

NIST BLCC 5.3-07: Detailed LCC Analysis

Consistent with Federal Life Cycle Cost Methodology and Procedures, 10 CFR, Part 436, Subpart A

General Information

File Name: C:\Program Files\BLCC5\projects\Multiple Locations Vs One Location.xml
 Date of Study: Wed Jan 23 09:22:20 CST 2008
 Analysis Type: FEMP Analysis, Energy Project
 Project Name: Multiple Locations Vs One Location
 Project Location: Texas
 Analyst: Travis Alexander
 Base Date: January 1, 2008
 Service Date: January 1, 2008
 Study Period: 25 years 0 months (January 1, 2008 through December 31, 2032)
 Discount Rate: 6%
 Discounting Convention: End-of-Year

Discount and Escalation Rates are NOMINAL (inclusive of general inflation)

Alternative: One Location

Initial Cost Data (not Discounted)

Initial Capital Costs

(adjusted for price escalation)

Initial Capital Costs for All Components: \$0

Component:

Cost-Phasing

Date	Portion	Yearly Cost
January 1, 2008	100%	\$0
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Total (for Component)		\$0

Energy Costs: Electricity

(base-year dollars)

Average	Average	Average	Average
Annual Usage	Price/Unit	Annual Cost	Annual Demand
158,000.0 kWh	\$0.07700	\$12,166	\$0
			Annual Rebate
			\$0

Energy Costs: Chilled Water

(base-year dollars)

Average	Average	Average	Average
Annual Usage	Price/Unit	Annual Cost	Annual Demand
34,103.0 Therm	\$0.88750	\$30,266	\$0
			Annual Rebate
			\$0

Life-Cycle Cost Analysis

	Present Value	Annual Value
Initial Capital Costs	\$0	\$0
Energy Costs		
Energy Consumption Costs	\$542,423	\$42,432
Energy Demand Charges	\$0	\$0
Energy Utility Rebates	\$0	\$0
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Subtotal (for Energy):	\$542,423	\$42,432
Water Usage Costs	\$0	\$0
Water Disposal Costs	\$0	\$0
Operating, Maintenance & Repair Costs		
Component:		
Annually Recurring Costs	\$2,621,387	\$205,065
Non-Annually Recurring Costs	\$0	\$0
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Subtotal (for OM&R):	\$2,621,387	\$205,065
Replacements to Capital Components		
Component:	\$0	\$0
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Subtotal (for Replacements):	\$0	\$0
Residual Value of Original Capital Components		
Component:	\$0	\$0
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Subtotal (for Residual Value):	\$0	\$0
Residual Value of Capital Replacements		
Component:	\$0	\$0
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Subtotal (for Residual Value):	\$0	\$0
Total Life-Cycle Cost	\$3,163,809	\$247,497

Emissions Summary

Energy Name	Annual	Life-Cycle
Electricity:		
CO2	28,474.91 kg	711,853.20 kg
SO2	229.80 kg	5,744.88 kg
NOx	33.56 kg	838.98 kg
Chilled Water:		
CO2	180,124.38 kg	4,502,986.29 kg
SO2	1,453.66 kg	36,340.52 kg
NOx	212.29 kg	5,307.16 kg
Total:		
CO2	208,599.29 kg	5,214,839.49 kg
SO2	1,683.46 kg	42,085.40 kg
NOx	245.85 kg	6,146.14 kg

Alternative: Multiple Locations Initial Cost Data (not Discounted)

Initial Capital Costs

(adjusted for price escalation)

Initial Capital Costs for All Components: \$0

Component: Copy of:

Cost-Phasing

Date	Portion	Yearly Cost
January 1, 2008	100%	\$0
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Total (for Component)		\$0

Energy Costs: Electricity

(base-year dollars)

Average	Average	Average	Average
Annual Usage	Price/Unit	Annual Cost	Annual Demand
158,000.0 kWh	\$0.07700	\$12,166	\$0
			Annual Rebate
			\$0

Energy Costs: Chilled Water

(base-year dollars)

Average	Average	Average	Average
Annual Usage	Price/Unit	Annual Cost	Annual Demand
34,103.0 Therm	\$0.88750	\$30,266	\$0
			Annual Rebate
			\$0

Life-Cycle Cost Analysis

Present Value Annual Value

Initial Capital Costs	\$0	\$0
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Energy Costs

Energy Consumption Costs	\$542,423	\$42,432
Energy Demand Charges	\$0	\$0
Energy Utility Rebates	\$0	\$0

Subtotal (for Energy):	\$542,423	\$42,432
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Water Usage Costs	\$0	\$0
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Water Disposal Costs	\$0	\$0
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Operating, Maintenance & Repair Costs

Component: Copy of:

Annually Recurring Costs	\$2,639,387	\$206,473
Non-Annually Recurring Costs	\$0	\$0

Subtotal (for OM&R):	\$2,639,387	\$206,473
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Replacements to Capital Components

Component: Copy of:	\$0	\$0
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Subtotal (for Replacements):	\$0	\$0
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Residual Value of Original Capital Components

Component: Copy of:	\$0	\$0
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Subtotal (for Residual Value):	\$0	\$0
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Residual Value of Capital Replacements

Component: Copy of:	\$0	\$0
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Subtotal (for Residual Value):	\$0	\$0
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Total Life-Cycle Cost	\$3,181,810	\$248,905
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Emissions Summary

Energy Name	Annual	Life-Cycle
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Electricity:

CO2	28,474.91 kg	711,853.20 kg
SO2	229.80 kg	5,744.88 kg
NOx	33.56 kg	838.98 kg

Chilled Water:

CO2	180,124.38 kg	4,502,986.29 kg
SO2	1,453.66 kg	36,340.52 kg
NOx	212.29 kg	5,307.16 kg

Total:

CO2	208,599.29 kg	5,214,839.49 kg
SO2	1,683.46 kg	42,085.40 kg
NOx	245.85 kg	6,146.14 kg