



Town of Sudbury
Melone Community Solar
Proposal

Steve Remen, Executive Vice President, Business
Development
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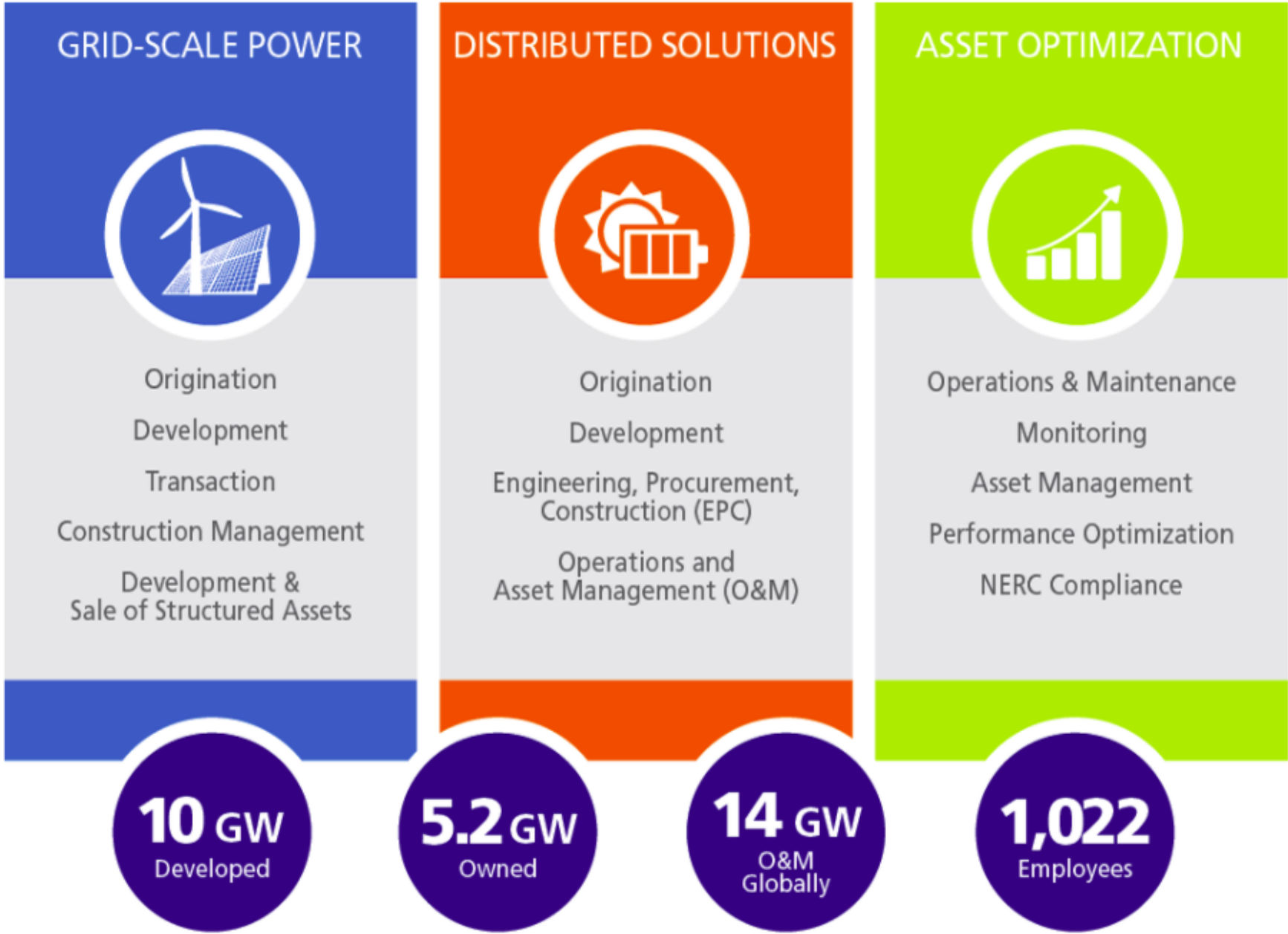
July 30, 2018

AGENDA

- 1 Company Overview
- 2 SMART Program
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- 5 Discussion



Company Overview





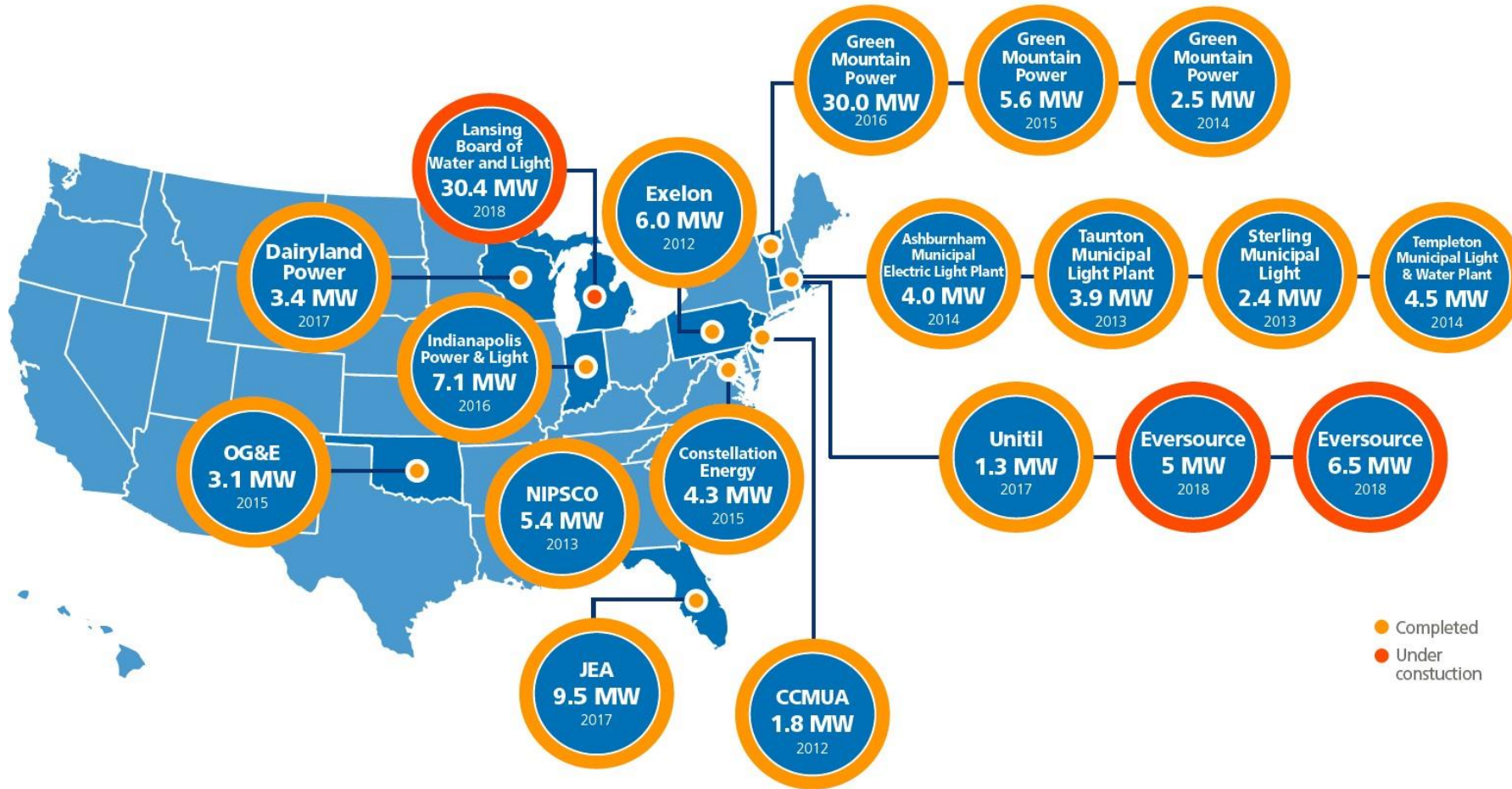
275+ MW
COMPLETED

350+ MW
IN DEVELOPMENT

20+
YEARS EXPERIENCE



Distributed Solutions: Utility Projects



Similar Project Experience

Environmentally Sensitive Sites

- 61.65 MW of projects at landfills, brownfields, or previously disturbed sites
- Largest landfill solar project in US
- 20+ MW of projects under development at previously disturbed sites

Massachusetts Projects

- 27.7 MW of projects constructed
- 20 MW of solar projects or solar + storage under development
- Trusted partner of numerous Municipal and Investor Owned Utilities

Storage + Microgrid Projects

- 1 MW / 4 MWh active ISO-NE Storage/Microgrid Deployed
- 55 MW Storage Pipeline
- 330 MW / 824 MWh EDF Group Storage Deployment



SMART Program

SMART Program

- 1,600 MWac Program (Solar MAssachusetts Renewable Target)
 - Developed by MA DOER following lengthy stakeholder engagement process
 - Capacity allocated to utilities based upon load share in MA
- Follows goals to guide development of projects through incentives
 - Location Based (Brownfields, Landfills, Buildings, Canopies, Floating)
 - Off-taker Based (Community Solar, Low Income, Public Entity)
 - Technology (Energy Storage, Dual-Axis Trackers)
 - Greenfield Subtractors
- Incorporates an alternative program to net metering
 - Avoids issues with hitting artificial 'caps' and limiting development
- Projects awarded enrollment via qualification under distinct Block procurements
 - 8 Blocks in total; declining (-4%) \$/kWh incentive pricing in each block
 - 1st 100 MW Block recently completed – established program pricing

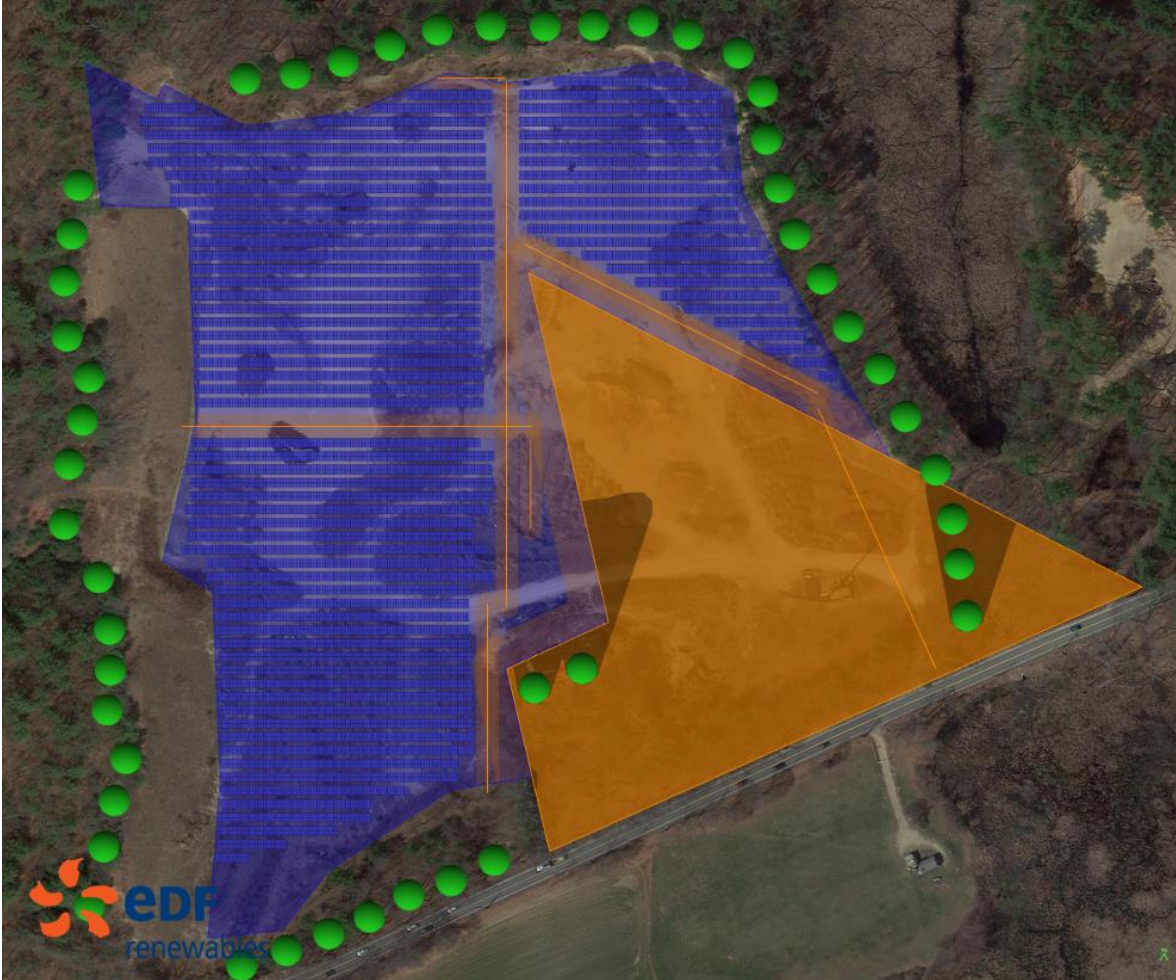
Community Solar

- Allows projects to sell discounted energy to residents, businesses, and others throughout the Eversource Service territory
- Potential subscribers would complete an application form, providing information from their electric bills, credit, and energy use
- This project would require a minimum of 112 subscribers but, number could be much higher depending on the type applicants
 - Subscribers obtained via, open houses, project website platform, mailings, etc.
- Similar EDF projects in different jurisdictions – have a set of partners to execute on subscriber onboarding and maintenance for duration of the project SMART Enrollment



Melone Community Solar

Sudbury Solar



Project Details

Project Capacity	4.5 MWac / 5.6 MWdc
Storage Size	1 MW / 4 Hour Duration
Annual Energy Production	7,228 MWh
Project Acreage	16 Acres
Project Off-takers	Community Solar

Project Design Considerations

Wetlands – if possible, design to avoid any encroachment with wetland or riverfront buffer areas

Rare, Threatened, or Endangered Species (RTE) – Screen the site through a consultant and applicable state offices for any concerns

Historical & Archaeological – Would plan to reach out to Massachusetts Historic Preservation Office to discuss any concerns

Clearing - Very limited tree clearing to the South

Aesthetics – Project area is already quite hidden but, will be evaluated further in order to mitigate or minimize any viewshed concerns

Anticipated Project Permits

PERMIT / APPROVAL / SCREENING	NOTES
Municipal Purpose Designation	Sudbury Planning and Economic Development
Project Modification Review (if necessary)	Sudbury Planning Board
Wetland Permits (If necessary; not expected)	Sudbury Conservation Commission; Massachusetts Department of Environmental Protection (Mass DEP)
Groundwater Protection Zone Approval	MA DEP
SHPO Project Screening	Massachusetts State Historic Preservation Office (SHPO)
Rare, Threatened, or Endangered Species Screening	Massachusetts National Heritage and Endangered Species Program; US Fish and Wildlife
Stormwater General Permit for Construction	National Pollutant Discharge Elimination System (NPDES - EPA)
Interconnection Services Agreement, Building and Electric, Access Driveways	Eversource Energy; Sudbury Building Dept.

MA DEP Solar in Groundwater Protection Zones

- Formalized Review and Approval process for siting solar + storage projects in Groundwater Protection Zones throughout the commonwealth
- Requires site plan review and approval w/ DEP
- Requires solar + storage to stay 200' away from the well locations with no associated disturbance (April 2018 update)
- Requires storage to be positioned out of Zone I areas

Project Timeline

Milestone	Estimated Start Timeframe
Site Due Diligence	Summer – Fall 2018
Project Permitting	Fall 2018 – Winter 2019
Project Engineering	Fall – Spring 2019
Project Financing	Spring 2019 – Summer 2019
Project Construction	Summer/Fall 2019
Project Operation	Fall/Winter 2019

Stakeholder Outreach

EDF is committed to working with communities and collaborating with parties through stakeholder outreach and public relations. We have dedicated resources to facilitate all stakeholder engagement. We work to understand each community's unique needs. Some of the ways we work with stakeholders include:

- Project introductory material – Introduction letter and project FAQs
- Open House information sessions
- Local media engagement
- Visualizations depicting a detailed project visualizations
- Availability to meet with stakeholders 1:1 to discuss the project and answer questions
- Ribbon cutting events



Proposal Benefits

Town of Sudbury Benefits

Financial	Local Impact	Environmental Benefits
<ul style="list-style-type: none">• Lease Revenues: \$292,000/yr (\$18,250/Acre) \$7.3 MM over 25 year term• PILOT Revenues: \$84,480/yr. (\$15,000/MWdc) \$2.112 MM over 25 year term• Access to Energy Savings: Up to \$72,280 (Year 1) \$1.379 MM over 20 year term• Town retains property ownership	<ul style="list-style-type: none">• No burden on traffic, water, sewer, student population, or impervious surface• Minimal Town resources for operation and maintenance• No local zoning changes required• Equipment removal and land restoration at the end of project life• Potential project expansion w/ SWD?• Compatible with 'Vision for Melone'	<ul style="list-style-type: none">• 7,228,000 kWh of clean energy produced annually, equivalent to:<ul style="list-style-type: none">• Energy usage of 581 Homes per year• 1,152 passenger vehicles driven for one year• Carbon sequestered by 6,336 acres of forest each year• Assist in meeting Commonwealth renewable energy goals• Limited site disturbance and clearing – quelling contamination concerns
\$10.79 MM Aggregate Benefit over 25 year	Low Impact Development	Increased Green Community Perception

\$0 Capital Cost to the Town

Melone Gravel Pit Community Solar Project Benefit Analysis

Generation	Year	Credit Value	Cost to Subscriber	Total Annual Value	Total Annual Cost	Annual Aggregate Energy		Lease Revenues	PILOT Revenues	Total			
						Savings							
7,228,000	1	\$ 0.10	\$ 0.09	\$ 722,800	\$ 650,520	\$ 72,280	\$ 292,000	\$ 84,480	\$ 448,760				
7,191,860	2	\$ 0.10	\$ 0.09	\$ 719,186	\$ 647,267	\$ 71,919	\$ 292,000	\$ 84,480	\$ 448,399				
7,155,901	3	\$ 0.10	\$ 0.09	\$ 715,590	\$ 644,031	\$ 71,559	\$ 292,000	\$ 84,480	\$ 448,039				
7,120,121	4	\$ 0.10	\$ 0.09	\$ 712,012	\$ 640,811	\$ 71,201	\$ 292,000	\$ 84,480	\$ 447,681				
7,084,521	5	\$ 0.10	\$ 0.09	\$ 708,452	\$ 637,607	\$ 70,845	\$ 292,000	\$ 84,480	\$ 447,325				
7,049,098	6	\$ 0.10	\$ 0.09	\$ 704,910	\$ 634,419	\$ 70,491	\$ 292,000	\$ 84,480	\$ 446,971				
7,013,852	7	\$ 0.10	\$ 0.09	\$ 701,385	\$ 631,247	\$ 70,139	\$ 292,000	\$ 84,480	\$ 446,619				
6,978,783	8	\$ 0.10	\$ 0.09	\$ 697,878	\$ 628,090	\$ 69,788	\$ 292,000	\$ 84,480	\$ 446,268				
6,943,889	9	\$ 0.10	\$ 0.09	\$ 694,389	\$ 624,950	\$ 69,439	\$ 292,000	\$ 84,480	\$ 445,919				
6,909,170	10	\$ 0.10	\$ 0.09	\$ 690,917	\$ 621,825	\$ 69,092	\$ 292,000	\$ 84,480	\$ 445,572				
6,874,624	11	\$ 0.10	\$ 0.09	\$ 687,462	\$ 618,716	\$ 68,746	\$ 292,000	\$ 84,480	\$ 445,226				
6,840,251	12	\$ 0.10	\$ 0.09	\$ 684,025	\$ 615,623	\$ 68,403	\$ 292,000	\$ 84,480	\$ 444,883				
6,806,050	13	\$ 0.10	\$ 0.09	\$ 680,605	\$ 612,544	\$ 68,060	\$ 292,000	\$ 84,480	\$ 444,540				
6,772,019	14	\$ 0.10	\$ 0.09	\$ 677,202	\$ 609,482	\$ 67,720	\$ 292,000	\$ 84,480	\$ 444,200				
6,738,159	15	\$ 0.10	\$ 0.09	\$ 673,816	\$ 606,434	\$ 67,382	\$ 292,000	\$ 84,480	\$ 443,862				
6,704,469	16	\$ 0.10	\$ 0.09	\$ 670,447	\$ 603,402	\$ 67,045	\$ 292,000	\$ 84,480	\$ 443,525				
6,670,946	17	\$ 0.10	\$ 0.09	\$ 667,095	\$ 600,385	\$ 66,709	\$ 292,000	\$ 84,480	\$ 443,189				
6,637,591	18	\$ 0.10	\$ 0.09	\$ 663,759	\$ 597,383	\$ 66,376	\$ 292,000	\$ 84,480	\$ 442,856				
6,604,403	19	\$ 0.10	\$ 0.09	\$ 660,440	\$ 594,396	\$ 66,044	\$ 292,000	\$ 84,480	\$ 442,524				
6,571,381	20	\$ 0.10	\$ 0.09	\$ 657,138	\$ 591,424	\$ 65,714	\$ 292,000	\$ 84,480	\$ 442,194				
6,538,525	21						\$ 292,000	\$ 84,480	\$ 376,480				
6,505,832	22						\$ 292,000	\$ 84,480	\$ 376,480				
6,473,303	23						\$ 292,000	\$ 84,480	\$ 376,480				
6,440,936	24			<table border="1"> <tr><td>Discount Rate</td><td>4%</td></tr> <tr><td>NPV</td><td>\$6,824,490.16</td></tr> </table>		Discount Rate	4%	NPV	\$6,824,490.16		\$ 292,000	\$ 84,480	\$ 376,480
Discount Rate	4%												
NPV	\$6,824,490.16												
6,408,732	25					\$ 292,000	\$ 84,480	\$ 376,480					

Totals \$ 1,378,951 \$ 7,300,000 \$ 2,112,000 \$ 10,790,951





Discussion

Thank You!



Contact

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