

In The Matter Of:
WEST OF HUDSON HYDROELECTRIC PROJECT

FERC PROJECT NO. 13287
December 15, 2009

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In the Matter of:

WEST OF HUDSON HYDROELECTRIC PROJECT
FERC PROJECT NO. 13287

Tuesday, December 15, 2009
7:10 P.M.

MINUTES OF PUBLIC MEETING
SULLIVAN COUNTY COMMUNITY COLLEGE
LOCH SHELDRAKE, NEW YORK

REPORTED BY: ROBERT HANTMAN, CSR

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APPEARANCES:

ANTHONY J. FIORE, Director of Planning and Sustainability

TINA JOHNSTONE, Director of Operations

ROBERT CRAIG, ESQ., Assistant Counsel

ALSO PRESENT:

GOMEZ AND SULLIVAN ENGINEERS, P.C.
BY: MARK J. WAMSER, P.E.

COUCH WHITE, LLP
BY: KEVIN M. LANG, ESQ.

FERC PROJECT NO. 13287 - December 15, 2009

1 Proceedings

2 MS. JOHNSTONE: Good evening.

3 Welcome to Sullivan County Community
4 College and our presentation of New York
5 City's Hydroelectric Project. My name
6 is Tina Johnstone, Director of
7 Operations for the Bureau of Water
8 Supply. The purpose of tonight's
9 meeting is to provide you with an
10 overview of the proposed Hydro
11 Development at four dams: Cannonsville,
12 Pepacton, Neversink, and Gilboa, and to
13 give you an overview of the FERC
14 licensing process, Federal Energy and
15 Regulatory Commission, and where we are
16 in the status of that licensing process.

17 The purpose of the meeting is
18 also to solicit feedback from you on our
19 pre-application document that was
20 submitted to FERC, any studies that you
21 feel may be needed to be undertaken, or
22 any issues or concerns that you have
23 with the project.

FERC PROJECT NO. 13287 - December 15, 2009

1 Proceedings

2 Given the geographic locations
3 of the dams, we decided to have two
4 additional public meetings that are not
5 required under the FERC licensing
6 process, tonight at Sullivan County,
7 tomorrow in Schoharie County, in
8 addition to the joint meeting with FERC,
9 which is being held tomorrow at our
10 Kingston office at 9:00 A.M.

11 Again, the purpose of the public
12 meetings is to be able to give the
13 public increased opportunity to provide
14 feedback and learn more about the
15 projects, so tonight we're going to give
16 a presentation covering all of this, as
17 well as an overview of the timeline that
18 we're undertaking and then we'll open it
19 up for any comments.

20 If you have any comments, we'll
21 have a portable microphone, and before
22 you give your comment, if you could just
23 state your name and affiliation for

FERC PROJECT NO. 13287 - December 15, 2009

1 Proceedings

2 questions, of course.

3 And our Panel of Representatives
4 tonight assisting with the meeting is
5 myself, Tina Johnstone, Anthony Fiore,
6 the Director of Planning and
7 Sustainability for DEP; he'll be giving
8 the presentation; Mark Wamser, Gomez and
9 Sullivan, our engineering consultants,
10 and Kevin Lang of Couch White, our legal
11 consultant.

12 Anthony?

13 MR. FIORE: Thanks, Tina.

14 My name is Anthony Fiore,
15 Director of Planning and Sustainability
16 for the Department, and as Tina
17 mentioned, we're going to be doing an
18 overview of the project. Along with the
19 overview of the project will be an
20 overview of the licensing process, an
21 overview of our pre-application document
22 and then be soliciting input from you
23 all. So I just want to start by going

FERC PROJECT NO. 13287 - December 15, 2009

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Proceedings

over the water supply system, probably very familiar to those of you in the audience, but I'll go over it anyway. It's an unfiltered surface water supply consisting of 22 counties ranging in size from about point two billion gallons to up over 140 billion gallons. We deliver over one billion gallons a day to serve approximately nine million people, one million of which reside outside of the City proper. The watershed is 2000 square miles, so our reservoir system extends over quite a large area. We have 125 miles of aqueducts and tunnels and the system is comprised of three subsystems. Our Croton water supply, which is on the east side of the Hudson, the Catskill water supply and then the Delaware water supply. The Croton subsystem is the oldest. It consists of twelve reservoirs and three controlled lakes

FERC PROJECT NO. 13287 - December 15, 2009

Proceedings

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2 with a total capacity of approximately
3 88 billion gallons. The Catskill
4 subsystem which is next to come on line,
5 made up of the Schoharie and Ashokan
6 reservoirs with a total capacity of
7 about 140 billion gallons, and the most
8 recent part of the system is the
9 Delaware subsystem. That consists of
10 Cannonsville, Pepacton and Neversink and
11 the Roundout Reservoir with a total
12 capacity of about 320 billion gallons.
13 These three subsystems are operated in
14 concert to supply the water to our
15 customers. So I just want to start with
16 the Cannonsville development. I'm going
17 to give you just a few characteristics
18 of that site and it was placed in
19 service in 1964, so it's our newest
20 reservoir. The dams are all dirt filled
21 embankment. It's 2800 feet long and
22 this is the dam here. It's 1100 feet
23 wide at the toe and approximately 45

FERC PROJECT NO. 13287 - December 15, 20091
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Proceedings

feet wide at the top of the dam and the elevation, it's 175 feet high for the elevation at the top is 1175, so there's about 175 feet difference, and that's what gives us our pressure difference. The spillway is a split level spillway, it's 800 feet long. The lower portion of that spillway is 240 feet long and an elevation of 1150 feet and the upper is 560 feet long, at an elevation of 1158, so this here is the lower part of the spillway and this is the upper spillway. The impoundment is 13 miles long. The total storage capacity is approximately 95, 96 billion gallons at normal pool and the watershed drainage area for this reservoir is 450 square miles. The proposal for this area as you can see is outlined in red. There will be a new powerhouse that's located adjacent to our existing release chamber. The water, we will be connecting there's 11

FERC PROJECT NO. 13287 - December 15, 2009

Proceedings

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2 foot tunnel that comes from the intake
3 structure that's out in the reservoir,
4 we would be teeing off of that tunnel
5 into the new powerhouse to serve two
6 turbines. In addition to that, we would
7 be teeing off a mechanical system that's
8 in that existing release chamber to
9 serve another two turbines, one large
10 turbine and one minimum release turbine.
11 We also right now, you know, I want to
12 press this we're very early in the stage
13 of this number of turbines, and stuff
14 could change and some of the other
15 statistics I'm giving you about new
16 developments may change as well, but
17 currently we're also looking at about a
18 750 foot long transmission line that we
19 have not done an interconnection study
20 yet, so that will determine where we
21 could tie in, but initially it's about
22 750 feet. Okay, so moving over to the
23 Pepacton Dam, this is a zoned earthen

FERC PROJECT NO. 13287 - December 15, 20091
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Proceedings

embankment dam 2400 feet long, 1200 feet wide at the toe and 45 feet wide at the top. It's about 204 foot elevation gain from bottom to top, so this is the dam, the spillway is over here. Spillway is 54 foot diameter tunnel that's under the spillway. The water comes over the spillway here and there's a tunnel that comes down, discharges into the storage pool. Crest elevation of that spillway is 1280. The watershed drainage area for this reservoir is 372 square miles, it's 18 miles long and has a net storage capacity of 140 billion gallons. The proposal here is to replace one of two release valves in the existing release chamber. This dam is a little bit different in setup from the Cannonsville dam. At the Cannonsville dam the release chamber was at the bottom of the dam, here the release chamber is up top and we would be replacing one of the two

FERC PROJECT NO. 13287 - December 15, 2009

Proceedings

1 valves with a turbine. This is still
2 going under evaluation. Currently we
3 need to make sure that we can meet our
4 flow requirements, our downstream flow
5 requirements, so we need to make sure
6 that by putting this -- replacing the
7 current valve with a turbine that we
8 could still meet those release
9 requirements, so that's still under
10 evaluation. Okay, so moving over to
11 Neversink, this was placed in service in
12 1954. It's an earthen embankment dam as
13 well, 2800 feet long, 1800 feet wide at
14 the toe and 200 feet high at an
15 elevation of 1460. This also has a 30
16 foot diameter tunnel below the spillway
17 and the crest of that spillway is at
18 1440. The impoundment is five miles
19 long with a net storage capacity of
20 approximately 35 billion gallons. The
21 watershed drainage area for here is 93
22 square miles. The proposal here,
23

FERC PROJECT NO. 13287 - December 15, 2009

Proceedings

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2 similar to Pepacton, is to replace one
3 of two main release valves with a
4 turbine, which we've determined here
5 that replacing one of those two valves
6 with the turbine we can still meet the
7 flow requirements, the downstream flow
8 requirement. However, there's space
9 restrictions in those chambers, so we're
10 still working out what size turbine,
11 what type turbine we could actually fit
12 into this facility. And the last
13 development is the Schoharie development
14 at the Gilboa Dam. As you may know, the
15 Gilboa Dam is going under rehabilitation
16 and part of that is to install a lower
17 level release chamber with a tunnel.
18 The current scenario is, there's a
19 proposed intake structure approximately
20 this location, the reservoir, this is
21 the dam here -- sorry, this is the
22 spillway here and the dam comes off
23 here. The intake chamber would come --

FERC PROJECT NO. 13287 - December 15, 2009

1 Proceedings

2 have a tunnel that would come out to a
3 gate chamber here and another tunnel
4 down to a lower level outward structure.
5 The plan would be to tee off of that new
6 tunnel to a new powerhouse. I will say
7 that right now from looking at this
8 initial screening, this doesn't look
9 promising. There's not a lot of water
10 and it's going downstream from this
11 reservoir, but we're going to continue
12 to look at some other alternatives to
13 see if there can be a feasible project
14 here.

15 Okay, so the preliminary permit.
16 The preliminary permit is the first step
17 in considering a hydroelectric
18 generation. What the preliminary permit
19 is not, it doesn't indicate for approval
20 of the project and it does not allow for
21 construction. What it does do is, it
22 maintains priority to file a license
23 application while the proposed project

FERC PROJECT NO. 13287 - December 15, 2009

Proceedings

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2 is being studied. Once you have the
3 permit, then you can begin collecting
4 existing data about projects sites,
5 including the environment setting of the
6 project area, engineering data, economic
7 information, and who the stakeholders
8 might be. That information is used to
9 put together what we call or what FERC
10 calls a pre-application document or PAD
11 and then using that pre-application
12 document as the baseline and engaging
13 the stakeholders, additional data that
14 might be needed to support a license
15 application can begin to be put
16 together. This is a real basic overview
17 of the licensing process. It's a simple
18 block flow diagram of the licensing
19 process. It is more involved than this
20 shows, but it gives you the highlights
21 and milestones in the process. So you
22 begin with your permit application and
23 you file your pre-application along with

FERC PROJECT NO. 13287 - December 15, 20091
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Proceedings

your notice of intent and that's the stage that we are at now. We have filed this with FERC and with that pre-application document that amasses the current information that you have about the project sites, engaged the stakeholders, and determine what studies might need to be done in order to support your license application to FERC. Once the studies are completed, we submit a license application to FERC and then the Federal Energy Regulatory Commission will review that and the environmental review part of the process then begins. Once that's completed FERC provides approval of the license. It's at that point that you then can begin planning for construction. So our project timeline, we've gotten the traditional licensing process that's what we're working under at this point. Then we're beginning to engage

FERC PROJECT NO. 13287 - December 15, 2009

Proceedings

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2 stakeholders now, as I said, to develop
3 what study plans we need to support our
4 license application. February 15 of
5 2010 study requests relating to the
6 project must be submitted to the City
7 and to the Federal Energy Regulatory
8 Commission, okay, and you know we're
9 taking in public comments. If you're
10 looking for a study, written submission
11 was submitted to us from FERC by
12 February 15th. In the fall of 2011 we
13 file a draft license application with
14 FERC and then comments on that draft
15 application are due 90 days after it is
16 filed and then in March of 2012 or in
17 the spring of 2012 we'd file for our
18 original license application with the
19 Federal Energy Regulation Commission and
20 as I said before, that would then
21 trigger the environmental review part
22 that's led by FERC. So our proposed
23 operations we've set this on the sights

FERC PROJECT NO. 13287 - December 15, 2009

Proceedings

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2 for today and set it for tomorrow here
3 tonight, but their primary mission of
4 the department is and will continue to
5 be supplying a high quality drinking
6 water for our customers. The hydropower
7 generation is second to that purpose.
8 The Delaware development operation of
9 the Delaware basin will fit into the
10 existing flow regime. Releases will
11 remain consistent with current protocols
12 and the magnitude timing or frequency of
13 downstream releases will not be changed
14 for hydroelectric generation. Existing
15 conservation and directed releases will
16 be used to generate power, so we're
17 really looking to capture that water
18 that would otherwise be flowing
19 downstream to generate a bit of power
20 with that. On the Schoharie development
21 release is made in accordance with a new
22 snowpack management plan. It's what
23 we'd be looking to capture to supply

FERC PROJECT NO. 13287 - December 15, 2009

Proceedings

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2 that power. So I talked about this a
3 little bit already, the pre-application
4 document. I'll tell you what it does.
5 You know, it provides the background
6 information that we have on the existing
7 reservoirs and dams, it discusses the
8 economics, engineering, environmental,
9 and operational information that is
10 already available and by that it helps
11 identify potential impacts. It looks at
12 a number of environmental components,
13 geology and soils, water resources, fish
14 and aquatic resources, wildlife and
15 botanical resources and the list goes
16 on. Then we take that information that
17 we have and we propose what studies we
18 would do based on the proposed
19 development and operation of the
20 project. As I talked about earlier,
21 after we file for a license application
22 the environmental review part of this
23 process begins and this is just a little

FERC PROJECT NO. 13287 - December 15, 2009

Proceedings

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2 bit of a flow diagram that describes
3 that process. FERC has to receive our
4 application and the draft application
5 and approve that. Once they do that,
6 then the NEPA scoping will begin. After
7 that happens they'll issue a ready for
8 environmental analysis known as be a
9 comment period and then FERC will review
10 that and eventually hopefully issue a
11 final EIS or EA, Environmental
12 Assessment or Environmental Impact
13 Statement, depending on the scope of the
14 project and those impacts and then a
15 license decision. For further
16 information I'm going to leave this up
17 here if you have questions that we don't
18 get to tonight or concerns that you want
19 to send in, this is the contact
20 information to send it to and with that
21 I am going to take a seat with the rest
22 of my colleagues and if you have
23 questions concerning issues you'd like

FERC PROJECT NO. 13287 - December 15, 2009

1 Proceedings

2 to raise, we'll hear that. If you do,
3 I'd ask you to -- you don't have to come
4 down and use the microphone. I think we
5 can hear you, but if you would state
6 your name and your affiliation. The
7 meeting is being transcribed, so we'd
8 like to capture that on the record,
9 please. Are there any questions on the
10 process itself, timeline for that?

11 MR. LANG: Any questions on the
12 types of studies that we're proposing to
13 do? I would note that out on the table
14 we do have copies of the pre-application
15 document. If anybody would like to take
16 a look at them, we do have those.

17 MR. FIORE: The pre-application
18 document is also available on our
19 website, so if you go to www.nyc.gov/dep
20 you'll come to our home page. If you go
21 to the A to Z index on the left side of
22 that web page and go under H for Hydro
23 you will find the pre-application

FERC PROJECT NO. 13287 - December 15, 2009

1 Proceedings

2 document and you've got copies there.

3 MR. URVAN: I'm Ron Urvan, for
4 Trout Unlimited New York State Chairman.
5 One thing I've heard, is there another
6 organization like the Delaware Power
7 Coalition or something that's looking
8 into generating if you don't?

9 MR. FIORE: The Delaware
10 Electric Cooperative had filed a permit
11 for developments. We have filed a
12 Preliminary Permit. FERC has awarded us
13 the permit so we have the permit to
14 study this and the permit provides us
15 priority to file a licensed application.

16 MR. URVAN: So I understand
17 they're no longer involved in anything,
18 then.

19 MR. FIORE: Independently I
20 don't know what they're doing, but
21 through the regulatory framework they're
22 not, I mean, but I will say that we have
23 had discussions with them about their

FERC PROJECT NO. 13287 - December 15, 2009

1 Proceedings

2 proposed project. We had certain
3 concerns with the project as proposed.
4 We've had several discussions since then
5 on how they might be involved in the
6 project and we continue to look to see
7 if there's a viable solution to that.

8 MR. URVAN: Okay, I got another
9 one. You made mention near the end
10 there quite a bit about the flexible
11 flow of master plan and maintaining the
12 flows that we've been working for.
13 They're being no impact to your
14 knowledge if turbines are put in there
15 or anything like that?

16 MR. FIORE: As I mentioned
17 before, the only place where we think
18 that there may be an impact and which is
19 why we're still studying it, is at the
20 Pepacton to replace one of the two
21 release valves with the turbine, so
22 we've got to analyze that further to
23 insure that if we do that, we will meet

FERC PROJECT NO. 13287 - December 15, 2009

1 Proceedings

2 those flow requirements, because we
3 won't do it if we can't meet the flow
4 requirements.

5 MR. URVAN: I mean just we're
6 trying to work together to maintain, you
7 know, the water going down to the city,
8 but also to protect the environment and
9 habitat for the cold water fisheries
10 that I represent and that's very
11 important to us right now.

12 MS. JOHNSTONE: That's very
13 important to us as well.

14 MR. LANG: Any other questions?

15 A SPEAKER: Sure. You're
16 looking at me. You mentioned up in the
17 Schoharie there's still some reservation
18 that that might work up there? Is that
19 correct or not?

20 MR. FIORE: There's a
21 reservation whether it would work or
22 not. There's very little flow
23 available, so right now it doesn't look

FERC PROJECT NO. 13287 - December 15, 2009

1 Proceedings

2 like it's promising with the options
3 we've considered, but we're still
4 evaluating whether or not there are
5 other alternatives that will make that
6 work.

7 THE SPEAKER: The other
8 alternatives does not take in the
9 portal, the tunnel coming down?

10 MR. FIORE: Different end of the
11 reservoir, so yeah, this project is
12 concerned at the dam end.

13 THE SPEAKER: I just wanted to
14 clarify that.

15 MR. FIORE: Yeah, we're only
16 talking about the north end of the
17 reservoir at the release.

18 THE SPEAKER: Right, okay.

19 MR. WALSH: Steve Walsh, DRBC.
20 We've seen some of this already come
21 through our office. Are you still
22 looking at 16,850 kilowatts for the
23 facility?

FERC PROJECT NO. 13287 - December 15, 2009

1 Proceedings

2 MR. FIORE: I mean, we're in the
3 midst of feasibility analysis on the
4 project and, you know, I would say that
5 it's still somewhere around that number,
6 but we still have a number of components
7 that we have to evaluate that could
8 change that number. You know, we're
9 still looking at turbine size and number
10 of turbines that we could fit into a
11 facility. Head losses still have to be
12 calculated, so at this point we don't
13 have a firm number for any one project
14 site, but I would say it wouldn't change
15 by orders of magnitude. You know, it's
16 going to be somewhere around that.
17 DRBC, Delaware River Basin Commission.

18 MR. LANG: We will remain
19 available. You have the contact
20 information. If you have any followup
21 questions, feel free to drop us a line
22 and send us an e-mail, we'd be happy to
23 work with you and answer any questions

FERC PROJECT NO. 13287 - December 15, 2009

Proceedings

you might have.

MR. FIORE: And you know, again, we have the joint meeting tomorrow morning in Kingston, 71 Smith Avenue and then tomorrow afternoon there is a site tour of Schoharie, the Gilboa Dam site that will be leaving from the Gilboa Town Hall we'll have a bus to ferry people over to the dam; that's at 2:30, and then tomorrow evening will be another public meeting at the Schoharie County Board of Supervisor's Chambers.

MR. LANG: That's in the Town of Schoharie, correct?

MR. FIORE: In the Town of Schoharie. Well, I'd like to thank you for making the trip out and showing interest in the project. Thank you.

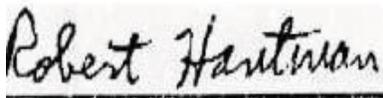
(Time noted: 7:40 P.M.)

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C E R T I F I C A T E

I, ROBERT HANTMAN, a Court Reporter and Notary Public in and for the County of Ulster, State of New York, do hereby certify that I recorded stenographically the proceedings herein at the time and place noted in the heading hereof, and that the foregoing transcript is true and accurate to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have hereunto set my hand.



ROBERT HANTMAN, CSR

	750 9:18,22	basic 14:16	comprised 6:17	7:16;12:13,13;17: 8, 20;18:19
0	8	basin 17: 9;25:17	concerned 24:12	developments 9:16; 21:11
Okay 11:11		begin 14: 3,15,22; 15:18;19: 6	concerning 19:23	diagram 14:18;19: 2
1	800 8: 8 88 7: 3	beginning 15:23	concerns 3:22; 19:18;22: 3	diameter 10: 7; 11:17
11 8:23 1100 7:22 1150 8:10 1158 8:11 1175 8: 4 1200 10: 2 125 6:15 1280 10:12 13 8:14 140 6: 8;7: 7;10:15 1440 11:19 1460 11:16 15 16: 4 15th 16:12 16,850 24:22 175 8: 3, 5 18 10:14 1800 11:14 1954 11:13 1964 7:19	9	begins 15:16;18:23	concert 7:14	difference 8: 5, 6
	9:00 4:10 90 16:15 93 11:22 95 8:16 96 8:16	below 11:17	connecting 8:23	different 10:19; 24:10
	A	billion 6: 7, 8, 9;7: 3, 7,12;8:16;10:15; 11:21	conservation 17:15	directed 17:15
	able 4:12	bit 10:18;17:19; 18: 3;19: 2;22:10	considered 24: 3	Director 3: 6;5: 6,15
	accordance 17:21	block 14:18	considering 13:17	dirt 7:20
	actually 12:11	Board 26:13	consistent 17:11	discharges 10:10
	addition 4: 8;9: 6	botanical 18:15	consisting 6: 6	discusses 18: 7
	additional 4: 4;14:13	bottom 10: 5,21	consists 6:22;7: 9	discussions 21:23; 22: 4
	adjacent 8:21	Bureau 3: 7	construction 13:21; 15:19	document 3:19; 5:21;14:10,12;15: 5; 18: 4;20:15,18;21: 2
	affiliation 4:23;20: 6	bus 26: 9	consultant 5:11	done 9:19;15: 9
	afternoon 26: 6	C	consultants 5: 9	down 10:10;13: 4; 20: 4;23: 7;24: 9
	Again 4:11;26: 3	calculated 25:12	contact 19:19;25:19	downstream 11: 5; 12: 7;13:10;17:13,19
	allow 13:20	call 14: 9	continue 13:11; 17: 4;22: 6	draft 16:13,14;19: 4
	Along 5:18;14:23	calls 14:10	controlled 6:23	drainage 8:17; 10:12;11:22
	alternatives 13:12; 24: 5, 8	can 8:19;11: 4; 12: 6;13:13;14: 3,15; 15:18;20: 5	Cooperative 21:10	DRBC 24:19;25:17
	amasses 15: 5	Cannonsville 3:11; 7:10,16;10:19,20	copies 20:14;21: 2	drinking 17: 5
	analysis 19: 8;25: 3	capacity 7: 2, 6,12; 8:15;10:15;11:20	Couch 5:10	drop 25:21
	analyze 22:22	capture 17:17,23; 20: 8	countries 6: 6	due 16:15
	Anthony 5: 5,12,14	Catskill 6:19;7: 3	County 3: 3;4: 6, 7; 26:13	E
	application 13:23; 14:15,22;15:10,12; 16: 4,13,15,18;18:21; 19: 4, 4;21:15	certain 22: 2	course 5: 2	EA 19:11
2	approval 13:19; 15:17	Chairman 21: 4	covering 4:16	earlier 18:20
2:30 26:10 200 11:15 2000 6:13 2010 16: 5 2011 16:12 2012 16:16,17 204 10: 4 22 6: 6 240 8: 9 2400 10: 2 2800 7:21;11:14	approve 19: 5	chamber 8:22;9: 8; 10:18,21,22;12:17,23; 13: 3	Crest 10:11;11:18	early 9:12
3	approximately 6:10; 7: 2,23;8:15;11:21; 12:19	chambers 12: 9; 26:13	Croton 6:18,21	earthen 9:23;11:13
30 11:16 320 7:12 35 11:21 372 10:13	aquatic 18:14	change 9:14,16; 25: 8,14	current 11: 8;12:18; 15: 6;17:11	east 6:19
4	aqueducts 6:16	changed 17:13	currently 9:17;11: 3	economic 14: 6
45 7:23;10: 3 450 8:18	area 6:15;8:17,19; 10:12;11:22;14: 6	characteristics 7:17	customers 7:15; 17: 6	economics 18: 8
5	around 25: 5,16	City 6:12;16: 6;23: 7	dam 7:22;8: 2;9:23; 10: 2, 5,18,20,20,22; 11:13;12:14,15,21,22; 24:12;26: 7,10	EIS 19:11
54 10: 7 560 8:11	Ashokan 7: 5	City's 3: 5	dams 3:11;4: 3; 7:20;18: 7	Electric 21:10
7	Assessment 19:12	clarify 24:14	data 14: 4, 6,13	elevation 8: 3, 4,10, 11;10: 4,11;11:16
7:40 26:20 71 26: 5	assisting 5: 4	Coalition 21: 7	day 6:10	e-mail 25:22
	audience 6: 4	cold 23: 9	days 16:15	embankment 7:21; 10: 2;11:13
	available 18:10; 20:18;23:23;25:19	colleagues 19:22	decided 4: 3	end 22: 9;24:10,12, 16
	Avenue 26: 5	collecting 14: 3	decision 19:15	Energy 3:14;15:13; 16: 7,19
	awarded 21:12	College 3: 4	Delaware 6:20;7: 9; 17: 8, 9;21: 6, 9;25:17	engage 15:23
	B	coming 24: 9	DEP 5: 7	engaged 15: 7
	background 18: 5	comment 4:22;19: 9	Department 5:16; 17: 4	engaging 14:12
	based 18:18	comments 4:19,20; 16: 9,14	depending 19:13	engineering 5: 9; 14: 6;18: 8
	baseline 14:12	Commission 3:15; 15:14;16: 8,19;25:17	describes 19: 2	environment 14: 5; 23: 8
		Community 3: 3	determine 9:20; 15: 8	environmental 15:15;16:21;18: 8, 12,22;19: 8,11,12
		completed 15:11,16	determined 12: 4	
		components 18:12; 25: 6	develop 16: 2	
			Development 3:11;	

<p>evaluate 25: 7 evaluating 24: 4 evaluation 11: 3,11 evening 3: 2;26:11 eventually 19:10 existing 8:22;9: 8; 10:17;14: 4;17:10,14; 18: 6 extends 6:14</p>	<p>further 19:15;22:22</p>	<p>initial 13: 8 initially 9:21 input 5:22 install 12:16 insure 22:23 intake 9: 2;12:19,23 intent 15: 2 interconnection 9:19 interest 26:19 into 9: 5;10:10; 12:12;17: 9;21: 8; 25:10 involved 14:19; 21:17;22: 5 issue 19: 7,10 issues 3:22;19:23</p>	<p>longer 21:17 look 13: 8,12;20:16; 22: 6;23:23 looking 9:17;13: 7; 16:10;17:17,23;21: 7; 23:16;24:22;25: 9 looks 18:11 losses 25:11 lot 13: 9 lower 8: 8,12;12:16; 13: 4</p>	<p>needed 3:21;14:14 NEPA 19: 6 net 10:14;11:20 Neversink 3:12; 7:10;11:12 New 3: 4;8:20;9: 5, 15;13: 5, 6;17:21; 21: 4 newest 7:19 next 7: 4 nine 6:10 normal 8:16 north 24:16 note 20:13 noted 26:20 notice 15: 2 number 9:13;18:12; 25: 5, 6, 8, 9,13</p>	
<p>F</p>	<p>G</p>	<p>J</p>	<p>M</p>	<p>O</p>	
<p>facility 12:12;24:23; 25:11 fall 16:12 familiar 6: 3 feasibility 25: 3 feasible 13:13 February 16: 4,12 Federal 3:14;15:13; 16: 7,19 feedback 3:18;4:14 feel 3:21;25:21 feet 7:21,22;8: 2, 3, 5, 8, 9,10,11;9:22; 10: 2, 2, 3;11:14,14, 15 FERC 3:13,20;4: 5, 8;14: 9;15: 4,11,12, 16;16:11,14,22;19: 3, 9;21:12 ferry 26: 9 few 7:17 file 13:22;14:23; 16:13,17;18:21;21:15 filed 15: 3;16:16; 21:10,11 filled 7:20 final 19:11 find 20:23 Fiore 5: 5,13,14; 20:17;21: 9,19;22:16; 23:20;24:10,15;25: 2; 26: 3,16 firm 25:13 first 13:16 fish 18:13 fisheries 23: 9 fit 12:11;17: 9;25:10 five 11:19 flexible 22:10 flow 11: 5, 5;12: 7, 7;14:18;17:10;19: 2; 22:11;23: 2, 3,22 flowing 17:18 flows 22:12 followup 25:20 foot 9: 2,18;10: 4, 7; 11:17 four 3:11 framework 21:21 free 25:21 frequency 17:12</p>	<p>gain 10: 4 gallons 6: 8, 8, 9; 7: 3, 7,12;8:16;10:15; 11:21 gate 13: 3 generate 17:16,19 generating 21: 8 generation 13:18; 17: 7,14 geographic 4: 2 geology 18:13 Gilboa 3:12;12:14, 15;26: 7, 8 Given 4: 2 gives 8: 6;14:20 giving 5: 7;9:15 goes 18:15 Gomez 5: 8 Good 3: 2</p>	<p>JOHNSTONE 3: 2, 6;5: 5;23:12 joint 4: 8;26: 4</p>	<p>magnitude 17:12; 25:15 main 12: 3 maintain 23: 6 maintaining 22:11 maintains 13:22 making 26:18 management 17:22 March 16:16 Mark 5: 8 master 22:11 may 3:21;9:16; 12:14;22:18 mean 21:22;23: 5; 25: 2 mechanical 9: 7 meet 11: 4, 9;12: 6; 22:23;23: 3 meeting 3: 9,17;4: 8; 5: 4;20: 7;26: 4,12 meetings 4: 4,12 mention 22: 9 mentioned 5:17; 22:16;23:16 microphone 4:21; 20: 4 midst 25: 3 might 14: 8,14;15: 9; 22: 5;23:18;26: 2 miles 6:13,15;8:14, 18;10:13,14;11:19,23 milestones 14:21 million 6:10,11 minimum 9:10 mission 17: 3 more 4:14;14:19 morning 26: 5 most 7: 7 moving 9:22;11:11 must 16: 6 myself 5: 5</p>	<p>off 9: 4, 7;12:22; 13: 5 office 4:10;24:21 oldest 6:22 Once 14: 2;15:11, 16;19: 5 one 6: 9,11;9: 9,10; 10:16,23;12: 2, 5; 21: 5;22: 9,20;25:13 only 22:17;24:15 open 4:18 operated 7:13 operation 17: 8; 18:19 operational 18: 9 Operations 3: 7; 16:23 opportunity 4:13 options 24: 2 order 15: 9 orders 25:15 organization 21: 6 original 16:18 otherwise 17:18 out 9: 3;12:10;13: 2; 20:13;26:18 outlined 8:20 outside 6:12 outward 13: 4 over 6: 2, 4, 8, 9,14; 9:22;10: 6, 8;11:11; 26:10 overview 3:10,13; 4:17;5:18,19,20,21; 14:16</p>	
<p>H</p>	<p>H</p>	<p>K</p>	<p>L</p>	<p>N</p>	
<p>habitat 23: 9 Hall 26: 9 happens 19: 7 happy 25:22 Head 25:11 hear 20: 2, 5 heard 21: 5 held 4: 9 helps 18:10 high 8: 3;11:15; 17: 5 highlights 14:20 home 20:20 hopefully 19:10 Hudson 6:19 Hydro 3:10;20:22 Hydroelectric 3: 5; 13:17;17:14 hydropower 17: 6</p>	<p>I</p>	<p>L</p>	<p>N</p>	<p>P</p>	
<p>identify 18:11 Impact 19:12;22:13, 18 impacts 18:11;19:14 important 23:11,13 impoundment 8:14; 11:19 including 14: 5 increased 4:13 Independently 21:19 index 20:21 indicate 13:19 information 14: 7, 8; 15: 6;18: 6, 9,16; 19:16,20;25:20</p>	<p>identify 18:11 Impact 19:12;22:13, 18 impacts 18:11;19:14 important 23:11,13 impoundment 8:14; 11:19 including 14: 5 increased 4:13 Independently 21:19 index 20:21 indicate 13:19 information 14: 7, 8; 15: 6;18: 6, 9,16; 19:16,20;25:20</p>	<p>Kevin 5:10 kilowatts 24:22 Kingston 4:10;26: 5 knowledge 22:14 known 19: 8</p>	<p>lakes 6:23 Lang 5:10;20:11; 23:14;25:18;26:14 large 6:15;9: 9 last 12:12 learn 4:14 leave 19:16 leaving 26: 8 led 16:22 left 20:21 legal 5:10 level 8: 7;12:17; 13: 4 license 13:22;14:14; 15:10,12,17;16: 4,13, 18;18:21;19:15 licensed 21:15 licensing 3:14,16; 4: 5;5:20;14:17,18; 15:21 line 7: 4;9:18;25:21 list 18:15 little 10:18;18: 3,23; 23:22 located 8:21 location 12:20 locations 4: 2 long 7:21;8: 8, 9,11, 14;9:18;10: 2,14; 11:14,20</p>	<p>name 3: 5;4:23; 5:14;20: 6 near 22: 9 need 11: 4, 6;15: 9; 16: 3</p>	<p>PAD 14:10 page 20:20,22 Panel 5: 3 part 7: 8;8:12;12:16;</p>

<p>15:15;16:21;18:22 people 6:11;26:10 Pepacton 3:12;7:10; 9:23;12: 2;22:20 period 19: 9 permit 13:15,16,18; 14: 3,22;21:10,12,13, 13,14 place 22:17 placed 7:18;11:12 plan 13: 5;17:22; 22:11 Planning 5: 6,15; 15:19 plans 16: 3 please 20: 9 PM 26:20 point 6: 7;15:18,22; 25:12 pool 8:16;10:11 portable 4:21 portal 24: 9 portion 8: 8 potential 18:11 power 17:16,19; 18: 2;21: 6 powerhouse 8:21; 9: 5;13: 6 pre-application 3:19; 5:21;14:10,11,23; 15: 5;18: 3;20:14,17, 23 preliminary 13:15, 16,18;21:12 presentation 3: 4; 4:16;5: 8 press 9:12 pressure 8: 6 primary 17: 3 priority 13:22;21:15 probably 6: 2 Proceedings 3: 1; 4: 1;5: 1;6: 1;7: 1; 8: 1;9: 1;10: 1;11: 1; 12: 1;13: 1;14: 1; 15: 1;16: 1;17: 1; 18: 1;19: 1;20: 1; 21: 1;22: 1;23: 1; 24: 1;25: 1;26: 1 process 3:14,16; 4: 6;5:20;14:17,19, 21;15:15,21;18:23; 19: 3;20:10 Project 3: 5,23;5:18, 19;13:13,20,23;14: 6; 15: 7,20;16: 6,18;20; 19:14;22: 2, 3, 6; 24:11;25: 4,13;26:19 projects 4:15;14: 4 promising 13: 9; 24: 2 proper 6:12 proposal 8:19;</p>	<p>10:16;11:23 propose 18:17 proposed 3:10; 12:19;13:23;16:22; 18:18;22: 2, 3 proposing 20:12 protect 23: 8 protocols 17:11 provide 3: 9;4:13 provides 15:17; 18: 5;21:14 public 4: 4,11,13; 16: 9;26:12 purpose 3: 8,17; 4:11;17: 7 put 14: 9,15;22:14 putting 11: 7</p> <p style="text-align: center;">Q</p> <p>quality 17: 5 quite 6:14;22:10</p> <p style="text-align: center;">R</p> <p>raise 20: 2 ranging 6: 6 ready 19: 7 real 14:16 really 17:17 receive 19: 3 recent 7: 8 record 20: 8 red 8:20 regime 17:10 Regulation 16:19 Regulatory 3:15; 15:13;16: 7;21:21 rehabilitation 12:15 relating 16: 5 release 8:22;9: 8, 10;10:17,17,21,22; 11: 9;12: 3,17;17:21; 22:21;24:17 Releases 17:10,13, 15 remain 17:11;25:18 replace 10:16;12: 2; 22:20 replacing 10:23; 11: 7;12: 5 represent 23:10 Representatives 5: 3 requests 16: 5 required 4: 5 requirement 12: 8 requirements 11: 5, 6,10;12: 7;23: 2, 4 reservation 23:17,21 reservoir 6:14;7:11, 20;8:18;9: 3;10:13; 12:20;13:11;24:11,17 reservoirs 6:23;7: 6;</p>	<p>18: 7 reside 6:11 resources 18:13,14, 15 rest 19:21 restrictions 12: 9 review 15:14,15; 16:21;18:22;19: 9 right 9:11;13: 7; 23:11,23;24:18 River 25:17 Ron 21: 3 Roundout 7:11</p> <p style="text-align: center;">S</p> <p>scenario 12:18 Schoharie 4: 7;7: 5; 12:13;17:20;23:17; 26: 7,12,15,17 scope 19:13 scoping 19: 6 screening 13: 8 seat 19:21 second 17: 7 send 19:19,20; 25:22 serve 6:10;9: 5, 9 service 7:19;11:12 set 16:23;17: 2 setting 14: 5 setup 10:19 several 22: 4 showing 26:18 shows 14:20 side 6:19;20:21 sights 16:23 similar 12: 2 simple 14:17 site 7:18;25:14; 26: 6, 7 sites 14: 4;15: 7 size 6: 7;12:10;25: 9 Smith 26: 5 snowpack 17:22 soils 18:13 solicit 3:18 soliciting 5:22 solution 22: 7 somewhere 25: 5,16 sorry 12:21 space 12: 8 SPEAKER 23:15; 24: 7,13,18 spillway 8: 7, 7, 9,13, 13;10: 6, 6, 8, 9,11; 11:17,18;12:22 split 8: 7 spring 16:17 square 6:13;8:18; 10:13;11:23 stage 9:12;15: 3 stakeholders 14: 7,</p>	<p>13;15: 8;16: 2 start 5:23;7:15 state 4:23;20: 5; 21: 4 Statement 19:13 statistics 9:15 status 3:16 step 13:16 Steve 24:19 still 11: 2, 9,10;12: 6, 10;22:19;23:17;24: 3, 21;25: 5, 6, 9,11 storage 8:15;10:10, 14;11:20 structure 9: 3;12:19; 13: 4 studied 14: 2 studies 3:20;15: 8, 11;18:17;20:12 study 9:19;16: 3, 5, 10;21:14 studying 22:19 stuff 9:13 submission 16:10 submit 15:12 submitted 3:20; 16: 6,11 subsystem 6:21;7: 4, 9 subsystems 6:17; 7:13 Sullivan 3: 3;4: 6; 5: 9 Supervisor's 26:13 Supply 3: 8;6: 2, 5, 18,20,21;7:14;17:23 supplying 17: 5 support 14:14; 15:10;16: 3 sure 11: 4, 6;23:15 surface 6: 5 Sustainability 5: 7,15 system 6: 2,14,16; 7: 8;9: 7</p> <p style="text-align: center;">T</p> <p>table 20:13 talked 18: 2,20 talking 24:16 tee 13: 5 teeing 9: 4, 7 Thanks 5:13 three 6:17,23;7:13 tie 9:21 timeline 4:17;15:20; 20:10 timing 17:12 Tina 3: 6;5: 5,13,16 today 17: 2 toe 7:23;10: 3;11:15 together 14: 9,16; 23: 6</p>	<p>tomorrow 4: 7, 9; 17: 2;26: 4, 6,11 tonight 4: 6,15;5: 4; 17: 3;19:18 tonight's 3: 8 top 8: 2, 4;10: 4, 5, 22 total 7: 2, 6,11;8:15 tour 26: 7 Town 26: 9,14,16 traditional 15:21 transcribed 20: 7 transmission 9:18 trigger 16:21 trip 26:18 Trout 21: 4 trying 23: 6 tunnel 9: 2, 4;10: 7, 9;11:17;12:17;13: 2, 3, 6;24: 9 tunnels 6:16 turbine 9:10,10; 11: 2, 8;12: 4, 6,10, 11;22:21;25: 9 turbines 9: 6, 9,13; 22:14;25:10 twelve 6:22 two 4: 3;6: 7;9: 5, 9; 10:16,23;12: 3, 5; 22:20 type 12:11 types 20:12</p> <p style="text-align: center;">U</p> <p>under 4: 5;10: 7; 11: 3,10;12:15;15:22; 20:22 undertaken 3:21 undertaking 4:18 unfiltered 6: 5 Unlimited 21: 4 up 4:19;6: 8;7: 5; 10:22;19:16;23:16,18 upper 8:10,13 Urvan 21: 3, 3,16; 22: 8;23: 5 use 20: 4 used 14: 8;17:16 using 14:11</p> <p style="text-align: center;">V</p> <p>valve 11: 8 valves 10:17;11: 2; 12: 3, 5;22:21 viable 22: 7</p> <p style="text-align: center;">W</p> <p>Walsh 24:19,19 Wamser 5: 8 Water 3: 7;6: 2, 5,</p>
--	---	--	--	---

18,20,20;7:14;8:23; 10: 8;13: 9;17: 6,17; 18:13;23: 7, 9 watershed 6:13; 8:17;10:12;11:22 web 20:22 website 20:19 Welcome 3: 3 White 5:10 wide 7:23;8: 2;10: 3, 3;11:14 wildlife 18:14 work 23: 6,18,21; 24: 6;25:23 working 12:10; 15:22;22:12 written 16:10 wwwnycgov/dep 20:19				
Y				
York 3: 4;21: 4				
Z				
zoned 9:23				