# New York City Steam & Public Housing Projects: District Energy Recovery & Resilience





# Baruch Houses: Site location/profile



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# Baruch Houses: Site location/profile



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# Site flooding



# Blantwoolaksage





# Replacement Schemes: New Boiler Plant



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# Replacement Schemes: Con-Ed steam PRV Plant





# Replacement Schemes: Con-Ed steam PRV Plant





# Repling then desibient es: Con-Ed steam PRV Plant



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# Making the decision: Financial Evaluation

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Feed Water Tank Replacement	S	30	Track.	Pneumatics Scheduled	Preventative Maintenance	-8	5	

Short-term (truck)

Breeching

Equipment Permits and Inspection

Long-term (to city code)

Pneumatics Replacement

Equipment Permits and Inspections

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# Making the decision: Net Present Value (NPV)

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# Making the decision: Net Present Value (NPV)



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# Manhattan West

Brookfield Property Group November 2016





## **Development Sites in 2014**



## **Development Sites in 2016**



## One Manhattan West



- Trophy office tower located on 33rd Street and 9th Avenue anchoring the Manhattan West Development
- Designed from the inside out and is capable of supporting the highest occupancy levels through its innovative center core floor plate and virtually column free interior
- LEED Gold designated tower reaching 996 feet will boast excellent natural light and incredible 360-degree views of Manhattan
- Substantial completion anticipated in Q4 2019

Tower Specifications				
Architect	Skidmore, Owings & Merrill LLP			
Mechanical Engineer	anical Engineer Jaros, Baum & Bolles			
Structural Engineers Skidmore, Owings & Merrill LLP				
Building Size	2.1M RSF			
Floors	67 + 3 Floor Mechanical penthouse			
Structure	Structure Concrete Core with Steel Frame			
Typical Floor 31-35,000 RSF				
Floor Heights	Floor Heights   13' 6" Slab to Slab / 9' 6" Finished Ceiling			
Typical Floor	Floor to Ceiling Glass / Column Free Lease Spans			



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### Two Manhattan West



- Trophy office tower to be located on 31<sup>st</sup> Street and 9th Avenue anchoring the Manhattan West Development
- Sister tower to One Manhattan West and supports the highest occupancy levels through its innovative center core floor plate and virtually column free interior
- LEED Gold designated tower reaching 890 feet with excellent natural light and 360-degree views of Manhattan
- Substantial completion anticipated in 1Q 2021

Tower Specifications				
Architect	Skidmore, Owings & Merrill LLP			
Mechanical Engineer	Jaros, Baum & Bolles			
Structural Engineers	Skidmore, Owings & Merrill LLP			
Building Size	2.0M RSF			
Floors	62+ Floors			
Structure	Concrete Core with Steel Frame			
Typical Floor 31-35,000 RSF				
Floor Heights	13' 6" Slab to Slab / 9' 6" Finished Ceiling			
Typical Floor	Floor to Ceiling Glass / Column Free Lease Spans			

### Three Manhattan West



- One of the tallest residential buildings in the U.S. (705 feet)
- Rooftop terraces will offer residents sweeping views of the Manhattan skyline and Hudson River
- The abundant amenity program, operated by La Palestra, will be one of the more luxurious in the city
- 24/7 concierge services will be available for tenants

Tower Specifications				
Architects	SLCE / Roman & Williams / SOM			
Mechanical Engineer	Cosentini			
Structural Engineer	DeSimone			
Building Size	844 units (586,000 RSF)			
Floors	62			
Structure	Concrete			
Typical Floor	11,500 - 13,000 GSF			
Floor Heights	9'-0" / 10'-0" Floor to Ceiling			
Amenities	33,000 SF indoor / outdoor spaces			

### Five Manhattan West



- Renovation will include a new pleated glass façade which will create floor-to-ceiling windows on every floor, maximizing daylight penetration while reducing solar heat gain
- Interior program includes a redesigned lobby, upgraded and expanded elevators, and enhanced building systems
- New retail storefronts will line the base of the building
- Incorporating the building into the streetscape with improved retail and other amenities as well as providing greater connectivity to the nearby High Line park

Tower Specifications				
Architect	REX			
Mechanical Engineer	Cosentini			
Structural Engineers	SOM			
Building Size	1.7M RSF			
Floors	16			
Structure	Cast-in-Place Concrete			
Typical Floor	pical Floor 104K RSF – 130K RSF			
Floor Heights	14'-0" / 16'-0" Floor to Ceiling			







## Manhattan West Timeline





# **District Steam Service**

# **Tariff Changes**

# **Enabling Resiliency & Sustainability**

Armand Agasian February, 2017



# **Enabling Distributed Generation Backup/Supplemental Service Tariff Changes**

• Encourage development of smaller scale projects

• Promote sustainable and efficient generation technologies

• Reduce the economic and administrative burden

• Enhance customer experience



# **Enabling Distributed Generation Backup/Supplemental Service Tariff Changes**

- SC4 Standby Rate Changes effective November 1, 2016
- Contract Demand (CD) focused in on December to March, inclusive
- 2% bandwidth introduced for CD
  - Exceedance occurs when above bandwidth
  - Ratchet of CD then applies and bandwidth moves with it
  - Surcharge may apply
- New multiplier for surcharge when applicable
- Customers can lower the Contract Demand
- Exemptions from backup/supplemental rate available



# Enabling Distributed Generation Backup/Supplemental Service Tariff Changes

## **Exemptions:**

- Nameplate rating of alternate energy source is <15% of maximum potential thermal demand.
- Solar Thermal and Geothermal
- Customers exempt from electric standby rates.
  - **Designated Technologies** Exemption through May 31, 2019.

## **Designated Technologies:**

- Efficient CHP up to 1MW
- Efficient CHP over 1MW, up to 15 MW
- Fuel Cells
- Wind
- Solar Thermal\*
- Photovoltaics
- Sustainably-managed biomass
- Tidal
- Geothermal\*
- Methane Gas



# **Enabling Resiliency of Campus Systems Proposed Steam Interconnection Tariff Changes**

• Increase flexibility to accommodate new applicants for steam service.

• Reduce the upfront financial burden for large projects such as campus systems.

• Enhanced customer experience during the interconnection process



# **Enabling Resiliency of Campus Systems Proposed Steam Interconnection Tariff Changes**

- Changes proposed December, 2016
- PSC Review and Expected Approval 2<sup>nd</sup> Quarter, 2017
- Upfront service prepayment requirements reduced or eliminated
  - -2 year revenue test increased to a 5 year revenue test
- Additional flexibility in determining point of service termination
  - Allows for service extension on customer property



# **QUESTIONS?**

**Contact Steam Business Development for further assistance at:** 

212-460-2011

Or

Armand Agasian, P.E. agasiana@coned.com 212-460-6172

