Bushwick Alliance

Building Energy Exchange
NYSERDA Buildings of Excellence
May 27th 2020

Project Info:
• 20 units (studio 5, 1bd 7, 2bd 8)
• 100% Affordable-below 80% AMI
TEAM

• **Owner/Developer**- RiseBoro and St Nick’s Alliance
• **Architect**- Suzanna Tharian, STAT Architecture
• **Energy Modeler/PHIUS** - David White, Right Environments
• **Energy Consultant**- Levy Partnership
• Passive House (PHIUS)- basis of design
• Add Solar
• Switch to Electric Hot Water
• De-Carbonize
Passive House

• Basis of Design
• Insulate/Air Seal
• HVAC Strategy
  • Heating & Cooling-Air Source Heat Pumps
  • Ventilation- Energy Recovery Ventilator (stacked)
• Model- PHIUS
• Adjustments according to model
Add Solar

• Confirm base building structure can accept solar PV loads
• Design electrical switchgear to accommodate solar PV
• Accommodate riser from switchgear to roof
• Solar planning for pergola or ballasted PV
Switch to Electric Hot Water

• Heat Pump Hot Water
  Use CO2 in place of refrigerant(?)
  Use waste heat from building air source heat pump for hot water (linked) system

• Other hot water systems using electricity
  Use individual hot water “on demand” systems
De-Carbonize

• Low Hanging Fruit?
  • Concrete- developed new “low carbon spec” between Structural Engineer, consultant, General Contractor confirmed feasibility and cost

• Tenant Energy Reduction
  • “Smart Power Strip” for tenants- eliminate phantom loads