



Hybrid Power Technologies LLC  
April 19, 2016

The Honorable James Inhofe, Chairman  
The Honorable Barbara Boxer, Ranking Member  
The Honorable Shelley Moore Capito, Chairman Subcommittee on  
Clean Air and Nuclear Safety  
The Honorable Thomas R. Carper, Ranking Member  
Senate Committee on Environment and Public Works  
Washington DC 20510

Subject: Nuclear Energy Innovation & Modernization Act

Dear Chairman Inhofe, Ranking Member Boxer, Chairman Capito and Ranking Member Carper

Hybrid Power Technologies LLC (a small Kansas business) commends the Committee's bipartisan support for advanced nuclear energy reactor innovation and development, as demonstrated by the Nuclear Energy Innovation and Modernization Act (S. 2795).

By way of a brief background, our firm is quietly developing an advanced reactor that marries both nuclear and fossil fuels to produce highly competitive power that is also exceptionally environmentally friendly – see Attachment (2). The hybrid is the only “all-of-the-above” approach in existence; all energy sources (nuclear, coal, natural gas and renewables) can be used on a single platform. The US patented hybrid-nuclear technology is a completely new direction for energy production and represents American innovation at its finest.

We are of the opinion that the proposed act will provide a major assist in the development of advanced reactors.

We would, however, place additional emphasis on promoting greater involvement by private investment firms. As outlined in Attachment (1), we recommend that financial institutions be allowed tax write-offs for their financial investments in support of developing advanced reactors.

In closing, many thanks for the work of the EPW Committee on this vital legislative measure.

Kind Regards,

*Michael F. Keller*

Michael F. Keller  
President & CEO  
Hybrid Power Technologies LLC

Attachments: (1) Nuclear Innovation Tax Write-offs  
(2) Hybrid-nuclear Overview

Attachment (1) to Hybrid Power Technologies LLC letter of April 19, 2016

Re: Nuclear Innovation Tax Write-offs

**Observations.**

1. The time-line associated with developing advanced nuclear innovations is simply incompatible with the investment world, where rapid (few years) investment returns are the norm.
2. The marketplace is generally the most efficient method to find solutions to problems.

**Proposal.** Allow venture-capitalists/investors to write-off their financial support for developing advanced nuclear innovations. The ability for these firms to use such investments to reduce their taxes is a very valuable short-range commodity. Further, the stage is set for much greater future revenues, generally in the form of selling their part of the ownership of a successful nuclear innovation as the new product moves into the marketplace.

More specifically, we have in mind an initial 100% write-off that ramps down to zero over say a 10 year time frame. A fundamental underpinning of this approach is that if a nuclear innovation cannot break into the markets after say a ten year time-frame, then the markets are clearly signaling that the product is not good enough.

The full tax write-off would only be available to investments made in smaller/mid-sized companies/partnerships/joint ventures that are sole purpose entities engaged in developing a specific advanced reactor approach. Such firms generally do not have adequate internal revenue sources nor do they have any meaningful access to credit markets. That is why some form of support is needed.

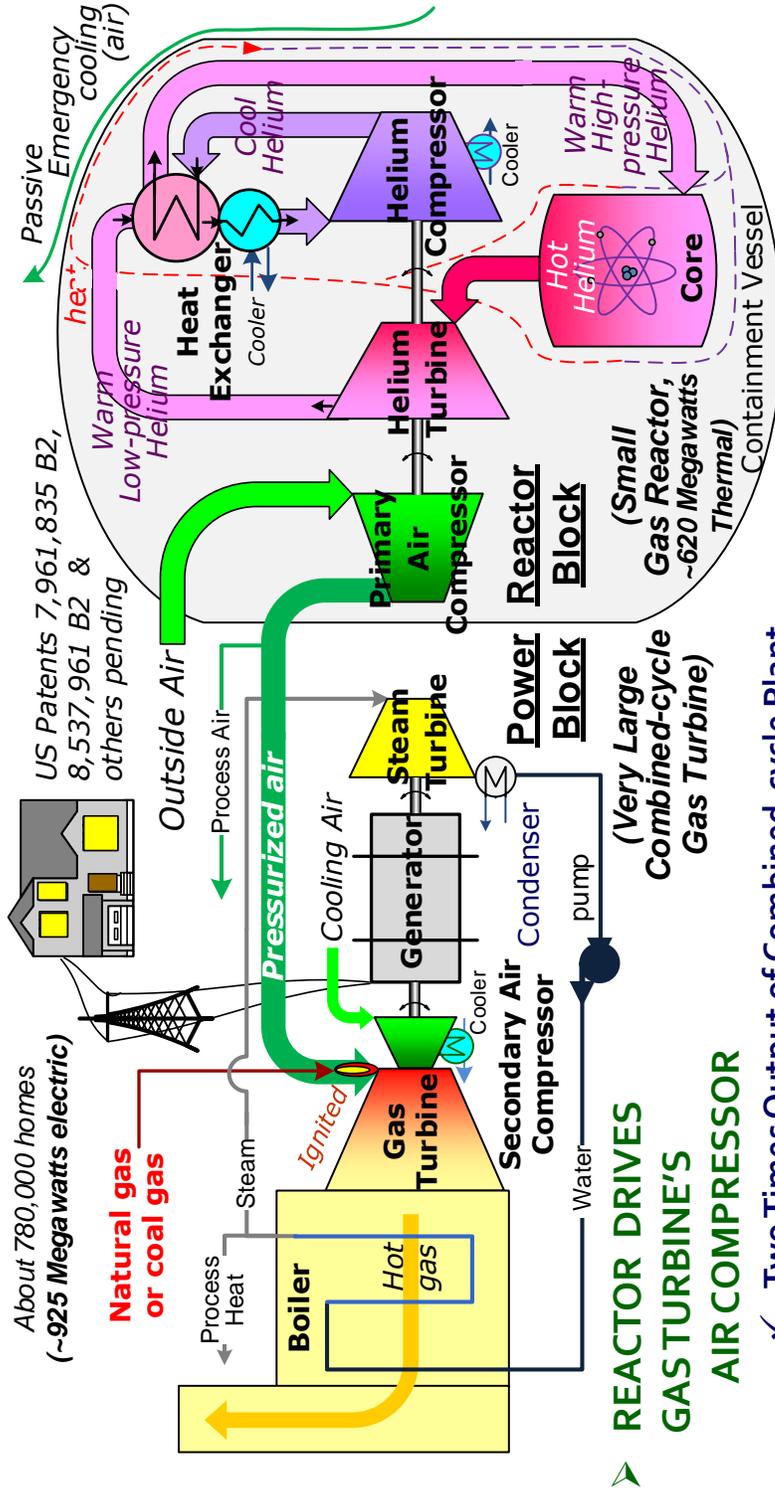
Outside investments in nuclear innovations being developed by large US firms would be greatly reduced (say by 50%) or not provided. These firms already enjoy considerable competitive advantages over smaller firms because they possess multiple internal revenue streams and ready access to credit markets.

A specific “innovation development” tax write-off would cease after 10 years. At that point, large firms and investors (with possibly some private/government partnership help) would be expected to have already begun to provide additional support for deploying the advanced nuclear technology.

Relative to operational power plants, no atypical and or special support should be provided to the nuclear innovations (i.e. no production tax credits or similar subsidies that are not universally applied to all energy production plants). Everybody competes on a level-playing-field and may the best technology win.

In closing, the idea is to provide nuclear innovators a reasonable chance to cross the business start-up “valley-of-death” without sole reliance on government handouts or rare serendipitous “gifts” from angel investors. Absent such rare help ***or an investor innovation tax write-off***, the likelihood of surviving the journey is zero.

## Hybrid-nuclear Overview



➤ **REACTOR DRIVES GAS TURBINE'S AIR COMPRESSOR**

- ✓ ~Two Times Output of Combined-cycle Plant
- ✓ Significantly more Efficient than Combined-cycle (~80% versus ~55%)

*(Nuclear reactor heats compressed pressurized helium sent to turbine that rotates helium compressor and air compressor. Compressed pressurized air mixed with fuel & ignited to spin combustion turbine that rotates electrical generator. Turbine's hot exhaust gas boils water that rotates steam turbine also attached to generator).*