1 UNITED STATES OF AMERICA 2 FEDERAL ENERGY REGULATORY COMMISSION 3 Office of Energy Projects 4 5 TransCanada Hydro Northeast, Inc. Vernon : Project No. 1904-073 6 7 FirstLight Hydro : Project Nos. P-1889-081 and 8 Generating Company : P-2485-063 9 ---- Massachusetts 10 VERNON PROJECT, NORTHFIELD MOUNTAIN PUMPED STORAGE PROJECT, and 11 12 TURNERS FALLS HYDROELECTRIC PROJECT 13 Great Falls Discovery Center 14 2 Avenue A 15 Turners Falls, MA 01376 Wednesday, January 30, 2013 16 17 The joint daytime scoping meeting, pursuant to notice, convened at 9 a.m., before a Staff Panel: 18 19 KENNETH HOGAN, Project Coordinator, FERC 20 MARY GREEN, Geology and soils, FERC 21 RALPH NELSON, Geology and soils, FERC 22 MARY McCANN, Endangered species and 23 macroinvertebrates, FERC 24 BRETT BATTAGLIA, Terrestrial resources, FERC 25 ADAM BEECO, Recreation, land use and aesthetics, FERC 26

ANGIE SCANGAS, Water resources, FERC ROBERT QUIGGLE, Archaeological and cultural resources, FERC. JOHN RAGONESE, FERC License Manager, With: US Northeast Hydro Region, TransCanada Accompanied by EDWIN NASON and EARL BRISSETTE, TransCanada JOHN HOWARD, Director, FERC Hydro Compliance, With: FirstLight Power Resources, Inc. Accompanied by MARK J. WAMSER, P.E., Gomez and Sullivan

1	P R O C E E D I N G S
2	MR. HOGAN: Good morning.
3	We got a pretty good turnout today, and I'm
4	really appreciative for that. I was a little worried that
5	our space might be too small, but I think we're okay.
6	My name is Ken Hogan. I'm with the Federal
7	Energy Regulatory Commission, and we're here today to
8	discuss the licensings of the Turners Falls, Northfield
9	Mountain and Vernon hydroelectric projects.
10	The process here today will be, we're going to
11	discuss a little bit about FERC and who we are. We're going
12	to get the presentation from the licensees on what their
13	proposals are for their hydroelectric projects, and then we
14	will be going through the resource areas identified in our
15	Scoping Document 1, which is one of our handouts you can
16	grab; it's the one with the bars across the top and the
17	bottom. At each resource area we'll seek comments from the
18	folks here in attendance on any concerns or compliments they
19	may have regarding the hydros and their environmental
20	effects or enhancements that they provide.
21	I heard from many folks this morning that they
22	have presentations that they'd like to give. Could I get a
23	show of hands just to see how many we may have?
24	(Show of hands)
25	AUDIENCE: What's the question?
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1 MR. HOGAN: How many folks would like to give a 2 presentation today. 3 AUDIENCE: I thought you said a presentation, 4 statement. 5 MR. HOGAN: Or a statement. (Show of hands.) 6 7 MR. HOGAN: About ten or eleven folks. 8 What I'd like to do is, after we go through our 9 resource areas and identify the potential issues or concerns 10 that we have specific to the resource areas, we'll then open 11 up the meeting for public comments and statements. Does 12 that sound like a fair approach to everybody? Okay. 13 Again, my name's Ken Hogan. I'm the Project 14 Coordinator for FERC. I'd like to introduce my team here 15 today. Come on over, ladies. MS. McCANN: I'm Mary McCann, I'm with the FERC, 16 17 and my specialty is going to be working with the endangered 18 species and macroinvertebrates and mussels. 19 MS. SCANGAS: Angie Scangas with FERC, for water resources and hydrology and hydraulics. 20 21 MR. SEARS: Mike Sears with FERC. Fisheries and 22 aquatic resources. 23 MR. NELSON: Ralph Nelson with FERC. Soils and 24 geology. 25 MR. BATTAGLIA: Brett Battaglia, also with FERC. 26

1 Terrestrial resources.

2 MR. QUIGGLE: Rob Quiggle with FERC, cultural, 3 archaeological and historical resources. 4 MS. GREEN: Mary Green with FERC. Geology and 5 soils, and I'm from FERC. MR. BEECO: I'm Adam Beeco with FERC. 6 7 Recreation, land use and aesthetics. 8 MR. HOGAN: Thank you. 9 Mary, would you like to give a little background on the Commission and who we are? 10 11 MS. GREEN: Good morning. So FERC, or the 12 Federal Energy Regulatory Commission is an independent 13 agency that regulates the interstate transmission of 14 electricity, natural gas and oil. We have five 15 Commissioners appointed by the President. We are under the 16 Office of Energy Projects for Hydropower Licensing. Our 17 hydropower jurisdiction comes from the Federal Power Act. 18 Our Commission authorization is required for non-federal 19 hydro projects that are located on navigable waters, located on public lands of the U.S., using surplus water from a 20 21 federal dam, or located on Commerce Clause waters, 2.2 constructed after 1935 and connected to the grid. 23 MR. HOGAN: So as part of our responsibility in 24 hydropower licensing, we have to comply with the National 25 Environmental Policy Act. That Act requires us to develop a 26

NEPA document -- National Environmental Policy Act -- and its an environmental review of potential project effects and concerns; and that document will become the recommendation to the Commission on what types of conditions or any new license that it determines to issue should have in it.

6 This meeting today is our scoping meeting, where 7 we identify those issues that our environmental document 8 must review and analyze. So it's really critical, and I 9 really appreciate your attendance here today to help FERC do 10 a better job in making sure that its document will address 11 the relevant issues associated with the hydros.

12 I'd like to go over our process a little bit. 13 This is not the only public meeting that we're going to 14 have. We've had several already this week, we've got a few 15 more later on in the week. But our licensing process is an 16 extremely public and open process, it's very transparent, 17 and there are opportunities throughout the next five years 18 for public involvement. So I want folks not to think that 19 this as your only chance to voice your concerns. This is 20 the first chance to voice your concerns. So I want to make 21 that clear.

Another handout that we proposed, with the nice colored boxes on it, you'll note that this is the integrated licensing process, and we're in that first row at box 4, where the Commission holds its scoping meetings. Box 4 is

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today. Our next step in the process is for you folks to submit written comments or study requests that you may have that you would like to have considered by the licensee to request studies. In comments on the projects, your again concerns, you get to verbalize them today, but we've also provided an opportunity for written responses.

7 Once those comments come in and study requests 8 come in, what happens is the licensees will digest these and 9 develop what's called a Proposed Study Plan. That study 10 plan is intended to develop, it's the studies that the 11 Applicant will propose to do that will fill information gaps 12 that may exist. Basically we are identifying issues. 13 There may be existing information regarding those issues 14 that can be used to evaluate the issues and concerns, but where there isn't existing information, studies will need to 15 be done to provide that information so that an informed 16 17 decision may be made by the Commission.

Once the licensees produce the Proposed Study Plan, that's a public document; it's open to comment. There's a 90-day period of time where stakeholders and the Applicants can work together to craft that Proposed Study Plan into a better document.

After that 90-day period of time, there's a written comment period on that proposed study plan, where you all get to tell FERC what you think. After the close of

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that comment period, the licensees will then prepare a revised study plan and file that with the Commission. Again, that's a public document, and there's another comment period after that revised study plan for issues that you feel still have not been resolved or concerns that you think that study plan is not addressing that still need to be addressed.

8 Once we have the public comments on the revised 9 study plan, the Commission will then issue a study plan 10 determination, and that determination is an order to the 11 licensees to implement the revised study plan as is or as 12 modified, including new studies -- whatever the Commission 13 feels is necessary to provide the information that it needs to do its environmental review of the proposed licensees. 14 15 Everyone with me so far? 16 AUDIENCE: Yup. 17 MR. HOGAN: Okay. 18 So once they have these study plan 19 determinations, then there's a one, two or sometimes even 20 longer study plan period -- one, two or sometimes longer 21 years -- for the Applicants to actually conduct the studies. 22 I don't want to go too much further into that, because now 23 we're three years down the road and you'll all forget it by 24 then. 25 So if I could, I'd like to have TransCanada

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1 We're going to go from upstream to downstream. start. 2 We're going to have the licensees present, by project, their 3 proposals for the relicensings, and give a little project description. We'll start with Vernon Dam, and then we'll 4 5 move to Northfield Mountain and then Turners Falls. MR. NASON: Good morning. 6 7 My name is Edwin Nason. I work for TransCanada 8 as an operations coordinator, and I'll go over, a very quick 9 hydro overview, and then a description of the flow timing 10 between the stations, and then the facility facts for Vernon 11 and our operations for Vernon. 12 TransCanada has hydro facilities on the Deerfield 13 River and the Connecticut River; and on the Connecticut River they have six hydro stations. Starting all the way 14 15 upstream, they have Moore Station and down from there it's Comerford, and below there it's McIndoes Falls. Those three 16 17 stations together we call Fifteen Mile Falls. Below that is 18 the Wilder station. 19 [Microphone adjustment] 20 MR. NASON: Oh, I'm sorry. 21 Is that okay? This is not a very good mic. 2.2 (Laughter.) 23 MR. NASON: I don't know what you heard, but I'll 24 start at the top again. All the way upstream is Moore 25 station, and below that is the Comerford hydro station, and 26

below that is the McIndoes Falls hydro station. Those three
 stations together are known as Fifteen Mile Falls.

Then below that is Wilder hydro station, and downstream from there is the Bellows Falls hydro station, and downstream from there is the Vernon hydro station. Wilder, Bellows and Vernon are the stations that are up for relicense.

8 So for river timing, what we consider the river 9 timing is, when there is a change in discharge from one 10 station -- how long does it take before those effects are 11 felt at the next station downstream. So between Moore and 12 Comerford, that's about an hour. And then Comerford to 13 McIndoes is about an hour; So those three stations are very 14 close together.

Between McIndoes Falls and Wilder it is eight hours, approximately. And then from Wilder down to Bellows Falls is another eight hours, and Bellows Falls down to Vernon is approximately four hours.

All the hydro stations that TransCanada has on the Connecticut River are remote-controlled. They're controlled from the Connecticut River control center in the Wilder hydro office in Wilder, Vermont. And that office is staffed 24/7.

24 So for facility facts, the Vernon station was put 25 into service in 1909. It has a normal average head of 35 26

1 feet. Vernon has ten units with a total authorized capacity 2 of 32.4 megawatts. On the dam, we have one skimmer gate, 3 eight floodgates, four tainter gates, two stanchion bays and 4 ten hydraulic flashboard panels.

5 The total project discharge capacity is 127,600 6 cfs. Total generation capacity is 17,000 cfs. The flood of 7 record in March 1936 is 176,000 cfs.

8 Vernon had some station upgrades. There is a 9 fish ladder that was completed in 1981. The reconstruction 10 of the spillway crest was completed in 1986. That's when 11 all the skimmer gates, tainter gates and all that was added. 12 The downstream diversion barrier was completed in 1995. The 13 station was automated and made remote-controlled in 1998. And then in 2008, four more units were added; those are 14 15 units 5 through 8.

For the reservoir, Vernon has a drainage area of 6,266 square miles. The reservoir is 26 miles long, and the total usable storage volume in the five feet that we use is 18,300 acre-feet.

Vernon has approximately 2,700 cfsh per tenth of elevation in the reservoir. That's a tenth of a foot of elevation. An example of that: if the inflow into the Vernon reservoir is 2700 cfs greater than the discharge for one hour, then the reservoir elevation will go up one-tenth of a foot.

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1 For the constraints at Vernon, we have a min flow 2 constraint that's sustaining around; it's 12,500 cfs. We 3 have downstream fish passage that is April 1 through December 31. That's done through a fish pipe and a fish 4 5 tube for a total of 390 cfs. There's a fish ladder for upstream fish passage that's 260 cfs, and that's operated 6 from approximately April 15 to July 15. That's operated 7 8 more as an as-needed basis.

9 For the reservoir, we have an operating range of 10 212.6 feet above sea level to 220.1 feet above sea level. 11 We have a drawdown limit of three-tenths per hour; that's 12 three-tenths per foot elevation of the reservoir. That's 13 the limit. We typically draw down one- to two-tenths an 14 hour.

15 For the reservoir, we have weekend rec limits. So weekends and holidays during the summer, we bring up the 16 17 low limit of the elevation of the reservoir for boat 18 launching, mostly. Because of the reservoir being a long 19 reservoir and the upstream end of the reservoir is a higher 20 elevation than the downstream end, this is what we call the 21 river profile. And during high flows, we have a river 22 profile operation, which means the higher the flow is, the lower we can take maximum elevation down at the dam in order 23 24 to keep the river inside the banks at the other end of the 25 reservoir.

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1 So that starts at about a min flow of 15,000 2 cubic feet per second, and all the way up to 45,000 cubic 3 feet per second, where we hold the elevation at 218.6. That's the end of -- oh, I have one more thing. 4 5 When we schedule the megawatts for Vernon 6 station, we do it every morning for the next day. And the 7 way the operators do this, the first priority is the license 8 constraints, so the min flows and their elevation 9 constraints for the reservoir. And then the second 10 consideration is the hours where they put the megawatts. 11 They always put the megawatts during the best hours or the 12 high-priced hours. This is during normal flows, normal day. 13 Of course, during high-flows or floods, that's not -- the first consideration will be the flows. 14 15 So, that's the end of my presentation. Does 16 anyone have questions? 17 SPEAKER: I have a guestion about the rec limits 18 on the at summer weekend. 19 MR. HOGAN: This meeting is being recorded, so could we state our name and affiliation before speaking? 20 21 That would be great, so we can maintain a good public 2.2 record. 23 MS. DONLON: My name is Andrea Donlon, and I work for the Connecticut River Watershed Council. 24 25 My question is: My question is the rec limits. Ι 26

thought I heard you say that your license required that? 1 2 MR. NASON: No, we do that, that's voluntary. 3 MR. HOGAN: Any other questions? 4 (No response.) 5 MR. NASON: Thank you. MR. HOGAN: First Light? 6 7 MR. HOWARD: Good morning. 8 My name is John Howard. I'm the relicensing 9 project manager for FirstLight, and I'd like to go through a 10 dozen and a half slides or so here to explain a little bit 11 about the operation of the Turners Falls and Northfield 12 Mountain projects. 13 The first slide here is just our website that set 14 up for relicensing. I just wanted everyone to take note of 15 that. Like FERC, they have an e-library where you can subscribe and everything that gets filed in our docket is 16 17 public, and you'll get notified with an e-mail when it hits 18 the FERC docket. 19 Also, if you go to this website, you can join our 20 mailing list, and everything that we then file on our 21 website, you'll get notified of any documents that show up 2.2 on the website. 23 So here is just an overview of the Connecticut 24 River main stem. Circled in gray up there are the projects. 25 Just where we show, the Vernon, Bellows Falls and Wilder 26

projects owned by TransCanada upstream of our projects. And
 then downstream you see the Northfield Mountain and Turners
 Falls projects.

So the project features: Vernon Dam up above the 4 5 Massachusetts line. Turners Falls impoundment starts at the base of the Vernon Dam, goes downstream to Northfield 6 7 Mountain. It goes through the French King Gorge and we end 8 up down at the Turners Falls Dam. Where at the beginning of 9 our power canal starts adjacent to where we're sitting this 10 morning. The canal goes for about two and a half miles. We 11 have two stations off the Turner Falls power canal. Station 12 No. 1 was the original termination of the canal when it was 13 originally constructed. There's five horizontal wheels 14 there existing today. The station capacity is a little over 15 6 megawatts.

The canal was widened and lengthened in the early 17 1900s. Went down to Cabot station, constructed in 1916. 18 And then below the Cabot station, you see the confluence of 19 the Deerfield River and then down through the Route 116 20 bridge in Sunderland, And down at the bottom of the screen 21 is the Holyoke Dam.

22 So the facility features for Northfield: a nice 23 aerial view there of the upper reservoir, about 296 acres 24 when full. Intake channel on the bottom left side of the 25 upper reservoir, the dotted line is the pressure shaft.

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1 It's a 31-foot, circular, concrete-lined shaft down to the 2 power house cavern. The cavern houses four reversible pump 3 turbines which discharge through about a 33-foot equivalent 4 diameter horseshoe-shaped tunnel out to the Connecticut 5 River. And then when we pump, the same activity, just in 6 the opposite direction. No natural inflow at all to the 7 Northfield upper reservoir.

8 Here's a photograph of the upper reservoir. The 9 main dam is on the upper right-hand side, you're looking, 10 facing east over Erving towards Boston. And then the intake 11 channel is in the lower right-hand side.

12 The tailrace where we discharge when we're 13 generating and where intakes when we're pumping, the flow 14 from the Connecticut River is from your left to your right. 15 You can see our boat barrier and log boom there and our 16 tailrace; and our riverview picnic area is to the left, in 17 amongst those trees to the left.

18 So the Turners Falls project facility layout starts at the Turners Falls Dam. You see the Turners Falls 19 20 power canal, station number 1. The spillway fish ladder 21 here at the base of the Turners Falls dam brings the fish up 22 into the gatehouse fish ladder underneath our gatehouse up 23 into the Turners Falls impoundment. There is the Cabot fish 24 ladder down at Cabot station, and then the bypass reach from 25 the Turners Falls Dam down to Cabot station.

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So there's an aerial of the Turners Falls Dam. The Connecticut River is flowing from the top down to the bottom of that photograph. We're spilling water at our tainter gates on the Gill side of the Montague Dam or Turners Falls dam, and some spill there on our Bascule gates on the right hand side, and the flow down through the bypass reach in addition to the flow in the power canal.

8 Station No. 1, as I mentioned earlier, was the 9 end of the original canal when it was constructed. And you 10 can kind of see the end of that. So the head pond here, and 11 then the canal when it ended, it used to come down through 12 here and back down into the Connecticut River. And then 13 there's the No. 1 station there.

Cabot station, six vertical units built in 1916 went into commercial operation. To the north side of the station is the Cabot station fish ladder. The fish ladders at Turners Falls, also at Cabot, a spillway and gatehouse were constructed in the late 1970s, went into operation in early 1980s. Flow in the Connecticut River again is from left to right here.

A little background on these two projects. I'll start in on the right hand side first. The Turners Falls project. The dam and the canal originally constructed in the late 1700s, a timber crib dam. We have two facilities off the canal with Station No. 1 and Cabot station, as I

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mentioned. The total generating capacity of the facility is just under 68 megawatts. Average annual generation of the No. 1 station is around 18,000 megawatt hours a year, and Cabot around 351,000 megawatt hours a year.

5 The hydraulic capacity of those facilities, 2200 6 cfs at No. 1 station, and a little under 14,000 at Cabot 7 station. The minimum flow volumes are 1433 through the 8 In addition, we spill an additional 400 cfs over project. 9 the No. 1 Bascule gates, which is the Bascule gate closest to the gatehouse, during the fish passage season from April 10 11 to June. And then we continue to spill 120 cfs for 12 shortnosed sturgeon habitat up through about the middle of 13 November, or when the water temperature gets down to about 7 14 degrees Centigrade.

15 The FERC license for the project expires April 30 16 of 2018, the same as the three projects upstream of us, and 17 the Northfield project.

18 So on the left-hand side, the Northfield Mountain 19 project began commercial operation with Unit 4 in 1972. The other three units started in 1973. There are four units 20 21 that are reversible pump turbines, in that they spin in a 22 clockwise direction when we're generating through the same 23 tunnel system. When the units reverse, the water then goes 24 from the Connecticut River to the mountaintop reservoir. 25 The generating capacity is 1119.2 megawatts.

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Average annual generation for those years mentioned there is about a million megawatt hours a year. Hydraulic capacity of the units at full output is 20,000 cfs, and pumping is 15,200 cfs. There is no minimum flow, obviously, for the project, and again its license terminates in 2018.

6 So Northfield Mountain's upper reservoir 7 operating range, 62 and a half feet from 1000.5 feet above 8 sea level down to a minimum elevation of 938 feet above sea 9 level. And then the lower reservoir operating range 10 measured at the Turners Falls Dam is approximately 9 feet 11 from elevation 176 feet above sea level to 185 feet above 12 sea level.

13 Station No. 1, the small station, about 6.4 14 megawatts. It generally operates as a baseload plant when 15 our flows are greater than 13,728, and we also operate it 16 for minimum flow where the flows are very low, for those few 17 weeks in the summer when we're passing about 1600-1700 cfs.

And then Cabot station operates as a peaking facility. When the flow are below the hydraulic capacity of the facility, it comes on and off during the day; and then it's a baseload plant when the flows exceed its hydraulic capacity of 32,780 cfs.

23 So some of the modifications that we're 24 evaluating as part of the relicensing process is upgrading 25 Station No. 1 with new or rehabilitated turbines. We're

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also looking at closing No. 1 station and adding a turbine generator at Cabot with a similar hydraulic capacity as Station No. 1; utilizing the full hydraulic capacity of the Cabot turbines that currently exist but we're not using; utilizing more storage in the Northfield Mountain project's upper reservoir.

7 As many of you know, the project, when it was 8 conceived in the 1960s, Northeast Utilities and the State of 9 Massachusetts -- well, I should say the State approached 10 Northeast Utilities to construct a reservoir larger than it 11 needed to be as a transfer point for water from the 12 Connecticut River. And that transfer never took place, but 13 there is additional storage built there. And then, 14 increasing the unit and the station capacity at the 15 Northfield Mountain project.

Some of our recreation facilities that we have, 16 17 Bennett Meadow up by the Route 10 bridge, The Munns Ferry 18 boat camping area, our boat tour and riverview picnic area, 19 our tour and trail center at the Northfield Mountain project; our mountaintop observation area up at our upper 20 21 reservoir, and about 26 miles of trail -- unfortunately, not 22 open currently for cross-country skiing. We've got a 23 fishway viewing area here at the Turners Falls fish ladder. We have fishing access at the branch canal area at No. 1 24 25 station, and then there's also Unity Park just at the stream

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1 of the dam.

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2 The Barton Cove nature area is a campground, and 3 we also rent canoes and kayaks. We have a picnic area there, and some trails. There's the State boat launch at 4 5 Gill, and the Barton Cove canoe and kayak rental area. Cabot Camp is a facility right at the confluence of the 6 7 Millers River, an old toll house that has some historic 8 meaning. Pachaug Wildlife Management Area and State boat 9 launch area was donated to the Commonwealth after the 10 project was constructed up in the Northfield area, just up of the old Northfield school. 11 12 Cabot Woods, fishing access down along Migratory 13 Way by the Conti Lab; and then the canal side trail bike 14 path on land that was leased to the Commonwealth for the two 15 and a half mile bike path along our power canal. 16 And then our canoe portage, if you're canoeing 17 down and take out in Barton Cove, we'll transport you down 18 and put you back in downstream of Cabot station. 19 So there is just kind of an overview of what I 20 spoke of from the Pachaug Wildlife Management Area up in the 21 upper right-hand side, and then the State boat ramp down 22 through our Bennett Wildlife Management Area, Munns Ferry, a 23 boat tour and riverview picnic area -- I won't go through 24 them all again. Quite a bit of recreation in the 22 miles -25 - actually in probably only about 17 miles of river.

Any questions on what I just went over? Yes. 1 2 MR. CONWAY: Peter Conway. 3 You mentioned that after the licensing period 4 you're going to utilize more of the storage up in the pool. 5 Maybe I'm not saying it right, but you said you're going to 6 utilize -- I'll read it here: More storage in the 7 Northfield Mountain storage area? Are you going to bring it 8 up higher? 9 MR. HOWARD: That is one of several listed on that slide of items that we are just going to study. I 10 11 don't know whether we're going to use it or not. It's 12 something that we wanted to look at. 13 MR. CONWAY: So it will be an increase over the 14 level you're going up to right now? 15 MR. HOWARD: That's right. It could go higher. We could do that. 16 It could go higher, and it could go 17 MR. CONWAY: 18 therefore lower? 19 MR. HOWARD: Four feet higher and maybe about 18 feet lower. 20 21 MR. CONWAY: So that means that a greater rush 22 through the river at that time? 23 MR. HOWARD: No. I wouldn't equate the storage 24 of water to a rush coming down. 25 MR. CONWAY: But getting back then to pulling the 26

1 water up, that would also mean a lower level in the river as 2 you're drawing water up, since you're going higher than it is now. 3 4 MR. HOWARD: Again, that's something that we need 5 to look at. I can't say for certain what the impact would be on the lower reservoir. 6 7 MR. CONWAY: That is a big impact. 8 MR. HOWARD: If what you say were to occur, it 9 would be. 10 MR. CONWAY: Okay, thank you. MR. HOWARD: Yes. 11 MR. SUPRENANT: Jeff Suprenant, I'm a resident of 12 13 Riverside Gill for 60 years. 14 Since I've lived in this area, I've noticed 15 significant changes on this river. And banks are eroded on 16 the riverside, there was river at there at one time. That 17 has even washed away. I guess you would make calls to the 18 FirstLight or Northeast Utilities delegate, they all said 19 they'd fix it. Just when the reservoir went down, or when 20 21 Northfield Mountain shut down because of their (inaudible), 22 the water stayed high most of the summer; there wasn't much 23 fluctuation. We noticed in that time, it was open in one 24 area, a four foot embankment was lost on that side of the 25 river. 26

There's an area on Riverview Drive, the guard rails, if you drive down that way you'll notice they're chipped out. I attribute that to undermining of water, that roadway, all along Riverview Drive is built up. And you and Northeast Utilities increased the level of the hydro dam; and there are some problems there on that section of the river.

8 Also, in the Barton Cove area --

9 MR. HOGAN: If I could interrupt you real quick, 10 these are the exact types of comments that we are interested 11 in, and concerns. Right now, we're curious to know if there 12 any questions about the presentation. We're going to go 13 through -- the meeting format is resource by resource, geology and soils, these erosion issues and things of that 14 15 nature, and we will, just to help of the transcript. MR. SUPRENANT: One more question on --16 17 The reservoir up on top, the reservoir on the 18 mountain, has the controller been operating the last ten 19 years? And if so, is it documented? 20 MR. HOWARD: The connection with the Quabbin 21 Reservoir, the Metropolitan District Commission? 22 MR. SUPRENANT: Yes. 23 MR. HOWARD: That has never gone into service 24 since the plan was constructed.

MR. SUPRENANT: So that's never been operated or

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1 anything?

2 MR. HOWARD: No. There is no water conveyance 3 between the upper reservoir and Quabbin. 4 MR. SUPRENANT: So is this part of your housing -5 MR. HOWARD: No. 6 7 MR. SUPRENANT: Okay. Thank you. 8 MR. HOGAN: Yes, Sam. 9 MR. LOVEJOY: Sam Lovejoy. I just wonder if 10 could make a statement about the generation use of 11 Northfield pumped storage; it was designed as a peak power 12 plant; seems to sort of changed. Just like you were 13 referring to Cabot station as peak at times and baseload at 14 times. I just wonder if you could make a couple of comments 15 about its power generation at Northfield. 16 MR. HOWARD: So Northfield is primarily a peaking 17 facility. They try to capture the high-priced hours during 18 the day for generation, and the low-priced hours for pumping 19 in the evening to refill the upper reservoir. That's in 20 general its scheme. That hasn't changed. 21 MR. SUPRENANT: So it's not being used for 2.2 intermediate load? 23 MR. HOWARD: No. 24 MR. HOGAN: Yes, Carl. 25 MR. MEYER: Carl Meyer. 26

This is from -- the question was, you got an 1 increase, mid-license increase in 1985. 5,000 cfs was 2 3 mentioned at (inaudible) And I believe you only have to keep 1,200 cfs in there. 4 5 The question was, what effect will this have --6 on the part of the Connecticut River which is bypassed by 7 the canal, and which (inaudible) 5,000 cfs reduction in 8 flow? 9 Have there been any other mid-license increases? 10 That's a huge amount of water that's (inaudible) to the tailrace. 11 12 MR. HOWARD: I'm not aware of any mid-license 13 increase in flow in the Turners Falls canal. 14 MR. SUPRENANT: So you don't know about this. 15 This is a matter of public record. MR. HOWARD: No, I don't know about that. 16 17 MR. SUPRENANT: So there is 25 percent more water 18 being taken out of the river. 19 The hydraulic capacity of the canal MR. HOWARD: is maybe 18,000. And we can't put in any more water than 20 21 that, because we'll overtop the canal walls. And the 22 hydraulic capacity of Cabot has remained consistent. The 23 hydraulic capacity of No. 1 station has remained consistent. There's two smaller wheels. The Turners Falls 24 25 Hydro Company and Southworth Paper each have a small wheel 26

1 on the canal. And that all adds up, when you get up there 2 around 17-, 18,000. There's been absolutely no change 3 there. 4 MR. JAHNIGE: Paul Jahnige, Department of 5 Conservation and Recreation. One of your slides indicated the annual 6 7 generation at the Northfield pumped storage. That station 8 obviously also uses electricity. Do you have a figure for 9 the annual energy use as well? 10 MR. HOWARD: Sure. 11 The question, if you didn't hear it: I have a 12 slide up that showed the average annual generation out of 13 Northfield at a million megawatt hours a year. So the station has an efficiency of about 75-78 percent. 14 So it 15 consumes more energy than it produces. So the pumped energy is just a ratio of that. For a million, on average it would 16 17 be about 1.3 million for pumped. 18 Yes? 19 MR. PUGH: Don Pugh. I was wondering -- I recognized all the recreation areas except for branch 20 21 fishing area. Could you explain where that is? 2.2 MR. HOWARD: Yes, sure. 23 You go along the power street there by our No. 1 24 station and up into the parking lot area, you know, the old 25 railroad road salvage building; along that fence line 26

1 there's some benches and yellow protection along the top of 2 the chain link. So if you want to drop a pole in there, 3 you're more than welcome. 4 Yes. 5 MR. DAPPLE: (ph) David Dapple. What's your generating capacity of Cabot Station? 6 7 I didn't hear you mentioned that. What do you hope to 8 increase it to? 9 The generating capacity of Cabot is MR. HOWARD: 61.8 megawatts. And I don't know what I hope to increase it 10 11 to, or if I'll be able to increase it. That's one of the 12 issues that we need to look at. 13 Any other questions? 14 SPEAKER: Since you put your solar farm up there, 15 at the Northfield Mountain, I thought that would decrease 16 the number -- pump the river. But apparently not, if you 17 are wanting to add four feet on top of the reservoir, 18 correct? 19 MR. HOWARD: No, the only thing the solar farm has decreased is the amount of golfing that goes on across 20 21 the road. So the solar farm is 2 megawatts, and it feeds 22 out into the 13 E distribution system on Route 63. It's 23 completely independent of the project. 24 MR. HOGAN: Thank you, John. 25 John's first slide reminded me of a little bit of 26

1 information that I neglected to give, and that's how to get 2 information from FERC. In our blue brochure that we passed 3 out, on page 12, there's a whole section on getting 4 information. We have a very usable electronic service that 5 can help you to see anything that's filed or issued by the 6 Commission. Two services; one is called eLibrary, and you 7 can actually log into FERC's website and search eLibrary and 8 you put in the project number and a date range. And 9 anything that's been filed with the Commission or issued by 10 the Commission, there will be a catalog of that. You can 11 click on an actual PDF of the document and actually read the 12 document, so if you want to follow it manually and track the 13 licensing process or see how your comments were actually entered into the public record, you can do that right there. 14

The other service that we have is called 15 eSubscription. You would set up an account with FERC's 16 17 on-line support team, which is all very automated, and put 18 in your e-mail. And when any document is issued by the 19 Commission or filed by any other party, you will receive an 20 e-mail with a link to that document. You get the e-mail, 21 you click on the link, and you can open up the document on 22 your web site or on your screen and read the document. It's 23 just a great way to all stay engaged in the process and know 24 everything that is going on with the project. There are no 25 surprises. It's clear that this room is very interested in

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staying engaged, and I really encourage the use of those services.

Again, the information on how to do this is on page 12 of this brochure. It's fairly simple, but there's also some phone numbers here that if you get stuck that you can call. Don't call me, because I don't do this.

7 (Laughter.)

8 MR. HOGAN: But we do have support services 9 that, if you have concerns or issues, you call FERC and they 10 can walk you through the process.

11 The other thing that I neglected to discuss -- I 12 had mentioned study requests, and I didn't tell you what 13 those are. Study requests are, if you see information that 14 the Applicant should be gathering for this relicensing 15 process to inform the environmental document, we want to 16 know about it.

17 The Commission also has a very strict set of 18 criteria that we use to evaluate study requests. Those are 19 on the last page of this handout that I passed out. There's seven of them. However, you only have to address six, as 20 21 study criteria 2 and 3 are mutually exclusive, depending on 22 whether you're a resource agency or a member of the public. 23 If you're planning to prepare a study request, take a look 24 at the criteria and follow the criteria step by step. 25 We also have new guidance this year -- well, last

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1 year, March of 2012. This is a guide to understanding the 2 Commission's study criteria. I highly suggest you take a 3 look through this document; it's a great tool. This came 4 about as the result of lots of public comment; you know, 5 eight or nine years of implementing the integrated licensing process. How Come My Studies Weren't Accepted at FERC? 6 Well, we developed this guidance to help us get better study 7 8 requests, so we have a better understanding of information 9 we need, and can give you the tools to understand what we're 10 looking for in study requests.

Like I said, the criteria are designed to be a litmus test to evaluate whether a study request is appropriate or not. So if folks weren't addressing the criteria correctly or sufficiently, we may have been rejecting study requests that in some cases maybe we shouldn't have. but hopefully that's not the case.

Anyway, it's a tool. I suggest you use it. It'll help you provide the information that we need to evaluate the study requests.

20 So with that, I'd like to go into what FERC has 21 identified by resource area as potential issues.

22 We have a question in the back. Yes, sir? 23 MR. CONEMEYER: (ph) Ken Conemeyer. Just a quick 24 question.

March 1 is the deadline for study requests?

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1 MR. HOGAN: Correct. 2 MR. CONEMEYER: Is there a deadline for submitting 3 written comments from the scoping sessions? MR. HOGAN: It's also for March 1. 4 5 The deadline for filing study requests or 6 comments on the pre-application document, or comments on our Scoping Document 1, is March 1. Thank you for that. 7 8 Now what I'd like to do is go from resource to 9 resource. FERC staff will identify -- I'm sorry, the folks I brought with me from FERC, helping me -- a lot of them are 10 11 contractor status -- will go through and identify what we 12 incorporated into our Scoping Document 1. And you can 13 follow along; I believe it starts on page 24 of Scoping Document 1. We'll start with geology and soils. Then we'll 14 15 get feedback from the group on concerns or issues with that 16 particular resource area, and then we'll move to each 17 separate resource area.

18 I do request that when you are providing comments 19 on a resource area, that because we are discussing three 20 different projects here today, you specify one, two or all 21 three projects; which project are you talking about. If you're talking about all three projects, just say, you know, 22 23 this is in reference to all the projects. Let us know to 24 help keep our record clear where your comments are 25 pertaining to.

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1 Any questions?

2 (No response.) 3 Geology and Soil Resources MR. NELSON: Good morning. 4

5 My name, again, is Ralph Nelson. I'll be 6 discussing the scoping document you all have a copy of, on page 24. There's an initial listing of issues, and I'll 7 8 start off with the Vernon project. Section 4.2.1 is geology 9 and soil resources. The identified initial listing is the 10 effect of project's operation and maintenance on riverbank 11 erosion, including the potential effect on protected species, cultural resources, or the structural integrity of 12 13 adjacent facilities. In this case of Vernon, we're talking 14 about the narrow neck of land separating the Vernon 15 impoundment from the tailwater on the east side of the power 16 house.

17 For Northfield and Turners Falls, on page 27, 18 4.3.1, geology and soil resource issues we have identified 19 are the effects of project-induced water level fluctuations 20 in the Turners Falls impoundment, on the shoreline stability 21 of riverbank erosion, particularly where erosion might 22 impact protected plant species, critical wildlife habitat, 23 adjacent structures, recreational use facilities, and/or 24 private landowners within the project boundary. 25

The second bullet is the effects of the Turners

Falls project operation on riverbank erosion in the bypass
 reach, and downstream of Cabot station. John Ragonese is
 going to present the licensee's plans.

4 MR. RAGONESE: Good morning.

5 In terms of how I'd like to just kind of go 6 through and respond on the resources effects and resource 7 issues, I'd like to just sort of identify what we may have 8 put in our pre-application document, the PAD, and then other 9 studies that we've performed on our own and in consultation with the agencies in the pre-scoping, or basically before we 10 11 filed the PAD or initiated them. And then, any of the 12 planned studies that either may be going on -- planned for 13 various different purposes, or what we're considering since 14 we've filed the PAD.

15 So in terms of geology and soils, several years 16 ago we performed a shoreline survey that included 17 identification of erosion locations, and this would be 18 basically on all three of our impoundments that were up for 19 relicensing, Vernon in particular. I might add that, 20 similar to FirstLight, there is a web site that's associated 21 with our relicensings. It is www.Transcanada-22 Relicensing.com.

What we maintain on the web site is a public information library, which you can access. So it's really on the overview tab. Then look for public information

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1 library, and there's a whole slew of documents that are 2 finally on that site -- took a while to get them all up 3 there. But many of the documents were supporting studies 4 that were identified in the PAD, as well as anything going 5 forward that other than those that are correspondence are filing that will be with the FERC. That's actually under a 6 7 different tab on the same overview page, sort of formal 8 documents.

9 So anyway, the shoreline study has a summary report that's on the web, and we will shortly be posting --10 11 because primarily the shoreline study survey is a map-based 12 resource document and/or analysis. So it will be sort of a 13 published map filed in a GIS reader format, similar to --14 you get a PDF sent to you in e-mail and you open up Adobe 15 Reader, there's a GIS reader that is available to look at all the information. You can turn on and turn off and 16 17 select different layers of pieces of information. But the 18 erosion locations are all mapped on that map as well as 19 summarized in the report.

A number of years ago, we amended our license for Vernon. We refurbished four units. We increased the capacity, increased efficiency in the use of water. As part of that amendment process, there were a number of studies that were done. One in particular that has a lot of bearing on what needs to be done for relicensing, and that's a Phase

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1A cultural resource, or basically an archaeology survey of
 the reservoir and for project impact areas. And that was
 performed and completed, submitted to the State Historic
 Preservation Officer.

5 We also have a cultural resources management plan 6 associated with the Vernon project. That's all been 7 completed, so I consider that to be a pre-scoping study. 8 It's very much required for going forward in our 9 relicensing, but it was already completed about four years 10 ago.

11 We also conducted a thorough survey of rare, 12 threatened and endangered species in the impoundments and/or 13 downstream areas of our project, although in this case with the Vernon project it was primarily associated with the 14 15 impoundments. These are areas that are affected by project operations. A lot of them were identified from the erosion 16 17 locations that were identified in the survey, but we didn't 18 restrict ourselves to just those locations that were mapped 19 in the previous survey. We basically did a full-blown analysis of all the shorelines for both archaeological, 20 21 prehistoric type of things, and/or historic resources.

22 We also, as part of an ongoing survey requirement 23 for Vernon, there's an embankment on the left side of Vernon 24 Dam on the downstream side. It's on project land, and it's 25 a fairly large erosional scar that has been there for many

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years. It was noted quite a number of years ago, and we were requested to do some monitoring of it; and then there's an updated sort of monitoring requirement that came out of the amendment process in our 401.

5 So we complete that survey every two years. The 6 latest one has just gotten filed with the FERC. As Ken 7 mentioned, you can get a link to that report through the e-8 library, download it and take a look at it. I will note 9 that in 2012 -- and that survey shows the differences as 10 time has marched on with pretty good service. And I will 11 note that we experienced two major flow events -- major for Vernon is essentially above 70,000 cfs spill -- one was the 12 13 Irene event in 2011 and then the spring was actually fairly high flow as well. And basically, there was very little 14 15 change in that erosion and movement of the whole topography 16 and hydrology below it.

17 I want to note that in previous relicensings for 18 the Vernon project, erosion was an issue similar to what it 19 is and will be, I'm sure, this year in this process. And I want to refer to our Army Corps 1979 Connecticut River Basin 20 21 Erosion Study. We think that was a very, very well-done 22 study and has a lot of merit. It had some mechanics 23 associated with erosion and the project operation or high 24 flow and other naturally-occurring operations in the river. 25 In terms of planned studies, there was one of the

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1 items that talked about sort of the structural integrity of 2 such as the Vernon Neck. So just to be clear, this erosion 3 face that we've been pondering -- is really nowhere near the narrow portion of Vernon Neck. The real concern area for 4 5 Vernon Neck for, you know, the FERC or those that are concerned about stability of our facility, is really a 6 7 narrow section, it's a natural narrow section associated 8 with Vernon Neck. This is actually a requirement that comes 9 out of our dam safety side of the house, with the folks in the New York regional office with the FERC. 10

11 We're going to be performing a survey to get 12 another baseline survey of the Vernon Neck, especially the 13 narrow area. We'll be doing some geotechnical evaluations 14 of the structure of the Neck, and really the issue here is 15 in under extreme high flow, beyond what we saw with Irene, 16 the question is whether or not water can get to a certain 17 level and essentially pipe through this embanked earthen 18 structure. And that's really what we're trying to 19 identify, is whether or not there's some potential threat there that is not known at this time. 20

21 We're also reevaluating the hazard classification 22 for Vernon, and this is basically something we do 23 periodically. We look for houses and downstream development 24 that may change, and whether or not that changes the hazard 25 classification should the dam fail and impact resources or

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private property or lives. That's a periodic evaluation and
 we're doing that again this coming year.

3 That's it.

4 MR. HOGAN: Mark's going to present ongoing 5 studies or proposed studies for the FirstLight projects.

6 MR. WAMSER: Hello, I'm Mark Wamser, I'm with 7 Gomez & Sullivan, engineers. We're assisting FirstLight in 8 their relicensing process, and I'll be talking about the 9 geology and soils.

If you read the PAD, we did not include any specific studies for geology and soils. We were going to rely on existing information. As many of you know, there's been many years of surveys done on the Turners Falls impoundment; and I'll just go through what studies have been done more recently, and studies that we are now proposing that weren't in the PAD.

The first one is as part of the existing license, 17 18 FirstLight is required to conduct what's called full river 19 reconnaissance surveys. In talking to FERC ahead of these meetings, what they would like to do, the next survey is 20 21 scheduled for 2013, in the November timeframe. And because 22 the study plan determination letter would be issued before 23 the timing of this study would be done, they would like to 24 include this study as part of the relicensing process. So 25 we are working right now with the Connecticut Streambank

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Erosion Committee and others on a QAPP, a quality assurance
 project plan, for that study.

3 A new one that we're adding is a hydrologic, 4 hydraulic and geomorphic analysis of erosion in the Turners 5 Falls impoundment. We're going to be looking at hydraulics 6 in the Turners Falls impoundment. There is a hydraulic 7 model, and we'll talk about this a little bit later; there 8 is a hydraulic model that was developed of this impoundment, 9 and we're going to be looking at that, as well as the 10 hydrology.

11 The last two were studies of the Route 10 bridge. 12 The Route 10 bridge traverses the Turners Falls impoundment, 13 and there was an evaluation of the erosion that's occurring 14 in that area. And then the last one is a riverbank erosion 15 comparison study along the entire Connecticut River. Both 16 of these studies were filed with FERC recently.

In addition, just last week, we also filed -there are some long-term monitoring cross-sections in the Turners Falls impoundment since roughly the late 1990s to current. Every year they resurvey roughly 20 cross-sections. So you can see the change that occurs over time.

22 That's it for us.

23 MR. HOGAN: At this point in time, I'd like to 24 turn to the public, the important part of the meeting, to 25 get your feedback, concerns, what your -- what have you guys

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1 identified as issues or concerns about the operations and 2 maintenance of the project, the project's existence? 3 Yes, sir. MR. CAMPANY: Chris Campany, one of the regional 4 5 commissioners for the Connecticut River Joint Commission. John, the prior study, what did you guys identify 6 7 as far as the (inaudible) besides the impact of erosion on 8 those. 9 Hold on. When you turn your back to MR. HOGAN: us, it's hard for the court reporter --. 10 11 MR. RAGONESE: So the question was, to what 12 extent -- and I quess this can be for FirstLight, too -- one 13 of the things that haven't identified or known brownfield sites and the impact of erosion on those. 14 15 MR. CAMPANY: One of the things we'd like to have identified are known brownfields identified and the impact 16 17 of erosion on those. 18 MR. RAGONESE: Along the reservoirs? 19 MR. CAMPANY: Yes. 20 MR. RAGONESE: Chris, I'm not aware of any 21 investigations or correlations beyond shoreline survey work 2.2 on brownfield sites that --. What we attempted to do was go 23 and identify a lot of information from various public 24 planning agencies, and reading the report, I'm not aware of 25 any notations on association with brownfields within our 26

1 project boundary.

2 MR. WAMSER: I think that's the same case with 3 us. What we could do an overlay on the GIS map any 4 brownfield sites that are reported to the State, to see 5 where if there was erosion is occurring, if there are in the same locations. But I'm not aware of any. 6 7 MR. CAMPANY: Okay. 8 MR. HOGAN: Other comments regarding geology and 9 soils erosion issues? 10 Yes, sir, in the back. AUDIENCE: Yes. I have a brief presentation. 11 12 MR. HOGAN: Is it specific to erosion, or is it 13 more broad-based? 14 Specific. I can wait; whatever you AUDIENCE: 15 prefer. I'd like to do presentations at the 16 MR. HOGAN: end after we go through the resource areas. 17 18 AUDIENCE: Sure. 19 MR. HOGAN: Yes, sir. 20 MR. LOVEJOY: Sam Lovejoy. I just wondered if 21 there could be any effort made by FERC or the various 22 applicants to compare erosion between the pools, between the 23 impoundments, so that we could get some read on what's going 24 on with Northfield pumped storage in the Turners impoundment 25 versus no pumped storage in the Vernon impoundment? 26

1 Is there a way to compare the erosion studies 2 between the impoundments themselves? They're being done by 3 different people maybe using different methodologies. If we 4 could come up with one methodology, perhaps we could 5 actually get a better read on what's going on in each of the 6 impoundments. 7 MR. HOGAN: And you're looking for an answer 8 right now, right? 9 (Laughter.) 10 MR. LOVEJOY: No, I just --MR. HOGAN: We'll take that into consideration. 11 12 Yes, sir. 13 MR. COHEN: Russ Cohen, same agency as Sam 14 Lovejoy; Mass Fish & Game Department. A similar question. 15 Will the Vernon project be looking at any erosion downstream of the dam and any potential connections between 16 17 the operations of that facility and any erosion that's 18 occurring downstream? 19 I'm going to turn that around. MR. HOGAN: 20 Should the Vernon project be looking at any 21 potential erosion issues downstream of the dam? 2.2 MR. COHEN: I think so. 23 MR. HOGAN: Thank you. 24 (Laughter.) 25 MR. HOGAN: That's why we're here. We want to 26

1 know your feedback. I can't tell you what we're going to do 2 until we hear what the concerns are.

3 MR. CONWAY: This goes along with Sam's question.
4 I'm Peter Conway.

5 As you go from Vernon down to here, you've got a stretch of 20 some miles that has kind of pooling areas, and 6 7 you've got a drop in elevation. And I would hope that the 8 people that study erosion get together on this, so that they 9 can compare notes and make adjustments. Because there is a 10 difference in the way the elevation of the river drops as to 11 how much erosion goes on. I think that's maybe along the 12 same lines, but maybe not.

MR. HOGAN: So you identified varying rates of erosion based on the slope of the reservoir?

15 MR. CONWAY: Yes, that's correct.

16 MR. HOGAN: Thank you. Yes?

MS. DONLON: This is Andrea Donlon from theConnecticut River Watershed Council.

19I'd be interested to hear a little bit more about20the details about the proposed study for erosion that21(inaudible)

22 MR. HOGAN: Mark, do you have any more details 23 that you can offer?

24 MR. WAMSER: We haven't scoped it out, really. 25 But what we're looking at is the -- and I'll get into this a

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little bit later, but there's a hydraulic model that's been done on these impoundments. We're going to be looking at that information, as well as hydrology and relying on some of the past fluvial (inaudible) We'll try and pull it all together. So ideally look at a causation study.

MS. DONLON: And you didn't put the (inaudible) MS. DONLON: And you didn't put the (inaudible) 2007 and look for it up there as an available. I certainly hope that (inaudible) not looking at (inaudible) very well done or not. Beside the 2012 report. I'm not sure why it was done, but it has some sort of thing about the methodology is fairly qualitative.

MR. HOGAN: For everybody, I know you want to speak to somebody else in the audience, it's natural to turn to them. But if you could project your voices this way, so we can maintain a public record. The microphones are up here, and I know he's having a hard time hearing everything. MS. DONLON: Should I repeat it?

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18 MR. WAMSER: That would be great.

19 MR. HOGAN: I think so.

MS. DONLON: Okay. The question was, kind of a comment then a question; but I did not see the report listed up on the screen related to, it was a field, 2007, study commissioned by the power company. I hope that the lack of it listing there doesn't mean that you're not referring to it as a resource. I was curious what -- whether the 2012

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1 Simon study somehow replacing that. It was very

qualitatively done; I'm not sure why it was done; there was a footer in the document that (inaudible) I'm just curious what the background is of that study.

5 MR. WAMSER: The study that I put up there, I 6 only listed ones that were, occurred more recently. As 7 you know, there are many older -- the Wisconsin surveys, an 8 erosion control plan; there's the Corps of Engineers that 9 have done studies. We have done studies; we're going to 10 look at all that as part of this.

11 What I put up there was not meant to narrow it 12 down to just looking at those. There is a long record of 13 years of data at this project; so we're going to be looking 14 at all that.

15 If there is existing information, MR. HOGAN: whether it be studies or surveys that you're aware of and 16 17 know about, have available to you and you think the 18 Commission should be aware of and know about and have 19 available to us, I'd encourage you to file it with the Commission in the record so that -- when we make any 20 21 recommendations to the Commission, it has to be based on our 22 public record and information that's in the record.

23 So if you think we should have information 24 available to us to inform our decisions, I strongly 25 encourage you to provide it into our public record.

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1 Other comments regarding geology, soils, erosion 2 concerns? 3 (No response.) 4 MR. HOGAN: Okav. 5 Water Resources MS. SCANGAS: Angle Scangas with FERC. 6 7 The preliminary water resources that have been 8 identified in the scoping document are the same for all 9 three facilities, and it's the effects of current and 10 proposed operations on water quantity and quality. In 11 particular, dissolved oxygen and temperature have been 12 identified. 13 John? 14 MR. RAGONESE: Again, under water resources, 15 essentially there's a couple of different aspects. In our PAD, we identified that we are going to be 16 17 evaluating the impacts of current or proposed operations on 18 water quantity and probably other metrics as well. We'll be 19 accomplishing that through a comprehensive Connecticut River operations model that we have. We've used this model for 20 21 many years on different projects. It's an extremely 22 sophisticated model, it has long-term and short-term 23 planning aspects associated with it to make sure we don't do 24 something in the short term that affects something we need 25 in the long term, like a full river in the spring, et

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1 cetera.

2 There will be inputs into the model. It's an 3 hourly dispatch model. It'll encompass headwaters of the 4 main stem all the way down through the discharge at Vernon. 5 There'll be some activity with our neighboring facilities downstream, but essentially the models will not be -- they 6 7 will be tied in terms of, the outputs of our model will be 8 provided to FirstLight as inputs to any analysis that they 9 do. 10 We will, however, be able to evaluate impacts 11 that are associated with proposed operations for the 12 FirstLight plants, and how that might impact upstream 13 projects which we own and operate. 14 So as I said these are hourly inputs. These are 15 primarily naturalized inflows. We'll have a different 16 percentile of natural inflows based on essentially trying to 17 capture medium, high, low water years -- these are going to 18 be actual water years -- as well as encompass all the 19 various constraints that are associated with the projects or 20 inflow, or other aspects, whether it be operating 21 constraints or simply physical constraints of the projects 2.2 themselves. 23 There'll also be energy prices in the model, 24 because we are in a deregulated energy market in New 25 England. Many of you like that. Many of us don't. But it

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is what it is, and so the model has to be able to be a dynamic model to respond to changing energy prices, as well as to be able to evaluate how the projects would or would not operate in the context of where it is today in New England

So just to give you a sense of how that will 6 7 work, as time marches on and we look at different operating 8 scenarios that are proposed to us, or we look at operating 9 scenarios that are proposed to FirstLight, you know, we'll 10 run the models. There'll be a working group. I'm sure 11 we'll be sharing the results of the model and discussing 12 whether or not those operational changes are restricted 13 based on, you can or can't do that because there's not 14 enough water in the river to do things that people might 15 think there is at certain times of the year, or whether or not there is an intolerable -- in our view -- unbalanced 16 17 impact on generation that's associated with a particular 18 water resource.

We'll obviously be sharing those results, not only with the stakeholders that are in the working group, but also with FERC. The idea behind that is just really identify what are working operational alternatives versus those that are unreasonable.

24 We also, as part of sort of a pre-scoping aspect, 25 we did do a lot of water quality investigation of our

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projects, including the downstream discharge at Vernon and the reservoir itself. These include continuous monitoring for DO and temperature, other nutrients and other chemical parameters. The reservoir has had continuous monitoring as well as profile samples at different locations upstream of Vernon Reservoir.

7 Also, as part of our amendment of Vernon a number 8 of years ago, we had a monitoring requirement associated 9 with the impact of the new units on water quality. And 10 that's also an ongoing, and has been an ongoing study for 11 the past few years. Both of these reports from the water 12 quality aspects will shortly be provided to the agencies. 13 They're just being finalized right now, and they're also be available on our web site, as I said earlier. 14 Thanks.

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Mark?

16 MR. WAMSER: So in the FirstLight PAD, we have a 17 couple issues that we've listed for conducting studies. The 18 first one is development of an operations model on an hourly 19 John Ragonese talked to this. We're doing an time set. operations model using the model called HAC REZ SIM. 20 We've 21 partnered with the Nature Conservancy on this, where we 22 exchange data between them. It's a simulation model, and we 23 figured if they had gotten out ahead of us a little bit on 24 it, it make sense to partner on this. That way, we're not 25 arguing about what flows are in the model, how we operate

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1 the model. So it'll be pretty transparent as to what we're 2 doing.

By the way, the model that they have developed that we're using goes from 1960 to 2003. It's a long-term model. Ours will be on an hourly time step because of the peaking nature of the system.

7 We did propose a water quality study, which is 8 pretty standard. We'll be taking DO and temperature 9 measurements continuously at key locations starting probably 10 in the Vernon tailrace through the Turners Falls impoundment 11 at various locations within the canal, probably, within the 12 bypass, and then below the Cabot facility, as well as monthly profiles. Typically, you take DO and temperature 13 14 profiles. These would occur in the Turners Falls 15 impoundment.

The last thing I want to mention here is, this 16 17 wasn't in our PAD. We're going to -- we've developed a 18 hydraulic model. We use somebody else's hydraulic model 19 that was done for the John Field study, actually, and we're looking at the impact of project operations and how far that 20 21 impact extends upstream to Vernon. We will be filing 22 something on this, probably in a month or so. But the 23 preliminary finding that we see is, the impact of the 24 project, although it's always been said to go up the Vernon 25 tailrace, we're finding that it actually is further

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1 downstream from the Vernon tailrace. That the backwater 2 effect of the project under various flows does not extend as 3 far upstream. So we will be sending that out or filing 4 that.

5 As John mentioned earlier, the Northfield-Relicensing.com web site -- do join the mailing list, 6 7 because this presentation and anything we file with FERC 8 will automatically be put up there. If you're on the 9 mailing list, you'll be sent an e-mail. It's very simple. 10 MR. HOGAN: Do we have comments or concerns 11 regarding water resources, flows, water quality, the 12 quantity of water?

13 MS. CAMPELL: Elise Campbell. I don't understand 14 how the temperature, particularly temperature effects of the 15 nuclear power plant, get -- I know this is not a hearing about the nuclear power plant, but it's there. It's on the 16 water, it's near the dams, and how does all that get 17 18 integrated into the study?

That's a very good question. MR. HOGAN: 20 We do recognize the presence of Vermont Yankee, 21 and we will be looking at what we call cumulative effects of 22 project operations with the presence of Vermont Yankee. We 23 will do an analysis of how do the hydro projects affect 24 water temperature, I think is the main component here. How 25 does it cumulatively affect water temperature with the

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1 discharge and presence of Vermont Yankee? 2 MR. LOVEJOY: Sam Lovejoy again. 3 I don't know whether in your water analysis whether you're looking at silt. But I know a lot of the 4 5 recreation people think that -- Barton Cove and just above the Turners Dam is silting in, and I just didn't know 6 7 whether -- you know, you're sort of agitating the pool, and 8 pump and down and flow through; and I didn't know whether 9 you're enhancing silt deposits and erosion. 10 I just wanted to know if there was going to be anything done with regard to analyzing silt deposits or silt 11 12 movement. 13 MR. HOGAN: Should we be analyzing silt deposits 14 or silt movement? 15 MR. LOVEJOY: I think that's what I was just 16 saying. 17 (Laughter.) 18 MR. HOGAN: Very well done. 19 MR. HOGAN: And this is in Barton's Cove 20 specifically? 21 MR. LOVEJOY: Well, Barton's Cove is the place 2.2 where we're seeing it. But I'm wondering whether the impoundments in general are also suffering from this and 23 24 obviously silt is a key factor with dams. 25 MR. HOGAN: Okay. Thank you. 26

MR. CONWAY: Peter Conway again.
 This is in regard to the model, the model --.

This is about the model, the hydraulic model, and one of the statements that you made is in regard to the fact that the backwater effects -- the model goes from Vernon to Turners Falls, but you said the effect of backwater in the model would show up more for Turners Falls than Vernon. Is that what you said?

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MR. WAMSER: Yes.

10 What we're finding is that it goes still a ways 11 upstream, but it doesn't go all the way to the Vernon 12 tailrace. It is quite a ways further upstream.

13 MR. CONWAY: I understand that. But the impact 14 would be more down here than up there as far as your model 15 will show?

MR. HOGAN: I think, if I can -- the model that they're currently working on is to evaluate how far the Turners Falls pool extends upstream under various flow conditions. It's not necessarily an impact assessment at this point in time. They're trying to identify the appropriate project boundary, and what's the most upstream extent of their project reservoir.

23 MR. CONWAY: To add to that, how much it doesn't 24 when there's no water.

MR. HOGAN: I don't think the model will go

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1 It's how much do they inundate at this point in there. time? And I don't know that it will look at, under low-flow 2 3 scenarios, the lowest extent of the reservoir. So it will show that? 4 5 MR. CONWAY: You'll look at that also? 6 MR. WAMSER: Yes, we looked at low flows and high 7 flows in the model, as well as different conditions found at 8 the dam, whether it's up at the top of the pool or at the 9 bottom. 10 MR. CONWAY: Okay, thank you. 11 What's your name again? 12 MR. WAMSER: Mark Wamser. 13 MR. CONWAY: Thank you. 14 MR. HOGAN: Karl. 15 MR. MEYER: Karl Meyer. 16 Mark, you said you were partnering with TNC and using the models from 1960 to 2002. Energy deregulation 17 18 didn't really hit Northfield until around 2000, so those 19 effects might not capture it in any significant way the effects of deregulation on Northfield, which -- in a 20 21 deregulated market more than it used to; and then if you 22 have only a single year, 2006 that you're looking at. 23 What I would suggest is you need a broader scale 24 to sort of look at the effects of the deregulated river over 25 several years. (inaudible) in a single year. 26

1 So I would say that that's a significant thing to 2 try to tease out and the studies that you guys have done. 3 MR. HOGAN: So the river, as managed under a 4 deregulated energy market? Is that what you're referring 5 to? Right. You should be able -- you're 6 MR. MEYER: 7 capturing almost none of it in the early TNC model there. 8 And then you have only a single year; so what I'm suggesting 9 that in order to get the information to the public that's 10 useful, you would actually have to capture more years to understand the effects of deregulation. 11 12 MR. WAMSER: Thank you, Karl. 13 MS. TUFTS: My name is Jennie Tufts, and I'm with the Greater Northfield Watershed Association. 14 15 I'm wondering if this study of water quality goes into any human health issues. I haven't observed them, or I 16 17 didn't recognize them if they were up there. Both as a 18 recreational issue for boating, swimming, fishing. At the 19 moment the levels of PCBs are very high in the river; we can't eat the fish safely. It's questionable whether we can 20 21 swim in the river safely. 2.2 I would like to see that as a part of the scoping 23 process, and I don't know if it is. 24 MR. HOGAN: You're looking for a study that would 25 basically evaluate the water quality against state water 26

1 quality standards?

2 MS. TUFTS: I would like that in the study, 3 SPEAKER: So will there be any recommendations 4 from FERC in these studies regarding the silt problem, the 5 buildup of silt in several areas. There have been some drastic changes in some of the channels on the river; in 6 7 Barton Cove and the vegetation buildup in there. I believe 8 that at one time I thought there was something that was 9 going to be done with that vegetation control; and I don't 10 know if anybody knows about that; if it's worth a study, or 11 there's going to be anything happening with that. 12 MR. HOGAN: Regarding FERC study requests; like 13 you, we will be submitting study requests to the Applicants 14 on March 1. We have the same deadline as everybody else 15 here. We're still evaluating, and part of our 16 17 evaluation process, in this meeting and hearing what the 18 concerns are. I can't tell you what our study requests will 19 be because we don't know right now for sure. 20 Regarding any potential mitigation or enhancement 21 measures that may come out of the relicensing process, the 22 first opportunity that you'll see as to what the Commission 23 may be recommending for let's say siltation or any changes 24 that may be appropriate or not appropriate will be 25 identified in our draft environmental NEPA document or 26

environmental document, which will come out three or four years from now. Right now, we're identifying the study needs to address essential issues or effects of the projects. Those studies will generate information that we will use to evaluate these issues and concerns.

Then, when the license applications come in, 6 7 we'll seek recommendations for how do you mitigate or 8 address issues that have been identified as being project 9 effects. We'll do an environmental document that will 10 evaluate the issue and the recommendations to fix the 11 problem, and then the environmental document will be our 12 recommendation: will we do this, do we do it with 13 quantifications, or do we not do it?

MR. PUGH: Don Pugh. I'd like to follow up onSam's question a little bit about sediment.

The dam here at Turners is not only causing the buildup of sediment in Barton's Cove, but it's restricting deposition of sand, gravel, cobble, et cetera in the bypass reach. And I think that that should be considered in the scope of the studies.

21 We're currently looking at a situation out here, 22 particularly in the upper reach of the bypass, where it's 23 basically bedrock.

24MR. HOGAN: So gravel recruitment in the bypass25reach.

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1 Gravel, cobble, et cetera, all the things VOICE: 2 that would be naturally occurring downriver in an undammed 3 river system are not being deposited in the bypass reach. 4 MR. HOGAN: Thank you. 5 MR. OKHOWSKI: Charlie Okhowski. I have a general question relative to this whole process, 6 7 and it may reflect on how we conduct ourselves. 8 How much weight do you give to an individual like 9 Sam Lovejoy or Ms. Tufts of Northfield saying about one 10 specific point relative to a question or comment from an 11 agency person, an organization? Are they all given equal weight, or do you write things off depending on the source 12 13 of the comment? 14 MR. HOGAN: We don't write anything off 15 initially. Our analysis may say that this is not a project 16 effect or a study is going to show that it's not a project 17 effect, but every comment we receive will be looked at and 18 evaluated; doesn't matter the source. 19 MR. OKHOWSKI: So, equal weight? 20 MR. HOGAN: Yes. And as we go through our 21 analysis, we're going to be evaluating the issues and -- we 22 may have a very specific comment about siltation in a cove where recreation is affected. But we may be addressing that 23 24 under a larger, broader scale type of measure, not 25 necessarily, specifically that one finite spot. 26

1 Does that make sense? 2 MR. OKHOWSKI: Thank you. 3 MS. KENNEDY: Katie Kennedy with the Nature 4 Conservancy. 5 I think we talked about this yesterday, so I'll 6 just have to make the statement again for this. 7 But we'd still like to have the water quantity 8 defined with the five parameters for a defined flow, an 9 attidude, frequency, timing and change as those particular 10 effects impact other objectors (inaudible) 11 And then when it comes to water quality, we're interested in particular in the (inaudible) and possibility, 12 13 if there is an imbalance, for restoring that vegetated part. MR. HOGAN: Thank you, Katie. 14 15 Other comments regarding water quantity or 16 quality? 17 (No response.) 18 MR. HOGAN: Aquatic resources and fisheries. Aquatic Resources and Fisheries 19 MR. SEARS: Mike Sears with FERC. 20 21 Aquatic resources -- i.e., fisheries and 2.2 macroinvertebrates and their habitats, we identified three 23 bullets, and it's the same for all three projects. 24 The first one is, effects of project operation and maintenance, including fluctuations in water levels and 25 26

downstream releases on aquatic habitat and resources in the project's vicinity; for example, resident and migratory fish populations; fish spawning, rearing, feeding and overwintering habitats, as well as mussels and macroinvertebrate populations and habitat.

6 The second bullet is the effects of project 7 facilities and operations, including reservoir fluctuations 8 and generation releases on upstream and downstream fish 9 migration through and within project fishways, reservoirs 10 and the downstream riverine corridors.

11 The last one is, effects on both entrainment on 12 fish populations at each project.

MR. RAGONESE: In terms of TransCanada's Vernon project, we did not at this point identify in the PAD specific studies that we are proposing at this time for aquatic resources. We know there will be many, I guess is a good word. But we felt we'll get through the scoping process first, and then we'll identify studies in our proposal.

Just add a mention in terms of project mitigation and continued enhancement, we don't anticipate any change -or we intend to continue to operate, I should say perhaps more clearly, both our upstream and downstream passage facilities that are located at Vernon presently for American shad and Atlantic salmon. We did perform a few pre-scoping

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1 studies. One in particular, though, relates to Vernon, and 2 that is, we've been working with USGS to evaluate the 3 effectiveness of the ladder on the passage of American shad. 4 We've been doing that over the last couple years. And that 5 report is actually going to be something that will be 6 produced out of the USGS folks, out of the Conti lab, and 7 I'm not exactly sure of the time of the release of that, but 8 I believe it's probably going to come out fairly shortly. 9 That's it.

10 MR. WAMSER: For FirstLight's fish and aquatic 11 resources, we had done this past year habitat mapping of the 12 bypass channel and below Cabot. And real brief, what that 13 means is that we go out and collect data on the depths, 14 widths of ripples, runs and pools in all these locations.

So that has been developed. It was incorporated in our PAD. There was also a mussel survey done, and it was done at the bypass. What's not up there was also done in the canal, and it was done of the Turners Falls impoundment. So that was done in 2012, and also was referenced in the PAD.

In terms of studies that we are proposing to do, we are proposing an in-stream flow study of the bypass reach and below Cabot, and I want to put folks on notice that we're trying to actually expedite this study, conduct this actually in 2013, ideally in the summertime. So those

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people that are probably here today, and also anybody that signed up on our mailing list or on the PAD distribution list, we're going to be sending out a study plan on this one issue in advance of the others, because of the importance of the study in this particular issue. So I just want to let everybody know about that.

7 The other thing we did propose in our PAD was 8 assess the impact of project operations on sturgeon spawning 9 near Cabot. I think that may end up being roped into the 10 third bullet. We'll probably look at impacts on sturgeon as 11 part of the in-stream flow study.

MR. RAGONESE: I just wanted to make asuggestion.

We did conduct a fairly intensive survey of all impoundments, including our Vernon impoundment for federally-endangered species; the dwarf wedge mussel plus a number of other important freshwater mussel species as well. That report -- that one was published, so that is on the web site. You can find that on the web site. That was just released a little while ago.

21 MR. HOGAN: Thank you.

Do we have comments regarding concerns or
compliments about fisheries or aquatic resources?
Yes, sir.
AUDIENCE: Yes. On the raising of the river for

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spawning rules, along the shores. For instance, in 2012 the river was sucked down so low that actually people could walk across parts of the river, that's how low it was; especially in the Barton's Cove area up towards the Rod and Gun Run area; and I believe this was documented on Channel 22 News, showing how low the water was.

7 The comment in the paper from FirstLight was that 8 it was a peak time generation of electricity because of the 9 high temperatures that we had. Well, you don't have to be a 10 rocket scientist to figure out the next day, the water's 11 back up. Come on; we're not stupid. I mean, somebody fell 12 asleep at the switch up here, as far as I'm concerned.

Just, here's these spawning pools sitting there in the baking sun, you know, the bass or whatever wanted to spawn there, -- and this doesn't just happen once a year; I mean, they draw it down low enough need drawdowns low enough where there's several of the spawning pools, you can see all along the shoreline, being ruined by this because the water's so low.

20 MR. HOGAN: Do you have a time frame that you're 21 seeing this occurring?

AUDIENCE: July 29, 2012. If you want to call Channel 22, maybe -- I believe it was on the news that night, and it was in The Recorder also. And that was their comment. And thank you for bringing that.

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1 But I mean, this happens, and you couldn't get --2 there was no boat traffic or anything on the river at all 3 because it was so low. I'm sure they received several 4 complaints up at FirstLight about this, and I know 5 personally I called one time and they said, "Well, we can draw it lower." Well, thank you very much. 6 7 MR. HOGAN: In summary, although they may have 8 been operating within the current license requirements --9 AUDIENCE: I can just wave -- And furthermore, 10 there used to be a water level gauge that was on the river 11 side of the pier. All of a sudden, this year, that thing 12 has disappeared. I don't know what they think. Don't they 13 want anybody to know what the water level is? 14 MR. HOGAN: So you'd like to see the installation 15 of a gauge that would --16 AUDIENCE: Yes, why should that be bad? 17 MR. HOGAN: Okay. Thank you. 18 MR. CONWAY: I think we can back up Jeff on this. 19 I live on Riverview Drive. Peter Conway. My 20 house is about 50 yards from the water, and I see the 21 eagles' nest -- actually when the eagles nest you can see 2.2 it. And it's a little more than just what Jeff is talking 23 about, because I live there year round. And this goes up 24 and down a lot. Sometimes my house is 50 feet from the 25 water's edge, sometimes it's more than 100. It all depends 26

1 on what the water is doing.

2 The time he talked about just then, the pools 3 he's talking about, this happens in May and June and July 4 when these fish come in to nest in this area, because of 5 slope, and they called it is just right for nestling, and 6 the fish are too dumb to know that the water's going to 7 leave after a few days. So they come in, they build their 8 nests, and they DP their guarding and everything else; and 9 then suddenly the water goes down and they're left high and dry, for sometimes 20-48 hours, depending on what's going on 10 11 up the river.

12 As a result, the nesting pools, they dry up. And 13 this is that section of the river where, if you go up to the 14 red bridge, which is where I fish from over to the public 15 boat dock, that's my shoreline fishing range, and I'm on the 16 river a lot. So I eyeball this all the time, and it's 17 really annoying to see this happen. And I'm shedding a tear 18 for the fish right now, by the way. And it just goes on and 19 on and on.

And Jeff referred to one instance. There's a lot more than just one instance. This happens a lot. I know we have to generate power, and I'm want electricity, by the way; I'm not knocking electricity. But you know, we need a little more control in the fluctuation. And as far as you said, Mark, you have a model here going. You've got to

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1 address this part, too. How low do you want to drop back 2 the flow in the rest of the river in order to generate 3 power? There has to be a little more control over it than 4 what we've got. And we don't have it right now, okay? 5 I was going to save this until I got up to speak, 6 but maybe I'll do it again in a different way. Thank you. 7 MR. HOGAN: Thank you. 8 AUDIENCE: One other quick sighting that I 9 observed -- I'm sure Peter has observed it also -- the 10 riverside, is these swans. They come up, they think they're 11 laying their eggs at the high-water mark, but then the water 12 goes two or three feet higher than that, and here's the swan 13 sitting there on these eggs on the water, trying to keep 14 them alive and hoping that they'll hatch. 15 And this is right by Peter's house. This 16 happened two or three times, where the swans kept building 17 their nest at the high water mark, and then the water comes up and ruins that. Well, you know, the wildlife that is 18 19 very much disturbed by this. 20 MR. HOGAN: Thank you. 21 MS. NEWCOMB: I'm Leena and I have a cottage on 22 the river on the Montague side, and I'm very interested in 23 what Jeff just said. 24 I'm a nature lover, and I watch the animal life 25 on the river. And I know the swans are not native; I know 26

there's a huge controversy about them being here, and know they've been here a long time. But I think that's a good register for what is happening to the habitat, because I haven't seen any cygnets for three or four summers now. Maybe someone else has, but I haven't, and I'm on the river from May til October into November. And the last time I saw cygnets was in 2009.

8 So whether you love the swans or hate the swans, 9 the point is, habitat is so buried that possibly they're not 10 reproducing. And if they're not, who else isn't? 11 MR. HOGAN: Good point. Thank you. 12 MR. PUGH: Don Pugh. I had a question for Mark 13 about the sturgeon study. Are you planning field work? 14 MR. WAMSER: Yes. There will be field work 15 associated with data collection (inaudible) MR. HOGAN: 16 Karl? 17 MR. MEYER: Who is going to have the license to 18 work with sturgeon? There's only a single license to 19 actually handle the sturgeon (inaudible) USGS right now. MR. WAMSER: We don't know at this point, but 20 21 we'll resolve that. MR. HOGAN: Are you actually going to be handling 2.2 23 sturgeon? 24 MR. WAMSER: No. 25 MR. PUGH: So what was the field work, then, 26

1 Mark?

2 MR. HOGAN: Can you speak up? 3 MR. PUGH: Don Pugh. So I asked Mark what the field work would be, if they're not going to actually handle 4 5 sturgeon. MR. WAMSER: The field work would entail 6 7 collecting habitat data in the areas where the surgeon are 8 known to be spawning, and assessment would by the project 9 (inaudible) spawning habitat. 10 MR. COHEN: Russ Cohen, Mass Fish & Game. 11 So just to -- the comments -- comments that were 12 made better addressing the issue of -- you know, these 13 projects to some extent are chasing power prices and seeking 14 to generate at the time when the prices are the highest. 15 The question is, to what extent does that deviation from the natural run of river cause adverse impacts to the fisheries 16 17 and habitat and the biota? 18 Maybe I should have brought this up earlier, but 19 this might be a good time to say that in both cases, the 20 project operators mention that they have a specific pool 21 height that they're allowed to operate under, under their existing license. And the question is, is that number a 22 23 correct number, or should it be revisited? Is it actually 24 too large in terms of the damage to the fish, habitat, biota 25 because there's too much fluctuation is allowed to occur

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within that eight or nine feet or whatever it is, and should that be shrunk to a smaller figure to reduce the fluctuations, to reduce the adverse effects on the fish habitat?

5 MR. HOGAN: I can tell you that that will be part 6 of our analysis.

7 Other comments?

8 (Inaudible) Fish & Wildlife Service.

9 This is more, I guess, a generic question related 10 to across resources areas specific to FirstLight. So what 11 they are doing is developing study requests to evaluate 12 impacts under existing operating conditions, yet FirstLight 13 has said they're evaluating a number, four to six different 14 developmental scenarios.

So how does that work, and is it appropriate then as they hone in on what developmental changes they may be making through the relicensing process, to come in and be able to say in Year 2, when we know actually what they're proposing to submit additional study requests based on this new information?

21 MR. HOGAN: Yes, if an applicant were to change a 22 proposal, mid-stride, in the prefiling process, that would 23 be cause for supporting evidence for a new study request. 24 As you know, in the relicensing process, the bar gets higher 25 each time around. But if the proposal changes, that bar

1 kind of gets reset.

Now, we get something new to look at, unless we feel that the studies that have already been done are also usable for the new proposal, 'no harm no foul.' But if it's something completely different, it is warrant for a new study request.

7 Similarly, if in conducting existing studies that 8 are required, if they uncover a new endangered species, then 9 we'll have a new study to evaluate the project effects on an 10 endangered species that wasn't known to exist in that area 11 before. So it is -- the integrated licensing process does 12 contemplate those situations, and that's why we encourage 13 applicants to put their proposals in the PAD. So that any proposal that's out there now, we can be developing study 14 15 requests and then trying to evaluate those ahead of the game 16 rather than trying to do it later on.

AUDIENCE: Even if they don't hone in on any potential new developmental scenario until after the Year 2 of license studies has expired?

20 MR. HOGAN: When you mean new, you mean something 21 that hadn't been contemplated at this point in time?

AUDIENCE: Well, again, I think that the development of scenarios that have been laid out are somewhat vague. We don't really know the specifics, and so we can't really anticipate what difference might be. And so

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1 until we have more specifics on what a particular scenario 2 would mean, it's hard to generate study requests. 3 MR. HOGAN: Broad scope study requests. 4 AUDIENCE: Right. 5 And hopefully we can work out getting MR. HOGAN: 6 the specificity that you're looking for through the study 7 plan development phase from the Applicants. Because they're 8 going to want to narrow the scope of their studies through 9 the study plan development phase, just for cost purposes. 10 That's the reason we have that 90-day period.

11 The agency, FERC's going to come in and say, 12 we're going to need this information and you have to provide 13 it based on what we understand the realm of your proposal 14 is. And then we're going to try and narrow that down. And 15 they are either going to provide all the information to cover the broad gamut of potential operations and facilities 16 17 that they need, are proposing, or they're going to try to 18 narrow their scope down so that they can be very specific 19 with their studies.

AUDIENCE: So to cover the bases, then, our study request should say, not only should this study cover the existing operational conditions, but any anticipated under your four to six developmental scenarios?

24MR. HOGAN: That's what we're going to do.25AUDIENCE: Okay.

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MR. HOGAN: For example, not to pick on FirstLight here, but they're looking at raising the upper reservoir by potentially four feet. Did I get that correct, four feet? Well, we would be interested in what are the concerns environmentally with that potential increase? That could be studied.

I think we got a comment earlier during the presentation that, if you're going to do that, you're putting more water in the upper reservoir, how is that affecting the lower reservoir? That's a legitimate question. Is that storage available, and that would be something that we would want to look at?

13 MR. SLATER: Cale Slater, Mass Fish & Wildlife. Yes, but you picked the only proposal they have 14 15 that has numbers on it. Their other three are adding a unit at Cabot. Well, what would that mean? Adding or 16 17 subtracting units at Station 1, what does that mean? For 18 people trying to write study requests, those are pretty 19 What's another unit at Cabot going to add for flows vaque. and potential changes in flows? What's adding generation at 20 21 Northfield -- what does that mean? I mean, there's no 22 specifics there.

23 MR. HOGAN: But Cale, you're interested, as FERC 24 is, about the environment. So don't we want to design our 25 study requests to identify what does the environment need

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1 for flows, and then we can look at when they do --

Well, yes, when you talk about the 2 MR. SLATER: 3 effects of project operations. If we don't know what the 4 project operations are going to be, it makes it pretty hard. 5 Say example, for entrainment. How is AUDIENCE: that entrainment risk going to change with increased 6 7 hydraulic capacity, how is traction to the tailrace 8 (inaudible) increase and decrease with that change in 9 hydraulic capacity? Those things -- obviously they don't 10 have the capacity now, so they can't study it. Yet, the way 11 licensing proceeds, we have them study what they can study, 12 and then what happens down the road is they say, 'Well, we 13 decided we do want to increase.' Then what? 14 MR. HOGAN: Typically, if we get a proposal, 15 let's use your false attraction, Sarah. And if the proposal doesn't come in early enough; let's say it came in with the 16 17 license application. 18 AUDIENCE: Please use the mic. 19 MR. HOGAN: I'm sorry. 20 Typically, the way we've handled a situation

where, let's say, all the studies have been completed and the Applicant comes in with a license application with a proposal to increase capacity, it may not have been exactly contemplated throughout our licensing process. We have two venues that we can take.

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We can then, at that point in time, instruct them that a them to conduct the studies that will be necessary to provide that analysis. The other option would be to handle those studies post-licensing to file a plan to do these studies, and not approve any of the increases in capacity until the analysis could be done after the license was issued.

8 So we do have two approaches. Does that get at 9 your questions? But we don't make blind decisions. If 10 they're going to increase capacity, and that's just okay. 11 We're going to want to know the environmental effects of any 12 of any of the proposals.

And I hate working in the hypotheticals. But clearly, my message to the licensees here is, get as specific as you can as early as possible, and I think you're going to hear that from the agencies as well.

17 MR. SLATER: Cale Slater again.

Yes, I think what Melissa was trying to say, though, is you can't study the effect of increased capacity until it's been increased.

21 MR. HOGAN: You can model a lot of things. 22 SPEAKER: Could you just explain to me what 23 happens on April 1, 2018, if everybody's thinking they've 24 got a rush to a license. Can FERC say, 'We're giving you a 25 six-month extension on your license, because we're not

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1 bashing the door down and we're not thinking that the

2 paper's got to get done tomorrow,' so we're not all rushing 3 through the door?

4 MR. HOGAN: That's a very good question. No, it 5 can't, and there's a reason for that.

6 The deadline for filing a license application is 7 statutory. So it's by law, and it's in the Federal Power 8 Act. What we can do is not issue our ready for 9 environmental analysis notice, which would trigger the 10 actual environmental review process.

11 So if we get an application in that we feel is 12 incomplete, we would not start our environmental review 13 until that application was made complete. But we can't tell 14 them or grant an extension of time to file the license 15 application. That is a statutory deadline.

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MR. PUGH: Don Pugh again.

17 I'm confused about one thing I've been wondering 18 about for a number of years, as I watched walking out in the 19 cold, and I'm thinking about the three areas that have an 20 effect on the generation and the canal at Cabot, the 21 generation by Northfield pumped storage, and also whatever 22 Vernon wants to generate. Sometimes I want to think there 23 could have been a little better coordination between the 24 three; because if Vernon decides to hold the water back and 25 Northfield decides to suck the water out, and Cabot decides

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1 to pull it through, the water goes flying right down real 2 quick.

That's my thoughts on it, but maybe that's not true. Similar to what the man in the front row asked the question about what would be the environmental effects as far as Cabot, a new approach to generating more power with whatever units they're going to put in down there.

8 And I don't know if drawing water through the 9 canal has as much of an effect as the Northfield pumped 10 storage does. Those are things I've often wondered about. 11 I don't know if there's an answer to that, nor would it 12 through a model, so to speak.

13 MR. HOGAN: So if we identify that there are 14 concerns with reservoir operations through our analysis, 15 what are the opportunities for better communication between 16 the facilities to limit those concerns?

17 MR. PUGH: Thank you.

18 MR. HOGAN: Thank you.

No questions or comments about the fish passage or fisheries issues associated with the projects? MR. COHEN: Russ Cohen, Mass Fish & Game. I would like there to be a study of the survivability of juvenile fish passing downstream in the -basically, the waterfall that's adjacent to the Cabot station, the hydroelectric project.

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1 MR. HOGAN: Okay, so the Cabot station downstream 2 fish passage mortality study. 3 VOICE: Yes. There's a, you know, discharge next 4 the building there that's like a 40-plus foot drop, very 5 precipitous. I was just wondering how the juvenile fish survive that. 6 7 MR. HOGAN: And is Mass Fish & Game planning to 8 provide a study request? 9 MR. COHEN: I don't know. I'm just saying that. 10 MR. HOGAN: I'm going to -- for my benefit, I'm 11 going to ask the question of Ken Sprankel with Fish and 12 Wildlife Service: You've done some telemetry studies on the shad 13 passage at Turners Falls. Would you be willing to give me 14 15 and my team a quick overview of what you've found at those facilities? Or are they not done yet? 16 17 MR. SPRANKEL: Well, the data's preliminary. 18 MR. HOGAN: Okay. 19 We're finding, I guess, that some MR. SPRANKEL: 20 of the preliminary results are, concerns relative to 21 cumulative effects; and that relates to delays -- the fish 22 that we looked at -- again, this is preliminary. Or that 23 the fish generally proceed fairly rapidly from one barrier 24 to the next. Once they reach a dam, they're proceeding 25 upstream or downstream, because we're also concerned about 26

1 getting the adult fish back out to the ocean; there are 2 delays associated with (inaudible) through our analysis, to 3 the extent of those delays. 4 Particularly for shad, for those of you that don't know. 5 They don't actively feed on their spawning run 6 migration. So the concern is they have a limited amount of 7 energy to complete the process. So we're concerned with the 8 ways -- they won't have enough energy to get back out to the 9 ocean. 10 Do you have a predicted timeline for MR. HOGAN: 11 when your preliminary results will be final? 12 MR. SPRANKEL: We'd like to publish it, of 13 course, in a peer-reviewed journal. So we should have a draft possibly by the summer, more rigorous reviews that we 14 15 would want to have for a peer reviewed publication --16 MR. HOGAN: Thank you, Ken. 17 MR. PUGH; Don Pugh. I had a question of what 18 the FERC -- or how the FERC would try to integrate telemetry 19 studies that consist of one species, one fish migrating 20 through several projects. That the two companies are, so to 21 speak, on the same page. 22 MR. HOGAN: Yes, we're trying to figure that out, 23 We don't know whether we're going to require telemetry too. 24 studies at this point in time. It's clearly a tool that is 25 available to look at species migrations through the system

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1 that we've identified in our Scoping Document 1. 2 We're having to deal with two different 3 applicants, and we're going to try to figure that out. 4 MS. KENNEDY: Katie Kennedy, Nature Conservancy. 5 I have a related comment, that under the FERC resources, 6 (inaudible) that fish migration bullet should be an 7 analysis. 8 MR. HOGAN: The fish migration -- analysis. 9 MS. KENNEDY: Yes. 10 MR. HOGAN: Thank you. I agree. 11 MR. RAGONESE: I am going to just mention -- John 12 Ragonese from TransCanada. 13 AUDIENCE: Would you repeat that? I didn't hear. 14 MR. RAGONESE: You spoke earlier about a shad 15 study that we did working with USGS, associated with what Ken was -- to get out, but to sort of respond to Don's 16 17 comment. 18 This is exactly what he did; Don wanted to have a 19 sense of getting involved in a presentation that looks at the effects more than just right at the base. So he's -- we 20 21 are looking at it. 2.2 They're associated with catch through Turners 23 Falls (inaudible) and that is combining information --. 24 MS. DONLON: Andrea Donlon, Connecticut River 25 Watershed Council. 26

We certainly are concerned about upstream and
 downstream passage at Turners Falls Dam.

3 The project maintenance activities that are also 4 concerned, and aquatic resources would be the annual 5 draining of the Turners Falls canal and what kind of impacts there are on downstream migratory fish' and then what 6 7 habitat are you (inaudible) are killed. And then the 8 (inaudible) for about a week, and then when Northfield 9 Mountain has to drain their upper reservoir, that's also a 10 concern; they don't do it on a set schedule right now, but 11 obviously the last time was problematic.

12 They're currently looking into -- maintenance 13 activities.

14 MR. HOGAN: John, a question for you. I don't15 know if you heard the comment.

Do you know the schedule for maintenance of the canal, draining of the canal, whatever maintenance you may do; and also, the time of the year and frequency, and also for the upper reservoir, just so we have that information?

JOHN: For the Turners Falls canal, we typically drain once a year for a week. We close the head gates on Sunday night to have the canal full of water for Monday morning. We refill it up Saturday. I'm trying to think: this year's schedule, the original schedule, second week of

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1 September. (inaudible) out for late in September. We've 2 done that. And I don't have that 3 right off the top of my head. MR. HOGAN: Typically September-ish? 4 5 Yes. We're not allowed to take the JOHN: 6 capacity scheduled off line in New England between June 1st 7 and September 15th. 8 MR. HOGAN: Okay. 9 JOHN: And then the (inaudible) upper reservoir? 10 MR. HOGAN: Yes. There are no plans, currently, for the 11 JOHN: 12 upper reservoir in the near term. Obviously, everyone's 13 interested that (inaudible) 14 MR. HOGAN: Thank you. 15 MS. CAMPBELL: Elise Campbell. A couple weeks ago, some U-Mass scientists announced a study they've done 16 17 on main stem rivers, and they say that it shows that fish 18 ladders don't work. Is that study going to be one of the 19 things that's looked at in this process, or should I send you a link when I get back to my computer? 20 21 MR. SEARS: I have that study. MS. CAMPBELL: You have that, good. Okay. 2.2 23 MR. HOGAN: It will be looked at. He's already 24 on it. 25 MS. CAMPBELL: Okay. 26

1 MR. HOGAN: Yes, sir? 2 AUDIENCE: Does FERC take a tour of the areas 3 that have been relicensed before that? MR. HOGAN: We did take a tour of the facilities 4 5 in October. We scheduled that in October before the PADs 6 were filed, purely because we knew we weren't going to have 7 access to some of the facilities now in January and 8 February. 9 I know, take it further, an actual AUDIENCE: tour of the (inaudible) in the areas that are affected. A 10 boat tour? 11 12 MR. HOGAN: We did take boat tours during those 13 facility on each of the reservoirs. We did not see the 14 entire reservoirs. Each boat tour was approximately two 15 hours on the tours; starting at the dam. For everything 16 except for Turners -- the TransCanada projects, we started 17 at the dam and went upstream. For the FirstLight projects, 18 we started at --19 Riverview picnic area, down through JOHN: Barton's Cove and went out to --20 21 MR. HOGAN: John, could you repeat that louder 22 for the court reporter? 23 We started at the Riverview picnic area, JOHN: 24 we traveled south to Barton Cove, then we turned around and 25 went north up to just south of the Route 10 bridge. 26

1 MR. HOGAN: Thank you. 2 JOHN: You know, like the areas that we're 3 speaking of, but for effect (inaudible) you hear about today, will you take another visual tour of that or not? 4 5 I'm going to say that that depends, MR. HOGAN: 6 but we do have, I know FERC Compliance staff that has toured 7 the Turners Falls reservoir extensively on several 8 occasions. What we generally do is, when we craft the 9 studies, specific things are going to be targeted and looked 10 at, and licensing staff is going to utilize the actual study 11 reports and evaluations that are incorporated into that 12 report to inform its analysis and decision-making process. 13 If we find a need that we feel that we need to 14 see something, it's certainly within the realm of our 15 capabilities During that tour, what was the height of 16 JOHN: 17 that water? Was it high, medium, low? 18 MR. HOGAN: If I had to give an assessment, it 19 looked like it was probably about 18 inches below bank full. 20 AUDIENCE: We were above 179 to probably 180. 21 Typically, the pond 181-3. It can go down to 176 -- so we're probably --. I don't know the exact number; 22 23 probably 180-, 181. 24 AUDIENCE: I will personally invite you to tour 25 on my boat.

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1 MR. HOGAN: Shall I bring some fishing rods? 2 AUDIENCE: Whatever you want. 3 MR. HOGAN: Yes, sir. 4 TOM MINER: There was a second tour by FERC staff 5 and representatives of the Streambank Erosion Committee at the beginning of November, from the Pachaug boat ramp up to 6 7 the Vernon Dam, and back down. 8 MR. HOGAN: Yes, when I was FERC staff, I was on 9 that tour; it was Chris Cheney with our Division of 10 Hydropower Compliance; and that's what I was referring to. 11 I know that our Compliance Division has been much more --12 has much more intimacy with the reservoir at this point in 13 time. 14 MR. RAGONESE: Unfortunately, the October tour 15 you mentioned was before we --MR. HOGAN: And that's important because --16 17 MR. RAGONESE: You can't see the riverbanks. 18 MR. HOGAN: Thank you. 19 Other comments about fishery resources or 20 concerns? 21 (No response.) AUDIENCE: Quick question. I wondered what your 2.2 23 schedule was going forward in terms of today. 24 I want to take a poll. We've got MR. HOGAN: 25 terrestrial resources, threatened and endangered species, 26

1 recreation, land use, aesthetic, socioeconomics and cultural 2 resources.

AUDIENCE: We have got presentations on there? MR. HOGAN: We've got presentations that are going to be done. I'm going to assume we want to take a break for lunch. I'm hearing yes.

So it's 11:30 right now. Let's try to get through a couple more resources, we'll take a break for lunch at noon. Anybody have a preference on a half hour or an hour? Half hour break for lunch would seem to be the goal.

What I'd like to do is try to get through -we'll stop wherever we are at noon and we'll take a lunch break. We'll come back, finish up the resource areas, and do presentations.

16 SPEAKER: Based on a question that I heard from 17 the back, I'm wondering if there were people who weren't 18 planning on spending the whole day here like other people 19 were, and would they want to get those presentations over 20 with and then leave?

21MR. HOGAN: I'm seeing a lot of nodding heads22Yes.

The question is, would folks rather give their presentations now and then pick up with the resources concerns after lunch? Show of hands.

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(Show of hands)

2 MR. HOGAN: Why don't we do that. I'm pretty flexible. 3 4 Who would like to go first? Step right up. 5 (Pause.) MR. BATHORY: I'll read the first part so I can 6 7 be brief. 8 I'm Michael Bathory, one of four landowners of 9 2300 feet of riverfront conservation land in Gill. Our 10 conservation restrictions are held by the Mass. Department of Conservation and Recreation. We are members of 11 12 Landowners and Concerned Citizens for License Compliance, 13 and the Connecticut River Streambank Erosion Committee. We 14 are assisted by the Connecticut River Watershed Council, 15 which serves as a nonprofit umbrella organization for our 16 landowner's group. 17 The last FRR -- full river reconnaissance -stated that the rate of erosion is decreasing in the Turners 18 19 Falls pool. FirstLight continues to maintain this in Section 4.2.4.1 of the PAD under FRR Studies. This is in 20 spite of thorough challenges in FERC filings by the 21 2.2 Streambank Erosion Committee and studies commissioned by our landowner's group, also filed with FERC. 23 24 Clearly, FirstLight and their consultant were not 25 looking at the erosion on our land. So rather than repeat 26

the information that we have already sent to you, here is the opportunity to briefly look at photos of the erosion on our riverbanks, and to lobby for a standard FRR methodology going forward that is repeatable and comparable from one FRR to the next, rather than a new one being used each time.

6 We want to demonstrate why the current and 7 previous owners of this conservation land have been so 8 persistent in trying to get your attention about the 9 severity of erosion of our riverbanks, and why the current 10 restoration is several decades too late. Unfortunately, I 11 don't have a PowerPoint, but if anyone would like a PDF, 12 leave me your e-mail address and I can get that to you.

I just gave packets of information to all the FERC reps. If you look at page 2, that map shows the location of our section of riverbank upstream from the tailrace and the picnic area. That's on page 2.

17 If you turn to page 3, it shows the beginning of 18 the restoration of this section, or these sections, starting 19 in December 2012. And the bottom picture shows the view of 20 the construction road that you would have seen on the boat 21 tour in October. Unfortunately, as I said before, before 22 they got conditioned.

If you look at page 4, again it shows some of the beginning stages of the restoration of our banks and creation of the construction road. This is year one of the

project in December 2012. Year two will be completed in the
 fall of 2013.

3 If you'll look at page 5, new attempts to buttress eroding banks in this first year. There will be 4 5 additional efforts in the second year, but you can see root rods and run ins (**) driven into the bank there, the first 6 7 two pictures. On the bottom, it shows some trees that have 8 slumped down to the bank and had to be cut off in the near 9 picture and in the far picture there. The contractor felt 10 they had to cut these off for safety.

11 Go to page 6. Looking up, that tree root was 12 exposed to erosion at the top of our 17-foot banks. It's a 13 tall oak tree there on the upper right, and below that you 14 see some areas, surface damage, slumping that has occurred 15 on our land for years, leaving root rods exposed on the tree 16 on the upper corner of that picture.

Larger wooden structures will be installed in the second year. We're hoping that some of these areas pictured here will be buttressed by those, and some of these large soil blocks will fall and be supported by the structures, rather than washing downstream as they have over the years.

Look at page 7. Again, trees and root rods cantilevered out over the top of the bank. You can see from the construction road in December 2012. The bottom picture shows a typical tree that has begun to slump. Sometimes

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these trees slump and stand up straight for awhile, and sometimes they lean like that one. It gets undermined at the top of the bank.

If you look at page 8, these are large trees. They used to be at the top of the bank, and began to slump, and eventually they were too large to be held up standing up, and collapsed onto the river, onto the bay. If you look at the arrows, you'll see a stump sort of darkly highlighted there.

10 If you turn to page 9, the last page, that stump 11 again is in the lower photograph. These are photos of the 12 tree at the top -- the top picture, the tree at the toe of 13 the bank in 1960, and the stump of the same tree in 2012, 14 demonstrating erosion that has occurred over 52 years. The 15 former owners of our property always maintained two markers 16 on our bank, at the stump and the oak tree at the downstream 17 end of our property.

18 The picture, with John Kofel and a buddy sitting 19 on the top, that was at the base of what used to be a 20 secondary terrace. This lower terrace we got to with a six-21 or eight-foot drop at about a 30-degree angle, down to where 22 they were sitting in 1960. The oak tree at the downstream 23 end of our property was one of the licensee cross-section 24 sites for monitoring erosion. This tree -- we don't have a 25 photo of this -- but this tree used to be over 30 feet,

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1 actually, from the edge of the bank, and is now less than 2 six feet. 3 So an information request that I might make is to have this cross-section 8A, the information of this, as far 4 5 back as possible to actually demonstrate the amount of erosion that has occurred. 6 7 I don't have photos for everyone to look at, but 8 if there are any questions based on not having seen the 9 photos? 10 (No response.) 11 Okay. Thank you. 12 MR. HOGAN: Thank you. We've included a copy for 13 the record. 14 MR. BATHORY: Thank you. 15 [The document follows:] 16 17 18 19

1 MR. HOGAN: Who would like to speak next? 2 Yes, sir. Come on up. 3 (Pause.) 4 MR. WETTLER: Hi. My name is Tom Wettler (ph) 5 I'm from the Social and Environmental Research Institute. It's in Greenfield. I just want a second. 6 7 I'm a sociologist. I study public engagement 8 processes. I learned about this process just the other day. 9 I e-mailed Ken here to tell him that I would be here. 10 I just have some questions. I have a survey 11 questionnaire. It would be great if people would fill it 12 out. I have some cards with a URL, and on the back, if you 13 want to take it on your cell phone. All I'm doing -- I'm 14 not evaluating this process. You can fill out the survey 15 whenever you want -- after one meeting, after ten meetings. I'm just looking for correlations between variables to test 16 17 a theoretical model of how communication in public 18 engagement processes happens, and how people perceive what's 19 going on. 20 I'm not going to write a report about this 21 process. All my data from multiple cases gets thrown 22 together, and it'll contribute to theory. It's funded by 23 the National Science Foundation. 24 So if you have time to fill out a short survey 25 some time during this process, I'd appreciate it. Thank

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1 you.

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2 (Pause.) 3 MS. NEWCOMB: I actually don't think I need the 4 mic. You can let me know. Somebody raise their hand in the 5 back if they can't hear me. I've never done this type of meeting. Okay. My 6 7 name is Leena Newcomb, and I own a cottage on the Horse Race 8 section of the river up here in Montague. I've been asked 9 to speak on behalf of the River Residents Association. The 10 River Residents Association is dedicated to preserving a 11 life worth living on a river worth loving. 12 The Association is comprised of people who own 13 camps, cottages, homes and land, and also are members of 14 private clubs that recreate on the Connecticut River within 15 the Turners Falls and Northfield pools. We are very concerned for the future of this beautiful natural resource, 16 17 as well as our existence along the riverbank. As many of us 18 live on the river, we see things changing, sometimes on a 19 daily basis. 20 Our major concern is the negative effects we see 21 occurring from extreme erratic water level fluctuation. And 22 I know it's what's being talked about a lot, and we have to talk about it too. 23 24 The following are observations by people who live and recreate along the river. Many of us have been here 25

for decades. We prepared poster boards with images purposely, because we could feel it's more tangible. It's more hands-on. It's more personal. I will reformat that into paper handouts and on a CD to get it to the Commission more conveniently, because you probably want to carry those home with you, but you can't.

7 Some of the observations that we have seen 8 include, but aren't limited to: shifts in the shoreline and 9 the riverbed, erosion along the shores, loss of recreation 10 areas that allow boat access that now have no shoreline, 11 only steep banks to climb up for access to the shore. 12 Sediment, silt builds up in the coves. We see it in shallow 13 backwaters along shorelines, near marshes, at the low tide. 14 Sandbars that come and go, algae growth in Barton's Cove, 15 damage to personal property at low tide, meaning our doors become torqued (**), our boats stranded on rocks and stuck 16 17 in the mud.

18 Wetland area, the cattail marshes, those 19 different kinds of habitat. These keep changing. We see 20 some of them damaged. Land mass lost around the islands, 21 sandbanks and the swallows that are now gone. Beaches 22 appear and disappear within hours or days. The backwaters, 23 the shallows, the coves, those depths changing and/or 24 diminishing, less heron, osprey and kingfisher sightings, 25 less dragonflies seen, and changes in the fish families.

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1 Also, as others have mentioned, nests of fish eggs in the 2 coves and shallow areas getting exposed at low tide. 3 We believe everyone here wants to work together to ask the right questions, and to find effective 4 5 solutions. And we feel that we, the river residents, are an 6 integral part of this process. Is there a way to create 7 moderation, or even eliminate altogether, the water level 8 fluctuation? That's my question. Can it be regulated and 9 should it be regulated? 10 Cynthia has been holding up some of the different 11 They'll be there for you to look at during the images. 12 lunch break. I'll be back tomorrow evening as well, for 13 other people to look at. 14 Our second concern is about our continued 15 existence as river residents along the river. Most of us in this Association are camp owners with a license agreement 16 17 allowing us to occupy the land. Our existing structures are 18 a historical use that began back in the early 1920s, and the 19 previous licensees for these projects issued permits to 20 manage their use. 21 However, prior to 2008, the previous licensors 22 did not seek Commission approval for these uses and 23 occupancies on project property. Someone dropped the ball

25 of Northfield Mountain Pumped Storage Facility for noticing

along the way. And we owe a great thanks to Mr. John Howard

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1 this oversight. He realized there was no mention of the 2 existing residential and private structures, and took action 3 to correct this.

An application was filed in October 2008 requesting Commission authorization to issue revocable five-year licenses, as well as life use licenses known as permits, for us on land at the Northfield Mountain and Turners Falls hydroelectric project. The Commission granted an order modifying and approving non-project use of project lands and water. It was issued October 28, 2009.

As the licensees, we are mandated to do certain things. We're expected once every year, and be in compliance with terms just like hydro generating companies set forth. As you can imagine, it's unsettling to not know if all our love, sweat and money spent on our river homes will be for naught at the end of the five-year license.

The power company reaps many rewards using the river to generate power, as does the community. For nearly 100 years, our families have been living and recreating on this stretch of the river. My grandchildren are now fifth generation to grow up at our cottage. They're two years old and seven years old. We've been here a long time.

23 We see ourselves as an asset for this majestic 24 waterway, and yet we have no reassurance that we'll have any 25 future on it past five years. It's a very one-sided

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1 situation and tenuous position to be in.

2 We act as caretakers. We are self-appointed 3 We are the eyes and ears of the woods and the stewards. 4 water. We investigate smoke sightings in the woods and have 5 aborted forest fires. We provide shelter and rides to 6 people in canoes who are caught in storms. We tow boaters 7 out of gas or with broken engines and props. We rescue 8 anglers who fall overboard, believe it or not -- some of 9 them can't swim; rescue kayakers during cold water months, 10 pick up countless amounts of trash after the weekend 11 warriors. We assist novice boaters and escort weary 12 paddlers, rescue women in labor off the water and get them 13 to the hospital. And sadly, we even help search for bodies.

14 As proprietors of our footprint, we take very 15 seriously our investment, both financially and emotionally. 16 Our lifestyles on the Connecticut River, we take them 17 seriously. The majority of us have remodeled and made 18 improvements to our property. We've taken great pride in 19 bettering our environment. We've given gladly, and we're gifted by the beauty, serenity and solitude the river 20 21 offers. We delight in her recreational diversity. We 22 celebrate family and friends generation after generation, 23 and we continue on year after year in blind faith that our 24 five-year licenses will be renewed. Does it seem equitable? 25 We'd like a clearer understanding of how the

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licenses are administered. We were under the impression that FERC governs over the use of the land, and according to the language in the order approving use of project lands, dated October 2009, it appears that FirstLight Hydro Generation Company makes the decision governing the licensor.

We ask, does FERC have any say in our interest? 7 8 Is there a liaison within the FERC organization that can 9 work with our association in helping us better understand 10 our rights and our responsibilities? How can we alter the 11 current arrangement to meet our present and future needs? 12 We respectfully ask consideration in lengthening 13 the license term commensurate to the number of years approved for FirstLight Hydro's new license to operate, 14 15 beginning in 2018. What is the procedure to effectuate this? 16

17 We endeavor to continue to assist and promote 18 ongoing cooperative relationships with all parties' 19 interests in mind. We thank you for your time, and we 20 respectfully submit this inquiry and these photographs to 21 the Commission. Thank you.

22 MR. HOGAN: Thank you.

Who would like to go next? We have about a dozenhands.

25 MR. LOVEJOY: My name is Sam Lovejoy. I just

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1 want to bring up two broad-brush points. I'll try to figure 2 out how to do a study request, but I think that at some 3 point the mission of FERC should give FERC the opportunity 4 to make some requests, and that'll be the end of it.

5 The first one is, we've got two Applicants, two corporations, several projects, and they don't talk to each 6 7 other. I mean, literally, Vernon can be dumping water and 8 Turners can be keeping water. I mean, it's nuts. And 9 there's got to be a way in this license process for FERC to 10 look at these two Applicants and these projects, as well as 11 probably the rest of the projects up the Connecticut River -12 - I mean, there's got to be a way to tell these corporations 13 that get licenses to operate these water resources to talk 14 to each other and coordinate their uses so that there's not 15 this idiocy which now and then breaks out in each of the 16 pools.

The second point, I think: 50 years ago, the Turners Falls dam, which creates a pool, and the pool was allowed to be used to run the Northfield pumped storage facility. And every now and then, you'll hear people refer to the Turners Falls pool as the lower reservoir of the Northfield pumped storage facility.

Now, I always thought this was the Connecticut River myself. Then I sort of realized they've got a dam there, and we've got a pool. I sort of get that. But by

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the time we're talking about it as a reservoir, I sort of feel like we're not using it as a river anymore. We kind of like have twisted the attitude.

So I'd like to say to FERC, FERC ought to say to themselves that, 50 years ago, you allowed the Turners Falls pool -- an experimental use for the Northfield pumped storage facility. And now, I would like you to pull the plug on that experiment, and I would like you to actually analyze, and request the utilities to analyze, what it would cost to create a closed loop.

11 Now, I've brought this up before, and everybody 12 goes, whoa, that's expensive, and there's no room, and this 13 and that. I'm sorry. If you give them a 30-, 40-, 50-year 14 license, and you amortize the cost of this pool, what you're 15 going to do is, you're going to buy huge goodwill. You're 16 going to end all the arguments related to this Northfield 17 pumped storage causing these problems, and you will have a 18 closed loop so that we don't have to worry about what you're 19 doing, you know, generating power. Is it peak, is it base, 20 what's going on? You'll just have a project.

I understand New England needs this power. Northfield definitely creates peak power. But I'm requesting that FERC requests of the utilities that they actually analyze what it would cost to create a closed loop and amortize it over the length of its license period. And

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I don't care if other utilities are forced to, like, join in
 and help pay for it. I think you ought to analyze the
 closed loop.

Yes, Turners Pool was the easy way to go. Now's the time to say, the experiment's over. We're going to move forward with a project with a closed loop, no more Turners Falls lower reservoir. Let's have our river back.

And then I just have to bring up, because I have several people who asked me to do this -- sort of the purposes of negotiation. It was suggested that perhaps we not just ask for a closed loop, but we actually ask for the removal of the Turners Falls dam as a negotiating message. We would give up asking to get rid of the dam in trade for, for instance, the closed loop.

But I understand that was a little tongue in cheek suggestion. But, you know, on your way home to Washington, maybe you can laugh.

18 (Laughter.)

MR. LOVEJOY: The fact of the matter is, there's got to be an economic analysis, which is more important than any environmental analysis right now, to tell us: is this the logical thing to do? Thank you very much.

23 (Applause.)

24 MR. HOGAN: Thank you.

25 Next speaker. Nobody?

1 MS. TUFTS: My name is Jennie Tufts. I'm here 2 representing two entities, actually, but mostly the Greater 3 Northfield Watershed Association today. I'm also on the 4 Open Space Committee for the town of Northfield. 5 How many people here are from Northfield? I'm not sure. 6 7 (Show of hands.) 8 MS. TUFTS: Great. There will be someone here 9 tomorrow night also representing the Open Space Committee, 10 who seems to be taking the lead right now for the town of Northfield. 11 12 The Greater Northfield Watershed Association is a 13 501(c)(3) nonprofit organization devoted to protecting the 14 tributary watersheds of the Connecticut River in the area of 15 Northfield, Mass., and preservation of surface and 16 groundwater resources. I am writing and speaking on behalf 17 of our membership, which consists right now of 79 families and individuals who are members. 18 19 Our town borders three states, and is the only

town along the Connecticut River with lands on both sides of the river. Northfield is acutely affected by and extremely interested in what happens during the scoping and relicensing process for Northfield Mountain Pumped Storage Project and the hydroelectric facilities at Vernon and Turners Falls. This river is critical to our members, both

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1 as a recreational and an economic resource.

2 Since 2005, the Greater Northfield Watershed 3 Association has partnered with the Open Space Committee and 4 the Conservation Commission in Northfield to preserve land 5 and water essential to maintaining the forested landscape, 6 to connect people to the recreational assets of the town, 7 and to protect the rural character of our community. Local 8 farms and businesses depend on these natural resources, and 9 access to the river remains key to the future identity of 10 our community, just as it was to the history of our 11 community.

12 The people of Northfield, especially our members, 13 value our natural resources and believe they will become 14 more, not less, critical to our health and well-being over 15 the next 30 to 50 years of this relicensing period. The river and its tributaries have defined this town as sources 16 17 of power, transportation, boating and swimming, river views, 18 wildlife and game, not to mention valuable sources of water 19 and food.

20 Water quality, as I said earlier, must be a 21 priority of the corporations that harvest water for power 22 generation. We call for a good-faith sharing of the 23 profits from hydroelectric power generation to be reinvested 24 locally, to fund programs to modernize sewage treatment 25 plants and stop the preventable dumping of pollutants into

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1 the river.

2	This is not a wealthy community in economic
3	terms. Franklin County is the poorest county in this state,
4	but its true wealth lies in the natural resources of this
5	river valley. This is exactly the time for bold planning
6	and investment in the future of the river.
7	Therefore, GNWA wants to support Sam's comments,
8	the Connecticut River Watershed Council, the Connecticut
9	River Stream Bank Erosion Committee, in the call for serious
10	studies on the feasibility for a closed loop reservoir
11	system, and other mitigating systems that will cause less
12	disruption to the natural flow of the Connecticut River, and
13	protect its fertile flood plain from erosion or pollution.
14	Large infrastructure projects have served this
15	country well in the past, and must not be ruled out as
16	solutions to the problems of today. We call upon regulators
17	to require a state-of-the-art and thorough environmental
18	impact study of the basin towards its relicensing. Anything
19	less is not good enough for our members.
20	Our concerns include the effects of the dam,
21	constant but unpredictable water fluctuation, barriers to
22	migratory and resident fish, as well as warming of the river
23	from Vermont Yankee nuclear power facility, which is
24	dependent on Northfield Mountain Pumped Storage Project as a
25	consumer for its electric power generation.

Our riverbanks provide essential habitat for scores of aquatic species. Specifically, we would like to see a more vigorous effort from FirstLight Hydro Generating Company and TransCanada Hydro Northeast to improve the Turner Falls fish ladder and canal, and the conditions in the river that will benefit spawning habits of shad and other native species.

8 In terms of recreation, the lack of 9 predictability in the drawdown of water by the pump station, 10 as well as heavy silt, are a major impediment to boating at 11 the Northfield Patchaug state boat ramp. GMWA would like to 12 see a deepening commitment to recreation, including funding 13 and development of riverside trails and additional boat 14 launches.

While I wish to commend Northfield Mountain for its existing recreational and wildlife programs, I would also like to see them establish a more frequent mechanism for regular updates and dialogue with local officials and NGOs to determine the optimal use of those resources dedicated to public programs.

GNWA views the scoping and relicensing process as an opportunity to plan for a better quality of life along the Connecticut River over the next 50 years and beyond. Provisions will need to be in place to deal with increasingly severe weather events that are now the norm.

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1 Climate change threatens to challenge us in ways we can 2 hardly imagine. It is impossible to predict the demand our 3 residents may have for precious local natural resources, as 4 fuel costs climb and demand for food and water grows 5 nationwide. Government and power suppliers will need to be 6 more flexible in responding to changes at the local level.

7 These debates can't be every 30 or 50 years 8 They have to be regular, even every five years, in anymore. 9 my opinion. Where we have the chance to speak to both the federal government and the utility companies, whose 10 11 headquarters and personnel are often very removed from our 12 town and our state, even, the public wants reassurance that 13 management of these power systems will be responsive to 14 local needs and concerns.

We will be following these negotiations closely in the months and years ahead, and urge the development of creative and responsible initiatives that will serve the public good well into this century. I do thank you for the opportunity to address the Commission with our concerns.

I just wanted to point out, my grandfather was involved in developing flood control measures following the 1936-1938 storms that flooded this river. It's just really interesting for me to be here in this position when I look ahead at the potential for serious flooding and serious drought from global warming. I don't want to let an

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1 opportunity pass to say, we have to think big in this 2 process. 3 Thank you. 4 (Applause.) 5 MR. HOGAN: Thanks. It's now 5 after 12:00. I need to see a show of 6 7 hands of folks who'd still like to speak. 8 (Show of hands.) 9 MR. HOGAN: One? Come on up, and after that we'll take a 30-minute break for lunch. When we reconvene 10 11 I'll pick up on the resource issues. 12 MR. CONWAY: I don't have anything prepared, so 13 I'm probably going to fumble along on this. For one reason, what Sam said -- he stole my thunder. I had all this stuff 14 15 ready in my brain, but I'm going to agree with most of what he said, and our lady from Northfield the same way, too. 16 I have my finger here up on December. This is 17 18 at the use of going below the Turners Falls dam to try to 19 find the hole to keep the water from flowing out of the 20 reservoir. But I'm giving up on that too. 21 I'm Peter Conway. I live at 47 Riverview Drive 22 in Gill. I live in a 1910 farmhouse bought just about ten 23 years ago, so I'm not a longtime river person. But being on 24 the river is something I've done all my life, since I used to fish the Green River. Caught my first fish at three. I 25 26

1 didn't throw it back, Charlie. It was not a catch and 2 release, by the way. I want you to know that, I kept it. 3 So as far as the Connecticut River is concerned, and what I've seen over ten years, it's really amazing how 4 5 that water goes up and down. And I'm concerned about the 6 future, as far as Northfield is concerned; about the 7 increase in putting more water into the reservoir and 8 dropping it down even lower. I think there needs to be 9 coordination as we've already mentioned between the three 10 areas. I hope that FERC can address that with a good bit of force. 11

12 As far as the loop system, which I think would 13 resolve a lot of problems here, the loop system, as far as 14 FERC addressing these different entities and so forth, it's 15 really the investors that are going to look at it and say, 16 yeah, we don't want to put that kind of money in. Because 17 once we get this license, in a couple years, wait a few 18 years, we're going to turn it over anyway. We're going to 19 improve that place.

As far as the people that run all of these dams and hydro plants and Northfield pumped storage and everything, they're workers. They do what they're supposed to do. They're not the real issue here. It's the investors who say, this is what we want, this is how we want you to operate it, and hang on.

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1 So our real force here is FERC. And addressing 2 the issues we have today, I'm concerned about what I see in 3 front of me all the time since I've been watching them for 4 ten years. I no longer have the eagle's nest to look at, 5 because the tree fell over. But I see the cove and the way 6 light changes. I watch the way the fish have to change 7 their habitats, and how these fish survive -- I mean, they 8 lay their eggs, and the eggs become food for other kinds of 9 things, and so forth. But when the water goes down and all 10 of these nests dry up and they stay high and dry for several 11 days sometimes, that's the end of that game as far as the 12 bass population and pumpkinseed population coming in. Thev just dry up. 13

14 There are times when -- they cannot leave the 15 cove, by the way. The water is too low for them to get out. 16 They can't do it. And if you want to take a trip and show 17 your price off, you know how to manage the river(**). So 18 this is something I'm not going to see 50 years from now. 19 I'm not going to be here. If you're 20 years old, probably 20 you are, but in 50 years from now or 30 or 40, changes are 21 going to be immense in that period of time. Changes are 22 going to take place.

You're going to have a license that is going to be granted in five years. You're going to have different situations in what you feel the power companies should do.

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Certainly coordination is a big issue here with these three
 levels, as this 20-plus miles of the river is concerned.
 They've got to get together on this.

4 And so, I hope that will come about. I won't see 5 it happen. I'll hear about it in 2018, I hope. But I do enjoy my place on the river. It's a real peaceful place, 6 7 and I know that all the people up and down the river who go 8 up and down the river in boats or camp sites or everything 9 else enjoy that, too. I don't like seeing these people on the weekends when they show up to have their fishing derbies 10 11 just go out there and recreate, go out in the morning at 12 9:00 in the morning, and come back at 3:00 and can't get 13 their boats on the ramp because it's changed that much. And 14 they don't know any different anyway, some of them. Some of them, the first time out on the boat, for example, they put 15 that boat in when the water's going down. By the time they 16 17 get back, forget the problem and everything else. It's 18 gone. You could do cartoons about that part.

19 So I appreciate being able to get up here. Most 20 everybody has said what I want to say. I hope that this 21 goes somewhere, as I said to you.

22 MR. HOGAN: Yes, it will.

23 MR. CONWAY: Thank you very much.

24 (Applause.)

25 MR. HOGAN: It's almost quarter after 12:00. Why

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don't we reconvene at quarter of 1:00? Thank you. Real quick, before we take a break, if you didn't sign the sign-in sheet when you came in, please sign it on your way out. We just want to make sure we capture everybody who was here. It will help the court reporter with writing down names and making sure the spelling is correct. (Whereupon, at 12:15 p.m., a lunch recess was taken.)

1 AFTERNOON SESSION 2 (1 p.m.) 3 MR. HOGAN: All right. We're going to get 4 started again. 5 (Pause.) MR. HOGAN: If we could just take our seats, 6 7 please. 8 Thank you very much. Hope everybody had a good, 9 quick lunch. Some of us are still having it. 10 We left off going through the resource areas we've identified and would like a few comments on. 11 12 Terrestrial resources, I'd like to start there. 13 Terrestrial Resources 14 MR. BATTAGLIA: Hello. I'm Brett Battaglia with 15 I'll go over the initial FERC issues identified for FERC. 16 terrestrial resources. They are the same for all three 17 projects that we're discussing today. 18 First is effects of project fluctuations in water 19 levels and flow releases from the projects on riparian 20 wetland and littoral vegetation community types, and the 21 spread of invasive species as a result of project operations 22 along the shoreline of the projects; effects of project 23 operation and maintenance activities, for example road and 24 facilities maintenance, and project-related recreation, on 25 wildlife habitat and wildlife; effects of project operation

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1 and maintenance on river bank integrity and shoreline 2 erosion along the project reservoirs and stream reaches, and 3 its potential effects on riparian vegetation; effects of the 4 frequency, timing, amplitude and duration of reservoir 5 fluctuations on the water flow and on riparian and wetland habitat. And lastly, the effects of project operation and 6 7 maintenance and project-related recreation on bald eagles 8 and their habitat.

9 MR. HOGAN: I'd like to know -- we did hear one 10 comment earlier about project effects on reservoir 11 fluctuations and waterfowl. I'm glad to hear that we got 12 that one right.

13 Oh, we're missing TransCanada. Come on up.14 (Laughter.)

15 MR. RAGONESE: I just filed an extension.

16 MR. HOGAN: Denied.

17 (Laughter.)

18 MR. HOGAN: We'll do FirstLight first, and then19 we'll switch to TransCanada.

20 MR. HOWARD: Okay.

In our PAD, we did propose a study. This is kind of a baseline, background study that incorporates several resources under one. But a baseline inventory of botanical resources in the Turners Falls bypass, versus the impoundment, and the bypass, and below Cabot. And what

1 we'll be looking at when we do this survey work is wetlands, 2 wildlife, threatened and endangered species. SAV stands for 3 Submerged Aquatic Vegetation, and emergent aquatic vegetation, and the littoral zone. We did hear this morning 4 5 concerns about fish spawning, and then if the reservoir elevation would drop, what the impact is. This is the type 6 7 of study that would look at the littoral zone and those 8 habitats.

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That's what we have.

MR. RAGONESE: Hi. My apologies for being a
little late. It was those extra fries.

12 In our PAD, we did not identify particular 13 proposed studies. Similarly, we didn't have any specified 14 mitigation measures regarding terrestrial resources. And as 15 I mentioned earlier, we did a shoreline survey, and as part of that shoreline survey we did identify wetlands, tried to 16 17 confirm those were in the National Wetlands Inventory, 18 mapping riparian vegetative types, and to the extent from a 19 timing standpoint we're out in the field, identification of invasive species. This would include all three 20 21 impoundments, in particular for the topic today, the Vernon 22 impoundment.

Then we also conducted, as I mentioned earlier, the rare, threatened and endangered species survey. In all cases, all three impoundments that we did that, the basis of

that were lists that were provided. When I say rare,
 threatened and endangered species, I'm talking about state listed species, not just the federal species, of course.

4 We had asked for the list to encompass a thousand 5 feet either side of the river. And then we prioritized those into different categories, depending on whether or not 6 they were likely to be impacted or potentially impacted by 7 8 project operations, versus those that weren't. And then we 9 conducted the full survey of the ones that were likely to 10 be, and those that were potentially. And those that were 11 far beyond, we did not conduct any further investigations. 12 They were out of the project.

13 We probably found about, of the total sites we 14 ended up recording, maybe about 40 percent of those were new 15 locations, new sightings. Again, this will be in a report that will be out soon. The specific locational information 16 17 is not probably going to be available. You'll have to 18 request that through the states of Vermont and New Hampshire 19 for the inventory information, and they may have some sort of confidentiality statements for that. 20

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That's it.

22 MR. HOGAN: I'd like to seek comments on 23 potential project effects, concerns or compliments regarding 24 terrestrial resources, wildlife habitat, vegetative 25 communities, things of that nature.

1 AUDIENCE: I do, yes. I'm trying to figure out 2 the way things go from here on out. Because I think that a 3 lot of the comments we had earlier cover a lot of what's 4 coming up right now. 5 MR. HOGAN: There's certainly been a lot of 6 overlap. 7 AUDIENCE: So there's been some overlap, so I 8 didn't want to go into that area. 9 I didn't know about the -- I think when the 10 gentleman from TransCanada there just spoke about showing a thousand feet on each side of the river. Is that what's 11 12 happening there? 13 MR. RAGONESE: You need to request information 14 from state agencies -- the National Heritage folks. It's 15 either a request about a range, some sort of range, you know, some delineation of what you want for their list. 16 And 17 then we have lists. -- not affected by the project. 18 We want to make sure we encompassed areas and 19 other adjacent areas besides just the river corridor. 20 AUDIENCE: So you get an overlay from them and 21 then you look at it --2.2 MR. RAGONESE: It's not an overlay. It's a list 23 that will have the locations identified; some case on a map, 24 some cases an area, it's a reported area that might have 25 been a sighting back in 1920, or whatever it might be. Some 26

1 of them are very specific, some of them are very broad. So 2 you spend a lot of time actually looking for the records linked. 3 4 AUDIENCE: Thank you. 5 MR. HOGAN: Any other comments or questions? 6 MR. JAHNIGE: Just a question. Paul Jahnige, 7 from the Department of Conservation and Recreation. 8 For FirstLight, I can't remember if your list 9 included the whole of the Northfield Project lands in your 10 baseline inventory. 11 MR. HOGAN: Was your list all-encompassing of all 12 the lands in the Northfield Mountain project area? 13 It was lands adjacent to the Turners AUDIENCE: 14 Falls impoundment, the bypass below Cabot. MR. JAHNIGE: So that would not include the rest 15 of the Northfield Project lands; and I would note that there 16 17 be schedule impacts from O&M of the Northfield Mountain on 18 that end; also project-related recreation on various 19 terrestrial resources, natural communities. 20 MR. HOGAN: So we should be looking at 21 terrestrial effects basically on Northfield Mountain? 22 MR. JAHNIGE: In terms of baseline inventory, 23 they should definitely expand that to include the full 24 extent of the project lands. 25 MR. HOGAN: Thank you. 26

1 Other comments regarding terrestrial resources? 2 (No response.) 3 MR .HOGAN: Okav. 4 Threatened and Endangered Species 5 Threatened and endangered species, it MR. HOGAN: sounds like we've kind of touched on. Do we want to go into 6 7 more detail about threatened and endangered species, or we 8 can we call that one covered already? 9 MR. RAGONESE: I think it would be important to 10 note the discussion we had in one of the earlier meetings 11 this week on whether or not some of these are cumulative 12 impact, or not. 13 MR. HOGAN: Thank you, John. I'm going to let Mary McCANN actually address the 14 15 comment about the beetles and cumulative impacts. 16 MS. McCANN: I'm sorry, you're asking about what 17 is under the cumulative impacts? 18 MR. HOGAN: Tiger beetle. 19 VOICE: Oh, the puritan tiger beetle? If that's 20 identified within a project area, then that would be 21 something we'd be evaluating. That includes downstream of 22 the project. It could have cumulative impacts from multiple 23 projects in the way the flows go downstream. 24 MR. HOGAN: Our Scoping Document 1 identified 25 this threatened tiger beetle as being in the TransCanada 26

project facilities, but what we learned through our scoping meetings is that it's actually located downstream in the Turners Falls project area.

4 MS. McCANN: So we'd be clarifying that in the 5 Scoping Document 2.

6 MR. HOGAN: Right. Sp we're going to provide 7 clarification, but we also recognize that flow fluctuations 8 that are coming down from the TransCanada projects and being 9 perpetuated through the system may provide a cumulative 10 effect to the tiger beetle or its habitat that we would be 11 addressing.

12 So I think that's the clarification you were 13 asking for, John?

MR. RAGONESE: Yes. Two parts. Yes, because in our list of threatened and endangered species, we only have one that has a cumulative impact aspect versus the other two, but it mentions tyrian tiger beetles. Whereas I don't think the puritan tiger beetle is mentioned at all in the FirstLight resources, regardless of whether or not they're cumulative impacts or not.

21 MR. HOGAN: It sounds like they're going to get 22 on top of that. I'm getting nods.

23 MR. RAGONESE: Well, I know you are. I was more24 thinking of that scoping document.

25 (Laughter.)

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1 MR. HOGAN: And we will fixing the scoping 2 document. 3 MR. JAHNIGE: Paul Jahnige again. 4 Am I correct that your interest in threatened and 5 endangered species at the FERC is relative to 6 federally-listed? 7 MR. HOGAN: No. We're interested in all species. 8 Different species carry different weights. When we set up 9 our environmental analysis, we will have a threatened and 10 endangered species section that carries with it the federal 11 authority. But we will address state species of concern, 12 and things of that nature. 13 MR. JAHNIGE: And I don't know if it's listed or 14 not, and I don't actually know what the current status in, 15 but I do know that there's peregrine nesting within the Northfield project lands as well. 16 17 VOICE: Peregrine nesting? 18 VOICE: Yes. 19 VOICE: Nesting, okay. In Northfield? 20 MR. HOGAN: 21 VOICE: At the Northfield project, and 22 specifically I think the ledges, the top of which is within the Northfield project lands. 23 24 MR. HOGAN: Other comments regarding wildlife or 25 wildlife habitat and project effects, or threatened and 26

1 endangered species?

2 (No response.) MR. HOGAN: I'm going to have Adam present: 3 Recreation, Land Use and Aesthetics 4 5 MR. BEECO: As far as recreation, land use and aesthetics is concerned, it's the same issues, opportunities 6 and concerns that have been identified for all three 7 8 projects. I'm just going to read through these. 9 The adequacy of existing recreation and public use facilities in meeting existing and future public use and 10 11 river access needs. Effects of project operations on 12 quality and availability of flow-dependent and water level-13 dependent recreation opportunities, including boating; adequacy of structural integrity, physical capacity, and/or 14 15 management methods to support recreation use at existing facilities. And under land use, the adequacy of existing 16 17 shoreline management policies and programs to control 18 non-project use, project lands, and the adequacy of 19 shoreline management buffers to achieve project purposes in 20 compliance with local and state requirements. 21 Under aesthetic resources, at this time we have 22 not identified any aesthetic resource issues. 23 MR. HOGAN: We have a question. Leena? 24 MS. NEWCOMB: What does that mean, you haven't

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identified any aesthetic --

1 MR. HOGAN: What that means is that currently we 2 haven't identified any aesthetic resource concerns. We're 3 here to be told that we're wrong. So if you have concerns 4 that affect the natural viewshed -- you don't like your 5 mudflats or some other thing that we've already heard, or 6 something new -- we want to hear it. MS. NEWCOMB: Well, I don't want to repeat things 7 8 that have already been said. A lot of it has been covered 9 in the photographs I brought. 10 MR. HOGAN: Okay. 11 MR. BEECO: And there are other things in past 12 meetings that we acknowledged; but for this purpose, we just 13 read from the scoping document. So we are, been made aware. 14 MS. NEWCOMB: Okay. 15 MR. HOGAN: But if you have something that hasn't 16 been raised, and want you to raise it in a minute here. 17 MS. NEWCOMB: Always petty things. 18 (Laughter) 19 They're all important. MR. HOGAN: 20 MR. RAGONESE: Again, in referencing the PAD that 21 we filed, we did not specify any particular recreational 22 study. We know that we'll be doing some analyses, and we 23 didn't specify particularly any mitigation or enhancement 24 measures, propose any. 25 I will make a note that in the part of the 26

1 shoreline survey that we performed, we did take notes of 2 public and private recreation opportunities, as well as in 3 the PAD there's quite a bit of information about public and 4 private recreational resources that are already adjacent to 5 the project areas; and we refer you to those.

6 Again similarly for land use and esthetics, we 7 did not propose any particular studies or have a particular 8 PM&E measure proposed in the pre-application document.

9 MS. BURGO: My name is Sara Burgo. I work with I'm assisting FirstLight in the relicensing of its 10 TRC. 11 TRC specifically is going to be working on projects. 12 recreational and cultural resources issues.

13 With respect to recreation, the first thing I wanted to note is that in 2011-2012, we started an inventory 14 15 of FirstLight's recreational facilities and recreational 16 opportunities within those two project areas. We've done 17 that on a seasonal basis, and we've completed the fall, 18 summer and winter portions of that inventory. The results 19 of that inventory is the information that you see in the PAD 20 and the figures there.

21 We have not been able to do the winter inventory 2.2 for two winters because of lack of good snow conditions. 23 We're hoping we're going to be able to complete it this 24 winter, so hopefully we'll get a big flood of snow. 25

So that's one proposed study is just finishing up

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that baseline inventory, which as I said sort of catalogues what's out there, what kind of amenities are at each recreation area, and for the weather conditions, what condition these amenities are in.

5 We also in the PAD have proposed a couple of 6 studies. One is sort of a recreation/user contact study. 7 The objective of this is to figure out whether current 8 recreational facilities are accommodating the amount of use 9 that they're receiving, and determining what other needs are 10 out there that aren't being met, if any.

We are going to do a land-use classification inventory. That's really sort of a survey to figure out what land activity is going on within the project boundary, and then how to appropriately manage those during the term of the new license. That also means non-project uses versus project uses.

And then finally, we're going to take the results of a lot of the different studies and determine whether or not project operations, water level fluctuations, are impacting recreational use within the projects; getting to some of the concerns that we heard this morning with regard to whether you can actually launch a boat at a boat ramp, whether a site is eroding, et cetera.

We did not specifically propose anything foraesthetic resources.

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1 Hi, Leena Newcomb, River Residents. MS. NEWCOMB: 2 Can you tell me what's available for tenting 3 upriver besides the Barton Cove campground? 4 SPEAKER: The only other location in our project 5 boundary would be the Munns Ferry. MS. NEWCOMB: And there's a facility there for 6 7 overnight tenting? 8 SPEAKER: Yes. 9 MS. NEWCOMB: And what does the facility consist 10 of? 11 There's about a dozen campsites, right SPEAKER: 12 along the river's edge. And it's accessible by boaters 13 only. 14 So if you canoe or kayak down the river, and make 15 reservations in advance, you can spend the night there. MS. NEWCOMB: Okay. And is there anything 16 17 upriver from that one? Is there anything else available? SPEAKER: Not that we're in control of. And I'm 18 19 not aware of any. 20 MS. NEWCOMB: Okay. But that has been a question 21 and a concern that I've heard through the community, through 22 the boating community and the other recreational water 23 users, is that there's not enough available. And there 24 seems to be so much rural land not being used for anything 25 else, is it possible that there should be another site to 26

1 accommodate people.

2 And concern about the fee at \$22 a night to sleep 3 in a tent. 4 MR. RAGONESE: Just to carry that, just a little 5 more information. It's TransCanada project land, that actually 6 7 below Vernon, there's a canoe campsite that's a privy, that 8 type of thing. And there's another one north of Yankee 9 somewhere in on the Vermont side there another campsite 10 there. And then I'm not sure if there's any more at Vernon. 11 Some of the ones that we maintain as part of our 12 network, that's maintained by the canoe -- Connecticut River 13 canoe, powers, -- or something like that. We maintain six 14 or seven. AUDIENCE: Abott's Trail. (ph) 15 16 MR. RAGONESE: Abott's Trail. It has many names, 17 but it's the same issue. 18 MS. NEWCOMB: So that's above Vernon Dam? 19 MR. RAGONESE: No, the first one I mentioned is 20 below Vernon Dam. 21 MS. NEWCOMB: And the other ones are upstream 22 from that? Okay. 23 The other concern I've heard recreational users 24 talk about is better, more effective portage for canoeing 25 and kayaking to get around the dams? I don't know 26

1 technically how it would be done, or what is available 2 through Northfield Mountain, or through the hydro company, 3 but I've heard people say it's not very accessible, and they'd like to see a better system put in place so that 4 5 people could portage and use the entire stretch of the river 6 system. MR. HOGAN: The portage around Turners Falls and 7 8 Vernon? 9 MS. NEWCOMB: Yes, and whatever else is 10 downstream; people don't want to canoe the entire length of the Connecticut. I'm just sharing what other people have 11 12 asked me to bring up about recreation. 13 MR. HOGAN: Right. 14 John, that's a good question. Is there a portage 15 already available at Turners Falls? 16 MR. RAGONESE: Yes. MR. HOGAN: Well, we'll get to it. 17 John 18 Ragonese. 19 The exit is right above the debris MR. RAGONESE: 20 barrier. 21 AUDIENCE: (inaudible) at Barton Cove, and then 22 we'll transport you and your canoe or kayaks downstream. 23 There's a put-in at Copper Street, which is downstream of 24 Cabot Station. 25 You say that you'll actually MR. HOGAN: 26

1 transport.

2 AUDIENCE: Yes. 3 MR. HOGAN: Is that a --4 MS. NEWCOMB: People have to call ahead? 5 AUDIENCE: Yes, they can call ahead; or once they 6 get there (inaudible) 7 MS. NEWCOMB: Where you actually rent canoes and 8 kayaks? 9 AUDIENCE: Yes. 10 MS. NEWCOMB: How often is that (inaudible) seven 11 days a week? 12 AUDIENCE: In the summer, during the summer 13 period, seven days a week. We end up portaging maybe a 14 dozen, two dozen trips a week. 15 MS. NEWCOMB: Okay. 16 MR. HOGAN: Yes, sir. 17 MR. CHRISTOPHER: Tom Christopher, from New 18 England FLOW, and American Whitewater. I'm here with my 19 colleague, (inaudible), American Whitewater. We do have 20 (inaudible) on Corps projects, and I'd like to start out 21 with Vernon first. 22 Essentially, the Vernon project is a 900-foot 23 wide dam that blocks flows completely, and any natural 24 whitewater flows have been eliminated because of the 25 installation of these dams. 26

1 MR. HOGAN: We're having a real hard time hearing 2 you. I'm sorry. So if you could project and come closer. Use the mic if you want. 3 4 MR. CHRISTOPHER: I'll start again? 5 MR. HOGAN: Please. 6 MR. CHRISTOPHER: Okay. The Vernon Dam, 7 basically we lost all the flows of the river, and it has 8 eliminated any possible whitewater opportunities. 9 One of the studies that we're asking the FERC to 10 undertake -- and this is going to be somewhat repetitious --11 is an economic analysis. The flow, the operations and 12 management of the Vernon Dam have significant negative 13 recreational impacts, and related socioeconomic impacts. 14 And no change of the operation scenario of the Vernon Dam is 15 going to create any relief from this loss. 16 In other words, there's no amount of water in the 17 Vernon Dam that's going to provide us with any sort of 18 whitewater opportunity. And in this particular case, 19 because there is no relief, we would ask FERC to weigh particularly the economic values associated with whitewater 20 21 use by looking at various alternatives. And you've heard a 22 little bit about this early in some of our prior testimony. 23 Essentially, what we're looking for is 24 compensation for the loss of this whitewater opportunity. 25 The goal of the study is to assess the presence, quality, 26

access needs, flow information needs, and preferred flow
 ranges for other regional offsite whitewater boating
 resources that could provide compensation for the loss of
 whitewater recreation beneath the Vernon Dam.

5 Offsite mitigation is a term that is used in this 6 business in many different ways, but this is perhaps a 7 unique opportunity to do offsite mitigation. What this 8 would require would be participation from, in all 9 likelihood, multiple state and federal agencies. And 10 agreement of this type of mitigation would balance the 11 objectives to offset the loss of whitewater that we have had 12 at the Vernon Dam.

13 Since the values of this lost whitewater 14 recreation are unknown, and because the problem is there's 15 no whitewater activity at the Vernon site, we request the 16 study be compiled using the contingent valuation method of 17 study, which would measure an individual -- if this was 18 available; and this should be measured against the value of 19 the generation power of the Vernon Dam.

20 Now, Turners Falls. Turners Falls is a little 21 different. Turners Falls actually has the ability to offer 22 whitewater paddling opportunities. So the Turner Falls 23 project is a 2.7-mile diversion that essentially reduces 24 flows, leaving only minimum flows, or those flows for 25 standards developed by the Department of Fish & Wildlife.

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Since the whitewater opportunities have been eliminated by this project, and whether they are in water stable or predictable operational flows, we think that we should have the full flow study relative to flows that could be provided.

One of the other issues that is a problem here at 6 7 Turners Falls here is public access directly below the 8 Turners Falls Dam Station No. 1. There is currently no form 9 of public access or parking that would be provided by the licensee, to our knowledge. And it is our understanding 10 11 access for access during whitewater flows that could occur 12 below Cabot Station, parking for boaters and multiple 13 vehicles is somewhat --.

14 Again, just to review, we certainly would like to 15 see a controlled whitewater flow study of the bypass reach. 16 We currently do not know the relationship between specific 17 low and moderate flows and any type of experience 18 they would provide. And until we obtain this information, we can't really define the project in those terms and we 19 20 really can't really come up with any proposal until we have 21 this type of information.

Again, we would like to see a study on public access through these different points, or they could just be discussed. And finally, -- almost finally. As we have in other projects, we do request an economic analysis of the

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site. And again, the goal of this particular recreational
 economic analysis is to examine the regional economic
 benefits of various flow alternatives that could be provided
 by restoring flows to the Turners Falls bypass reach.
 And again, as we have described in all of our

6 other projects, we would like to see this study go forward 7 using the contingent valuation method of study; it will be 8 much more predictive.

9 In this project, if it is determined that we 10 cannot have suitable whitewater flows, we would want the 11 licensee to also look at some type of other offsite 12 mitigation. But I feel confident that there is enough 13 structure in the river, in the bypass reach, that could 14 provide consistent whitewater. And I don't think it will be 15 necessary to go much beyond that.

Thank you very much.

17 MR. HOGAN: Thank you.

18We have a comment over here, and then over here.19MR. CONWAY: Peter Conway, Gill resident. A

20 couple things.

First of all, I want to speak to the Northfield Mountain recreation area. I really want to compliment John Howard on the great job they do up there providing that area for recreation to anyone who wants to use it, whether it's fall, or summer. We have cross-country meets up there in

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the fall. And they do a great job. So far, we have a negative side as far as that is concerned; but this is really a positive part of how we manage that facility.

4 And the other thing has to do with these 5 canoeists. Many canoeists get into the river at some point 6 along the river and just say, 'Let's go 100 miles.' And so they come down. They didn't research anything. I think 7 8 half a dozen times since I've lived where I live, I've woke 9 up in the morning, heard conversation. I looked down there, there's a kink on the riverbank with a canoe pulled up. I 10 11 go down there and say Hi, they say, "How do we get to the 12 next park?" And they haven't even researched what they're 13 Just fly by the night kind of thing. doing.

So I load up there canoe, I get in the car, we drive over the one-way bridge, I stop at Shady Glen, I give them breakfast, and ride them down to the other end where people are down underneath the bike path goes over the old railroad bridge; and I say, "This is where you go, guys. Good luck." And off they go.

20 So it's a matter of research, and it's not a 21 matter of they don't know where to go, because these people 22 don't bother to find out. So the place is there. If they 23 want to plan a trip and call ahead, then they'll know what 24 to do. So think ahead. Right?

25 Thank you.

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MR. HOGAN: Thank you.

2 VOICE:

SPEAKER: Bob (inaudible), American Whitewater. 3 4 I want to echo and expand on Tom's comments.

5 We represent the interests of kayakers, canoeists 6 and rafters who enjoy the whitewater industries; and here in 7 Turners Falls, we're sitting in kind of the cradle of two 8 important whitewater resources. To our east is the Millers 9 River, and it's a series of Class II, Class IV there that 10 are always boated in the springtime. To our west is the 11 Deerfield River, which throughout the late spring, 12 throughout the summer into the early fall is where boaters 13 in Massachusetts and New England really enjoy the 14 recreation. TransCanada is here, and I really want to 15 credit them for the agreements they've reached on that river 16 that's providing an important resource. And I think that's 17 really a model for what could happen here in Turners Falls. 18

Which is want I want to speak to.

19 There's a 2.7-mile stretch that, only the minimum 20 flows go through it -- could be and should be a tremendous 21 resource for the boating community. And we support the call 2.2 for controlled flow studies on that reach so we can see 23 exactly what are the resources that are there. A few people 24 have paddled it when there's been surplus water that has 25 gone in that reach, and we have great reason to believe that

there are resources there that could be enjoyed, that would be enjoyed.

We certainly want to urge FERC to study this issue. We'll be submitting formal comments and study requests on that issue, the issue of access and economic analysis, and we're optimistic that we can open up this boating opportunity to kayakers throughout the region.

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Thank you.

9 MR. SIMS: My name is Norm Sims, and I'm with the 10 Appalachian Mountain Club, and we'll be representing the 11 America interests in these relicensings, along with Dr. Ken 12 Kimball.

13 The AMC is the largest conservation and 14 recreation organization in New England. It's been here 15 since 1876. The majority of our members live in 16 Massachusetts, New Hampshire and Connecticut, and currently 17 there are 90,000 members of the AMC.

18 I'd like to start by mentioning to Adam that we 19 do have an aesthetic issue in the dryway. Bare rock where 20 there ought to be a river is an aesthetic issue that needs 21 to be addressed.

I want to mention several things, starting with the Turners Falls facility, and then moving on to Vernon. We do have an interest in boating in the 2.7, 2.5

25 mile bypass reach -- however long it is -- and we agree with

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1 American Whitewater that there should be controlled flow 2 studies. A number of people have traveled this reach 3 because of flood flows; it creates some fairly interesting 4 surfing waves immediately below the dam. So people have 5 experience with this. We know it's paddle-able. We know 6 it's a valuable resource. We think we ought to have 7 controlled flows, with a standard controlled flow study, 8 which has been done on many, many rivers that have been 9 licensed by FERC.

Along with that study, there should be a cogent valuation study about the value of that resource. Contingent valuation allows us to compare values -- not necessarily dollars, but values -- of a recreational use versus the value of the power generation from the facility.

15 Secondly -- and I want to thank Peter for his comments about people portaging through his property or 16 17 camping on his property. The AMC has a broad interest in all of the recreational facilities on the river. We are 18 19 going to file a request for a study on the quantity, quality and adequacy of those facilities for the proposed 30-year 20 21 life of the license. This should include put-in and 2.2 take-out facilities. I think some of those ought to be 23 modified so that they're more usable for canoes and kayaks. 24 Portage routes. In my opinion, there is no

25 portage route around the Turners Falls dam, because there is

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no pathway. The three facilities, and the TransCanada
 that's relicensing, they all three have pathways, you can
 call them.

Now one of those follows a high-speed highway. I don't think it's adequate at all. But at least there is a pathway you can walk. I'm not going to call a truck from FirstLight to come pick up my wooden canvas canoe. That's not going to work for me at all. They have to address this -- I can't imagine FERC relicensing a dam on a major river that does not have a portage pathway around it.

11 This could result in the construction of more 12 trails. There could be a historic and scenic trail along 13 the lip of the river around here, where there are some major 14 historical connections, going back to colonial times. These 15 facilities could be matched up to create a portage route.

We're also interested in the number of campsites, 16 in parking, in road access, seasons of operation, 17 18 maintenance, and sanitary facilities along the river. In my 19 research of this and talking to through boaters, the 20 campsites, once you cross the Massachusetts border, are 21 inadequate. We're told that the islands are posted so 22 nobody can use them; those are the natural places for 23 through canoeists to camp. They end up sometimes camping on 24 mudflats. I'm sure they've been camping on Peter's 25 property, because they don't really have other

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1 opportunities.

2 So that's one reason why I think the study of the 3 adequacy of the facilities provided by the licensee should 4 take place.

5 This might also include the suggestion that the 6 licensee buy the land from willing sellers in order to 7 create additional campsites, particularly for canoeists on 8 the river.

9 I'd like to say a word, too, about Northfield 10 Mountain, and start by congratulating them on creating what 11 has been at times a spectacular recreational resource, 12 particularly for cross-country skiing during winter. I hear 13 that the facility has been compromised somewhat in recent 14 years, not just by the weather but by lack of staff.

15 There is currently a discussion about the trails, 16 particularly the New England Trail that passes through the 17 Northfield Mountain property, and I believe there are 18 discussions taking place about possibly buying some 19 additional land to relocate the trail down from where the 20 pumped storage is, at a little bit lower level. 21 Mark, is that approximately correct?

21Mark, is that approximately correct?22AUDIENCE: (Inaudible).

23 MR. SIMS; I'll share a map with you later. 24 Anyhow, that discussion needs to take place if those trails 25 are going to be relocated.

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1 MR. HOGAN: Can you give me a guick definition of 2 what the New England Trail is? 3 MR. SIMS; I can't tell you how far it goes. MR. HOGAN: What is it? 4 5 MR. SIMS: Go ahead. The New England Trail is the New 6 AUDIENCE: England National Scenic Trail. It's a National Scenic 7 8 Trail, federally designated. It goes through the Northfield 9 Project area. It's the former, also Metacomet-Monadnock 10 Trail, also known by the name, Metacomet-Monadnock; a 11 220-mile trail from Long Island Sound to Mount Monadnock. 12 And it is Massachusetts' second National Scenic Trail, in 13 New England. 14 MR. HOGAN: And it goes right through the 15 Northfield Mountain project? SPEAKER: It goes on the back side of the 16 17 reservoir, Ken. Forest land, and touches on the back side/ 18 MR. HOGAN: Thank you. 19 AUDIENCE: Ken, we actually have a unigrid for 20 it, so I can get you a copy of that. 21 MR. HOGAN: Okay. 2.2 MR. SIMS: This trail recently acquired, as 23 Congressman John Alper was very active in doing that; and 24 portions of the trail were relocated as that went through. 25 AMC, which manages thousands of miles of trails 26

in New England, is interested in the location of those trails; and we're also interested in perhaps linking up some of those trails through project lands with other systems of trails.

As I mentioned, the recreational and educational benefits of Northfield Mountain have been nice. With global warming -- particularly last year there wasn't much snow; maybe this year will be better, but we don't know. One thing we would like to have studied, and looked into is the possibility of using some snow making at Northfield Mountain.

As I mentioned in the other meetings, the AMC has a strong interest in the opportunities for multiple-day canoe trips on the Connecticut River. I mention this in relationship to all the TransCanada dams, and I'd like to repeat it a little for the FirstLight people.

There are a number of people that would do multiple-day canoe trips on the river if there were adequate campsites and portages. The biggest problem for someone coming downriver and trying to spend more than one day on the river is simply the existence of the dams, complicated campsite arrangements, and making portages that are not of the best quality.

24The Connecticut River Paddlers Trail -- as I25guess it's called now -- is pretty extensive in the northern

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reaches of the river, and that's going to be extended through the southern reaches of the river. So I hope the licensees can get involved in improving the situation, particularly there needs to be more campsites, in my opinion, that we could study that and see how many there need to be.

As Tom mentioned, there's a real whitewater opportunity below Turners Falls, but there were whitewater opportunities at the dam and above as well which have been drowned by the dam. Nobody's talking about taking the dam out, so we would like to see offsite mitigation for the loss of those recreational opportunities.

I would particularly suggest that the licensee look at the National Blueway System, which frequently named the Connecticut River watershed as the first National Blueway River. They may be able to find offsite mitigation and whitewater opportunities elsewhere within the watershed.

18 If I could make just a couple of comments about 19 Vernon, and then I'll be done. In a similar way, I think 20 the facilities at Vernon ought to be examined from the 21 Stebbins Island campsite below Vernon dam all the way up to 22 Bellows Falls: the adequacy and the number of campsites, the 23 opportunities for put-ins and take-outs, and the quality of 24 those should be assessed in the study, and we will be making 25 a request for that.

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1 There has been a study done by the National 2 Paddlers Trails for four or five of the primitive campsites on the Connecticut River, one of which was Stebbins Island, 3 4 and it is found to be fairly seriously deficient. 5 Also, I think opportunities for most of the day 6 trips can be addressed at Vernon, and I'm sure TransCanada 7 will be looking into that for all three of their properties 8 up there; and we also want them to look into the opportunity 9 with American Whitewater mentioned, of providing offsite 10 mitigation for the loss of recreational resources because of 11 the dams. 12 Thank you. 13 Thank you. MR. HOGAN: 14 Do we have other comments? Kevin. 15 MR. MENDIK: Kevin Mendik, National Park Service. 16 I think one of the things that's important to 17 evaluate when you're doing these studies is a comprehensive 18 look at the whole river, not just in terms of what 19 recreational use is occurring and what you're observing on 20 your various surveys and onsite days; but to reach out to 21 all the different organizations and individuals and agencies 22 that have been here in the last couple of days. 23 Funding for their membership was to their members 24 and find out why a lot of these people are either using 25 these resources or not using these resources based on the 26

1 condition, the available facilities. Because you may find 2 there's a lot more desire to use some of these resources, 3 but they don't because of the conditions and lack of certain 4 facilities. That would give you a better picture of what's 5 happening and what's not happening. You may find the 6 resources allegedly 7 A lot of them are either underused or underutilized, but 8 there may be a lot more desire to use that resource. 9 MR. HOGAN: Are you going to be present during 10 the study plan development phase between proposal and revised? 11 12 MR. MENDIK: Yes, I'll be here. 13 MR. HOGAN: So you might be a resource tool for 14 us to utilize. 15 MR. MENDIK: Yes, there's a lot more 16 communication, judging by the number of people in 17 organizations that are here now. You've got project 18 websites -- all these organizations have websites that could 19 be gathering that type of information. It's a lot easier 20 than it used to be, passing out surveys to residents by 21 mail. 22 MR. HOGAN: Thank you. 23 MS. DONLON: Andrea Donlon, Connecticut River 24 Watershed Council. 25 We have published a boating guide for the 26

1 Connecticut River that lists all the facilities and at the 2 different reaches; and it's been said by many people, but 3 since the scoping document didn't put a little star next to 4 the recreational resources as being sort of cumulative, I 5 hope FERC's getting the sense that there is kind of a 6 cumulative, in a sense, of that the river runs 410 miles; 7 there are people who want to paddle the entire distance, 8 much like they want to hike the Appalachian Trail 9 So it's important to provide recreational opportunities that would allow for a full paddling trip down 10 11 the river, or boating trip. 12 MR. HOGAN: So for the record, you'd like us to 13 do a cumulative effects analysis of projects' effects on recreational resources, specifically boating, canoeing, 14 15 kayaking. Yes? 16 MS. DONLON: Okay. 17 AUDIENCE: Well said. 18 MR. HOGAN: Gotcha. 19 MS. DONLON: And in terms of the portage at 20 Turners Falls, the Poplar Street ramp, the company hired the 21 Conway School of Landscape Design to look at various options 22 for improving that facility, gosh, it was probably seven 23 years ago. 24 I don't know if any of those were ever implemented. It's a 25 tough site, there's almost no parking, the neighbors are 26

pretty mean, I guess -- they really don't want -- I think they've been impacted by partyers stopping there and just assuming that it's okay to use their property. But it's not exactly a friendly spot to park a car at. It's difficult; a very steep bank, and it's eroding, and it's hard to get there.

7 And then to the aesthetics issue, it is related 8 to streambank erosion. The projects that have been done to 9 sort of protects the bank also do have an aesthetic effect 10 on the river.

MR. HOGAN: We're talking about Turners Fallsimpoundment right now?

13 MS. DONLON: Yes, the impoundment.

14 So I think as projects goes forward, the most 15 recent projects have been, I think, more aesthetically 16 pleasing in that there's more natural vegetation left along 17 the banks; the types of things that get put in there are 18 rootwas (ph) and things that look natural. But there are 19 areas where there's tires placed along the river. They've 20 held up great, but it's not exactly a natural-looking 21 riverbank. So I think that is an aesthetic impact that's 22 come as a result of the operations. Same with rock rip-rap; 23 we wouldn't want to rip-rap the entire 20-odd miles of 24 river.

25 MR. HOGAN: We were thinking about asphalt.26

1 Joking. 2 (Laughter.) 3 MR. HOGAN: Andrea, you made a comment about a boater's guide that you've produced. Is that available on 4 5 line somewhere? MS. DONLON: It is not. It is something that 6 7 we sell as a book, so you can buy it online. But it's not 8 published online. MR. HOGAN: Okay. 9 10 MS. DONLON: But we do get a lot of phone calls 11 from people who are planning trips. Not everyone is like 12 Peter Conway described, which I'm sure does exist; but there 13 are people who really want to plan multi-day trips. They 14 call us up. We tell them about websites where they can 15 learn about the portages and things like that. MR. HOGAN: Do you have a citation for the book? 16 17 We may want to buy it. 18 MS. DONLON: Yes. I can even bring you a copy. 19 (Laughter.) MS. DONLON: Stop by our office or I can send you 20 21 a link. 2.2 MR. HOGAN: Okay. Thank you. 23 MR. JAHNIGE: Paul Jahnige, Department of 24 Conservation and Recreation. 25 I guess the meeting's almost over, as one of the 26

hosts of this building here, our organization manages this building. I welcome everybody to the Great Falls Discovery Center, and also the bike trail that we manage out here is noted as one of the project facilities, recreational facilities; the canal side bike path is on the property.

I'll also draw attention to the FERC and to the 6 7 licensees about Commonwealth Connections, which is the 8 Massachusetts Greenway plan, and suggest that it ought to be 9 listed as one of those statewide plans in the resources, and 10 look at that. It highlights the Connecticut River Greenway 11 as an important greenway. It also highlights the New 12 England National Scenic Trail as one of our critical, 13 long-distance statewide trails. Both of those are within 14 the project, and through the project area.

15 I would note in terms of aesthetics, you noted already that the FERC hadn't identified issues there, and 16 17 clearly some of those are coming up; clearly there are some 18 esthetic issues within the lower reservoir -- I'm sorry, 19 River. The raising and lowering of the water where's Sam: 20 does have aesthetic impacts as well as the other impacts 21 that have been noted.

22 With respect to another big impact that was 23 mentioned, the bare rock where there might be a river, and 24 then the upper reservoir I think also has some potential 25 visual impacts related to high-ground views, and also

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related specifically to the National Scenic Trail, which
 does go right near the upper dam.

In terms of recreational use studies that FERC 3 4 might particularly propose, I saw a user contact study and 5 maybe some user counts of existing uses. I'd suggest that 6 if we're really trying to identify the adequacy of existing 7 recreational and public use facilities, and meeting both 8 existing and future regional needs, we probably need to look 9 at some kind of sample survey study which reaches out to 10 population within the region to look at what the needs are, 11 what the desires are, and what the potential future needs 12 are for recreation.

13 I think it was mentioned in the scoping document 14 that the SCORPS for all three states perhaps identify hiking 15 as one of the most needed recreational opportunities, and obviously Northfield Mountain provides some important 16 17 opportunities there. And the New England National Scenic 18 Trail is an important opportunity, but really connecting and 19 recognizing those opportunities will be important in 20 addition to some of the paddling opportunities.

21 With respect to the National Scenic Trail, which 22 is also mentioned with respect to paddling opportunities, 23 the importance of camping and overnight camping within the 24 National Scenic Trail -- again, it's a 220-mile trail. 25 People are looking to do through hiking and looking for

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1 overnight facilities on that, and there may be an

2 opportunity for the projects to provide that kind of amenity 3 as well.

4 Then, as has been mentioned that the Connecticut 5 River Paddlers Trail, if that's what it's called, currently is in the northern reach of the river, in New Hampshire and 6 7 Vermont. It does not currently extend into Massachusetts, 8 but I think we've got a meeting next week to discuss the 9 opportunities for bringing the Paddlers Trail into 10 Massachusetts and Connecticut, and so that will be an 11 important consideration for the projects.

12 MR. HOGAN: Thank you.

MS. NEWCOMB: Leena Newcomb, I live on the river. John Howard, can you tell me what determines the length of a boating season when you decide, or how you decide to put the buoys in front of the dam, the safety buoys.

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(Laughter)

19 as it takes the length of the boating season, whether you're 20 a canoer or a kayaker or a power boater, angler, how that's 21 done and determined.

22 MR. BATTAGLIA: So the Federal Energy Regulatory 23 Commission through the New York Regional Office sent out a 24 letter quite a little while ago --

25 MR. RAGONESE: '85.

1 MR. BATTAGLIA: '85, thank you. Saying the boat 2 barriers have to be in by, and they can't be removed before 3 that period of time. 4 May 15 to November 30, I think it is. 5 MR. HOGAN: I'm sorry? (Simultaneous discussion) 6 7 MS. NEWCOMB: November 30? 8 They're out in October. 9 AUDIENCE: We don't take them out in October. 10 MS. NEWCOMB: Really? Okay. Is there a way of 11 extending the season, with a change in the weather pattern? 12 We often have reasonable weather on May 1. 13 There was some request for that last AUDIENCE: 14 year; and I quess we didn't do that, because of the 15 potential for high flows during the spring, and we look at that floweration curve, and high drafts in this area. 16 17 We can get some fairly high flows. I've had some 18 people during high flows wind surf and get hung up on the 19 bulk barrier. We also, we almost lost a fireman over the 20 dam a couple of years ago, trying to rescue someone trying 21 to go through the area. So in the interests of public safety. 22 23 MS. NEWCOMB: Okay, Thank you. 24 MR. HOGAN: Let me just ask a clarifying question 25 for my benefit. 26

1 If the prayer breeds (ph) are not installed, does 2 that mean that boating is prevented on the reservoir? 3 We lock them. The State boat ramp. AUDIENCE: 4 That gate is closed until that whole pier goes in, and we 5 notify the State, and they open up the gate for the summer boating season. 6 7 MR. HOGAN: Thank you. 8 You first. 9 Walter Ramsey. (inaudible) MR. RAMSEY: 10 Montague has an open space and recreation plan, 11 and one of the priorities in it is to improve access to the 12 river, it was started on the two sides of the river, again, 13 Montague; with very limited opportunity for access. That's still a priority for the residents here. 14 15 Regarding historic and aesthetic impacts, there is a historic district here in Turners Falls. 16 Tt. 17 encompasses the building that we're in and also encompasses 18 most of downtown as what we call the historic mill district, 19 which is essentially an island that's sandwiched in between the canal and the river. 20 21 The FirstLight resources on both sides of this, basically an island. It's five former mill sites in various 22 23 states of disrepair. The sites are hindered by lack of 24 access; and FirstLight owns two bridges to these sites, and 25 they're in various states of not being used or not having 26

access. And those bridges are on the Historic Register. 1 2 MR. HOGAN: So are you asking for those bridges 3 to be made accessible so repairs can be done? I'm not sure. 4 MR. RAMSEY: This is important. It seems to me 5 development of that land --MR. HOGAN: On the river access, are we talking 6 7 both above the dam and below the dam, or below dam, or just 8 above the dam? 9 MR. RAMSEY: Both. I guess below the dam would be more realistic for actual use of the water, as far as the 10 11 swimming area. 12 MR. HOGAN: Thank you. 13 MR. SIMS: Norman Sims, AMC again. Just one 14 additional comment, concerning what John Howard said about 15 closing facilities at certain times. For example, at Barton 16 Cove, the gate out by the road is closed. 17 That's a facility that's usually used primarily 18 for motorboat access. It has a concrete ramp, and there is 19 a dock that runs out during summer that makes it possible to 20 launch a canoe, a little bit more conveniently. 21 But once that gate is closed and the dock is removed, it's very difficult to use for car top canoe 22 23 access. 24 I tried to take a canoe out in November, and I had to drive 25 all the way up to Northfield Mountain -- I mean the town of 26

Northfield, to find an open route to the river. And that
 was still a concrete ramp.

3 As part of our study request, we're going to request that the facilities consider better access for 4 5 canoes and kayaks, as opposed to motorboats on the trail. 6 We'll be saying the same things to TransCanada, although at the Vernon portage trail, those facilities were decent for 7 8 But some of the other access points up in New canoes. 9 Hampshire and Vermont are essentially the same; they're 10 designed for motorboats on trailers.

11 MR. JAHNIGE: Paul Jahnige again. I forgot to 12 mention one recreational resource that's within the 13 Northfield Mountain project area, and that's climbing. There are two important ledges there, Farley Ledges and Rose 14 15 Ledges, both of which are used by climbers. I believe climbing was not mentioned in the pre-application document 16 17 as a recreational activity. I want to make sure that gets 18 on the record.

MR. HOGAN: Paul, you had also mentionedCommonwealth plan for--?

MR. JAHNIGE: The Commonwealth Connections.
Massachusetts Greenway plan.

23 MR. HOGAN: And you ask that the Commission 24 consider it as a comprehensive plan on the state list? 25 MR. JAHNIGE: I'll send that.

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1 MR. HOGAN: You also have to ask that it be 2 evaluated as a comprehensive plan in the Commission. It's 3 got to go through an approval process. I think it's just 4 filed with the Commission with a letter requesting that it 5 be considered an amendment. Other comments regarding recreational resources, 6 7 land use, or aesthetics? 8 (No response.) 9 MR. HOGAN: I'm not seeing any. 10 Socioeconomic resources. We've heard several 11 times today and this week about a proposed economic analysis regarding recreational opportunities and recreational 12 13 effects in and around the project lands in the Connecticut 14 River Basin. 15 Are their other economic resource concerns that we should be considering in our analysis? 16 17 (No response.) 18 MR. HOGAN: Okay. 19 Cultural resources? 20 MR. QUIGGLE: Good afternoon. I'm Rob Quibble 21 with FERC. 2.2 Our Scoping Document 1 identifies cultural resources issues, and the same issues for all three 23 24 projects. Those are: project effects on archaeologic or 25 historic resources listed in or eligible for inclusion in 26

the National Register of Historic Places, including
 properties of traditional religious or cultural
 significance.

4 MR. RAGONESE: With respect to the Vernon 5 project, again, as I mentioned earlier, in 2008 we 6 redeveloped the Vernon project, and part of the application 7 and determination by FERC in the order allowing us to amend 8 the project was the requirement -- and we were planning on 9 doing that when we proposed it -- to do a Phase 1A survey. 10 We signed a programmatic agreement with the state SHPOs and 11 the FERC and ourselves; and we have a cultural resources 12 management plan.

We are not anticipating doing particularly anything more than what we already have in place. We have plans to deal with impacts and project effects on historic and archaeological resources; it's in place already, and it's pretty much the general model that is used in new licenses; it's in place at Vernon.

We are implementing -- you know, we'll be putting those forth on the other two projects, but we didn't initiate those at the same time.

22 SPEAKER: We had proposed to do both 23 archaeological and historic structure surveys. We'll start 24 out doing the standard Phase 1A archaeological survey: 25 literature search, consultation with the historic

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preservation officers from the three states, probably develop sensitivity models which determine which areas might be sensitive to the presence of prehistoric and post-historic resources, and then do some field reconnaissance.

We'll do further studies, Phase 1B testing, 6 7 depending on the results of the Phase 1A archaeological 8 Also, we're going to do a historic structure surveys. 9 We're going to do a reconnaissance-level survey of survev. 10 the area, from which Turners Falls and Northfield projects 11 may be visible to any existing historic resources, as well 12 as evaluate the facilities themselves for eligibility.

13 MR. HOGAN: Yes, sir.

14 AUDIENCE: (inaudible) Montague.

15 I'd like the study do address the impact on the16 Native American cultural landscape.

17 They've all been listed on the National Register 18 in the past few years. The town has been working with 19 Native American tribes on development of the Native Cultural 20 That would involve parts of Turners Falls. Actually, Park. 21 three towns. Montague, Greenfield, Gill and Deerfield 22 submitted an application for a downfield grant application for the area around the Turners Falls Dam. That was an area 23 24 that was significant -- in 1675, I believe it was. And 25 we're having a battlefield study done. They are hopefully

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1 getting funding for that.

2 We want to extend our cultural bid, American 3 cultural process to include the area below the dam, possibly, or whatever, and having public access to that. 4 5 MR. HOGAN: Thank you. Could you tell us what tribes you are working 6 7 with on that? 8 VOICE: We're working with the Narragansett 9 Tribe, and (inaudible) 10 MR. HOGAN: Thank you. 11 MR. SIMS: Norm Sims from the AMC again. 12 We're going to be requesting a historical survey 13 of a slightly different kind. This is a nationally 14 significant historical site at Turners Falls, as is 15 Deerfield, where there was an attack in 1704. But I'm more concerned about the structures in the river. These are 16 17 actually fabulous structures. They were built by great 18 engineers. They stood since -- when was Turner built, John? 19 MR. RAGONESE: 1909. 20 They've had some tremendous impacts of MR. SIMS: 21 floods. These were good engineers. They were careful. 2.2 They constructed valuable historical records about the 23 facilities, about the land forms around the historic --. 24 It was in the age of photography; they took 25 photographs, and what I'm concerned about now is that with 26

1 multiple changes of ownership; from New England Power to-2 help me witness this.

3 MR. RAGONESE: Whatever.

4 (Simultaneous discussion.)

5 (Laughter.)

6 MR. SIMS: Similarly at Turners Falls, the 7 facility has been owned by several different companies 8 recently, and it's now owned by a French company, G.E. 9 (inaudible)

MR. HOWARD: Correct.

11 MR. SIMS: I'm worried that the historical 12 engineering and photographic records of the facilities may 13 be mislocated or lost in the process of transferring 14 ownership. I don't know what FirstLight may have or where 15 they may have those records stored. I'd like to find that 16 out.

17 I tried to find out what TransCanada has, and I 18 learned that there are at least a couple of dozen 19 scrapbooks, two or three inches thick, filled with mostly 20 photographs, but also detailed engineering records on 21 onionskin dating from the 1920s and earlier. Those two 22 dozen scrapbooks, each one of them is numbered, and they 23 have various numbers; there's a suggestion that there may be 24 as many as 300 of those notebooks. Where they are, nobody 25 knows.

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1 I think as part of this process, as part of the 2 archaeological and historical aspect of that, all of those 3 records ought to be located, and if possible placed in a secure location such as a library, if the companies don't 4 5 need active access to them. MR. RAGONESE: We still manufacture parts from 6 7 those onionskin drawings, because you can't get them 8 anywhere. 9 MR. HOGAN: Sounds like CEII. 10 (Laughter.) 11 That's Critical Energy Infrastructure MR. HOGAN: 12 Information, for those of you who may not know. 13 (Laughter.) 14 MR. HOGAN: Other comments? Yes, sir. 15 MR. DETWOLD: My name is David Detwold, and I 16 live a few blocks from here, on 4th Street. 17 Just two things on the historical front: One, I 18 think the Cabot camp is a historical resource of this 19 community that should be made more accessible to the people of this community, and I'd like to encourage that to be 20 21 considered by the Applicant here. 2.2 MR. HOGAN: Could I interrupt you? The Cabot --23 MR. DETWOLD: The Cabot camp, which is on the 24 river right where the Millers Falls River joins the 25 Connecticut. I believe it's owned by GFE Suez - Northfield 26

Mountain. But it's got a long history, an interesting history that I think the people of this community should have more access to it if it could be made more available. And it's right on a lake at the bike path as well. So potentially it could have a lot more use than it's getting right now.

7 The other thing is that the town manager 8 mentioned that we have been encouraged by at least three 9 federally-recognized Indian tribes to think about ways in 10 which this community, with its 10,000-year history of Native 11 American use -- it is one of the longest

12 continually-occupied areas where the archaeological and 13 cultural record shows that Native Americans would have been 14 present -- they have encouraged us to think about ways that 15 we could build on this rich past to bring more tourism, historic tourism to the town. And one thing that they've 16 17 proposed -- and I noticed on your time line that you had a 18 meeting with the tribes, perhaps already -- is the idea of 19 an international and intertribal canoe race down the river, 20 which would have great economic benefits for our community 21 if we were to host one leg of that.

So I don't know whether you could comment on whether the tribes have already brought this to your attention. I think it could certainly be part of the relicensing to see how such an important event could be

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1 facilitated. Thank you.

2	MR. HOGAN: Thank you.
3	Regarding the Commission's consultation with the
4	tribes as you indicated, our process does incorporate
5	that. I believe it was in November, we sent two tribes a
6	letter both the Wampanoag Gay Head and Mashpee, I believe
7	it was the letter was inquiring about their interest in
8	the relicensing process. That letter didn't get any
9	response.
10	I followed up twice with phone calls and e-mails,
11	providing additional information to one of them, and I'm not
12	sure which one. Through the middle of January, I've still
13	had no response from either tribe, and no indication of any
14	interest. Any time that the tribes indicate that they would
15	be interested in consulting with FERC on the relicensing,
16	our doors are always open. But at this point, I don't want
17	to bug them any more.
18	MR. DETWOLD: If I were able to put you in touch
19	with the Narragansett Indian Tribe's historic preservation
20	officer here, for that purpose would that be of use to you?
21	Because I know that he'd be particularly interested in
22	talking to you about this.
23	MR. HOGAN: Yes. Clarification. Are they a
24	federally-recognized tribe?
25	MR. DETWOLD: Absolutely.
26	

1 MR. HOGAN: If they are interested, we would 2 certainly engage with them. 3 The Narragansett Tribe was very AUDIENCE: 4 involved in this battle here. They were the protector of 5 members of Indian tribes who were relocated, who were refugees. So they're very much involved in the history of 6 7 Turners Falls. 8 MR. HOGAN: Okay. We'll take contact 9 information. Rob, you're writing this down, and we'll reach 10 out to them. Other comments on cultural resources or historic 11 12 properties? No? 13 (No response.) 14 MR. HOGAN: The last resource area that the 15 Commission considers is Developmental Resources. We're not 16 really taking any input on this, but I just wanted to -- you 17 see it here, and I'll kind of let you know what that is. When the Commission staff makes its 18 19 recommendations in its environmental document to the Commission -- the Commission being the five great Americans 20 21 appointed by the President of the United States -- that 22 analysis has to consider both the environment and the 23 economics of the projects, and it's a balancing act. It's 24 basically so we're making an informed decision on any 25 environmental recommendations that we're making in the 26

1 context of the project. That's what that analysis 2 incorporates. And just to be open, that's what we do. 3 Any questions about that? 4 (No response.) 5 MR. HOGAN: Any questions about the licensing 6 process? 7 (No response.) 8 MR. HOGAN: We've all been here for a very long day. Melissa? 9 10 MELISSA: I think I didn't hear it or perhaps you 11 didn't go over it, the part of the scoping document that 12 gives alternatives considered. I guess this gets more to a 13 pet peeve of mine about these scoping documents with the IFP; it's probably the hard facts of the IFP, where you're 14 15 trying to put out a document when you really haven't had any opportunity to solicit public input. So of course no party 16 17 has probably suggested decommissioning yet, because there 18 hasn't been the opportunity. 19 So I guess I would just recommend that the 20 Commission, in future scoping documents, change that 21 language to be more reflective. Because the way it reads, 22 people might think that door is shut. 23 MR. HOGAN: That's Scoping Document 1. We'll 24 shut it in Scoping Document 2. No. 25 (Laughter.) 26

1 MELISSA: You give the impression that the 2 Commission won't consider it, and I just think the language 3 in somewhat --4 MR. HOGAN: That's a fair comment. I'll say that 5 nothing is off the table. We consider everything until 6 there's no reason to consider any further. 7 Am I forgetting anything? 8 (No response) 9 MR. HOGAN: Well, thank everybody. 10 Oop, we get two hands with that. 11 AUDIENCE: Ken could you give just a snapshot of 12 what the cumulative impacts may be? 13 MR. HOGAN: Sure. 14 Tomorrow morning we're having a meeting -- which 15 we rarely do. In fact, I'm only aware of one situation 16 where we've ever done this in the past. It's to address 17 cumulative effects and cumulative resources that may be --18 resources that may be cumulatively affected throughout all 19 five of the hydroelectric projects. And it can be resources 20 that are, the effects between each of the hydros, or it 21 could be outside influences such as Vermont Yankee and water 22 temperature, and just to use this as an example: how the 23 water temperature is affected because you're impounding 24 water in the reservoir, and there may be some solar warming. 25 Plus you have Vermont Yankee adding to the reservoir, adding 26

to the temperature of the reservoir. That's a cumulative effect. And you have another reservoir downstream, more solar effect and potential warming of a reservoir, more cumulative effects.

5 It's not just -- it can be very broad scope. We're looking for information. What are the activities that 6 7 are planned within the watershed, within the basin, in these 8 areas of the projects that may also warrant some kind of 9 analysis that we -- it could be sewage treatment plants, it 10 could be planned roads or highways that are construction 11 plans that would be implemented. We may be looking at 12 turbidity and sedimentation as a result of construction 13 activities, or fish passage, upstream or downstream fish 14 entrainment.

15 These are all resources that could be affected 16 from one dam to the next and incrementally. So that's the 17 goal, so I understand what's going on within the watershed 18 in the vicinity of these projects, and to define a 19 geographic scope for the resources of how far we need to be 20 looking. Temperature, how far downstream or upstream do we 21 need to be looking? Fish passage, how far downstream or 22 upstream? Things of that nature; and basically other 23 activities that are not just the hydros within the basin. 24 Does that answer your question? It's a good 25 question. Thank you.

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1 Like I said, we haven't done this meeting before, 2 so it's -- I'm only aware of one. I've never done this 3 meeting before, so I'm hoping for your attendance to really 4 steer discussion. We can do it by resource area or however 5 we want to do it, but I want to be real flexible. 6 AUDIENCE: Ken, where was the other cumulative 7 effects meeting? 8 MR. HOGAN: The one I'm aware of was Snake River 9 in Idaho, where we had multiple dams going through 10 relicensing at the same time. AUDIENCE: You also had one on the Ohio. 11 12 MR. HOGAN: Someone did his homework. 13 (Laughter.) 14 MR. HOGAN: Way before my time. 15 Any other questions? 16 (No response.) 17 MR. HOGAN: Well, thank you. We really 18 appreciate the input. We'll have a much better product with 19 Thank you very much. And I want to thank our host. it. 20 (Applause.) 21 (Whereupon, the meeting was concluded.) 2.2 23 24 25