

Morris County Improvement Authority

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September 24, 2015

The Morris County Improvement Authority (the "MCIA"), together with a Morris County Board of Chosen Freeholder "Build-No Build Committee" (together, the "2011 Program Recommendation Committee"), have collectively been asked by the Board of Chosen Freeholders (the "Freeholders") to make a recommendation to the Freeholders regarding implementation of renewable energy projects located at one or more various local unit sites located within Morris County (the "Unbuilt Sites"). The Unbuilt Sites consist of local unit sites originally scheduled for implementation as part of the Morris County Improvement Authority's Renewable Energy Program Series 2011 (the "2011 Program"), and alternate sites that are being considered post-commencement of the 2011 Program. The Unbuilt Sites consist of County-owned facilities, municipal owned facilities and board of education owned facilities, all located within the County.

The 2011 Program Recommendation Committee's due diligence efforts include, but are not limited to, the following:

- Receipt of preliminary design and installation cost proposals for one or more Unbuilt Sites from one or more Engineering, Procurement and Construction contractors;
- Site visits and inspection of roof, ground and other engineering due diligence to determine the overall accuracy of each proposal and to confirm and document the constructability of the Unbuilt Sites;
- Productivity analysis to determine the anticipated photovoltaic production at each Unbuilt Site; and
- Financial modeling, including a preliminary ranking of Unbuilt Sites, based on multiple inputs, including installation costs (hard, soft and contingency), efficiency in installation, existing site conditions, energy productivity and break-even Solar Renewable Energy Certificate (SREC) values.

The 2011 Program Recommendation Committee has released two information documents to date – a "Preliminary Evaluation of Vendor Proposals for Series 2011 Unbuilt Site Evaluation" dated July 7, 2015 and the attached "Summary of All Unbuilt Site Analysis" (the "Preliminary Unbuilt Site Revenue Analysis").

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The Preliminary Unbuilt Site Revenue Analysis provides the following information with respect to each Unbuilt Site:

- **PPA Revenue** – The amount of money paid by the Local Unit for the supply of energy, in lieu of a similar payment to the traditional grid-energy supplier. The PPA Revenue payments are a contractual obligation of the Local Unit and are a fixed price that escalates annually. Each Local Unit’s renewable energy project is assumed to lose 0.05% productivity annually. The PPA Revenue is paid by each Local Unit directly to the Trustee for the 2011 Program bonds.
- **SREC Revenue** – The amount of revenue anticipated to be generated at each Unbuilt Site from the generation and sale of SRECs. SRECs are generated based on the production of each renewable energy project. The assumed sales prices for SRECs for the first five years are stated in footnote 2.
- **Operating Costs** – Includes industry-standard operation and maintenance expenses, as well as benchmark equipment upgrades in years 5, 10 and 15.
- **Debt Service** – The aggregate amount of principal plus interest at the 2011 Program bond interest rate incurred to finance the implementation of the renewable energy project at each Unbuilt Site.
- **Project Cash Flow** – An amount equal to the excess of the aggregate of PPA Revenue plus SREC Revenue, less the aggregate of Operating Costs and Debt Service.
- **Local Unit Energy Savings** – The aggregate amount of savings realized by each Local Unit as a result of participation in the 2011 Program.
- **Breakeven SREC** – The average annual price of SRECs required in order to produce sufficient SREC Revenue, which, together with PPA Revenue, is sufficient to pay for Operating Costs and Debt Service, and resulting in a Project Cash Flow of \$0.

The Preliminary Unbuilt Site Revenue Analysis was presented to the Freeholders and members of the public at the Freeholder meeting held on Monday, September 21, 2015 at 7:30 p.m. in the Borough of Rockaway.

On Monday October 5, 2015 at 6:30 p.m., the 2011 Program Recommendation Committee will host a Public Workshop in the Morris County Administration Building on Court St. in Morristown NJ, in the Public Meeting Room located on the 5th floor, to present the Preliminary Unbuilt Site Revenue Analysis, to present additional findings, if applicable, and to respond to questions from members of the public.

Morris County Improvement Authority
Solar Tranche 2
Summary of all Unbuilt Site Analyses¹
Profitability Rank of Unbuilt Sites

Cash Flow Summary over 15 Years Based on Market SRECs

Rank	PPA Revenue	SREC Revenue ²	Operating Costs	Debt Service ³	Project Cash Flow ³	Local Unit Energy Savings ⁴	Breakeven SREC
1	738,285	1,907,018	(313,737)	(1,329,753)	1,001,813	578,912	\$37
2	274,539	709,048	(136,494)	(499,846)	347,247	195,035	\$51
3	374,223	966,620	(154,869)	(657,406)	528,568	293,440	\$98
4	361,990	935,076	(154,869)	(647,898)	494,299	299,860	\$101
5	569,613	1,471,336	(205,959)	(1,472,372)	362,618	404,657	\$102
6	667,117	1,723,162	(287,275)	(1,202,075)	900,929	503,434	\$102
7	338,443	874,156	(136,494)	(646,540)	429,565	320,277	\$109
8	316,618	817,698	(154,941)	(577,268)	402,107	234,264	\$109
9	344,786	890,562	(136,494)	(670,989)	427,865	270,358	\$111
10	440,791	1,138,538	(205,989)	(1,051,306)	322,034	358,637	\$153
11	186,496	481,704	(136,494)	(418,350)	113,356	132,488	\$165
12	544,907	1,407,428	(205,989)	(1,431,624)	314,722	419,244	\$166
13	97,179	250,976	(125,494)	(184,726)	37,935	99,127	\$181
14	86,057	222,204	(125,494)	(167,068)	15,699	59,866	\$200
15	204,612	528,388	(280,363)	(480,830)	(28,193)	214,749	\$225
	5,545,656	14,323,914	(2,760,955)	(11,438,051)	5,670,564	4,384,348	

Cash Flow Summary over 30 Years (in same # rank as 15 year scenario)

Rank	PPA Revenue	SREC Revenue ²	Operating Costs	Debt Service ³	Project Cash Flow ³	Local Unit Energy Savings ⁴	Breakeven SREC
1	1,828,260	1,952,247	(894,008)	(1,329,753)	1,556,746	1,161,407	\$0
2	679,858	725,870	(374,602)	(499,846)	531,280	385,942	\$0
3	926,712	989,548	(443,505)	(657,406)	815,349	588,696	\$35
4	896,418	957,251	(443,505)	(647,898)	762,266	605,796	\$40
5	1,410,567	1,506,237	(650,177)	(1,472,372)	794,255	800,752	\$0
6	1,652,022	1,764,035	(817,179)	(1,202,075)	1,396,803	1,004,799	\$41
7	838,106	894,892	(374,604)	(646,540)	711,854	657,002	\$40
8	784,060	837,102	(443,577)	(577,268)	600,317	466,288	\$57
9	853,815	911,680	(374,602)	(670,989)	719,904	542,389	\$42
10	1,091,557	1,165,542	(650,207)	(1,051,306)	555,586	722,918	\$110
11	461,831	493,130	(374,602)	(418,350)	162,009	262,172	\$142
12	1,349,386	1,440,814	(650,207)	(1,431,624)	708,369	838,965	\$106
13	240,650	256,931	(352,602)	(184,726)	(39,747)	204,910	\$250
14	213,108	227,470	(352,602)	(167,068)	(79,092)	118,097	\$290
15	506,694	540,924	(796,107)	(480,830)	(229,319)	445,138	\$306
	13,733,044	14,663,673	(7,992,086)	(11,438,051)	8,966,580	8,805,271	

¹ Based on approximate hard & soft project costs less 27.4% 1603 grant

² Annual budget year summaries assume a Market SREC scenario (\$206 in 2016, \$210 in 2017, \$218 in 2018, \$218 in 2019, \$216 in 2020)

³ Total summaries are inclusive of debt service for the sites which has already been retired since debt service began in June 2012. Includes debt service payment paid through June 2015.

⁴ Assumes 2.2% annual escalator as per BPU standards