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To: Federal Energy Regulatory Commission  
RE: Comments on FERC Relicensing Projects: No. **P- 2485-063** (Northfield Mountain Pumped Storage Project) and No. **P-1889-081** (Turners Falls Hydroelectric Project)

Dear Commissioners,

Please carefully adhere to the standard FERC relicensing processes and deadlines as you relicense these two projects. Holding public and agency site visits in early October 2012 may have been deemed convenient for circumventing winter weather that might have affected visits, however it placed invested parties in the difficult position of having to view and judge hydro operations and configurations at both facilities without the benefit of knowing what operational changes and information FirstLight Power Resources was including in its PAD.

Further, of the three FERC group tours at Northfield/Turners Falls, only one group, mine, was able to view the area of the By-Pass Reach and the Turners Falls Canal and head gates from the downstream side of the Turners Falls gate house. This is a critical area to view, and the excuse being given was that there was construction happening on the Turners Falls Bridge. However, unrestricted access to view these sites was available to any passing citizen just yards away via a bike and walking path, open to the public. My group only received access because I made a direct request to FirstLight's John Howard, who was my former boss.

The two other tour groups did not get to see the confused flows created by the 14 head gates at the upstream end of the Turners Falls Canal. The canal has been a major disappointment as the upstream conduit for all migratory fish these last 34 years. Those head gates are open at full bore during much of the upstream fish migration season, they should have been a key component of the tour. Nor did interested parties get to view the exposed rock bed and de-pauperizing flow regimes created by flood gate manipulations at the Turners Falls Dam that renders the By-Pass Reach a non-river. FERC should place particular emphasis on any studies that redirect upstream migrating fish away from the confused and failed conditions experienced in the Turners Falls Power Canal, and send them directly upstream to a lift at TF Dam. That configuration has worked quite effectively at Holyoke Dam these last 58 years.

In late January 2013, GDF-Suez FirstLight Power Resource representative noted at public hearings that it intends to apply to FERC with a Proposed Study Plan to begin its own investigations of flows in the reach below Turners Falls Dam this April 2013, rather than the 2014 and 2015 study seasons noted in the FERC Relicensing Process. No study in this critical segment of river known as the By-pass Reach should be undertaken without a full vetting of the proposals. This section of river is critical spawning habitat for the federally-endangered Connecticut River shortnose sturgeon, also listed as endangered under the Commonwealth of Massachusetts Natural Heritage and Endangered Species Act. It is also the age-old upstream route for spawning federal-trust American shad and blueback herring. It is noteworthy that in their expedited study application that FirstLight cites the area below Cabot Station as a key shortnose sturgeon spawning location, while the critical site for these fish—used for likely thousands of years, is the natural escarpment in the riverbed known as Rock Dam, a half mile upstream of Cabot Station.

In a letter from FERC to Mr. John Howard of FirstLight Power Resources dated March 12, 2010, the Commission noted that FirstLight had failed to comply with Article 34 of the license for the

Turners Falls Project, releasing just 120 cubic feet per second to this segment of the river to protect shortnose sturgeon from the effects of low flows. The minimum requirement is 125 CFS.

With respect to measured, in-depth, long-term investigations on flow and river regulation in this reach I would direct you to the 17 years of research done by Dr. Boyd Kynard and colleagues at the Conte Anadromous Fish Research Center adjacent to this river segment in Turners Falls, MA. The work was largely conducted via the federal Conte Lab under the US Fish & Wildlife Service and later, under the US Geological Survey, when it took over responsibilities for Conte Lab after 1999. These investigations were also supplemented by funds, research and personnel from the University of Massachusetts at Amherst.

This research is documented in: ***Life History and Behaviour of Connecticut River shortnose and other sturgeons***, published in 2102 by the World Sturgeon Conservation Society and produced by Books on Demand, GmbH, Norderstedt, Germany: ISBN 978-3-8448-2801-6. Copies can be obtained from the **North American Sturgeon and Paddlefish Society**: [www.nasps-sturgeon.org/#!/publications](http://www.nasps-sturgeon.org/#!/publications) Chapter 3 concerns the long-term study of flows and river regulation on spawning success of the last 300, spawning-capable, federally endangered shortnose sturgeon in this river system—covering the period of 1993 – 2005. This is critical, long-term research that includes seven years of findings from the time before Northfield Mountain Pumped Storage and Turners Falls Hydroelectric Project operated as a regulated utility, and the seven years when Northfield’s pumping was unconstrained by regulations and operated to profit from price spikes and drops in the energy spot market using the public’s river. Deregulation was fully implemented here in 2000 or thereabouts. All of these issues need careful consideration before sanctioning a rushed study plan in such a critical river reach.

When considering a new license for these facilities, careful consideration of the public’s interest should be made respecting the changes and power generation, flows, and operational practices from the commencement of the current licenses down to the present. In 2012, Northfield Mountain Station added 40 megawatts of power to its generating facilities through retooling two of its turbines. This increase nearly equals the total power generated at HG&E’s Holyoke Dam, the next downstream project licensed by FERC. Two remaining turbines await power up-rates, which is a considerable addition to the generation at this plant, originally proposed and installed at 1,000 megawatts. Currently, due to mid-license changes, it now produces 1,119 megawatts of power in an unregulated power market.

Also noteworthy and important to be considered in weighing the public’s right to a living ecosystem, upstream fish passage, and protection of endangered species, is that Northfield Mountain’s original license was for a plant used to create “peaking power, and as a reserve unit.” It can only produce 6-8 hours of stored power before it is spent and needs to purchase replacement power on the open market. Its stated intention was to peak twice daily in high-demand winter and summer months, and once a day during shoulder months in spring and fall when energy demand is low. Northfield now generates when demand is present, or—when energy prices will make the greatest profit for investors. The river and the states have been impoverished by this profound change.

The building of Northfield was based on the availability of current and proposed power from collected regional nuclear sources (New England Power Pool) that included Maine Yankee (closed 1997); Yankee Rowe (closed 1992) Connecticut Yankee’s Haddam Neck (closed 1994), as well as two proposed nuclear plants at Montague, MA (never built.) Vermont Yankee is currently the only “local” nuclear plant still operating, and its 40 year operating license expired March 21, 2012. Its continued operation is contingent on findings in the courts. It is currently

operated at a loss by Entergy, and has a failing condenser system which could force its closure. In short, Northfield is now operated well beyond the bounds of its originally stated purpose. The public's river is paying a high price for power, much of it now imported to pump river reserves uphill to Northfield's reservoir from sources outside the region. The ecological impacts to fish runs and the damaging flow regimes imperiling endangered species in the river are apparent.

As a facility with great ecological impacts that cannot produce any of its own power--one totally dependent on outside sources for power, one proposed for using this stored power source put before the Federal Power Commission in the 1960s was that Northfield not operate during the spring fish migration due to its impacts on the runs. It is time to revisit the option of silencing the effects of Northfield Mountain so that towns and cities including Greenfield, Montague, Gill, Turners Falls, and Northfield, MA; and all the towns north to Vernon, Brattleboro and Bellows Falls, VT, and Hinsdale and Walpole, NH receive their share of the river's ecological bounty.

Northfield does serve a function as an emergency "reserve unit" for ISO New England (Independent Systems Operator) during times of severe heat waves, or high winter demand, to deliver a high volume of power on short notice to accommodate spikes in the power grid. Northfield could be taken off-line and kept in reserve to be operated by ISO New England solely for that purpose during the low-demand spring energy months when fish are migrating. This would greatly benefit river ecology, species, and all upstream stakeholders. New England's power grid resources are currently rated at 15% above demand. Removing the damaging effects of these operations on river ecology during critical months is a simple, equitable solution.

Northfield and Turners Falls have greatly profited by incremental power increases and operational changes over the past 34 years, while the public has watched flows, regulation, and conditions in the By-pass Reach wither to a brutal, feast-or-famine regime that denies spawning for endangered fish, and passage for upstream migrants. This situation has effectively privatized the 2-1/2 miles of river, depriving my town, Greenfield, as well as Gill, of its share of fish and a river. This de-pauperization has impacted all the towns upstream of Cabot Station and Turners Falls dam into central Vermont and New Hampshire. None of these municipalities have received compensation, though in many states the loss and damage to these fish populations would be considered "take" under state statutes. Damage in the By-Pass Reach to the Connecticut River's last 300, spawning-capable Connecticut River shortnose sturgeon carries a significant federal fine, as well as possible imprisonment.

FirstLight's new requests for more generation at both licensed sites should be rejected, and the damaging mid-license flow and power increases should be reversed in any new license. Indeed, since there have now been no less than FIVE different owner/operators of this facility in the last 14 years, it would be prudent to grant only the shortest license possible in order to help track and minimize damage to the ecosystem due to operational/managerial changes, and protect the public's interest in a living river.

Northfield's impacts have never been fully measured with respect to flows in the By-pass Reach, but it is clear that fish passage is now at, or below, the paltry levels of the 1980s, and just a fraction of the 40 – 60% passage upstream long-targeted by the US Fish & Wildlife Service of fish that had been passed at the Holyoke Fish Lift. Regulated, continuously monitored flows should be returned to the By-pass Reach at this time, and continuous monitoring should be included in any new licenses issued. FirstLight has noted that in-stream data loggers for river levels and flow have been subject to vandalism. Continuous camera monitoring of river levels and open and closed gate positions at the Turners Falls Dam would go

a long way toward insuring compliance with any new license conditions. This is an inexpensive solution that could easily include a back-up system.

With a federally endangered species present in the By-pass Reach, as well as federal-trust migrating American shad and blueback herring, FERC would do well to consider enforcing regulated flows in this stretch in accordance with law and statutes in the current license. NOAA's National Marine Fisheries Service has had the USGS Conte Lab findings from studies in the By-Pass reach by Kynard et al, in their possession since 2007. This agency—as well as the MA Division of Fisheries and Wildlife, could intervene at any time. These impacts are also affecting the success of the federal/state Connecticut River Migratory Fisheries Restoration, begun in 1967, which stipulates that all the states share equally in the bounty of migratory fish—as both a recreational and seafood resource. In several studies by the Massachusetts Cooperative Fisheries Unit at UMass/Amherst from the 1980s it is noted that blueback herring, (*Alosa aestivalis*) were noted gathering at the base of Turners Falls Dam, and were also noted spawning in the mouth of the Fall River--just 300 feet downstream of the dam, by then Conte Lab Director Steve Rideout.

Further, in the late 1980s, in another mid-license power up-rate, up to 5,000 CFS was redirected out of the By-pass Reach and into the Turners Falls Power Canal for use by Cabot Station and a refurbished Unit # 1, some 1-1/2 miles upstream of Cabot. This was undoubtedly another blow to the shortnose sturgeon attempting to spawn at their ancient grounds at the Rock Dam, though sturgeon spawning in the Connecticut here was not confirmed until 1993.

In the PAD, it is noted that FERC had not found any compliance issues during its inspections these two projects. However, as well as a failure to release minimum flows for sturgeon in 2009, I would direct you the US Environmental Protection Agency's August 3, 2010 letter and Administrative Order Docket No. 10-016, sent to Mr. James Ginnetti, FirstLight Vice President, noting violations of the federal Clean Water Act. FirstLight knowingly dumped up to 45,000 cubic square yards of silt into the Connecticut River below its fouled pumped storage plant in an attempt to clear its tunnels and intake. This illegal enterprise was undertaken by FirstLight after failing to conduct silt removal in a manner consistent with the "due diligence" stated in its operating license. This dumping took place throughout upstream fish migration season, May 1, 2010, or thereabouts, and continued until the EPA Cease and Desist Order of August 2010. At that time, FERC then became involved in this egregious license violation, requesting a full report from Mr. John Howard, Plant Manager, in a FERC letter dated August 10, 2010.

In a subsequent fall meeting with agency and non-profit river interests, a FirstLight representative stated that they did not know how to remove silt from their upper reservoir, and that it had never been done successfully. That admission came after 40 years of operating their plant. Hence, the public, and FERC are being asked to grant a new license to operators who have not shown they can successfully maintain their facility without profoundly affecting a navigable four-state waterway and a migratory fish highway. FirstLight has now asked for deadline relief, and is promising to have a study of siltation completed in 2014. Perhaps all study decisions should be held in abeyance until that time, 2014—which would comply with FERC Licensing Guidelines.

Sincerely,  
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Document Content(s)

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