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March \_\_, 2023

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Secretary of the U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, D.C. 20585  
Via email to [The.Secretary@hq.doe.gov](mailto:The.Secretary@hq.doe.gov)  
Via facsimile transmission to (202) 586-4403

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RE: Third Request for DOE denial of certification of Palisades Nuclear Plant for DOE  
Civil Nuclear Credit Program

Dear Madame Secretary Granholm:

The undersigned individuals and organizations, numbering thousands of citizens, request for the third time that the Palisades Nuclear Power Plant (“Palisades” or “PNP”), owned by Holtec International, be denied certification by the U.S. Department of Energy (DOE) to receive payments under DOE’s Civil Nuclear Credit (“CNC”) Program. DOE’s recently-issued amended

“Guidance,” which was specifically rewritten to enable Holtec to apply for \$1.2 Billion of taxpayer funds, is illegal under the Infrastructure Investment and Jobs Act (IIJA).

We understand that Holtec International, the current owner of Palisades, may be applying to DOE for a subsidized loan under another law, with the intention of using funds from the IIJA to pay off the loan. We question whether such a combined transaction would be lawful under the IIJA. Even if it is, IIJA credits may not be used to support Palisades. Congress intended the IIJA to support only currently operating commercial nuclear reactors that face termination of operations for economic reasons. Palisades does not meet any criteria for eligibility.

## **I. The IIJA Contemplates CNC Subsidies For Operating Reactors Only**

Certain specific changes appeared for the first time in the publication on March 2, 2023 of the “U.S. Department of Energy Grid Deployment Office Guidance for the Civil Nuclear Credit Program Second Award Cycle.” DOE now states that “The second award cycle clarifies that eligibility extends to nuclear reactors that are at risk of closure by the end of the four-year award period (January 1, 2024- Dec 31, 2027), *including such reactors that have Ceased Operations after November 15, 2021*, and does not restrict eligibility to Applicants who have publicly announced intentions to retire.” (Guidance, Summary of Changes at Sect. V) (Emphasis added). The Guidance further states:

In accordance with the discretion granted to the Secretary in 42 U.S.C. § 18753(c)(1)(A), the Secretary has determined that, for the second award cycle, an Applicant may only apply that can demonstrate that, due to economic factors, the Nuclear Reactor will close by the end of the Award Period unless it receives Credits, or has Ceased Operations after November 15, 2021, due to economic factors.

Guidance p. 14. We have reproduced the entire text of 42 U.S.C. § 18753(c)(1)(A) in the margin.<sup>1</sup> Nowhere does the statute vest discretion in the Secretary of Energy to include

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<sup>1</sup> (A) In general - In order to be certified under paragraph (2)(A)(i), the owner or operator of a nuclear reactor that is projected to cease operations due to economic factors shall submit to the Secretary an application at such time, in such manner, and containing such information as the Secretary determines to be appropriate, including—

(i) information on the operating costs necessary to make the determination described in paragraph (2)(A)(ii)(I), including—

(I) the average projected annual operating loss in dollars per megawatt-hour, inclusive of the cost of operational and market risks, expected to be incurred by the nuclear reactor over the 4-year period for which credits would be allocated;

(II) any private or publicly available data with respect to current or projected bulk power market prices;

(III) out-of-market revenue streams;

(IV) operations and maintenance costs;

(V) capital costs, including fuel; and

(VI) operational and market risks;

(ii) an estimate of the potential incremental air pollutants that would result if the nuclear reactor were to cease operations;

already-closed commercial nuclear reactors in the pool of potential recipients of Civil Nuclear Credits. We submit that the IIJA clearly allows subsidy only of operating commercial nuclear reactors, and that the DOE has spun an interpretation of the IIJA in the Guidance document which effectively amends the clear intention of Congress.

Palisades permanently ended power generation activities on May 20, 2022. Its entire inventory of nuclear fuel was unloaded from the reactor core on June 10, 2022 by its former owner, Entergy. Permission to operate the reactor has been formally terminated by the U.S Nuclear Regulatory Commission (NRC). On June 13, 2022, Entergy, the then-owner of PNP, sent the NRC a letter entitled “Certifications of Permanent Cessation of Power Operations and Permanent Removal of Fuel from the Reactor Vessel.”<sup>2</sup> When Entergy docketed these certifications, the PNP license issued under 10 CFR Part 50 no longer authorized operation of the reactor, nor placement or retention of fuel in the reactor vessel. In addition, PNP has been authorized since December 13, 2021 to spend money from the Palisades Decommissioning Trust Fund<sup>3</sup> without notifying the NRC prior to drawing resources from it, according to the NRC.<sup>4</sup> Holtec International has been spending money from the Decommissioning Trust Fund since at least late June 2022<sup>5</sup> to decommission the plant.

## II. The Applicant Reactor Must Be Currently Competing In The Market

IIJA’s Civil Nuclear Credit Program, codified at 42 USC § 18753, explicitly requires that in order for a nuclear power reactor to be certified, the applicant must be “a nuclear reactor that . . . competes in a competitive electricity market. . . .” 42 USC § 18753(a)(1)(A). Palisades is competing nowhere because its fuel is completely unloaded and the permission to operate that was part of the NRC license has formally ended.

Moreover, according to 42 USC § 18753(b)(1), the Secretary is ordered to “establish a civil nuclear credit program . . . to evaluate *nuclear reactors that are projected to cease*

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(iii) known information on the source of produced uranium and the location where the uranium is converted, enriched, and fabricated into fuel assemblies for the nuclear reactor for the 4-year period for which credits would be allocated; and

(iv) a detailed plan to sustain operations at the conclusion of the applicable 4-year period for which credits would be allocated—

(I) without receiving additional credits; or

(II) with the receipt of additional credits of a lower amount than the credits allocated during that 4-year credit period.

<sup>2</sup> The June 13, 2022 Certifications letter is available online at

<https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML22164A067>

<sup>3</sup> Palisades Site-Specific Decommissioning Cost Estimate,

<https://holtecinternational.com/wp-content/uploads/2022/06/HDI-Palisades-PSDAR.pdf> at p. 46.

<sup>4</sup> NRC Exemption granted to Palisades, ADAMS No. ML21286A506 at p. 10,

<https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML21286A506>

<sup>5</sup> Holtec Decommissioning International (HDI) predicted that it would be expending DTF funds by the time the license transfer from Entergy to HDI was completed, which transfer was completed on June 28, 2022. See *Entergy Nuclear Operations, Inc., Entergy Nuclear Palisades, LLC, Holtec International and Holtec Decommissioning International, LLC* (Palisades Nuclear Plant and Big Rock Point Site), 95 NRC \_\_\_, CLI-22-08 at 38 (July 15, 2022).



*operations due to economic factors. . . .*” (Emphasis added). Again, there is no mention in the CNC statute that bestows any credits on already-closed reactors. And the statute contains no wording that gives the DOE Secretary the power to warp the meaning of its wording to encompass the circumstances at Palisades.

### **III. Palisades Meets No Determinative Requirements For Subsidy**

The IIJA sets out factors at 42 USC § 18753(c)(2) that DOE must consider before it can certify a reactor to receive the credits. Palisades meets none of them.

#### ***A. Palisades Is Not ‘Projected to Cease Operations.’ It Is Inoperable***

Subsection 18753(c)(2)(A)(ii)(I) requires the DOE Secretary to determine “that the nuclear reactor is *projected to cease operations* due to economic factors.” Palisades is not “projected to cease operations.” It has not been operable for more than 9 months and incapable of operating without considerable refurbishment, repair and maintenance of systems. The process of restoring PNP to the generation of electricity will require a wholly-new NRC operating license adjudication.

#### ***B. Required Pollution Measurement Bespeaks An Operating Reactor***

Subsection 18753(c)(2)(A)(ii)(II) obligates the DOE Secretary to determine “that pollutants would increase *if the nuclear reactor were to cease operations* and be replaced with other types of power generation.” Again, it is not speculative that Palisades might cease operations; *it has*.

#### ***C. The NRC Can Give No ‘Reasonable Assurance Of Palisades’ Continued Compliance With Its Current Licensing Basis***

Subsection 18753(c)(2)(A)(ii)(III)(aa) mandates that “the Nuclear Regulatory Commission has reasonable assurance that the nuclear reactor will continue to be operated in accordance with the current licensing basis (as defined in section 54.3 of title 10, Code of Federal Regulations (or successor regulations) of the nuclear reactor.” The NRC cannot provide this assurance since Palisades is closed. The phrase “current licensing basis” is a term of art<sup>6</sup> and obviously anticipates an operating reactor. To require Palisades to “continue” to be operated in accordance with its current licensing basis is a nonsensical statutory requirement because *it is not operating*. Palisades has no permission to conduct power generation operations and lacks a licensing basis that encompasses power generation.

#### ***D. The NRC Cannot Reasonably Assure That Palisades Poses No Significant Safety Hazards***

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<sup>6</sup> 10 C.F.R. § 54.3: *Current licensing basis* (CLB) is the set of NRC requirements applicable to a specific plant and a licensee's written commitments for ensuring compliance with and operation within applicable NRC requirements and the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect.

Subsection 18753(c)(2)(A)(ii)(III)(bb) mandates that “the Nuclear Regulatory Commission has reasonable assurance that the nuclear reactor poses no significant safety hazards.” The NRC cannot provide the DOE Secretary with reasonable assurance that there are no significant safety hazards. To the contrary, Palisades poses significant safety hazards, whether or not the plant can ever be restored to fission operations.

Before Palisades could be restored to operate, for example, there would have to be resolution of its half-century-long plague of control rod drive mechanism (CRDM) seal leakage problems. During much of its operating life, Palisades was allowed to leak 10 gallons of radioactive water per minute through all seals on the reactor vessel. Seal failures recurred throughout the 1970’s at Palisades, then stopped for a while but have repeatedly occurred since the early 2000s. The root cause(s) of the problem have never been established. Nuclear engineer David Lochbaum stated for the Union of Concerned Scientists in 2010 that “the Palisades reactor has had a much higher seal failure rate than other reactors, particularly the other reactors with similar control rod seals.”<sup>7</sup> Noting that the CRDM seals are a key safety feature to protect the radioactive fuel core from damage, Lochbaum decried the fact that the “fundamental cause of the recurring control rod seal leak problems at Palisades has apparently eluded detection.”<sup>8</sup> Indeed, Palisades was permanently closed on May 20, 2022 – 11 days early – because of the latest control rod drive mechanism seal failure.<sup>9</sup>

If Palisades were restored to operations there would have to be a determination about what to do regarding the reactor vessel’s severe embrittlement. In 2006, Consumers Energy, then-owner of Palisades, cited the Palisades reactor vessel’s increasingly risky metallurgical embrittlement as a reason for its decision to sell the plant.<sup>10</sup> Palisades has perennially been ranked by the NRC as having one of the most embrittled reactor vessels in the industry, one which could critically fail in the event of too-rapid heating or cooling.<sup>11</sup> But new owner Holtec has apparently done nothing to understand this serious metallurgical problem. Since final fuel unloading in June 2022, Holtec has had access to at least one metal “coupon,” a piece of reactor metal which was placed inside the reactor when it was built in order to provide metallurgical evidence of the vessel’s changing condition. There has been no meaningful hard science assessment of the Palisades reactor vessel for more than 20 years nor, evidently, any known assessment of the “coupon.” Without accurate physical analysis and understanding of the state of embrittlement at Palisades, this major safety concern remains unresolved, yet it would have to be resolved if the plant were to reopen.

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<sup>7</sup> Lochbaum, “Headaches at Palisades: Broken Seals & Failed Heals,” <https://beyondnuclear.org/headaches-at-palisades-broken-seals-and-failed-heals/> p. 4.

<sup>8</sup> Lochbaum, *id.*

<sup>9</sup> Press Release, “Entergy’s Palisades Team Finishes Strong As Facility Shuts Down,” <https://www.entropynewsroom.com/news/entergy-s-palisades-team-finishes-strong-as-facility-shuts-down/> (May 20, 2022).

<sup>10</sup> <http://archives.nirs.us/reactorwatch/licensing/kampsconsbrifeinf051806.htm> Also, see <http://archives.nirs.us/reactorwatch/licensing/pg2.jpg>

<sup>11</sup> <https://www.nrc.gov/docs/ML1310/ML13108A336.pdf>, p. 5/15 of PDF, Item #4, “Which are the other most embrittled plants in the U.S.? How many PWRs will reach their screening criteria in the next 10 years?”



Restoration of Palisades to operation would also require replacement of the reactor pressure vessel head.<sup>12</sup> The project was deferred indefinitely in 2006<sup>13</sup> and has never been performed. Also In 2006, then-owner Consumers Energy stated a need to replace the steam generators for the second time in Palisades' history.<sup>14</sup> Entergy did not do so during the 2007-2022 period, but they would have to be replaced at great cost before reopening could occur.

Even in its inoperable state, Palisades poses significant safety concerns regarding the onsite storage of spent nuclear fuel (SNF). In 1994, an NRC safety inspector, Dr. Ross Landsman, identified violations of the reactor's Safe Shutdown Earthquake Evaluation in the form of subsurface stability beneath the concrete pads for the loaded nuclear waste casks that are perched on the Lake Michigan shoreline. Dr. Landsman filed a Differing Professional Opinion with the agency in an effort to prevent the loading of nuclear waste into the casks for indefinite storage on a geological base made literally of "shifting sand."<sup>15</sup> The NRC allowed the spent nuclear fuel waste to be loaded into the casks anyway. Both cask pads at Palisades violate NRC earthquake safety regulations. The older one, located nearer Lake Michigan, violates liquefaction standards, while the newer one, somewhat inland, violates amplification standards, according to Landsman.

Cask No. 4, the fourth dry storage cask (DSC) to be loaded with spent nuclear fuel at Palisades, poses dangers to public health and the environment. Weld defects were detected in the 130-ton VSC-24 cask after it was loaded in 1994. Engineers for then-owner Consumers Energy predicted that placing the thermally hot inner canister which contains the thermally hot SNF into the 100 degree F. indoor storage pool water while the SNF was at 400 degrees C. (750 degrees F.) could cause a steam flash and thermal shock to container and fuel. The steam flash could expose workers to radiation doses, while the thermal shock could degrade the canister and fuel, making physical conditions even worse than they already are. They determined that the SNF could not be adequately cooled during the short window of time to cut into the storage cask and move SNF into a transfer cask. Disruption of the convection air flow needed, by design, to cool the cask's contents would cause overheating and violate the cask's technical specifications. Director's Decision DD-97-1, *Consumers Power Company* (Palisades Nuclear Plant), 45 NRC 33, 37-38 (1997). As a result, Cask No. 4 was not opened and has been left on the storage pad at Palisades in defective condition for the ensuing 28 years. Remediation in order to move the SNF in Cask No. 4 will have to happen someday, and whenever it takes place, it will be dangerous and expensive.

#### **IV. DOE Cannot Contradict The Statutory Wording That Leaves Palisades Ineligible**

DOE has some discretion under the Administrative Procedure Act to issue binding interpretations of what the agency believes its statutory obligations are, as well as what they mean. But an interpretative rule cannot be used to change the thrust of the law. An interpretative rule simply states what the administrative agency thinks the statute means

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<sup>12</sup> See fn. 11, *supra*.

<sup>13</sup> <http://www.nrc.gov/docs/ML0630/ML063060176.pdf>

<sup>14</sup> See fn. 11, *supra*.

<sup>15</sup> <http://www.nirs.org/reactorwatch/licensing/landsmandec.pdf>

and is meant to be something that "'reminds' affected parties of existing duties." *Citizens to Save Spencer County v. EPA*, 600 F.2d 844, 876 n. 153 (D.C. Cir. 1979). If by its action the agency intends to create new law, rights or duties, the rule is properly considered to be a legislative rule. *General Motors Corp. v. Ruckelshaus*, 742 F.2d 1561, 1565 (D.C. Cir. 1984) (citations omitted), *cert. denied*, 471 U.S. 1074, 105 S.Ct. 2153, 85 L.Ed.2d 509 (1985).

The DOE's current opinion that the IIJA allows Palisades to be subsidized goes beyond the limitations stated in the statute and creates a beneficiary which was not authorized by Congress. The DOE's interpretation is a legislative rulemaking which requires an adequate notice and comment opportunity, but none has occurred. The DOE is confined to using its judgment only to establish how best to implement the statutory mandate but instead has read the closed Palisades reactor into the statute even though the statute addresses only operating reactors. The Guidance claims "discretion granted to the Secretary in 42 U.S.C. § 18753(c)(1)(A)" as the source of authority to make Palisades eligible for nuclear credits, but the statute mentions no such thing. DOE may not unilaterally limit the pool of applicants for this second award cycle to a reactor that has ceased operations after November 15, 2021, due to economic factors. DOE has no legislative authority for its action. The Guidance interpretation has materially changed the implications of the statute, and so it cannot stand. *United Technologies Corp. v. EPA*, 821 F.2d 714, 719-20 (D.C. Cir. 1987); *Fertilizer Institute v. U.S.E.P.A.*, 935 F.2d 1303, 1308 (D.C. Cir. 1991).

Congress doesn't typically use oblique or elliptical language to empower an agency to make a "radical or fundamental change" to a statutory scheme. *MCI Telecommunications Corp. v. American Telephone & Telegraph Co.*, 512 U. S. 218, 229 (1994). Agencies have only those powers given to them by Congress, and "enabling legislation" is generally not an "open book to which the agency [may] add pages and change the plot line." E. Gellhorn & P. Verkuil, *Controlling Chevron-Based Delegations*, 20 Cardozo L. Rev. 989, 1011 (1999). The courts presume that "Congress intends to make major policy decisions itself, not leave those decisions to agencies." *West Virginia v. U.S. Environmental Protection Agency*, 597 U.S. \_\_\_, WL 2347278, 2022 U.S. LEXIS 3268 (2022) (citing *United States Telecom Assn. v. FCC*, 855 F. 3d 381, 419 (D.C. Cir. 2017) (Kavanaugh, J., dissenting from denial of rehearing *en banc*). In extraordinary cases, both separation of powers principles and a practical understanding of legislative intent counsels reluctance "'to read into ambiguous statutory text" the delegation claimed by the agency to be lurking there." *Utility Air Regulatory Group v. EPA*, 573 U. S. 302, 324 (2014). Something more than a merely plausible textual basis for the agency action is necessary. The Secretary's interpretation of the IIJA isn't plausible. DOE has no "clear congressional authorization" for the power it claims. *Id.*

## **V. Conclusion: Palisades Doesn't Qualify For CNC Credits And Certification Should Be Denied**

Palisades does not qualify for the Civil Nuclear Credit Program because it isn't an operating nuclear power generating reactor. Congress spoke through the IIJA and made no allowance for federal monetary support to be awarded to a reactor that has already shut down. The legislative intention was to offer life support to reactors that were struggling to hang on, not

those which, for a complex of reasons that may include economic considerations, have lost the race.

Please curtail all consideration of a bailout for Holtec's Palisades Nuclear Plant under the IIJA, and deny certification for the plant to receive subsidies.

Thank you.

Sincerely,

*/s/ Terry J. Lodge*

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