


DRAFT Project Finance Report

Property: Auto Dealer Sample Property Type: Retail - Medium Box (7,500-25,000 SF) Property Size: 21,599 SF Baseline Period: Jan 2015 to Dec 2015	Report Date: June 01, 2016 Prepared By: Ken Gallagher Company: Colorado C-PACE Program
	
Scenario: Sample SRS DRAFT 100% Financed \$177,216 6% 20 Yrs	

Financial Summary

The table below displays a financial summary of the recommended Energy Conservation Measures (ECMs).

100% Financed Scenario: 20 Year Term at 6% Interest Rate			
	Projected	'Worst' Case	'Best' Case
Financing			
Borrower Equity Contribution (100% financed):	\$0	\$0	\$0
Project Amount Financed:	\$172,894	\$193,929	\$151,858
Program Administration Cost Financed:	\$4,322	\$4,848	\$3,796
Total Amount Financed:	\$177,216	\$198,778	\$155,655
Project Cash Flows			
Projected Savings Over Effective Useful Life:	\$369,195	\$345,983	\$392,407
Projected Debt Service:	\$304,800	\$341,760	\$267,600
Net Cash Flows Over Effective Useful Life:	\$64,395	\$4,223	\$124,807
Projected Annual Debt Service:	\$15,240	\$17,088	\$13,380
Projected Average Annual Savings (net of debt service):	\$2,576	\$169	\$4,992
Key Financial Metrics			
Savings to Investment Ratio (SIR):	1.21	1.01	1.46
Net Present Value (NPV at 6% discount rate):	\$62,337	\$27,848	\$96,963
Time to Positive Cash Flow:	Immediate	N/A	Immediate
Asset Value Increase at 6.50% CAP Rate:	\$227,197	\$212,913	\$241,481
Projections include annual utility price escalation factors of 3% for electricity and 3% for fuels, as well as an annual savings degradation factor of 0.5%. Estimated 'Best' and 'Worst' cases are calculated using uncertainty levels of ± 10% for projected costs (applied to total installation cost, excluding incentives) and ± 10% for projected savings. One-time incentives applied to Projected, 'Worst' and 'Best' cases are unaffected by uncertainty assumptions. The 'Worst' case is comprised of the upper range of costs and the lower range of savings. The 'Best' case is comprised of the lower range of costs and the upper range of savings. The Asset Value Increase calculation assumes debt service payments are treated as loan payments that do not impact the building's net operating income.			

Projected Cash Flows

The table below displays the projected annual cash flows over the ECMs Effective Useful Life (EUL) as defined in the ECM Recommendations Financial Summary.

100% Financed Scenario: 20 Year Term at 6% Interest Rate						
Year	Project Savings	Financing Costs	Net Cash Flows			
			Projected	'Worst' Case	'Best' Case	
Borrower Equity Contribution			(\$0)	(\$0)	(\$0)	
1	\$73,692	\$15,240	\$58,452	\$55,527	\$61,388	
2	\$17,124	\$15,240	\$1,884	(\$1,055)	\$4,836	
3	\$17,399	\$15,240	\$2,159	(\$808)	\$5,137	
4	\$17,680	\$15,240	\$2,440	(\$555)	\$5,447	
5	\$17,968	\$15,240	\$2,728	(\$296)	\$5,764	
6	\$18,264	\$15,240	\$3,024	(\$30)	\$6,089	
7	\$15,433	\$15,240	\$193	(\$2,890)	\$3,289	
8	\$15,744	\$15,240	\$504	(\$2,611)	\$3,631	
9	\$16,062	\$15,240	\$822	(\$2,324)	\$3,981	
10	\$16,338	\$15,240	\$1,098	(\$2,076)	\$4,284	
11	\$16,671	\$15,240	\$1,431	(\$1,776)	\$4,651	
12	\$17,013	\$15,240	\$1,773	(\$1,469)	\$5,026	
13	\$17,363	\$15,240	\$2,123	(\$1,153)	\$5,412	
14	\$17,722	\$15,240	\$2,482	(\$830)	\$5,807	
15	\$18,090	\$15,240	\$2,850	(\$499)	\$6,212	
16	\$6,757	\$15,240	(\$8,483)	(\$10,699)	(\$6,255)	
17	\$6,849	\$15,240	(\$8,391)	(\$10,616)	(\$6,153)	
18	\$6,944	\$15,240	(\$8,296)	(\$10,530)	(\$6,049)	
19	\$7,041	\$15,240	(\$8,199)	(\$10,443)	(\$5,942)	
20	\$7,141	\$15,240	(\$8,099)	(\$10,353)	(\$5,833)	
Subtotals: (over finance term)	\$347,297	\$304,800	\$42,497	(\$15,485)	\$100,719	
21	\$4,165	\$0	\$4,165	\$3,748	\$4,581	
22	\$4,270	\$0	\$4,270	\$3,843	\$4,697	
23	\$4,377	\$0	\$4,377	\$3,939	\$4,815	
24	\$4,487	\$0	\$4,487	\$4,038	\$4,936	
25	\$4,600	\$0	\$4,600	\$4,140	\$5,060	
Totals:	\$369,195	\$304,800	\$64,395	\$4,223	\$124,807	

Projections include ECM Life Cycle Savings Over EUL as defined in the ECM Recommendations Financial Summary. ECM savings are assumed to persist over the term of each ECM's EUL and terminate at each ECM's EUL end-date. Projections also include annual utility price escalation factors of 3% for electricity and 3% for fuels, and an annual savings degradation factor of 0.5% (compounded monthly beginning in Year 2). 'Best' and 'Worst' cases are calculated using uncertainty levels of $\pm 10\%$ for projected costs (applied to total installation cost, excluding incentives) and $\pm 10\%$ for projected savings. One-time incentives applied to Projected, 'Worst' and 'Best' cases and annual incentives applied to cash flows are unaffected by uncertainty assumptions. The 'Worst' case is comprised of the upper range of costs and the lower range of savings. The 'Best' case is comprised of the lower range of costs and the upper range of savings.

Scenario Summary

The table below displays the summary analysis of implementing the recommended ECMs.

Cost Analysis					
Total Implementation Cost:					\$210,356
Total Utility Incentives:					(\$37,462)
Total Tax Incentives:	\$0				
Cash Value of Tax Incentives (at 30.0%):					\$0
Renewables Tax Credit Amount:					\$0
Net Project Cost:					\$172,894
Projections					
Projected First Year Savings:					\$73,844 (\$6,154 avg./month)
Projected Project Start Date:					May 19, 2016
Projected Project Completion Date:					July 01, 2016
Effective Useful Life (cost-weighted avg.):					21.3 years
Effective Useful Life (savings-weighted avg.):					17.4 years
CO2e Emissions					
Annual CO2 Emissions Reduction:					192.1 tons/year
Consumption Analysis					
	Baseline Consumption	Projected Consumption	Projected Savings	Units	Projected % Savings
Total EUI:	51.7	19.6	32.1	kBTU/SF	62.1%
Total Consumption:	1,116	424	693	mmBTU/yr	62.1%
Electric Consumption:	327,151	124,125	203,026	kWh/yr	62.1%
Electric Demand:			14.1	kW	
Baseline consumption values are from the most recent 12 months of the baseline period Jan 2015 to Dec 2015. Projected consumption values are calculated by subtracting the sum of the recommended ECMs projected savings from the baseline consumption during the baseline period.					
Job Creation*					
	Direct	Indirect	Total	Percent Local Jobs	Local (in-state)
Job-Years Created:	1	2	3	100%	3
* Job-years created values are based on methodology outlined in Navigant Consulting's, March 2009, Renewable Energy/Energy Efficient Economy Baseline Study.					
Renewables					
Annual Renewables Production:					70,230 kWh/yr
Nameplate Capacity (DC):					50 kW

Key Assumptions

The table below displays the key assumptions of implementing the recommended ECMs.

Building	
Income Tax Rate:	30.0 %
Assumed Capitalization (CAP) Rate:	6.50 %
Project	
Fiscal Year Start Date (month day):	January 01
Do Incentives Go To Building Owner?	Yes
Percent Local Jobs (%):	100 % (in-state labor allocation)
Assumptions Used to Calculate Projected Savings	
Annual Electric Utility Price Escalation:	3.0 %
Annual Fuels Utility Price Escalation:	3.0 %
Annual Savings Degradation Factor:	0.5 %
Methodologies Used to Calculate Savings Projections	
Energy Consumption Baseline Data:	Conventional (Utility bill-based, no adjustments)
Savings Estimates Uncertainty Level:	± 10 % (Solar feasibility study)
Costs Estimates Uncertainty Level:	± 10 % (Firm quotations for primary ECMs)
Financing	
Percent Financed:	100 %
Annual Interest Rate:	6.00 %
Term:	20 Years
Discount Rate (for NPV calculation):	6.0 %
Program Administration Cost (%):	2.500% of project finance amount
The uncertainty levels of ± 10% for projected costs and ± 10% for projected savings are consistent with this project's scope of work.	

ECM Recommendations Financial Summary

The table below displays a financial summary of the recommended ECMs.

ECM Name	Effective Useful Life (EUL) (years)	Gross Installed Cost	One-Time Utility Incentives	Net Installed Cost	Annual Savings & Incentives (First Year)	Life Cycle Savings Over EUL	Life Cycle Savings Over Finance Term	Simple Payback Term (years)
Lighting: Interior: Light Emitting Diode (LED): ID:9.4.7	15.0	\$38,892	(\$6,141)	\$32,751	\$5,647	\$100,281	\$100,281	5.80
Controls: Lighting Control System: Occupancy Sensors: ID:4.5.3	9.0	\$690	(\$109)	\$581	\$41	\$404	\$404	14.17
Lighting: Exterior: Light Emitting Diode (LED): ID:9.3.6	15.0	\$42,639	(\$6,732)	\$35,907	\$2,515	\$44,662	\$44,662	14.28
Renewable Energy Systems: Solar-Photovoltaic (PV): Roof Mount: String Inverter w/10 Yr Manufacturer Warranty: ID:16.4.6: 49.77 kW, 70,230 kWh Annual Production - \$2,564 Annual Savings	25.0	\$126,381	-	\$126,381	\$2,564	\$86,772	\$64,874	49.29
ECM Related Costs / Savings Name	Term (years)	Cost	One-Time Incentives	Net Cost	Annual Savings & Incentives (First Year)	Life Cycle Savings Over EUL	Life Cycle Savings Over Finance Term	
ECM Related Costs/Savings: Savings: Federal Investment Tax Credit (ITC): ID:5.2.4	1.0	\$0	-	\$0	\$37,914	\$37,914	\$37,914	
ECM Related Costs/Savings: Costs: Capital Provider Closing Cost: ID: 5.1.29	1.0	\$1,754	-	\$1,754	\$0	\$0	\$0	
ECM Related Costs/Savings: Costs: County Servicing Fee: ID:5.1.25	20.0	\$0	-	\$0	(\$152)	(\$3,048)	(\$3,048)	
ECM Related Costs/Savings: Savings: Accelerated Asset Depreciation (MACRS): ID:5.2.1: 50% Over 6 Years	6.0	\$0	-	\$0	\$3,133	\$18,799	\$18,799	
ECM Related Costs/Savings: Savings: Renewable Energy Credit: (REC): ID: 5.2.5.2: 70,230 kWh @ \$0.046/kWh for 20 Years	20.0	\$0	-	\$0	\$3,231	\$64,612	\$64,612	
ECM Related Costs/Savings: Savings: 50% Bonus Depreciation: ID:5.2.11: MACRS 50% Value in Year One	1.0	\$0	-	\$0	\$18,799	\$18,799	\$18,799	
ECM Related Costs/Savings: Savings: Utility Incentive: Uncategorized: ID: 5.2.8.3: Proposed Boulder County EnergySmart Incentive (PV)	1.0	\$0	(\$10,000)	(\$10,000)	\$0	\$0	\$0	
ECM Related Costs/Savings: Savings: Utility Incentive: Uncategorized: ID: 5.2.8.3: Proposed Boulder County EnergySmart Incentive (Lighting & Occupancy Sensors)	1.0	\$0	(\$14,480)	(\$14,480)	\$0	\$0	\$0	
Project Totals:		\$210,356	(\$37,462)	\$172,894	\$73,844	\$369,195	\$347,297	
		Weighted EUL (to set finance term):		Savings to Investment Ratio (SIR): 1.21				
		21.3	Cost-weighted avg. (yrs)	(Financing Term: 20 Years)				
		17.4	Savings-weighted avg. (yrs)					
ECM Life Cycle Savings Over EUL are calculated based on each ECM's EUL. These savings are assumed to persist over the term of each ECM's EUL and terminate at each ECM's EUL end-date. ECM Life Cycle Savings Over EUL include annual utility price escalation factors of 3% for electricity and 3% for fuels, as well as an annual savings degradation factor of 0.5%.								

ECM Recommendations Savings Summary

The table below displays a summary of the projected energy savings from recommended ECMs.

ECM Name	Effective Useful Life (EUL) (years)		Projected Annual Unit Savings	Life Cycle Unit Savings Over EUL	Life Cycle Unit Savings Over Finance Term	Projected % Savings Over Baseline
Lighting: Interior: Light Emitting Diode (LED): ID:9.4.7	15.0	Electric: Demand:	62,815 kWh/yr 14 kW	911,968 kWh	911,968 kWh	19.2%
Controls: Lighting Control System: Occupancy Sensors: ID:4.5.3	9.0	Electric:	1,114 kWh/yr	9,848 kWh	9,848 kWh	0.3%
Lighting: Exterior: Light Emitting Diode (LED): ID:9.3.6	15.0	Electric:	68,867 kWh/yr	999,833 kWh	999,833 kWh	21.1%
Renewable Energy Systems: Solar-Photovoltaic (PV): Roof Mount: String Inverter w/10 Yr Manufacturer Warranty: ID:16.4.6: 49.77 kW, 70,230 kWh Annual Production - \$2,564 Annual Savings	25.0	Electric:	70,230 kWh/yr	1,658,195 kWh	1,342,900 kWh	21.5%
Project Totals:			693 mmBTU/yr	12,216 mmBTU	11,140 mmBTU	62.1%
Project Subtotals:		Electric: Demand:	203,026 kWh/yr 14.1 kW	3,579,845 kWh	3,264,550 kWh	62.1%
<p>Life Cycle Unit Savings projections include an annual savings degradation factor of 0.5%. Projected % Savings for each ECM is calculated as the ratio of the Projected Annual Unit Savings to the total energy consumption during the Baseline Period for the corresponding energy type. Project Totals are normalized to mmBTU using conversion factors of 3.4123 kWh/mmBTU and 10 therms/mmBTU.</p>						