

Insulation

Dimenishing Return Chart

Added R	Base Case R									
	2	3	4	5	6	7	8	9	10	**** out of order 1
	Percent of Base case									
0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	66.7	75.0	80.0	83.3	85.7	87.5	88.9	90.0	90.9	50.0
2	50.0	60.0	66.7	71.4	75.0	77.8	80.0	81.8	83.3	33.3
3	40.0	50.0	57.1	62.5	66.7	70.0	72.7	75.0	76.9	25.0
4	33.3	42.9	50.0	55.6	60.0	63.6	66.7	69.2	71.4	20.0
5	28.6	37.5	44.4	50.0	54.5	58.3	61.5	64.3	66.7	16.7
10	16.7	23.1	28.6	33.3	37.5	41.2	44.4	47.4	50.0	9.1
15	11.8	16.7	21.1	25.0	28.6	31.8	34.8	37.5	40.0	6.3
20	9.1	13.0	16.7	20.0	23.1	25.9	28.6	31.0	33.3	4.8
25	7.4	10.7	13.8	16.7	19.4	21.9	24.2	26.5	28.6	3.8

Incremental Savings: This is the savings as percent of base case in moving down one row in a given column.
For example, moving from Added R 1 to Added R 2 under base case R 2 results in a savings of 16.7% of the base case.

0										
1	33.3	25.0	20.0	16.7	14.3	12.5	11.1	10.0	9.1	50.0
2	16.7	15.0	13.3	11.9	10.7	9.7	8.9	8.2	7.6	16.7
3	10.0	10.0	9.5	8.9	8.3	7.8	7.3	6.8	6.4	8.3
4	6.7	7.1	7.1	6.9	6.7	6.4	6.1	5.8	5.5	5.0
5	4.8	5.4	5.6	5.6	5.5	5.3	5.1	4.9	4.8	3.3
10	11.9	14.4	15.9	16.7	17.0	17.2	17.1	16.9	16.7	7.6
15	4.9	6.4	7.5	8.3	8.9	9.4	9.7	9.9	10.0	2.8
20	2.7	3.6	4.4	5.0	5.5	5.9	6.2	6.5	6.7	1.5
25	1.7	2.3	2.9	3.3	3.7	4.1	4.3	4.6	4.8	0.9

Total Savings Matrix

0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	50.0	33.3	25.0	20.0	16.7	14.3	12.5	11.1	10.0	9.1
2	66.7	50.0	40.0	33.3	28.6	25.0	22.2	20.0	18.2	16.7
3	75.0	60.0	50.0	42.9	37.5	33.3	30.0	27.3	25.0	23.1
4	80.0	66.7	57.1	50.0	44.4	40.0	36.4	33.3	30.8	28.6
5	83.3	71.4	62.5	55.6	50.0	45.5	41.7	38.5	35.7	33.3
6	85.7	75.0	66.7	60.0	54.5	50.0	46.2	42.9	40.0	37.5
7	87.5	77.8	70.0	63.6	58.3	53.8	50.0	46.7	43.8	41.2
8	88.9	80.0	72.7	66.7	61.5	57.1	53.3	50.0	47.1	44.4
9	90.0	81.8	75.0	69.2	64.3	60.0	56.3	52.9	50.0	47.4
10	90.9	83.3	76.9	71.4	66.7	62.5	58.8	55.6	52.6	50.0

Diminishing Returns of Added Insulation

This chart shows the energy use as a % of the starting value. The number is 100% when there is no added insulation. insulation. The % energy use decreases as R is added. Base case means the R that is present before insulation is added. Another way to illustrate is 100-the % shown in the figure. The curves in this case would start with zero, move upward, and be concave down.

