

Applying Clean Tax Cuts to the Oil and Gas Industry

April 9-10, 2017

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Hosted by:

One Step In Foundation

Getches-Wilkinson Center for Natural Resources, Energy and the Environment

American Sustainable Business Council

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Executive Summary – Clean Tax Cuts and the Oil and Gas Industry

Clean Tax Cuts (CTCs), in general, are designed to target taxes that investors pay on debt and equity to accelerate investment in clean technology. CTC can include other taxes, as appropriate, for application to specific sectors, such as, the oil and gas sector. Owing to the nature and complexity of oil and gas sector activities and operations being evaluated here, targeted CTC will include other taxes, such as, corporate income taxes and accelerated depreciation relevant to the targeted activities.

This paper provides the technical background for a charrette that will apply CTC principles to the oil and gas industry. The purpose is to accelerate and incentivize the advancement and implementation of technologies and/or processes that reduce the industry's impact on the environment, and reduce emissions.

The goal of the upcoming charrette will be to bring together a diverse set of stake-holders for a dynamic and balanced discussion of the many issues and perspectives in the oil and gas sector, to explore and shape new, simple, high-impact policy design concepts.

Clean Tax Cuts Development Process So Far

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 Oil and Gas Industry Charrette at the Getches-Wilkinson Center for Natural Resources, Energy and Environment on April 9-10, 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 2017 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 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. The Nature Conservancy, Climate Advisors, 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 9-10*

Power Sector. American Renewable Energy Institute (AREI), *Aspen, CO - March 27*

Clean Technology. Arizona State University (ASU), LightWorks, Center for Negative Carbon Emissions - *Arizona, April 4, 2017*

Members and friends of the Clean Tax Cuts Working Group are welcome to participate in the above charrettes, or collaborate with us at The Clean Capitalism Challenge at Earth Day Texas, where participants can both present their own initiatives, and help us report, discuss and further integrate and develop the proposals coming out of these charrettes. Please contact info@gracerichardsonfund.org for details.

Defining Clean Tax Cuts

As originally formulated, “clean tax cuts” have 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. Accelerated depreciation or immediate expensing of investment costs is another way to arrive at tax rate reduction, useful in some circumstances.
- (3) The approach focuses on harnessing positive, rather than negative, feedback loops — rewarding the implementation of sustainable technologies and processes in lieu 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.

While the reporting criteria does not currently exist for monitoring methane and hydrocarbon emissions in the oil and gas industry, it will. One objective of this charrette is to ensure the infrastructure for these systems is designed and implemented.

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 basis(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 yet been defined; this will be a key challenge for CTC charrette

participants. Sustainable Accounting Standards Board (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 Environmental Protection Agency gives a good overview of emissions standards for new, reconstructed and modified sources that are material for this sector.

Most industries other than oil and gas have the ability to measure GHG emissions based on consumption. The O&G industry does not. All reporting on GHG emissions to the Environmental Protection Agency (EPA) are based on estimates developed by the EPA in 2014. These estimates are not based on actual emissions, over time, but only on estimated emission that may emit from a newly constructed oil and gas production facility. (See Item 1, Annex 1)

For the basis of the discussions for the O&G industry it must be noted, systems to accurately measure actual initial production volumes do not exist. For regulatory agencies to measure the potential impacts of technologies or process that reduce GHG emissions this system must first be developed and implemented.

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 ensure 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 the Oil and Gas Industry

Why. The EPA has made available the national level trends in greenhouse gas emissions through the [Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2014](#). Trends in emissions reported for individual industries are discussed in the industry-specific reports.

The reports from the EPA state that the total U.S. emissions increased by 1.0% from 2013 to 2014, based on the U.S. GHG Inventory.¹ Over the past five years reporting (2011-2015) Greenhouse Gas Reporting Program (GHGRP) reported emissions declining by 8.2%, is primarily due to the decline in the reported emissions by power plants in 2011. The oil and gas sector has seen some improvement but can certainly be enticed through the CTC efforts to enhance their performance.

Applying CTC to the oil and gas sector will have an impact:

1. Through the elimination of emissions production volume increases at each site therefore, availing new opportunities for additional revenue.
2. Thus, CTC increases the opportunity for clean energy technologies and processes. That will translate into accelerated deployment of clean technologies and lower overall emissions.

Specific Oil and Gas Charrette Questions

Due to the complexity of the oil and gas industry it is imperative that we limit our focus to methane and hydrocarbon emissions. (*see oil and gas diagram A for emissions reference*) This will allow us to focus on technology and specific application of the CTC to these areas of the oil and gas sector. We will specifically focus on the Oil & Gas Production, Treating and Processing for both upstream and midstream assets within the industry.

CLEAN: measurement and impact

The following questions could be used to guide discussions and structuring proposals for evaluation criteria and metrics when defining clean

How is “clean” defined for qualification of CTC? What will be the baseline for emissions calculation to determine “clean”? Are there other metrics?

What metrics (e.g., baseline vs. improved performance) should be used to trigger application of a CTC, determine its level and period of application? What stage of implementation should a CTC be applied?

What is the anticipated impact based on “clean” performance from the oil and gas sector?

What standards are already in place for the oil and gas industry: will CTC endorse or require adherence to one over others? Will standards have to be created? If so, by whom?

Are there any current market participants’ methods within the oil and gas sector for external verification to accurately measure and score what is clean, green and sustainable? Are any inadequate?

TAX: regulatory framework and targets for reduction

The following questions could be used to guide discussions and structuring proposals for evaluation criteria and metrics when identifying taxes.

What economic and environmental impact can we expect from cutting these taxes for the oil and gas industry? Can we model this?

Which specific taxes should be considered? State and Local? Federal?

What impact/relation should CTC have to existing regulatory programs applicable to practices potentially subject to CTC?

How should CTC be paid for as applied to the oil and gas sector; for example, should there be a trade-off between CTC and current tax subsidies for oil and gas production (e.g., tax exemption for MLPs, intangible drilling oil and gas deduction, percentage depletion allowance)?

What would be the political, economic and environmental impact of CTC alone? How would that impact change if combined with other policies such as a carbon tax, subsidies, or regulation? What are the pros and cons of such policy combinations?

CUTS: implementing mechanism and logistics

First, a designated reduction in taxes 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.

Next, approaches for financing the cost of CTC’s must be determined so as not to increase federal or state deficits.

The following questions should prompt charrette workshop discussions:

What impact/relation should CTC have to existing regulatory programs applicable to practices potentially subject to CTC?

What are the principal barriers to adoption and implementation of CTC for the oil and gas industry?

How should CTC be paid for as applied to the oil and gas sector; for example, should there be a trade-off between CTC and current tax subsidies for oil and gas production (e.g., tax exemption for MLPs, intangible drilling oil and gas deduction, percentage depletion allowance)?

Charrette Goals and Outcomes

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

We will consider:

1. The low hanging fruit in terms of:
 - a. best practices
 - b. existing technology (off the shelf)
 - c. technology in the pipeline
 - d. potential breakthrough technology with maximum potential for material reduction of greenhouse gas emissions and other priority public health and environmental risks associated with the oil and gas sector:
2. General Concepts of credible metrics and systems to measure, monitor and verify impacts and effectiveness of high impact practices and technologies:
3. The taxes and related “cuts” generating the desired actions and impacts
 - a. What “cuts” have the biggest impact for the consumer (oil and gas companies)?
 - b. What “cuts” make the consumer want to prioritize “clean” activities?
4. Effective means to design and implement the desired tax relief including voluntary actions, regulations and/or legislation.

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 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 technologies/processes that will have the highest positive environmental impact.

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. All charrette participants are invited to *CTC Charrette: Oil and Gas Industry – University of Colorado-Boulder – April 9-10, 2017*

participate in the 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.

Advice 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.

Annex I: Straw proposals, variations and suggestions for discussion

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 the oil and gas sector.

1. According to the EPA, on GHG emissions. the infrastructure to support accurate GHG reporting must be created within the industry. All reporting mechanisms in place now are based on estimates and self-reporting. As per the EPA Emission Guidelines:

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[EPA-HQ-OAR-2010-0505; FRL-9944-75- OAR]

RIN 2060-AS30

Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources

2. It should be established within the oil and gas industry, with the assistance of the EPA, an infrastructure which electronically monitors and reports total hydrocarbon production at every production site.
3. Utilizing existing technologies for electronic reporting for remote locations to a central database, a mass balance of total hydrocarbon production could be accurately monitored and reported.
4. With this information, the industry and industry regulators, could track the exchange of hydrocarbon values and volumes throughout the hydrocarbon supply chain.
5. If there is a “loss” of hydrocarbons in the system, the loss can be identified because the volumes are electronically and automatically tracked at each transfer of custody point.
6. Identification of hydrocarbon losses is a necessary first step. A leak/vent can only be fixed after it is identified. Therefore, the first phase could be a CTC for the purchase and installation of the instrumentation necessary to perform a mass balance at a production site. This could be accelerated depreciation of the installed equipment.
7. Another CTC approach would be to reduce the tax rates of the suppliers of O&G hydrocarbon systems and their investors. Let their ordinary income from such “clean” revenue be taxed at the capital gains tax rate, and their investor’s “clean” capital gains and dividend income (proportionate to percentage of company taxable income from such systems) be at half the normal cap gains tax rate. This would accelerate capital to these businesses, and drive down the cost of such systems, accelerating adoption.
8. This basic approach above (call it “clean capital tax rates” were clean income from clean revenue sources is taxed at the capital gains rate, and clean capital gains and dividend income is half the normal capital gains rate) could be extended to suppliers of systems that reduce GHG emissions.
9. This approach can be further extended to O&G producers who can demonstrate lower GHG emissions. This is a very general proposal and would need to be fleshed out by more specific metrics qualifying such tax relief.

10. Just as Energy Star rates energy efficiency in buildings, an O&G Star rating system would be extremely useful, rating O&G producers and refiners on hydrocarbon waste reduction. Such ratings could drive CTC tax rate rewards. Utilities and their investors could pay lower taxes (along the lines above) on revenue from gas sourced from the top quartile of producers, or perhaps also from producers showing a 30% improvement. Oil resellers could get the same tax reduction with respect revenue sourced from top quartile or 30% improved O&G Star oil producers and refiners. In other words, O&G buyers will have a strong incentive to buy only from the most efficient and most improved producers, who will be rewarded for eliminating waste with higher prices and more demand for their product, while at the same time, the cost to produce efficient O&G will decline.

On the debt side, loans and bonds financing emission could be half ordinary interest income tax rates, driving down the cost of capital and outputs for such high-impact investments. Certified O&G Star producers and refiners could be allowed to borrow or issue bonds at such “clean” half-tax rates to reward efficient, waste-reducing behavior. This would allow efficient producers and refiners to expand faster than more wasteful competitors, accelerating clean practices at the same time.

Annex II: Supporting Articles

Clean Tax Cuts

<http://gracerichardsonfund.org/wp-content/uploads/2016/10/grf-charrette-report-161029.pdf>

<http://gracerichardsonfund.org/wp-content/uploads/2016/11/GRF-CTCwhitepaper-160919.pdf>

<https://spectator.org/world-court-decision-wont-temper-chinas-territorial-claims/>

Oil and Gas Sector

https://www.hamiltonproject.org/assets/legacy/files/downloads_and_links/THP_15WaysFedBudget_Prop5.pdf

<https://www.wsj.com/articles/does-the-oil-and-gas-industry-still-need-tax-breaks-1479092522>

<https://www.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014>

<http://www.bp.com/en/global/corporate/press/press-releases/oil-and-gas-majors-call-for-carbon-pricing.html>

United States Environmental Protection Agency: 40 CFR Part 60: Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources; Final Rule (separate .pdf attachment)

<https://www.colorado.gov/pacific/cdphe/summary-oil-and-gas-emissions-requirements>

FYI:

REFINERIES

Utah lawmakers pass tax incentive aimed at cleaner gas

Published: Friday, March 10, 2017

Utah lawmakers passed a tax incentive Wednesday for refiners to produce cleaner gas.

The Utah House of Representatives voted 72-0 to pass S.B. 197, which is designed to encourage the state's refineries to move toward cleaner-burning gasoline more quickly.

The Utah Senate previously passed the tax incentive by a margin of 24-1. The bill now heads to the office of Utah Gov. Gary Herbert (R).

State House Majority Leader Brad Wilson (R) said widespread production of Tier 3 fuels would vastly reduce pollution particulates. Tier 3 refers to a set of fuel and vehicle standards adopted by U.S. EPA.

"If every vehicle on the Wasatch Front were using Tier 3 fuel, it's the equivalent of removing four out of five cars off the roads — a big and important step in the right direction to improve our air," Wilson said (Lee Davidson, [*Salt Lake Tribune*](#), March 8).

Annex III: Relevant organizations and standards

United States Environmental Protection Agency: 40 CFR Part 60: Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources; Final Rule

References

ⁱ <https://www.epa.gov/ghgreporting/ghgrp-reported-data>

Exhibit A

