

Appendix C

Economic Tables

The tables in this section should be used when executing the economic analysis, block twelve (PV12), of the program. The variables obtained from these tables are;

1. Uniform Present Worth of Costs which is based on the expected lifetime of the PV system, average annual price escalation rate over lifetime of the PV system, and the discount rate for borrowing money over the lifetime of the PV system.
2. Loan Uniform Present Worth which is based on the years required to payoff loan, the loan discount rate, and the annual average price escalation rate over loan years.
3. Benefit Uniform Present Worth which is based on the expected lifetime of the PV system, the annual average price escalation rate of electricity, and the discount rate for alternative investments.

For example, to determine the Uniform Present Worth of Costs based on an expected lifetime of 20 years, an average annual price escalation rate of 10 percent and a discount rate for borrowing money of 25 percent, table C-9 will be utilized. By referring to the Years column, look for row containing 20 and from the Escalation Rate row, look for the column containing 10. Moving from left to right along the row containing 20 in the years column and from top to bottom along the column containing 10 in the escalation rate row, the Uniform Present Worth of Costs is found to be 6.76. The other variables are obtained in a similar manner. The discount rate specifies what table should be used to obtain any of the above mentioned variable.

Table C-1, Discount Rate = 0 Percent [1]

Economic Life	Escalation Rate (Percent)							
	0	4	6	8	10	12	15	20
5	5.00	5.63	5.93	6.34	6.72	7.12	7.75	8.93
8	8.00	9.58	10.49	11.49	12.58	13.78	15.79	19.80
10	10.00	12.49	13.97	15.65	17.53	19.65	23.35	31.15
12	12.00	15.63	17.88	20.50	23.52	27.03	33.35	47.50
15	15.00	20.82	24.67	29.32	34.95	41.75	54.72	86.44
20	20.00	30.97	38.99	49.42	63.00	80.70	117.81	224.03
25	25.00	43.31	58.16	78.95	108.18	149.33	244.71	566.38
30	30.00	58.33	83.80	122.35	180.94	270.29	499.96	1418.26

Table C-2, Discount Rate = 5 Percent [1]

Economic Life	Escalation Rate (Percent)							
	0	4	6	8	10	12	15	20
5	4.33	4.86	5.14	5.45	5.76	6.09	6.62	7.60
8	6.46	7.66	8.35	9.10	9.92	10.81	12.31	15.28
10	7.72	9.49	10.54	11.71	13.03	14.51	17.06	22.41
12	8.86	11.28	12.77	14.48	16.45	18.71	22.76	31.72
15	10.83	13.91	16.20	18.93	22.21	26.13	33.51	51.29
20	12.46	18.12	22.13	27.24	33.78	42.17	59.44	107.59
25	14.09	22.13	28.34	36.81	48.39	64.32	100.29	217.37
30	15.37	25.95	34.86	47.82	66.82	94.91	164.68	431.39

Table C-3, Discount Rate = 8 Percent [1]

Economic Life	Escalation Rate (Percent)							
	0	4	6	8	10	12	15	20
5	3.99	4.47	4.73	5.00	5.28	5.58	6.06	6.94
8	5.75	6.78	7.63	8.00	8.70	9.46	10.72	13.23
10	6.71	8.17	9.04	10.00	11.08	12.28	14.36	18.68
12	7.54	9.47	10.65	12.00	13.55	15.32	18.48	25.41
15	8.56	11.24	12.96	15.00	17.43	20.31	25.71	38.57
20	9.82	13.78	16.53	20.00	24.39	29.95	41.26	72.25
25	10.67	15.88	19.79	25.00	32.01	41.50	62.54	129.30
30	11.26	17.62	22.75	30.00	40.37	55.37	91.67	225.90

Table C-4, Discount Rate = 10 Percent [1]

Economic Life	Escalation Rate (Percent)							
	0	4	6	8	10	12	15	20
5	3.79	4.24	4.48	4.73	5.00	5.28	5.72	6.54
8	5.33	6.27	6.80	7.37	8.00	8.68	9.82	12.07
10	6.14	7.44	8.20	9.05	10.00	11.06	12.87	16.65
12	6.81	8.49	9.51	10.67	12.00	13.52	16.21	22.09
15	7.61	9.86	11.30	12.99	15.00	17.38	21.80	32.26
20	8.51	11.69	13.87	16.59	20.00	24.30	32.95	56.38
25	9.08	13.07	16.00	19.87	25.00	31.87	46.88	93.66
30	9.43	14.11	17.78	22.86	30.00	40.15	64.27	151.24

Table C-5 Discount Rate = 12 Percent [1]

Economic Life	Escalation Rate (Percent)							
	0	4	6	8	10	12	15	20
5	3.60	4.03	4.25	4.49	4.74	5.00	5.42	6.18
8	4.97	5.81	6.29	6.82	7.38	8.00	9.03	11.05
10	5.65	6.80	7.48	8.23	9.07	10.00	11.60	4.90
12	6.19	7.66	8.54	9.55	10.69	12.00	14.31	9.33
15	6.81	8.72	9.93	11.35	13.03	15.00	18.65	27.22
20	7.47	10.05	11.79	13.95	16.64	20.00	26.71	44.62
25	7.84	10.96	13.21	16.12	19.95	25.00	35.90	69.17
30	8.06	11.59	14.28	17.93	22.97	30.00	46.38	103.85

Table C-6 Discount Rate = 15 Percent [1]

Economic Life	Escalation Rate (Percent)							
	0	4	6	8	10	12	15	20
Years								
5	3.35	3.74	3.94	4.16	4.38	4.62	5.00	5.69
8	4.49	5.22	5.64	6.09	6.58	7.12	8.00	9.73
10	5.02	6.00	6.56	7.20	7.90	8.67	10.00	12.73
12	5.42	6.63	7.35	8.17	9.09	10.15	12.00	16.00
15	5.85	7.36	8.31	9.41	10.71	12.22	15.00	21.44
20	6.26	8.19	9.47	11.03	12.96	15.33	20.00	32.22
25	6.46	8.69	10.24	12.22	14.76	18.05	25.00	45.55
30	6.57	8.99	10.76	13.08	16.20	20.44	30.00	62.04

Table C-7 Discount Rate = 17 Percent [1]

Economic Life		Escalation Rate (Percent)							
		0	4	6	8	10	12	15	20
Years									
5		3.20	3.56	3.75	3.96	4.17	4.39	4.75	5.40
8		4.21	4.88	5.26	5.67	6.12	6.61	7.41	8.98
10		4.66	5.54	6.05	6.61	7.23	7.93	9.11	11.52
12		4.99	6.05	6.69	7.41	8.22	9.14	10.75	14.20
15		5.32	6.63	7.45	8.39	9.49	10.77	13.10	18.48
20		5.63	7.24	8.30	9.58	11.14	13.05	16.77	26.37
25		5.77	7.58	8.82	10.38	12.35	14.88	20.13	35.33
30		5.83	7.77	9.14	10.91	13.25	16.36	23.22	45.49

Table C-8 Discount Rate = 20 Percent [1]

Economic Life	Escalation Rate (Percent)							
	0	4	6	8	10	12	15	20
5	2.99	3.32	3.50	3.69	3.88	4.08	4.41	5.00
8	3.84	4.43	4.76	5.13	5.52	5.94	6.64	8.00
10	4.19	4.95	5.38	5.86	6.39	6.98	7.97	10.00
12	4.44	5.33	5.86	6.46	7.13	7.88	9.20	12.00
15	4.68	5.74	6.39	7.15	8.02	9.03	10.85	15.00
20	4.87	6.13	6.94	7.91	9.07	10.48	13.18	20.00
25	4.95	6.32	7.23	8.35	9.75	11.51	15.06	25.00
30	4.98	6.41	7.39	8.62	10.19	12.23	16.58	30.00

Table C-9 Discount Rate = 25 Percent [1]

Economic Life	Escalation Rate (Percent)							
	0	4	6	8	10	12	15	20
Years								
5	2.99	2.98	3.18	3.29	3.46	3.64	3.92	4.43
8	3.33	3.82	4.09	4.38	4.70	5.04	5.60	6.69
10	3.57	4.17	4.51	4.88	5.29	5.74	6.50	8.04
12	3.73	4.41	4.81	5.25	5.75	6.31	7.27	9.29
15	3.86	4.64	5.11	5.64	6.26	6.96	8.21	10.99
20	3.95	4.83	5.37	6.01	6.76	7.66	9.33	13.39
25	3.98	4.90	5.49	6.19	7.03	8.06	10.07	15.35
30	4.00	4.93	5.54	6.27	7.17	8.30	10.56	16.95