

BUSINESS CASE TREATMENT PLANT SOLAR PLANT

	year 1	year 2	year 3	year 4	year 5	year 6	year 7	year 8	year 9	year 10
Cost of 230 kW system after \$ 460,000 grant										
output kwh per year	327,307									
Value of energy produced per year at 0.0673c/kwh * 1.06 (line losses avoided)	\$24,578									
Energy credits: Solar REC value/year sold into PA market at \$50/ea	\$16,365									
Demand value PJM capacity charge: This is the market fluctuating capacity charge from the Regions transmission grid	\$11,417									
RMU Grid value per year - savings in demand stress of Rochelle's transmission/distribution grid	\$21,390									
Value to RMU per year:	\$73,751	\$73,751	\$73,751	\$73,751	\$73,751	\$73,751	\$73,751	\$73,751	\$73,751	\$73,751
Cost of 10 year internal loan at 1/2 bond rate										
principal remaining	\$307,000	\$276,300	\$245,600	\$214,900	\$184,200	\$153,500	\$122,800	\$92,100	\$61,400	\$30,700
interest at 1.34 %	(\$4,114)	(\$3,702)	(\$3,291)	(\$2,880)	(\$2,468)	(\$2,057)	(\$1,646)	(\$1,234)	(\$823)	(\$411)
Principal payments	(\$30,700)	(\$30,700)	(\$30,700)	(\$30,700)	(\$30,700)	(\$30,700)	(\$30,700)	(\$30,700)	(\$30,700)	(\$30,700)
Cost	(\$34,814)	(\$34,402)	(\$33,991)	(\$33,580)	(\$33,168)	(\$32,757)	(\$32,346)	(\$31,934)	(\$31,523)	(\$31,111)
Net result per year	\$38,937	\$39,348	\$39,760	\$40,171	\$40,583	\$40,994	\$41,405	\$41,817	\$42,228	\$42,640
NPV (3 %)	\$347,078									

PA

SREC value

\$50

per MWH

Using replacement value 6.73 c/kwh