



February 7, 2022

Draft Scoping Plan Comments  
NYSERDA  
17 Columbus Circle  
Albany, NY 12203-6399

To whom it may concern:

I'm an architect with over 30 years of experience working in New York. My career has been dedicated to designing the resilient, zero-energy buildings that are needed to face the challenges of our time. Recently, I have started a company to provide deep energy retrofits for buildings, and this company has been qualified by NYSERDA as a solution provider to implement and execute deep energy retrofits at scale. I offer this feedback with the hope that the ambitious goals of the Draft Scoping Plan can be met through coordinated and inclusive actions that will allow building owners of all types to implement deep energy retrofits.

The cost of retrofitting buildings is the primary barrier to their widespread adaptation. If deep energy retrofits are to be ubiquitous in the coming years, the cost of executing these retrofits will need to be radically brought down. There are innovations in materials and equipment that will help to bring down costs, such as panelization of exterior cladding and the development of unitized heat pumps. However, without far-reaching changes to the business of retrofitting, the cost to execute retrofits will remain painfully high.

Contracting is a really important feature of how the work of meeting these ambitious goals will get done. Every time someone agrees to retrofit their building, they will sign a contract with a company to execute the work. If we expect to continue using the current model for contracting, costs will not be driven down, and entrenched incumbents with the legal and insurance resources will drive out innovative companies and start-ups. It is said that "insanity is doing things the same way but expecting different results." If we want to really see cost reduction for retrofits, we need to see changes in regulations that apply to design and construction services, and possibly a way to address insurance costs.

Following are six examples of the impact of contracting regulations and practices on potential costs of executing retrofits.

1. Design-Build: Right now, because of NYS Education Department regulations, design and construction contracts have to be held separately unless the state makes an exception. Current exceptions exist for large infrastructure projects and for a select group of seven New York City agencies as per the 2019 NYC Public Works Investment Act. Allowing design/build delivery for energy retrofit projects would reduce costs of these projects by potentially reducing time required to execute a given project.
2. Drones: At present in New York City, drone flights are in a legal gray area. However, we need to be able to survey buildings for retrofits using drones if we want to bring the cost down. The alternative is to hire licensed riggers to set up bosun's chairs or to bring in people to rappelle

down the face of buildings, or worse, put up a full scaffold. This takes time and resources.

Drone flight for building surveys needs to be made explicitly legal, and licensing and permitting requirements need to be harmonized with Federal regulations in order to reduce regulatory risk and permit drone surveys to take place. This is a small detail, but an important one.

3. Insurance costs for construction - particularly construction requiring cranes and rigging is prohibitively expensive. There are few private insurers who manage these kinds of risk. The market needs help - it needs to be more open and competitive, or the state needs to step in and provide insurance for these kinds of operations. Reigning in insurance costs could reduce overall project costs substantially.
4. Condominium Finance - At present, condominiums have no access to financing for deep energy retrofits because they are - financially speaking - bundles of residential mortgage. Most project financing is off limits because the only collateral that can be held by a lender is the condo association dues. This is simply not enough collateral for most lenders to consider a loan. PACE (Property Assessed Clean Energy) financing also does not work with a condominium. Condos need to be able to collateralize their main asset - the building's structure and enclosure - if they want to take advantage of private financing for retrofits. There is not a clever way to work around this circumstance, and legislation must be crafted to remove this obstacle and enable private lenders to make these loans, which are critical for deep energy retrofits.
5. Off-site assembly of modular, unitized components is key to reducing time spent in construction on-site, and therefore a critical technique if deep energy retrofits are to be implemented at scale. Cooperation between city and state regulators needs to be deepened in order to facilitate the critical work of inspecting off-site fabricated components. Inspectors across the state need to be trained to meet the requirements of local construction enforcement agencies, or the requirements for such inspections need to be harmonized across jurisdictions. Without taking this step, deep energy retrofits will be potentially bottlenecked by the status quo.
6. Training: Deep energy retrofits offer great potential for job training. With the average age of licensed plumbers and electricians approaching 60, there is a substantial need to increase the ranks of skilled plumbers and electricians. Likewise, in order to accomplish deep energy retrofits at the scale proposed, we need more surveyors, master riggers, equipment operators, construction safety engineers, HVAC technicians and skilled mechanics. Training in the construction trades is a critical need, and also presents an opportunity to address the Just Transition goals advanced in the scoping plan, by making training available to those in impacted communities. Building trades should mobilize around this objective of providing more skilled workers.

Thank you for the opportunity to comment on this ambitious plan, which is a necessary pre-requisite for addressing the challenges of today.

Sincerely,



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