

## RulemakingComments Resource

---

**From:** Charles Brexel Sr. <cbrexel@aol.com>  
**Sent:** Thursday, July 23, 2015 6:38 AM  
**To:** RulemakingComments Resource  
**Subject:** [External\_Sender] Radioactive Waste Disposal 10 CFR61 Docket ID NRC-2011-0012

Dear Secretary,

I, along with probably more than 225 million Americans (i.e. 9 out of 10 Americans in recent surveys), who want the least local pollution and health risk from nuclear power reactors, and along with more than 24.36 million members and supporters of the supporting organizations listed below and more supporting organizations, strongly oppose the proposed 10 CFR 61 changes and ask the NRC to make changes in the direction of greater isolation of waste.

Radioactive releases and exposure to humans and other species must be prevented, not increased.

We especially reject and ask that you remove the following provisions in your proposal:

No deregulation of radioactive waste:

Remove all provisions that would allow nuclear waste to go to regular trash or other unregulated places or into commercial recycling into consumer goods. This approach has been consistently rejected by the American public and explicitly by Congress in the 1992 Energy Policy Act. Delete the existing "§ 61.6 Exemptions" and the proposed addition to "§61.7 Concepts" that would allow deregulating, exempting and releasing radioactive waste and materials from radioactive regulatory control.

No increase in radiation to the public:

Reduce radiation releases: the goal should be to prevent all releases. Reject the proposed change from the current allowable public dose of 25 millirems/year to the higher 25 millirems EDE, 100 millirems EDE, 500 millirems EDE or even more per year.

No "black box" Performance Assessments by dump operators:

Remove all provisions that would allow dump operators to do their own "Performance Assessments" and make "Safety Cases" to claim they can put more kinds of radioactive waste and longer-lasting nuclear waste in shallow land burial trenches. This presents an obvious conflict-of-interest issue, as operators would have a vested interest in a favorable outcome of such assessments.

No preemption of state's authority:

Allow states to continue setting stricter, more protective standards than NRC. Remove the "Level B" compatibility requirement.

Radioactive materials hazardous for 100 years or more should be kept out of burial grounds. Simply labeling various time periods (compliance, performance, protective assurance, etc) and assigning increasing allowable doses does not protect anyone--it simply makes it legal to pollute.

The members and supporters of the supporting organizations for this letter include more than the listed members and supporters for each of the following organizations (more than 24.36 million total):

National Wildlife Federation – 4 million Credo Action – 3.5 million Sierra Club – 2.4 million National Audubon Society – 2 million Natural Resources Defense Council (NRDC) – 2 million World Wildlife Fund (WWF) – 1.09 million Earthjustice – 1 million Environment America – 1 million The Nature Conservancy – 1 million Defenders of Wildlife – 1 million Environmental Defense Fund – 1 million Clean Water Action – 1 million Center for Biological Diversity – 825,000 League of Conservation Voters – 700,000 The Wilderness Society – 500,000 Public Citizen – 400,000 Greenpeace – 250,000 Friends of the Earth US – 210,200 Union of Concerned Scientists – 200,000 NukeFree.org – 120,000 Southern Alliance for Clean Energy – 50,000 Physicians for Social Responsibility – 50,000 Waterkeeper Alliance – 24,000 South Florida Wildlands Association – 17,400 Nuclear Information and Resource Service (NIRS) – 9,130 Beyond Nuclear – 8,990 San Luis Obispo Mothers for Peace - 2,145 Mothers for Sustainable Energy (The Mothers Project) – 1,935 Florida Consumer Action Network – 1,810 Nuclear Watch South - 615 Alliance for Nuclear Responsibility in San Luis Obispo - 170

In addition, by virtue of its outrageous and extreme expense; the deceptively high carbon footprint of the nuclear fuel chain; and the inherent contradiction of integrating "baseload" power with the variable nature of 21st century energy technologies, nuclear power is actually counterproductive at addressing the pressing issue of climate change.

Moreover, while nuclear is lower carbon than coal or oil, it delivers a range of other poisons - plutonium, strontium, cesium, etcetera - to our environment through routine releases, radioactive waste, and the less frequent, but devastating, atomic meltdowns.

We urgently need greater support, encouragement and deployment of clean solar power, wind power, energy efficiency, geothermal power, smart grid interfaces for rooftop solar (in Hawaii as just one urgent example), battery storage technologies, other smart grid technologies and other clean renewable energy technologies.

Instead of propping up obsolete, 50-year-old technologies like nuclear power, we should be embarking on our own energy transition to a new nuclear-free, carbon-free energy system that can power our nation cleanly, safely, sustainably and affordably.

Furthermore, nuclear power is the most expensive form of power and, without question, could not exist without massive taxpayer subsidies, including the "Price-Anderson" law that places a cap on industry liability in the event of a nuclear accident.

The market price evidence is overwhelmingly clear and compelling - nuclear power is an outrageously and extremely more expensive energy solution. In fact, the US energy market continues to move, faster and faster, toward an extremely better value energy future, reliant on solar and wind power, not the outrageously and extremely expensive and risky nuclear power.

As of 7/5/15, it has already been costing our manufacturing industry, our businesses and our homeowners much less to buy solar power than natural gas, coal, oil, timber, biomass or nuclear power. And, it is expected to continue to cost them typically another 20% less per year for, at the least, the next few years. It is at <http://www.usatoday.com/story/money/markets/2015/07/05/motley-fool-solar-energy/29583021/>

As of 7/5/15, all bids for selling power from solar power utility-scale projects are now in the 4 cents to 5 cents per kWh range – this is much less than what it costs you to build a natural gas, coal, oil, timber, biomass or nuclear power plant. It is at <http://www.usatoday.com/story/money/markets/2015/07/05/motley-fool-solar-energy/29583021/>

As of 7/9/15, two bids for selling power from solar power utility-scale projects have now come in below 4 cents per kWh, with one bid coming in below 3.9 cents per kWh – this is much less than what it costs you to build a natural gas, coal, oil, timber, biomass or nuclear power plant. It is at <http://www.utilitydive.com/news/nv-energy-buys-utility-scale-solar-at-record-low-price-under-4-centskwh/401989/>

As of 6/23/15, the price of wholesale solar power has been forecasted by independent analysts at Bloomberg New Energy Finance to continue to decrease, at the least, for the next 25 years. It is at

<http://www.bloomberg.com/news/articles/2015-06-23/renewables-to-beat-fossil-fuels-with-3-7-trillion-solar-boom>

As of 7/5/15, according to GTM Research, the cost of utility-scale solar projects has fallen 67% in the past five years, and is expected to fall another 44% in the next couple of years.

As of 7/5/15, "Since solar costs are beating those of competing energy sources, there are expectations of a boom in demand -- and it's going to be a global solar boom. GTM Research predicts that solar installations will triple to 135 GW annually by 2020."

On 7/5/15, investment analyst Travis Hoiium of The Motley Fool said: "We're past the point of no return -- solar energy will be the biggest new energy source in the future."

US wind power, as of 8/22/14, hit an all-time national average low purchase price of 2.5 cents per kWh – this is much less than what it costs you to build a natural gas, coal, oil, timber, biomass or nuclear power plant. It is at <http://www.theenergycollective.com/eric-wesoff/468266/price-us-wind-power-all-time-low-25-cents-kilowatt-hour>

As of 5/31/15, lawyers for Wal-Mart, a hospital group and a coalition of other ratepayers found that Florida utilities were buying Oklahoma wind power for just 2 cents per kilowatt hour: "Henry and the lawyers for OG&E's corporate customers formed a kind of tag team, taking turns blasting the company for refusing to even study new wind power. They repeatedly pointed out that in-state competitors as well as Florida and New Mexico utilities were buying Oklahoma wind for just 2 cents per kilowatt hour, even cheaper than coal without pollution controls, while OG&E hadn't purchased new wind in four years—even though its ads boasted about its commitment to wind. When its witnesses claimed their transmission lines were too congested to add new wind, Henry produced internal documents suggesting the congestion could be fixed for about 3 percent of the cost of the new coal scrubbers."

<http://www.politico.com/agenda/story/2015/05/inside-war-on-coal-000002>

As of 3/12/15, the price of wholesale wind power will continue to decrease, at the least, for the next 10 years according to a Department of Energy report. It is at <http://www.bloomberg.com/news/articles/2015-03-12/wind-energy-without-subsidy-will-be-cheaper-than-gas-in-a-decade>

On 8/8/14, Amory Lovins, a physicist and chief scientist at the Rocky Mountain Institute, found that "Wind and solar become the most economical options while gas and nuclear become the least economical". It is at <http://www.theenergycollective.com/eric-wesoff/468266/price-us-wind-power-all-time-low-25-cents-kilowatt-hour>

In addition, 9 out of 10 Americans, including Republicans, Democrats and Independents, want more solar and wind power installed, rather than using natural gas, coal, oil and nuclear power.

According to a comprehensive 12-year Harvard survey as of 1/1/15, 90% of all Americans, including Republicans, Democrats and Independents, said that they wanted solar and wind energy to increase and 80% of all Americans said that they wanted solar and wind energy to "increase a lot". It is at <http://www.forbes.com/sites/jeffmcmahon/2015/01/01/americans-want-america-to-run-on-solar-and-wind/>

The Harvard study found that all Americans overwhelmingly prefer solar and wind power, rather than natural gas, coal, oil and nuclear power, because solar and wind power provide the least local pollution and health risk.

On 9/19/14, a UBS investment banking report called nuclear power plants the "the DINOSAUR of the future energy system" and Amory Lovins, a physicist and chief scientist at the Rocky Mountain Institute, said that nuclear power was an "OBSOLETE technology": "Banking giant UBS calls the big, slow, lumpy, expensive coal and nuclear plants "the dinosaur of the future energy system: Too big, too inflexible, not even relevant for backup power in the long run." Such obsolete technologies are less at risk from regulatory mandates than from

market defeat by a swarm of agile competitors that their promoters don't even recognize." It is at <http://www.forbes.com/sites/amorylovins/2014/09/19/micropowers-quiet-takeover/2/>

As of 7/6/15, worldwide investments in solar, wind and other renewable power are already running at a rate that is ten times greater than investments in nuclear power. It is at <http://www.greentechmedia.com/articles/read/renewables-outpace-nuclear-in-major-economies>

As of 7/6/15, not one single new generation (i.e. Generation III) nuclear reactor has been able to come into service in the past 20 years. Most new generation nuclear reactors are delayed three to nine years and are extremely far over budget. It is at <http://www.greentechmedia.com/articles/read/renewables-outpace-nuclear-in-major-economies>

As of 7/16/15, Jonathon Porritt, co-founder of the Forum for the Future and former Chairman of the U.K. Sustainable Development Commission, wrote in the forward to the "World Nuclear Industry Status Report 2015" that: "The impressively resilient hopes that many people still have of a global nuclear renaissance are being trumped by a real-time revolution in efficiency-plus-renewables-plus-storage, delivering more and more solutions on the ground every year." It is at <http://www.greentechmedia.com/articles/read/renewables-outpace-nuclear-in-major-economies>

Nuclear power is clearly an obsolete and old technology. Nuclear power is clearly an energy of the past. Nuclear power is clearly not where the overwhelming amount of innovation in new energy technology is occurring.

As of 2014 and 2015, most of the major power companies and utilities in the EU have already transitioned away from both nuclear power and fossil fuels. On 12/18/14, David Elliott, an Emeritus Professor of Technology Policy at the Open University, said: "It's hardly surprising then that most of the major power companies and utilities in the European Union (EU) have backed away from nuclear, including SSE, RWE, Siemens and most recently E.ON, in favor of renewables." It is at <http://ecowatch.com/2014/12/18/renewables-outpace-nuclear-energy/>

Solar and wind power are clearly the most innovative and newest technologies. Solar and wind power are, overwhelmingly, the energies of the present and future. Solar and wind power are clearly where the overwhelming amount of innovations and developments are rapidly occurring.

As of 5/29/15, for the year so far, 84.1% of all new power installations for U.S. utility companies were solar power, wind power and other renewables. Natural gas power supplied the rest of the new power installations. It is at <http://safeenergy.org/2015/05/29/checking-in-on-the-energy-transition/>

Germany and Sweden continue to very rapidly decommission all of their nuclear power plants and to very rapidly transition to solar and wind power. France is also rapidly cutting down its amount of nuclear power and is also rapidly transitioning to solar and wind power.

California has only two, very old nuclear reactors left in operation at the Diablo Canyon nuclear power plant. Like the overwhelming majority of states and countries, California is also continuing to very rapidly transition to solar and wind power.

On 1/7/15, Governor Brown of CA called for increasing the state renewable portfolio standard (RPS) to 50% by 2030, reducing petroleum use in cars and trucks in California by 50%, and doubling building energy efficiency, all by 2030. As of 6/5/15, the Senate has already passed a bill for the plan and the Assembly is expected to also act in 2015. It is at <http://www.lawofrenewableenergy.com/2015/04/articles/renewable/governor-brown-announces-new-2030-greenhouse-gas-reduction-target-for-california/>

NRG Energy had already reorganized the entire company in 2014 and early 2015 to quickly and massively ramp up converting their business services to supply zero carbon emission, clean energy such as solar and wind power. It is at <http://www.utilitydive.com/news/what-happened-when-nrg-energy-disrupted-its-own-business-model/401472/>

Since 2008, Duke Energy, the largest US power company, has been working on becoming one of the largest renewable energy developers in the nation. It is at <http://www.utilitydive.com/news/how-americas-largest-power-company-plans-to-become-a-leading-renewables-de/401539/>

Since 2014 and earlier, Arizona Public Service, Tucson Electric Power, Southern Company, Georgia Power, Southern California Edison, the Hawaiian Electric Company (HECO) and many other US electric utility and power supply companies have all been quickly and massively ramping up their installations of zero carbon emission, clean energy such as solar and wind power. It is at <http://www.utilitydive.com/news/grid-edge-live-2015-the-trends-behind-the-explosion-in-distributed-resourc/401417/>

On 6/29/15, Pacific Gas and Electric Corporate Strategy Officer Elizabeth Brinton said about electric power utility companies quickly and massively transitioning to become major renewable energy suppliers: "Business as usual for the [electric power] utility cannot continue. There is urgency for us to recognize disruption is an opportunity."

As of 6/11/15, Vermont has a law for electric utilities to be at 75% renewables by 2032 and at 55% renewables by 2017. It is at <http://www.utilitydive.com/news/new-vermont-law-mandates-75-renewables-by-2032-targets-residential-emissi/400777/> and <http://www.eia.gov/todayinenergy/detail.cfm?id=21852>

As of 6/29/15, Governor Cuomo of NY presented an energy plan under NY's REV plan to be at 50% renewable energy by 2030. The Assembly has already passed a bill for the plan and the Senate bill is awaiting a vote. It is at <http://www.governorswindenergycoalition.org/?p=13551> and <file:///C:/Users/Charles/Downloads/2015-overview.pdf> and <http://energyplan.ny.gov/Plans/2014.aspx>

Effective 7/1/15, it is the law in Hawaii that 100% of its electricity come from renewables by 2045, with 30% by 2020, 40% by 2030 and 70% by 2040 as interim targets. It is at <http://www.utilitydive.com/news/100-renewables-by-2045-is-now-the-law-in-hawaii/400495/> and <http://www.eia.gov/todayinenergy/detail.cfm?id=21852>

Nuclear power is clearly in rapid decline in use in the US and throughout the world, while solar and wind power are, clearly and compellingly, experiencing exponential growth for the next 25 years and longer.

It will be even harder and even more expensive to get parts, operation, maintenance, support and engineering services for nuclear power as the decline in the use of nuclear power plants continues to accelerate over the next couple of decades.

In addition, nuclear power plants use outrageous and extreme quantities of precious fresh water supplies for cooling. New reactors on the drawing board would still need to withdraw more than 1,140,000 gallons of water per minute from nearby lakes, rivers or oceans.

The United States is highly vulnerable to continuing and worsening drought as climate change continues to worsen.

Nuclear power plants in Alabama and Tennessee and other states have been shut down because of drought. More nuclear power plants will be shut down when drought continues to get worse because of climate change.

Nuclear reactors also imperil fish larvae and other forms of aquatic life, which are strained from the water as it travels through thousands of metal tubes to become steam that turns the turbines to make electricity. A 2005 study found that one coastal power plant in Southern California destroyed nearly 3-and-a-half million fish in just one year.

Solar and wind power do not require any use of our extremely precious fresh water drinking and agricultural irrigation supplies.

In addition, any more new nuclear reactors would produce even more radioactive waste that would not decay for the next 250,000 and millions of years. Solar and wind power do not produce any radioactive pollution.

Nuclear power has been proven to be dangerous, dirty, harmful and obsolete. We need proven 21st century energy technologies, not failed, 50-year-old technology holdovers.

We, every regulator, every world leader, every world lawmaker, every environmental organization and every consumer must keep strongly urging every nuclear, oil, natural gas, coal and electric utility company to quickly and massively ramp up converting their business services to supply zero carbon emission, clean energy such as solar, wind and geothermal power.

We, every regulator, every world leader, every world lawmaker, every environmental organization and every consumer must also keep strongly urging every nuclear, oil, natural gas, coal and electric utility company to quickly and massively ramp up converting their business services to supply other clean energy products and services, such as:

1. Batteries for electric vehicles, home power storage, business power storage and utility-scale power storage
2. Home, business and utility-scale inverters with advanced capabilities (such as ultra-fast trip times and battery-backup) and settings, to allow for more connection of renewable energy to the grid.
3. Smart grid technology products and services
4. 2-way smart grid communication systems and services as part of a modern smart grid
5. Energy efficiency products and services - plus renewable energy (like solar and wind) products and services - plus battery storage products and services
6. Electric car, truck, bus and/or train manufacturing

With the success of the Tesla Model S and its impending large-scale lithium ion battery manufacturing from Tesla's Gigafactory, it appears that Big Oil and Gas could now become even more interested in transitioning to becoming a large-scale supplier in the battery business. It is at <http://ecowatch.com/2015/07/14/elon-musk-tesla-model-s/>

As just one example, it has been suggested and discussed that a Big Oil and Gas company, like ExxonMobil, could purchase a successful battery manufacturer, like Tesla, and thereby massively and quickly ramp up electric car and truck manufacturing and use. It is at <http://www.albertaoilmagazine.com/2015/07/is-teslas-model-s-the-beginning-of-the-end-for-oil/>

In 11/28/07, ExxonMobil Chemical was originally involved in developing a new battery technology that made lithium-ion batteries usable for electric cars. It is at <http://www.chron.com/business/article/Exxon-to-unveil-hybrid-car-battery-breakthrough-1811103.php>

In addition, on 9/19/11, CEO Peter Loscher of Siemens, one of the world's leading nuclear reactor manufacturers, explained that the company did not see a future in building any more new nuclear power plants. Siemens announced that it would no longer manufacture nuclear reactors and that it was leaving the nuclear industry. Siemens transitioned massively and quickly into a leading supplier of wind, solar and geothermal products and services. It is at <http://thinkprogress.org/climate/2011/09/19/321935/siemens-quits-nuclear-industry/>

Also, since 9/9/11 and before, Alstom, another major nuclear power manufacturer, has significantly transitioned and increased its offshore wind power, onshore wind power, solar and geothermal power products and services. It is at <http://www.fool.com/investing/general/2014/12/20/offshore-wind-uk-siemens-better-watch-out-for-gene.aspx> and <http://www.alstom.com/microsites/power/products-services/renewables/>

Also, since 9/9/11 and before, Areva, one of the world's largest nuclear reactor manufacturers, has significantly transitioned and increased its rapidly growing offshore wind power products and services and formed Adwen in a joint venture with Gamesa. It is at <http://www.adwenoffshore.com/about-us/profile/> and <http://suppliers.areva.com/EN/home-256/index.html>

In place of any more new, harmful and wasteful nuclear power, we very strongly urge you to urge every nuclear and electric power utility company to quickly and massively ramp up converting their business services to supply zero carbon emission, clean energy such as solar, wind, geothermal power and other clean energy products and services.

Thank you for seriously considering our requests.

Charles Brexel Sr.  
12085 Wexford Overlook  
Roswell, GA 30075