



DEPARTMENT OF ENERGY

10 CFR Part 600

Development of Nuclear Energy Technologies and Collaboration with States on Nuclear Development, Notice of Petition for Rulemaking

AGENCY: Office of Nuclear Energy, Department of Energy.

ACTION: Notification of petition for rulemaking; request for comment.

SUMMARY: On October 23, 2019, the Department of Energy (DOE) received a petition from Mr. Ken Kay asking DOE to promulgate rules and establish programs that will allow States and their agents to collaboratively develop new nuclear technologies with DOE, and under the authority of DOE, including but not limited to the development of small nuclear reactors. The petition further requests that DOE promulgate rules and establish programs that would allow States to develop collaborative nuclear and non-nuclear laboratories with DOE on currently licensed or formerly licensed nuclear facility grounds, within their respective States, and allow for the construction of collaborative nuclear experimentation containment facility testing platforms. Through this document, DOE seeks comment on the petition, as well as any data or information that could be used in DOE's determination on whether to proceed with the petitions.

DATES: Written comments and information are requested on or before **[INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: Interested persons are encouraged to submit comments, identified by "Nuclear Petition," by any of the following methods:

Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.

E-mail: NuclearPetitions@hq.doe.gov Include “Nuclear Petition” in the subject line of the message.

Postal Mail: Mark Yale, Office of Nuclear Energy, U.S. Department of Energy, Mailstop 5A-148, 1000 Independence Avenue SW, Washington, DC 20585. If possible, please submit all items on a compact disc (CD), in which case it is not necessary to include printed copies.

Hand Delivery/Courier: Mark Yale, Office of Nuclear Energy, U.S. Department of Energy, Mailstop 5A-148, 1000 Independence Avenue, SW, Washington, DC, 20585. Telephone: (202) 586-7856. If possible, please submit all items on a CD, in which case it is not necessary to include printed copies.

Docket: For access to the docket to read background documents, or comments received, go to the Federal eRulemaking Portal at <http://www.regulations.gov>.

FOR FURTHER INFORMATION CONTACT: Mr. Mark Yale, Office of Nuclear Energy, U.S. Department of Energy, Mailstop 5A-148, 1000 Independence Avenue, SW, Washington, DC, 20585. Telephone: (202) 586-7856. E-mail: Mark.Yale@hq.doe.gov.

SUPPLEMENTARY INFORMATION: The Administrative Procedure Act (APA), 5 U.S.C. 551 *et seq.*, provides among other things, that “[e]ach agency shall give an interested person the right to petition for the issuance, amendment, or repeal of a rule.” (5 U.S.C. 553(e)) DOE received a petition from Mr. Ken Kay, as described in this document and set forth verbatim below, requesting that DOE promulgate rules and establish programs to (1) allow States and their agents to collaboratively develop new nuclear technologies with DOE, and under the authority of DOE, to include, but not be limited to, the development of small nuclear reactors

designed to produce ten megawatts or less of thermal energy, and (2) establish programs that would allow States to develop collaborative nuclear and non-nuclear laboratories with DOE on currently licensed or formerly licensed nuclear facility grounds, and allow for the construction of collaborative nuclear experimentation containment facility testing platforms. Among the cited grounds for petitioner's petition are: the Atomic Energy Act of 1954, Pub. L. 83-703, as amended; 42 U.S.C. 2013; and 42 U.S.C. 2021. In publishing this petition for public comment, DOE is seeking views on whether it should grant the petition and undertake a proposed rulemaking or other appropriate action. By seeking comment on whether to grant this petition, DOE takes no position at this time regarding the merits of the suggested rulemaking or the assertions made by the Petitioner.

DOE welcomes comments and views of interested parties on any aspect of the petition.

Submission of Comments

DOE invites all interested parties to submit in writing by **[INSERT DATE 90 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]** comments and information regarding these petitions.

Submitting comments via <http://www.regulations.gov>. The <http://www.regulations.gov> web page will require you to provide your name and contact information prior to submitting comments. Your contact information will be viewable to DOE Office of Nuclear Energy staff only. Your contact information will not be publicly viewable except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment. Persons viewing comments will see only first and last names, organization names, correspondence containing comments, and any documents submitted with the comments.

Do not submit to <http://www.regulations.gov> information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information (CBI)). Comments submitted through <http://www.regulations.gov> cannot be claimed as CBI. Comments received through the website will waive any CBI claims for the information submitted. For information on submitting CBI, see the Confidential Business Information section.

DOE processes submissions made through <http://www.regulations.gov> before posting. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your comment may not be viewable for up to several weeks. Please keep the comment tracking number that <http://www.regulations.gov> provides after you have successfully uploaded your comment.

Submitting comments via email, hand delivery, or postal mail. Comments and documents via email, hand delivery, or postal mail will also be posted to <http://www.regulations.gov>. If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information on a cover letter. Include your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments.

Include contact information in your cover letter each time you submit comments, data, documents, and other information to DOE. If you submit via postal mail or hand delivery, please provide all items on a CD, if feasible, in which case it is not necessary to submit printed copies. No telefacsimiles (faxes) will be accepted.

Comments, data, and other information submitted electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII) file format. Provide documents that are not secured, written in English, and free of any defects or viruses. Documents should not include any special characters or any form of encryption, and, if possible, they should carry the electronic signature of the author.

Campaign form letters. Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

Confidential Business Information. Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email, postal mail, or hand delivery two well-marked copies: one copy of the document marked "Confidential" including all the information believed to be confidential, and one copy of the document marked "Non-confidential" with the information believed to be confidential deleted. Submit these documents via email or on a CD, if feasible. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

Factors of interest to DOE when evaluating requests to treat submitted information as confidential include: (1) a description of the items; (2) whether and why such items are customarily treated as confidential within the industry; (3) whether the information is generally

known by or available from other sources; (4) whether the information has previously been made available to others without obligation concerning its confidentiality; (5) an explanation of the competitive injury to the submitting person which would result from public disclosure; (6) when such information might lose its confidential character due to the passage of time, and (7) why disclosure of the information would be contrary to the public interest.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

DOE considers public participation to be a very important part of its process for considering rulemaking petitions. DOE actively encourages the participation and interaction of the public during the comment period. Interactions with and between members of the public provide a balanced discussion of the issues and assist DOE in determining how to proceed with a petition. Anyone who wishes to be added to DOE's mailing list to receive future notices and information about this petition should contact Office of Nuclear Energy program staff at (202) 586-2240 or via e-mail at *Mark.Yale@hq.doe.gov*.

Approval of the Office of the Secretary

The Secretary of Energy has approved publication of this petition for rulemaking.

Signing Authority

This document of the Department of Energy was signed on December 17, 2020, by Dr. Rita Baranwal, Assistant Secretary for Nuclear Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to

sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed in Washington, D.C. on December 17, 2020.

Treena V. Garrett
Federal Register Liaison Officer,
U.S. Department of Energy

Attn: John T. Lucas General Counsel, GC-1
U.S. Department of Energy
1000 Independence Avenue, SW.
Washington, DC 20585.

Cc:

Eric J. Fygi, Deputy General Counsel, at eric.fygi@hq.doe.gov
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UNITED STATES DEPARTMENT OF ENERGY

In the Matter of Proposed Rulemaking Regarding the **Creation of New Rules**

PETITION FOR RULEMAKING

This Petition for Rulemaking is submitted pursuant to The Administrative Procedure Act, 5 U.S.C. 551, and 553, requires each federal agency to "give an interested person the right to petition for the issuance, amendment, or repeal of a rule" and defines a "person" to include an individual, partnership, corporation, association, or public or private organization other than an agency.

STATEMENT OF PETITIONER'S INTEREST

I, Ken Kay am From the State of Ohio, have a sincere interest and support the Creation of new rules, to enable further research and development into safe modular nuclear reactors as a true means of sustainable low-cost abundant ultra-clean energy, remove unused nuclear fuel known as waste and many of beneficial factors that will come with unleashing safe nuclear technology.

BACKGROUND

Federal agencies have failed to provide a domestic program of research and development for nuclear technologies to encourage maximum scientific and industrial progress allowing other nations to become the world leaders in nuclear and energy diplomacy. This failure has compromised America's safety and security and put states at a competitive disadvantage to foreign countries in producing new nuclear technologies. **Federal policies with states are not consistent with international arrangements and agreements of cooperation.**

Providing a regulatory pathway that removes much of the potential for litigation during the research and development phase of a technology allows private industry to better prove technologies and reduce

investor risks. Such a pathway would allow America to bring many more nuclear technologies at an accelerated pace.

Countries around the world — particularly China, Russia, India, and developing nations — see the benefits of developing new nuclear technology and are poised to increase their nuclear production.

Unfortunately, projections by the Energy Information Agency show a diminishing U.S. nuclear presence as closures of reactors mount. To improve the human condition — ensuring clean air, clean water, and a robust economy — nuclear energy should be a part of America's diverse energy mix. The failure to innovate within the nuclear industry and produce newer more cost effective technologies and allow current nuclear power plants to produce income streams other than those from electricity generation; have prevented the nuclear industry from competing against other technologies such as natural gas.

Nuclear energy is simply more reliable than all other sources of energy except geothermal. It has the ability to operate at full capacity 90 percent of the time. By contrast, solar energy can only sustain maximum output less than one-third of the time and wind generation just about half of the time because the sun isn't always shining and the wind isn't always blowing. Another source of energy must always be ready to back up unreliable renewables, which is often coal and natural gas.

Nuclear power has even proved its reliability in the face of devastating conditions. A two-reactor nuclear power plant located near Houston, known as the South Texas Project, took a direct hit from the Category 4 Hurricane Harvey. While Texas' wind farms quickly cut off generation due to high winds, the nuclear power plant continued providing power at capacity for struggling communities during the disaster.

In other words, nuclear provided electricity when Texans needed it most.

While states have their own development programs for other energy technologies (coal, oil, gas, wind, and solar); the federal government has a near monopoly in the development of new nuclear technologies. **The federal government has failed to recognize substantively the interest of the states to develop new nuclear technologies for peaceful uses.**

The federal government should remove barriers to the research and development of nuclear technologies so that states can provide scientific diversity and aid in accelerating the development of new nuclear technologies. This will help provide Americans with a program of maximum development and an energy future that is not only clean, affordable, and reliable, but also powers their lives and their potential for flourishing.

FOUNDATIONS FOR PROPOSED ACTION

The United States has fallen behind or is falling behind the rest of the world in building nuclear reactors and developing new nuclear technologies. The United States has not come close to the rate of building and planning of nuclear power plants under the Atomic Energy Commission (AEC) which was formed in 1946 and dissolved in 1974. In 1974 the Energy Research and Development Administration (ERDA) and the Nuclear Regulatory Commission (NRC) legally split the duties of the AEC. The ERDA was to take on the research and development activities of the AEC and the NRC was to take on the safety and regulatory aspects of the defunct AEC. In 1977, Congress saw fit to dissolve the ERDA and consolidate the Federal

Energy Administration, the ERDA, the Federal Power Commission, and programs of various other agencies into the Department of Energy (DOE).

What was lost in the dissolution of the AEC were a number of key issues that remain unresolved to this day. The 1954 Atomic Energy Act (AEA) amended the 1946 Atomic Energy Act and is still the core piece of legislation that drives the regulation of the nuclear industry. Included within the language of the 1954 Atomic Energy Act:

- Required the AEC to ***“recognize the interests of the States in the peaceful uses of atomic energy”*** U.S. Code 42 Section 2021.
- Required the AEC to ***“promote an orderly regulatory pattern between the Commission and State governments with respect to nuclear development”*** U.S. Code 42 Section 2021.
- Required the AEC to create ***“a program of conducting, assisting, and fostering research and development in order to encourage maximum scientific and industrial progress”*** U.S. Code 42 Section 2013.
- Required the AEC to ***“create a program of administration which will be consistent with the foregoing policies and programs, with international arrangements, and with agreements for cooperation”*** U.S. Code 42 Section 2013.

Many of these legal requirements, as laid out by Congress in 1954 are not being met since the AEC was dissolved.

STATEMENT IN SUPPORT OF PROPOSED ACTION

While the NRC has developed rules that allow states to regulate source material and byproducts, it has failed to recognize the interests of states to develop new nuclear technologies and to encourage maximum scientific and industrial progress. The NRC however, has correctly identified that its mission is only concerned with safety and regulation; not development. Providing a program that encourages maximum scientific and industrial progress most correctly falls under the umbrella of the DOE. We believe a proper interpretation of the law is that the authority of the DOE can be extended to states in collaborative research and development agreements per the 1954 AEA mandate to recognize the states interest in developing nuclear technologies for peaceful uses and the provision for providing a program of maximum development. We do not believe DOE authority can extend to commercial activity unless the NRC has previously authorized such activity such as in the production of medical isotopes from research reactors - or- the DOE developed reactor is a demonstration reactor that aids in determining real world feasibility.

PROPOSED ACTION

I, Ken Kay, hereby petitions the United States Department of Energy, under its authority, to promulgate rules and establish programs that will allow states and their agents to collaboratively develop new nuclear technologies with the United States Department of Energy, and under the authority of the United States Department of Energy, including, but not limited to, the development of small nuclear reactors that are

designed to produce ten megawatts or less of thermal energy, thus providing for a program of maximum development that recognizes the interests of states.

I, Ken Kay, hereby petitions the USDOE to promulgate rules and programs that will allow states to develop collaborative nuclear and non-nuclear laboratories with the United States Department of Energy on currently licensed or formerly licensed nuclear facility grounds, within their respective states, and allow for the construction of collaborative nuclear experimentation containment facility testing platforms.

Ken Kay

Ken Kay

October 23rd 2019.

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