TESTIMONY FROM NYCHA EXECUTIVE VICE PRESIDENT FOR CAPITAL PROJECTS RAYMOND RIBEIRO
PROVISIONAL HEATING SYSTEMS IN THE WAKE OF SANDY
COMMITTEE ON PUBLIC HOUSING WITH THE COMMITTEE ON RECOVERY AND RESILIENCY
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CAREY GARDENS COMMUNITY CENTER, BROOKLYN, NY

Chairman Ritchie Torres and Chairman Mark Treyger, members of the Committees on Public Housing and Recovery and Resiliency, other distinguished members of the City Council, and public housing residents, good morning. Thank you for the opportunity to discuss the mobile heating systems installed at New York City Housing Authority (NYCHA) developments impacted by Superstorm Sandy. I am Raymond Ribeiro, Executive Vice President for Capital Projects. Joining me today are Carlos Laboy-Díaz, NYCHA's Executive Vice President for Operations, and other members of NYCHA's team.

This morning, I would like to address a number of issues stemming from the Authority's use of mobile heating systems in the aftermath of Superstorm Sandy. I will also address how these systems fit into the provision of heat and hot water at NYCHA developments during our efforts to build more resilient infrastructure. I would like to stress that we have very clear plans to permanently replace the mobile boilers in a way that is smart, safe, and more dependable for residents, while emphasizing that we are fighting for every dollar to make those plans a reality, and we remain a long way from achieving our goal.

Procuring the Mobile Boilers, Assessing the Damage, and Working to Become More Resilient

As every New Yorker knows too well, Superstorm Sandy caused great destruction in places across New York City, and at many NYCHA developments. Eighty thousand of our residents in 423 buildings were significantly affected, many of whom are still feeling the impact more than one year later. In the weeks following Sandy, my colleagues and I worked around the clock to bring heat and hot water

back to residents by restoring dozens of existing boilers and installing 23 mobile boilers. In some cases, repairing the infrastructure in place proved to be impossible, as salt water damaged parts beyond repair.

In order to secure the mobile boilers, we first focused locally by relocating mobile boilers from our regular construction program. We then procured 21 additional mobile boilers from as far as Texas. Prior to installation, we ensured that they would work with NYCHA's infrastructure – low pressure versus high pressure, or be appropriately sized with the right horsepower – and we deployed electricians, plumbers, welders, and steamfitters to install the necessary connections. Permitting issues, weight restrictions, and difficult transportation within the devastated Tri-State Area made delivery challenging.

Although a destructive event, Superstorm Sandy offered an opportunity to pursue a more resilient, sustainable future. Very early on in the aftermath of the storm, once we had completed basic repairs to our damaged systems, we made a determination that it would be irresponsible to simply repair or replace boilers back in the basement locations. That approach would potentially compromise our infrastructure, and residents would remain vulnerable during future extreme weather events. This finding came after a detailed examination of how our entire organization – buildings, employees, residents, and equipment – performed during Sandy, and how they can become better prepared for future emergencies. As part of this effort, we conducted detailed and thorough assessments of each boiler affected by the storm. We examined the extent of their damage and analyzed replacement costs. And we evaluated plans to make our infrastructure generally more resilient to future disasters or extreme weather events. At the time of the assessments, if we had decided to simply repair in place and if we only wanted to rebuild for short-term expediency instead of long-term sustainability, the replacement of the boilers would be completed. Our commitment to do what's most resilient rather than what's easiest is a message that we have been communicating to various stakeholders.

We have developed comprehensive plans for the safer, more resilient, more dependable infrastructure I mentioned a moment ago. For some of our developments, we want to raise the boilers and electrical equipment and house them in separate building extensions or stand-alone buildings. For other developments, we propose advanced resiliency efforts such as central boiler plants, or combined heat and power plants that provide backup electricity. At others, we propose alternate options such as insulated façades that reduce heat load and preserve the building's envelope.

The Funding Needed for a More Resilient Tomorrow

NYCHA is aggressively pursuing the funding needed to build this better infrastructure from multiple sources, including insurance, the Federal Emergency Management Agency, the Hazard Mitigation Grant program, and the Community Development Block Grant Disaster Recovery (CDBG-DR) program. We are working with the New York City Department of Buildings for regulatory support related to that funding. NYCHA, together with other affected agencies, are working to justify the boiler replacements to ensure the most resiliency possible. Despite these efforts, the Authority remains without sufficient commitments to realize our resiliency plans.

This uncertainty and lack of funding seriously impacts the design and execution of repairs and resiliency efforts. Without knowing how much of our resiliency efforts will be funded, we cannot begin the requisite final design, procurement, and construction processes to replace our mobile boilers in the optimal way. And without the money we need for true resiliency, we'll have to simply return the boilers to their previous locations, putting them at high risk for damage from future disasters and threatening residents' quality of life.

Current Status of the Mobile Boilers

Currently, there are 24 mobile boilers serving approximately 8,800 families in

110 buildings at 16 developments. There are also two backup mobile boilers at Surfside. Since installing the mobile boilers, NYCHA has paid a total of $55.8 million. This includes approximately $18.2 million for rent, $33.6 million for fuel, and $4 million for installation. The mobile boilers are housed in self-contained trailers or temporary structures. Power and steam distribution lines connect them to the permanent systems for the buildings. In addition, temporary piping is in place for fuel supply, water supply, and condensate return lines. Basically, the mobile boilers generate steam which is then distributed via the existing infrastructure in the buildings.

The mobile boilers are just as effective at producing steam heat as regular boilers and have sufficient capacity to serve the needs of the developments. In some cases, their horsepower ratings exceed regular boilers. The only difference is in how they interact with the steam distribution system. To clarify, existing boiler rooms have backup systems, which the mobile boilers currently lack. When a permanent boiler fails, staff, utilizing backup systems, makes manual adjustments to compensate. The automated distribution systems that boilers utilize were also damaged by Sandy. Therefore, the distribution systems are now manually regulated, according to the outside temperature. For this reason, residents may experience fluctuations in heat distribution. By separately tracking heat and hot water complaints related to the mobile boilers, we determined that there is a minor difference in the number of complaints received about them. We attribute this slight difference to the extremely cold weather we've experienced this year.

The mobile boilers will be in place for at least two more heating seasons, contingent on funding commitments, completion of designs, and construction. We are often asked why we are unable to proceed with design without funding commitments. Design costs typically make up 10 percent of the construction costs. Therefore, it is not cost efficient to design without funding guarantees.

Lessons Learned

We've learned important lessons as a result of this winter's extreme cold weather, and are applying this knowledge to the provision of more effective service from the mobile systems. In early January, amid a significant winter storm with blizzard-like conditions and record-breaking cold temperatures, various boiler components froze. Despite the extreme weather conditions, staff worked continuously to restore service, replacing the broken components and thawing frozen sections with portable space heaters. Learning from this incident, we bolstered weatherization by insulating their enclosures and all water lines, installing heaters to keep key components from freezing during frigid weather and heat trace lines on all water piping. In addition, we fortified the heating systems for both O'Dwyer and Surfside Gardens by connecting them, installing over 300 feet of above-ground steam lines and establishing two additional backup mobile boilers at Surfside. This means that there will be a backup in case a boiler goes out at either location. While the mobile boilers have always been continuously monitored and maintained, we also increased the number of staff responsible for monitoring them during cold snaps. These key lessons learned allowed us to work through a second cold snap in mid-January without any major disruptions.

At all locations that utilize mobile boilers, we are currently replacing oil burning systems with natural gas systems. As I previously mentioned, these new boilers will have built-in backups in case an individual boiler must go offline for general maintenance and repairs. Switching to natural gas will make fuel supply more efficient, since our developments already receive gas through existing pipelines. Also, natural gas is a cleaner-burning fuel – an important benefit for residents – and more environmentally friendly.

Keeping Residents Informed and Engaged

Residents are NYCHA's most critical partner throughout our efforts to address the day-to-day maintenance of the temporary systems and our most important stakeholder as we aim to rebuild smarter and more resilient and sustainable systems in the future. Since the storm subsided, we have consistently sought the input of NYCHA residents, and have worked very hard to provide them with up-to-date information. In addition to the newsletters that we distributed on a quarterly basis in four languages to residents of Coney Island, Red Hook, and the Rockaways in the year following the storm, we published a special edition on Sandy's one-year anniversary that provided more information about the mobile boilers and their replacement. Just this past Tuesday, we conducted a meeting with the Resident Association Presidents of all developments served by mobile boilers to update them on the status of the boilers. Additional meetings will be scheduled at the individual developments for all residents to provide input on preliminary design concepts in the coming months.

Conclusion

While NYCHA has worked to protect residents, our staff, properties, and infrastructure against potential emergencies, more needs to be done. Funding is necessary for us to recover from Superstorm Sandy's destruction in a way that is smart and provides a strong foundation for the future. Until that funding is committed, we are doing everything we can. We have met with many elected officials to discuss specific needs at individual developments – and we will continue to do so. If provided to us, City capital dollars can be leveraged with any recovery funds we receive to help address those needs. Also, we ask that you advocate for additional State and federal funds that will help us accomplish our resiliency work.

We look forward to working on these very important issues with the Mayor and City Council. Partnership – with elected officials and other key stakeholders – is a vital part of our efforts to tackle the challenges we have been served and to safeguard against any incidents that may arise. Future generations of NYCHA residents depend on us to make the right choices today – and we must work together to obtain as much funding as possible to serve them.

Thank you; I am happy to answer any questions you may have.