

OPENING STATEMENT
Representative Zoe Lofgren (D-CA)

House Committee on Science, Space, and Technology
Subcommittee on Energy
The Future of U.S. Fusion Energy Research
March 6, 2018

Thank you Mr. Chairman for holding this hearing and thank you to the witnesses for being here today. Fusion is the process that powers the sun and the stars. So we know it works! But, as all of the witnesses here will be able to discuss in far more detail than me, it turns out that controlling and harnessing a fusion plasma here on earth is one of the most difficult challenges that our nation's – and indeed the world's – top scientists and engineers are working to address. That said, if they are successful, then fusion has the potential to provide abundant, reliable, emissions-free, and practically limitless energy to meet a large portion of our electricity needs for the foreseeable future.

Given the huge potential benefits of developing a viable approach to fusion energy, I believe that this is an area that we should be strongly investing in. Unfortunately, that's not what we're seeing in the Department of Energy's recent budget request for FY 2019, which would cut the Office of Science's fusion research program by about 11%. It would also entirely eliminate ARPA-E, which is currently supporting a portfolio of innovative fusion projects that could point the way to producing fusion energy far more quickly and at a much lower cost than more conventional approaches.

Lastly, as I'm sure we'll learn more about from Dr. Herrmann, the budget for the DOE National Nuclear Security Administration's Inertial Confinement Fusion program – including support for the National Ignition Facility at Lawrence Livermore National Laboratory – would be slashed by about 20%. Now the focus of this program is actually not on energy, but on ensuring the reliability of our nation's nuclear weapons stockpile. Yet because there is currently no ongoing, federally supported program to develop inertial fusion concepts specifically for energy applications, this weapons-relevant work is currently the only way that many of these concepts are able to advance. So these major cuts could be especially devastating for *both* our national security *and* our clean energy future.

I would also like to note that while support for the U.S. contribution to the ITER international fusion project would receive an increase in this request, the actual level of \$75 million is woefully inadequate to maintaining the project's current schedule and minimizing its cost to U.S. taxpayers. Rather, the most recent official estimates we've received from the Department projected our contribution to be at least \$230 million in FY18 and \$240 million in FY19. Investing substantially less in those years means our "standing army" costs go up because we're paying a lot of the same people to do less work over a longer period of time, all while we aim to maintain our ability to meet our commitments to the project.

These lower investments may have been more justifiable prior to Dr. Bigot's tenure as Director General of ITER began about 3 years ago, when the U.S. was really leading the effort to

significantly reform ITER's management after a critical U.S.-led assessment of the project was presented to its governing council. But given the remarkably impressive progress made by Dr. Bigot and his team in getting this project back on track, this budget request now essentially undermines all of our prior efforts and could end up causing the problems that we worked so hard to resolve.

To be fair, support for fusion energy development has really been a bipartisan problem, as there were notable issues with the previous Administration's stewardship of research in this area as well. But the good news is that in this room you will find strong, bipartisan support for your work, and I believe that, working together, we can go a long way toward enabling a brighter future for the fusion research community and for other potentially revolutionary clean energy technologies as well.

Thank you again Mr. Chairman, and I yield back the balance of my time.