Submitter: Michael Fairhurst

On Behalf Of:

Committee: House Committee On Climate, Energy, and Environment

Measure: HB2215

Hello, my name is Mike Fairhurst.

I am a pro science, techy/geeky voter here in Oregon. I'm a software engineer that has worked for Google and Facebook and also worked freelance, and I enjoy watching videos of quantum physics in my spare time.

Like a lot of people with a high trust in science and technology, I find a lot of nuclear tech pretty cool and fascinating. Next generation reactor tech like MSR is like real life sci-fi. But the problem of waste storage, is a bigger problem than the vast majority even realize.

As a person of science, I must unfortunately point out that these plants, this legislation, are not part of a sci-fi world. It might be OK for movies and television to ignore the consequences of their fancy technology, but this is not an acceptable option for legislators and utility operators in our home state of Oregon.

The science of waste storage is about a lot more than splitting atoms. Waste storage is a much, much harder problem. High level nuclear waste may remain dangerous for as long a period of time as Homo Sapiens have walked the earth. As an example, proponents of the Yucca Mountain storage facility sometimes argue that it was "one of the most expensive decisions ever made" by the US government, as if this is a good thing. It doesn't take much intuition to see that this is not the case. In fact, Yucca mountain merely the least worst option our government came up with after clutching at very expensive straws.

Yucca Mountain is a great example of how not to store nuclear waste. If scientists were to imagine the perfect bunker system that could last 100k+ years, a mountain is one of the last places you would ever want to consider. It's simple: mountains only exist because of geological activity. In our own state of Oregon, Mount Jefferson's top 3000 feet formed in such a time span (approx 100k years), and mount bachelor formed within a fraction of that time -- merely the last 18000-8000 years.

Putting a nuclear waste repository anywhere near a geologically active zone is morally reprehensible and irresponsible because of the extreme threat it poses to our groundwater. According to one team of researchers, there is only one part of our entire planet that is geologically stable enough to "safely" house such a repository, and it is far away in the center of the continent in Australia (and the Australian people voted not to become the world's nuclear waste dump). This research means,

nowhere in the state of Oregon can safely house waste (and indeed nowhere in the nation).

It would be nice if we lived in a world where technology can solve all of our problems. It would be nice if we could devise a way to safely store high level nuclear waste for a length of time that exceeds 15x the age of human civilization, and the age of our entire species. In fact, there are scientists working on this problem, in spite of all of the challenges. We will eventually have to put our existing nuclear waste somewhere, whether we can build an adequate repository or not. This is certainly a chilling thought.

Any solution to the climate crisis that furthers our reliance on technology which is fundamentally irresponsible, such as nuclear tech without the existence of facilities that will safely store fuel for geological time scales, is a continuation of the problem that brought us the present and impending climate disaster that's facing us. If technology is alone is to save us, as many would hope, the only responsible tech to lean on is wind and solar.

I urge my lawmakers of my beautiful state to vote no on this bill. The requirements for safe storage approved by Oregon voters should stand. There simply is no other responsible way forward with present nuclear tech.