help public corporations disclose material, decision-useful information to investors.
- [Equator Principles](#): a risk management framework, adopted by financial institutions, for determining, assessing, and managing environmental and social risk in projects that is primarily intended to provide a minimum standard for due diligence to support responsible risk decision-making.
- [Green Bond Principles](#): updated June 2016, they are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the green bond market.
- [Science Based Targets](#): partnership between CDP, UN Global Compact, WRI and WWF that helps companies determine how much they must cut emissions to prevent the worst impacts of climate change.
- [RE100](#): group of influential businesses committed to 100% renewable electricity
- [Intergovernmental Panel on Climate Change](#) is the leading international body for the assessment of climate change, established by the United Nations Environmental Program and the World Meteorological Organization in 1988 to provide the global decision makers with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts.
- [Science Based Targets](#), a partnership between CDP, UN Global Compact, WRI and WWF that helps companies determine how much they must cut emissions to prevent the worst impacts of climate change, developed the Sector Decarbonization Approach to establish methods to calculate and compare company performance on greenhouse gas emissions.

### **Bert Hunter, CT Green Bank**

It is probably best to start from the premise that tax reform is going to happen – one way or another. So, any proposal for “Clean Tax Cuts” should dovetail with the GOP “Better Way” blueprint for tax reform (released mid-2016).<sup>vi</sup> Proposals that assume away tax reform or fly in its face will, in all likelihood, meet strong opposition. Also, whatever is proposed is going to have a tough time finding its way into a tax reform package on at least 2 counts.

First, the purpose of tax reform is to reduce, not increase, the number of “special interest deductions and credits” in the tax code designed to encourage particular business activities. In fact, the Blueprint is silent on tax-exempt bonds and other financings with particular tax incentives such as Low Income Housing Tax Credit bonds, but states that it “will generally eliminate special-interest deductions and credits in favor of providing lower tax rates for all businesses and eliminating taxes on business investment.” Second, as we are all well aware, arguments about climate change – and proposals that seek to counteract its effects – have a hard time being heard on the other side of the aisle. This is not to suggest that we don’t offer up proposals, it is only to make clear that we need to go into this with eyes wide open.

To recap, the GOP “Better Way” blueprint is anchored around a few key changes in the tax code:

1. Individual tax rates lowered

The GOP blueprint reduces the number of individual tax rates from seven to three – 12%, 25% and 33%. Note that that’s below existing top rates of 36% and 39.6%, but the lowest rate is higher than the 10% rate in place today for tax payers in the lowest bracket. Note also that President Trump originally proposed even LOWER individual rates (10%, 20%, 25%) but has since raised these to be in synch with the GOP “Better Way” blueprint.

2. Standard deduction increased

Under the Blueprint - the standard deduction would be nearly doubled, increasing to \$12,000 for single taxpayers, up from \$6,300 today -- and to \$24,000 for married couples, up from \$12,600 today. This increase in the standard deduction will offset to some degree the increase in the lowest income bracket for individual tax payers. The Trump plan would raise the standard deduction by an even higher amount, to \$15,000 for single taxpayers (and \$30,000 for joint filers). It is unclear whether these differences in the standard deduction have been bridged between the GOP and the president.

3. Most itemized deductions eliminated

The Blueprint eliminates all itemized deductions except those for mortgage interest and charitable contributions while the president’s plan retains itemized deductions, but would cap their total value at \$100,000 for single taxpayers or \$200,000 for joint filers.

4. Reduces investment income taxes

Today, long-term capital gains and dividends are taxed at 20% for individuals and interest income is taxed at ordinary income rates (the highest rate today being 39.6%). The Blueprint would allow investors to deduct half of their gains, dividends as well as interest income. Offsetting taxable income in this way effectively reduces the top rate on that income to 50% of the Blueprint’s proposed individual tax brackets – so either 6%, 12.5% or 16.5%, depending on one’s income tax bracket. The president does not propose significant changes to current investment income tax rates.

5. Cuts in business tax rates

Corporate business income tax rates max out at 35% currently while individually held small businesses and “pass through” entities (such as subchapter S corps and partnerships) max out at the highest individual rate of 39.6%. The Blueprint would reduce the corporate tax rate to 20% and the small business (pass through) rate to a maximum of 25%. The president would go further to cut rates, lowering the rate on all business income to 15%. It is not clear how these two positions might be reconciled.

6. Depreciation

The Blueprint would allow capital spending on tangible and intangible assets (but not land) to be deducted immediately (so-called “100% expensing”) rather than over a period of years and in various depreciation “categories” depending upon the type of equipment.

### Implications for Clean Tax Cuts

Other than the clear environmental, climate and resiliency benefits of investments in clean energy and energy efficiency, the strongest case for providing an incremental incentive under the tax code for such investments is the substantial jobs, infrastructure and economic development benefits that will accrue to tens of thousands of communities across the country. These jobs run the gamut from the skilled trades, such as electricians, pipefitters, roofers and carpenters to considerable general and lesser-skilled labor required to complete projects. These projects benefit single family homes, subsidized and market-rate multifamily dwellings, commercial real estate (office buildings, light-to-heavy industrial buildings, office complexes, educational and buildings for not for profits), schools and state and local government buildings and more. As such, jobs are plentiful and local. Once improved, the value of the real estate rises, increasing property tax rolls and the municipal tax base. Dollars that would otherwise flow out of these communities and states – as the majority of communities don’t “self-supply” energy resources – are retained for local benefit and investment. Clearly there is a compelling economic case to make and is the best hope to attract the attention of the new administration which has expressed a clear intent to invest a trillion dollars or more in infrastructure.

The key to a successful hearing for Clean Tax Cut proposals might be to adjust the proposed tax reform structure (i.e., the “Blueprint”) incrementally so that it benefits clean economy investments and promotes growth and employment. Here are some possible measures that could leverage off of proposed tax reform elements:

1. Residential Clean Energy and Resiliency Credit – permit single family homeowners to take a credit against their taxes equal to a defined percentage of improvements done by third party contractors. As with the current corporate investment tax credit, 50% of the credit would be excluded from what would otherwise be eligible to be added to the tax basis of the property.
2. “100% Expensing” for Residential Clean Energy and Resiliency Investments – permit single family homeowners to take a deduction for 100% improvements done by third party contractors. The deduction would be a special increment to the standard deduction and would not require itemization in order to claim the benefit and excess deductions could



be carried forward. Any deductions taken would be excluded from what would otherwise be eligible to be added to the tax basis of the property.

3. Corporate and Small Business Clean Energy and Resiliency Credit – permit corporations and small businesses to take a credit against their taxes equal to a defined percentage of improvements done by third party contractors. As with the current corporate investment tax credit, 50% of the credit would be excluded from what would otherwise be eligible to be deducted for depreciation.
4. Clean Energy and Resiliency Investment Bonus – as the Blueprint would allow investors to deduct half of their gains, dividends as well as interest income, specifically permit investors in clean energy and resiliency (including obligations or other securities issued by Green Banks) to deduct an additional x% (10%, 15%...). This would apply to “Green Bonds” as well as investments in eligible “green businesses” or “green projects” where no more than (say) 10% of revenues come from non-green/resiliency activities.

#### Other possible “Clean Tax Cuts”

5. Qualified Energy Conservation Bonds (QECBs) - Issue another round of QECBs and allow states to capitalize Green Banks from proceeds from these bonds.
6. Tradeable QECBs - Permit QECBs to be “tradeable” between the states. For whatever reason, some states value QECBs more than others. Some states have used their QECB allocation entirely. Others are sitting on tens of millions of dollars in QECBs that could drive clean energy investment in other states. Permitting states to trade QECBs between them would benefit the “selling state” by deriving some economic benefit from QECBs that otherwise wouldn’t be used and benefit the “buying state” by encouraging more investment in qualifying investments. To encourage states that are squatting on QECBs to enter into trades, a “sunset date” could be enacted simultaneously with permission to trade the QECBs, so that upon the sunset date the QECBs would be cancelled without any value to the states whatsoever – essentially a “use it – trade it – or lose it” proposition.
7. Clean Renewable Energy Bonds (CREBs) - Increase the allocation of Clean Renewable Energy Bonds (CREBs) and allow states to capitalize Green Banks from proceeds from these bonds.
8. Expand CREBs allowable investments - Permit CREBs to be used for EV infrastructure and state or municipal transport, including electric and natural gas propulsion as well as fuel cells for power generation and transportation.
9. Reauthorize the Build America Bonds program and allow states to capitalize Green Banks from proceeds from these bonds. The Recovery Act of 2009 created an innovative new tool for municipal financing called Build America Bonds (BABs), which are taxable bonds for which the US Treasury Department pays a direct subsidy of 35 percent of the interest

costs to the issuer. BABs have helped state and local governments finance public capital projects at lower borrowing costs. The program was an overwhelming success with the Treasury reporting there were 2,275 separate BABs issues, which supported more than vii \$181 billion of financing for new public capital infrastructure projects such as schools, bridges and hospitals. (The BAB program expired December 31, 2010.)

## References

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<sup>i</sup> Clean Technica, [Labeled Green Bonds Issuance Doubled To \\$81 Billion In 2016](#)

<sup>ii</sup> ImpactAlpha, [Global green bonds more than doubled in 2016, led by China](#)

<sup>iii</sup> OECD/Bloomberg Philanthropies, Green Bonds: Mobilizing the Debt Capital Markets for a Low-Carbon Transition

<sup>iv</sup> S&P [What's Next for U.S. Municipal Green Bonds?](#)

<sup>v</sup> <http://www.barrons.com/articles/memo-to-trump-dont-mess-with-muni-tax-exemption-1482172406>

<sup>vi</sup> [https://abetterway.speaker.gov/\\_assets/pdf/ABetterWay-Tax-PolicyPaper.pdf](https://abetterway.speaker.gov/_assets/pdf/ABetterWay-Tax-PolicyPaper.pdf)

<sup>vii</sup> <https://www.treasury.gov/initiatives/recovery/Documents/BABs%20Report.pdf>