

BUILDINGENERGY NYC

Beyond Incentives: Market-Based Funding to Decarbonize Affordable Housing

David Davenport, NY Green Bank

Curtis Probst, NYCEEC

Laura Humphrey, L+M Development Partners

Karim Hutson, Genesis Companies

Curated by: Christina McPike (WinnCompanies) and
Mark Morales (Legend Power Systems)

Northeast Sustainable Energy Association (NESEA)
September 15, 2022

NY Green Bank

FINANCING AFFORDABLE HOUSING DECARBONIZATION

DAVID DAVENPORT



NY Green Bank
A Division of NYSERDA

WHO WE ARE

Mission-driven, solutions-oriented investment professionals with deep credit, project finance, and technical experience, along with unique expertise in New York State energy and environmental policy.

LARGEST

green bank
in the nation

\$1 BILLION

capitalization with New
York ratepayer funds

2013

year established

\$10–50 MILLION

typical investment size

GOAL

alleviate financing gaps
in New York's sustainable
infrastructure markets to
create a cleaner, more
equitable, and more resilient
energy system and built
environment

WHAT WE FINANCE AND HOW

Investments span a wide range of climate change-mitigating technologies, from building efficiency to grid-scale energy storage to clean transportation.

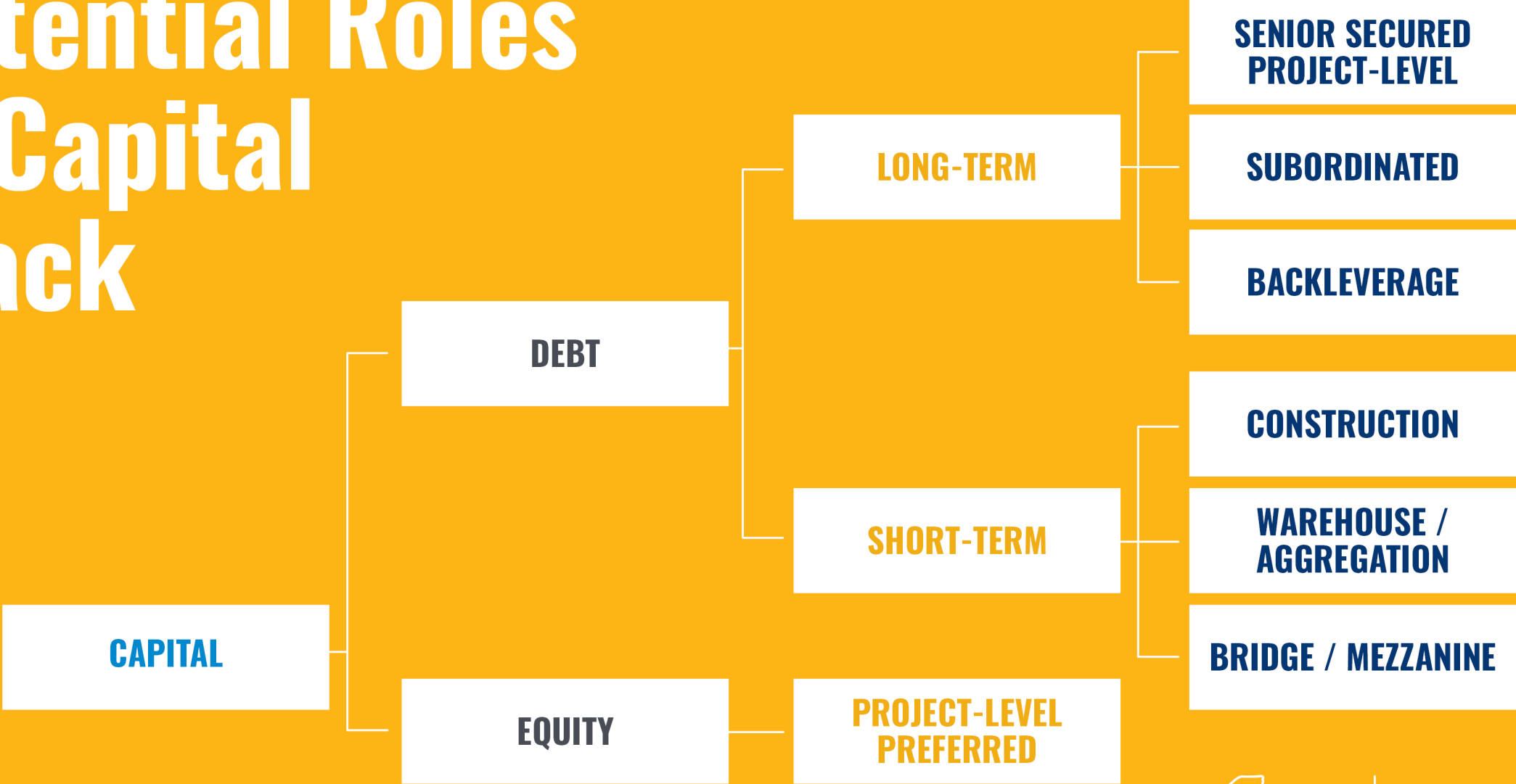
PRIMARY INVESTMENT CRITERIA

To be a fit for NY Green Bank's mandate, a transaction must:

- Demonstrate potential for greenhouse gas reductions in support of New York State clean energy policies
- Demonstrate how it contributes to market transformation in terms of:
 - > Mobilization of private capital
 - > **Additionality** in proposed investments
- Be economically and technically feasible, and have expected financial returns to support NYGB's self-sufficiency

NY Green Bank operates and lends much like a commercial project finance provider, including replicable structured transactions, market pricing and terms, and full diligence process

Potential Roles in Capital Stack



FINANCING PRODUCTS

NYGB can come in at various places in the capital stack & project lifecycle.

- Predevelopment
- Construction/construction-to-permanent
- Term
- Mid-cycle improvement loans
- Preferred equity

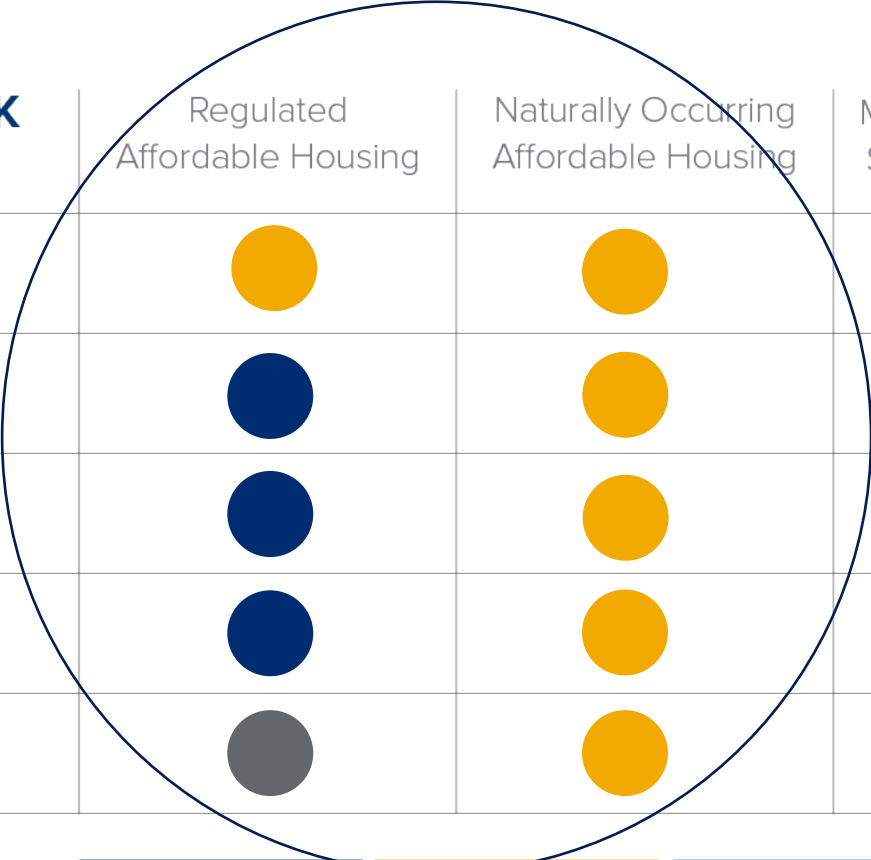
AND OTHER CREATIVE SOLUTIONS:

- On-lease financing for commercial tenant efficiency improvements
- Incentive bridging loans
- Use of proceeds including deferred maintenance and HQS
- Underwrite to expected energy savings
- Capitalize pay-as-you-save/energy-as-a-service structures

WHERE WE CAN FILL THE GAPS

NY Green Bank evaluates investment gaps and market needs for disadvantaged communities and bridges those gaps.

NY GREEN BANK PRODUCTS	Regulated Affordable Housing	Naturally Occurring Affordable Housing	Municipal, University, Schools & Hospitals	Community Facilities	Commercial
Bridge/Development/Acquisition Loans	●	●	●	●	●
Construction Loans	●	●	●	●	●
Construction to Term Loans	●	●	●	●	●
Term Loans	●	●	●	●	●
Subordinated Loans	●	●	●	●	●



MARKET OFFERING	NY GREEN BANK SOLUTION	POTENTIAL ROLE	UNLIKELY NEED
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LOOKING AHEAD

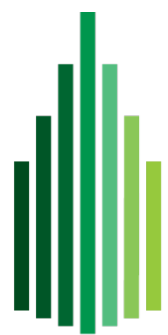
New developments on the horizon for NYGB capital offerings and sources.

COMMUNITY DECARBONIZATION FUND

- \$250 million available to CDFIs at low interest rates
- To be deployed in clean energy and sustainable infrastructure projects benefitting underserved communities in NYS

INFLATION REDUCTION ACT

- New funding available for green banks
- In coordination with other NYSERDA programs, NYGB is evaluating the opportunities and considering potential implications



NYCEEC
BUILDING FINANCIAL SOLUTIONS

Beyond Incentives: Market-Based Funding to Decarbonize Affordable Housing

Curtis Probst, CEO | NYCEEC

September 15, 2022



NYCEEC: Background

Overview

- First local green bank in US
- 501(c)(3) mission-driven lender, created in 2010 by NYC Mayor's Office of Sustainability
- NYC C-PACE administrator
- Lending to support energy efficiency, clean energy, and high-performance building projects

Impact

- Mobilized >\$430 million capital for energy efficiency and clean energy projects to date
- In last 3 years, 98% of loan volume supported projects in LMI communities

NYCEEC focuses 100% on energy efficiency and clean energy in buildings.



NYCEEC's Diverse Loan Products Cover All Aspects of Decarbonizing Buildings

Product	Affordable Multifamily	Min. Loan Size
GREEN PREDEVELOPMENT LOAN	✓	n/a
ACQUISITION LOAN	✓	\$400k
GREEN CONSTRUCTION LOAN	✓	\$300k
EQUIPMENT LOAN	✓	\$200k
ESA LOAN	✓	\$400k
PPA LOAN	✓	\$400k



 **NEXUS** creative
Architecture Planning Design
a collaborative network alliance

**AFFORDABLE
MULTIFAMILY**

73 Units

**LAND
ACQUISITION
LOAN**

\$40M

Total Project Cost

\$2.4M

NYCEEC Acquisition
Loan

**Designed
to be All-
Electric**

CRESCENT MANOR AFFORDABLE HOUSING: Ossining, NY

Lessons Learned

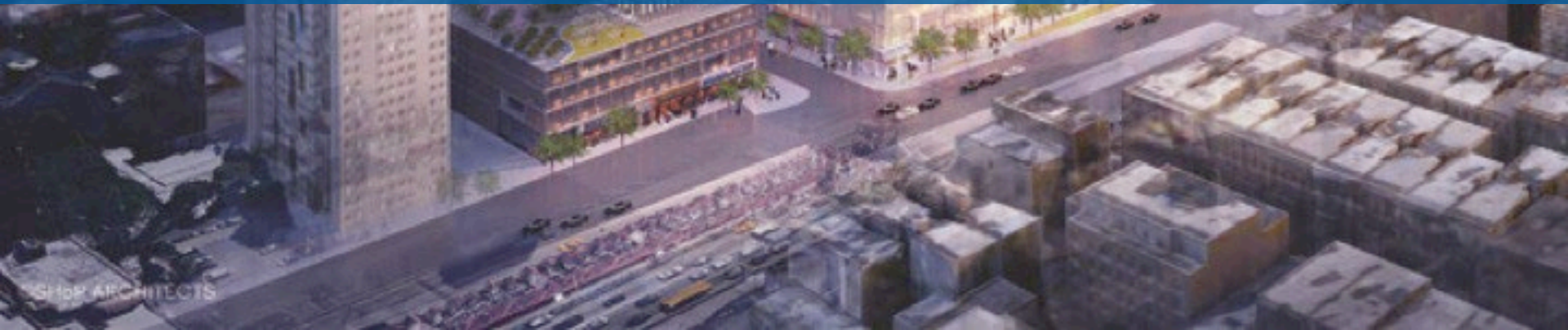
- Full electrification remains costly, although incentives and a full accounting of benefits allow some projects to pencil:
 - New construction generally easier than retrofit
 - Suburban/rural generally easier than urban
 - Inflation Reduction Act incentives could be tipping point for more projects, and policy drivers (e.g., gas ban) have rapidly changed landscape
- Financing typically from multiple sources, and needed at different stages of projects:
 - Acquisition
 - Pre-development (project scoping)
 - Construction
 - Permanent
- Strong relationships are key. Coordination with affordable housing agencies and partnerships with leading developers help build momentum.
- Evaluating contractor capabilities an important aspect of project review; thorough technical diligence enables successful projects.



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Building Energy NYC 9/15/2022

L+M DEVELOPMENT PARTNERS





Who We Are: L+M Development Partners

LMDP is an impact-driven, vertically integrated top-tier developer, builder, and manager of multifamily, mixed use and affordable housing



Guided by its mission – Working Together to Build Stronger Communities – L+M Development Partners, LLC (LMDP) is in the process of operationalizing sustainability across its business practices

- Sustainability is a new department at L+M that **builds on our experience** as a developer and builder of low-carbon affordable housing
- Having a presence in the lifecycle of our buildings, from development and construction through asset and property management, opens-up opportunities for us to benefit from **long-term investments in sustainability**





Case Study: The Heritage

The Heritage retrofit is will result in 19% energy use reduction and 662MT annual carbon reduction



Project rendering
(Atchain / L+M Fund Management)



Construction staging, June 2022

Retrofit Scope

Façade Upgrades	<ul style="list-style-type: none"> Towers over-cladded with Exterior Insulated Finishing System (EIFS) Mid-rise building will be re-cladded with prefabricated wall panels with EIFS on lower floors
Window Upgrades	<ul style="list-style-type: none"> Mid-rise will receive new high-performance windows
Package Terminal Heat Pumps (PTHPs) and VRF	<ul style="list-style-type: none"> PTHPs will provide cold-climate heating and cooling while significantly reducing electric consumption Energy-efficient VRF systems specified for lobbies and ground floor amenity spaces
Domestic Hot Water Electrification	<ul style="list-style-type: none"> Compressor technology with CO₂ refrigerant will produce hot water 4x more efficiently than electric resistance heat while eliminating the building's largest green house gas use on mid-rise building
Ventilation Upgrades	<ul style="list-style-type: none"> Will enhance indoor air quality to improve resident comfort and health while recovering waste heat
Grid-Responsive Centralized Controls	<ul style="list-style-type: none"> Will allow for real-time monitoring and help to reduce risk of blackout or grid failure during peak demand Potential for residents to opt-in to demand response programs
Electrify Common Area Laundry	<ul style="list-style-type: none"> Will eliminate use of natural gas for common area laundry



Financing Upgrades at The Heritage

NYSERDA's Empire Building Challenge provided a framework to think creatively about how to reduce energy usage and achieve carbon neutrality

Value Creation		Project Costs	
Annual Energy Savings	\$225k	Total Project Cost	\$18.7M
Capitalized Value	\$4.5M	NYSERDA EBC Grant	\$5M
NPV of CapEx Savings	\$3.5M		
Value Creation	\$7.5M	Net Project Cost	\$13.7M
			Differential \$6.2M

Anticipate incremental revenue from commercial rents and market-rate units will bridge \$6.2 million gap.



Lessons Learned

Our experience at The Heritage illustrates key opportunities and challenges in financing deep retrofits more broadly



Opportunity

Energy efficiency is bankable, especially when timed with a capital event

(but needs to be adopted as standard practice)



Challenge

Disconnect on funding for low-carbon buildings

(carbon reduction and energy efficiency aren't always the same thing)

genesis

**NESEA Conference Presentation
Karim Hutson**

Presented to:



September 15th, 2022

A Boutique Diversified Firm

Genesis Companies is a boutique, minority-owned development firm committed to strengthening communities through disciplined real estate analysis, investment and innovative approaches. We work collaboratively to maximize results while creating positive impact within the communities we operate.



genesis

Firm Summary

- **Summary.** Genesis Companies is a full-service, minority-owned development firm committed to strengthening communities through disciplined real estate analysis, investment and innovative approaches. We work collaboratively to maximize results while creating positive impact within the communities we operate.
- **Background.** Founded in 2004, Genesis Companies (Genesis) is a Harlem-based leading full-service affordable housing developer and manager in the region. Among Genesis' key success factors are:
 - Successful collaborations with community groups to enhance underutilized real estate and to provide services which enrich tenant experiences
 - A commitment to developing energy-efficient as well as “smart” housing
- **Proven Track Record.** Genesis' experience includes development of 117+ buildings, over 2100 units with aggregate economic activity of over \$670 million
- **Investment Grade Company.** Genesis recently closed a multimillion-dollar preferred equity investment from Impact Development Fund (backed by Morgan Stanley, TruFund and Ford Foundation) which funded Genesis' current strategic growth plan



Overview: NYCHA Frederick Samuel Apartments

1. 42 building 664-unit scattered site development located in Harlem, NY
2. Consists primarily of 6-story walk-up buildings within a 10-block radius, plus commercial and community center
3. Scope of Work: Tenant-in-place rehab of the portfolio including comprehensive upgrades to the units, building exteriors, building systems and open spaces
4. Sources: The ~\$324M of projected total development cost will be financed through a mixture of private debt, historic tax credit equity, developer equity and municipal subsidy
5. Preliminary Projected Uses:
 - Acquisition Cost: \$42,000,000
 - Construction Cost: \$212,000,000
 - Soft Cost: \$70,000,000



LL97 & NYCHA's Sustainability Goals

- The Climate Mobilization Act of April 2019 enacted into law Local Law 97 (LL-97) in NYC
- NYC Local Law 97 (LL-97) requires reducing the carbon footprint of buildings greater than 25,000 Sq. Ft. at two milestones of 2030 and 2050
- The baseline reference to measure the reduction in a building is based on that building's 2005 Energy use and fossil fuel consumption.
- **While LL-97 is not a mandate for NYCHA buildings, the agency has committed to making its best effort to reduce greenhouse gas emissions by 40% in their buildings by 2030.**
- *Key Point: Implementation “under discussion”*
 - *sustainability items requiring relocation*
 - *tenant vs. owner pay*

Sustainability Measures



ELECTRIFICATION

New Electric Heat Pump
Technology for Heating and
Cooling

New Electric Domestic Hot Water
Heaters

New All Electric Kitchens



BUILDING ENVELOPE:

New High Efficiency WINDOWS

New Weatherizing Exterior Doors

New Roof Insulation with a High
R Value



OTHER MEASURES:

Installation of Low Flow Aerators,
Plumbing Fixtures (shower
bodies, toilets, faucets, etc.),
which will reduce water usage

New High Efficiency LIGHTING

New ENERGY STAR
Refrigerators

Benefits & Challenges

Benefits:

- **Reduction in maintenance expenses:** There is an overall reduction in expenses due to lower maintenance costs of equipment used.
- **Increased efficiency:** There is Increased-efficiency in heating and cooling of the typical building. Heat Pump technology is point-of-use, decreasing utility costs.
- **Cooling:** Heat pump technology adds cooling which wasn't previously provided but becoming a necessity, the savings over the course of the years is beneficial not only to the Landlord but the Tenant.
- **Decreased carbon emissions:** Decreased carbon emissions are as a direct consequence of sustainability initiatives of utilizing electric energy for space and water heating of a building. We are working towards achieving 72% reduction in carbon emissions.

Challenges

- **Cost:** Higher upfront costs driven by
 - New electric systems
 - Scattered site nature of the portfolio



745 Fifth Avenue

Suite 500

New York, NY 10151

T. 212.433.1336

F. 646.219.4188

www.genesiscompanies.com