1335

HAVERHILL SOLAR ENERGY PROJECT

The design of a solar energy system to provide 150 psi industrial process steam for the production of polystyrene at the USS Chemicals Haverhill, Ohio plant.

ECONOMIC ANALYSIS

Columbia Gas System Service Corporation
1600 Dublin Road
Columbus, Ohio 43215

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INTRODUCTION

There are a number of computer based evaluation techniques that can be used to conduct an economic analysis of a solar energy system. In order to provide a common framework for analysis of different solar industrial process heat solar energy systems, DOE-SAN directed solar energy project contractors to determine annual required revenue and internal rate of return using the methodology developed by W. C. Dickinson and K. C. Brown (1).

With this economic analysis technique, certain system parameters; such as solar system installed cost, annual operating and maintenance cost, and net annual solar energy delivered to the industrial process; are estimated for the candidate solar energy system. Then annual required revenue, annualized cost of solar energy, and annualized cost of conventional energy are derived using discounted cash flow techniques. The annual fossil fuel savings and simple payback can also be calculated. Lastly, the internal rate of return on solar equity investment can be determined by trial and error or graphical techniques.

(1) W. C. Dickinson and K. C. Brown, "Economic Analysis of Solar Industrial Process Heat Systems", Lawrence Livermore Laboratory, Livermore, California, Report UCRL-52814, August, 1979.

DEVELOPMENT OF COMPUTER CODES

In order to facilitate the analysis of numerous sets of parameters and to perform sensitivity analysis of certain solar system financial, monetary, and investment strategies and tax variables, Columbia developed an economic analysis computer code that is based on the methodology of Dickinson and Brown[2]. This program is attached in Appendix A.

The computer program has been exercised with the sets of baseline parameter values shown in Dickinson and Brown. "M-Values" calculated by the computer program for numerous sets of input parameters have been compared to M-Values presented in Dickinson and Brown[3]. The computer code has also been checked against Examples 1 and 2 in the Dickinson and Brown report[4]. Lastly, all of the sets of parameters required to recreate the Dickinson and Brown IROR curves[5] were used as inputs to the computer program. An exact overlay of these curves was obtained.

[2] IBID

[3] IBID, pp. 7, 8, 9

[4] IBID, pp. 19, 20

[5] IBID, pp 21

SELECTION OF PARAMETERS

There are nineteen input parameters that must be assigned values for each computer analysis. Because of the wide range of values that many of these variables can assume, (e.g. general inflation rate, fuel escalation rate, fraction of investment financed by loan, etc.) there are a multitude of sets of parameters that can be analyzed for any candidate solar energy system.

As part of the guidelines for performing an economic analysis of a DOE sponsored solar IPH system, DOE-SAN requested contractors to use the following parameters in their analysis:

(1)	Depreciation Schedule	= SOYD
(2)	Depreciation Period	= 7 years
(3)	Fraction of Investment Financed by Loan	= 0
(4)	General Inflation Rate	= 6%
(5)	Auxiliary Fuel Escalation Rate	= 8%
(6)	Major Component Replacement Cost	= 25% of Initial Cost
(7)	Year Major Component is Replaced	= 10
(8)	System Life	= 20 years
(9)	Salvage Value	= 0
(10)	Investment Tax Credit	= 0.2
(11)	Marginal Composite Tax Rate	= 50%
(12)	Rate of Return on Investment	= 5, 10, 15 and 20%

DOE-SAN also requested calculation of internal rate of return for two separate cases:

Case 1 - Using the values for the twelve variables given on the previous page with Initial Solar System Investment (I) equal to the entire solar system cost ($2,400,000)

Case 2 - Using the values for the twelve variables given on the previous page with Initial Solar System Investment (I) equal to the contractor cost share ($600,000)

Thus, there are eight DOE requested economic analysis:

1. I = $2,400,000 , ROI = 5
2. I = $2,400,000 , ROI = 10
3. I = $2,400,000 , ROI = 15
4. I = $2,400,000 , ROI = 20
5. I = $600,000 , ROI = 5
6. I = $600,000 , ROI = 10
7. I = $600,000 , ROI = 15
8. I = $600,000 , ROI = 20

with all the values for the other variables given on the previous page held constant.

In addition to the eight sets of parameters that were analyzed as requested by DOE, approximately 150 other sets of parameters were analyzed by Columbia. Sixty of these analysis are included in Appendix B. Table 1 presents values for the fifteen variables that were held constant for these sixty computer runs. Table 2 presents a summary of the four variables that were varied for the sixty computer runs.

HAVERHILL SOLAR SYSTEM ECNOMIC ANALYSIS

SUMMARY OF INPUT PARAMETER VALUES

(1)	Depreciation Schedule	= SOYD
(2)	Depreciation Period	= 7 years
(3)	Annual Energy Provided	= $8.0X10^9$ Btu/year
(4)	Solar Effectiveness Factor	= 1.06
(5)	Investment Loan Fraction (see Note A)	= 0.0, 0.3, 0.5
(6)	General Inflation Rate	= 6%
(7)	Auxiliary Fuel Escalation Rate (see Note A)	= 8%, 10%
(8)	Solar System Initial Investment (see Note B)	= $600,000
(9)	Loan Period	= 20 years
(10)	Major Component Replacement Cost (see Note A)	= 0.0, 0.25
(11)	Year Major Component is Replaced	= 10
(12)	System Life	= 20 years
(13)	Average of O, M, PT, and I	= 4%
(14)	Auxiliary Fuel Price	= $3.50/million Btu
(15)	After Tax ROI (see notes A & C)	= 5.1, 10.1, 15.0, 20.0
(16)	Market Interest Rate on Loan	= 9%
(17)	Net Salvage Value	= 0.0
(18)	Investment Tax Credit	= 20%
(19)	Marginal Composite Tax Rate	= 50%

Note A: This parameter varied according to schedule shown in Table 2
Note B: This parameter equal to contractor cost (25% of total solar system investment)
Note C: After tax ROI must not be set exactly equal to values of items 6, 7 or 16

TABLE 1

HAVERHILL SOLAR SYSTEM ECONOMIC ANALYSIS

SUMMARY OF COMPUTER RUNS

Run Number	q'	m (tc)	f	R
1	8%	0.00	0.0	0.1
2	8%	0.00	0.0	5.1
3	8%	0.00	0.0	10.1
4	8%	0.00	0.0	15.0
5	8%	0.00	0.0	20.0
6	8%	0.00	0.3	0.1
7	8%	0.00	0.3	5.1
8	8%	0.00	0.3	10.1
9	8%	0.00	0.3	15.0
10	8%	0.00	0.3	20.0
11	8%	0.00	0.5	0.1
12	8%	0.00	0.5	5.1
13	8%	0.00	0.5	10.1
14	8%	0.00	0.5	15.0
15	8%	0.00	0.5	20.0
16	8%	0.25	0.0	0.1
17	8%	0.25	0.0	5.1
18	8%	0.25	0.0	10.1
19	8%	0.25	0.0	15.0
20	8%	0.25	0.0	20.0
21	8%	0.25	0.3	0.1
22	8%	0.25	0.3	5.1
23	8%	0.25	0.3	10.1
24	8%	0.25	0.3	15.0
25	8%	0.25	0.3	20.0
26	8%	0.25	0.5	0.1
27	8%	0.25	0.5	5.1
28	8%	0.25	0.5	10.1
29	8%	0.25	0.5	15.0
30	8%	0.25	0.5	20.0
31	10%	0.00	0.0	0.1
32	10%	0.00	0.0	5.1
33	10%	0.00	0.0	10.1
34	10%	0.00	0.0	15.0
35	10%	0.00	0.0	20.0
36	10%	0.00	0.3	0.1
37	10%	0.00	0.3	5.1
38	10%	0.00	0.3	10.1
39	10%	0.00	0.3	15.0
40	10%	0.00	0.3	20.0
41	10%	0.00	0.3	0.1
42	10%	0.00	0.5	5.1
43	10%	0.00	0.5	10.1
44	10%	0.00	0.5	15.0
45	10%	0.00	0.5	20.0
46	10%	0.25	0.0	0.1
47	10%	0.25	0.0	5.1
48	10%	0.25	0.0	10.1
49	10%	0.25	0.0	15.0
50	10%	0.25	0.0	20.0
51	10%	0.25	0.3	0.1
52	10%	0.25	0.3	5.1
53	10%	0.25	0.3	10.1
54	10%	0.25	0.3	15.0
55	10%	0.25	0.3	20.0
56	10%	0.25	0.5	0.1
57	10%	0.25	0.5	5.1
58	10%	0.25	0.5	10.1
59	10%	0.25	0.5	15.0
60	10%	0.25	0.5	20.0

TABLE 2

ANALYSIS OF RESULTS

Dickinson and Brown identify an "M-factor" which is the ratio of levelized required revenue for solar generated energy to initial solar system investment. For the sixty cases delineated in Tables 1 and 2, the M-factor covers values that range from 0.102 for small (0.1%) after tax return on investment and low major component replacement cost to 0.289 for large (20%) after tax return on investment and high major component replacement cost.

From the M-factor and the annual amount of solar energy delivered, the levelized price of solar energy and the levelized price of solar energy per unit of fuel energy saved can be calculated. For the sixty cases mentioned previously the levelized price of solar energy ranges from $7.68 per million BTU for 0.1% ROI assumptions to $21.71 per million for 20% ROI assumption. Because steam at the Haverhill plant is generated in very high efficiency boilers the solar effectiveness factor is small and the levelized price of solar energy per unit of fuel energy saved ranges from $7.24 to $20.48 per million BTU.

The calculated levelized fossil fuel price for 8 percent fuel escalation rate ranges from $5.68 per million BTU at 20% ROI to $8.63 per million BTU at 0.01% ROI. For 10 percent fuel escalation rates the levelized fossil fuel price ranges from $6.52 per million BTU at 20% ROI to $11.00 per million BTU at 0.1% ROI.

The Internal Rate of Return for the Haverhill solar energy system can be determined by trial and error or graphical techniques. Figure 1 demonstrates the graphical technique for the set of parameters from computer runs 1 through 15 and 31 through 45 (given in Tables 1 and 2).

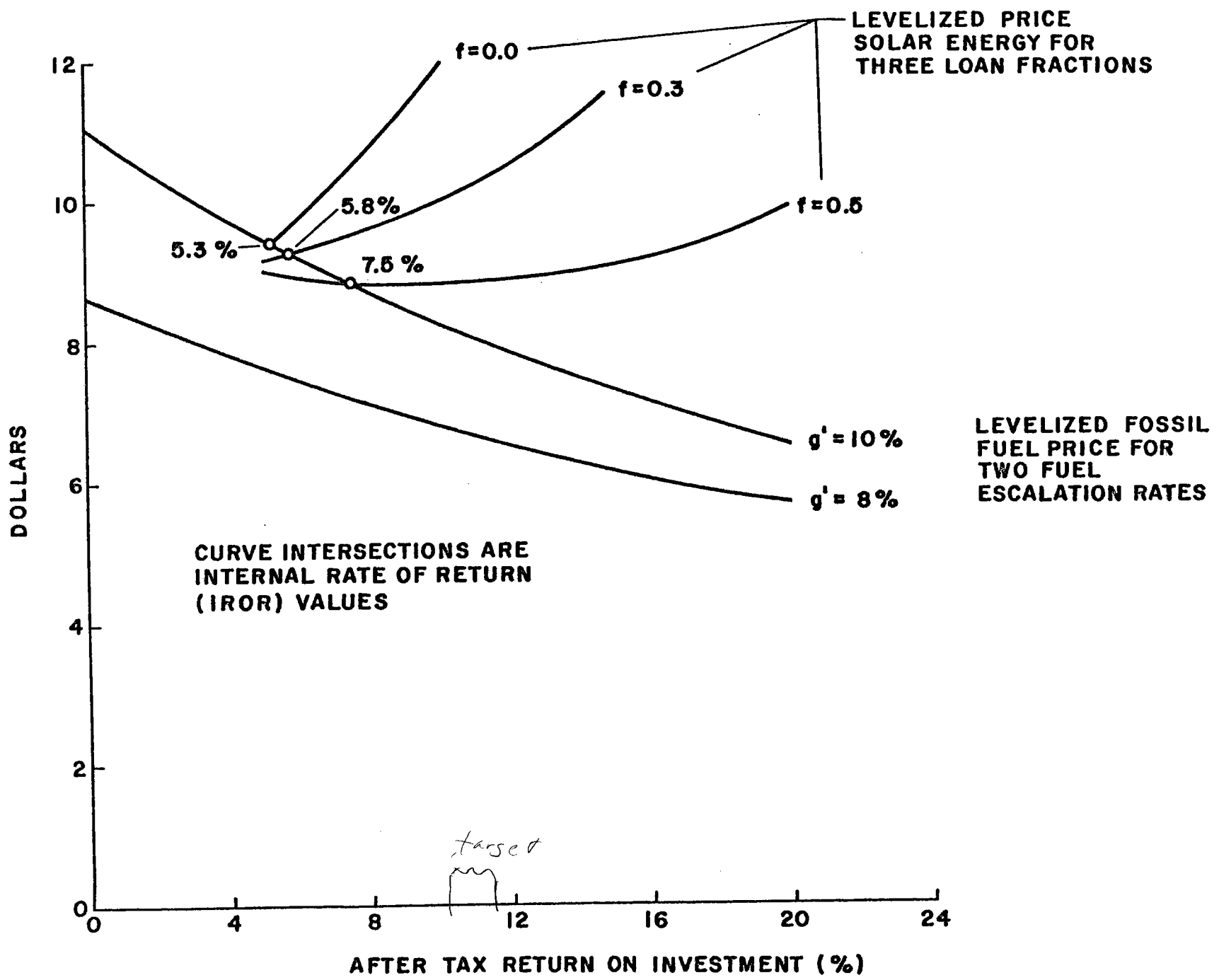
LEVELIZED PRICE
SOLAR ENERGY FOR
THREE LOAN FRACTIONS
f=0.0
f=0.3
f=0.5
5.8%
5.3 %
7.5 %
g' = 10%
g' = 8%
LEVELIZED FOSSIL
FUEL PRICE FOR
TWO FUEL
ESCALATION RATES
CURVE INTERSECTIONS ARE
INTERNAL RATE OF RETURN
(IROR) VALUES
target
DOLLARS
AFTER TAX RETURN ON INVESTMENT (%)
0
2
4
6
8
10
12
0
4
8
12
16
20
24

FIGURE 1

For the case of the initial solar system investment (I) equal to the entire solar investment, the internal rate of return is negative.

For economic analysis 1 through 30 the simple payback period, using Dickinson and Brown Variation 3 Methodology[6] is 19 years. For economic analysis number 31 through 60 the simple payback period is 16 years.

The expected annual fossil fuel savings for the Haverhill solar energy system is 8.48×10^9 BTU per year or 1515 barrels of crude oil or 60,000 gallons of #2 fuel oil per year.

[6] IBID, pg 25

APPENDIX A

ECONOMIC ANALYSIS OF SOLAR INDUSTRIAL PROCESS HEAT COMPUTER PROGRAM LISTING

```
C * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * JPD00010
C                                                                       JPD00020
C      THIS PROGRAM PERFORMS AN ECONOMIC ANALYSIS OF SOLAR INDUSTRIAL   JPD00030
C                                                                       JPD00040
C      PROCESS HEAT SYSTEMS USING THE METHODOLOGY TO DETERMINE          JPD00050
C                                                                       JPD00060
C      ANNUAL REQUIRED REVENUE AND INTERNAL RATE OF RETURN PRESENTED BY JPD00070
C                                                                       JPD00080
C      BILL DICKINSON AND KEN BROWN IN LAWRENCE LIVERMORE LABORATORY    JPD00090
C                                                                       JPD00100
C      PUBLICATION UCLR-52814, DATED AUGUST 17, 1979.  COMPUTER         JPD00110
C                                                                       JPD00120
C      PROGRAM JPDEIPH CREATED MAY 2, 1980 BY PHIL DECHOW.              JPD00130
C                                                                       JPD00140
C * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * JPD00150
C                                                                       JPD00160
C                                                                       JPD00170
      REAL*8 TITLE(20,10),CARD(10),TEMP(1)                              JPD00180
      REAL*8 SITE(3)                                                    JPD00190
C                                                                       JPD00200
C                                                                       JPD00210
C===> READ IN DATA FILE                                                 JPD00220
C                                                                       JPD00230
      READ (1,100,END=10)SITE,NDS,NDP,XES,SEF,F,XG,XGCF,SI,NLP,XCR,NYCR,JPD00240
     1N,XOMPIO,PFO,ROI,XSMR,XSV,XTC,XTAU                                JPD00250
  100 FORMAT (3A8/I2/I2/E9.3/F4.2/F4.1/F4.1/F4.1/F8.0/I2/F4.1/I2/I2/    JPD00260
     1F4.1/F4.1/F4.1/F4.1/F4.1/F4.1/F4.1)                               JPD00270
      REWIND 1                                                          JPD00280
      READ(1,101,END=10)((TITLE(I,J),J=1,10),I=1,20)                    JPD00290
  101 FORMAT(10A8)                                                      JPD00300
      DO 99 II=1,3                                                      JPD00310
      IF(II.EQ.1)XF=00.0                                                JPD00320
      IF(II.EQ.2)XF=30.0                                                JPD00330
      IF(II.EQ.3)XF=50.0                                                JPD00340
      XROI= -4.9                                                        JPD00350
      DO 99 JJ=1,5                                                      JPD00360
      XROI=XROI+5.0                                                     JPD00370
      IF(JJ.EQ.4)XROI=15.0                                              JPD00380
      WRITE(2,102) SITE                                                 JPD00390
  102 FORMAT('1'//28X,3A8)                                              JPD00400
      DO 5 KK=2,20                                                      JPD00410
      CALL CORE(CARD,80)                                                JPD00420
      WRITE(0,70)(TITLE(KK,J),J=3,10),(TITLE(KK,J),J=1,2)               JPD00430
   70 FORMAT(10A8)                                                      JPD00440
      IF(KK.NE.6) GO TO 3                                               JPD00450
      CALL CORE(TEMP,8)                                                 JPD00460
      WRITE(0,80)XF                                                     JPD00470
   80 FORMAT(F4.1)                                                      JPD00480
      CALL MOVE(TEMP,1,CARD,65,4)                                       JPD00490
      GO TO 4                                                           JPD00500
    3 IF(KK.NE.16) GO TO 4                                              JPD00510
      CALL CORE(TEMP,8)                                                 JPD00520
      WRITE(0,80)XROI                                                   JPD00530
      CALL MOVE(TEMP,1,CARD,65,4)                                       JPD00540
    4 CONTINUE                                                          JPD00550
```

```
      WRITE(2,103) CARD                                                 JPD00560
  103 FORMAT(10A8)                                                      JPD00570
    5 CONTINUE                                                          JPD00580
      WRITE(2,104)                                                      JPD00590
  104 FORMAT(//,10X,'*************************************'/            JPD00600
     110X,'*   NOTE: G MUST NOT EQUAL ROI       *'/                    JPD00610
     210X,'*   NOTE: GCF MUST NOT EQUAL ROI     *'/                    JPD00620
     310X,'*   NOTE: SMR MUST NOT EQUAL ROI     *'/                    JPD00630
     410X,'*************************************')                     JPD00640
   10 F=XF/100.                                                         JPD00650
      G=XG/100.                                                         JPD00660
      GCF=XGCF/100.                                                     JPD00670
      CR=XCR/100.                                                       JPD00680
      OMPIO=XOMPIO/100.                                                 JPD00690
      ROI=XROI/100.                                                     JPD00700
      SMR=XSMR/100.                                                     JPD00710
      SV=XSV/100.                                                       JPD00720
      TC=XTC/100.                                                       JPD00730
      TAU=XTAU/100.                                                     JPD00740
      ES=XES/1000000.                                                   JPD00750
      IF(G.NE.ROI) GO TO 20                                             JPD00760
      WRITE(2,105)                                                      JPD00770
  105 FORMAT( 'G.EQ.ROI, DIVIDE CHECK ERROR WILL OCCUR')                JPD00780
   20 RPR=((1.+ROI)/(1.+G)) -1.                                         JPD00790
      CALL CRF(ROI,NDP,VAL1)                                            JPD00800
      DP=NDP                                                            JPD00810
      DEP=(2./(DP*(DP+1.)*ROI))*(DP-(1./VAL1))                          JPD00820
      CALL CRF(ROI,N,VAL2)                                              JPD00830
      CALL CRF(RPR,N,VAL3)                                              JPD00840
      OMPI=OMPIO*(VAL2/VAL3)                                            JPD00850
      CALL CRF(SMR,NLP,VAL4)                                            JPD00860
      CALL CRF(ROI,NLP,VAL5)                                            JPD00870
      IF(SMR.NE.ROI) GO TO 21                                           JPD00880
      WRITE(2,106)                                                      JPD00890
  106 FORMAT('SMR.EQ.ROI, DIVIDE CHECK ERROR WILL OCCUR')               JPD00900
   21 RDPR=(1.+ROI)/(1.+SMR)-1.                                         JPD00910
      CALL CRF(RDPR,NLP,VAL6)                                           JPD00920
      TERM1=F*(1.-TAU)*(VAL4/VAL5)                                      JPD00930
      TERM2=((F*TAU)/(1.+SMR))*((VAL4-SMR)/VAL6)                        JPD00940
      TERM3=CR*(1.-TC-TAU*DEP)*((1.+G)/(1.+ROI))**NYCR                  JPD00950
      TERM4=SV*((1.+G)/(1.+ROI))**N                                     JPD00960
      XM=OMPI+(VAL2/(1.-TAU))*((1.-F)+TERM1+TERM2-TC/(1.+ROI)-TAU*DEP+TEJPD00970
     1RM3-TERM4)                                                        JPD00980
      WRITE(2,107) XM                                                   JPD00990
  107 FORMAT(/,10X,'M VALUE=',F7.3)                                     JPD01000
      PS=(XM*SI/ES)                                                     JPD01010
      WRITE(2,108) PS                                                   JPD01020
  108 FORMAT(/,10X,'LEVELIZED PRICE OF SOLAR ENERGY= $',F7.2)           JPD01030
      PSE=PS/SEF                                                        JPD01040
      WRITE(2,109) PSE                                                  JPD01050
  109 FORMAT(/,10X,'LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $',F7.JPD01060
     12)                                                                JPD01070
      TERM5=1.-((1.+GCF)/(1.+ROI))**N                                   JPD01080
      IF(GCF.NE.ROI) GO TO 22                                           JPD01090
      WRITE(2,110)                                                      JPD01100
```

```
  110 FORMAT( 'GCF.EQ.ROI, DIVIDE CHECK ERROR WILL OCCUR')              JPD01110
   22 XLF=VAL2*TERM5*(1.+GCF)/(ROI-GCF)                                JPD01120
      WRITE(2,111) XLF                                                 JPD01130
  111 FORMAT(/,10X,'AUX FUEL PRICE LEVELIZING FACTOR= ',F7.3)          JPD01140
      PF=PFO*XLF                                                       JPD01150
      WRITE(2,112) PF                                                  JPD01160
  112 FORMAT(/,10X,'LEVELIZED PRICE AUX FUEL = $',F7.2)                JPD01170
      TERM7=0.0                                                        JPD01180
      TERM9=0.0                                                        JPD01190
      DO 50 NN=1,50                                                    JPD01200
      TERM6=(1.+GCF)**NN                                               JPD01210
      TERM7=TERM7+TERM6                                                JPD01220
      TERM8=(1.+G)**NN                                                 JPD01230
      TERM9=TERM9+TERM8                                                JPD01240
      TERM10=(1.-TAU)*SEF*ES*PFO*TERM7/SI                              JPD01250
      TERM11=(1.-TAU)*OMPIO*TERM9                                      JPD01260
      X1=NN*TAU/N+TERM10-TERM11                                        JPD01270
      X2=1.-TC                                                         JPD01280
      IF(X1.GE.X2) GO TO 51                                            JPD01290
   50 CONTINUE                                                         JPD01300
      WRITE(2,113)                                                     JPD01310
  113 FORMAT(/,10X,'SIMPLE PAYBACK (VERSION 3) GREATER THAN 50 YEARS') JPD01320
      GO TO 99                                                         JPD01330
   51 CONTINUE                                                         JPD01340
      WRITE(2,114) NN                                                  JPD01350
  114 FORMAT(/,10X,'SIMPLE PAYBACK (VERSION 3) =',I5,' YEARS')         JPD01360
   99 CONTINUE                                                         JPD01370
      STOP                                                             JPD01380
      END                                                              JPD01390
      SUBROUTINE CRF(R,N,V)                                            JPD01400
      V=R/(1.-(1./(1.+R))**N)                                          JPD01410
      IF(V.GT.0.0) GO TO 11                                            JPD01420
      WRITE(2,200)                                                     JPD01430
  200 FORMAT('CRF COMPUTED IN SUBROUTINE CRF IS LE. 0.0')              JPD01440
   11 CONTINUE                                                         JPD01450
      RETURN                                                           JPD01460
      END                                                              JPD01470
```

APPENDIX B

HAVERHILL SOLAR ENERGY SYSTEM

ECONOMIC ANALYSIS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
ONPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	0.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.102

LEVELIZED PRICE OF SOLAR ENERGY= $ 7.68

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 7.24

AUX FUEL PRICE LEVELIZING FACTOR= 2.466

LEVELIZED PRICE AUX FUEL = $ 8.63

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	5.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.132

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.90

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.34

AUX FUEL PRICE LEVELIZING FACTOR=   2.181

LEVELIZED PRICE AUX FUEL = $ 7.63

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	10.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**********************************
*   NOTE: G MUST NOT EQUAL ROI   *
*   NOTE: GCF MUST NOT EQUAL ROI *
*   NOTE: SMR MUST NOT EQUAL ROI *
**********************************
```

M VALUE= 0.169

LEVELIZED PRICE OF SOLAR ENERGY= $ 12.66

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 11.94

AUX FUEL PRICE LEVELIZING FACTOR= 1.944

LEVELIZED PRICE AUX FUEL = $ 6.80

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	15.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.216

LEVELIZED PRICE OF SOLAR ENERGY= $ 16.23

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 15.32

AUX FUEL PRICE LEVELIZING FACTOR= 1.763

LEVELIZED PRICE AUX FUEL = $ 6.17

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	20.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.275

LEVELIZED PRICE OF SOLAR ENERGY= $ 20.61

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 19.44

AUX FUEL PRICE LEVELIZING FACTOR= 1.624

LEVELIZED PRICE AUX FUEL = $ 5.68

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	0.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.120

LEVELIZED PRICE OF SOLAR ENERGY= $ 8.99

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 8.48

AUX FUEL PRICE LEVELIZING FACTOR= 2.466

LEVELIZED PRICE AUX FUEL = $ 8.63

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	5.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.129

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.70

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.15

AUX FUEL PRICE LEVELIZING FACTOR=   2.181

LEVELIZED PRICE AUX FUEL = $ 7.63

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	10.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**********************************
*   NOTE: G MUST NOT EQUAL ROI   *
*   NOTE: GCF MUST NOT EQUAL ROI *
*   NOTE: SMR MUST NOT EQUAL ROI *
**********************************
```

M VALUE= 0.142

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.66

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.06

AUX FUEL PRICE LEVELIZING FACTOR=   1.944

LEVELIZED PRICE AUX FUEL = $ 6.80

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	15.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**********************************
*   NOTE: G MUST NOT EQUAL ROI   *
*   NOTE: GCF MUST NOT EQUAL ROI *
*   NOTE: SMR MUST NOT EQUAL ROI *
**********************************
```

M VALUE= 0.164

LEVELIZED PRICE OF SOLAR ENERGY= $ 12.28

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 11.58

AUX FUEL PRICE LEVELIZING FACTOR=   1.763

LEVELIZED PRICE AUX FUEL = $ 6.17

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	20.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.194

LEVELIZED PRICE OF SOLAR ENERGY= $ 14.53

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 13.71

AUX FUEL PRICE LEVELIZING FACTOR=   1.624

LEVELIZED PRICE AUX FUEL = $ 5.68

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	0.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.132

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.87

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.31

AUX FUEL PRICE LEVELIZING FACTOR=   2.466

LEVELIZED PRICE AUX FUEL = $ 8.63

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	5.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.128

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.57

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.03

AUX FUEL PRICE LEVELIZING FACTOR= 2.181

LEVELIZED PRICE AUX FUEL = $ 7.63

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	10.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.124

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.33

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 8.80

AUX FUEL PRICE LEVELIZING FACTOR=   1.944

LEVELIZED PRICE AUX FUEL = $ 6.80

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	15.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.129

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.64

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.10

AUX FUEL PRICE LEVELIZING FACTOR= 1.763

LEVELIZED PRICE AUX FUEL = $ 6.17

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	20.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
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M VALUE= 0.140

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.48

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.89

AUX FUEL PRICE LEVELIZING FACTOR= 1.624

LEVELIZED PRICE AUX FUEL = $ 5.68

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	0.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**********************************
*   NOTE: G MUST NOT EQUAL ROI   *
*   NOTE: GCF MUST NOT EQUAL ROI *
*   NOTE: SMR MUST NOT EQUAL ROI *
**********************************
```

M VALUE= 0.113

LEVELIZED PRICE OF SOLAR ENERGY= $ 8.49

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 8.01

AUX FUEL PRICE LEVELIZING FACTOR=   2.466

LEVELIZED PRICE AUX FUEL = $ 8.63

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	5.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.148

LEVELIZED PRICE OF SOLAR ENERGY= $ 11.11

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.48

AUX FUEL PRICE LEVELIZING FACTOR= 2.181

LEVELIZED PRICE AUX FUEL = $ 7.63

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	10.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.186

LEVELIZED PRICE OF SOLAR ENERGY= $ 13.94

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 13.15

AUX FUEL PRICE LEVELIZING FACTOR= 1.944

LEVELIZED PRICE AUX FUEL = $ 6.80

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	15.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.233

LEVELIZED PRICE OF SOLAR ENERGY= $ 17.46

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 16.47

AUX FUEL PRICE LEVELIZING FACTOR=   1.763

LEVELIZED PRICE AUX FUEL = $ 6.17

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	20.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.289

LEVELIZED PRICE OF SOLAR ENERGY= $ 21.71

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 20.48

AUX FUEL PRICE LEVELIZING FACTOR=   1.624

LEVELIZED PRICE AUX FUEL = $ 5.68

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	0.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.131

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.81

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.25

AUX FUEL PRICE LEVELIZING FACTOR=   2.466

LEVELIZED PRICE AUX FUEL = $ 8.63

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	5.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**********************************
*   NOTE: G MUST NOT EQUAL ROI   *
*   NOTE: GCF MUST NOT EQUAL ROI *
*   NOTE: SMR MUST NOT EQUAL ROI *
**********************************
```

M VALUE= 0.146

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.91

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.30

AUX FUEL PRICE LEVELIZING FACTOR= 2.181

LEVELIZED PRICE AUX FUEL = $ 7.63

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	10.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.159

LEVELIZED PRICE OF SOLAR ENERGY= $ 11.94

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 11.26

AUX FUEL PRICE LEVELIZING FACTOR= 1.944

LEVELIZED PRICE AUX FUEL = $ 6.80

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	15.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.180

LEVELIZED PRICE OF SOLAR ENERGY= $ 13.50

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 12.74

AUX FUEL PRICE LEVELIZING FACTOR=   1.763

LEVELIZED PRICE AUX FUEL = $ 6.17

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	20.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.208

LEVELIZED PRICE OF SOLAR ENERGY= $ 15.64

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 14.75

AUX FUEL PRICE LEVELIZING FACTOR=   1.624

LEVELIZED PRICE AUX FUEL = $ 5.68

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	0.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.142

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.68

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.08

AUX FUEL PRICE LEVELIZING FACTOR= 2.466

LEVELIZED PRICE AUX FUEL = $ 8.63

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	5.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.144

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.78

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.17

AUX FUEL PRICE LEVELIZING FACTOR= 2.181

LEVELIZED PRICE AUX FUEL = $ 7.63

SIMPLE PAYBACK (VERSION 3) = 19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	10.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**********************************
*   NOTE: G MUST NOT EQUAL ROI   *
*   NOTE: GCF MUST NOT EQUAL ROI *
*   NOTE: SMR MUST NOT EQUAL ROI *
**********************************
```

M VALUE= 0.141

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.61

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.01

AUX FUEL PRICE LEVELIZING FACTOR=   1.944

LEVELIZED PRICE AUX FUEL = $ 6.80

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	15.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.145

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.87

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.25

AUX FUEL PRICE LEVELIZING FACTOR=   1.763

LEVELIZED PRICE AUX FUEL = $ 6.17

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	08.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	20.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.154

LEVELIZED PRICE OF SOLAR ENERGY= $ 11.59

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.93

AUX FUEL PRICE LEVELIZING FACTOR=   1.624

LEVELIZED PRICE AUX FUEL = $ 5.68

SIMPLE PAYBACK (VERSION 3) =   19 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	0.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.102

LEVELIZED PRICE OF SOLAR ENERGY= $ 7.68

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 7.24

AUX FUEL PRICE LEVELIZING FACTOR=   3.142

LEVELIZED PRICE AUX FUEL = $ 11.00

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	5.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.132

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.90

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.34

AUX FUEL PRICE LEVELIZING FACTOR= 2.703

LEVELIZED PRICE AUX FUEL = $ 9.46

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	10.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**********************************
*   NOTE: G MUST NOT EQUAL ROI   *
*   NOTE: GCF MUST NOT EQUAL ROI *
*   NOTE: SMR MUST NOT EQUAL ROI *
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M VALUE= 0.169

LEVELIZED PRICE OF SOLAR ENERGY= $ 12.66

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 11.94

AUX FUEL PRICE LEVELIZING FACTOR=   2.344

LEVELIZED PRICE AUX FUEL = $ 8.20

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	15.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
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M VALUE= 0.216

LEVELIZED PRICE OF SOLAR ENERGY= $ 16.23

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 15.32

AUX FUEL PRICE LEVELIZING FACTOR=   2.070

LEVELIZED PRICE AUX FUEL = $ 7.25

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	20.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
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M VALUE= 0.275

LEVELIZED PRICE OF SOLAR ENERGY= $ 20.61

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 19.44

AUX FUEL PRICE LEVELIZING FACTOR= 1.863

LEVELIZED PRICE AUX FUEL = $ 6.52

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	0.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
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M VALUE= 0.120

LEVELIZED PRICE OF SOLAR ENERGY= $ 8.99

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 8.48

AUX FUEL PRICE LEVELIZING FACTOR= 3.142

LEVELIZED PRICE AUX FUEL = $ 11.00

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	5.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
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M VALUE= 0.129

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.70

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.15

AUX FUEL PRICE LEVELIZING FACTOR=   2.703

LEVELIZED PRICE AUX FUEL = $ 9.46

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	10.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**********************************
*   NOTE: G MUST NOT EQUAL ROI   *
*   NOTE: GCF MUST NOT EQUAL ROI *
*   NOTE: SMR MUST NOT EQUAL ROI *
**********************************
```

M VALUE= 0.142

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.66

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.06

AUX FUEL PRICE LEVELIZING FACTOR= 2.344

LEVELIZED PRICE AUX FUEL = $ 8.20

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	15.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
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M VALUE= 0.164

LEVELIZED PRICE OF SOLAR ENERGY= $ 12.28

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 11.58

AUX FUEL PRICE LEVELIZING FACTOR= 2.070

LEVELIZED PRICE AUX FUEL = $ 7.25

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	20.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.194

LEVELIZED PRICE OF SOLAR ENERGY= $ 14.53

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 13.71

AUX FUEL PRICE LEVELIZING FACTOR=   1.863

LEVELIZED PRICE AUX FUEL = $ 6.52

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	0.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.132

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.87

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.31

AUX FUEL PRICE LEVELIZING FACTOR= 3.142

LEVELIZED PRICE AUX FUEL = $ 11.00

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	5.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.128

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.57

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.03

AUX FUEL PRICE LEVELIZING FACTOR= 2.703

LEVELIZED PRICE AUX FUEL = $ 9.46

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	10.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.124

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.33

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 8.80

AUX FUEL PRICE LEVELIZING FACTOR=   2.344

LEVELIZED PRICE AUX FUEL = $ 8.20

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	15.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**********************************
*   NOTE: G MUST NOT EQUAL ROI   *
*   NOTE: GCF MUST NOT EQUAL ROI *
*   NOTE: SMR MUST NOT EQUAL ROI *
**********************************
```

M VALUE= 0.129

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.64

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.10

AUX FUEL PRICE LEVELIZING FACTOR=   2.070

LEVELIZED PRICE AUX FUEL = $ 7.25

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	00.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	20.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.140

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.48

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.89

AUX FUEL PRICE LEVELIZING FACTOR= 1.863

LEVELIZED PRICE AUX FUEL = $ 6.52

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	0.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.113

LEVELIZED PRICE OF SOLAR ENERGY= $ 8.49

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 8.01

AUX FUEL PRICE LEVELIZING FACTOR= 3.142

LEVELIZED PRICE AUX FUEL = $ 11.00

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	5.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.148

LEVELIZED PRICE OF SOLAR ENERGY= $ 11.11

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.48

AUX FUEL PRICE LEVELIZING FACTOR=   2.703

LEVELIZED PRICE AUX FUEL = $ 9.46

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	10.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.186

LEVELIZED PRICE OF SOLAR ENERGY= $ 13.94

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 13.15

AUX FUEL PRICE LEVELIZING FACTOR= 2.344

LEVELIZED PRICE AUX FUEL = $ 8.20

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	15.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
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M VALUE= 0.233

LEVELIZED PRICE OF SOLAR ENERGY= $ 17.46

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 16.47

AUX FUEL PRICE LEVELIZING FACTOR=   2.070

LEVELIZED PRICE AUX FUEL = $ 7.25

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	0.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	20.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**********************************
*   NOTE: G MUST NOT EQUAL ROI   *
*   NOTE: GCF MUST NOT EQUAL ROI *
*   NOTE: SMR MUST NOT EQUAL ROI *
**********************************
```

M VALUE= 0.289

LEVELIZED PRICE OF SOLAR ENERGY= $ 21.71

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 20.48

AUX FUEL PRICE LEVELIZING FACTOR= 1.863

LEVELIZED PRICE AUX FUEL = $ 6.52

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	0.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.131

LEVELIZED PRICE OF SOLAR ENERGY= $ 9.81

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 9.25

AUX FUEL PRICE LEVELIZING FACTOR= 3.142

LEVELIZED PRICE AUX FUEL = $ 11.00

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	5.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.146

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.91

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.30

AUX FUEL PRICE LEVELIZING FACTOR=   2.703

LEVELIZED PRICE AUX FUEL = $ 9.46

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	10.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.159

LEVELIZED PRICE OF SOLAR ENERGY= $ 11.94

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 11.26

AUX FUEL PRICE LEVELIZING FACTOR=   2.344

LEVELIZED PRICE AUX FUEL = $ 8.20

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	15.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.180

LEVELIZED PRICE OF SOLAR ENERGY= $ 13.50

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 12.74

AUX FUEL PRICE LEVELIZING FACTOR=   2.070

LEVELIZED PRICE AUX FUEL = $ 7.25

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	30.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	20.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

```
**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
**************************************
```

M VALUE= 0.208

LEVELIZED PRICE OF SOLAR ENERGY= $ 15.64

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 14.75

AUX FUEL PRICE LEVELIZING FACTOR= 1.863

LEVELIZED PRICE AUX FUEL = $ 6.52

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	0.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
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M VALUE= 0.142

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.68

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.08

AUX FUEL PRICE LEVELIZING FACTOR=   3.142

LEVELIZED PRICE AUX FUEL = $ 11.00

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	5.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
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M VALUE= 0.144

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.78

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.17

AUX FUEL PRICE LEVELIZING FACTOR=   2.703

LEVELIZED PRICE AUX FUEL = $ 9.46

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	10.1
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
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M VALUE= 0.141

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.61

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.01

AUX FUEL PRICE LEVELIZING FACTOR=   2.344

LEVELIZED PRICE AUX FUEL = $ 8.20

SIMPLE PAYBACK (VERSION 3) =   16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	15.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
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M VALUE= 0.145

LEVELIZED PRICE OF SOLAR ENERGY= $ 10.87

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.25

AUX FUEL PRICE LEVELIZING FACTOR= 2.070

LEVELIZED PRICE AUX FUEL = $ 7.25

SIMPLE PAYBACK (VERSION 3) = 16 YEARS

HAVERHILL POLYSTYRENE

NDS	DEPRECIATION SCHEDULE (1=SL, 2=SOYD)	02
NDP	DEPRECIATION PERIOD (YEARS)	07
ES	ANNUAL SOLAR ENERGY PROVIDED (BTU/YEAR)	8.000E+09
SEF	SOLAR EFFECTIVENESS FACTOR	1.06
F	FRACTION INVESTMENT FINANCED BY LOAN (PERCENT)	50.0
G	GENERAL INFLATION RATE (PERCENT)	06.0
GCF	CONVENTIONAL FUEL ESCALATION RATE (PERCENT)	10.0
SI	SOLAR SYSTEM INITIAL INVESTMENT (DOLLARS)	0600000.
NLP	LOAN PERIOD (YEARS)	20
CR	MAJOR COMPONENT REPL COST (PERCENT OF I.C.)	25.0
NYCR	YEAR MAJOR COMPONENT IS REPLACED (YEAR)	10
N	SYSTEM LIFE (YEARS)	20
OMPIO	AVG OF O,M,PT,I IN ZERO YR $ (PERCENT OF I.C.)	04.0
PFO	AUX FUEL PRICE IN ZERO YR $ ($/MILLION BTU)	03.5
ROI	AFTER TAX ROI (PERCENT)	20.0
SMR	MARKET INTEREST RATE ON LOAN (PERCENT)	09.0
SV	NET SALVAGE VALUE (PERCENT OF I.C.)	00.0
TC	INVESTMENT TAX CREDIT (PERCENT)	20.0
TAU	MARGINAL COMPOSITE TAX RATE (PERCENT)	50.0

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**************************************
*   NOTE: G MUST NOT EQUAL ROI       *
*   NOTE: GCF MUST NOT EQUAL ROI     *
*   NOTE: SMR MUST NOT EQUAL ROI     *
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M VALUE= 0.154

LEVELIZED PRICE OF SOLAR ENERGY= $ 11.59

LEVELIZED PRICE S.E/UNIT OF AUX ENERGY SAVED= $ 10.93

AUX FUEL PRICE LEVELIZING FACTOR=   1.863

LEVELIZED PRICE AUX FUEL = $ 6.52

SIMPLE PAYBACK (VERSION 3) =   16 YEARS