**Roadmap to the Fusion Energy Economy**

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It is widely agreed that the planet is near or actually in a crisis due to rapidly accelerating climate change. If global warming is not stopped very soon, the worldwide rise in average temperature will bring catastrophic numbers of extreme weather events and widespread flooding.

It is also widely agreed that one important element is addressing this warming is to significantly cut back the emission of carbon dioxide (CO2), a so-called greenhouse gas which is produced when fossil fuels are burnt. This means it is very important to ramp up the use of conventional “green energy” sources, such as solar and wind power, and hydroelectric generation. In addition to these generally recognized important steps to reducing CO2, there have been some improvements in the safety of nuclear fission power generation. However, the safety issues and the issues of long-term radioactive waste storage have not yet been overcome.

Many estimates, however, show that wind and solar do not have the capacity to provide enough energy to supply the growing needs of the industrializing world.

There is, on the other hand, a virtually “perfect” solution to the clean production of energy on a scale that would have the capacity to power the whole world.

This technology is fusion energy.

Fusion energy is the production of nuclear energy without any of the shortcomings of nuclear fission (conventional “atomic energy”). Fusion consists of engineering a system that causes small nuclei, such as hydrogen, to fuse together, releasing clean nuclear energy in the process. Fusion energy has the following features, which make it a highly attractive energy source:

1. The fuel is readily available from sea water
2. There is no chance of any diversion of fuel or other elements of this technology into weapons; thus, the power plants could be build anywhere in the world with no issues of terrorism
3. There are no long term radioactive waste products requiring storage
4. The power plants would be intrinsically safe from catastrophic failure, such as is a concern in conventional atomic power systems. No public safety issues would exist for people living near fusion power plants.

Unfortunately, the road to the development of workable fusion energy has been a long one so far, paved with many advances but also many false-steps. This has given fusion energy a bit of a troubled reputation for being impractical.

Quietly, but quite dramatically, there have been several breakthroughs in fusion energy technology over the past few years. We are now at a moment when the whole field is poised to accelerate and there are several projects which have realistic prospects of reaching technical feasibility in 5-10 years, which is far sooner than many people have been expecting.

These breakthrough ideas capitalize on advances in materials, artificial intelligence and parallel computing and automated production technology, and have resulted in the formation and funding of over 25 commercial start up companies, founded and managed by highly dedicated and energetic entrepreneurs. These breakthroughs completely change the prospects for fusion energy in a reasonable planning timeframe. Collectively, these companies have raised over [ $ x ] and are moving forward rapidly towards demonstrating the fundamental soundness of their ideas.

The Stellar Energy Foundation, a non-profit entity based in Princeton, NJ and Concord, MA, is hosting a workshop in New York City the morning of June 13th to feature representatives of many of these start up companies plus the National Laboratories and university groups who have been advancing fusion technology with government funding and who have also produced breakthrough ideas which will accelerate bringing “fusion energy to the grid soon enough to make a difference for our climate!” [do we mention group(s) from the UK ? ]

The workshop will also feature representatives of the funding community: Wall Street, private equity, large-scale philanthropy and government funding agencies who are promoting public-private-philanthropic partnerships to accelerate development of fusion energy. Learn about the thinking behind the funders of the companies and the government programs.

Another key challenge in many peoples’ minds about fusion power is the cost of fusion power plants. The workshop will discuss this directly and map a path forward to accurate estimates of what fusion energy will cost. Hear the responses and plans of the commercial players to the cost issues.

The purpose of Stellar Energy Foundation and the workshop is to spread the word about the acceleration of the development of fusion energy among people and entities who can help the emerging fusion energy community. There will be no soliciting.

Join us on June 13th at the Roadmap to the Fusion Power Economy, which will be held at the Flatiron Institute (affiliated with the Jim Simons Foundation), 162 E. 21 Street, Manhattan. [we need to make sure this attribution is ok with the Simons Foundation people].

Workshop Sponsor:

Stellar Energy Foundation

[www.stellarenergyfoundation.org](http://www.stellarenergyfoundation.org)

Workshop Co-Host:

Fusion Industry Associates

[www.fusionindustryassociation.org](http://www.fusionindustryassociation.org)