

**Riverkeeper, Inc. · Natural Resources Defense Council · Sierra Club
Waterkeeper Alliance · Earthjustice · Environment America
Clean Air Task Force · Surfrider Foundation
Super Law Group · National Environmental Law Center**

March 13, 2014

The Honorable Regina A. McCarthy, Administrator
U.S. Environmental Protection Agency
William Jefferson Clinton Federal Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

The Honorable Sally Jewell, Secretary
U.S. Department of the Interior
1849 C Street, N.W.
Washington, D.C. 20240

The Honorable Penny Pritzker, Secretary
U.S. Department of Commerce
1401 Constitution Avenue, N.W.
Washington, D.C. 20230

Re: CWA § 316(b) – Cooling Water Intake Structure Rule

Dear Administrator McCarthy, Secretary Jewell and Secretary Pritzker:

As attorneys representing some of the largest national and regional environmental organizations in the United States, with millions of members keenly interested in protection of our nation's air, water and other natural resources, we write with respect to the Clean Water Act § 316(b) cooling water rule for existing facilities, which the Environmental Protection Agency (EPA) has committed to issue by April 17, 2014.

In particular, we wish to respond to certain requests, recommendations and legal assertions made in letters from the Edison Electric Institute and the heads of several utility and energy companies (collectively, "EEI") in September and December 2013, the Utility Water Act Group (UWAG) in October 2013, and Senator David Vitter and other Senators in July 2013 and February 2014.

As explained below, what EEI, UWAG and the Senators ask of EPA, the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) (collectively, the "Services") would plainly violate the Clean Water Act (CWA) and the Endangered Species Act (ESA).

I.

**Endangered Species Act Consultation and
ESA-Related Requirements in 316(b) Rule**

Cooling water intakes cause widespread and substantial harm to federally-listed threatened and endangered (T&E) species. In initiating formal consultation under the ESA, EPA acknowledged that “after promulgation and implementation of the 316(b) rule, the rule may allow as many as 215 T&E species and 30 habitats of T&E species to continue to be affected.”¹ We wish to make six points in this regard:

- First, in light of the acknowledged effects on T&E species, if EPA were to issue the final rule in the absence of a final Biological Opinion from each Service, the agency would be in clear violation of ESA § 7(a)(2) and 50 C.F.R. § 402.14. Contrary to EEI and UWAG’s assertions, the law is crystal clear that all future fish kills and thermal discharges at regulated facilities are legally attributable to EPA’s upcoming rule. There is no such thing as “baseline impingement and entrainment” or “baseline thermal discharges”; to the contrary, the ***ESA baseline assumes that the plants and their intake structures have been built, but are not operating.***² Consequently, there is no legal or factual basis on which the Services could “vacate the consultation” as requested by Senator Vitter, *et al.*, or conclude the consultation with a “not likely to adversely affect” concurrence, as requested by EEI and UWAG.
- Second, EPA should make clear in the 316(b) rule that nothing in the Section 7 consultation process can eliminate the duties of state agencies, federal agencies and plant operators to comply with the ESA Section 9 prohibition against taking listed species or modifying their critical habitat. EPA recognizes that “any take of listed species without an incidental take statement or ESA Section 10 take permit is in violation of ESA regulations.”³ As previously explained, the record provided by EPA to the Services precludes issuance of an Incidental Take Statement (ITS) that would insulate future take or habitat modification from ESA protections.⁴

¹ Letter from Robert K. Wood, Director, Engineering and Analysis Division, EPA Office of Water, to Donna Wieting, Director, Officer of Protection Resources, NMFS, and Gary Frazer, Assistant Director, Endangered Species, USFWS, June 18, 2013, at 2.

² See Comments of Riverkeeper, *et al.* regarding ESA Biological Evaluation for CWA Section 316(b) Rulemaking, October 31, 2013, (“RK Comments”) at 9-17 (citing *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 524 F.3d 917, 929 (9th Cir. 2008) and other authority).

³ ESA Biological Evaluation for CWA Section 316(b) Rulemaking, June 18, 2013, (“BE”) at 65.

⁴ RK Comments at 44-45.

- Third, the record is also insufficient to support a “no jeopardy” finding, particularly in light of harm to a number of salmonid and sturgeon Distinct Population Segments and various species of freshwater mussel.⁵ Closed-cycle cooling (CCC) technology must be the focus of any Reasonable and Prudent Alternative (RPA) analysis or Reasonable and Prudent Measures (RPM) analysis because it reduces fish kills and thermal discharges by approximately 98 percent and no other technology comes anywhere close.⁶
- Fourth, if the 316(b) rule directs permit writers to make any Best Technology Available (BTA) determinations on a case-by-case basis, the rule must require that EPA and the Services remain involved in permitting, in both delegated and non-delegated states, to identify the appropriate control requirements to be included in NPDES permits to protect listed species. Contrary to EEI’s assertion, the ESA and CWA provide for those agencies’ continuing involvement. For example, an ITS must establish clear triggers for subsequent consultation if there is a risk of jeopardizing the species.⁷ Further, as the action agency, EPA must report on “the progress of the action and its impact on the species to the Service[s].”⁸ Indeed, EPA and the Services agreed in their 2001 MOA to coordinate with State and Tribal permitting agencies to remove or reduce detrimental impacts of any NPDES permit on listed species, including, in appropriate cases, by EPA “objecting to and Federalizing the permit...”⁹
- Fifth, to implement that process, the 316(b) rule must require permittees to undertake robust monitoring, including the use of environmental metagenomic sampling to detect the presence of listed species near an intake. Because T&E species are, by definition, rare, they may not be collected or observed in limited, traditional sampling events despite being impinged and entrained.
- Sixth, the rule must require the submittal of comprehensive information on the potential for **direct and indirect impacts** to listed species, including impacts to listed species’ prey. EEI’s opposition to collecting information regarding the taking of prey or other indirect impacts to T&E species has no statutory basis. Avoiding “jeopardy” and avoiding “adverse modification of critical habitat” are separate and independent requirements.¹⁰ Further, the taking of prey may

⁵ RK Comments at 44-45.

⁶ RK Comments at 35-38, 39-42.

⁷ See *Miccosukee Tribe of Indians v. United States*, 566 F.3d 1257, 1271-72 (11th Cir. 2009) (citing 50 C.F.R. § 402.14(i)(4)).

⁸ 50 C.F.R. § 402.14(i)(3).

⁹ Memorandum of Agreement Between the Environmental Protection Agency, Fish and Wildlife Service and National Marine Fisheries Service Regarding Enhanced Coordination Under the Clean Water Act and Endangered Species Act, January 2001, at 20.

¹⁰ *Sierra Club v. U.S. Fish and Wildlife Service*, 245 F.3d 434, 441-43 (5th Cir. 2001).

constitute either a take of listed species or adverse modification of critical habitat,¹¹ and both must be avoided.

II.

Definition of New Units at Existing Facilities

In promulgating the Phase I Section 316(b) rule in 2001, EPA established Best Technology Available (BTA) standards for cooling water intake structures at new facilities based on closed-cycle cooling (CCC), a 0.5 foot-per-second maximum intake velocity, and a prohibition against withdrawals that are disproportionate to the size of the waterbody.¹² Throughout the administrative and judicial review processes, industry argued that CCC and the other standards should not be considered BTA or that BTA for new facilities should be determined case-by-case. Those arguments were fully considered and rejected, first by EPA and then by the court when it upheld the Phase I rule in 2004.¹³

In the context of the current existing facility rulemaking, a decade later, EPA is *not* reconsidering BTA for new facilities or comparing the merits of CCC with once-through cooling – an antiquated technology rarely installed in plants built since the 1980s. That debate was settled at the federal level long ago, in the first term of the Bush administration. The ***only remaining question concerns the retrofitting*** of CCC on existing facilities and whether those facilities can meet the velocity limits and proportional flow requirements.

The Phase I rule did not establish standards for new units built at existing facilities. Nor did EPA determine that such units were to be treated as existing facilities. Rather, EPA deferred regulation of those units until it had completed analysis of data on existing facilities.¹⁴ Having completed that analysis, the draft proposed rule EPA sent to OMB shortly before proposal in 2011 required that “[n]ew units constructed at an existing facility ... comply with provisions for impingement and entrainment mortality based on closed-cycle [cooling] that are similar to those required in the Phase I new facility rule.”¹⁵ That was appropriate because new units – including rebuilt, repowered and replaced units – are like new facilities; they do not encounter retrofitting issues.

Accordingly, the draft proposed rule defined new unit at an existing facility to

¹¹ See, e.g., 64 Fed. Reg. 60727, 60730 (Nov. 8, 1999) (NMFS adopting USFWS’s definition of harm, and noting that “[r]emoving ...fish ... or other biota required by the listed species for feeding” can constitute a take).

¹² See 40 C.F.R. § 125.84; see also generally 66 Fed. Reg. 65256 - 65345 (Dec. 18, 2001).

¹³ *Riverkeeper, Inc. v. EPA*, 358 F.3d 174, 197 (2d Cir. 2004) (“*Riverkeeper I*”) (“The EPA considered all of the factors that UWAG now raises...”).

¹⁴ 66 Fed. Reg. at 65286.

¹⁵ See EPA-HQ-OW-2008-0667-1295.2 (redline-strikeout version documenting changes made during Executive Order 12866 review) (hereinafter, “Redlined Version of Proposed Rule”) at 2.

include “rebuilt, repowered, or replaced unit[s].”¹⁶ EPA further defined “rebuilt” with reference to “major modifications affecting operation of the cooling water intake structure such as replacement of the turbine, boiler, or condensers” and defined “repowering” to mean rebuilding and replacing major components of a power plant instead of building a new one.”¹⁷ After many years of careful analysis by its engineers and economists, EPA explained why installing CCC at rebuilt, repowered and replaced units is unlike a retrofit:

As [older] units are retired and replaced based on individual facility circumstances, facilities have the ideal opportunity to design and construct the new units without many of the additional expenses associated with retrofitting an existing unit to closed-cycle. ... [D]owntime ... may be avoided or minimized [,] ... condensers can be configured for closed-cycle, reducing energy requirements, and high efficiency cooling towers can be designed as part of the unit replacement, allowing for installation of smaller cooling towers.¹⁸

In summary, ... repowering, replacement, and additional unit installation decisions can be accomplished feasibly and with lower costs than retrofitting an entire existing facility... New units are similar to new facilities, regardless of whether that unit is a green field construction, an additional unit, a replacement unit, or a repowered unit. ... [N]ew units [also] would be similar to new facilities in terms of the useful expected plant life...¹⁹

... EPA considered whether such requirements ... would serve as a disincentive to replace older units and determined that this would not be the case given closed-cycle cooling’s comparable cost relative to once through cooling and its small cost as a percentage of overall costs at the new unit. ... Furthermore, the costs usually comprise less than 1 percent of the total costs of a new unit. Recent experience indicates that the Phase I requirements are not a disincentive for new facility construction...²⁰

Shortly before proposal in the Federal Register, however, for reasons unknown and wholly unexplained, OMB changed the definition of new units at existing facilities to exclude rebuilt, repowered or replacement units.²¹ That change should not have been made and, indeed, EPA has reconsidered it. According to EEI’s recent letters, EPA’s current approach more closely aligns with the February 2011 draft proposal in that the definition

¹⁶ *Id.* at 423 (proposed 40 C.F.R. § 125.92(r)).

¹⁷ *Id.* at 423 (40 C.F.R. §§ 125.92(r) and 125.92(t)).

¹⁸ *Id.* at 92-93.

¹⁹ *Id.* at 147.

²⁰ *Id.* at 147-148.

²¹ Proposed 40 C.F.R. § 125.92(r).

of new unit at existing facility includes repowered, replaced or rebuilt units, so long as the turbine and condenser are replaced (and the location of the cooling water intake structure or design intake flow is changed).²²

There is no factual or legal basis for EEI's request that repowered, replaced or rebuilt units be excluded from the definition of new unit at an existing facility. As noted, EPA has considered and rejected EEI's argument that a CCC requirement would be a disincentive to upgrade or repower facilities. EEI also rehashes its argument that "EPA's authority under § 316(b) extends only to the *cooling water intake structure*."²³ But for nearly four decades EPA has recognized that Section 316(b) authorizes it to regulate the volume and velocity of water withdrawn through a cooling water intake structure as a means of addressing capacity.²⁴ That authority is no different for new units than for new or existing facilities and does not depend on whether the intake structure or anything else has been modified. Moreover, given that existing facilities can be subjected to stricter requirements during permit renewal in the absence of any change to the facility,²⁵ there is obviously no legal impediment to regulating modified units in the absence of changes to the intake or design flow.

For those reasons, EPA should not define new unit based on whether the location of the intake structure or design intake flow will change. Using turbine and condenser replacement as the sole touchstone for rebuilt, repowered and replaced units is consistent with EPA's statutory authority, and properly recognizes that such units are, for all intents and purposes, new facilities.

If the electric power industry were given authority to repower the nation's existing fleet of antiquated, destructive once-through-cooled power plants by installing new boilers, new condensers and new turbines without also replacing their 1950s cooling systems, EPA would create an enormous loophole that would swallow not only the existing facility rule, but also the Phase I rule for new facilities as well.

Notably, the last time EPA (or OMB) attempted an Orwellian re-write of the definitions of "new" and "existing," that aspect of the Phase II rule was remanded by the Second Circuit, with the court noting that no deference is owed to an agency interpretation that is "plainly erroneous."²⁶

²² EEI Dec. 20, 2013 letter at 3.

²³ EEI Sept. 17, 2013 letter at 3 (emphasis in original).

²⁴ See 66 Fed. Reg. at 65313 (citing *In re Brunswick Steam Electric Plant*, Decision of the General Counsel No. 41 (June 1, 1976)).

²⁵ Entergy's argument that Section 316(b) imposes only a *pre-construction* requirement and does not allow EPA to later revisit the design, location, capacity or construction of an existing plant's cooling water intake structure was rejected by the Second Circuit in *Riverkeeper II*. See *Riverkeeper, Inc. v. EPA*, 475 F.3d 83, 121-23 (2d Cir. 2007)

²⁶ *Riverkeeper II*, 475 F.3d at 117-20 (citing *Fowlkes v. Adamec*, 432 F.3d 90, 97 (2d Cir. 2005)).

III.

Permit Application Requirements & Deadlines

EEl has asked EPA to “[p]rovide a minimum of five years for all facilities to complete the permit application requirement.”²⁷ Allowing five years to complete an application for a five-year permit would be patently excessive, particularly since it has long been clear to industry what information it will need to submit. As EPA noted in the proposal, many of the regulated facilities were previously subject to the withdrawn Phase II rule and should have already compiled much of the proposed application data, which can be used to meet many of the information submittal requirements.²⁸ For newly covered facilities, the 2011 proposal gave them advance notice as to what the agency’s expectations are regarding application requirements.²⁹ Once the final 316(b) rule has been issued, plant operators can hit the ground running with their application materials and should be kept to a tight time frame. In light of this, the information submittal time periods are entirely too long; ***the schedule set forth in the proposal should be cut in half.***³⁰

Apart from the length of the schedule, the proposed rule’s phased approach for information submittal is a significant improvement over prior 316(b) rules because it requires facilities to submit application materials at intervals triggered by promulgation of the final rule.³¹ This is critical because certain components of an application take less time to complete than others, regulators can evaluate only so much information at any one time and may not request information expeditiously, and certain items may need to be supplemented. Tying the schedule to the rule’s promulgation date provides far greater efficiency, uniformity and transparency than if 50 permitting agencies were directed to set information submittal schedules for the 1,200 covered facilities.

Many facilities operate under long-expired, administratively-continued NPDES permits even though their renewal applications do not yet include the information needed by permit writers. As EPA is well aware, the CWA authorizes states to issue NPDES permits “for fixed terms, not exceeding five years.”³² The five-year, time-limited nature of the permit is central to Congress’s plan to press new technologies – and incrementally stricter

²⁷ EEl Dec. 20, 2013 letter at 4.

²⁸ See 76 Fed. Reg. at 22254.

²⁹ See 76 Fed. Reg. at 22248 (similar statement in context of compliance schedules).

³⁰ In addition, the Clean Water Act mandates compliance with the 316(b) rule no later than three years from promulgation. CWA Sections 301(b)(2)(C), (D), (E) & (F) and 301(b)(3)(A) & (B) require compliance “as expeditiously as practicable, but in no case later than three years after the date such limitations are promulgated....” As the courts have explained, “the time limits in sections 301 and 306 govern EPA’s duty to take action under section 316(b).” *Cronin v. Browner*, 898 F. Supp. 1052, 1059 (S.D.N.Y. 1995). The same is true with respect to permittees’ duty to comply.

³¹ 76 Fed. Reg. at 22254.

³² 33 U.S.C. § 1342(b)(1)(B).

effluent limits – onto dischargers at regular five-year intervals.³³ Once a five-year NPDES permit expires, the Administrative Procedure Act (APA) allows licensees who have made “timely and sufficient application for a renewal or new license *in accordance with agency rules*,” to conduct “an activity of a continuing nature ... until the application has been finally determined by the agency.”³⁴

As a result of the administrative continuance of their permits, some power plants are currently operating under permits that were issued in the late 1980s or early 1990s and expired approximately 20 years ago. These plants are typically inefficient and highly polluting facilities still using antiquated technologies from that era or earlier and badly in need of technology upgrades. The generational delay in repermitting them is unacceptable and plainly contrary to the intent of Congress. Consequences should be attached to the failure of a permit applicant to complete its renewal application on a timely basis. That failure can affect the administrative continuance of an expired permit or the opportunity to contend that the putative best technology for minimizing adverse environmental impact is not available at a particular plant. ***Such a “backstop” provision is necessary to prevent dilatory plant owners from continuing to operate under 1980s and 1990s permits in the 2020s and beyond.*** EPA must do its utmost to ensure that long overdue permits are reviewed, renewed and modified as needed. EPA’s final rule should address this issue, in delegated and non-delegated states.

IV.

Cost-Benefit Analysis and EPA’s Stated Preference Survey

EPA is most assuredly *not* required to base its Section 316(b) determinations on cost-benefit analysis or to direct permit writers to do so. In EPA’s very first 316(b) rule, the agency stated: “No comparison of monetary costs with the social benefits of minimizing adverse environmental impacts, much less a formal, quantified ‘cost/benefit’ assessment is required by the terms of [§ 316] of the Act.”³⁵ More recently, “[i]n *Entergy Corp. v. Riverkeeper*, the Supreme Court has now made pellucid that the EPA may but is not required to engage in cost-benefit analyses for CWIS rule making.”³⁶

Furthermore, as Justice Breyer noted in *Entergy*, Congress “intended the law’s text to be read as *restricting ... the use of cost-benefit comparisons*. ... [because] the Act’s sponsors ... feared that such analyses would emphasize easily quantifiable factors over more qualitative factors (particularly environmental factors, for example, the value of preserving nonmarketable species of fish).”³⁷ Justice Breyer was particularly concerned

³³ See *NRDC v. EPA*, 822 F.2d 104, 123 (D.C. Cir. 1987).

³⁴ 5 U.S.C. § 558(c) (emphasis added).

³⁵ 41 Fed. Reg. 17387, 17388 (Apr. 26, 1976).

³⁶ *ConocoPhillips Co. v. EPA*, 612 F.3d 822, 837 (5th Cir. 2010).

³⁷ *Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208, 232 (2009) (Justice Breyer, concurring).

about “futile attempts at comprehensive monetization.”³⁸ Justice Scalia’s majority opinion similarly acknowledged that “arguments may be available to preclude such a rigorous form of cost-benefit analysis as that which was prescribed under the statute’s former BPT standard, which required weighing ‘the total cost of application of technology’ against ‘the ... benefits to be achieved.’”³⁹

Notably, EPA chose not to rely on cost-benefit considerations in developing its Phase III rule for new oil rigs, and neither that rule nor the Phase I rule include a cost-benefit variance. Both were upheld in court.⁴⁰ EPA’s reason to eschew cost-benefit analysis in Phase III was plain: “it did not have enough information to perform a *meaningful* cost-benefit analysis.”⁴¹ The Fifth Circuit agreed, explaining that “[t]he agency’s decision to regulate on the basis of economic achievability was borne out by the existence of cost information but not benefit information.”⁴²

EEI now asks EPA to *require* permit writers to rely on quantified, monetized cost-benefit analysis but to *prevent* them from using stated preference methods for valuing ecological benefits.⁴³ EPA must decline that request because doing so would guarantee the development of meaningless and futile analyses of the kind that Justice Breyer warned against in Phase II. The lack of meaningful benefits information is exactly the reason EPA did not employ cost-benefit analysis in Phase III, and it would also violate the Clean Water Act in ways that Justices Breyer and Scalia foreshadowed. States have informed EPA of the enormous difficulties in placing an accurate dollar value on aquatic resource impacts. And EPA itself recently noted that the “difficult, time-consuming and expensive” process of cost-benefit analysis “will rarely be sustainable for individual permits.”⁴⁴ **Accordingly, EPA should not mandate cost-benefit analysis as a part of the permit issuance process** because it would result in 1,200 meaningless cost-benefit analyses.

Furthermore, to the extent that cost-benefit analysis is allowed as a *voluntary* component of permitting, the analysis must fully value all benefits by using the data from EPA’s regional and national stated preference survey. EEI and the Senators’ attempt to malign stated preference methods as “controversial” or “inappropriate” is belied by EPA and OMB’s guidelines for regulatory analysis. Those guidelines have long recognized that such methods are not only appropriate and well-established economic tools, but also that they are *necessary* to a complete benefits analysis:

³⁸ *Id.* at 235.

³⁹ *Entergy*, 556 U.S. at 223.

⁴⁰ *ConocoPhillips* at 833-42; *see also Riverkeeper I*, 358 F.3d 174.

⁴¹ *ConocoPhillips*, 612 F.3d at 838 (emphasis added).

⁴² *Id.* at 842.

⁴³ EEI Sept. 17, 2013 letter at 2-3; EEI Dec. 20, 2013 letter at 2-3.

⁴⁴ EPA - New England, Clean Water Act NPDES Permitting Determinations for the Thermal Discharge and Cooling Water Intake Structures at Merrimack Station in Bow, New Hampshire NPDES Permit No. NH 0001465 at 327.

Stated Preference Methods (SPM) have been developed and used in the peer-reviewed literature to estimate both “use” and “non-use” values of goods and services. They have also been widely used in regulatory analyses by Federal agencies... A stated-preference study may be the *only* way to obtain quantitative information about non-use values...⁴⁵

Because biological diversity and other non-use values are invariably significant in this context – typically they account for 98 percent of the total benefits⁴⁶ – conducting cost-benefit analyses without stated preference methods would result in virtually all of the benefits being zeroed out, thereby guaranteeing a completely useless analysis. The national and regional cost-benefit study EPA conducted in the context of the rulemaking represents the most comprehensive and rigorous effort yet to monetize all of the benefits of reducing impingement and entrainment. States have neither the time nor resources to conduct their own stated preference surveys. EPA’s survey showed that the economic benefits of minimizing impingement and entrainment dramatically exceed the costs.⁴⁷ The use of those data in the plant-specific context would be manifestly more reliable than placing a zero value on benefits that are known to exist and that in the aggregate vastly outweigh the costs.

Accordingly, if permit writers are permitted to undertake cost-benefit on a voluntary basis, or to accept such analyses prepared by permit applicants, they should be prohibited from using any such analysis that does not take full account of all benefits, including ecological benefits, on equal footing with all other benefits and costs.

V.

Low Capacity Utilization Units (“Peakers”)

EEI also asks EPA to “specify a capacity factor or flow rate below which the final rule’s requirements will not apply,” based on its unsupported assertion that low capacity utilization units (*i.e.*, “peakers”) have “little risk” of adverse environmental impact.⁴⁸

⁴⁵ OMB Circular A-4 at § 4 (emphasis added); *see also* EPA, Guidelines for Preparing Economic Analyses.

⁴⁶ As EPA has explained, 98.2 percent of the aquatic organisms affected by intake structures are not harvested and thus do not go to market. 69 Fed. Reg. 41576, 41661 (July 9, 2004).

⁴⁷ *See* Comments on EPA’s Section 316(b) Stated Preference Survey, Dr. Frank Ackerman, Stockholm Environment Institute-US Center, Tufts University, July 10, 2012. Notably, the Senators cite a NERA Consulting report prepared for UWAG and EEI for the proposition that the stated preference survey estimates benefits to be \$2.275 billion annually for EPA’s preferred option and five times the value of the costs. *See* July 22, 2013 letter from Senator Vitter, et al., to EPA at 2.

⁴⁸ EEI Sept 17, 2013 letter at 4-5; *see also* EEI Dec. 20, 2013 letter at 4.

In fact, as state regulators have found, there is “no predictable relationship” between capacity factor and cooling water use.⁴⁹ There are several reasons for this, including that cooling water systems at non-baseload facilities may be operated more than is necessary to condense steam.⁵⁰ Further, “non-targeted reductions” in cooling water use may have little effect on reducing adverse environmental impact because the “driving factors” influencing entrainment and impingement at a facility are the “seasonal dimension of both energy demand and fish reproductive and migratory life history.”⁵¹ In other words, peaking and load-following facilities can have a disproportionately large adverse environmental impact on aquatic resources if they operate when biological activity is high. In addition, many facilities that now operate as peakers or load-following units were originally designed as baseload units but are no longer efficient enough to be operated regularly. This means that they also have a disproportionately large adverse impact on air quality and climate relative to more efficient baseload facilities.

Moreover, a plant’s past operational history does not guarantee that it will run infrequently in the future, due to changes in demand and fuel costs. Facilities should not be exempted from certain requirements based on prior capacity utilization and given free rein to ramp up operations in the future.


Consequently, if capacity factor or average flow rate is to be a component of BTA for certain facilities, the NPDES permit must contain mandatory limits on future capacity and flow. In addition, those limits must be expressed as targeted, seasonal reductions and/or be accompanied by additional requirements specifying the minimum reductions in impingement and entrainment to be achieved as a result of reduced operation, as has been done in some recent state-issued permits for peakers.

Thank you for considering these legal issues as the rulemaking is completed

Very Truly Yours,



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Legal Director, Waterkeeper Alliance
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Phillip Musegaas
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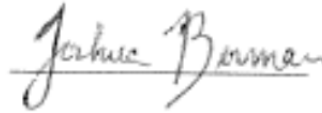
⁴⁹ See generally New York State Department of Environmental Conservation, *The Relationship between Cooling Water Capacity Utilization, Electric Generating Capacity Utilization, and Impingement and Entrainment at New York State Steam Electric Generating Facilities*, Technical Document, July 2010, at 2.

⁵⁰ *Id.* For example, plants may withdraw water when not generating electricity, or may withdraw a disproportionately high volume of water relative to kilowatt hours, in order to prevent condenser fouling; to dilute discharges; because they have single-speed intake pumps that do not allow withdrawals to be scaled down; or to cool the plant during the start-up and cool-down periods before and after operation.

⁵¹ *Id.*



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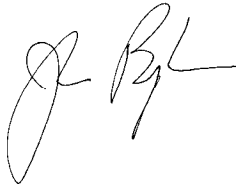
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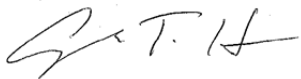
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