

GUNNISON COUNTY

Final TEA Report Presentation

June 15, 2010

Agenda

- ▶ Review and Reconnect with Process
- ▶ Review Needs
- ▶ Data Analysis
- ▶ Review Facility Recommendations/Scope
- ▶ Cost and Savings Review
- ▶ Environmental Impacts
- ▶ Agree on Next Steps

REVIEW & RECONNECT TO THE PROCESS

Energy Savings Performance Contracting – Buying Process



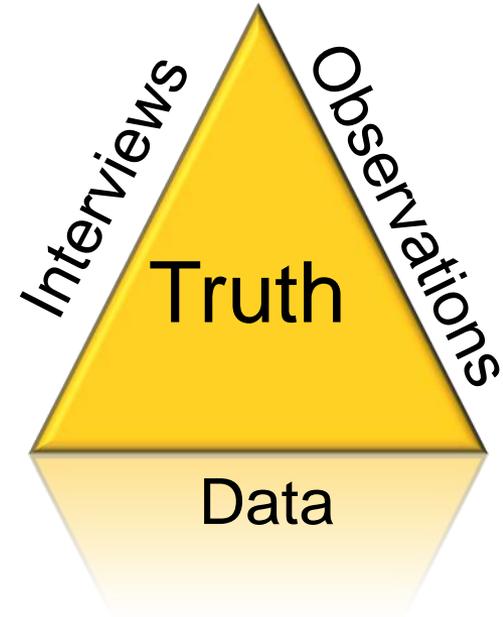
REVIEW NEEDS

Needs Assessment Summary

- **Interview - Needs Provided by You**
 - Commissioners Plan Calls for a 10% Reduction in Emissions
 - Current Automation System is Poorly Support
 - Lack of Automation System in Facilities
 - To be Fiscally Responsible
 - Older/Problematic Boilers
 - Overall Efficiency Gains on Operations
 - Add Cooling to Housing Authority

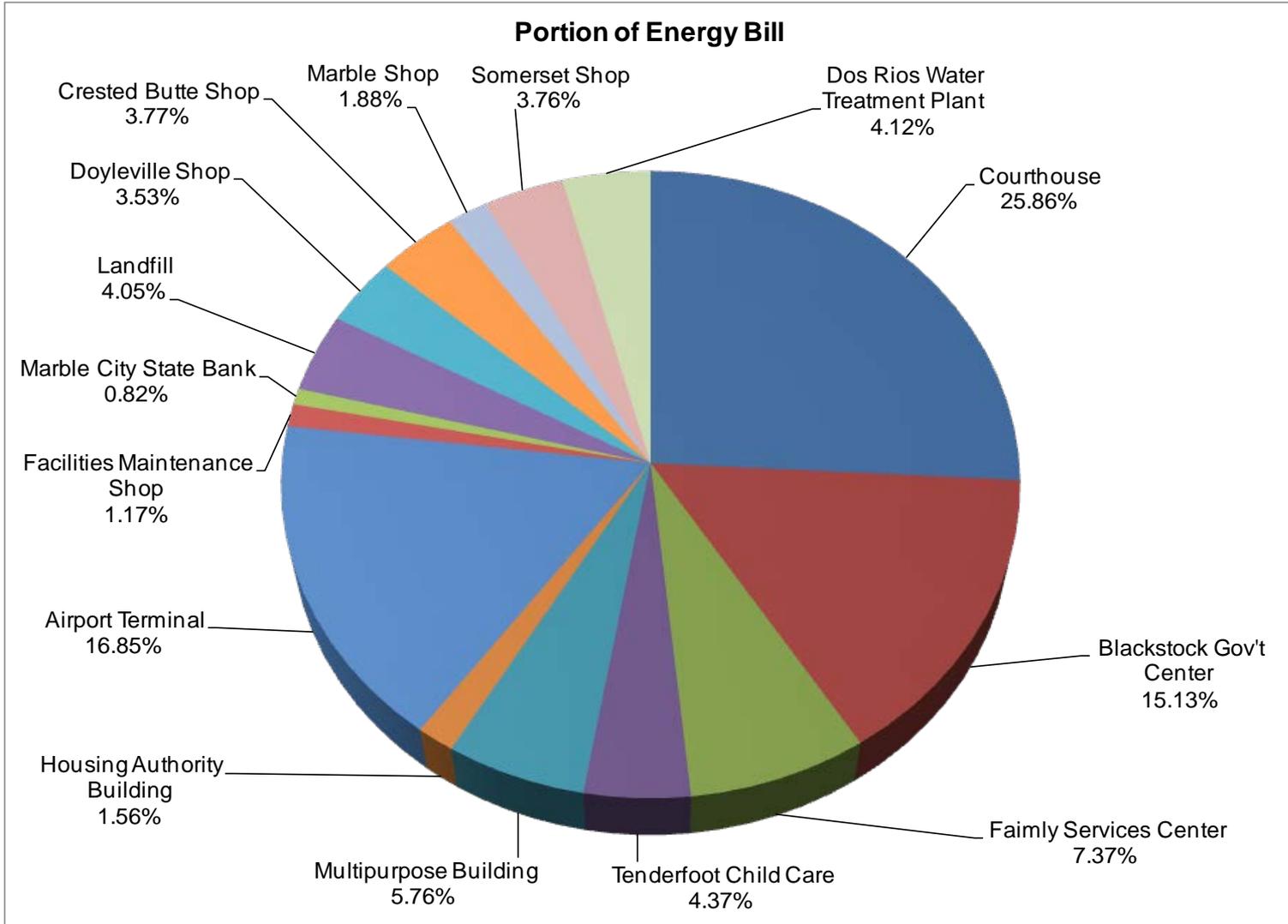
- **Observations – Needs Observed by Ennovate**
 - Comfort Complaints at Facilities
 - Lack of Comprehensive and Energy Efficient Controls
 - Facilities unable to be Accessed Remotely
 - Varying Occupancy and Large Unoccupied Areas

- **Data Analysis – Needs Observed from the Data**
 - Court House Consumes 21% of County's Total Utility Bill
 - 2,800 Tons of CO2 Released
 - No Demand Rate

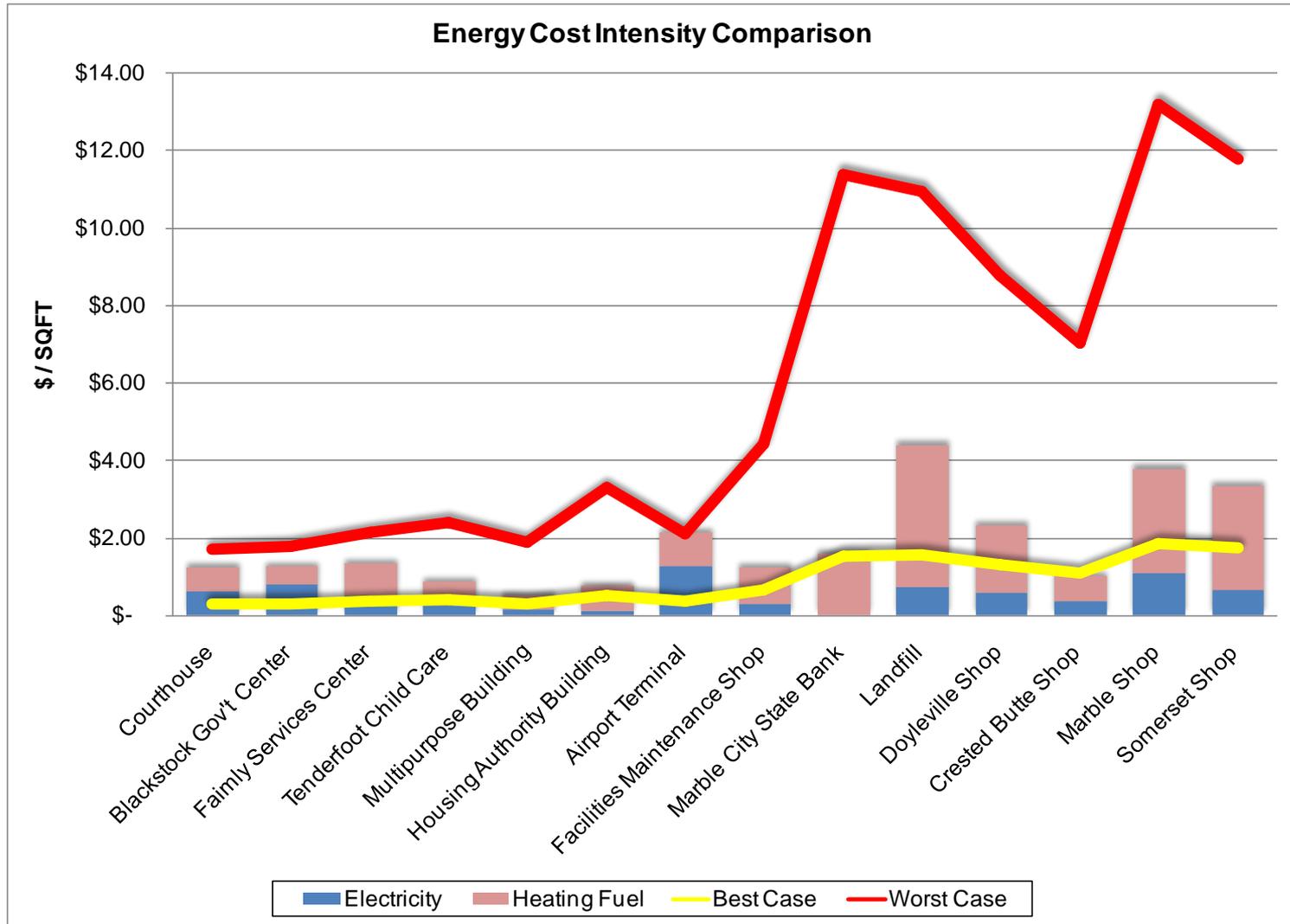


DATA ANALYSIS

Allocation of Utility Costs

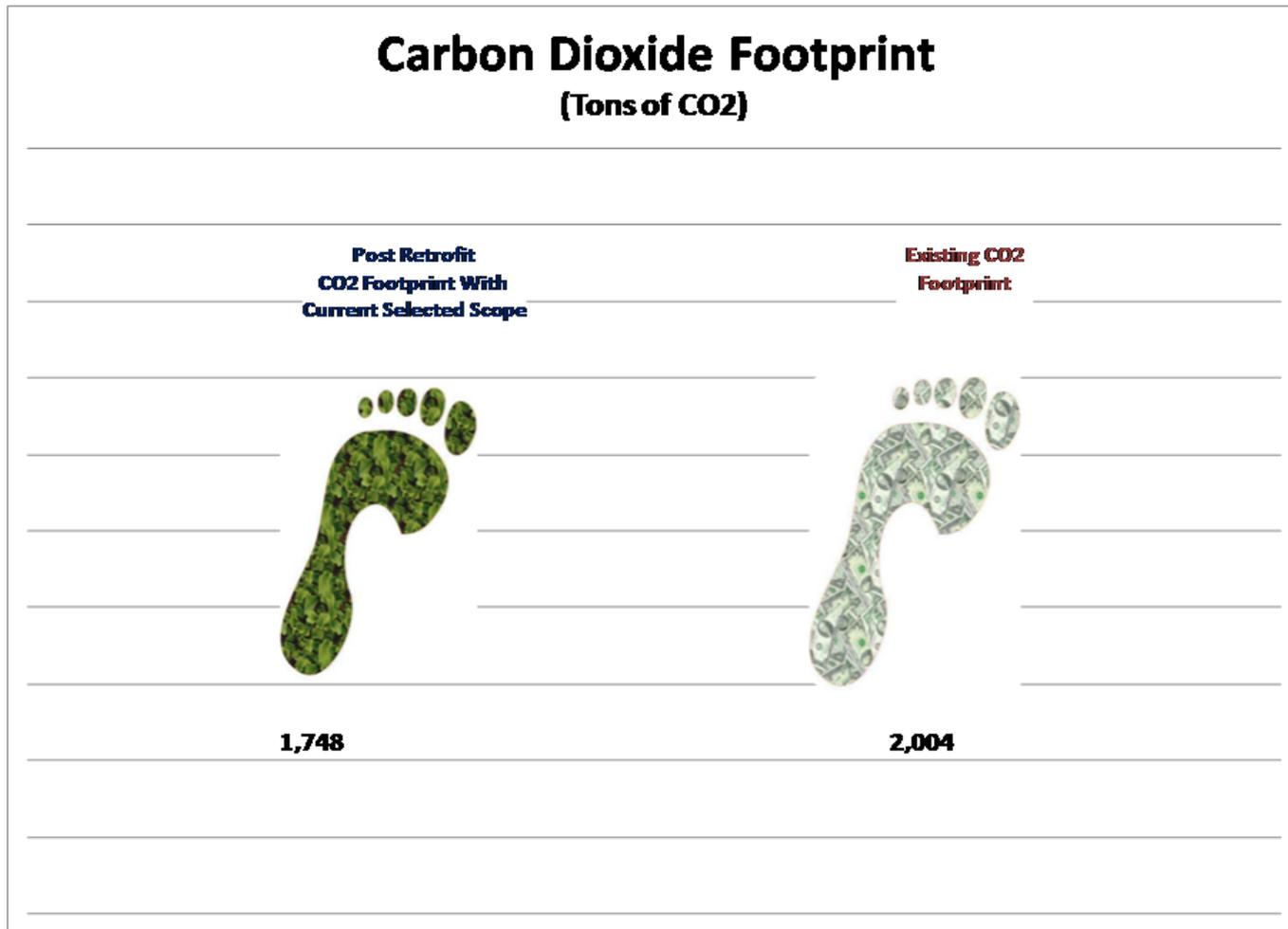


Energy Intensity \$/Sqft



Gunnison's Carbon Footprint

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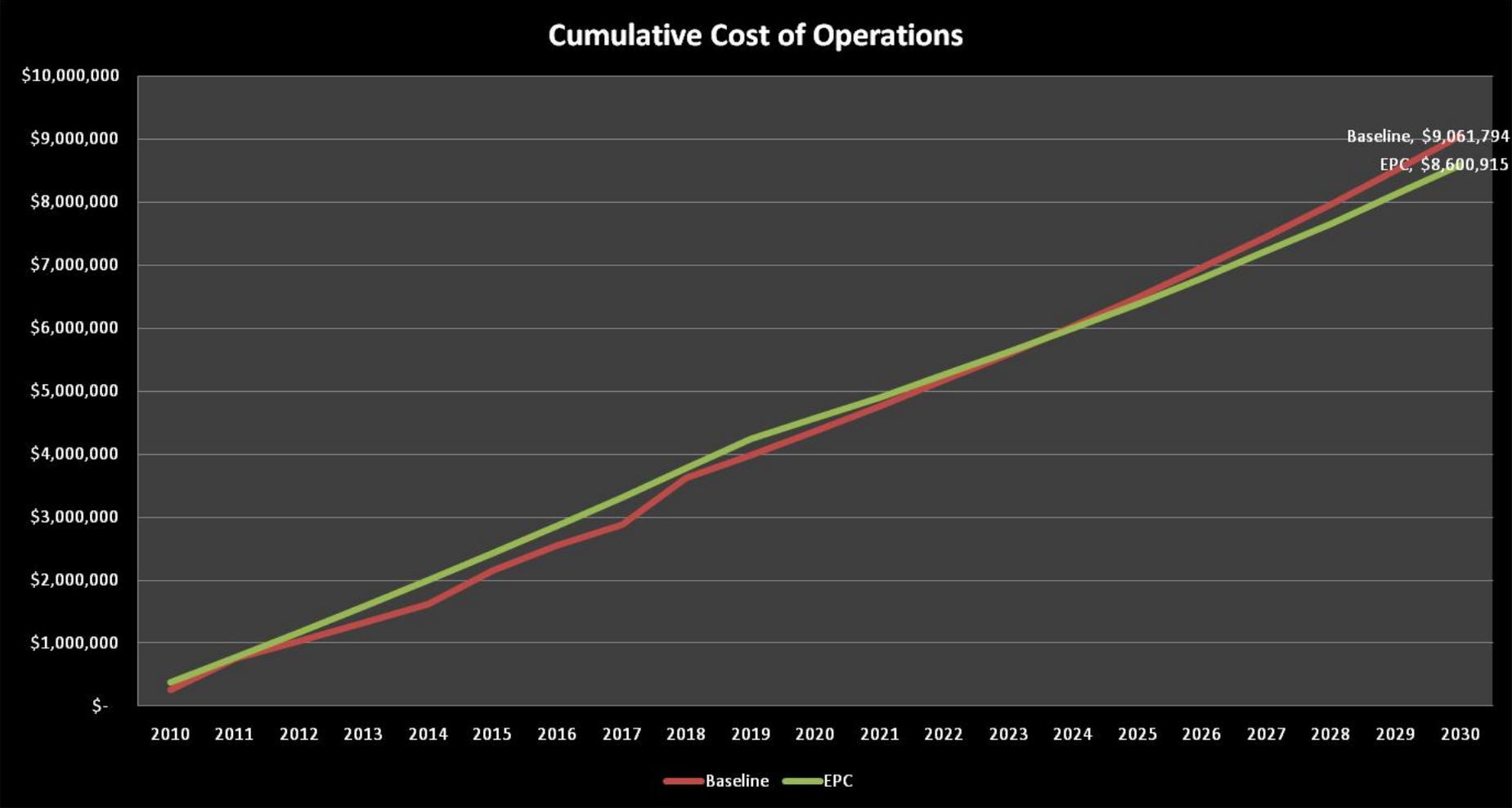
13% reduction from 2009 Baseline for Facilities included in TEA Report

FACILITY RECOMMENDATIONS

Selected Scope for Final TEA

ECM / FIM Description	AirAdmin	AirTerminal	Blackstock	CB Shop	DR WTP	DoyleShop	FMSShop	FamServices	GunCourthouse	HouseAuth	Landfill	MarbleBank	MarbleShop	MPBldg	Somerset	Tenderfoot	Post Rebate Price	Utility Savings	Operational Savings	Total Savings	Utility & Operational Payback (Yrs)
New High Efficiency Condensing Boiler(s)		A						A						A			\$ 415,882	\$ 4,096	\$ 7,515	\$ 11,611	36
Destratification Fans																	\$ -	\$ -	\$ -	\$ -	0
VAV Conversion								A	A								\$ 88,144	\$ 2,842	\$ -	\$ 2,842	31
Zoning Improvements		A							A								\$ 26,592	\$ -	\$ -	\$ -	0
Install Evaporative Cooling									A								\$ 23,059	\$ -	\$ -	\$ -	0
Install Radiant Gas Heaters															A		\$ 14,812	\$ -	\$ -	\$ -	0
DDC System Install		A	A					A	A								\$ 323,902	\$ 11,295	\$ 2,877	\$ 14,171	23
DDC Recommission																B	\$ 3,639	\$ 629	\$ -	\$ 629	6
Setback Thermostats						A	A			A	A	A	A				\$ 5,858	\$ 2,864	\$ -	\$ 2,864	2
Lighting Retrofit, Daylight & Occ Sensors			A	A	A	A	A	A	A	A	A	A	A	A	A		\$ 165,246	\$ 2,579	\$ 272	\$ 2,849	58
Door Switches						A					A		A				\$ 4,835	\$ 1,320	\$ -	\$ 1,320	4
Window Replacement										A							\$ 58,651	\$ 331	\$ -	\$ 331	177
Weatherize Doors / Windows				A											A	B	\$ 22,947	\$ 516	\$ -	\$ 516	44
Repair Gutter Heat System									A								\$ 2,417	\$ 135	\$ -	\$ 135	18
Vehicle Exhaust System													A				\$ 3,347	\$ -	\$ -	\$ -	0
Engine Block Heaters																	\$ -	\$ -	\$ -	\$ -	0
Vending Misers		A	A						A						A		\$ 6,806	\$ 650	\$ -	\$ 650	10
Repair & Seal Bay Doors													A				\$ 2,782	\$ -	\$ -	\$ -	0
Install Entrance Vestibule																	\$ -	\$ -	\$ -	\$ -	0
Air Curtain																	\$ -	\$ -	\$ -	\$ -	0
SubTotals																	\$ 1,168,919	\$ 27,255	\$ 10,664	\$ 37,918	31
Grants																	\$ (1,705)				
Totals																	\$ 1,167,214	\$ 27,255	\$ 10,664	\$ 37,918	31

Life Cycle Cost Comparison



County Courthouse

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Benefits:

- Comfort Improvements
- Improved Lighting Systems

ECM / FIM Description	GunCourthouse
New High Efficiency Condensing Boiler(s)	
Destratification Fans	
VAV Conversion	A
Zoning Improvements	A
Install Evaporative Cooling	A
Install Radiant Gas Heaters	
DDC System Install	A
DDC Recommission	
Setback Thermostats	
Lighting Retrofit, Daylight & Occ Sensors	A
Door Switches	
Window Replacement	
Weatherize Doors / Windows	
Repair Gutter Heat System	A
Vehicle Exhaust System	
Engine Block Heaters	
Vending Misers	A
Repair & Seal Bay Doors	
Install Entrance Vestibule	
Air Curtain	

Blackstock Government Center

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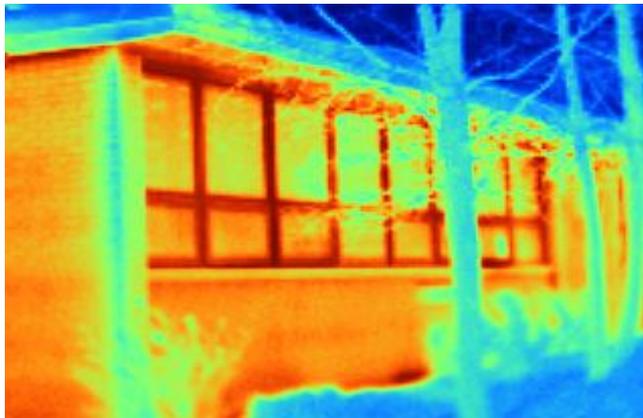
Benefits:

- Comfort Improvements
- Improved Lighting Systems

ECM / FIM Description	Blackstock
New High Efficiency Condensing Boiler(s)	
Destratification Fans	
VAV Conversion	
Zoning Improvements	
Install Evaporative Cooling	
Install Radiant Gas Heaters	
DDC System Install	A
DDC Recommission	
Setback Thermostats	
Lighting Retrofit, Daylight & Occ Sensors	A
Door Switches	
Window Replacement	
Weatherize Doors / Windows	
Repair Gutter Heat System	
Vehicle Exhaust System	
Engine Block Heaters	
Vending Misers	A
Repair & Seal Bay Doors	
Install Entrance Vestibule	
Air Curtain	

Family Services

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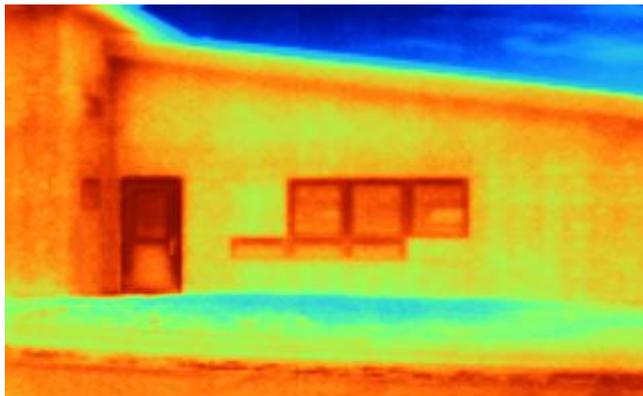
Benefits:

- High Efficiency Boiler
- Comfort Improvements
- Improved Lighting Systems

ECM / FIM Description	FamServices
New High Efficiency Condensing Boiler(s)	A
Destratification Fans	
VAV Conversion	A
Zoning Improvements	
Install Evaporative Cooling	
Install Radiant Gas Heaters	
DDC System Install	A
DDC Recommission	
Setback Thermostats	
Lighting Retrofit, Daylight & Occ Sensors	A
Door Switches	
Window Replacement	
Weatherize Doors / Windows	
Repair Gutter Heat System	
Vehicle Exhaust System	
Engine Block Heaters	
Vending Misers	
Repair & Seal Bay Doors	
Install Entrance Vestibule	
Air Curtain	

Tenderfoot Child Care

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Benefits:

- Comfort Improvements
- Health and Safety Improvements

ECM / FIM Description	Tenderfoot
New High Efficiency Condensing Boiler(s)	
Destratification Fans	
VAV Conversion	
Zoning Improvements	
Install Evaporative Cooling	
Install Radiant Gas Heaters	
DDC System Install	
DDC Recommission	B
Setback Thermostats	
Lighting Retrofit, Daylight & Occ Sensors	
Door Switches	
Window Replacement	
Weatherize Doors / Windows	B
Repair Gutter Heat System	
Vehicle Exhaust System	
Engine Block Heaters	
Vending Misers	
Repair & Seal Bay Doors	
Install Entrance Vestibule	
Air Curtain	

Multi Purpose Building



Benefits:

- High Efficiency Boiler
- Improved Lighting Systems

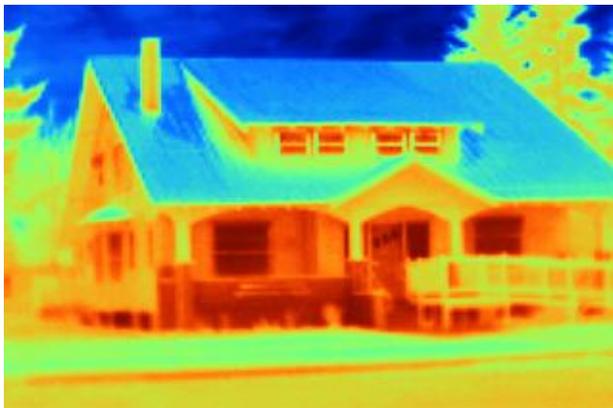
The locations for the occupancy sensors for the Multipurpose Building are:

- Men’s and Women’s restrooms (includes a switch to be turned on and off manually)
- Managers office (includes a switch to be turned on and off manually)
- Conference room (includes a switch to be turned on and off manually)
- CSU Extension (includes a switch to be turned on and off manually)

ECM / FIM Description	MPBldg
New High Efficiency Condensing Boiler(s)	A
Destratification Fans	
VAV Conversion	
Zoning Improvements	
Install Evaporative Cooling	
Install Radiant Gas Heaters	
DDC System Install	
DDC Recommission	
Setback Thermostats	
Lighting Retrofit, Daylight & Occ Sensors	A
Door Switches	
Window Replacement	
Weatherize Doors / Windows	A
Repair Gutter Heat System	
Vehicle Exhaust System	
Engine Block Heaters	
Vending Misers	A
Repair & Seal Bay Doors	
Install Entrance Vestibule	
Air Curtain	

Housing Authority

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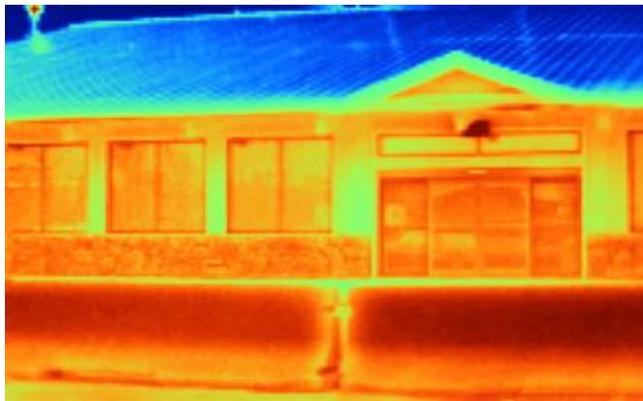
Benefits:

- Comfort Improvements
- Improved Lighting Systems

ECM / FIM Description	HouseAuth
New High Efficiency Condensing Boiler(s)	
Destratification Fans	
VAV Conversion	
Zoning Improvements	
Install Evaporative Cooling	
Install Radiant Gas Heaters	
DDC System Install	
DDC Recommission	
Setback Thermostats	
Lighting Retrofit, Daylight & Occ Sensors	A
Door Switches	
Window Replacement	A
Weatherize Doors / Windows	
Repair Gutter Heat System	
Vehicle Exhaust System	
Engine Block Heaters	
Vending Misers	
Repair & Seal Bay Doors	
Install Entrance Vestibule	
Air Curtain	

Airport Terminal

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Benefits:

- High Efficiency Boiler
- Comfort Improvements

ECM / FIM Description	AirTerminal
New High Efficiency Condensing Boiler(s)	A
Destratification Fans	
VAV Conversion	
Zoning Improvements	A
Install Evaporative Cooling	
Install Radiant Gas Heaters	
DDC System Install	A
DDC Recommission	
Setback Thermostats	
Lighting Retrofit, Daylight & Occ Sensors	
Door Switches	
Window Replacement	
Weatherize Doors / Windows	
Repair Gutter Heat System	
Vehicle Exhaust System	
Engine Block Heaters	
Vending Misers	A
Repair & Seal Bay Doors	
Install Entrance Vestibule	
Air Curtain	

Marble Bank

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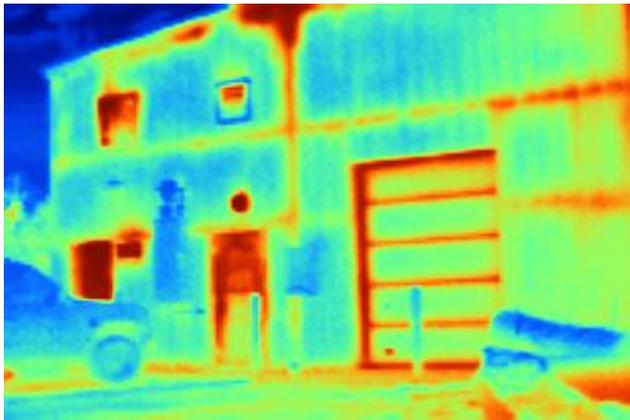
Benefits:

- Energy Savings

ECM / FIM Description	MarbleBank
New High Efficiency Condensing Boiler(s)	
Destratification Fans	
VAV Conversion	
Zoning Improvements	
Install Evaporative Cooling	
Install Radiant Gas Heaters	
DDC System Install	
DDC Recommission	
Setback Thermostats	A
Lighting Retrofit, Daylight & Occ Sensors	
Door Switches	
Window Replacement	
Weatherize Doors / Windows	
Repair Gutter Heat System	
Vehicle Exhaust System	
Engine Block Heaters	
Vending Misers	
Repair & Seal Bay Doors	
Install Entrance Vestibule	
Air Curtain	

Dos Rios Water Treatment Plant

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Benefits:

- Improved Lighting Systems

ECM / FIM Description	DR WTP
New High Efficiency Condensing Boiler(s)	
Destratification Fans	
VAV Conversion	
Zoning Improvements	
Install Evaporative Cooling	
Install Radiant Gas Heaters	
DDC System Install	
DDC Recommission	
Setback Thermostats	
Lighting Retrofit, Daylight & Occ Sensors	A
Door Switches	
Window Replacement	
Weatherize Doors / Windows	
Repair Gutter Heat System	
Vehicle Exhaust System	
Engine Block Heaters	
Vending Misers	
Repair & Seal Bay Doors	
Install Entrance Vestibule	
Air Curtain	

Landfill and Road & Bridge Shops



Benefits:

- Comfort Improvements
- Improved Lighting Systems
- Health and Safety Improvements
- Higher Efficiency Heating System

ECM / FIM Description	CB Shop	DoyleShop	FMSHOP	Landfill	MarbleShop	Somerset
New High Efficiency Condensing Boiler(s)						
Destratification Fans						
VAV Conversion						
Zoning Improvements						
Install Evaporative Cooling						
Install Radiant Gas Heaters						A
DDC System Install						
DDC Recommission						
Setback Thermostats		A	A	A	A	
Lighting Retrofit, Daylight & Occ Sensors	A	A	A	A	A	A
Door Switches		A		A	A	
Window Replacement						
Weatherize Doors / Windows	A					
Repair Gutter Heat System						
Vehicle Exhaust System					A	
Engine Block Heaters						
Vending Misers						
Repair & Seal Bay Doors					A	
Install Entrance Vestibule						
Air Curtain						

COST AND SAVINGS

Energy Savings Summary

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Facility Name	Energy Cost Savings	Pre-Retrofit Total Energy Costs	% Savings
Courthouse	\$ 10,773.14	\$ 53,443.87	20%
Blackstock	\$ 2,545.45	\$ 31,263.50	8%
Family Services	\$ 4,455.75	\$ 15,233.09	29%
Tenderfoot	\$ 2,005.13	\$ 9,022.60	22%
Multipurpose	\$ 1,464.89	\$ 11,905.69	12%
Housing Authority	\$ 701.14	\$ 3,230.85	22%
Airport Terminal	\$ 6,096.97	\$ 34,816.62	18%
Marble Bank	\$ 141.93	\$ 1,696.47	8%
Water Treatment Plant	\$ 79.98	\$ 8,505.21	1%
Landfill	\$ 1,796.16	\$ 8,372.68	21%
Facilities Maintenance	\$ 425.44	\$ 2,408.05	18%
Doyleville Shop	\$ 1,832.63	\$ 7,294.45	25%
Crested Butte Shop	\$ 558.08	\$ 7,781.34	7%
Somerset Shop	\$ 504.44	\$ 7,776.61	6%
Marble Shop	\$ 839.30	\$ 3,891.17	22%

ENVIRONMENTAL IMPACT

Environmental Impact

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Gunnison County CO2 Breakdown

	Total CO2 (Tons)	Cars	Trees
Gunnison County Baseline	2,004	360	12,023
Project Savings	256	46	1,535
% Reduction	13%	13%	13%



Financial Breakdowns

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Utility Savings (first year)	\$27,255
Operational Savings (first year)	\$10,664
Capital Cost Avoidance (first year)	\$0,000
Total First Year Savings	\$37,919
Total Savings over Project Term	\$478,463
Cost of Project	\$1,168,919
Grants	(\$0,000)
Capital Contribution	\$0,000
Pre Rebate Cost	\$1,168,919
Rebates	(\$1,705)
Net Cost	\$1,167,214

Based on a 10 year lease purchase agreement and a 5.5% interest rate

^[1] Price is based upon lowest qualified subcontractor responses to bid solicitation if the County wishes to use alternate subcontractors, then the price may vary.

^[2] To be determined prior to development of the Energy Performance Contract

^[3] To be determined prior to development of the Energy Performance Contract

County's Cash Flow – W/O Capital Cost Avoidance

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Performance Year	0	1	2	3	4	5	6	7	8	9	10	TOTAL
Savings Summary												
Phase A - Utility Savings	\$13,230	\$26,460	\$27,571	\$28,729	\$29,936	\$31,193	\$32,503	\$33,868	\$35,291	\$36,773	\$38,317	\$333,870
Phase B - Utility Savings	\$398	\$795	\$829	\$864	\$900	\$938	\$977	\$1,018	\$1,061	\$1,106	\$1,152	\$10,037
Phase A - Operational Savings	\$5,332	\$10,664	\$11,112	\$11,578	\$12,065	\$12,571	\$13,099	\$13,650	\$14,223	\$14,820	\$15,443	\$134,556
Phase B - Operational Savings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Phase A - Avoided Capital Savings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Phase B - Avoided Capital Savings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Savings:	\$18,959	\$37,919	\$39,512	\$41,171	\$42,900	\$44,702	\$46,580	\$48,536	\$50,574	\$52,698	\$54,912	\$478,463
Payment Summary												
Phase A - Retrofit Payment	\$0	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$1,520,386)
Phase B - Retrofit Payment	\$0	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$16,910)
Ongoing Support Services	\$0	(\$6,700)	(\$6,941)	(\$7,191)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$20,832)
Total Payments:	\$0	(\$160,430)	(\$160,671)	(\$160,921)	(\$153,730)	(\$1,558,128)						
Grants & Rebates												
Phase A - Grants & Rebates	(\$1,705)											
Phase B - Grants & Rebates	\$0											
Total Grants & Rebates:	(\$1,705)											
Phase A - Net Cash Flow	\$16,857	(\$121,615)	(\$120,297)	(\$118,922)	(\$110,038)	(\$108,274)	(\$106,436)	(\$104,521)	(\$102,525)	(\$100,446)	(\$98,279)	(\$1,074,497)
Phase B - Net Cash Flow	\$398	(\$896)	(\$862)	(\$827)	(\$791)	(\$753)	(\$714)	(\$673)	(\$630)	(\$586)	(\$539)	(\$6,873)
Annual Cash Flow:	\$17,254	(\$122,511)	(\$121,159)	(\$119,750)	(\$110,829)	(\$109,028)	(\$107,150)	(\$105,194)	(\$103,155)	(\$101,031)	(\$98,818)	(\$1,081,370)
Accumulative Cash Flow:	\$17,254	(\$105,256)	(\$226,415)	(\$346,165)	(\$456,995)	(\$566,022)	(\$673,172)	(\$778,366)	(\$881,521)	(\$982,552)	(\$1,081,370)	

**Annual cash flow short falls will need to be funded through County Capital

County's Cash Flow – w/ Capital Cost Avoidance

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Performance Year	0	1	2	3	4	5	6	7	8	9	10	TOTAL
Savings Summary												
Phase A - Utility Savings	\$13,230	\$26,460	\$27,571	\$28,729	\$29,936	\$31,193	\$32,503	\$33,868	\$35,291	\$36,773	\$38,317	\$333,870
Phase B - Utility Savings	\$398	\$795	\$829	\$864	\$900	\$938	\$977	\$1,018	\$1,061	\$1,106	\$1,152	\$10,037
Phase A - Operational Savings	\$5,332	\$10,664	\$11,112	\$11,578	\$12,065	\$12,571	\$13,099	\$13,650	\$14,223	\$14,820	\$15,443	\$134,658
Phase B - Operational Savings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Phase A - Avoided Capital Savings	\$48,184	\$96,368	\$96,368	\$96,368	\$96,368	\$96,368	\$96,368	\$96,368	\$96,368	\$96,368	\$96,368	\$1,011,865
Phase B - Avoided Capital Savings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Savings:	\$67,144	\$134,287	\$135,880	\$137,539	\$139,268	\$141,070	\$142,948	\$144,904	\$146,942	\$149,067	\$151,280	\$1,490,329
Payment Summary												
Phase A - Retrofit Payment	\$0	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$152,039)	(\$1,520,386)
Phase B - Retrofit Payment	\$0	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$1,691)	(\$16,910)
Ongoing Support Services	\$0	(\$6,700)	(\$6,941)	(\$7,191)	\$0	(\$20,832)						
Total Payments:	\$0	(\$160,430)	(\$160,671)	(\$160,921)	(\$153,730)	(\$1,568,128)						
Grants & Rebates												
Phase A - Grants & Rebates	(\$1,705)											
Phase B - Grants & Rebates	\$0											
Total Grants & Rebates:	(\$1,705)											
Phase A - Net Cash Flow	\$65,041	(\$25,247)	(\$23,929)	(\$22,554)	(\$13,670)	(\$11,906)	(\$10,068)	(\$8,153)	(\$6,157)	(\$4,078)	(\$1,911)	(\$62,632)
Phase B - Net Cash Flow	\$398	(\$896)	(\$862)	(\$827)	(\$791)	(\$753)	(\$714)	(\$673)	(\$630)	(\$586)	(\$539)	(\$6,873)
Annual Cash Flow:	\$65,439	(\$26,143)	(\$24,791)	(\$23,382)	(\$14,461)	(\$12,659)	(\$10,782)	(\$8,826)	(\$6,787)	(\$4,663)	(\$2,450)	(\$69,505)
Accumulative Cash Flow:	\$65,439	\$39,296	\$14,505	(\$8,877)	(\$23,338)	(\$35,997)	(\$46,779)	(\$55,605)	(\$62,392)	(\$67,055)	(\$69,505)	

AGREE ON NEXT STEPS

Next Steps...



- ▶ **Approve Energy Performance Contract**