



Fact Sheet : GreenTop Fund I, L.P.

Sustainable Non-Traditional Real Estate Equity Fund

Bridging Farm and City for Maximum Impact

April 17, 2015

The Problem

There has been a growing demand for green roof systems by building owners and aspiring entrepreneurs. Green roofs reduce energy costs for buildings by up to 25% and storm water runoff by up to 65%, while significantly extending the life of roofs. Building owners are also able to capture federal, state, and city tax credits and incentives.

Entrepreneurs have begun tapping into the growing demand for fresh produce in metropolitan areas by setting up rooftop greenhouses. These greenhouses are able to supply fresh produce to local grocery stores and restaurants at lower prices due to decreased transportation and storage costs. In New York City, the increasing demand for contract growing from restaurants has accelerated the demand for rooftop greenhouses.

While there is significant demand, there remains a misalignment of incentives for both building owners and entrepreneurs:

- Building owners face difficulties in monetizing the environmental and tax benefits due to their inexperience in the urban farming sector, while facing unwanted risks associated with the capital investment
- Entrepreneurs face large construction and start-up costs of approximately \$600,000 for each 20,000 sq. ft. greenhouse and annual maintenance costs of over \$50,000, while many of the economic benefits of the investment accrue to the building owner

The Solution

GreenTop Capital will raise a fund to construct greenhouses on the rooftops of industrial buildings and lease these facilities to entrepreneurs to plant produce for sale. Fund I will cover an initial run of 30 sites around the Northeast U.S. with an average size of 20,000 sq. ft. and with the following characteristics:

- Rooftop rights to industrial buildings meeting the target site criteria
- Full capture of tax savings through the Tax-Increment Financing (TIF) or Payment-In-Lieu-of-Taxes (PILOT) structure
- 10-year lease-share agreements with local entrepreneurial urban farmers

The Opportunity

- **Considerable site availability:** We have identified over 5,000 buildings in New York City and over 1,000 in Boston and Philadelphia that fit the target site criteria
- **Increasing downstream demand for fresh food:** Fresh food sales in the United States grew by 5.4% in 2014 to \$134 billion and now represent over 30% of total supermarket sales. The demand for fresh food is expected to grow at 6–7% annually
- **Heightened awareness of climate change mitigation:** Cities have become more aware of the effects of climate change and have increased public-private incentives to reduce energy consumption, heat island effects, and storm water runoff
- **Increasing desire for energy savings:** Building owners and tenants are increasingly concerned with reducing energy costs. Rooftop greenhouses will be able to significantly reduce building electricity consumption

Summary of Key Investment Terms

Target Capital Commitments (Fund I):	\$20 million
Minimum Investment:	\$500,000
Commitment Period:	12 years
Term:	12 years
Management Fee:	2%
GP Interest in Fund Cash Flows:	20%

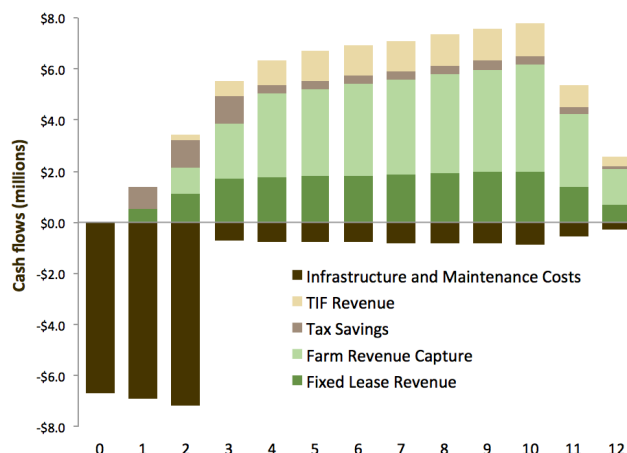
Fund Characteristics

Target IRR (Net of GP Interest):	15.5%
Dividend Yield (After capital draws):	20.0%
Target Multiple:	2.3x
Performance Benchmark:	S&P U.S. REIT Index
3-Year Annualized Benchmark Returns:	11.7%
Number of Sites in Fund:	Approx. 30
Geography (Fund I):	New York City, Philadelphia, Boston
Target Investors:	Social Impact Funds, Private Family Offices, Foundations

Investment Process

1. Identify potential sites that fit the target criteria
2. Create a legal entity and negotiate contracts with building owners to obtain 10-year rooftop rights and the capture of tax credits and grants
3. Create the TIF/PILOT structure with the city to capture incremental property tax revenue from buildings
4. Construct greenhouses incorporating heat, electricity and water connections. Each greenhouse will be designed to lay out hydroponic systems as extensively as possible and include features to channel and purify storm water
5. Lease farm space to local farmers and entrepreneurs for 10 years; assist farmers in negotiations with restaurants and supermarkets for contract growing

Fund Cash Flows



Target Sites

- Industrial buildings that have sufficient structural integrity to support greenhouses
- Built between 1900 and 1970, when building codes required high roof-load specifications
- Usable, flat roof space of at least 10,000 sq. ft.
- Sufficient electrical capacity
- 10 stories or lower to maximize energy savings
- Not used for heavy industry to eliminate the risk of crop contamination

TIF & PILOT Structures

Tax-Increment Financing (TIF) and Payment-In-Lieu-of-Taxes (PILOT) structures have been used successfully for urban redevelopment in the U.S. since the 1980's. The construction of the rooftop greenhouses increases property values due to increased energy savings to tenants, which in turn allow for higher rents. This thereby increases property taxes. These incremental tax revenues from portfolio properties will flow to the fund for the 10-year horizon of each farm investment.

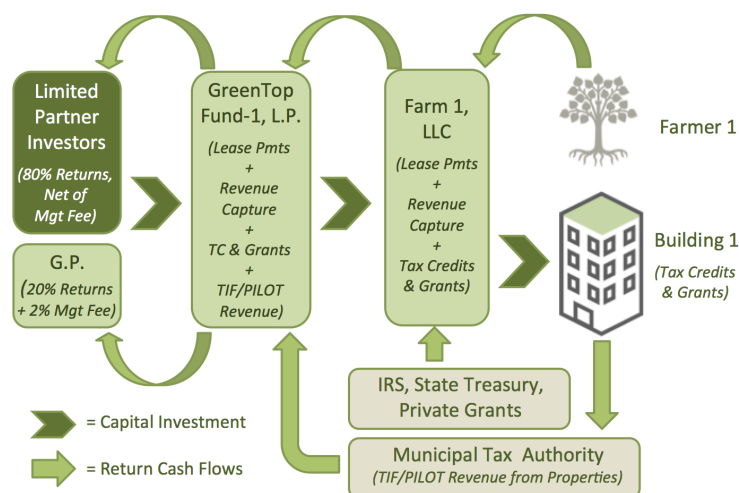
Single Farm Cost Breakout

Greenhouse Initial Costs (20,000 sqft)	
Infrastructure Improvements:	\$380,000
Hydroponic systems:	
Electric Wiring and Heating:	\$150,000
Nutrition Storage Unit:	\$1,000
NFT Rail System:	\$44,000
Growing Medium:	\$42,000
Maintenance Costs (annual):	\$50,000
Total Startup Costs:	\$667,000

Investment Impact

Economic Impact	Environmental Impact	Social Impact
<ul style="list-style-type: none"> • Building energy costs reduced by up to 25% • Building property values increased by up to 10% • Reduced food storage and transportation costs • Building roof lives increased by 2x 	<ul style="list-style-type: none"> • Reduction of heat island effects by up to 36% • Reduced carbon footprint through lower energy consumption • Decreased stormwater runoff by 65% through a rainwater harvesting and purification system 	<ul style="list-style-type: none"> • Create employment in economically underdeveloped neighborhoods • Engage local schools and communities to use the farms to promote healthy lifestyles

Fund Diagram and Flow Chart



Returns Profile

- **Farm Fixed-Rate Lease Revenue:** Fixed-rate lease agreement with monthly cash payments based on a 10-year amortization of farm construction costs—*paid by farmer to LLC*
- **Farm Revenue Share:** Variable-rate lease agreement with monthly cash payments based on 15% of farm revenues—*paid by farmer to LLC*
- **Tax-Increment Capture:** Incremental property tax revenue from increased building value through municipal TIF/PILOT structure—*paid by building owner to LP fund through municipal tax authority*
- **Public Incentives:** IRS green roof tax credit, state tax credits, grants and other incentives—*paid by public entities to LLC*
- **Timing of Cash Flows:** Cash returns are earned beginning in year 1 and continue annually thereafter
- **Fund Dividend Payments:** Dividends will be returned to investors after year 5 in order to create a contingency reserve for property maintenance
- **Term and Dissolution:** At the end of year 12, all remaining funds will be distributed as dividends, greenhouse infrastructure ownership reverts to the building owners, and special municipal TIF entity is dissolved

Risks:

Real Estate Prices

- ✦ Factors other than rooftop building improvements and energy efficiency drive real estate pricing and therefore affect the TIF revenue stream

Mitigants:

- ✓ Negative real estate price changes will not result in losses to the fund, while positive changes will increase revenue; TIF revenue has a floor of zero

Unstable Farm Revenue

- ✦ Organic food pricing, farm productivity, and exogenous demand factors lead to variable farm revenues and therefore affect the revenue share component of the lease revenue stream

- ✓ The revenue share provides financial stake in the success of the farm, and the fund GP will provide technological and best-practice expertise to maximize value; fixed rate lease payments provide stable cash flows to hedge the revenue share risk

Public Incentive Regime

- ✦ IRR and cash flow projects are based partially on tax credits and incentives available in current tax codes but could change and therefore affect the public incentives revenue stream

- ✓ The fund GP has an incentive to maximize public funding and will adjust contract structure as necessary to capitalize on changing public policy

Legal/Regulatory

- ✦ Construction of rooftop greenhouse is contingent on compliance with local zoning codes

- ✓ NYC and many other cities have expedited the approval process for green roofs; the fund GP will work to obtain block approvals for multiple buildings

Scalability

- Goal is to expand on a national scale, targeting high density urban centers
- Future Northeast funds can scale to \$200 million; U.S. funds can scale to over \$1 billion
- Potential to expand internationally to Canada, Australia, and East Asia, conditional upon country-specific regulation and local conditions

Case Study in Urban Farming

Gotham Greens, based in New York City, works with businesses to construct and manage rooftop greenhouses on commercial buildings. Gotham currently manages two greenhouses between 20,000 and 30,000 sq. ft. in size with average revenues of \$400,000 each. The produce is sold to local supermarkets, including one cultivated exclusively for Whole Foods.

Through its climate-controlled greenhouses incorporating cutting-edge hydroponics technology, Gotham Greens is able to provide a year-round growing environment. These greenhouses use 20 times less water and produce 20-30 times more yield per acre than a comparable traditional farm. Keeping the greenhouses sterile and soil-free allows for pesticide-free cultivation.