## Rulemaking1CEm Resource

**From:** RulemakingComments Resource
**Sent:** Thursday, December 26, 2013 11:23 AM
**To:** Rulemaking1CEm Resource
**Subject:** FW: Response: NRC - Waste Confidence Generic Environmental Impact Statement: NUREG-2157



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**From:** Dan Gamble [mailto:dan@invirodesign.com]
**Sent:** Friday, December 20, 2013 11:58 PM
**To:** RulemakingComments Resource
**Subject:** Response: NRC - Waste Confidence Generic Environmental Impact Statement: NUREG-2157

Response: NRC - Waste Confidence Generic Environmental Impact Statement: NUREG-2157

The Waste Confidence Draft Generic Environmental Impact Statement is categorically inappropriate. The NRC license for nuclear power plants is 60 years, yet these plants produce radioactive waste that requires storage in a controlled environment for 100 or 1,000 times that span. This EIS says that the impact of indefinite would be "small" because storage facilities will be replaced every 100 years. That assumption is totally unreasonable for numerous economic, social, scientific and historical reasons.

What will happen if no maintenance ever occurs, or if replacement of the facilities ceases entirely? What happens when the social "reset button" is pressed, and the world as we know it is erased? Geological records show that massive changes in climate occur on the timescale in question – for example, the most recent ice age ended just ten thousand years ago, and we have absolutely no written record from human societies existing before that event. Other catastrophes: volcanoes, famines, plagues and wars all have a far shorter time line of global recurrence and resulting dramatic social changes. Unless this document considers the possibility of the storage facilities NEVER being replaced or repaired, the document is fundamentally invalid.

Even if society continues unhindered, who will pay to replace these facilities after the plant is shut down and the power company is bankrupt? Are these costs built in to the cost of the licensing of the facility? What guarantee is there that this maintenance will ever be done? As we cannot assess the stability of future society or its similarity to our own, any storage design that requires the active input of either educated human labor or electrical or fossil energy is making too many assumptions. Any study of the recorded history of human society will tell you that the highest probability outcome for the next 10,000 year period is that the world as we know it

will change to something unrecognizable to our present day. the people of any future era will likely not have the financial and technical means, the interest, or the knowledge necessary to satisfy the proposed 100 year cycle of indefinite reconstruction of these storage facilities. Thus, the environmental, economic and human safety effects of such storage are incalculable.

More modern technologies and methods such as solar, wind and energy conservation all offer utility scale environmentally preferable alternatives. The price of solar power plants continues to fall. Already solar power plants on a utility scale have fallen to just above $1 per watt, making them cheaper to build and operate than nuclear facilities – so much cheaper, in fact, that the cost savings covers the grid scale storage infrastructure necessary to accommodate such improvements. Advances in battery efficiency, reliability and life cycle, most notably sodium-sulfur and zinc-air batteries, can make a solar power plant into a 24/7 base load solution. The same applies to wind energy sources. Reliable grid-scale storage solutions are now offered by reputable companies using proven technologies. These companies include GE, NGK and Fluidic Energy.

Even more accessible than new sources of generation is the single most affordable source of untapped energy in the nation: conservation. If every building in the country were improved with even the simplest of efficiency measures, then the whole fleet of existing nuclear power plants could be taken offline. Why are we even considering building new nuclear power plants? Let us spend our money, time, and intellect more constructively.

Please contact me if you require further details, citations, documentation, etc.

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**Hearing Identifier:** Secy_RuleMaking_comments_Public
**Email Number:** 740

**Mail Envelope Properties** (377CB97DD54F0F4FAAC7E9FD88BCA6D0014433C4A12A)

**Subject:** FW: Response: NRC - Waste Confidence Generic Environmental Impact Statement: NUREG-2157
**Sent Date:** 12/26/2013 11:23:07 AM
**Received Date:** 12/26/2013 11:23:08 AM
**From:** RulemakingComments Resource

**Created By:** RulemakingComments.Resource@nrc.gov

**Recipients:**
"Rulemaking1CEm Resource" <Rulemaking1CEm.Resource@nrc.gov>
Tracking Status: None

**Post Office:** HQCLSTR01.nrc.gov

| **Files** | **Size** | **Date & Time** |
|---|---|---|
| MESSAGE | 4283 | 12/26/2013 11:23:08 AM |
| Dan_Gamble_Signature.jpg | 38948 | |

**Options**
**Priority:** Standard
**Return Notification:** No
**Reply Requested:** No
**Sensitivity:** Normal
**Expiration Date:**
**Recipients Received:**

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