

Natural Resources Defense Council
Sierra Club Atlantic Chapter
Riverkeeper Inc.
Citizens Campaign for the Environment
Environmental Advocates of New York

March 13, 2014

Stephen M. Tomasik
NYS DEC - Division of Environmental Permits
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**Re: Astoria Generating Company LP – Application for Water Withdrawal
Permit (Application ID: 2-6301-00185/00026)**

Dear Mr. Tomasik:

On behalf of the Sierra Club Atlantic Chapter and its 38,000 members and the Natural Resources Defense Council and its 37,000 members in New York, Riverkeeper Inc. and its 4,500 members, and Citizen’s Campaign for the Environment and its 80,000 members please accept the following comments on the above-referenced permit application, which DEC has noticed for public comment, with a comment deadline of March 13, 2014.¹

The Astoria Generating Company LP seeks a permit on behalf of its Astoria Generating Station Facility for a water withdrawal permit to withdraw up to 1,246,000,000 GPD of water from the East River in New York harbor. The size of this permit application makes it particularly important that DEC rigorously apply to this application the standards set forth in the agency’s own regulations. Nothing less is needed to ensure the protection of the state’s water resources and the integrity of DEC’s new permitting regime, which was established pursuant to landmark water withdrawal legislation that Governor Cuomo signed in August 2011.²

¹ http://www.dec.ny.gov/enb/20140226_reg4.html

² A.5318A-2011, codified at ECL § 15-1501, *et seq.* The legislation was enacted, in large part, to implement the requirements of the Great Lakes-St. Lawrence River Basin Water Resources Compact (“Compact”). The legislation
² A.5318A-2011, codified at ECL § 15-1501, *et seq.* The legislation was enacted, in large part, to implement the requirements of the Great Lakes-St. Lawrence River Basin Water Resources Compact (“Compact”). The legislation applied key elements of the Compact’s decision making standards to all permits issued throughout the state; this includes the Compact’s requirement that withdrawals must “incorporate environmentally sounds and economically feasible water conservation measures” and “result in no significant individual or cumulative adverse impacts to the quantity or quality of” the waters and water-dependent resources in the source watershed. *See* Compact § 4.11 (available at http://www.glsregionalbody.org/Docs/Agreements/Great_Lakes-St_Lawrence_River_Basin_Water_Resources_Compact.pdf). Therefore, even though the Asoria Generating

Based on our review of the public notice application materials, it is clear that DEC cannot lawfully approve the permit application without further review and analysis.

In order for this application to proceed lawfully, all potential adverse environmental impacts of increased water withdrawals must be identified; DEC must impose permit terms that avoid or mitigate those adverse impacts; and DEC must impose any further permit conditions needed to ensure that the applicant implements all “environmentally sound and economically feasible” water conservation measures.

Our detailed comments follow below:

1. Issuance of the proposed permit is not a “ministerial action” and is, therefore, subject to SEQRA review.

DEC regulations expressly provide that an initial permit “includes all terms and conditions of a water withdrawal permit, including environmentally sound and economically feasible water conservation measures to promote the efficient use of supplies.”³ To comply with this provision, DEC must determine, *inter alia*, what measures constitute the “environmentally sound and economically feasible” water conservation measures for the activities covered by an initial permit application, and must include provisions in the permit requiring implementation of such measures.

Further, state law provides a definition of “environmentally sound and economically feasible water conservation measures” to guide this analysis. Specifically, a permit must ensure implementation of:

those measures, methods, technologies or practices for efficient water use and for reduction of water loss and waste or for reducing a withdrawal, consumptive use or diversion that:

- (1) are environmentally sound;
- (2) reflect best practices applicable to the water use sector;
- (3) are technically feasible and available;
- (4) are economically feasible and cost effective based on an analysis that considers direct and avoided economic and environmental costs; and
- (5) consider the particular facilities and processes involved, taking into account the environmental impact, age of equipment and facilities involved, the processes employed, energy impacts and other appropriate factors.⁴

Company’s water withdrawal is not within the Great Lakes Basin, DEC’s application of the law’s permitting standards will set a precedent in regard to New York’s implementation of the Compact standards.

³ 6 NYCRR § 601.7(e). All water withdrawal permits must ensure implementation of a water conservation program that “incorporate[s] environmentally sound and economically feasible water conservation measures.” ECL § 15-1503(f). The applicant is required to submit a proposed water conservation program to DEC for review, so that the permit can be conditioned on implementing the elements of an approved program. The burden is on the applicant to demonstrate that its water conservation program meets the legal standard. 6 NYCRR § 601.10(f), (k)(4); *id.*

§ 601.11(c)(7).

⁴ ECL § 15-1502(9); 6 NYCRR § 601.2(g).

These provisions make it unmistakably clear that the issuance of an initial permit is not a mere “ministerial action” – which ordinarily would be exempt from SEQRA review as a Type II action.⁵ DEC regulations define a ministerial action as one that is “performed upon a given state of facts in a prescribed manner imposed by law without the exercise of any judgment or discretion as to the propriety of the act. . . .”⁶ While the state’s water withdrawal permitting law does provide that DEC “shall” issue an initial permit to an eligible applicant, the law is equally clear, as reflected in the provisions cited above, that such permit must include, *inter alia*, terms and conditions specifying the water conservation measures that the permittee must implement.⁷ Therefore, DEC must exercise its judgment to determine which water conservation measures, precisely, are required in the context of any given permit, pursuant to the criteria set forth above. Such an exercise of judgment, by definition, is not ministerial in nature.

Since the proposed permit is not a ministerial action, Type II action, DEC’s determination in the public notice that the permit “is not subject to SEQR because it is a Type II action” is incorrect. The permit cannot proceed until DEC has completed the necessary SEQRA review.

Due to the size of the Astoria Generating Facility’s water withdrawal, the permit application is, in fact, a “Type I” action. DEC’s SEQRA regulations specifically provide that “a project or action that would use ground or surface water in excess of 2,000,000 gallons per day” is a Type I action.⁸ As a Type I action, the application is “likely” to require the preparation of a full Environmental Impact Statement (EIS).⁹ Before proceeding with the application, DEC must make a determination of significance and, if the activity “may include the potential for at least one significant adverse environmental impact,” require preparation of an EIS.¹⁰

⁵ 6 NYCRR § 617.5(c)(19). As discussed further in note 8, below, even if DEC’s processing of this permit application were somehow considered “ministerial” – or otherwise fell into one of the categories typically treated as “Type II” – the application would not be eligible for treatment as a Type II action, in light of the size of the water withdrawal at issue.

⁶ 6 NYCRR § 617.2(w) (emphasis added).

⁷ This is true even though DEC must issue an initial permit authorizing a withdrawal up to the maximum capacity the applicant reported to DEC on or before Feb. 15, 2012, as per ECL § 15-1501(9) and 6 NYCRR § 601.7(d). The statute is clear that initial permits are “subject to appropriate terms and conditions as required under this article,” ECL § 15-1501(9) (emphasis added), and, as explained above, DEC’s rules expressly state that “all terms and conditions” of water withdrawal permit, including those related to water conservation requirements, apply equally to initial permits. 6 NYCRR § 601.7(e). As a result, while the initial permit the Astoria Generating Company must specify a maximum authorized withdrawal of 92 MGD, it must also condition the authorization to withdraw any water from the East River on the implementation of environmentally sound and economically efficient water conservation measures to be specified by DEC in the permit, even if – indeed, especially if – the effect of such measures is to maintain withdrawals at a level below the maximum capacity of the system.

⁸ 6 N.Y.C.R.R. § 617.4(b)(6)(ii). In addition, DEC’s SEQRA regulations provide that, to be categorized as Type II, an action must “must . . . (2) not be a Type I action as defined in section 617.4 of this Part.” 6 NYCRR § 617.5(b). Thus, wholly apart from the fact that issuance of initial permits is never a “ministerial action,” issuance of an initial permit for a withdrawal the size of the Astoria Generating Company’s withdrawal cannot be considered a Type II action exempt from SEQRA review, since it is expressly defined as a Type I action.

⁹ 6 NYCRR § 617.4(a).

¹⁰ *Id.* § 617.7(a)(1).

We note that, based on the materials in the application alone it appears that operation of the Astoria Generating Facility's water withdrawal system "may have a significant adverse impact" on the environment.¹¹ The application materials reference, but do not fully explain, the adverse impacts related to thermal discharges to the river and impingement and entrainment of aquatic life. (See further discussion in point #3 below.) It is not clear from the application materials, however, what the full range of feasible water conservation measures may be, which would help mitigate any such harms (and which are, in any event, necessary for compliance with the water withdrawal law). (See further discussion in point #2 below.)

Therefore, the requirement to evaluate the merits of this application under SEQRA is important both as a precedential matter, with regard to DEC's implementation of the "initial permit" program under the state water withdrawal law, and as a practical matter with regard to protecting the water resources at issue in this application.

2. The permit must specify, and require implementation of, all "environmentally sound and economically feasible" water conservation measures.

As explained in point #1, above, all water withdrawal permits – including "initial permits" – must require the implementation of a water conservation program that includes all "environmentally sound and economically feasible water conservation measures," as that term is defined by law. In order to satisfy this requirement, DEC must address the following issues:

a. The permit must specifically identify, and require continued operation and maintenance of, all existing water conservation measures.

As per DEC regulations, the maximum withdrawal volume of 1,246 MGD proposed to be authorized in the permit is simply the maximum capacity of the system.¹² That maximum capacity is significantly higher than the facility's 2012 reported maximum daily withdrawals of 405.8 MGD, shown on DEC's website.¹³ The maximum capacity figure proposed to be authorized in the permit is exactly the same as the "maximum current withdrawal" claimed in the Astoria application, although the tables of operating data attached to the application show maximum operating usage of 480 MGD. The fact that the facility appears to have been using approximately 33% of its maximum capacity suggests that there are existing design features and/or operating practices at the facility that effectively serve as "environmentally sound and economically feasible" water conservation measures. The permit should, therefore, clearly identify all of these features and practices, and should expressly require their continued operation and maintenance – or, if this should become infeasible due to changed circumstances during the life of the permit, the implementation of alternative practices that are no less effective at reducing water demand.

b. The permit must specifically identify, and require implementation of, any additional measures DEC finds to be environmentally sound and economically feasible, based on further evaluation by the applicant.

¹¹ See 6 NYCRR § 617.1(c).

¹² 6 NYCRR § 601.7(d). See also ECL § 15-1501(9).

¹³ <http://www.dec.ny.gov/maps/withdrawalslink.kmz>.

State law places the burden on the applicant to demonstrate, to DEC's satisfaction, that its proposed water conservation program includes all "environmentally sound and economically feasible conservation measures."¹⁴ Similarly, DEC regulations provide that a water withdrawal permit application must include "an analysis of increased water conservation measures as a means to reduce or eliminate the need for the proposed source,"¹⁵ and must demonstrate that "increased water conservation or efficiency measures [beyond those proposed by the applicant] cannot negate or reduce the need for the proposed water withdrawals."¹⁶

While Astoria's application materials include some discussion of these topics, there are some potentially very cost-effective measures that were not discussed, and which require further evaluation.¹⁷ Specifically, DEC should require Astoria to evaluate the feasibility of reducing water flow with closed-cycle cooling at the generating station, and should incorporate any economically feasible measures into the permit's requirements. Installation of a closed-cycle cooling system would substantially reduce the size of the water withdrawal needed to cool the generating station. (It would also reduce the total thermal discharge from the system back to the river, thereby reducing evaporative losses from the surface waters.)

In connection with this evaluation, DEC should require Astoria to determine the avoided cost of measures that would reduce water use by its cooling system. These avoided costs may include reduced operating costs of the cooling system (including reduced energy demand for pumping).¹⁸

DEC must then independently evaluate Astoria's analyses and determine which measures are environmentally sound and economically feasible. The permit must specifically identify such measures and require their implementation.

c. DEC must determine, with respect to this permit, whether state water withdrawal permitting standards require the use of closed-cycle cooling.

The massive volume of water used by the Astoria Generating Facility is attributable largely to the fact that it relies on a once-through cooling system. A closed-cycle cooling system would use much less water. The facility's September 2, 2011, SPDES renewal application is attached to its water permit application.

¹⁴ *Supra* note 3.

¹⁵ 6 NYCRR § 601.10(e)(3).

¹⁶ 6 NYCRR § 601.10(k)(2).

¹⁷ The Water Conservation Form submitted as part of the application (at Part VI) states that "Facility is in the process of installing variable speed drives on existing pumps as required by SPDES Permit # NY -0005118 that will allow for reduced water withdrawals under certain operating conditions," and that the facility's "goals for reducing future water usage" are "NA." As described in point #2.c, below, the SPDES permit renewal process does not relieve DEC of its responsibility to identify and include environmentally sound and economically feasible water conservation measures in this permit. Moreover, the scope of the SPDES permit analysis, as described in the application for this permit, does not address the range of potential water conservation measures addressed herein.

¹⁸ See 6 NYCRR § 601.2(g)(4) (providing that determination of economic feasibility of conservation measures must include "consider[ation of] direct and avoided economic and environmental costs" (emphasis added)).

DEC's pending evaluation under 6 NYCRR § 704.5 and Section 316(b) of the Clean Water Act, however, will not determine whether closed-cycle cooling is necessary to meet the requirements of the state water withdrawal permitting law, which applies a different legal standard to determine the required water conservation measures. If DEC determines under Clean Water Act section 316(b) and 6 NYCRR § 704.5 that closed-cycle cooling is required, the question as to the water withdrawal permitting law would be, effectively, moot. However, in the absence of such a determination, DEC is also obliged to determine whether closed-cycle cooling represents an "environmentally sound and economically feasible water conservation measure," as that term is defined by law.

3. DEC must ensure that there has been sufficient analysis of the potential adverse impacts of the proposed water withdrawal and impose any necessary permit conditions to avoid those impacts.

The application contains no description of potential adverse impacts of the proposed water withdrawal other than what is contained in the SPDES application included with the application. To determine whether the withdrawal may cause any significant adverse environmental impacts on the river itself or on downstream users, potential adverse impacts must be identified, and their consequences must be evaluated. (We note that such consequences may relate not only to water quantity, but also to water quality. The East River receives substantial pollution inputs in and around the facility. Reduced water levels in the river would decrease its assimilative capacity for such pollution. Additionally, thermal discharges from the facilities outfalls also adversely affect water quality, both directly (though the adverse effects of temperature on aquatic life) and, potentially, indirectly (through the effects of temperature on the biochemical processes that influence dissolved oxygen levels).

Without further data and analysis, DEC cannot meet its burden to demonstrate that "the proposed project is just and equitable to other municipalities and their inhabitants in regards to present and future needs for sources of potable water" and "the proposed withdrawal will result in no significant individual or cumulative adverse environmental impacts."¹⁹ Likewise, without such data and analysis, DEC cannot make the determinations it is required to make, under 6 NYCRR § 601.11(c), including whether:

- (6) the proposed water withdrawal will be implemented in a manner to ensure it will result in no significant individual or cumulative adverse impacts on the quantity or quality of the water source and water dependent natural resources, including aquatic life[.]

DEC must require Astoria to provide the necessary data and analysis to determine whether the Astoria Generating Facility withdrawals may result in significant individual or cumulative adverse impacts on the quality or quantity of water in the East River, on its aquatic

¹⁹ 6 NYCRR § 601.10(k)(6)-(7). *See also id.* § 601.10(e)(11) (requiring that applications must include "information on rainfall, stream flows and classifications,...other upstream water withdrawals, safe yield analyses or passby flow calculations....").

life, and on other users of the water body. If DEC determines that such adverse impacts may occur, it must include further conditions in the permit sufficient to avoid such impacts.

* * * * *

Thank you for your consideration of these comments. Please contact the undersigned with any questions.

Sincerely,

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