

Policy Brief 7: Clean Free Market Strategies for Energy Innovation

On October 1, leading members of the Clean Capitalist Coalition will host a charette on policy innovation for clean energy innovation. This will be the first gathering to consider the combination of clean tax cuts (CTC) and other clean free market (CFM) policies for energy innovation. And also the first with the goal to design CTC mechanism specifically for early stage innovation.

Up to now, CTCs have been designed for a variety of sectors – with and eye to impact on innovation to be sure – but more aiming to accelerate commercial scale deployment of profitable technologies. That design goal has been achieved, conceptually, in the form of the proposals for tax-exempt Clean Asset Bonds & Loans (CABLs), the Clean Free Market Act, and energy choice competition. These market-expanding frameworks would also help accelerate incremental innovation of proven technologies, and could rapidly spread new innovations as they emerge.

Our focus now will be on designing clean free market and clean tax cut mechanisms that work in sync to promote early stage innovation, accelerating the transition from concept to startup to commercial scale deployment to unsubsidized profitability. Straw proposals are highlighted below in green.

Charette co-host ClearPath has long applied barrier-reducing clean free market design principles to policy design for early research stage energy innovation. Which is tough to do, considering that there is no commercial product, profit or customers at this stage, and most of the basic science research takes place, not in corporations operating in a marketplace, but in an ecosystem of national laboratories and research universities, funded federally and philanthropically.

Nevertheless, ClearPath’s recommendations for early energy innovation, as well as that of Manhattan Institute Senior Fellow, Mark Mills, sound a lot like the game plan for energy choice competition in mature power markets: shrink the monopoly, decentralize and distribute energy choice decision-making to market participants, by introducing competition among energy generators and technologies.

Translated to the research ecosystem, that means: shrink the power of the DOE and other federal agencies to end micro-management of research decisions: decentralize and distribute decision making power and funding directly to the heads of national labs and over 600 US research universities; and slash the mountain of federal paperwork upon which researchers must waste time and money. By removing such barriers, and without raising spending, these reforms could greatly increase real federal funding for basic research if Mills is correct that “50 percent of federal R&D funding is now... wasted in performing administrative overhead instead of research.”

In sync with such reforms, Mills also proposes redesigned tax incentives to increase private research funding, which our charette should consider, as straw proposals in need of detail. Mills proposes: “*The federal government can unlock more private capital for basic R&D by: (i) accelerating and enhancing tax benefits for internal corporate R&D spent on basic science; and (ii) radically increasing tax deductions for any private organization, or citizen, funding university-based basic research.*” These proposals should be re-examined in light of recent tax reform, and fleshed out. What is the best way to increase the value of a tax deduction, and how should super-deductions be qualified?

ClearPath has also developed its own transitional, market-mimicking tax incentives for emerging energy technologies: Energy Sector Innovation Credits (ESICs) – See link for proposal details). ESICs cure

many conventional subsidy barriers by incorporating features natural to free markets (tech neutrality, promotion of revenue generation, which then triggers automatic phaseout and market share grows, so avoiding dependency barriers). They shrink the quasi-political barriers of incumbent advantage and free-riding polluter privilege, while promoting successful independence, not dependence.

However ESICs are still tax credits, with the some of the usual market-constricting and leakage drawbacks. The 60% value of the initial credit may also strike some as high compared to the 30% value of the ITC and PTC. This may lead to some opposition.

Can we improve transitional tax credits via an optional transition to CTCs? Or some combinational transition? Three kinds of CTCs deserve close consideration for emerging technologies, in this order:

- **Tax-exempt business and investor income for start up clean energy innovation**
- **Reduced marginal tax rates on business and investor income from new clean energy and tech**
- **Tax-exempt private bonds and loans to finance profitable, scalable clean infrastructure (CABLs)**

First Five Innovation Tax Exemption. One well understood bottleneck for clean energy innovation is that the first few commercial scale plants for a new advanced energy technology are almost impossible to finance. 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. One possible way to shrink the valley of death would be to improve the risk/reward ratio. This might be done by increasing the backend 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. The federal tax expense might not be that large because it's only five applications for each such new technology. 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 other mechanisms such as CABLs and the Clean Free Market Act.

First Five would make it possible to use less front end subsidy by increasing the backend reward. This combination might make ESICs both more powerful and more political palatable to opponents of direct subsidy vs supply-side tax cuts. There may be other ways as well to use tax exemption for start ups.

Reduced marginal tax rates on business and investor income from breakthrough clean energy technology revenues (from technology and energy sales) could also accelerate innovation. This is similar to a Clean Tax Cuts Working Group proposal for all clean energy, but less expensive and more impactful for early innovation, if focused there. If so restricted, the tax rate could be zero to start and gradually increase to prevailing rates as the technology hits profit or market share targets. If utilities can take that tax cut on innovative-energy revenues, it might help encourage more openness to innovation.

A new technology's emerging profitability will signal the need to transition to promotion by CABLs, the Clean Free Market Act or energy choice competition frameworks. The federal CFMA leaves it up to the DOE to suggest periodically which new technologies be included. Is this mechanism sufficient?

Lastly, recent federal tax reform allows the capital gains tax deferral (or elimination) on investment proceeds that are invested in Opportunity Funds, which then invest in a portfolio of assets located in selected low income census tracts. This is a mechanism which is gaining many investors and could help accelerate investment in clean technology innovation, perhaps worth considering.

CTC proposals have been defined by answering the three questions: (1) What is CLEAN? As in, how is an activity or asset qualified as “clean”? (2) What TAX matters? Who is paying taxes, and which taxes offer a point of leverage on key behavior? (3) What are the CUTS - best designs for high, cost effective impact?