

CLEAN CAPITALIST LEADERSHIP COUNCIL

Turning Capitalism Into Clean Capitalism

Policy Brief 4: Equity-side Clean Tax Cuts for Innovation & Entrepreneurship:

If you want more innovation, tax it less. The logical way to promote private investment in innovation, is to increase the rewards of innovating. The most direct way to do that, is to cut the taxes that burden innovators, the business and investor taxes on profits from innovative products and technologies.

Tax-exempt debt would help accelerate late, but not early stage innovation. Since CABLs would powerfully accelerate investment in proven clean technologies, and help build big clean capital markets focussed on clean technologies, they would also be very useful both in accelerating global deployment of new innovations that demonstrate profitability, and in speeding incremental innovations that improve successful clean technologies. But few lenders will touch anything speculative, like a fundamentally new product, or a start up for a new technology.

For early innovation, taxes on equity matter more than taxes on debt. Equity remains the only realistic way to attract most private start up capital for new tech. The profit motive also drives consumer product innovation among companies of all sizes. So equity, in the form of business and investor income, is where CTC marginal rate cuts might be applied to directly incent early innovation for new clean technologies and consumer products.

Two kinds of equity-side CTC deserve close consideration:

- **Tax-exempt business and investor income for start up clean energy innovation;**
- **Reduced marginal tax rates on business and investor income from clean products.**

Energy innovation is essential... but hard. Most climate scientists warn that we need to shift to 100% clean energy technologies in a short time to avoid the worst impact of climate change. But clean energy adoption is held back because of technical constraints. For renewables, intermittency leads to lack of dispatch-ability and reliability. For nuclear, security risks, safety concerns and project size drive opposition, delays and cost overruns. Meanwhile, carbon capture, grid-scale storage solutions, fossil fuel plant conversion tech, zero-emission waste-to-energy and alternative fuel processes all have advocates, but few have yet achieved profitability or widespread adoption. We need breakthrough energy innovation to overcome these limitations, to accelerate clean energy adoption, to avoid the worst risks from climate change, which may dwarf the currently skyrocketing costs from extreme weather damages.

It is hard to make a business case for expensive investment in new energy source innovation. Energy is very cheap, and first-of-a-kind plants are generally expensive, costing much more than incumbent technologies with economies of scale. It is tough to make the numbers work.

One well understood bottleneck for clean energy innovation is that the first five commercial scale plants for a new advanced energy technology are almost impossible to finance. Pilot project data might be perfect. Still venture capitalists won't touch the first five. They'll say, "Sorry. You haven't done it at scale yet, so the business case is unproved. Too many unknown risks." As a result of this Catch-22, it's very hard to finance these projects. The difficulty of raising capital makes the "valley of death" between launch and profitability just too long, which in turn makes it even harder to raise capital.

Straw Proposal: "The First Five" Innovation Tax Exemption: One possible way to shrink the valley of death would be to improve the risk/reward ratio. This might be done by increasing the back-end reward, by granting tax exemption on all business and investor income from the first five commercial scale plants deploying a new, better, zero emission technology (or add-on improvements, such as new storage or carbon capture tech) for a period of years, say 15 or so, after the first profitable year.

That would significantly raise the profitability of these first five plants, making them easier to finance, and shrinking the valley of death. The federal tax expense might not be that large because it's only five plants for each such new technology. And there's no way for tax payer money to be wasted on failure (aka another Solyndra) because the tax expense only occurs if the technology is successful and makes money. If the first five are successful, commercially and in terms of improved reliability and certified environmental impact, then the valley of death has been conquered, and commercial scale deployment of the technology would be best accelerated by use of CABLs, from that point on.

Details of this proposal need some refinement. How should we qualify each new promising clean energy technology? How would this apply to clean tech add-ons that are not sources, but make energy sources more clean and scaleable? Could this CTC mechanism translate usefully to other clean technology innovations, like recycling, biodegradable plastic production, desalination or water treatment?

The above is a straw proposal, one of several advanced for consideration and refinement at a *charrette* on “Promoting Energy Innovation” occurring on October 1 in Washington, DC, co-hosted by Grace Richardson Fund, American Council for an Energy-Efficient Economy, ClearPath, and Holland-Knight LLP. *While space is limited, any think tank, scholar, and industrial policy expert who would like to participate, should contact Grace Richardson Fund.*

Reduced marginal tax rates on business and investor income from clean products. Consumer product innovation is easier than grid scale energy innovation. The need for improved consumer appeal and efficiency already drives a natural dynamic of consumer product innovation with some environmental benefits. That is offset by dynamics that favor free-rider polluters. So there may be a need to accelerate the beneficial dynamic to avoid mounting environmental impacts. But the natural positive dynamic pushing product innovation means we don't need tax exemption, which would be expensive overkill.

Marginal tax rate cuts on clean product income will incent both innovation and production. If companies can keep more profits from clean products vs. polluting products, they will have a strong incentive to produce and innovate more appealing clean products. This differential can probably be modest, say up to 20% off prevailing tax rates, and still have a strong and cost-effective incentive effect.

R Street Institute work on CTC for the Auto Industry gives the best exempt of this mechanism. Thanks to CAFE, we know the average vehicle fleet emissions for every automobile manufacturer. It would be a simple matter to take that number, and turn it into a tax rate: the lower the fleet emissions, the lower the tax rate. If applied to all business and investor taxes that would provide a very powerful mechanism to drive the automobile industry ever-cleaner. Firms with cleaner fleets would gain a competitive advantage... Since investors, management and employees have stock packages, CTCs would align corporate culture, from boardroom to shop floor, with the goal of lower emissions.

Equity side CTC would need to be tailored for each sector. CTC rewarding clean product sales could also apply very well in other sectors, such as energy, where metrics of environmental impact are well understood and reported. But the regulatory and operational landscape is different from industry to industry. CTC mechanisms would need to be carefully specified. CTC's would be generally hard to apply in sectors like agriculture where there are no nationally recognized standards of certification for environmental impact, and where most farmers pay no taxes. If a national agricultural certification system does emerge, one could apply equity-side clean product tax cuts to the distributors and retailers of certified agricultural products, or to the suppliers of goods and services to certified sustainable/regenerative farms. By contrast, CABLs are much easier to apply across multiple sectors where metrics are well understood and reported, so are more suitable as a tool for building big clean free markets.