



**Utility Requirements Summary
WNY STAMP Feasibility Study
25 Aug 08 - Rev 2**

Photovoltaic Master Plan					
			Utility Requirements		
	Building Area SF	Power Watt-Hour	Water GPD	Sewer GPD	Gas Therms/Yr
PV Master Plan - Buildout					
Technology Manufacturing	4,000,000	208,000,000	2,300,000	1,700,000	27,400,000
Flex Space	1,400,000	4,620,000	23,333	23,333	672,000
Office	500,000	3,000,000	16,667	16,667	250,000
Retail	180,000	594,000	1,800	1,800	86,400
Demonstration Center	50,000	300,000	500	500	25,000
Totals	6,130,000	216,514,000	2,342,300	1,742,300	28,433,400
PV Master Plan - Phase 1					
Technology Manufacturing	1,000,000	51,000,000	570,000	440,000	6,900,000
Flex Space	0	0	0	0	0
Office	0	0	0	0	0
Retail	0	0	0	0	0
Demonstration Center	0	0	0	0	0
Totals	1,000,000	51,000,000	570,000	440,000	6,900,000
Flat Panel Display Master Plan					
			Utility Requirements		
	Building Area SF	Power Watt-Hour	Water GPD	Sewer GPD	Gas Therms/Yr
FPD Master Plan - Buildout					
Technology Manufacturing	2,400,000	100,000,000	6,000,000	5,000,000	7,200,000
Flex Space	1,400,000	4,620,000	23,333	23,333	672,000
Office	500,000	3,000,000	16,667	16,667	250,000
Retail	180,000	594,000	1,800	1,800	86,400
Demonstration Center	50,000	300,000	500	500	25,000
Totals	4,530,000	108,514,000	6,042,300	5,042,300	8,233,400
FPD Master Plan - Phase 1					
Technology Manufacturing	1,200,000	50,000,000	3,000,000	2,700,000	3,600,000
Flex Space	0	0	0	0	0
Office	0	0	0	0	0
Retail	0	0	0	0	0
Demonstration Center	0	0	0	0	0
Totals	1,200,000	50,000,000	3,000,000	2,700,000	3,600,000

Utility Requirements				
WNY STAMP Feasibility Study				
25 Aug 08 - Rev 2				
PHOTOVOLTAIC - BUILDOUT				
Power	SF	Design Population	Design Factor	Power Watt-Hour
PV Master Plan - Buildout				
Technology Manufacturing	4,000,000		N/A	208,000,000
Flex Space	1,400,000		3.3 watts per SF	4,620,000
Office	500,000		6 watts per SF	3,000,000
Retail	180,000		3.3 watts per SF	594,000
Demonstration Center	50,000		6 watts per SF	300,000
Total	6,130,000			216,514,000
Water	SF	Design Population	Design Factor	GPD
PV Master Plan - Buildout				
Technology Manufacturing	4,000,000		N/A	2,300,000
Flex Space (600 SF/person)	1,400,000	2,333	10 GPD / Person	23,333
Office (300 SF/person)	500,000	1,667	10 GPD / Person	16,667
Retail (1,000 SF/person)	180,000	180	10 GPD / Person	1,800
Demo Center (1,000 SF/person)	50,000	50	10 GPD / Person	500
Total	6,130,000			2,342,300
Sewer	SF	Design Population	Design Factor	GPD
PV Master Plan - Buildout				
Technology Manufacturing	4,000,000		N/A	1,700,000
Flex Space (600 SF/person)	1,400,000	2,333	10 GPD / Person	23,333
Office (300 SF/person)	500,000	1,667	10 GPD / Person	16,667
Retail (1,000 SF/person)	180,000	180	10 GPD / Person	1,800
Demo Center (1,000 SF/person)	50,000	50	10 GPD / Person	500
Total	6,130,000			1,742,300
Natural Gas	SF	Design Population	Design Factor	Therms per Year
PV Master Plan - Buildout				
Technology Manufacturing	4,000,000		N/A	27,400,000
Flex Space	1,400,000		0.48 Therms/SF/Yr.	672,000
Office	500,000		0.50 Therms/SF/Yr.	250,000
Retail	180,000		0.48 Therms/SF/Yr.	86,400
Demonstration Center	50,000		0.50 Therms/SF/Yr.	25,000
Total	6,130,000			28,433,400

Utility Requirements				
WNY STAMP Feasibility Study				
25 Aug 08 - Rev 2				
PHOTOVOLTAIC - PHASE 1				
Power	SF	Design Population	Design Factor	Power Watt-Hour
PV Master Plan - Phase 1				
Technology Manufacturing	1,000,000		N/A	51,000,000
Flex Space	0		3.3 watts per SF	0
Office	0		6 watts per SF	0
Retail	0		3.3 watts per SF	0
Demonstration Center	0		6 watts per SF	0
Total	1,000,000			51,000,000
Water	SF	Design Population	Design Factor	GPD
PV Master Plan - Phase 1				
Technology Manufacturing	1,000,000		N/A	570,000
Flex Space (600 SF/person)	0	0	10 GPD / Person	0
Office (300 SF/person)	0	0	10 GPD / Person	0
Retail (1,000 SF/person)	0	0	10 GPD / Person	0
Demo Center (1,000 SF/person)	0	0	10 GPD / Person	0
Total	1,000,000			570,000
Sewer	SF	Design Population	Design Factor	GPD
PV Master Plan - Phase 1				
Technology Manufacturing	1,000,000		N/A	440,000
Flex Space (600 SF/person)	0	0	10 GPD / Person	0
Office (300 SF/person)	0	0	10 GPD / Person	0
Retail (1,000 SF/person)	0	0	10 GPD / Person	0
Demo Center (1,000 SF/person)	0	0	10 GPD / Person	0
Total	1,000,000			440,000
Natural Gas	SF	Design Population	Design Factor	Therms per Year
PV Master Plan - Phase 1				
Technology Manufacturing	1,000,000		N/A	6,900,000
Flex Space	0		0.48 Therms/SF/Yr.	0
Office	0		0.50 Therms/SF/Yr.	0
Retail	0		0.48 Therms/SF/Yr.	0
Demonstration Center	0		0.50 Therms/SF/Yr.	0
Total	1,000,000			6,900,000

Utility Requirements				
WNY STAMP Feasibility Study				
25 Aug 08 - Rev 2				
FLAT PANEL DISPLAY - BUILDOUT				
Power	SF	Design Population	Design Factor	Power Watt-Hour
FPD Master Plan - Buildout				
Technology Manufacturing	2,400,000		N/A	100,000,000
Flex Space	1,400,000		3.3 watts per SF	4,620,000
Office	500,000		6 watts per SF	3,000,000
Retail	180,000		3.3 watts per SF	594,000
Demonstration Center	50,000		6 watts per SF	300,000
Total	4,530,000			108,514,000
Water	SF	Design Population	Design Factor	GPD
FPD Master Plan - Buildout				
Technology Manufacturing	2,400,000		N/A	6,000,000
Flex Space (600 SF/person)	1,400,000	2,333	10 GPD / Person	23,333
Office (300 SF/person)	500,000	1,667	10 GPD / Person	16,667
Retail (1,000 SF/person)	180,000	180	10 GPD / Person	1,800
Demo Center (1,000 SF/person)	50,000	50	10 GPD / Person	500
Total	4,530,000			6,042,300
Sewer	SF	Design Population	Design Factor	GPD
FPD Master Plan - Buildout				
Technology Manufacturing	2,400,000		N/A	5,000,000
Flex Space (600 SF/person)	1,400,000	2,333	10 GPD / Person	23,333
Office (300 SF/person)	500,000	1,667	10 GPD / Person	16,667
Retail (1,000 SF/person)	180,000	180	10 GPD / Person	1,800
Demo Center (1,000 SF/person)	50,000	50	10 GPD / Person	500
Total	4,530,000			5,042,300
Natural Gas	SF	Design Population	Design Factor	Therms per Year
FPD Master Plan - Buildout				
Technology Manufacturing	2,400,000		N/A	7,200,000
Flex Space	1,400,000		0.48 Therms/SF/Yr.	672,000
Office	500,000		0.50 Therms/SF/Yr.	250,000
Retail	180,000		0.48 Therms/SF/Yr.	86,400
Demonstration Center	50,000		0.50 Therms/SF/Yr.	25,000
Total	4,530,000			8,233,400

Utility Requirements				
WNY STAMP Feasibility Study				
25 Aug 08 - Rev 2				
FLAT PANEL DISPLAY - PHASE 1				
Power	SF	Design Population	Design Factor	Power Watt-Hour
FPD Master Plan Phase 1				
Technology Manufacturing	1,200,000		N/A	50,000,000
Flex Space	0		3.3 watts per SF	0
Office	0		6 watts per SF	0
Retail	0		3.3 watts per SF	0
Demonstration Center	0		6 watts per SF	0
Total	1,200,000			50,000,000
Water	SF	Design Population	Design Factor	GPD
FPD Master Plan Phase 1				
Technology Manufacturing	1,200,000		N/A	3,000,000
Flex Space (600 SF/person)	0	0	10 GPD / Person	0
Office (300 SF/person)	0	0	10 GPD / Person	0
Retail (1,000 SF/person)	0	0	10 GPD / Person	0
Demo Center (1,000 SF/person)	0	0	10 GPD / Person	0
Total	1,200,000			3,000,000
Sewer	SF	Design Population	Design Factor	GPD
FPD Master Plan Phase 1				
Technology Manufacturing	1,200,000		N/A	2,700,000
Flex Space (600 SF/person)	0	0	10 GPD / Person	0
Office (300 SF/person)	0	0	10 GPD / Person	0
Retail (1,000 SF/person)	0	0	10 GPD / Person	0
Demo Center (1,000 SF/person)	0	0	10 GPD / Person	0
Total	1,200,000			2,700,000
Natural Gas	SF	Design Population	Design Factor	Therms per Year
FPD Master Plan Phase 1				
Technology Manufacturing	1,200,000		N/A	3,600,000
Flex Space	0		0.48 Therms/SF/Yr.	0
Office	0		0.50 Therms/SF/Yr.	0
Retail	0		0.48 Therms/SF/Yr.	0
Demonstration Center	0		0.50 Therms/SF/Yr.	0
Total	1,200,000			3,600,000