

Written Testimony of John Suloway

On behalf of

The National Hydropower Association

Before the

New York City Council
Committee on Environmental Protection

Regarding

Int. 419-2018 - A Local Law to amend the administrative code of the city of New York, in relation to generating, capturing and utilizing energy from city's water supply, wastewater treatment systems and natural bodies of water

November 25, 2019

Introduction

Good afternoon Chairman Constantinides and members of the Committee. I am John Suloway, and I am pleased to be here to discuss Int. 419-2018, a bill proposed by the Chairman to promote conduit power projects as part of the City's municipal water supply and other systems.

To begin, let me provide you a little bit of information on my background. I have spent 40 years in the energy sector, with experience in energy and transmission project development, licensing, and environmental research. Most of that time was with the New York Power Authority (NYPA). I retired from NYPA at the end of 2014, serving at the time as Vice President of Project Development, Licensing & Compliance.

I now serve as Senior Energy Regulatory Advisor for Gomez and Sullivan Engineers, DPC, a water resources and environmental science firm that works in the hydropower sector in New York and throughout the northeast. I appear before you today in my capacity as a member of the Board of Directors of the National Hydropower Association (NHA).

NHA is a national association dedicated to advancing U.S. hydropower resources, including conventional hydropower, pumped storage, conduit power and marine energy. NHA represents more than 240 companies, from Fortune 500 corporations to family-owned small businesses, including conduit power project developers seeking to deploy the very technology that this bill seeks to promote.

My main message to you is this: conduit power presents a largely untapped opportunity to add clean, renewable generation to municipal water supply systems and other conveyances in furtherance of climate goals and grid reliability objectives.

These projects, whether they be installed in water supply pipes, wastewater treatment systems, irrigation canals or others, can provide predictable and reliable renewable power, with almost no additional impacts. In fact, adding new hydropower generating equipment maximizes the public benefits of this existing infrastructure. This point is recognized and exemplified in the Hydropower Regulatory Efficiency Act of 2013 and updated through the Americas Water Infrastructure Act of 2018 to create a new hydropower category, appropriately named “Qualifying Conduit Facilities”. This legislation allow for small and medium-sized conduit hydroelectric projects (< 40 MW) to receive full federal approval from the Federal Energy Regulatory Commission (FERC) in only 30 days. Congress and FERC recognized the benign nature of these projects on the environment in relation to their potential contributions across the US to reach our national energy goals.

This is a win-win for the City. Renewable electricity production increases. Carbon emissions are reduced. Costs associated with water delivery are offset. New, distributed, renewable generation provides reliable and predictable power to the local electric grid.

Diving a bit deeper into the climate benefits of hydropower, I note that New York City has committed to reducing its greenhouse gases 80 percent by 2050. Like other jurisdictions seeking to reduce their carbon emissions profile, to reach this level, every kilowatt hour of renewable

generation will be needed. That includes generation from small, distributed conduit hydropower projects. The bill before you today provides another tool to attain the City's ambitious, yet achievable, emissions reduction targets.

As such, NHA is pleased to support the bill and urges the Council to move expeditiously on its approval.

Hydropower and New York

I would like to take a quick moment to step back and review our state's history utilizing its hydropower resources - as promoting conduit power opportunities builds off a long, proud hydropower tradition.

Hydropower has provided electricity to New York State since the first generating plant opened at Niagara Falls more than 100 years ago. New York is the largest hydroelectric power producer east of the Rocky Mountains and in 2018 was third largest hydropower generating state, representing 11 percent of total U.S. hydropower generation. More than 300 hydroelectric generating stations - large and small - connect to the state's electric grid, meeting approximately 17 percent of the state's total electricity demand.

And it was some of these very hydropower projects, following the massive August 2003 East Coast blackout, that served as the base for restoring power to millions of Americans. This event demonstrated yet again for policymakers and the public the reliability benefits hydropower provides to the New York system and beyond.

Hydropower is the foundation of the state's, and the City's, renewable energy usage. Not only is it a carbon-free resource itself, but hydropower is a force multiplier as its grid services also function to integrate greater amounts of additional variable renewable generation. The path to carbon free flows through hydropower. Hydropower compliments wind and solar – when the sun goes down and the wind stops blowing hydropower keeps carbon free electricity flowing on the grid. The City has a great opportunity to build off of this legacy by supporting these new conduit power applications, as proposed by the bill.

New York Conduit Power Opportunities

In 2012, Gomez and Sullivan Engineers in association with HANDS-ON! Hydro and O'Brien & Gere conducted a study for the New York City Department of Environmental Protection (DEP) to identify sites in the DEP's water and wastewater system with the greatest hydroelectric potential. Thirty-six sites representative of the greatest hydroelectric potential in the system were screened. Sites were evaluated based on criteria related to constructability, electrical demand, operability and economic factors. The top twelve sites were analyzed further to match up the best turbine technologies to site-specific characteristics. Six sites that represented the best electric generation potential and different parts of the system were advanced through an economic analysis. Two of the six sites appeared to appear to be economically feasible, while two others have marginal economics. It was recommended that the DEP continue to monitor the development of turbine technology and their costs along with market factors that may influence the price of electricity in conjunction with the environmental benefits that may be realized from any future development.

The point of this and other studies is to identify sites within the system that can be developed and there definitively are sites that can be developed. This bill provides the impetus to take these studies and implement the best ideas. The NHA supports the development of the hydroelectric potential of New York City's resources.

NHA recognizes the challenges of implementing new ideas and taking risk even with a reliable and proven technology such as hydropower. The City of New York might consider joining the expertise and experience of in-conduit hydropower developers and vendors with the knowledge and expertise of the DEP staff in a pilot program to develop the best sites. The City of New York might issue a request for proposals to the develop the sites with the most potential and to encourage the broadest range of innovative hydropower technologies. The experts at DEP could evaluate the merits of these proposals and recommend the best for potential funding. The lessons learned in a small group of successful pilot projects could lead to large scale hydropower program and significant benefits for the City of New York.

Conclusion

Hydropower has been providing clean, reliable and low-cost power to New York families and businesses for over a century and these new, small, conduit project opportunities are primed to add to that contribution, while also playing a new role in meeting the City's climate policy objectives.

I thank the Committee for providing me the opportunity to highlight the benefits of new conduit power projects as part of the City's municipal water supply and other system and to share NHA's support for Chairman Constantinides' bill.

I look forward to answering any questions you may have.