

**EPA DOCKET NO.  
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**COMMENT OF THE CONCERNED HOUSEHOLD  
ELECTRICITY CONSUMERS COUNCIL ON EPA'S  
EMISSION GUIDELINES FOR GREENHOUSE GAS  
EMISSIONS FROM EXISTING ELECTRIC UTILITY  
GENERATING UNITS; REVISIONS TO EMISSION  
GUIDELINE IMPLEMENTING REGULATIONS; REVISIONS  
TO NEW SOURCE REVIEW PROGRAM**

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This comment is submitted through counsel by the Concerned Household Electricity Consumers Council (“CHECC”). CHECC is a group of homeowners concerned about the dramatic increases in the costs of household electricity brought about by the government-mandated shift of electricity generation from inexpensive and reliable fossil fuels to expensive and unreliable “renewables” like wind and solar. CHECC receives no funding from anyone, and the work of its members and counsel on this comment and all previous submissions and filings with the EPA is entirely *pro bono*.

**I. EPA CANNOT RELY ON THE SAME ENDANGERMENT FINDING AS THE CLEAN POWER PLAN TO ESTABLISH LEGAL AUTHORITY TO ISSUE THE ACE RULE.**

On August 31, 2018, EPA published its proposed “Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program,” referred to as the “Affordable Clean Energy (“ACE”) Rule. 83 Fed. Reg. 44,746. The ACE Rule is intended to replace the Clean Power Plan (“CPP”), published at 80 FR 64662 (October 23, 2015).

In the ACE Rule, EPA explicitly relies on the endangerment finding, such as it was, set forth in the New Source Performance Standard (“NSPS”) Rule (80 Fed. Reg. 64510, 64529), issued concurrently with the CPP in 2015, to establish its legal authority to issue the ACE Rule. After describing the CPP’s reliance on the NSPS endangerment finding under Section 111(b), EPA’s proposed ACE Rule states as follows:

That CAA section 111(b) rulemaking [the NSPS endangerment finding] remains on the books, although EPA is currently considering

revising it. Accordingly, it continues to provide the requisite predicate for applicability of CAA section 111(d). Any comments on the issues discussed in this subsection would be more appropriately addressed to the docket on EPA's intended forthcoming proposal with regard to the new source rule.

83 Fed. Reg. 44,751-44,752.

While EPA seeks to deflect comment on the legal authority of the ACE Rule to some other yet-to-be-announced rulemaking docket, it can never be improper to point out deficiencies in the claimed legal authority upon which EPA proposes to regulate, and CHECC does so here.

EPA should repeal the CPP and replace it with nothing at all for five reasons. First, as shown in Section II, regulation of existing Electric Generating Units ("EGUs") under Section 111(d) is prohibited because they are already regulated under Section 112. Second, as shown in Section III, even absent this prohibition, Section 111(d) regulation of CO<sub>2</sub> emissions from existing sources requires valid regulation of such emissions from new sources under Section 111(b), which requires a separate and valid Section 111 endangerment finding, which does not yet exist. Nor may EPA legally rely on the 2009 Section 202(a) Greenhouse Gas ("GHG") Endangerment Finding for mobile sources (the "2009 EF"). Third, as shown in Section IV, there are powerful scientific reasons the 2009 EF should be reconsidered, which apply with even greater force to the cursory Section 111 endangerment finding in the NSPS. Fourth, as shown in Section V, any GHG regulation that drives higher grid penetration for "renewable" energy sources – wind and solar – will cause enormous increases in the cost of electricity, causing substantial economic harm to everyone in America. Fifth, as shown in Section VI, the ongoing war on fossil fuels through regulations and litigation arising from the 2009 EF gravely threaten U.S. strategic, national security and economic interests, as well as President Trump's Energy Dominance Agenda.

## **II. THE SECTION 112 EXCLUSION BARS REGULATION UNDER SECTION 111.**

The CPP should be repealed and not replaced with the ACE Rule or anything at all because regulating GHG emissions from existing Electric Generating Units ("EGUs") under Section 111 violates the clear and unambiguous language of Section 111(d) (42 U.S.C. § 7412(d)) of the Clean Air Act ("CAA"), which prohibits regulation of any source category which is regulated under Section 112. The specific language is as follows:

(1) The Administrator shall prescribe regulations which shall establish a procedure similar to that provided by section 7410 of this title under which each State shall submit to the Administrator a plan which (A) establishes standards of performance **for any existing source for any air pollutant (i)** for which air quality criteria have not been issued or **which is** not included on a list published under section 7408(a) of this title or **emitted from a source category which is regulated under section 7412 of this title ...**

(Emphasis added). It is undisputed that EGUs are regulated under Section 112. That being so, regulation under Section 111(d) is prohibited. The existing CPP is plainly unlawful. Any replacement thereof other than complete repeal would also be plainly unlawful.

The point is crystal clear and there is hardly any need of belaboring it.

Yet the prior Administration insisted the clear and explicit language of this code section does not mean what it says. All manner of metaphysical speculations were summoned to erase the plain meaning of the prohibition.

These arguments should not be indulged. In *AEP v. Connecticut*, 564 U.S. 410 (2011) the Court recognized the plain meaning of the statutory prohibition in footnote 7: “EPA may not employ §7411(d) if existing stationary sources of the pollutant in question are regulated under the national ambient air quality standard program, §§7408–7410, or the “hazardous air pollutants” program, §7412. *See* §7411(d)(1).”

Undeterred by explicit and unambiguous statutory language and an equally clear statement by the Supreme Court, the CPP relied upon fanciful semiotic examinations of the legislative entrails of the 1990 amendments to Section 111 and 112 to find an “ambiguity.” Into this tiny crack the Agency inserted for itself limitations and qualifications not found in the U.S. Code. Through these erosive forces of statutory deconstruction, the express statutory limitation was washed away, and a giant canyon was gouged. The Agency eventually claimed authority to centrally plan and control the entire electric power sector of the economy, with massive economic consequences for that sector and for everyone in the U.S. This result was so radically disconnected from the Agency’s statutory authority that for the first time in history, the Supreme Court entirely stayed the regulation. *West Virginia v. EPA*, No. 15A773 (U.S. February 9, 2016).

While the ambitions of the ACE Rule are far less grandiose than those of the CPP, the legal point is the same. The language of Section 111 is not so elastic as to permit that which it plainly forbids, and the discretion of the Agency is not so great as to invert the plain meaning of the statute. That is why we have written statutes in the first place, as the Agency had to be reminded in *UARG v. EPA*, 134 S. Ct. 2427 (2014). Regulation of existing EGUs under Section 111(d) is prohibited because they are already regulated under Section 112.

### III. REGULATION OF EXISTING SOURCES DEPENDS ON VALID REGULATION OF NEW SOURCES.

Even absent the Section 111 exclusion, Section 111(d) of the CAA makes plain that EPA's authority to regulate existing stationary sources of an air pollutant under Section 111(d) derives from and depends upon the issuance of valid regulations of that pollutant for new stationary sources under Section 111(b):

The Administrator shall prescribe regulations which shall establish a procedure ... under which each state shall submit to the Administrator a plan which (A) establishes standards of performance for any existing source for any air pollutant ... (ii) **to which a standard of performance under this section would apply if such existing source were a new source, ....**

(Emphasis added).

Thus, authority for the ACE Rule, which relies upon the previously claimed authority for the CPP under Section 111(d), rests explicitly upon the regulations issued for new sources under Section 111(b). *See* ACE Rule, 83 Fed. Reg. 44,751-44,752, *citing* CPP, 80 Fed. Reg. 64661, 64702:3 (10/23/15). Issuance of regulations for new sources under Section 111(b) rests in turn upon the issuance of a Section 111(b) endangerment finding. As EPA explained in both the CPP and the ACE Rule:

As predicates to promulgating regulations under CAA section 111(d) for existing sources, the EPA must make endangerment and cause-or-contribute-significantly findings for emissions from the source category, and the EPA must promulgate regulations for new sources in the source category.

CPP, 80 Fed. Reg. at 64709:1, n. 284; restated in ACE Rule at 83 Fed. Reg. 44,751:2-3.

The relevant standard of performance for GHG emissions from new sources was issued simultaneously with the CPP as a separate rulemaking. 80 Fed. Reg. 64510 (10/23/15) (the “NSPS Rule”). As noted, EPA explicitly relies upon this 2015 NSPS Rule as authority for issuance of the ACE Rule.

Therefore, the validity of the ACE Rule, and of any replacement of the CPP, is legally dependent upon there being a valid Section 111(b) endangerment finding for emission of GHGs from electric generating units under Section 111(b)(1)(A).

Section III(A) of this comment explains why there has been no valid endangerment finding under § 111(b)(1)(A) or § 202(a) and why EPA cannot rely on the 2009 EF for purposes of § 111, thus invalidating the ACE and the CPP and any proposed replacement for the CPP. Section IV explains why the 2009 EF is scientifically invalid, should be reconsidered, and cannot be relied upon to support regulation under § 111. This is a proper topic of comment because the Administrator should not embark on a replacement for the CPP when the entire exercise is unlawful from its inception.

**A. THERE IS NO LAWFUL SECTION 111 ENDANGERMENT FINDING.**

In the NSPS Rule, EPA set out what can be called a layered defense of its position on the Section 111 endangerment finding issue. It claimed (1) that no new endangerment finding was required because it had made one for the source category (but not the pollutant) many years ago; (2) if one was required, it could adopt the 2009 Endangerment Finding for mobile sources lock, stock and barrel; and (3) if that was not sufficient, it was then and there making the requisite finding by declaring it to be so. None of these arguments withstands scrutiny.

**1. EPA CANNOT RELY ON SOURCE CATEGORY FINDINGS FOR DIFFERENT POLLUTANTS FROM DIFFERENT SOURCE CATEGORIES ADOPTED IN 1971 AND 1977.**

EPA’s first argument was that it previously made an endangerment finding for different pollutants for what it claimed is the same source category many years ago, and that it therefore need not make a new one for GHG emissions from EGUs.

The prior findings were for different pollutants from different sources - a one-line finding in 1971 for “steam generators,” 36. 5931 (3/31/71) and a separate finding in 1977 for “stationary gas turbines.” 42. 53, 657 (10/3/77).



Neither of these findings had anything to do with GHGs. EPA therefore argued in the NSPS Rule that the prior finding for the two source categories stated just above authorized it to thereafter commence regulation of any pollutant emitted by EGUs without any finding that the particular pollutant being regulated actually caused endangerment. This was a repudiation of the clear language of Section 111, under which regulation under § 111(d) is tied to standards of performance for *particular pollutants* having been issued under § 111(b)(1)(B), which depend on an endangerment finding having been made under § 111(b)(1)(A) that a source category's emissions *of a pollutant* "cause[], or contribute[] significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." This language and the structure of § 111 plainly mean that absent a § 111 endangerment finding *as to a pollutant* emitted by the source category, regulation is not permitted. Any other reading would be a limitless blank check to regulate anything emitted by a source category, whether it causes any endangerment or not. Given the "capacious" definition of "air pollutant" in § 302(g) of the Clean Air Act, "any substance ... emitted into the ambient air," a limiting principle is essential; otherwise EPA could regulate emissions of air itself.

It is not possible to know whether a pollutant should be regulated under Section 111 without knowing if it "significantly" contributes to "endangerment." Nor is it possible to know how to set a § 111 performance standard without knowing the nature or extent of endangerment that a given level of source category emissions of a particular pollutant causes. Thus, the logical requisite of rational and lawful regulation is having some clue as to what, whether and how much to regulate – all of which is supplied by a proper § 111 endangerment finding.

Moreover, the source categories of the 1971 and 1977 "findings" are separate and distinct from the brand new "fossil-fueled fired EGU" category EPA created for the NSPS Rule and the CPP. 80 Fed. Reg. at 64512. Therefore, the earlier non-GHG "endangerment findings" for those separate source categories, whose unity as a single overlapping source category was never previously claimed, cannot do double duty as the endangerment finding for a different pollutant emitted from the new and distinct source category regulated here. EPA attempted to surmount these distinctions in the NSPS Rule by adopting the regulatory equivalent of a Trinitarian doctrine for source categories – "steam generators," "stationary gas turbines" and "fossil fuel-fired EGUs" are three in one and one in three – a triune source category. While a supernatural fusion of entities may be permissible for matters of faith, it is not permissible for matters of law.

Finally, the one-liner "finding" in 1971 for "steam boilers" neither applied to GHGs nor remotely complied with the requirements of the Data Quality Act.

Pub.L. 106-554. OMB defines a “Highly-Influential Scientific Assessment” (“HISA”) as follows:

III. 1. Applicability: This section applies to influential scientific information that the agency or the Administrator determines to be a scientific assessment that:

(i) Could have a potential impact of more than \$500 million in any year, or

(ii) Is novel, controversial, or precedent-setting or has significant interagency interest.

70 Fed. Reg. 2664, 2675:3 (1/14/05). If the prior 1971 and 1977 “findings” on which EPA relies are deemed sufficient for purposes of § 111(b), then relying upon them for the ACE Rule certainly meets the threshold of having an economic impact greater than \$500 million, or of being novel, controversial or precedent-setting or having significant interagency interest, clearly triggering application of HISA requirements.<sup>1</sup> Of course, the prior “findings” do not apply to GHGs, and do not meet HISA requirements. Therefore, EPA cannot enact the ACE Rule to replace the CPP relying solely on these aged and scientifically irrelevant findings that say nothing whatsoever about GHGs or global warming.

## **2. EPA CANNOT RELY ON THE 2009 ENDANGERMENT FINDING FOR MOBILE SOURCES**

EPA’s second line of defense in the NSPS Rule was that it could adopt the 2009 Endangerment Finding for mobile sources (the “2009 EF”) for all purposes necessary under § 111. This argument is without merit.

First, the fact that Congress saw fit to adopt a separate and distinct endangerment finding requirement for § 111 is compelling proof that EPA cannot willy-nilly adopt endangerment findings made for different purposes under a separate title of the Act. If Congress had intended for a single endangerment finding to support regulation under every title and regulatory program of the Act, it would have said so, and would not have bothered to adopt separate endangerment finding provisions in § 111, § 202(a), § 211(c)(1) and § 231(a)(2)(A). Stationary

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<sup>1</sup> The ACE Rule Regulatory Impact Analysis measures costs relative to a base case which assumes the CPP were in effect. Even so, compliance costs exceed \$500 million in the vast majority of scenarios. See Regulatory Impact Analysis for ACE Rule, pp. ES-6, 1-16, 3-18, Tables 1-4, and 3-11. Table 3-12 shows Annualized Compliance Costs, Relative to No CPP Scenario in 8 out of 12 scenarios. See [https://www.epa.gov/sites/production/files/2018-08/documents/utilities\\_ria\\_proposed\\_ace\\_2018-08.pdf](https://www.epa.gov/sites/production/files/2018-08/documents/utilities_ria_proposed_ace_2018-08.pdf)

sources are fundamentally different from automobiles, and Congress' expressly distinct treatment of the two cannot be lawfully ignored by importing the 2009 EF for mobile sources into stationary source regulation.

EPA itself has recognized that a § 111 endangerment finding must meet a higher threshold than a § 202 finding. Under § 111, the source category must “cause or contribute *significantly*” to air pollution that endangers human health and welfare. EPA made this point itself in the 2009 EF, emphasizing how little endangerment was required by § 202(a) as compared to the elevated threshold of § 111:

Moreover, the statutory language in CAA section 202(a) does not contain a modifier on its use of the term contribute. Unlike other CAA provisions, it does not require “significant” contribution. *See, e.g.,* CAA sections 111(b); 213(a)(2), (4).

74 Fed., Reg. 66506:1. EPA cannot pretend in the NSPS Rule that there is no difference between the endangerment finding provisions of § 111 and § 202 after having urged those distinctions itself to defend the § 202 finding.

### **3. THE 2009 ENDANGERMENT FINDING DID NOT COMPLY WITH THE REQUIREMENTS FOR HIGHLY INFLUENTIAL SCIENTIFIC ASSESSMENTS.**

EPA cannot rely on the 2009 EF in the NSPS Rule or the ACE Rule because the 2009 EF failed to comply with HISA requirements.

The 2009 EF relies on the accompanying the Technical Support Document (“TSD”). The 2009 EF and TSD were found by the EPA Inspector General to constitute a Highly Influential Scientific Assessment: “We interpreted OMB’s guidance to indicate that the TSD was a highly influential scientific assessment.”<sup>2</sup>

The Inspector General then found that EPA did not meet the applicable requirements for HISAs in several respects:

We interpreted OMB’s guidance to indicate that the TSD was a highly influential scientific assessment. **EPA’s peer review did not meet all OMB requirements for such documents.** EPA had the TSD reviewed by a panel of 12 federal climate change scientists. However, **the panel’s**

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<sup>2</sup> See <https://www.epa.gov/office-inspector-general/report-procedural-review-epas-greenhouse-gases-endangerment-finding-data>, last visited February 19, 2018, p. 13.

**findings and EPA’s disposition of the findings were not made available to the public as would be required for reviews of highly influential scientific assessments.** Also, this panel **did not fully meet the independence requirements** for reviews of highly influential scientific assessments because one of the panelists was an EPA employee. Further, in developing its endangerment finding, we found that OAR did not:

- Include language in its proposed action, final action, or internal memoranda that identified whether the Agency used influential scientific information or highly influential scientific assessments to support the action. OAR also did not certify that the supporting technical information was peer reviewed in accordance with EPA’s peer review policy.
- Prepare a complete analytic blueprint outlining its approach for reviewing the technical data needed to support its action as recommended by the Agency’s action development process. OAR also did not follow some of the procedural guidelines in EPA’s action development process

*Id.* The failure of the 2009 EF to meet HISA requirements is plain and obvious, and occurred in many dimensions.

In response to the Inspector General’s report, the EPA claimed that HISA requirements did not apply to the TSD because “they did not consider the TSD a scientific assessment.” *Id.* They claimed instead that the TSD “consisted only of science that was previously peer reviewed,” and that “the Administrator primarily relied upon assessments conducted by other organizations rather than the TSD, which summarizes the findings and conclusions of these other assessments.” *Id.*

EPA took this position with the Inspector General to avoid the fatal consequences to the 2009 EF that would have ensued if it were subject to HISA requirements that it did not meet. Yet this was the exact opposite of the position EPA took in the concurrent litigation over the 2009 EF.

In *Coalition for Responsible Regulation v. EPA*, 684 F.3d 102 (D.C. Cir. 2012), the Petitioners argued that the 2009 EF was invalid because the Administrator had simply adopted the reports of the IPCC without exercising her independent judgment as required by § 202. *See* Non-State Petitioners’ Opening Br. at 33 (“The Administrator Made No Independent Judgment”); 42-43 (“Section

202(a) unequivocally requires the Administrator to make an endangerment determination. In this case the Administrator did not do so, ... but instead pointed to preexisting ‘assessment literature’ that supported the conclusions she had already reached.”) In response to the Petitioners’ argument, EPA claimed to the DC Circuit that the Administrator *had* exercised independent judgment: “Although the scientific assessments reviewed by EPA provided the principal source materials for the Endangerment Finding, the Administrator exercised her own judgment in making that Finding.” EPA Brief at 37. Similarly, when EPA denied the Petitions for Reconsideration of the 2009 EF it said:

***It is useful to describe the process EPA followed in exercising its scientific judgment in making the Endangerment Finding. EPA did not passively and uncritically accept a scientific judgment and finding of endangerment supplied to it by outsiders.*** Instead, EPA evaluated all of the scientific information before it, determined the current state of the science on greenhouse gases, the extent to which they cause climate change, how climate change can impact public health and public welfare, and the degree of scientific consensus on this science. EPA applied this science to the legal criteria for determining endangerment, i.e., whether greenhouses gases cause, or contribute to, air pollution that may reasonably be anticipated to endanger public health or welfare. ... ***EPA properly and carefully exercised its own judgment in all matters related to the Endangerment Finding.***

*Denial of Petitions for Reconsideration*, 75 Fed. Reg. 49,556, 49,581 (Aug. 13, 2010) (emphasis added).

The EPA’s position in the DC Circuit and in the Denial of Reconsideration that the Administrator *had* exercised independent judgment cannot be reconciled with EPA’s position to the Inspector General that the Administrator *had not* exercised independent judgment. EPA simply cannot have it both ways.

EPA cannot ground the NSPS Rule or the CPP or the ACE Rule on the 2009 EF because of its extensive and thoroughly documented failure to comply with HISA requirements.

#### **4. THE NSPS RULE’S PURPORTED NEW ENDANGERMENT FINDING IS NOT HISA-COMPLIANT.**

EPA’s last line of defense in the NSPS Rule is to say that if a new § 111 endangerment finding is required, then it then and there made one, relying on the

2009 EF and subsequently issued assessment literature identified in the NSPS Rule. 80. at 64530:3. The NSPS Rule and the ACE Rule, as outlined above, will obviously trigger the data quality requirements for highly influential scientific assessments. EPA’s arm-waving at the assessment literature does not even remotely comply with HISA requirements. Therefore, EPA cannot rely on the purported endangerment finding in the NSPS Rule for either the CPP or the ACE Rule as a replacement of the CPP. The only lawful way to regulate GHG emissions under § 111 is to prepare a proper, HISA-compliant § 111 positive endangerment finding. Until that has been completed, and a lawfully conducted and scientifically robust positive finding returned, the CPP should not be replaced with any regulation at all, and the ACE Rule should be withdrawn.

#### **IV. SCIENCE ARGUMENTS FOR NOT REPLACING THE CPP WITH ANYTHING AT ALL.**

In this section we present evidence that the 2009 EF has been invalidated on its merits, which is an additional category of reasons the CPP should simply be repealed and not replaced with the ACE Rule.

##### **A. THE 2009 ENDANGERMENT FINDING SHOULD BE RECONSIDERED BECAUSE THE THREE LINES OF EVIDENCE ON WHICH IT IS BASED HAVE BEEN INVALIDATED.**

EPA’s Endangerment Finding appears at 74 C.F.R., page 66,495, *et seq.* At page 66,518 EPA sets forth the three “lines of evidence” upon which it says it has attributed “observed climate change” to “anthropogenic activities,” thus providing the basis for the Finding that human GHG emissions endanger human health and welfare:

The attribution of observed climate change to anthropogenic activities is based on multiple lines of evidence. The **first line of evidence** arises from our basic physical understanding of the effects of changing concentrations of greenhouse gases, natural factors, and other human impacts on the climate system. The **second line of evidence** arises from indirect, historical estimates of past climate changes that the changes in global surface temperature over the last several decades are unusual. The **third line of evidence** arises from the use of computer-based climate models to simulate the likely patterns of response of the climate system to different forcing mechanisms (both natural and anthropogenic).

(Emphasis added).

More information about the nature of each of the three “lines of evidence” can be gleaned from EPA’s further elaboration in the Endangerment Finding itself and the associated Technical Support Document.

By the first “line of evidence,” (“our basic physical understanding of the effects of changing concentrations of greenhouse gases, natural factors, and other human impacts on the climate system”), EPA is referring to its “greenhouse gas fingerprint” or “tropical hot spot” (“Hot Spot”) theory, which is that in the tropics, the upper troposphere is warming faster than the lower troposphere and the lower is warming faster than the surface, all due to rising atmospheric greenhouse gas concentrations blocking heat transfer into outer space. By this mechanism, increasing greenhouse gas concentration is assumed to increase surface temperatures.

The second “line of evidence” (“indirect, historical estimates of past climate changes that suggest that the changes in global surface temperature over the last several decades are unusual”) refers to EPA’s claim that global average surface temperatures have been rising in a dangerous fashion over the last fifty years or so.

The third “line of evidence” (“use of computer-based climate models to simulate the likely patterns of response of the climate system to different forcing mechanisms (both natural and anthropogenic)”) consists of EPA’s reliance on climate models (not actually “evidence”) that assume that greenhouse gases are a key determinant of climate change. EPA uses climate models for two purposes: to “attribute” warming to human GHG emissions, and to set regulatory policy for such emissions based on their modeled impact on global temperatures.

As shown below, recent research has shown that EPA’s first line of evidence, the claimed basic physical understanding of the climate system, is invalidated by empirical data showing that a core premise and prediction of that understanding – the existence of a characteristic “Hot Spot” in the tropical upper troposphere – simply does not exist in nature.

It has been contended by some that invalidation of the Hot Spot has no particular significance because it was not expressly identified in EPA’s enumeration of the three lines of evidence. This is incorrect because even though the Hot Spot was not specifically identified as one of the three lines of evidence, there can be no question that it is a critical and necessary component of the

“physical understanding” of climate that EPA claims as the foundational line of evidence supporting the Endangerment Finding.<sup>3</sup>

EPA itself previously acknowledged in the TSD for the 2009 EF that if the Hot Spot were missing it would be “an important inconsistency.” TSD p. 50.

The Climate Change Science Program, Synthesis and Assessment Product 1.1, on which EPA placed primary reliance, likewise conceded that if the Hot Spot were missing it would be a “*potentially serious inconsistency*.” See S.A.P. § 1.1, p. 11. <https://downloads.globalchange.gov/sap/sap1-1/sap1-1-final-all.pdf>.

The research discussed below proves that a fatal inconsistency between theory and observations has in fact been demonstrated.

**B. NEW RESEARCH FINDINGS MAKE IT ALL BUT CERTAIN THAT CO<sub>2</sub> IS NOT A POLLUTANT BUT RATHER A BENEFICIAL GAS THAT SHOULD NOT BE REGULATED.**

On January 20, 2017, CHECC submitted a Petition to EPA, (See: <https://thsresearch.files.wordpress.com/2017/04/ef-epa-petitionforreconsiderationof-ef-final-1.pdf>) requesting that it revisit and revoke the Endangerment Finding because that Finding had been scientifically invalidated. The Petition provided new information that demonstrated that the Endangerment Finding was nothing more than a scientific hypothesis that had been disproved by the best empirical evidence from the real world.

The Endangerment Finding is the fundamental foundation on which all greenhouse gas policy and regulation rest, including the Clean Power Plan, and now the ACE Rule. The Endangerment Finding purported to “find” that human-generated greenhouse gases, including carbon dioxide, constitute a “danger” to human health and welfare because of their effect in warming the atmosphere. However, the Endangerment Finding has been invalidated, and with it the foundation for regulation. As a result, there exists *no* scientific basis for any of greenhouse gas-restricting policies or regulations.

The Council Petition to EPA was based in part on the September 21, 2016 Research Report by James Wallace, John Christy and Joseph D’Aleo. That Report

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<sup>3</sup> The dependence of the physical understanding of the climate line of evidence on the validity of the Hot Spot, as documented in the assessment literature, is set forth in detail in CHECC’s original Petition for Reconsideration of the 2009 EF, at pp. 10-13. See <https://thsresearch.files.wordpress.com/2017/04/ef-epa-petitionforreconsiderationof-ef-final-1.pdf>, which is incorporated herein by reference.



demonstrated by clear scientific proof the invalidation of each of the three lines of evidence on which EPA relied in the Endangerment Finding to attribute global warming to human emissions of greenhouse gases. The Research Report can be found at:

<https://thsresearch.files.wordpress.com/2016/09/ef-cpp-sc-2016-data-ths-paper-ex-sum-090516v2.pdf> .

The Research Report was peer-reviewed by seven eminent and highly qualified scientists, engineers and economists, all of whom agreed with its conclusion. Those conclusions are definitive and unequivocal. As stated in the Research Report itself, “[T]his analysis failed to find that the steadily rising atmospheric CO<sub>2</sub> concentrations have had a statistically significant impact on any of the 13 critically important temperature time series data analyzed.”

In testimony before Congress on March 29, 2017, Dr. John Christy reiterated the key findings of the Research Report, stating:

*The IPCC climate models performed best versus observations when they did **not** include extra GHGs [anthropogenic greenhouse gases]. . . . The basic result of this report is that the temperature trend of several datasets since [1959] 1979 can be explained by variations in the components that naturally affect the climate [that is, excluding anthropogenic greenhouse gases] ...*

Then, on May 8, 2017, CHECC announced that it filed with EPA a Supplement to the Council’s January 20, 2017 Petition based on more new information, asking the Agency to reconsider the scientifically invalid Endangerment Finding on which all Obama-era greenhouse gas regulations are based. This Supplement may be found at:

<https://thsresearch.files.wordpress.com/2017/05/ef-checc-suppl-pfr-of-ef-050817-final.pdf>.

This first Supplement to the Petition brought to the attention of EPA new developments, since the date of the original Petition, that make the invalidation of the Endangerment Finding even more definitive. First among the new developments is a new extensively peer reviewed April 2017 Research Report, also from Wallace, Christy and D’Aleo (Wallace 2017). Wallace 2017 can be found at:

<https://thsresearch.files.wordpress.com/2017/04/ef-data-research-report-second-editionfinal041717-1.pdf> .

Wallace 2017 takes a totally different analytical approach than Wallace 2016, and specifically estimates the impacts of the key natural factors, including solar, volcanic and oceanic/ENSO<sup>4</sup> activity, on tropical and global temperatures. It concludes that once these natural factor impacts on temperature data are accounted for, there is no “natural factor adjusted” warming remaining to be attributed to rising atmospheric CO<sub>2</sub> levels.

That is, these natural factor impacts fully explain the trends in all relevant temperature data sets over the last 50 or more years. This research, like Wallace (2016), found that rising atmospheric CO<sub>2</sub> concentrations did not have a statistically significant impact on any of the (14) temperature data sets that were analyzed. Wallace 2017 concludes that, “at this point, **there is no statistically valid proof that past increases in atmospheric CO<sub>2</sub> concentrations have caused what have been officially reported as rising, or even record setting, temperatures.**” *Id.* at pp. 4, 71.

The first Supplement to the Petition also points out the improper use of climate models relied upon by EPA in the attribution of warming to human-related CO<sub>2</sub> emissions. As extensively documented with citations to the assessment literature and the TSD in the first Supplement, the scientific premise of using climate models in attribution is that such models are properly validated, provide reliable forecasts, and are unable to reproduce observed warming without the additional forcing from anthropogenic GHGs. *See* First Supplement, pp. 3-5

Wallace (2016) and Wallace (2017) both independently demonstrate that this premise is false. Both reports show that natural factors alone explain all the warming. Conversely, climate models show a pattern of warming in the tropical troposphere that simply does not exist in nature—the missing tropical Hot Spot. Thus, the climate models have been invalidated and cannot be relied upon by EPA for attribution analysis in its Endangerment Finding<sup>5</sup>. Therefore, simple but insistent logic precludes the use of invalidated climate models to attribute warming

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<sup>4</sup> El Niño Southern Oscillation (“ENSO”).

<sup>5</sup> It should be noted here that Wallace 2017, p. 14 states the following: “Unlike some research in this area, this research does not attempt to evaluate the existence of the THS [Tropical Hot Spot] in the real world by using the climate models. This would constitute a well-known error in mathematics and econometrics in that such climate models obviously must include all relevant theories, possibly including some not even known today; many, if not all, of which could impact tropical temperatures. Thus, it is never mathematically proper to attempt to validate any theory embedded in a model using the model itself. Each such theory needs to be tested outside of the model construct.” In short, EPA’s approach to attribution analysis is itself fundamentally flawed.

to human emissions of GHGs, and requires reconsideration of the Endangerment Finding.

The first Supplement to the Petition also puts in the record before EPA information from the March 29, 2017 testimony of John Christy before Congress which also dealt with the missing tropical Hot Spot issue. Dr. Christy's testimony can be found at:

<https://science.house.gov/sites/republicans.science.house.gov/files/documents/HHRG-115-SY-WState-JChristy-20170329.pdf>.

Dr. Christy's Congressional testimony showed that the temperature trend, projected by climate models on which EPA relies, differs from the actual trend of observations in the tropical troposphere at the 99% confidence level. *Id.*, at pp. 9-10. Thus, the models used by EPA to conclude that greenhouse gases pose a "danger" to human health and welfare have failed a simple "scientific method" test. They have been invalidated.

**C. NEW RESEARCH FINDINGS DEMONSTRATE THAT ADJUSTMENTS BY GOVERNMENT AGENCIES TO THE GLOBAL AVERAGE SURFACE TEMPERATURE RECORD RENDER THAT RECORD TOTALLY INCONSISTENT WITH PUBLISHED CREDIBLE TEMPERATURE DATA SETS AND USELESS FOR ANY POLICY ANALYSIS PURPOSE.**

On July 6, 2017, CHECC announced that it had filed with EPA a Second Supplement to the its January 20, 2017 Petition asking the Agency to reconsider the scientifically invalid Endangerment Finding on which all Obama-era greenhouse gas regulations are based. The Second Supplement to Petition may be found at: <https://thsresearch.files.wordpress.com/2017/07/ef-gast-data-secondsupplementtopetitionfinal.pdf>

The Second Supplement to the Petition relied on a third new major peer-reviewed scientific paper from James Wallace, Joseph D'Aleo and Craig Idso, published in June 2017 (Wallace 2017B). Wallace 2017B can be found at: <https://thsresearch.files.wordpress.com/2017/05/ef-gast-data-research-report-062817.pdf>

Wallace 2017B analyzed the Global Average Surface Temperature ("GAST") data issued by U.S. agencies NASA and NOAA, as well as British group Hadley CRU. In this research report, past changes in the previously reported historical data

were quantified. It was found that each new version of GAST had nearly always exhibited a steeper warming linear trend over its entire history. And, this result was nearly always accomplished by each entity systematically removing the previously existing cyclical temperature pattern. This was true for all three entities providing GAST data measurement, NOAA, NASA and Hadley CRU.

The Second Supplement to Petition states: “Adjustments that impart an ever-steeper upward trend in the data by removing the natural cyclical temperature patterns present in the data deprive the GAST products from NOAA, NASA and Hadley CRU of the credibility required for policymaking or climate modeling, particularly when they are relied on to drive trillions of dollars in expenditures.”

The invalidation of the adjusted GAST data knocks yet another essential pillar out from under the lines of evidence that are the claimed foundation of the Endangerment Finding. As the Second Supplement to Petition further states: “It is therefore inescapable that if the official GAST data from NOAA, NASA and Hadley CRU are invalid, then both the ‘basic physical understanding’ of climate and the climate models will also be invalid.” Second Supplement, p. 2.

**D. TEN FREQUENT CLIMATE ALARMISTS’ CLAIMS HAVE EACH BEEN REBUTTED BY TRUE EXPERTS IN EACH FIELD BY SIMPLY CITING THE MOST RELEVANT AND CREDIBLE EMPIRICAL DATA.**

On February 9, 2018, CHECC submitted a fifth Supplement to their Petition to provide additional new relevant and credible information relating to “Other State Variables” of the Earth’s Climate System, that is, variables other than temperature. (see: [EF CPP Fifth Supplement to Petition for Recon FINAL020918](#)).

This Fifth Supplement to the CHECC Petition provided new highly relevant information that invalidates oft-repeated alarmist claims that human emissions of Greenhouse Gases (“GHGs”) will cause calamitous changes in other state variables of the climate system such as sea level, ocean acidification, and extreme events.

As demonstrated in CHECC’s original Petition and its first two supplements, each of the three lines of evidence upon which EPA relies to attribute global warming to human GHG emissions has been invalidated. As a result, EPA has no proof whatsoever, and no scientist has devised an empirically validated theory, that CO<sub>2</sub> has had a statistically significant impact on global temperatures.

If the causal link between higher atmospheric CO<sub>2</sub> concentrations and higher global average surface temperature (“GAST”) is broken by invalidating each of EPA’s three lines of evidence, then EPA’s assertions in the 2009 EF that higher CO<sub>2</sub> concentrations also cause loss of Arctic ice<sup>6</sup>, sea-level increases<sup>7</sup> and more frequent severe temperatures,<sup>8</sup> storms,<sup>9</sup> floods,<sup>10</sup> and droughts<sup>11</sup> are also necessarily disproved.

EPA’s faulty chain of reasoning is depicted in Figure 1:

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<sup>6</sup> Technical Support Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act (“TSD”), pp. ES-4 (“Sea ice extent is projected to shrink in the Arctic under all IPCC emissions scenarios”) *See also id.* at pp. 52; 73

<sup>7</sup> *Id.* at p. ES-4 (“By the end of the century, global average sea level is projected by IPCC to rise between 7.1 and 23 inches.”); *See also id.* at 52,73.

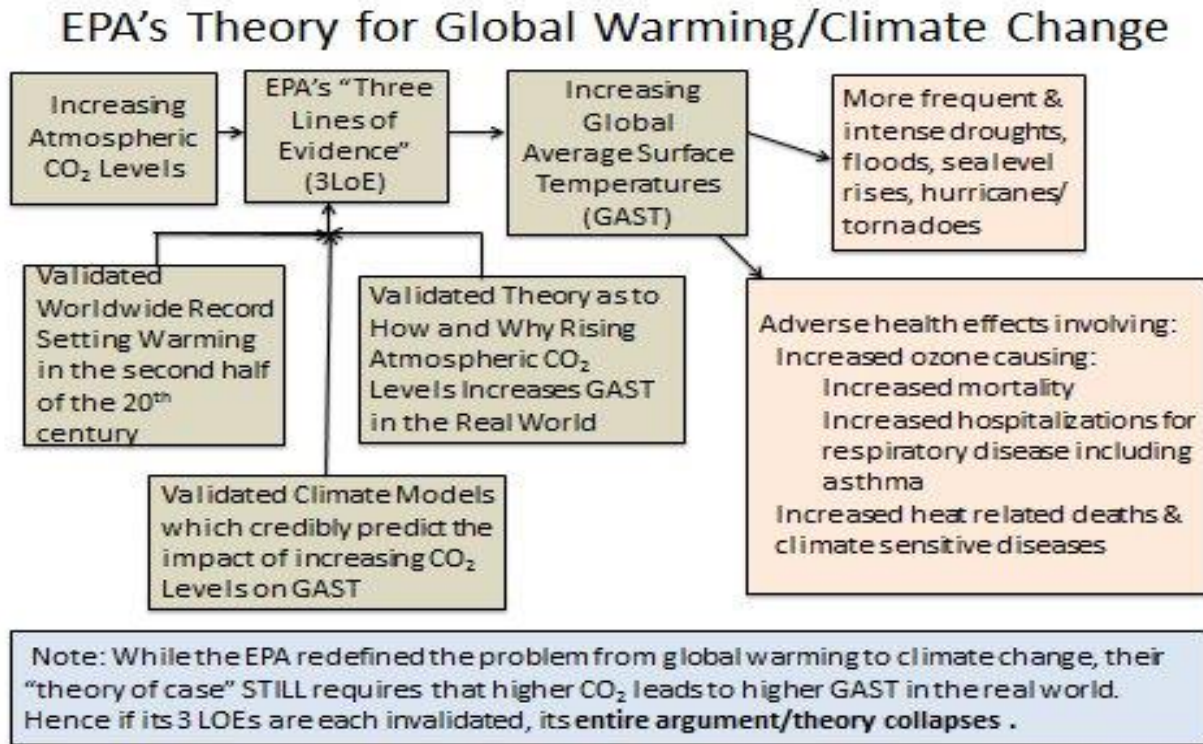
<sup>8</sup> *Id.* at pp. ES-4 (“It is very likely that heat waves will become more intense, more frequent, and longer lasting in a future warm climate, whereas cold episodes are projected to decrease significantly.”); *See also id.* at pp. 44-45; 73-74.

<sup>9</sup> *Id.* at ES-4 (“It is likely that hurricanes will become more intense”).

<sup>10</sup> *Id.* at ES-4 (“Intensity of precipitation events is projected to increase in the United States and other regions of the world. More intense precipitation is expected to increase the risk of flooding.”)

<sup>11</sup> *Id.* at p. ES-6 (Reduced snowpack, earlier spring snowmelt, and increased likelihood of seasonal summer droughts are projected in the Northeast, Northwest, and Alaska. More severe, sustained droughts and water scarcity are projected in the Southeast, Great Plains, and Southwest.”); 45-46; 73-74.

Figure 1



Such causality assertions require a validated theory that higher atmospheric CO<sub>2</sub> concentrations cause increases in GAST and in turn cause these other phenomena. Lacking such a validated theory, EPA's conclusions cannot stand. In science, credible empirical data always trump proposed theories, even if those theories are claimed to (or actually do) represent the current consensus.

The Fifth Supplement presented a series of rebuttals of typical climate alarmists' claims regarding other state variables of the climate system, such as those mentioned above and those made in the recently released Fourth National Climate Assessment Report.<sup>12</sup> The authors of these rebuttals are all recognized experts in the relevant scientific fields. The rebuttals demonstrate the falsity of EPA's claims merely by citing the most credible empirical data on the topic.

Those alarmist claim rebuttals were recently updated. An overview of the rebuttals is available at <https://thsresearch.files.wordpress.com/2018/10/alarmist-claim-rebuttal-overview-103018-11.pdf>. Like the original rebuttals, the updated

<sup>12</sup> <https://science2017.globalchange.gov>

rebuttals include a Summary of Rebuttal along with a link to the full text of the rebuttal and a list of the credentials of the Rebuttal's authors.

The ten alarmist claims and links to this information are as follows:

1. **Claim: Heat Waves are increasing at an alarming rate and heat kills.**

Detailed Rebuttal and Authors: [Updated Rebuttal – Heat Waves](#)

2. **Claim: Global warming is causing more hurricanes and stronger hurricanes.**

Detailed Rebuttal and Authors: [Updated Rebuttal - Hurricanes](#)

3. **Claim: Global warming is causing more and stronger tornadoes.**

Detailed Rebuttal and Authors: [Updated Rebuttal - Tornadoes](#)

4. **Claim: Global warming is increasing the magnitude and frequency of droughts and floods.**

Detailed Rebuttal and Authors: [Updated Rebuttal – Droughts and Floods](#)

5. **Claim: Global Warming has increased U.S. Wildfires.**

Detailed Rebuttal and Authors: [Updated Rebuttal - Wildfires](#)

6. **Claim: Global warming is causing snow to disappear.**

Detailed Rebuttal and Authors: [Updated Rebuttal - Snow](#)

7. **Claim: Global warming is resulting in rising sea levels as seen in both tide gauge and satellite technology.**

Detailed Rebuttal and Authors: [Updated Rebuttal – Seal Level](#)

8. **Claim: Arctic, Antarctic and Greenland ice loss is accelerating due to global warming.**

Detailed Rebuttal and Authors: [Updated Rebuttal – Arctic, Antarctic and Greenland](#)

**9. Claim: Rising atmospheric CO<sub>2</sub> concentrations are causing ocean acidification, which is catastrophically harming marine life.**

Detailed Rebuttal and Author: [Updated Rebuttal – Ocean Acidification](#)

**10. Claim: Carbon pollution is a health hazard.**

Detailed Rebuttal and Authors: [Updated Rebuttal – Health Impacts](#)

Readily available empirical data presented in the updated Rebuttals show that not even one of these frequently-repeated claims is true.

The invalidation of the three lines of evidence upon which EPA attributes global warming to human GHG emissions breaks the causal link between human GHG emissions and global warming. This in turn necessarily breaks the causal chain between rising GHG emissions and the alleged knock-on effects of global warming, such as loss of Arctic ice, increased sea level, and increased heat waves, floods, droughts, hurricanes, tornadoes, etc.

These alleged downstream effects are constantly cited to whip up alarm and create demands for ever tighter regulation of GHG emissions. EPA explicitly relied on predicted increases in such events to justify the 2009 EF<sup>13</sup>. But there is no evidence to support such claims, and copious empirical evidence that refutes them.

The enormous cost and essentially limitless scope of the government's regulatory authority over GHG emissions cannot lawfully rest upon a collection of scary stories that are conclusively disproven by readily available empirical data.

The parade of horrible calamities that the 2009 EF predicts and that a vast program of regulation seeks to prevent has been comprehensively and conclusively refuted by the relevant empirical data. The CPP should be replaced with nothing at all, and both it and the ACE Rule should be withdrawn.

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<sup>13</sup> See notes 6-11 above.



**E. NUMEROUS DISTINGUISHED CLIMATE SCIENTISTS “ARE CONVINCED THAT THE 2009 GHG ENDANGERMENT FINDING IS FUNDAMENTALLY FLAWED AND THAT AN HONEST, UNBIASED RECONSIDERATION IS IN ORDER.”**

Consistent with the new scientific findings outlined above, on October 16, 2017 and on February 5, 2018, a total of over eighty-five (85) highly credentialed scientists sent a letter to Administrator Pruitt. See: (<https://thsresearch.files.wordpress.com/2017/10/letter-to-pruitt-signed-final-101617.pdf>) and [EF CPP 2nd LT Pruitt - Scientists Final020518](#) ). The letter to the EPA Administrator begins by stating that:

“You have pending before you two science-based petitions for reconsideration of the 2009 Endangerment Finding for Greenhouse Gases, one filed by the Concerned Household Electricity Consumers Council, and one filed jointly by the Competitive Enterprise Institute and the Science and Environmental Policy Project.” The letter immediately continues with:

“We the undersigned are individuals who have technical skills and knowledge relevant to climate science and the GHG Endangerment Finding. We each are convinced that the 2009 GHG Endangerment Finding is fundamentally flawed and that an honest, unbiased reconsideration is in order.”

The letter states further that: “If such a reconsideration is granted, each of us will assist in a new Endangerment Finding assessment that is carried out in a fashion that is legally consistent with the relevant statute and case law. We see this as a very urgent matter ...”

**F. RECOMMENDATIONS BASED ON SCIENCE ARGUMENTS:**

CHECC fully endorses the recommendations of these scientists because recent research has definitively validated that: once certain natural factor (i.e., solar, volcanic and oceanic/ENSO activity) impacts on temperature data are accounted for, there is no “natural factor-adjusted” warming remaining to be attributed to rising atmospheric CO<sub>2</sub> levels. That is, these natural factor impacts fully explain the trends in all relevant temperature data sets over the last 50 or more years. At this point, there is no statistically valid proof that past increases in atmospheric CO<sub>2</sub> concentrations have caused what have been officially reported as rising, or even record setting, global average surface temperatures (GAST.)

Moreover, additional new research findings demonstrate that adjustments by government agencies to the GAST record render that record totally inconsistent

with published credible temperature data sets and useless for any policy analysis purpose. These new results conclusively invalidate the claims based on GAST data of “record warming” in recent years, and thereby also invalidate the so-called “lines of evidence” on which EPA claimed to base its 2009 CO<sub>2</sub> Endangerment Finding.

In addition, 10 typical climate alarmist claims have each been invalidated by specialists in each of the areas simply relying on the most credible, relevant empirical data.

Clearly, based on this science-based evidence alone, the 2009 GHG Endangerment Finding must be put through a rigorous reconsideration process. In addition, by necessary implication, EPA should not issue any replacement for the CPP, including but not limited to the ACE Rule.

**V. THE CPP SHOULD NOT BE REPLACED WITH ANYTHING BECAUSE INCREASING THE FRACTION OF ELECTRICITY GENERATION FROM INTERMITTENT RENEWABLES CAUSES ENORMOUS CONSUMER ELECTRICITY PRICE INCREASES AND SERIOUS NEGATIVE MACROECONOMIC IMPACTS.**

The effort to increase the percentage of electricity generated by intermittent renewable sources like wind and solar inevitably brings about large increases in the actual price of electricity paid by consumers. This proposition may seem counterintuitive, since the cost of fuel for wind and solar generation is zero. However, the experience in jurisdictions that have attempted to generate more and more of their electricity from these renewables proves the truth of this rising consumer price proposition.

In those jurisdictions that have succeeded in getting generation from renewables up to as high as about 30% of their total electricity supply, the result has been an approximate tripling in the price of electricity for their consumers. The few (basically experimental) jurisdictions that have gotten generation from renewables even higher than that have had even greater price increases, for relatively minor increases in generation from renewables. As the percentage of electricity coming from renewables increases, the consumer price increases accelerate. The burden of these increasing prices for electricity falls most heavily on poor and low-income people.

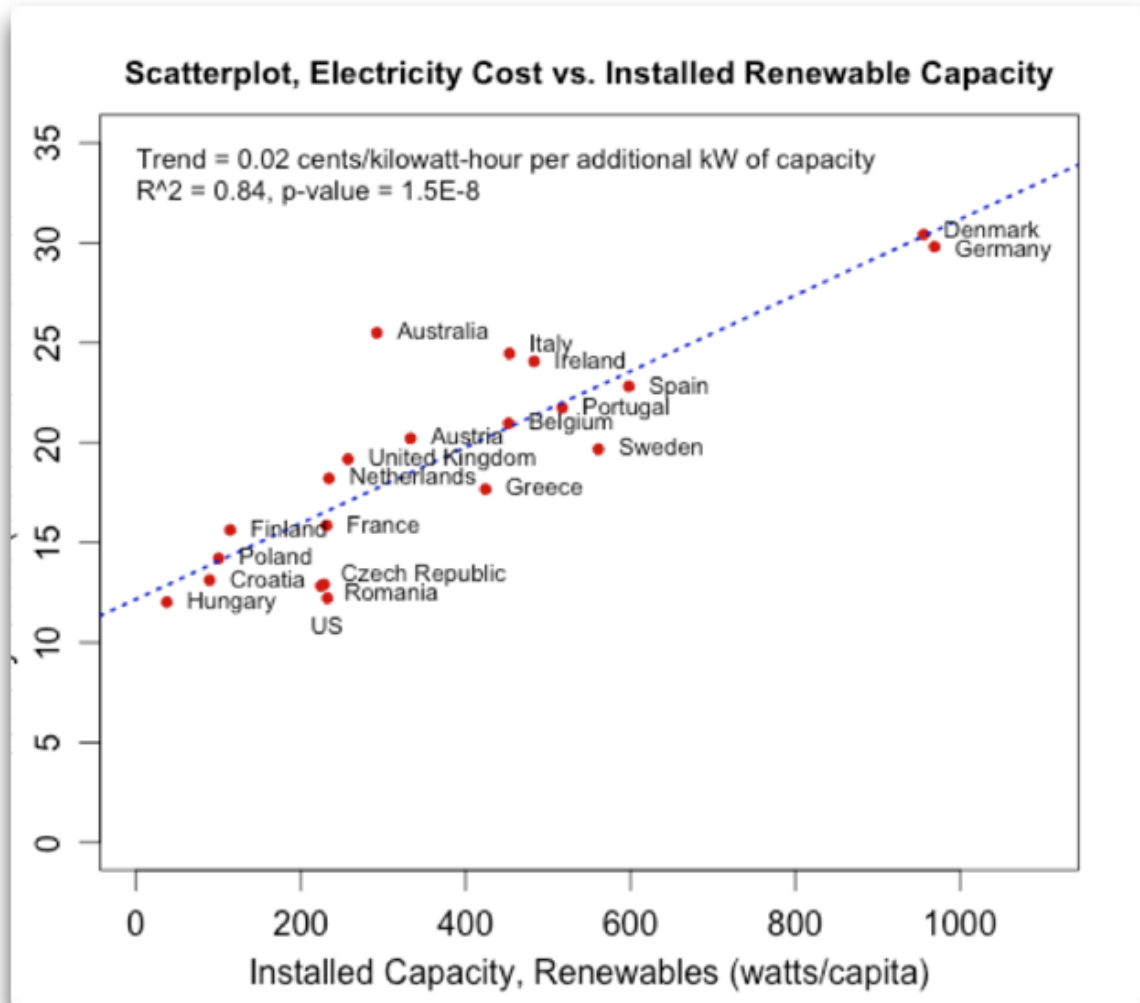
The reason that increasing renewable generation leads to accelerating consumer prices is that an electrical grid must operate with one hundred percent reliability on a 24/7 basis. A reliable grid requires a very close match between power supplied and power demanded on a minute-by-minute, and even a fraction of second basis. But wind and solar sources experience large and often sudden swings in the power that they supply. Therefore, in a grid using large amounts of power from wind and solar sources, additional costly elements must be added to the system to even out the supply and always match it to the demand. These additional elements are what bring about the increased costs and thus consumer prices. Such elements can include:

- Additional renewable sources (wind turbines or solar panels), such that the renewable capacity becomes a multiple of peak usage, enabling the system to work at times of relatively low wind or thick clouds; however, no amount of excess capacity can make a wind/solar system generate any electricity on a completely calm night.
- “Back-up” capacity from fossil fuel generating units; however, if such back-up capacity is the only additional element added, repeated calms and nights will mean that the “back-up” will often end up supplying well more than half of the electricity, even if there is substantial excess capacity of the renewable sources.
- Storage, such as batteries; however, due to the frequency of calms and nights, multiple *days*’ worth of storage capacity, at huge cost, are needed to have any hope of getting the percent of electricity from renewables up to 50% or above; and
- Additional transmission lines; however, there has been no demonstration of how much additional transmission capacity, and in what locations, and at what cost, might be able to get generation from renewables up to any substantially higher level.

Each of these additional elements is costly, and more and more of them are necessary as the desired percentage of electricity from the renewables increases.

The following chart, initially prepared by Willis Eschenbach of the website WattsUpWithThat, shows the near linear relationship between installed renewables

capacity per capita (in watts/capita) on the x-axis and cost of electricity to the consumer (in cents per kilowatt hour) on the y-axis, where each point is a country. The chart is available at the following link:



<https://wattsupwiththat.com/2015/08/03/obama-may-finally-succeed/> Contrast the current situation in Germany with that of the U.S.

Germany is the leader in Europe in its power generation per capita from renewables, through its so-called *Energiewende*, having gotten the percentage of its electricity from wind and solar all the way up to about 30%. However, the consequence of that effort has been an approximate tripling of the cost of electricity to consumers, to about 30 cents per kWh. Analyses of the soaring price of electricity in Germany place the blame squarely on excess costs that have been

necessarily incurred to try to get to a stable, functioning, 24/7 system with so much input from intermittent renewables.

First, massive “excess” wind and solar capacity has been installed to try to deal with days of light wind and heavy clouds. And for the completely calm nights and overcast winter days when the wind and solar sources produce nothing or next-to-nothing, nearly the entire fleet of fossil fuel plants has been maintained and ready to go, even though those sources end up being idle much of the time. (Actually, since Germany during this time was shutting down all of its Nuclear power plants, it has been building coal plants to back up its renewables.<sup>14</sup>) And then, some means have had to be found to deal with the surges of available electricity when the wind and sun suddenly blow and shine together at full strength at the same time.

As noted by Benny Peiser at the Global Warming Policy Foundation on April 4, 2015 (<http://www.thegwpcf.com/benny-peiser-eus-green-energy-debacle-shows-the-futility-of-unilateral-climate-policies/>):

Every 10 new units worth of wind power installation has to be backed up with some eight units worth of fossil fuel generation. This is because fossil fuel plants have to power up suddenly to meet the deficiencies of intermittent renewables. In short, renewables do not provide an escape route from fossil fuel use without which they are unsustainable. . . . To avoid blackouts, the government has to subsidize uneconomic gas and coal power plants. . . . Germany’s renewable energy levy, which subsidizes green energy production, rose from 14 billion euros to 20 billion euros in just one year as a result of the fierce expansion of wind and solar power projects. Since the introduction of the levy in 2000, the electricity bill of the typical German consumer has doubled.

To further illustrate the relationship between the percentage of electricity from renewables and cost of electricity to the consumer, consider two jurisdictions. California is a “leader” in the United States in generating power from wind and solar sources. According to the California Energy Commission, in 2016 California got 8.11% of its electricity supply from solar and 9.06% from wind, for a total of 17.17% from those two intermittent sources. See [http://www.energy.ca.gov/almanac/electricity\\_data/total\\_system\\_power.html](http://www.energy.ca.gov/almanac/electricity_data/total_system_power.html). For

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<sup>14</sup> <https://euobserver.com/environment/137298>. The consequent ironic net result of Germany’s effort to diminish reliance on fossil fuel energy sources is that its production of GHGs has *increased*. *Id.*

the U.S. as a whole for wind and solar was 6.5%. See <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3>.

According to the U.S. Energy Information Agency, California's average electricity price that year was 14.91 cents per kWh, versus a U.S. average of 10.10 cents per kWh; that is, almost 50% higher. See [https://www.eia.gov/electricity/monthly/epm\\_table\\_grapher.cfm?t=epmt\\_5\\_6\\_a](https://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_5_6_a).

There are only a handful of small jurisdictions that have tried to get the percentage of their electricity generation from renewables up much beyond the 30% achieved by Germany. But those jurisdictions have not achieved levels much beyond that of Germany, and even those levels have been achieved only at high and accelerating costs. One such jurisdiction is Gapa Island, a small island of only 178 people (97 households) in South Korea. A report on the Gapa Island Project appeared on the Hankyoreh news site in July 2016 ([http://english.hani.co.kr/arti/english\\_edition/e\\_national/752623.html](http://english.hani.co.kr/arti/english_edition/e_national/752623.html)).

With average electricity usage of 142 kw, and maximum usage of 230 kw, the islanders installed wind and solar capacity of 674 kw – about *three times* maximum usage, to deal with light wind and low sun. They also bought battery capacity for about eight hours of average usage. The cost of the wind and solar capacity plus batteries was approximately \$12.5 million, or about \$125,000 per household. And with all that investment the islanders were still only able to get about 42% of their electricity from the sun and wind when averaged over a full month. Even with the storage, they still needed the full fossil fuel backup capacity.

Applying a reasonable cost of capital to a system like that of Gapa Island, and considering additional elements of a system, like additional storage, that would be necessary to push the percent of total generation from renewables to higher levels, one can calculate that a system like the Gapa demonstration project for the full United States would lead to electricity prices of *at least five times* their current level, and more likely, far higher. And even then, the U.S. would be hard-pressed to achieve 50% of electricity from the intermittent renewables.

A somewhat larger demonstration project on the Spanish island of El Hierro (population about 10,000) has had similar results. The idea on El Hierro was to combine a massive wind farm with a large elevated reservoir to store water, which would then be released at times of low wind to balance the grid. El Hierro has the good fortune of a mountainous geography, so that a large reservoir could be placed at a relatively high elevation, in close proximity to the consumers of the electricity. The investment in the wind/water system was approximately 64.7 million euros, or

about \$80 million – which was on top of what was already a fully-functioning fossil fuel-based system, all of which still needed to be kept. Operations of the El Hierro project began in 2015 with high expectations for 100% renewable generation, but it has not come close.

An operations review of the El Hierro system from inception to date by engineer Robert Andrews can be found at <http://euanmearns.com/el-hierro-end-2017-performance-update/>. During 2017 the percent of generated electricity that came from renewables ranged from 62.4% in September down to only 24.7% in November, with the overall average for the year at about 40%. Based on the data from actual operations, Mr. Andrews calculates that, to achieve the goal of 100% generation from the wind/water project, El Hierro would need to increase its wind turbine capacity by some 50%, and the capacity of its reservoir *by a factor of 40*. Clearly, there is no place on the island to put such a massive reservoir; and if there were, the cost would be not in the millions, but in the billions. And that would be for a mere 10,000 people.

The geography of the United States does not permit a water storage system like that of El Hierro for most parts of the country. The alternative of storage by large batteries, such as the type used for Tesla automobiles, carries truly astounding potential costs. Current prices for lithium ion batteries are about \$200,000 per MWh. At that price, to provide sufficient capacity to cover New York City for three consecutive days of no-to-low wind and sun would cost in the range of \$50 billion. And the experience of places like Germany indicates that there could well be five or even seven consecutive dark and calm days in winter in much of the country. Attempting to create an electricity system consisting entirely of renewables backed up by batteries could easily lead to consumer electricity prices at ten times current levels.

Such an economic jolt would hit everyone in the country hard, with the possible exception of some of the very wealthiest people. Even middle and upper middle-income people would be forced to make major reductions in their energy consumption. But poor and low-income people would be hit by far the hardest. If electricity prices went to five to ten times current levels, most low-income people would be almost completely priced out of things they now take for granted, like light, refrigeration and computers. They would be forced into energy poverty. This is the route down which the Clean Power Plan, but for the Supreme Court's stay, would surely have taken us – on the now thoroughly discredited assumption that CO<sub>2</sub> is a pollutant (*See Section IV above*).

A new study by IHS Markit, titled *Ensuring Resilient and Efficient Electricity Generation: The Value of the Current Diverse U.S. Power Supply Portfolio* considered the economic effects of state and federal energy policies that are driving electric utilities away from coal, nuclear and hydroelectric and towards renewables and natural gas. Such policies are forecast by IHS Markit to lead to a tripling of the current 7% reliance on wind, solar and other intermittent resources, with natural gas-fired resources supplying the majority of generation.

The Study's Findings are that current policy driven market distortions will lead to:

*U.S. power grid becoming less cost-effective, less reliable and less resilient due to lack of harmonization between federal and state policies and wholesale electricity market operations, ...*

*Id.* at p. 4 (Emphasis added).

The study found that these policies will cause significant increases in the retail price of electricity. The following economic impacts of these price increases were forecast:

**The 27% retail power price increase** associated with the less efficient diversity case causes a **decline of real US GDP of 0.8%, equal to \$158 billion** (2016 chain-weighted dollars).

Labor market impacts of the less efficient diversity case involve a reduction of **1 million jobs**.

A less efficient diversity case **reduces real disposable income per household by about \$845 (2016 dollars) annually**, equal to 0.76% of the 2016 average household disposable income.”

*Id.* at p. 5. (Emphasis added).

It should be noted that the projected 27% increase in average retail power prices is predicated on the wind and solar renewables share rising by three-fold from 7% to “only” about 21%. The case studies discussed above make very clear the enormous increases in power prices that would result as policy makers attempt to move the renewables share higher than that.

Moreover, the study found that current state and federal policy-driven market distortion will imply:



**Increased variability of monthly consumer electricity bills by around 22 percent; and an additional \$75 billion per hour cost associated with more frequent power supply outages.**

*Id.* (Emphasis added).

The study's lead author commented that "[d]iversity of supply is an essential bedrock for security and reliability for an electric power system that is as big and diverse—and as crucially important—as that of the United States." See <http://news.ihsmarkit.com/print/node/23497>

Moreover, policies that promote increased use of wind and solar would likely result in little to no reduction in the level of electric sector CO<sub>2</sub> emissions:

Ironically, addressing climate change concerns with federal and state policies to subsidize and mandate wind and solar electric generation produced the unintended consequence of distorting wholesale electricity market clearing prices and driving the uneconomic closure of nuclear power plants—a zero-emitting source. The result has been some power system CO<sub>2</sub> emissions remaining constant or increasing,  
...

*Id.*

## **VI. THE 2009 ENDANGERMENT FINDING MAKES ACHIEVING U.S. ENERGY DOMINANCE IMPOSSIBLE**

It is no exaggeration to say that for some time now environmental groups have been waging an all-out war to apply ever tighter GHG regulation to force the eventual total elimination of fossil fuels in the American economy. For example, the Sierra Club has launched a "Beyond Fossil Fuels" campaign to push the Country to 100% "clean and renewable" energy.<sup>15</sup> The war is being waged at every point of regulatory contact with fossil fuels, from exploration, extraction, transportation, processing, to consumption and disposal. The war is waged at all levels and branches of local, state, national and international governments. The war against fossil fuels is now also being waged by most electric utilities, many players in the transportation sector, and indirectly against funding of fossil fuel companies and projects by many key players in the financial sector.

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<sup>15</sup> <https://content.sierraclub.org/ourwildamerica/beyond-dirty-fuels-initiative>

In addition to direct claims based on nuisance and public trust legal theories, a large number of administrative petitions and lawsuits have been filed against the U.S. government to force tighter GHG regulation under a plethora of environmental statutes, such as the Clean Air Act, the Clean Water Act, the Endangered Species Act and the National Environmental Policy Act. A great many proposed oil or gas terminal, refinery and pipeline projects in the United States are being challenged. Even projects that are ultimately approved experience substantial delays and increased costs. The same is true of federal government mineral leasing efforts. While the full catalog of such litigation is beyond the scope of this Comment, representative examples include the following:

<b>Case</b>	<b>Claim</b>	<b>Case No.</b>	<b>Status</b>	<b>Statute</b>
Sierra Club v. FERC	Challenge to Sabal Trail Pipeline for failure to consider downstream GHG impacts	867 F.3d 1357 (DC Cir. 2017)	Remanded for FERC to consider GHG impacts	NEPA
Allegheny Defense Project v. FERC	Challenge to Atlantic Sunrise Pipeline for natural gas for failure to consider downstream impacts on climate change impacts	DC Cir. 17-1098	Pending	NEPA
Atchafalaya Basinkeeper v. USACE	Challenge to Bayou Bridge Pipeline project for failure to consider GHG and climate Impacts - Injunction Granted, stayed on appeal	5th Cir. 18-30257	Preliminary injunction vacated by 5th Cir.	NEPA
In re: PennEast Pipeline Co.	Request for FERC to reconsider authorization of PennEast Pipeline project	FERC CP15-558-000,	Denied	CWA, NEPA

Sierra Club, et. al. v. USACE	Challenge to stream crossing permits for Mountain Valley Pipeline	5th Cir. 18-1173	Permits stayed pending appeal	CWA
California v. BLM Sierra Club v. Zinke	Challenge to repeal of fracking regulations for failure to consider climate change impacts	N.D. CA 4:18-cv-00521 3:18-cv-00524	Pending	NEPA
High Country Conservation Advocates v. US Forest Service	Mine expansion permit delayed 4 years for failure to adequately consider GHGs	D CO 1:17-cv-03025	Concluded	NEPA
Millenium Bulk Terminals Longview LLC v. Washington State Dept. of Ecology	Challenge to denial of water quality certificate for coal terminal	Washington Superior Court	Pending	CWA
Conservation Law Foundation v. Shell Oil Products, Inc.	Challenge to bulk fuel storage terminal for failure to prepare for climate change	D RI 1:17-cv-00396	Pending	CWA
Center for Biological Diversity v. US Forest Service	Challenge to oil and gas leasing in Wayne National Forest for failure to consider climate change	SD OH 2:17-cv-0372,	Pending	NEPA
Center for Biological Diversity v. US Bureau of Land Management	Challenge to oil and gas lease sale in Nevada for failure to consider GHG emissions and climate change impacts	D NV 3:17-cv-00553	Pending	NEPA

Wilderness Workshop v. US BLM	Challenge to 53 oil and gas lease parcels for failure to consider GHGs and climate change impacts	D CO 1:18-cv-00987	Pending	NEPA
Save the Colorado v. US Bureau of Reclamation	Challenge to diversion of river water for reservoir for failure to consider climate change impacts	D CO 1:17-cv-02563	Pending	NEPA
Center for Biological Diversity, et. al v. Ross	Failure to consider climate change in management of lobster fishery in relation to right wales	DDC 1:18-cv-00283	Pending	ESA
Center for Biological Diversity v. Zinke	Challenge to failure to list Pacific Walrus as endangered species due to climate change	D AK 3:1-cv-00064	Pending	ESA
Center for Biological Diversity v. Zinke	Challenge to failure to make finding on whether Tinian monarch endangered by, inter alia, climate change	D DC 1:18-cv-00862	Pending	ESA

For further information on climate-based litigation in the U.S., see <http://columbiaclimatelaw.com/resources/u-s-litigation-database/>

In litigation seeking to block or delay important fossil fuel energy development projects, or to force tighter regulation of GHG emissions, the mere existence of the 2009 EF makes it awkward at best, if not impossible in practice, for the U.S. Government to dispute the alleged adverse effects of GHG emissions, were it ever inclined to do so. As a result, the issue in such litigation is never whether to regulate, but only how much to regulate GHG emissions. Over time, the continued existence of the 2009 EF makes a ratcheting effect of such litigation towards ever more stringent GHG regulation all but inevitable.

The ongoing all-out war on fossil fuels, enabled and sustained by the U.S. Government's current official position in the 2009 EF that GHG emissions endanger human health and welfare, poses a direct threat to America's strategic, diplomatic, economic and national security interests. Indeed, there are suggestions that the campaign against fossil fuels is covertly funded, at least in part, by our international adversaries. This GHG-based war on fossil fuels has put President Trump's declared Energy Dominance Strategy in very serious jeopardy, and thus also America's current economic and national security outlook.

The 2009 EF should be reconsidered, and regulations that arise from it, like the ACE Rule, the 2015 NSPS Rule and the CPP, should be withdrawn.

## **VII. CONCLUSION**

If the 2009 Endangerment Finding is not ultimately vacated, it is certain that electric utility, oil & gas, automotive and many other industries will face ongoing EPA CO<sub>2</sub> regulation, whether the current administration likes it or not. The scientifically unjustifiable Endangerment Finding and the ensuing regulatory push to renewable energy will cause U.S. energy prices to skyrocket, thereby dramatically reducing energy security, economic growth, and jobs, as clearly demonstrated by the experience of U.S. States, Germany and all other countries that are now strictly enforcing such GHG regulations.

The scientific invalidity of the Endangerment Finding has become more blindingly obvious and undeniable with each day's accumulation of credible empirical data. It is time for an honest and rigorous scientific re-evaluation of this Obama-era political document – which is what the 2009 Endangerment Finding really is. The nation has been taken down a tragically foolish path of pointless regulations and wasteful mal-investments to “solve” a problem which does not actually exist. Our political leaders and courts must summon the courage to acknowledge the truth and act accordingly. All Americans will benefit from a new era where the cheapest sources of energy can also compete and prevail in the marketplace. The fossil fuel resources of the U.S. are enormous and – by virtue of advancing extraction technology – increasing, yet climate alarmists want them left untouched.

Failure to reconsider the Endangerment Finding may well lead to regulation by litigation – in which a handful of judges in one part of the country impose upon the entire country a regulatory regime that the vast majority of Americans oppose but can do nothing about. Without undertaking an unbiased, rigorous and lawful process that firmly resolves the underlying concerns over the validity of the

Endangerment Finding, regulation by litigation will lead to many extremely poor decisions, and enormous and unnecessary political, economic and social costs.

Therefore, CHECC, based on all of this new evidence, implores EPA to grant the “very urgent” scientists’ request for an honest, unbiased reconsideration of the 2009 GHG Endangerment Finding based on the scientific method.

Finally, CHECC urges EPA to simply repeal the CPP and not replace it with the ACE Rule, or anything else until a lawful and scientifically rigorous and valid finding of endangerment under Section 111(b)(1)(A) has been made.

Respectfully submitted, this 31st day of October 2018.

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